

4 Market definition

Contents

	<i>Page</i>
Introduction	11
The terms of reference	12
The relevant economic market	13
The relevant product market for groceries	14
Definition of groceries	14
Characteristics of demand for groceries—basic considerations	14
Views and evidence of the main parties	15
Patterns of grocery shopping	15
Economic substitutes for supermarket shopping	20
The role of the top-up shopper	22
Shopper behaviour and preferences: consumer survey	23
Patterns of expenditure on groceries	23
Main grocery shopping habits	26
Secondary or top-up grocery shopping habits	28
Main party views on the CC's survey of grocery shopping habits	28
Consumer choice model: price effects by store size	29
The role of the discounters	30
Consumer switching	30
Consumer attitudes to the discounters	30
Cross-price elasticities between discounters and other multiples	31
The relevant geographic market for groceries	31
Main parties' views on the relevant geographic market for groceries	32
The definition and measurement of supermarket catchment areas	32
General approaches	32
Other factors in the assessment of store catchment areas	34
Postal areas versus isochrones	34
Overlapping catchments and chains of substitution	34
Consumer survey: evidence on travel patterns for groceries	35
Consumer choice model: evidence on geographic market definition	36
Distribution of shoppers by distance from store	36
The impact of distance between stores on cross-elasticities	36
The market for groceries in Northern Ireland	37
Summary of evidence on the economic market for groceries	38

Introduction

4.1. This chapter uses a range of evidence and analysis to define the relevant economic market for the purpose of this inquiry. Some introductory comments on the concept of the economic market, and its different dimensions, are contained in paragraphs 4.10 to 4.14.

4.2. We have assembled evidence on the market for groceries from several sources:

- (a) information on customer behaviour submitted by the main parties, and their comments as to how they perceive the market for groceries;

- (b) evidence on grocery shopping habits drawn from our survey of 982 consumers, conducted during October/November 1999; and
- (c) evidence on a number of market-definition-related questions available from an econometric model of consumer demand for groceries, the estimation and detailed results of which are described in Appendix 7.8. This consumer demand approach explains consumers' choice of store, and expenditure on groceries at that store, in terms of various store characteristics, such as: average price of groceries at the store, consumer's distance from the store, the presence or absence of additional services or facilities, store size (an indicator of range), and fascia (an indicator of several difficult-to-observe features such as quality). From this demand model, estimates of elasticities can be derived at store level, allowing us to consider how price effects vary according to factors such as location, store size, or fascia.

4.3. We first consider a range of evidence and analysis relating to the definition of the relevant product market for groceries (paragraphs 4.15 to 4.107). Much of the discussion concentrates on the role of different patterns of grocery shopping. The DGFT, in making the reference to us, identified the one-stop form of grocery shopping as potentially important to the analysis of competitive influences on the multiples' behaviour. This is a form of shopping in which consumers purchase all or a substantial part of a household's weekly grocery requirements together in one place and during one shopping trip, rather than purchase such items from a number of different outlets or during different shopping trips. The role of one-stop shopping was highlighted by others early on in our inquiry. The Consumers' Association, in its evidence to us, highlighted the importance of the consumer's weekly shop for groceries: it felt that multiples largely competed against other multiples for repeat custom based on the weekly shop conducted by individuals or family units with the aim of satisfying a majority of the household's grocery needs.

4.4. Evidence and views submitted by the main parties to the inquiry on grocery shopping patterns and possible economic substitutes to supermarket shopping are then presented (paragraphs 4.20 to 4.69). Evidence on grocery shopping patterns from our consumer survey is presented in paragraphs 4.70 to 4.86. This is followed by a summary of more formal analysis of price sensitivity effects by store size, derived from our model of grocery demand.

4.5. Broader qualitative factors may also have a bearing on the assessment of the relevant product market, if they lead to a high degree of market segmentation. Markets may sometimes be segmented because of differences in types of customer appeal (of different firms or their products), or because of the competitive strategies pursued by firms. In this respect, the role of the discounters is addressed in paragraphs 4.93 to 4.107, which concludes the discussion of the relevant product market for groceries.

4.6. We then turn to an account of the geographic market for groceries. Paragraphs 4.108 to 4.126 examine the issues, the views of the main parties, and different approaches to the measurement of local catchment areas. The remainder of the section presents evidence on how far consumers travel for their main grocery shopping, and the extent to which the distance between stores affects the price sensitivity between them.

4.7. Our terms of reference were amended to include Northern Ireland. We considered whether there were any special features of the grocery sector in Northern Ireland—for example, different shopping habits—that might have a bearing on market definition. We drew upon the results of a 1998 survey of consumers in Northern Ireland commissioned by the GCCNI, the results of which are reported in paragraphs 4.145 to 4.148.

The terms of reference

4.8. We were required to investigate and report on a possible monopoly situation in the supply of groceries in the UK from stores in each of which:

- (a) the space devoted to the retail sale of groceries exceeds 600 sq metres; and
- (b) the space devoted to the retail sale of foods and non-alcoholic drinks exceeds 300 sq metres; and

which are controlled by a person who controls ten or more such stores as are described above.

4.9. These therefore are stores that fall within the definition ‘reference store’. Groceries were defined as including food, drinks (alcoholic and non-alcoholic), cleaning products, toiletries and household goods; but excluding petrol, clothing, DIY products and financial services. We considered some items sold in reference stores as not constituting groceries, such as newspapers and magazines, videos and compact discs, tobacco, and pharmaceuticals sold from a pharmacy counter.

The relevant economic market

4.10. We had to consider whether the economic market was wider or narrower than that indicated in the terms of reference for the inquiry. We also tested the definition of groceries (see below). The ‘economic market’, a concept used widely by competition authorities including the US Department of Justice (DoJ), provides the essential starting point for any competition analysis within a sector or industry. It may be defined conceptually by reference to what is known as the ‘hypothetical monopolist’ test. According to the 1992 Horizontal Merger Guidelines issued by the US DoJ, the economic market is the minimum number of products and geographical area in which a hypothetical profit-maximizing firm that was the only present and future seller of those products (ie a hypothetical monopolist) could profitably impose at least a small but significant and non-transitory increase in price. The economic market is not necessarily equivalent to the market in which companies may see themselves as operating from a business or commercial perspective.

4.11. In determining the scope of the economic market, two concepts of consumer and supplier behaviour can be applied. The first of these concerns the scope for demand-side substitution by users of the product or service in question, ie the extent to which users could switch to alternative products or services, sufficient to constrain the pricing behaviour of the hypothetical monopoly supplier. This will depend largely on the pattern of consumer preferences, ie the extent to which users regard the product and alternatives as effective substitutes. It is not required that all users regard the products as perfect substitutes in order for them to fall within the same market, but rather that sufficient numbers of consumers would switch to the alternative, in response to a modest increase in price, in order to constrain the pricing behaviour of the hypothetical monopoly supplier.

4.12. Supply-side substitution, on the other hand, concerns the extent to which producers not currently in the market could easily switch existing productive capacity into supply of the goods or services in question, sufficient to render unprofitable any price increase by a hypothetical monopoly supplier. This depends, inter alia, on barriers to entry and, in practice, the dividing line between supply-side substitution and new entry is not very clear.¹ We consider barriers to entry in Chapter 6 on ‘The market’ (and related issues to do with supermarket costs and the land planning regime in Chapters 10 and 12, respectively).

4.13. While the above provides the conceptual framework for thinking about the economic market, it is difficult in practice to apply the hypothetical monopolist test directly. In particular, it is important that the benchmark price (ie against which switching to substitutes is assessed) is the fully competitive price. If firms have market power, the prevailing price is likely to reflect this and may already be raised to the point where a further price increase would not be profitable, making it difficult to identify the competitive price level in such circumstances.

4.14. Hence it is necessary to rely on a range of indirect evidence of consumer and supplier behaviour. From such evidence, one can then make a judgement about the likely results were the test to be applied in practice. In the context of this inquiry, we considered evidence on four issues in particular, from our own studies and other sources:

- (a) the importance of one-stop grocery shopping to consumers;
- (b) the main parties’ perspectives on the size of store and product range necessary to provide a one-stop shop;
- (c) the degree of consumer switching between alternative outlets for main grocery shopping; and
- (d) how far consumers travel for their main grocery shopping.

¹In fact, the US DoJ’s 1992 Guidelines state that supply-side substitution is now considered under the heading of barriers to entry.

The relevant product market for groceries

Definition of groceries

4.15. A definition of groceries was provided by our terms of reference, as set out above. This definition of groceries was broadly accepted as valid by a majority of the parties, although some said that the definition was not fully representative of the full range of products consumers would expect to find in a grocery outlet, or of all the products sold in their stores. Among those companies suggesting a wider definition of groceries, some differences in views were evident. Some observed that many of the excluded items formed an important part of their commercial strategy and considered that the definition of groceries could be wider to reflect the fact that they operate in these areas. Others also felt that the definition should take account of the recent expansion of the major multiples into new products or services—for example, petrol, financial services, post offices—but from the perspective of the effect this might have on smaller specialist retailers and on the viability of town centres.

4.16. We considered whether groceries as defined in our terms of reference would be robust as an economic market definition. We were primarily interested in the one-stop form of grocery shopping (as described in paragraph 4.3). This raised the question of whether there were particular products that were more or less likely to be purchased as part of a main grocery shopping basket.

4.17. Our consumer survey was used to investigate this issue. We considered it unnecessary to test for mainstream grocery categories such as fruit, vegetables, meat, tinned food, packaged food or frozen food. Instead we looked at eight product categories that were potentially on the margin of the one-stop grocery shop—some of these were already in our terms of reference but others were not. Respondents were asked which, if any, of these eight categories of product they would want to be able to purchase as part of a single visit to a supermarket for their main grocery shopping. The most frequently chosen category was toiletries (72 per cent), followed by ‘wines, spirits and beer’ (37 per cent) and ready-prepared meals (36 per cent). Next were medicines (31 per cent) and confectionery (29 per cent). The least frequently chosen categories were newspapers/magazines/videos (24 per cent), clothing (13 per cent), and DIY products (9 per cent). 12 per cent indicated that none of these categories was particularly important to them in a one-stop grocery context.

Characteristics of demand for groceries—basic considerations

4.18. Demand for groceries has a number of distinct features:

- (a) Demand for the principal component of groceries, food, has a low income elasticity, ie it responds slowly to changes in income. Growth in population, which influences aggregate demand, has been slow. Data from the Family Expenditure Survey show a long-term decline in household spending on food and non-alcoholic drinks relative to total household expenditure, from 26 per cent in 1968, to 20 per cent in 1986, and to 17 per cent in 1998/99.¹
- (b) Search costs² for groceries can be seen as significant in two ways. First, individual grocery items tend to have a low price or value, which suggests that search costs will be high in relation to the price or value of individual items. Second, grocery demand is usually expressed in terms of demand for a bundle of products, rather than individual items. As bundles of products are more difficult to compare than individual items, search costs are likely to be high for this reason as well. These characteristics differentiate grocery retailing from other retail markets where comparison of alternative products is much more feasible and worthwhile. Against this, Tesco said that grocery items were more comparable than goods bought in other retail markets, such as clothing, jewellery, furniture or holidays, and that the pricing of items within the grocery bundle was more transparent than in other forms of retail bundling (for example, electrical goods with complements such as software and warranties). Safeway suggested that, although search costs may be high relative to the cost of individual grocery products, price transparency is helped by the frequency of purchase.

¹*Family Spending: A Report on the 1998–99 Family Expenditure Survey*, ONS 1999. The definition of food includes some non-reference items, such as take-away meals consumed at home.

²Search costs are those associated with finding information on the price and quality characteristics of products and their suppliers.

- (c) Consumers typically have varying shopping needs for groceries, resulting in different forms of shopping trips. One form of grocery shopping will be undertaken in order to purchase a substantial part of the household's weekly grocery needs (often called primary or main shopping), whereas other trips will be designed to top up or to complement the main shopping trip (often called secondary shopping). The evolution of different grocery formats within the grocery sector, for example large supermarkets or convenience stores, can in part be viewed as a solution to the problem of minimizing search costs for different forms of grocery shopping, and hence an effective and desirable response to consumers' varying shopping needs.
- (d) A number of other potential influences on demand were identified to us. We were told that increasing labour force participation rates, changes in working patterns and wider demographic changes meant less time available for activities viewed by many as a chore. This could be expected to have a number of effects: consumers would attach a premium to convenience in their choice of outlet for particular grocery needs; and to some extent there would be substitution of products within the grocery basket (for example, ready-prepared meals as an alternative to conventional foods prepared at home). Other influences on demand include the growth in overseas travel, which can influence customer expectations of the range and quality of products available from grocery retailers.

Views and evidence of the main parties

4.19. In terms of the scope of the relevant product market for groceries, the main parties were somewhat divided in their views. With the exception of Asda, the larger multiples favoured a wider definition of the market than that implied by our terms of reference, to take account of the impact of smaller specialist grocers and convenience-type outlets. Their views and evidence are best considered under a number of headings, as follows:

- (a) patterns of grocery shopping and the relevance of the 'one-stop shop';
- (b) economic substitutes to grocery shopping at supermarkets; and
- (c) the role of the top-up shopper.

Patterns of grocery shopping

4.20. Several of the larger multiples told us that they did not regard the distinction between main and secondary shopping as a valid or useful way of describing grocery-shopping patterns. We were told that any definition of the relevant market based on an assumed 'big weekly shop', carried out in a supermarket, would fail to take account of the very wide variation in shopping patterns that exists in practice and the ability of smaller stores to provide core grocery needs.

4.21. Some of the larger multiples—principally Tesco and Sainsbury—said that consumers exhibited a wide range of grocery shopping patterns, often depending on individual circumstances. This diversity of shopper behaviour could be seen in the following ways:

- (a) households without access to a car may shop a number of times per week in order to be able to carry groceries home;
- (b) while some customers will purchase almost all of their grocery requirements from one outlet on a weekly basis, others will divide their grocery shopping between a number of different grocery stores;
- (c) others may use a supermarket for part of their grocery requirements, but turn to specialist stores for the remainder;
- (d) some shoppers purchase a wide range of products from a small store, while others will purchase a limited range from a large store (even though more typically larger stores generate larger baskets); and

- (e) there could be significant variability in the size and frequency of grocery purchases for the same shopper over time.

4.22. Tesco developed this line of thinking about shopper behaviour somewhat further than most. It identified four stylized types of shopping behaviour, which it suggested would be obscured by the one-stop and secondary shopping distinction. Its stylized forms of shopping behaviour were:

- (a) *Pure one-stop shopping*. This is where all grocery items for a given period are purchased from a single store in a single visit, which may or may not be a supermarket.
- (b) *Mixed one-stop and top-up shopping*. This is where most grocery items for a given period are purchased from a single store in a single visit, with top-up items purchased during another visit, to a supermarket (which may be the same one as before or a different one) or to another (non-supermarket) store.
- (c) *Sub-basket switching*. This is where most grocery items for a given period are purchased from a single store in a single visit. However, a specific set of items will be bought from a different store, which may or may not be a supermarket. These items are not top-ups but are products that the customer would prefer to purchase from another retailer.
- (d) *Multi-shopping*. This is where the required grocery items for a given period are purchased during a number of different visits, which may be to the same store or to different stores.

4.23. On the basis of these stylized forms of behaviour, Tesco drew a number of conclusions. First, it said that these forms of grocery shopping were consistent with 11 types of grocery shopping trip,¹ most of which would be observationally equivalent from the point of view of the retailer, since the latter sees only whether a large or small basket is bought and does not know the shopper's behaviour at other stores. Second, Tesco suggested that its classification showed that there are a significant number of shoppers who could be classed as marginal between the different types of shopping trip, for example mixed one-stop/top-up shoppers may have the opportunity to switch more of their grocery purchases to top-up shopping trips. Third, Tesco said that customer data showed that customer behaviour is volatile over time, with customers likely to move in and out of different shopping categories.

4.24. On the question of one-stop shopping, Tesco reported the results of an analysis it had undertaken to determine the importance of one-stop shopping for different supermarket fascias and some other types of shops, using data supplied by Taylor Nelson Sofres (TNS) on the spending patterns of 1,994 shoppers over the period from 13 December 1999 to 5 March 2000. The exercise sought to identify the proportion of spend at different supermarkets that was accounted for by one-stop shopping, the latter defined by Tesco as those shopping trips accounting for 60, 70 or 80 per cent of average weekly spend. The results are shown in Table 3 of Appendix 4.1. On Tesco's 60 per cent criterion, the proportion of spend accounted for by one-stop shopping was around 72 to 78 per cent at Asda, Morrison, Sainsbury and Tesco. The proportion of one-stop shopping as defined fell to around 53 per cent for Somerfield and Kwik Save, and to around 38 per cent for M&S. On the basis of the more restrictive definitions (ie using the 70 per cent and 80 per cent criteria), the role attributed to one-stop shopping declined. The analysis suggested that one-stop shopping accounted for 68 per cent of Tesco spend on the 70 per cent criterion, and just over 60 per cent on the 80 per cent criterion.

4.25. Tesco said that the significance of this analysis was threefold. First, that no retailer provided pure one-stop shopping. Second, that between 30 and 40 per cent of spend at Asda, Morrison, Safeway, Sainsbury and Tesco was not one-stop shopping. Third, that the proportion of one-stop shopping spend at the limited range discounters was higher than most of the other main parties. It said that this demonstrated that one-stop shopping was possible at stores below about 1,400 sq metres (15,000 sq feet) and that these retailers competed actively with other reference retailers.

4.26. We questioned whether such calculations of one-stop shopping might be sensitive to the size of basket purchased by shoppers in the sample, ie they might include shoppers with very small average spend who were doing most of their shopping at a particular outlet. Such shopping baskets might amount

¹Tesco's typology assumes four types of shopping trip, as set out in paragraph 4.22, potentially conducted across three types of retailers—Supermarket A, Other supermarkets, and Other stores. Eleven different types of shopping trip, seen from the perspective of Supermarket A, result. These are shown diagrammatically in Table 2 of Appendix 4.1.

to only a small number of grocery items and erroneously appear as main shops. Tesco subsequently recalculated its figures for one-stop shopping, this time imposing a £20 minimum spend threshold, which it said was around the average basket size in Tesco. The recalculated figures are shown in Table 4 of Appendix 4.1. On the 60 per cent criterion, the proportion of spend accounted for by one-stop shopping as defined fell slightly for the largest grocery multiples. Asda was found to have the highest proportion of one-stop shopping as defined, at 76 per cent. The figures were 73 per cent for Tesco, 72 per cent for Morrison, and 70 per cent at Sainsbury. Measured one-stop shopping also fell for the discounters—it was around 57 per cent in Netto and around 50 per cent in Aldi and Lidl.

4.27. Tesco said that it did not regard a minimum spend threshold as relevant to the definition of one-stop shopping. It considered that such a threshold would skew the market towards higher-income groups and exclude from the market spending decisions by the elderly, students and other low-income groups. It would also reduce the size of the measured one-stop shop market.

4.28. Tesco said that its analysis of the TNS dataset contradicted the view that customers could not or did not purchase large baskets at the discounters. We noted that the TNS data appeared to show that maximum spend levels for a 12-week period were lower for the discounters than for the major parties to the inquiry, though they were slightly higher than for other main parties. Tesco indicated that this reflected a higher proportion of non-reference goods sold at stores of the major parties.

4.29. We had certain reservations about some of the conclusions drawn from the TNS data. Some of the results appeared ambiguous or suggested unusual patterns of shopping. The data suggested that 13.3 per cent of spending at Boots, and 6.7 per cent of spending at off-licences, was in the form of one-stop shopping (ie from customers spending at least 60 per cent of their grocery spend at the retailer in question). Second, Tesco set the threshold for minimum spend at £20, which it said was the average at its stores. However, the average spend at Tesco would be influenced by secondary shopping trips at Tesco, and by spending at smaller store formats.

4.30. Sainsbury also disputed the relevance of the one-stop shop concept, at least with regard to its customers. It cited A C Nielsen data on shopping patterns for the 12-week period ending September 1998 showing that 48 per cent of Sainsbury customers were main shoppers at Sainsbury, and accounted for 83 per cent of its revenue. This demonstrated, in its view, that 52 per cent of Sainsbury customers were unlikely to be one-stop shoppers at its stores.¹

4.31. Several main parties submitted evidence on frequency of visits, usually in respect of customers at their stores. Tesco referred us to a spend/frequency classification, based on the shopping patterns observed among its Clubcard holders across an eight-week period in 1999 (see Table 5 of Appendix 4.1). This showed that 23 per cent of customers over this period could be classified as weekly customers at Tesco, accounting for 32 per cent of sales. Just over a quarter of Clubcard holders were more frequent customers at Tesco over the period in question, while 22 per cent were defined as infrequent customers, and 28 per cent as lapsing. Tesco suggested that this was indicative of a wide range of shopping patterns among customers at its stores. Tesco's data also showed 9 per cent of customers shopping daily, with an average weekly spend of £54, 17 per cent shopping twice weekly with an average weekly spend of £40, and 23 per cent shopping weekly with an average weekly spend of £34. Tesco suggested that this demonstrated that daily shoppers could not be part of a weekly one-stop shop market, as they shop for relatively small baskets, even though their weekly spend may be high. However, we put it to Tesco that neither set of data was inconsistent with an alternative shopping pattern, namely shoppers having one large shop every week and one smaller top-up shop (or, in some cases, more than one top-up shop).

4.32. Tesco responded with a further analysis, using daily data on the shopping habits of a random sample of 105 Clubcard holders over 12 weeks who each carried out more than 40 visits over the period. Its analysis showed that about two-thirds of shopping trips in the sample were for amounts lower than £15, and 91 per cent were for amounts lower than £40.

4.33. We noted several aspects of Tesco's analysis of the spending patterns of frequent customers at its stores. First, even among this sample of frequent or daily visitors, there were some large basket sizes. Second, the data seemed consistent with several possible types of shopping behaviour. The observed

¹In this classification a main shopper is one who spends more at the defined store group than at any other store group over a 12-week period, whereas a secondary shopper is one who visits a defined store group more than twice over a 12-week period, but a greater proportion of their expenditure occurs in another defined store group.

distribution (lots of small baskets, but a tail of large baskets) could be consistent with shoppers carrying out one large shop every week but also visiting on a more frequent basis for top-ups. Third, the sample included baskets purchased at Tesco stores in general, including its smaller formats, and might not reflect spending patterns at those stores of sufficient size to provide a one-stop shop. Fourth, the data did not preclude the possibility that some of these individuals were doing a one-stop shop at another supermarket, ie some of the sample might be secondary shoppers at Tesco.

4.34. Sainsbury also referred to data from TNS¹ indicating that the majority of its customers did not appear to be main shoppers at Sainsbury (ie did not spend at least 50 per cent of their grocery expenditure at Sainsbury). Its analysis of TNS till-roll data for a 12-week period ending 14 November 1999 indicated that 77 per cent of customers at Sainsbury stores spent less than 50 per cent of their total grocery expenditure at Sainsbury stores (25 per cent spent between 20 and 50 per cent there, and 52 per cent spent less than 20 per cent there). These data also indicated that less than 45 per cent of Sainsbury main shoppers shopped once a week. The proportion of main shoppers as defined was related to size of store. About one-quarter of Sainsbury main shoppers at stores of about 465 sq metres (5,000 sq feet) or less shopped once a week. This figure rose to around 43 per cent for stores of about 2,325 to 5,575 sq metres (25,000 to 60,000 sq feet), and to around 59 per cent for stores above about 5,575 sq metres (60,000 sq feet).

4.35. One general feature of these types of customer analyses is that they are specific to customers of a given supermarket and therefore do not tell us about more general shopping patterns, ie some of the sample will be recorded as infrequent customers of Sainsbury or Tesco because they are using the supermarket in question for top-up, rather than main, shopping. These shoppers may, of course, be primary shoppers at some other supermarket (whose loyalty card they may also hold).

4.36. Sainsbury subsequently submitted further analysis of a different dataset of spending patterns among households in the TNS SuperPanel. It examined the frequency of shopping trips for baskets of different minimum size (£30, £50, £75 and £100) among the sample for a six-month period up to 2 April 2000. The frequency of visits for shopping baskets of different minimum sizes was then examined. The analysis indicated that 8 per cent of the households did not make a shopping visit of greater than £30 in value, while just under a quarter, 23 per cent, undertook between one and five shopping visits of greater than £30 in value. Just over a third, 34 per cent, undertook between 6 and 15 visits where the transaction size was more than £30. 13 per cent had between 16 and 20 such shopping visits over the sample period, while 23 per cent had over 20 such visits. Sainsbury said that its analysis contradicted the view that one-stop shops are frequent and regular events.

4.37. Sainsbury also used the TNS data to investigate usage of different fascias. Of the TNS households who made shopping trips of £50 or more at least once in the six-month period, 47 per cent used one fascia, 32 per cent two fascias, and 15 per cent three fascias. When shopping trips of £30 or more were examined, it was found that 28 per cent used one fascia, 29 per cent used two fascias, and 22 per cent used three fascias over the six-month period in question.

4.38. Several main parties did view the 'one-stop shop' as a valid concept (though not necessarily of relevance to economic market definition). The one-stop shop was perceived by them to be generally valid for the following reasons:

- (a) lifestyle trends meant that there was generally less free time available for an activity most people would regard as a chore;
- (b) although consumers might not make a hard and fast distinction between stores in terms of their size, large stores could cater for all customers' needs, whereas a small store format was best able to provide secondary or top-up shopping needs;
- (c) although convenience stores might carry a basic range of products sufficient for some customers, they could not provide a one-stop shop for those shoppers interested in having a choice of products within each product category;

¹Sainsbury's analysis is based on till-roll data collected from the TNS SuperPanel, 10,000 consumers selected at random throughout Great Britain by TNS. The till-roll data are used to record the location of shopping and the items purchased.

- (d) most customers, with the exception of the old and less affluent, would tend to see themselves as doing 'one big shop' every week; and
- (e) while not all customers wanted or needed to buy their groceries on a weekly basis, and might be happy to buy from more specialized outlets, increasingly they might not have this option.

4.39. Evidence that tended to support the importance of weekly one-stop shopping was provided by Asda. It provided the results of a survey of its shoppers undertaken by Researchcraft Ltd, based on a total of 5,000 exit interviews conducted at ten Asda stores in mid-January 2000. The results indicated that more than half (55 per cent) of Asda shoppers at these stores shopped once a week or less frequently. The remainder shopped nearly every day (14 per cent) or two to three times a week (32 per cent).¹ The tendency to shop weekly varied according to store format, with daily shopping far less common at hypermarket formats than town centre stores.

4.40. The survey provided information on the distribution of Asda shoppers by amount spent (in the store that day). One-quarter had spent £10 or less in store on the day that they were interviewed, while just under a fifth (19 per cent) spent between £10 and £20. Almost one-third (32 per cent) had spent between £20 and £50. Almost one-quarter (24 per cent) had spent £50 or more in-store on the day of interview.

4.41. In terms of mode of transport, the survey of Asda shoppers indicated that just over three-quarters (77 per cent) travelled to Asda by car, compared with 11 per cent who walked, 9 per cent who travelled by bus, and 2 per cent who used a taxi. Car usage was slightly higher at weekends (82 per cent) compared with weekdays (76 per cent). There appeared to be a relationship between mode of transport used to visit an Asda store and average spend in Asda. Shoppers on foot had an average spend of £16, compared with an average expenditure of £23 for those travelling by bus. Average expenditure increased to £39 for car-borne shoppers. Shopping weekly or less frequently also increased markedly for car-borne shoppers, compared with those travelling on foot. Just over three-fifths of car-borne shoppers visited once a week or less frequently, compared with 46 per cent and 21 per cent, respectively, of shoppers travelling by bus or on foot.

4.42. The results of the Asda visitor survey relate to both main and secondary Asda shoppers, ie some will be main shoppers at other stores. Four-fifths of those interviewed were found to be main shoppers at Asda.

4.43. Safeway told us that the concept of the one-stop shop was both relevant and valid, due to increasing pressure on customers' time and the greater availability and desire to spend time on leisure activities. It suggested that the majority of customers were looking at ways to minimize the time spent on grocery shopping. However, it said that for Safeway the key competitive battle was to achieve a high share of a customer's weekly spend, and it felt that it was irrelevant whether this was achieved by a one-stop shop or several small shops.

4.44. Somerfield told us that it regarded the concept of the one-stop shop as relevant and valid, though there was considerable diversity in consumers' shopping patterns. It said that it derived a high proportion of its sales from customers who spent the majority of their weekly budget in competing outlets. It told us that Somerfield derived 57 per cent of revenue from primary shoppers, 33 per cent from secondary shoppers, and about 10 per cent from tertiary shoppers.²

4.45. The discounters told us that the one-stop shop concept was valid, although they did not view their stores as providing one-stop grocery shopping.

4.46. CWS said that the idea of superstores was based on the concept of one-stop shopping, and that, in its experience, consumers tended to think primarily in terms of main shopping. Other shopping patterns were possible, however; some older or less affluent people, for example, might shop every day for immediate needs.

¹This includes both main and secondary shoppers.

²Somerfield said that it classified its customers into primary (more than 50 per cent of spend with Somerfield), secondary (between 10 and 50 per cent with Somerfield) and tertiary (less than 10 per cent).

Economic substitutes for supermarket shopping

4.47. We were told by some of the larger multiples that there were several full or partial economic substitutes to grocery shopping at supermarkets.

4.48. First, it was put to us that smaller grocery formats—small non-reference stores, convenience stores and petrol forecourts—were often capable of serving core grocery needs for many shoppers. Both Sainsbury and Tesco cited their own experience of operating smaller store formats, which indicated to them that such stores have sufficient range for shoppers to complete a weekly shop and also compete against larger formats. Tesco mentioned its Express stores (attached to petrol filling stations), which offered around 2,800 lines often in outlets with sales areas less than 200 sq metres.

4.49. Sainsbury reported the results of a study it had undertaken to test the proposition that smaller store formats (below 600 sq metres) could support a core range of products sufficient for a weekly shop. It took a random sample of just over 100 baskets of between £38 and £42 from 47 of its stores during a two-week period in July 1999. It identified 219 products found in two or more such baskets. It found that an equivalent product for each item in the 'weekly shopping basket' as defined could be purchased from its local stores (which are below 280 sq metres (3,000 sq feet)), and from many stores in the 'convenience store' category. Of 81 products found in more than 10 out of 107 surveyed baskets of Sainsbury shoppers, 80 identical or equivalent products could be bought in M&S, 78 in Lidl, 74 in Netto and 72 in Aldi.

4.50. It was also put to us (by Tesco) that typically a large proportion of a supermarket's revenue is generated from only a limited number of lines. Tesco indicated that 20 per cent of its total UK sales came from 280 lines, and 50 per cent of sales were derived from 2,140 lines. Tesco was therefore of the view that a significant proportion of general grocery requests could be met from only 500 to 1,000 product lines.

4.51. We asked supermarkets about the minimum store scale required for one-stop shopping, defined by reference either to store size or to number of product lines. As shown in Table 1 of Appendix 4.1, a majority of companies put the minimum floor space required to operate a one-stop shop in the range from about 1,625 to 2,970 sq metres (17,500 to 32,000 sq feet), and the minimum number of product lines in the range 8,000 to 23,000.

4.52. Somerfield told us that store size requirements would depend on a variety of factors. In larger-sized catchments with a more diverse customer base, larger stores were needed to offer more choice. It regarded about 1,625 sq metres (17,500 sq feet) as the minimum size to meet customers' grocery requirements. However, in a store of that minimum size it could be difficult to accommodate extra facilities (coffee shop, photo booth etc) which customers perceived as an intrinsic part of a modern food store. It said that the minimum number of product lines required to offer one-stop shopping was around 8,000. This would be adequate where there was little competition from superstores, and where customer expectations were conditioned by small store size and locational convenience. However, it considered that this level of ranging and space allocation would not allow for a significant seasonal offer, or a discretionary non-food range, with consumer choice compromised as a result. It said that in locations where it competed against larger superstores it needed to offer greater breadth and depth of range in order to provide a credible alternative, and that this was by far the most frequent scenario it faced.

4.53. Aldi said that one-stop shopping was more likely in out-of-town stores, as their often isolated location meant that their offer needed to be more comprehensive and appealing. Safeway told us that town or district centre locations would tend to attract more top-up and convenience shoppers than out-of-town stores. It originally told us that the minimum size for one-stop shopping was 2,090 sq metres (22,500 sq feet), but subsequently said that the minimum size could be as low as about 740 sq metres (8,000 sq feet). It said that it was relative size (ie relative to the size of competitor stores), rather than absolute size, which was the main determinant of which store was chosen for the main shop.

4.54. CWS said that a retail selling space of 1,500 sq metres or more was required, though in more rural areas a smaller supermarket might provide a one-stop grocery shop for part of the time; for example, some consumers might use a local store for three weeks out of four, but travel to a superstore some distance away on the fourth week.

4.55. A number of the companies supplied information to us on the relationship between grocery expenditure patterns and store size or location. Generally, the picture provided was one of increasing average transaction size for larger-sized stores and those situated in out-of-centre locations. Sainsbury Reward Card data showed that the average basket size was £14.40 in town centre stores, increasing to £23.50 in edge-of-centre stores, and to £27.40 in out-of-centre stores (see Table 10 of Appendix 4.1).

4.56. Tesco supplied us with an analysis it had undertaken of average basket size by store type, based on 1998/99 sales data, which showed that a range of different sized transactions could be observed at smaller and larger stores. For its small stores—the Metro format—the data showed a high proportion of small basket sizes, with 46 per cent of transactions under £5 and about 29 per cent between £5 and £9.99. For each of the larger store formats—high street, superstore and Extra—the distribution of basket sizes had two ‘peaks’. In other words, there was a high proportion of very small basket sizes, and a high proportion of large basket sizes, and relatively fewer medium-sized baskets. The analysis also showed that the largest store formats—superstores and Extras—had proportionately more large transactions.

4.57. We investigated the relationship between average expenditure and store size. Average weekly spend was plotted against net (sales) area for a number of the main parties. For most of the supermarkets examined there was a positive association between average spend and store size,¹ ie average spend increased as the size of store increased. For stores of about 1,860 sq metres (20,000 sq feet) the average transaction size was around £18 for Tesco, increasing to around £25 for stores of about 2,790 sq metres (30,000 sq feet). For stores of about 3,720 sq metres (40,000 sq feet), the average transaction size for Tesco stores was around £35. Average transaction size at Sainsbury was around £16 for stores of about 1,860 sq metres (20,000 sq feet), increasing to around £23 for stores of about 2,790 sq metres (30,000 sq feet), and to around £29 for stores of about 3,720 sq metres (40,000 sq feet). One exception to this general trend was Asda, where no evidence was found of a relationship between store size and spend.

4.58. Several of the main parties suggested that there were a series of partial economic substitutes to the basket of products purchased at supermarkets when viewed at the individual product or category level. Such opportunities for partial substitution were offered both by smaller specialist grocers—bakers, butchers, greengrocers, and so forth—and by non-grocery retailers who were the market leaders in some product categories, for example Boots for toiletries, First Quench for off-licence alcohol sales etc. Collectively, these were viewed as placing a competitive constraint on the multiples’ offering for the product categories in question. A number of the major parties told us that they often benchmarked their product offering in certain categories against these market leaders and monitored category sales within stores that faced close competition from them. In addition, the fact that many supermarket customers visited these specialists and independents suggested that consumers would be well aware of comparative price, quality and service levels between reference and non-reference stores.

4.59. To illustrate the propensity of their customers to undertake grocery shopping at non-reference stores, several of the main parties presented analyses of customer expenditure and shopping visits derived from commercial market research sources such as the TNS SuperPanel. These expenditure analyses are reproduced for a number of the multiples in Appendix 4.1 (Tables 6, 11 and 14).

4.60. An analysis of Tesco customers’ shopping patterns, derived from the TNS SuperPanel data, is shown in Table 6 of Appendix 4.1 for the 12-week period ending June 1999. This analysis appears to show that 37 per cent of Tesco customers shopped at least once at Boots over the period, making an average of 2.6 visits and spending around £20 per visit. Tesco acknowledged that this latter figure included prescriptions and over-the-counter medicines, both items we considered as not constituting groceries. It told us that, as the TNS data were calculated from the figure recorded at the bottom of the till receipt, it was not possible to break the till-roll total down into its constituent parts. However, it suspected that the proportion of Tesco customer spend at Boots and Superdrug accounted for by prescriptions was likely to be small, because most prescriptions were free at the point of sale, and prescriptions and over-the-counter medicines were often bought at a separate counter (with a separate receipt) and would therefore not always be included in the till-roll data.

4.61. Over the same period, 19 per cent of Tesco customers visited a butcher, making 4.2 trips and spending almost £9 per visit. Overall, for the period in question, 13 per cent of spending by Tesco customers took place at non-reference stores. Over two-thirds of expenditure occurred at the Big 4 grocery multiples—Asda, Safeway, Sainsbury or Tesco.

¹These were Tesco, Sainsbury, Safeway, Somerfield/Kwik Save (analysed separately), Waitrose and Netto.

4.62. Similar analyses of spending patterns were provided by a number of other multiples. Sainsbury showed us a separate loyalty and residual spend analysis, again derived from TNS data, which showed that, over a 52-week period to the end of June 1999, 23.5 per cent of the grocery expenditure of its customers occurred in a Sainsbury supermarket, with the remainder spent in other supermarkets and independents. Asda provided a duplication analysis, derived from the TNS till-roll database, showing the proportion of Asda shoppers shopping in other retailers' stores. This showed 36 per cent of Asda customers shopping in Sainsbury, 43.5 per cent in Tesco, 28 per cent in Safeway, 31 per cent in Iceland, 27 per cent in Kwik Save, 23 per cent in discounters, 19 per cent in Somerfield, and 15 per cent in Morrisons. 43 per cent of Asda customers over the time period in question shopped at a Co-op or independents.

4.63. These types of expenditure analyses count as a customer of a given multiple any member of the sample who visits a store of that fascia over the sample period. This means that they will pick up the expenditure patterns of someone who is a very occasional customer of a given multiple but who shops most of the time at other stores; for example, a person who calls in to buy a loaf of bread at supermarket A but who most of the time is a regular shopper at supermarket B. This effect will therefore obscure the expenditure patterns of more regular shoppers at a given multiple, and may exaggerate the significance of top-up shoppers.

The role of the top-up shopper

4.64. A number of the main parties referred to the influence of top-up grocery shopping on aspects of the supermarket offer such as pricing and service. Most of the major parties told us that they had a significant number of top-up customers visiting their stores and, therefore, potentially faced competition from a wider class of retailers than the set of operators that might be seen as providing a one-stop service. Safeway, for example, said that top-up shoppers accounted for nearly 50 per cent of sales. As both Asda and Safeway put it, one of the aims of a multiple would be to convert as many of its secondary shoppers as possible into primary shoppers at its stores.

4.65. However, views differed as regards the likely strength and significance of this relationship. Some, principally Tesco and Sainsbury, viewed the overlap as sufficiently strong to justify a wide definition of the relevant product market, to include the supply of groceries from non-reference grocery stores. Asda said that its principal and most direct competitors are other multiples, though the class of competitors is wider than that.

4.66. One point put to us by several of the major parties—Tesco, Sainsbury and Safeway—was that supermarkets were not able to price discriminate between main and top-up shoppers (or, more generally, between marginal shoppers who might switch in the event of a price rise and intra-marginal shoppers who would not do so). As such, we were told, the major parties could not be indifferent to the top-up shopper when setting their prices across the board, and their inability to discriminate between different types of shopper meant that one could not argue that there were different 'one-stop' and 'top-up' markets.

4.67. Sainsbury said that grocery multiples could not and did not discriminate between different groups of customers, supplying all at the same prices—regardless of the size of their basket. Its analysis of TNS data, discussed above, went against any view that top-up shopping was so limited as to lack the potential to constrain the price-setting behaviour of one-stop shop store operators.

4.68. Safeway indicated that, although many shoppers preferred to concentrate their grocery purchases in a weekly shopping trip, it was sufficient for just some of a multiple's customers actually or potentially to migrate to the discounters or the non-multiple segment of grocery retailing for this to exercise a price discipline on the whole supermarket sector. In its view, it was the marginal shopper—with the greatest tendency to migrate—who determined prices. Safeway told us that it had a high proportion of secondary shoppers and could not be indifferent to them in terms of its price setting. It said that its stores were, on average, smaller than those of others (Asda, Morrison, Sainsbury and Tesco) and included many located in town or district centre locations which compete directly with other stores and were more likely to attract secondary shopping.

4.69. On the competitive role of the top-up shopper, we noted two points. First, there is the question of whether or not the multiples can price discriminate. They may not be able to distinguish main or top-

up shoppers, but they may be able to identify some of the products more likely to be bought by top-up shoppers and compete on these more intensively. Second, if top-up shoppers are capable of exerting competitive pressure on a line-by-line or category-by-category basis, then it might be expected that profitability would be broadly equalized across a multiple's entire product offer, particularly if there is a large number of (possibly different) competitors for each product category. This in fact does not appear to happen (see Chapter 8).

Shopper behaviour and preferences: consumer survey

4.70. In this section we record evidence from our survey, carried out in October/November 1999, of 982 individuals solely or jointly responsible for their household's main grocery shopping. Respondents were asked a series of questions relating to main grocery shopping trips and top-up grocery shopping trips. The purpose of this part of the survey was to gain insight into the way consumers shop for groceries, their usage of reference stores and other outlets for different forms of grocery shopping, and the factors influencing their choice of grocery store. Details of survey methodology and results are provided at Appendix 4.2, while the survey questionnaire is reproduced at Appendix 4.3.

Patterns of expenditure on groceries

4.71. For overall expenditure, Table 4.1 shows the distribution of average weekly household expenditure on groceries, both at supermarkets and at other shops. Respondents were asked to exclude from their estimate of weekly household spend any expenditure incurred on non-reference items: petrol, tobacco, newspapers, magazines, medicines, clothing, DIY products and financial services. The median expenditure level on groceries as defined was around £50. Just over two-thirds of shoppers in our survey had an overall weekly expenditure falling in the range £26 to £75. 12 per cent of those interviewed spent £25 or less per week on their overall grocery shopping, while 14 per cent spent between £76 and £100. 7 per cent had a weekly grocery expenditure of £101 or more.

TABLE 4.1 Distribution of respondents by average household expenditure per week on groceries, both at supermarkets and other shops

<i>Expenditure</i>	<i>%</i>
£15 or less	3
£16–£25	9
£26–£40	21
£41–£50	16
£51–£75	30
£76–£100	14
£101–£125	4
More than £125	3

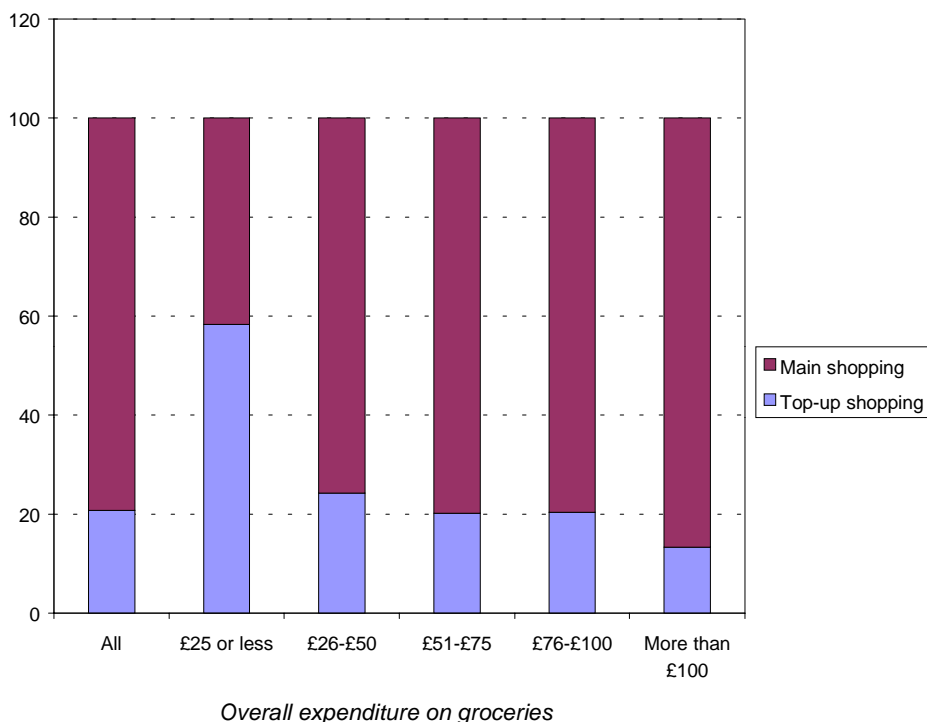
Source: CC consumer survey.

4.72. Average household spend on groceries, as a proportion of income, tended to fall as household income increased. Grocery spend was particularly skewed towards smaller amounts for those main shoppers with a household income of less than £10,000 a year.

4.73. Figure 4.1 shows the distribution of overall grocery expenditure between main and top-up. This figure demonstrates that for low spenders (£25 or less) the distinction between main and top-up is less important.

FIGURE 4.1

Percentage distribution of expenditure between main and top-up shopping



Source: CC consumer survey.

4.74. To gauge the relative importance of supermarkets in overall weekly grocery spend, we asked respondents to estimate how much of their grocery spend would typically be spent at a supermarket. The results are shown in Table 4.2, for different levels of overall grocery spend. It can be seen that, regardless of the level of overall spending on groceries, for most respondents the bulk of weekly grocery expenditure took place at a supermarket.

TABLE 4.2 Percentage distribution of respondents by average weekly spend on groceries at a supermarket, against overall weekly grocery spend

Spend at supermarket	Overall weekly spend on groceries				
	£25 or less	£26-£50	£51-£75	£76-£100	More than £100
£15 or less	47	5	1	1	1
£16-£25	53	14	1	5	-
£26-£40	1	53	9	2	1
£41-£50	-	27	34	7	-
£51-£75	-	1	54	33	17
£76-£100	-	-	-	53	31
£101-£125	-	-	-	1	31
More than £125	-	-	-	-	17

Source: CC consumer survey.

4.75. From the data in Table 4.2, we calculated the proportion of overall grocery spend taking place in a supermarket. The results are shown in Table 4.3, and diagrammatically by Figure 4.2.¹

¹We omitted the smallest overall grocery spend category from Table 4.3, as the small number of class intervals (two) for supermarket spend make the result sensitive to the actual mid-points used for the calculation.

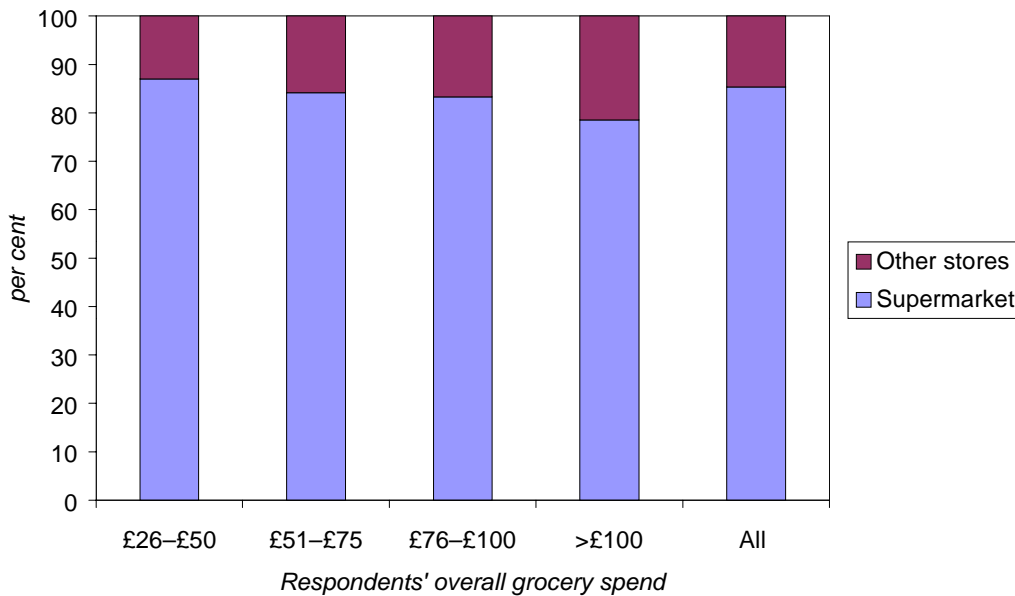
TABLE 4.3 Proportion of overall spend on groceries that occurred at a supermarket

Those with an overall grocery spend of:	% of overall spend in supermarket
£26–£50	87.0
£51–£75	84.1
£76–£100	83.3
More than £100	78.5
All	85.3

Source: CC consumer survey.

FIGURE 4.2

Proportion of overall grocery spend at supermarket(s)

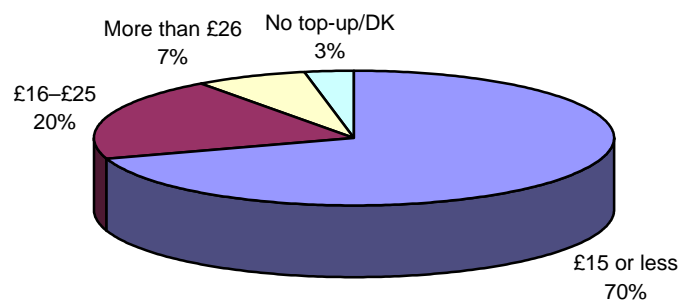


Source: CC consumer survey.

4.76. We also examined the distribution of expenditure on top-up shopping. Just under seven out of ten (69 per cent) respondents had a weekly top-up expenditure of £15 or less, while a further one-fifth spent between £16 and £25 a week on top-up groceries. A further 6 per cent had a top-up spend of between £26 and £40. 3 per cent of respondents reported not having any top-up expenditure. Figure 4.3 shows the distribution of respondents by expenditure on top-up shopping, while Figure 4.4 provides the distribution of respondents by overall grocery spend for comparison.

FIGURE 4.3

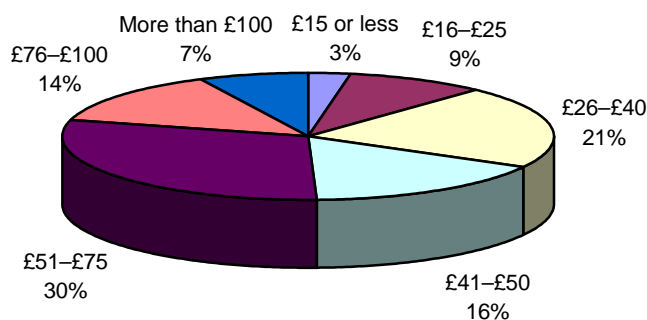
Distribution of respondents by top-up spend



Source: CC consumer survey.

FIGURE 4.4

Distribution of shoppers by overall grocery spend



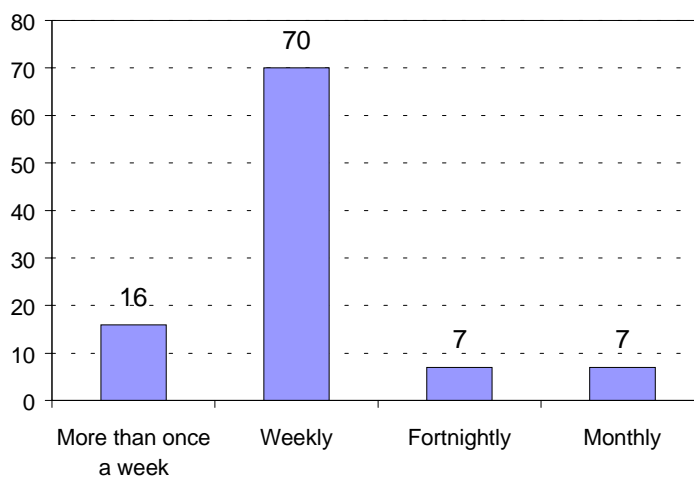
Source: CC consumer survey.

Main grocery shopping habits

4.77. Respondents to the survey were asked how often they carried out their main grocery shopping. A majority of respondents, seven out of ten, indicated that they did their main grocery shopping on a weekly basis, with a further 14 per cent shopping less frequently (7 per cent fortnightly and 7 per cent monthly). 16 per cent reported carrying out their main grocery shopping more than once a week. The results are illustrated in Figure 4.5.

FIGURE 4.5

Percentage distribution of respondents by frequency of grocery shopping



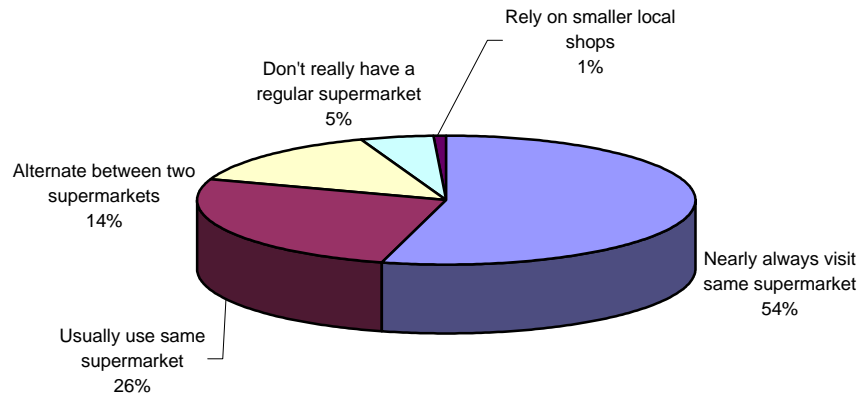
Source: CC consumer survey.

4.78. There was evidence of a greater frequency of main shopping among low-income respondents: 21 per cent of those with a household income below £10,000 a year reported doing their main shopping more than once a week, compared with 13 and 14 per cent, respectively, of those in the £10,000 to £17,000 and £17,000+ income categories. A similar relationship was observed between frequency of main shopping and mode of transport. About one-quarter each of those who walked or took a public bus service to their regular supermarket carried out their main shopping more than once a week, compared with 13 per cent of car-borne respondents. Some further demographic splits are described in Appendix 4.2.

4.79. The survey was used to investigate usage of different grocery stores (Figure 4.6). Over half of respondents (54 per cent) indicated that they nearly always visited the same supermarket for their main grocery shopping, with a further 26 per cent reporting that they usually used the same supermarket but occasionally might use a different one. 14 per cent reported using two different supermarkets that they alternated between every couple of shopping trips. 5 per cent of respondents reported not having a regular supermarket and 1 per cent relied on local shops.

FIGURE 4.6

Main grocery shopping habits



Source: CC consumer survey.

4.80. There was no evidence to indicate that those shopping more frequently than once a week were significantly more likely to alternate between different supermarkets for their main grocery shopping, in comparison with shoppers as a whole.

4.81. The main form of transport used for main grocery shopping was the private car. Three-quarters of respondents travelled by car to their regular store for their main grocery shopping. A further 15 per cent walked, while 10 per cent used a public bus service. In terms of the return journey, the main difference was some usage of taxis (6 per cent) appearing to substitute for walking home (11 per cent), or using a public bus service (7 per cent). 1 per cent reported using a supermarket bus service for the return journey.

4.82. In terms of supermarkets/stores used for main grocery shopping, of those respondents who had a regular store that they always or usually visited, just under a quarter (24 per cent) used Tesco, followed by Asda (19 per cent), Safeway (13 per cent), Somerfield/Kwik Save (13 per cent) and Sainsbury (10 per cent). The remainder used other stores, of which Morrison (10 per cent) and Co-ops (6 per cent) were the most significant. The 'hard discounters'—Aldi, Lidl and Netto—accounted for a further 5 per cent of these shoppers.

4.83. Survey respondents were asked about the main factors influencing their choice of store for main grocery shopping. Just over two-fifths of respondents (43 per cent) indicated that the main factor influencing their choice of store, for main grocery shopping, was 'the ability to get most of the weekly shopping done under the one roof'. This was followed by 'within easy and convenient reach of home', chosen by 18 per cent of respondents, and prices charged for groceries (16 per cent). This result seems consistent with the results of other studies of store choice determinants, which generally place price as the second- or third-ranked factor. Ranked further down were factors such as: 'a large range of grocery products to choose from' (6 per cent); 'availability of sufficient car parking space' (6 per cent); 'products I want always in stock' (4 per cent); and flexible opening hours (4 per cent).

4.84. Another way of looking at the store choice decision is to ask respondents about the factors that would reduce their willingness to try out other stores for main grocery shopping. The main factors that would deter consumers from switching to another store were ‘lack of easy access by car’, mentioned by 36 per cent of respondents, followed by ‘unfamiliar store layout’ (34 per cent), ‘others too far away’ (30 per cent), ‘unfamiliar brands’ (26 per cent), ‘smaller range of products than used to’ (20 per cent), and ‘lower quality’ (19 per cent). The fact that the principal deterrent to switching was said to be lack of easy access by car points to the importance of one-stop shopping to consumers. Some of these deterrents to switching, for example unfamiliar brands, relate particularly to the discounters (issues of segmentation between the discounters and broad-range multiples are discussed further in paragraphs 4.93 to 4.107).

Secondary or top-up grocery shopping habits

4.85. With regard to shops used for top-up shopping, although the main supermarkets featured strongly in top-up shopping patterns, there was greater use of alternative grocery outlets for top-up shopping. The most frequently mentioned supermarkets used for top-up shopping were Somerfield/Kwik Save (20 per cent), a Co-op (18 per cent), Safeway (12 per cent), Tesco (12 per cent), Asda (8 per cent), M&S (7 per cent), Iceland (7 per cent) and Sainsbury (6 per cent). Specialist shops (ie bakers, butchers, greengrocers etc) were used by 15 per cent of respondents for top-up shopping, and local shops by 5 per cent. Of the symbol group convenience stores, only SPAR featured significantly, mentioned by 10 per cent of the sample.¹

4.86. On product-specific top-up shopping, while it is clear that most top-up shopping is done in a supermarket, there is some variation by product category. For each of nine products, respondents were asked whether they usually did their top-up shopping for the product in question at a supermarket, local or specialist store, or both. The results are summarized in Table 4.4 (and shown in graphical form in Appendix 4.2). As can be seen, local/specialist shops were used predominantly in three product categories—medicines, newspapers etc, and clothing, which are not part of our definition of groceries. In contrast, a supermarket was the main outlet used for top-up shopping in the remaining six product categories (which did fall inside the definition of groceries), although there was still a sizeable proportion of respondents usually using local/specialist shops in each case. The predominance of supermarkets was greatest in the case of bakery products and fruit and vegetables, and somewhat less so for fish, milk, meat and alcoholic drinks.

TABLE 4.4 **Percentage distribution of respondents by usual choice of store for top-up shopping, for nine product categories**

	Supermarket	Local/ specialist	Both	Don't buy/ don't know	Total
Meat	60	25	8	6	99
Medicines	18	70	9	3	100
Newspapers	22	66	6	5	99
Fruit and vegetables	65	24	7	3	99
Clothing	5	84	6	6	100
Wines, beer	56	17	9	17	99
Fish	60	21	3	16	100
Milk	60	25	10	4	99
Bread, cakes	73	14	10	3	100

Source: CC consumer survey.

Main party views on the CC's survey of grocery shopping habits

4.87. The evidence of grocery shopping patterns derived from the CC's consumer survey was shown to the main parties. Tesco and Sainsbury gave the fullest responses. As mentioned earlier, Asda told us that it regarded other multiples as its principal, direct competitors.

4.88. Tesco said that the fact that weekly shopping characterizes the grocery purchasing behaviour of a high proportion of shoppers did not mean that there was a distinct economic market for ‘weekly one-

¹Note: percentages sum to more than unity because respondents could indicate more than one store used for top-up shopping.

stop shopping'. It said that any evidence as to customers' indicated behaviour must always be viewed in light of evidence as to their actual behaviour. It told us that its own data suggested that few of its customers exhibited weekly one-stop shop behaviour (see paragraphs 4.31 and 4.32). As discussed above (paragraph 4.22ff and Appendix 4.1, paragraphs 2 and 3), it suggested that there were many different types of shopping behaviour and that, at any point in time, each customer could be engaging in one of 11 different types of shopping trip. It said that our consumer survey failed to shed light on these different types of shopping trip, and therefore on the number of shoppers who were potentially marginal (ie who would switch away from a hypothetical monopolist of one-stop shopping). It said that, within top-up shopping, our survey failed to reveal differences between proper top-up shopping (ie additional shopping trips to purchase items that were missed or were consumed), elements of sub-basket switching (see earlier typology of shopping behaviour), and individual trips of a multi-shop. Tesco also suggested that the expenditures on top-up shopping indicated in our survey were large and supported its view that the impact of top-up expenditure was such that there could not be separate one-stop and top-up markets.

4.89. Sainsbury said that main shoppers constituted a relatively small proportion of its customer base, and far below the level indicated by our consumer survey. It suggested that this would be expected from a survey relying on recollections which would exaggerate the importance of larger shopping trips.

Consumer choice model: price effects by store size

4.90. In the previous paragraphs we have considered market research and internal company evidence on the behaviour of grocery shoppers and their usage of different types of grocery outlets. In defining the relevant product market, such information on shopping patterns can usefully be supplemented with measures of price sensitivity effects for stores of different sizes. One such measure is the cross-price elasticity of demand—this indicates the degree to which a price change in one store affects demand in another store, other things being equal.¹

4.91. First, we can consider cross-price effects between stores in given size categories, and for given distance between them. Average elasticities of this type, computed from our consumer choice model, are shown in Table 17 of Appendix 7.8. Each cell gives the average cross-elasticity between stores falling in the size and distance category. For example, in the Northern region of the study (see Table 1 of Appendix 7.8 for a description of the areas covered by the model), the average cross-elasticity for the smallest category of stores, up to around 930 sq metres (10,000 sq feet), is 0.0357 when stores are less than 5 km apart, but it is 0.2331 for the largest category of stores (around 2,790 to 3,720 sq metres (30,000 to 40,000 sq feet)). The results are consistent with the view that competitive effects are generally stronger between larger stores, and weaker between smaller stores. This store-size effect is more pronounced when stores are in close proximity to each other. Thus a price change in one store is more likely to affect demand in another store the closer they are to each other and the effect is most noticeable for larger stores in close proximity to one another.

4.92. Second, by looking at the relationship between size of store and cross-price elasticities, some insight can be gained into the degree to which different-sized stores are effective substitutes for one another. For store types that are poor substitutes in the eyes of consumers, cross-price effects will tend to be relatively weak, and vice versa. The relationship between cross-price effects and different sizes of store is shown in matrix form as Table 18 of Appendix 7.8. We took stores of 465 sq metres (5,000 sq feet) or less and examined how the average cross-elasticity varied as the size of competitor stores was increased, controlling for the effects of distance. It can be seen that the average elasticity between the small store and competitor stores declined as the size of the competitor store was increased. For example, in the Southern region of the study, for stores that are close to each other (less than 5 km apart), the average cross-elasticity between the smallest stores less than 465 sq metres (5,000 sq feet) and those in the range of 930 to 1,860 sq metres (10,000 to 20,000 sq feet) was 0.0204. When stores of less than about 465 sq metres (5,000 sq feet) and stores of about 2,790 to 3,720 sq metres (30,000 to 40,000 sq feet) were compared, the average cross-elasticity declined to 0.0097. The same exercise was undertaken for slightly larger stores—those in the 465 to 930 sq metres (5,000 to 10,000 sq feet) category—and the same type of effect was observed. The essence of this analysis is that it indicates that smaller stores are less likely to affect demand at larger stores.

¹For example, if store A has a cross-elasticity of one with respect to store B, this indicates that a 1 per cent increase in the average price of groceries at store B would be expected to lead to a 1 per cent increase in quantity demanded of groceries at store A. By contrast, a cross-elasticity close to zero would indicate that store B's pricing had no effect on demand for groceries at A.

The role of the discounters

4.93. We considered whether there was any evidence to suggest the existence of sub-markets within the wider market for grocery retailing specified in our terms of reference. Such segmentation might arise where there are significant disparities in the nature of the grocery-retailing offer available from different supermarkets. The role of the discounters, and the question of the extent to which they were regarded by consumers as suitable for one-stop shopping, were key questions here.

4.94. Most of the main parties told us that they did not explicitly target particular customers of a certain socio-economic grouping. An exception here to some extent were the limited-range discounters: Netto, for example, told us that while it did not target particular types of competitor, it did target the C1, C2, D and E socio-economic groups.

4.95. The degree to which the main parties aim to compete against particular competitors in terms of pricing strategies is examined in detail in Chapter 7.

4.96. Another reason for examining possible segmentation between the discounters and other multiples is the issue of product range and brands stocked. The discounters told us that they had a very limited product range, usually 500 to 950 lines. This can be compared with the range typically found in a full-range supermarket. For example, Tesco told us that a typical Tesco store would tend to stock about 30,000 products.

Consumer switching

4.97. In considering whether discounters form part of the economic market for one-stop grocery shopping, we also considered evidence on the degree of consumer switching between grocery outlets, particularly between the discounters and the major parties.

4.98. Tesco showed us an analysis of gross and net customer switching flows for the period 1998/99.¹ It said that its gains and losses were approximately £[] billion in each direction, with [] per cent of its Great Britain trade switching to Tesco, and [] per cent switching away. The analysis showed Tesco incurring net losses to [] (about £[] million), [] and (to a lesser extent) []. Tesco said that the fact that its second and third biggest net losses were to [] and [] was incompatible with the idea that these retailers might operate in a separate market to Tesco.

4.99. However, an analysis of gross switching flows showed Tesco making its biggest gains from [] (about £[] million), [] (about £[] million) and [] (about £[] million). Smaller gross gains were made from [] the symbol groups and independents, and []. The smallest gross gains came from [] and independents.

4.100. We asked Tesco to clarify whether it viewed net or gross switching as the more appropriate measure to use when assessing which supermarkets consumers regarded as substitutes for one-stop shopping. Tesco said that the gross switching flows were indicative of a competitive market and showed that the economic market included discounters (as well as non-reference retailers). However, the size of gross switching would be correlated with retailer size; the fact that its gross switching flows to and from [] were larger than those to and from [] did not mean that [] was to be regarded as a more formidable competitor than []. It said that net trade flows were a measure of retailer performance, and the retailer's ability to satisfy consumer preferences, even if they did not show anything about the level of switching.

Consumer attitudes to the discounters

4.101. We considered above the results of our consumer survey on the determinants of store choice for main grocery shopping, some of which is directly relevant to the discounters. However, we also asked respondents specifically about their usage of, and attitudes to, the discounters.

¹A multiple's gross switching gains represent the total number of shoppers who have switched to its stores over a defined period, usually one year. Its gross losses represent the total number of its own shoppers who have switched away from its stores over a defined period, usually one year. The difference between the two measures gives the multiple's net customer gains (or losses).

4.102. Of those who had one supermarket that that they usually used for their main grocery shopping, only 5 per cent reported using one of the discounters. However, 57 per cent of all respondents reported that they did have a discount supermarket within easy reach of their home. Of these, 20 per cent said that they regularly visited such stores (about 11 per cent of the overall sample) while 26 per cent did so sometimes. As only a small proportion overall claimed to use such stores for main shopping, this would suggest that those visiting regularly were primarily engaged in top-up shopping. For those who were main shoppers at non-discount supermarkets and who had a discount supermarket within easy reach of their home, the proportion regularly visiting a discount format varied from 27 per cent in the case of Co-op customers, to 14 per cent for Somerfield/Kwik Save customers, and around 11 per cent in the case of main shoppers at Asda, Tesco and Morrison. 13 per cent of Sainsbury main shoppers within easy reach of a discounter sometimes visited such a store (none claimed to do so regularly. The sample base was quite small here, as a lower proportion of Sainsbury customers reported being within easy reach of a discounter).

4.103. 54 per cent of respondents were within easy reach of a discount store but had never visited the store, or had done so only once or twice. They were asked about the reasons for this. The main reasons given were 'not my style/type of store' (31 per cent), 'can't find all the products I need for the weekly shop' (30 per cent), 'product quality is not as good as my usual supermarket' (29 per cent), and 'brands stocked are not familiar to me' (28 per cent). Less frequently indicated reasons were: 'store environment too basic' (8 per cent), 'price savings not worthwhile' (7 per cent), 'can't use credit card' (6 per cent), 'too far away' (5 per cent), and 'satisfied/happy with current store' (2 per cent).

4.104. In our consumer survey, respondents were asked to name their next best choice of store (ie to the store currently used). Only 5 per cent said that one of the discounters (Aldi, Lidl or Netto) would be their next-best choice of store. The vast majority chose one of the broad-range multiples—17 per cent chose Asda, 16 per cent Sainsbury, 16 per cent Tesco, 11 per cent Safeway, 10 per cent Somerfield/Kwik Save, and 8 per cent Morrison. 1 per cent said that a specialist shop would be their next-best choice, about the same proportion choosing a local corner shop or convenience store format.

Cross-price elasticities between discounters and other multiples

4.105. Evidence on cross-elasticities, this time by store fascia, was available from our econometric model of consumer demand for groceries.

4.106. For any pair of multiples, two types of elasticity can be distinguished: the effect on firm A's demand of changes in B's prices, and the effect on firm B's demand of changes in firm A's prices. These two measures are usually not symmetric. If we begin by looking at the effect of price changes by firms such as Sainsbury and Tesco on rival firm demand, we can see that the effect was reasonably uniform across different rivals, including the discounters (Table 15, Appendix 7.8). In the Southern region examined in the study, the estimated cross-elasticity with respect to Tesco's prices is 1.33 for Asda and 1.35 for Aldi. Similar values are found for other stores, including Netto and Lidl. Therefore, the percentage effect on Aldi or Asda is similar. However, the effect on Tesco is different, as the loss of custom to Asda would account for a greater proportion of its business.

4.107. We also considered the elasticities in the other direction: specifically, the effect of pricing decisions by limited range stores on full-range stores. Here we can see that the cross-price effect of stores such as Aldi and Netto on rival firm demand is generally very small, compared with that of full-range multiples. For example, the matrix of elasticities indicates that, in the Southern region, the cross-price effect of Aldi pricing on Tesco demand is 0.04, suggesting little constraint on Tesco pricing. The cross-elasticity is 0.10 in the Northern region, 2.5 times larger, but still very much smaller than those applying in the reverse direction. The same observations generally hold true for Lidl and Netto.

The relevant geographic market for groceries

4.108. Having considered the relevant product market, we now go on to consider the relevant geographic market. If consumers face significant travel costs, this may be much narrower than a national market. The appropriate test is whether a hypothetical monopolist supplying the products within a defined geographical area would be able to effect a small but significant non-transitory increase in price. If so, the relevant geographic market is correctly defined. If, on the other hand, the hypothetical

monopolist would not be sufficiently insulated from outside competitive pressure, the relevant market is wider than the area in question and needs to be considered for a broader area.

4.109. In the context of this inquiry we are primarily interested in whether the market for groceries should be defined at a national, regional or local level. As before, we begin with a summary of the main parties' views and evidence on aspects of geographic market definition. We then consider evidence from our consumer survey on a number of aspects of consumer search for groceries. Using our estimated model of consumer demand for groceries, we were also able to take account of econometric evidence as to the effect of distance on cross-price effects between stores.

Main parties' views on the relevant geographic market for groceries

4.110. A majority of the main parties were of the view that the market for groceries was a national one, with the rest considering the relevant market to be local or regional.

4.111. Several parties, but particularly Sainsbury and Tesco, indicated that the relevant market should be considered to be national, because, even though many stores might draw their catchment from an essentially local area, there were mechanisms that ensured the benefits of competition were transmitted more widely than the local level. These mechanisms included:

- (a) the use by some of the multiples of national pricing policies or strategies;
- (b) the adoption of largely national strategies in terms of product range, brand image, advertising, and product procurement;
- (c) overlaps between local catchment areas, implying that there would be few stores not facing competition from a neighbouring store; the competitive interaction between stores linked by a geographic chain of substitution could have a competitive 'knock-on' effect on more remote stores; and
- (d) the use of linked grocery shopping trips (for example, on a school run, or commuting to work), giving consumers an opportunity to shop outside their natural catchment area and compare different retailers in terms of price, service, range etc.

4.112. Among the larger multiples, Asda strongly favoured a definition of the geographic market in local terms, citing evidence that some 90 per cent of its customers travelled to its stores from within a radius of 15 minutes' drive time. On the question of the role played by linked trips in potentially widening local markets, it cited survey research it had commissioned from Researchcraft Ltd, discussed in paragraphs 4.39 to 4.42, involving exit interviews with shoppers at ten Asda stores. The results of this research had indicated that 74 per cent of shoppers at these stores were visiting only Asda during their shopping trip, with the remainder also visiting other stores or places. Additionally, the survey revealed that 84 per cent of shoppers interviewed had originated their trip from home, 8 per cent from work, and 7 per cent elsewhere. Asda's view was that the incidence of linked trips was low and did not alter the analysis of the market overall as local.

4.113. Some of the companies, such as Budgens and Netto, suggested that there were distinct markets by region, either because of the predominance of some multiples in particular regions or the presence of different demand characteristics.

The definition and measurement of supermarket catchment areas

General approaches

4.114. This section examines possible approaches to the definition and measurement of supermarket catchment areas. Many of the multiples have developed sophisticated methods for defining store catchment areas, either to assess the performance of existing stores, or to evaluate the trading potential of prospective sites for new supermarket development.

4.115. In principle there are a number of ways in which one might seek to delineate local catchments. These include:

- (a) equidistant radii around a given store;
- (b) postal areas; and
- (c) isochrone (drive-time) radii.

4.116. The simplest approach is to use an equi-distant radius, which bounds the area within x miles of a store which yields a specified proportion of its trade, for example 80 or 90 per cent. The most obvious disadvantage of equi-distant radii is that no account is taken of the relative ease of travel within the areas so defined, and therefore of the consumer's cost in terms of time, particularly in built-up areas where travel is generally slower due to congestion. As a result, in some cases, the consumer's choice boundaries may not be accurately reflected in the use of equi-distance catchments. In other cases, however, distance-based measures may be useful in delineating catchment areas. Some city centre stores, for example, have a very high proportion of walk-up trade (for example, local office workers), and will expect to capture most of their trade from within a short distance around the stores. One operator told us that it used a distance-based measure to identify local catchments for high-density city centre stores.

4.117. Postal areas, as their name suggests, are administrative designations of area, corresponding to the first two letters of the postcode (for example, MK), used for the collection and delivery of mail. They generally represent self-contained areas—major towns and their transportation hinterland.

4.118. Isochrones are essentially contours on a map representing equal travel time (usually drive time) from a given point. A 15-minute isochrone around a given store would encompass the areas from which the store could be reached by driving for 15 minutes or less. One of the advantages of isochrones is that they correspond reasonably closely to the individual shopper's grocery shopping behaviour, which is likely to be determined by the time taken to reach a store. The shape of an isochrone for individual stores can vary significantly depending on location (for example, urbanized or rural) and the presence of natural or artificial transport barriers (for example, a river or major motorway). An unusual feature of isochrones is that they can sometimes be discontinuous—where a particular area is by a major motorway linking it to a store within the given drive time, but access is slower from other surrounding areas where the road network is poorer.

4.119. Most of the multiples use some form of drive-time-based measure as the principal factor in determining the size of store catchment area, usually when considering potential sites for new stores. As a first approximation, the local catchment area for an individual store would be expressed as the drive-time area from which a store would expect to derive x per cent of its trade. This initial estimate is then usually refined to take account of local circumstances such as demographics and the presence of other stores (see list of additional factors below). Asda told us that it used a 15-minute drive time, on the basis that typically 90 per cent of customers visiting a store will have originated their journey within a 15-minute drive time. Sainsbury uses a similar methodology; it said its experience suggested that, as a rule of thumb, most shoppers would drive for up to 10 minutes to their preferred supermarket even if it involved passing another one on the way. However, it said that there could be significant variability depending on the type of store and area in question, and it subsequently said that it believed a 20-minute isochrone would be the most appropriate measure of a local catchment area.

4.120. Tesco said that a 15- to 20-minute drive-time model was appropriate. Although internally Tesco tended to use a somewhat longer drive-time figure to gauge local trading patterns, it told us that 92 per cent of stores would achieve 80 per cent of their revenue from within a 15- to 20-minute drive-time band.

4.121. For commercial purposes, some multiples may as a rule of thumb use higher drive times, in order to capture the area that would provide nearly all the trade for a given store. We also reviewed information on the distribution of trade by travel time or distance for a sample of supermarket operators. Details are provided in Appendix 4.1 (Tables 7, 8 and 12). There is clearly some variability around the average, but the general picture is one where the majority of customers or trade for stores in non-rural areas is seen to be coming from within a 10-minute isochrone, and between 80 and 90 per cent from within a 15-minute isochrone. In rural areas the mean proportion of trade from within these isochrones tends to be less, though is still high.

Other factors in the assessment of store catchment areas

4.122. Although areas defined by drive times represented the most important element in the assessment of store catchment areas, the multiples told us that there could be significant variability in the size of store catchment areas depending on local circumstances. Additional factors that might affect the assessment were:

- (a) the size of the store and the presence of other stores, including those of competitors;
- (b) population distribution/density; the demographic and socio-economic profile of the local population, for example. Tesco uses a Mosaic lifestyle classification to segment customers into different groups according to expenditure and preferences;
- (c) the nature of the store's offering and the extent to which it matches the profile of the local population;
- (d) likely type of shoppers, for example local resident, passing shopper, office worker etc;
- (e) presence of complementary retail and non-retail attractions;
- (f) mental barriers, for example unwillingness to cross major motorways, waterways etc;
- (g) the extent of linked shopping trips, for example on the way home from work; and
- (h) the availability of car parking.

Postal areas versus isochrones

4.123. The main comments on the relative merits of postal areas and isochrones in defining super-market catchments came from Tesco and Sainsbury. Tesco was strongly of the view that catchments delineated on the basis of postal areas were not likely to give an accurate reflection of the level of choice or competition existing at the local level, as these failed to take account of shopper behaviour and, in particular, consumer willingness to cross postal boundaries. It was possible for two stores to be in the same postal area, but different drive-time catchments, suggesting that use of postal areas could potentially distort the evaluation of consumer choice and competition at the local level. Sainsbury likewise criticized postal-area-based approaches to the analysis of local competition, on the grounds that these disregarded demand-side substitutability, as shoppers were not confined to shopping in their postal areas.

Overlapping catchments and chains of substitution

4.124. A number of companies—Safeway, Sainsbury and Tesco—told us that while they regarded local catchment areas as an important feature of local shopping habits, these did not in their view constitute distinct economic markets, as regard had to be given to the competitive effects caused by overlapping catchment areas. The existence of overlapping catchments potentially had two implications for consumer choice and competition. First, some shoppers would be located in the overlapping segments of different store catchment areas and therefore would have a wider choice than suggested by a single store catchment area. Second, individual stores would need to take account of the competitive threat of other stores which might not be in their own catchment area but whose catchment areas overlapped with their own. In effect, a chain of substitution across connected local catchments was posited, such that multiples would be unable to set prices in their own catchment area insulated from competitive pressure in another. These effects (which we call 'blurred isochrones' and 'overlapping isochrones', respectively) are set out in diagrammatic form in Appendix 6.1.

4.125. In paragraphs 6.5 to 6.38 we describe the results of an investigation into local market structure using an isochrone-based analysis. In principle, one would ideally use isochrones centred on the individual household for such an analysis, as it is individuals' travel for groceries that one is seeking to capture. However, it is not practical to measure isochrones in relation to many individual households,

and we have used isochrones measured by reference to stores rather than individuals. Further details of the methodology used are provided in the discussion of local market structure in paragraph 6.8 ff.

4.126. The existence of densely clustered supermarket catchments in some areas may also point to a wider regional aspect to geographic market definition in some cases, for example densely populated conurbations. Safeway drew attention to this point in evidence it submitted to us on aspects of local market concentration, and said that many of the high-share catchment areas for individual supermarkets (especially those of Sainsbury and Tesco) tended to exhibit geographic clustering. To examine this effect, in paragraph 6.29 we also describe an investigation into market concentration using wider regional measurements of the market, up to 32 km (20 miles) around stores.

Consumer survey: evidence on travel patterns for groceries

4.127. In this section we consider evidence from our consumer survey on shopper travel patterns for groceries, an important element in establishing geographic market definition.

4.128. We asked about approximate travel distance from home to the store visited most frequently. Almost three-fifths of respondents to our survey reported a travel distance of 3.2 km (2 miles) or less—36 per cent 1.6 km (1 mile) or less, and 23 per cent 3.2 km (2 miles). A further 14 per cent travelled 4.8 km (3 miles), 15 per cent 6.4 to 8.0 km (4 to 5 miles), and 12 per cent greater than 8.0 km (5 miles).

4.129. The survey was used to investigate shoppers’ average travel time to their most frequently visited store. As shown in Table 4.5, almost two-thirds (65 per cent) of respondents reported a travel time of 10 minutes or less to their usual store, and 91 per cent had a travel time of 20 minutes or less. 7 per cent spent on average 21 to 30 minutes travelling to their usual store, and 1 per cent spent between half an hour and 1 hour.

TABLE 4.5 Distribution of respondents by average travel time, using usual mode of transport, to store visited most frequently for main grocery shopping

<i>Average travel time (minutes)</i>	<i>Respondents %</i>
5 or less	28
6–10	37
11–20	26
21–30	7
31–60	1
More than 60	—
Total	99

Source: CC consumer survey.

4.130. Respondents were asked how far they had travelled in the past to try out a new supermarket that they thought might be better than their usual one in some way, for example in terms of price, quality, range or service. Responses to this question showed that 9 per cent had travelled 10 minutes or less, 24 per cent 11 to 20 minutes, 26 per cent 21 to 30 minutes, and 11 per cent 31 to 60 minutes. Just over one-quarter of the sample (26 per cent) reported that they had never travelled to try out a new supermarket.

4.131. A more hypothetical version of the previous question is to ask how far main grocery shoppers would be willing to travel if they heard a new supermarket had opened that was particularly suited to them. 10 per cent of respondents indicated 10 minutes or less, 32 per cent reported 11 to 20 minutes, and 34 per cent indicated 21 to 30 minutes. 10 per cent would be willing to travel 31 to 60 minutes. The remainder (11 per cent) did not know how far they would be willing to travel.

4.132. As mentioned earlier, one of the points made by some of the main parties was that individuals might link their main shopping with other activities—for example, travel home from work, or recreational activities—thereby allowing shoppers the opportunity to sample stores that were not necessarily near their home. Asked how often they combined their main grocery shopping with travel home from work, college etc, a majority of respondents indicated that they never (63 per cent) or rarely

(11 per cent) did this. A minority of respondents replied that they did undertake this form of linked shopping trip sometimes (15 per cent), usually (8 per cent), or always (3 per cent).

4.133. A variation on the 'linked trip' theme concerns whether individuals combined their main grocery shopping with recreational activities. Again, the bulk of responses indicated never (67 per cent) or rarely (15 per cent). There were, however, a minority of respondents who sometimes (14 per cent) or usually (2 per cent) combined main grocery shopping with recreational activities.

Consumer choice model: evidence on geographic market definition

4.134. In assembling evidence on the geographic market for groceries, we were also able to draw upon the findings of our model of consumer demand for groceries. Two measures are directly relevant to the discussion in hand. First, we considered the distribution of shoppers by distance from their store of primary choice. This analysis complements our consumer survey results on reported distance and travel times, but differs in that it is based on actual rather than perceived distances (with the consumer's average location defined as the centre of the postcode sector where they live). Second, the consumer choice model allows us to examine the impact on store-pair cross-elasticities of widening the distance between stores.

Distribution of shoppers by distance from store

4.135. Table 8 of Appendix 7.8 shows the distribution of shoppers by distance from their store of primary choice (in the National Shoppers Survey, which provides the information on shopping patterns on which the consumer choice model is based, shoppers are asked to state which store(s) they choose for primary and secondary shopping). Separate distributions are shown for stores in three regions: a Northern study region, the Southern region excluding London, and London.

4.136. It can be seen that, outside London, two-thirds of shoppers go up to 8.0 km (5 miles) to their preferred store. This does not vary significantly between the Northern region and the Southern region (excluding London). However, in the case of London, consumers go much shorter distances to their preferred store, with, for example, 84 per cent travelling 4.8 km (3 miles) or less, and 96 per cent 6.4 km (4 miles) or less.

4.137. To explore whether this divergence between London and other areas reflects a more general urban/rural distinction, the model was used to examine how distance varies for a selection of areas ranging from small villages, large cities, edge-of-centre locations, and regional conurbations. The results of this exercise indicated that the distribution in the conurbations examined (Leeds, Sheffield, Luton/Dunstable) is such that about three-quarters of shoppers are within 8.0 km (5 miles) of their primary store. For a sample of small towns examined, the proportion of shoppers within 8.0 km (5 miles) of their store of primary choice is 50 per cent in the case of Bicester, 48 per cent in Witney, 44 per cent in Thame, 39 per cent in Wallingford, and 27 per cent in Henley.

4.138. The fact that customer shopping patterns in urban areas appear to be characterized by shorter drive times or distances may be due to several factors. First, it may reflect a greater density of stores in more populous areas, implying that consumers do not travel as far in urban areas simply because they will encounter their preferred store more quickly. Second, it is possible that it could reflect differences in time preference between inhabitants of urban and rural areas—higher incomes in cities, for example, might indicate a higher opportunity cost of time spent travelling. Third, it might reflect the outcome of some people choosing to live in rural areas because they are more willing to spend time travelling. Fourth, when travelling in urban areas people may face greater uncertainty about how long it will take them to reach their destination (for example, due to the risks of traffic congestion, roadworks etc), which may mean that they choose a supermarket near to them to avoid the risk of high maximum travel times.

The impact of distance between stores on cross-elasticities

4.139. The delineation of geographic markets ultimately depends on the extent to which different stores are capable of constraining each other's pricing behaviour. Evidence on this was available from our consumer demand model which provided estimates of cross-price elasticities for different stores.

4.140. Cross-price elasticities for the smallest stores—those around 930 sq metres (10,000 sq feet)—decay rapidly as the distance between stores exceeds 10 km (Table 17, Appendix 7.8). For the smallest stores, in the Northern region of the study, cross-elasticities are 0.0357 at up to 5 km (3.1 miles) and 0.0011 at 10 to 15 km (6.2 to 9.3 miles).

4.141. For the largest stores, those in the size category from around 2,790 to 3,720 sq metres (30,000 to 40,000 sq feet), cross-price effects again decline according to distance between stores. For stores of this size, the cross-elasticity at up to 5 km apart is 0.2331, roughly nine times the elasticity (0.0250) at 15 to 20 km (9.3 to 12.4 miles) apart, and about 13 times the elasticity (0.0179) when stores are 20 to 25 km (12.4 to 15.5 miles) apart.

4.142. In summary, the results of the consumer choice model relating to geographic market definition indicate the following:

- (a) two-thirds of shoppers do their main shopping at stores located 8 km (5 miles) away or less; shoppers in London travel significantly less;
- (b) price changes by large stores will affect demand over a greater distance than in case of price changes by small stores; and
- (c) for the very largest stores, the effect of pricing changes on rival firm demand appears not significant when rival supermarkets are more than 10 km away. For smaller stores, price effects decay more rapidly, and are generally not significant beyond 5 km.

The market for groceries in Northern Ireland

4.143. Until recently, the Northern Ireland grocery market was served by indigenous supermarket chains. This changed with the entry of several of the Great Britain-based multiples from the mid-1990s onward. The implications of such entry in terms of market structure and conduct are examined in Chapter 6. In this chapter we describe the evidence on the nature of the market at the consumer level.

4.144. Sainsbury told us that, although not yet identical, conditions of competition in the Northern Ireland grocery market were rapidly approaching those in Great Britain, mainly as a result of the entry of a number of the major Great Britain multiples and the adoption of similar policies (on pricing, store standards etc) for stores in Northern Ireland as in Great Britain. Tesco said that it had extended its pricing, advertising and promotional policies and other aspects of its offer to the Stewarts' business which it had acquired in 1997 and subsequently rebranded. A limited number of product lines were, however, priced differently in Northern Ireland from the rest of the UK, and there were also some differences in product selection, the latter reflecting local tastes. However, Tesco did not consider these local procurement and pricing policies to represent a significant departure from its claimed national policies.

4.145. On the question of grocery shopping habits in Northern Ireland, we considered evidence from a survey commissioned by the GCCNI.¹ The survey, conducted in September 1998 and based on interviews with a representative sample of 1,000 adults throughout Northern Ireland, was designed to assess changes in grocery shopping behaviour and gauge attitudes towards the recent (at that stage) arrival of the Great Britain-based multiples.

4.146. In terms of outlets used for main grocery shopping, the survey revealed that about six out of ten (61 per cent) consumers in Northern Ireland now used a large supermarket, while a further one-tenth used a small supermarket or symbol store (9 per cent). Only around a quarter used traditional specialist grocers (23 per cent) or a small corner shop (other—3 per cent). The main influences on choice of store were 'convenient to home', mentioned by 67 per cent of respondents, followed by 'good value for money' (48 per cent), and 'good selection' (47 per cent). Factors such as loyalty schemes (10 per cent), wide aisles (8 per cent) and 'convenient to work' (5 per cent) were not significant influences on choice of store for most consumers.

¹*What's in Store?: Consumer Views on Grocery Shopping*, General Consumer Council for Northern Ireland, 1999.

4.147. As for shopping location, a majority of consumers in Northern Ireland did their main grocery shopping at a shopping centre in their local area (28 per cent), or at the edge of town (18 per cent), or at an out-of-town site (11 per cent). Slightly fewer than three out of ten (29 per cent) used a town centre or high street for their main food and grocery shopping, while 14 per cent used a neighbourhood shop. Travel to supermarket or store was predominantly by car (71 per cent), followed by walking (22 per cent), taxi (3 per cent) and bus (2 per cent).

4.148. In terms of purchases of some key staples, large supermarkets are the single most important outlet for purchases of wrapped bread, and, to a lesser extent, fruit and vegetables and meat. Just over three-fifths of those surveyed (63 per cent) reported using a large supermarket to buy wrapped bread, compared with 25 per cent using a small supermarket and 7 per cent using a specialist shop. Usage of large supermarkets was somewhat lower for fruit and vegetables (56 per cent) and fresh meat (48 per cent). However, this masks, in the case of fruit/vegetables and meat, a significant reversal in the position of the large supermarket and specialist retailer since 1988. Then almost seven out of ten (68 per cent) consumers in Northern Ireland used a specialist shop to buy fresh meat, compared with 26 per cent using a large supermarket. The situation was similar in respect of shopping for fruit and vegetables, with a 48 to 30 per cent split in favour of specialist retailers at that time.

Summary of evidence on the economic market for groceries

4.149. In our earlier discussion of the methodological background to the economic market, we set out the main elements of the 'hypothetical monopolist' test but noted that it is not usually possible to apply the test directly in practice. Instead, it is necessary to rely on indirect evidence relating to consumer and supplier behaviour. The types of evidence examined above are fourfold:

- (a) the extent of one-stop shopping among grocery shoppers;
- (b) the minimum store size and range required to provide a one-stop shop;
- (c) the degree and nature of consumer switching between grocery outlets; and
- (d) how far consumers travel for their main grocery shopping.

4.150. From the above indirect evidence on consumer and supplier behaviour, it is possible to identify the likely consequences were the DoJ test to be applied in practice. Assume that a store of, say, around 1,860 sq metres (20,000 sq feet) raises its prices by 5 per cent. Some one-stop shoppers at the store will shift to other large stores in the vicinity, ie those which can support a one-stop shop. More top-up shoppers at the store will shift to other (competitor) stores, though some of these alternative stores will also be large (ie providing a one-stop shop). Some customers on the edge of the isochrone will move beyond it. This effect in itself is likely to be weak (though the precise effect will depend on the distribution of the catchment population). If enough isochrones overlap, then the loss of customers may be too large for the store in question to sustain the assumed 5 per cent increase in price, and the geographic market may be wider than the isochrone, possibly regional. However, if isochrones do not overlap significantly, then the loss of customers to other stores is likely to be small, in which case the store in question is likely to be able to sustain the 5 per cent price increase. In this case the economic market will consist of large stores within the isochrone (ie a locally defined market for one-stop shopping).