

## **LOCAL COMPETITION ROUNDTABLE DISCUSSION PAPER**

### **Introduction**

1. As part of the CC's inquiry into grocery retailing in the UK, the Group is investigating competition at the local level. The empirical assessment of these concerns is potentially complex and there is scope for fruitful discussion regarding different approaches to issues of this sort.
  
2. This paper has been prepared to inform a discussion among economists who have researched and published work on topics relevant to the CC's investigation. The CCs intention in preparing this paper and conducting this discussion is to ensure that all strands of argument in the economic literature relevant to its investigation are fully explored. The inquiry group will consider the outcomes of the discussion alongside the other evidence presented to it in the course of the inquiry. This brief paper sets out the main points for discussion.

### ***Main competition issues***

3. The CC Issues Statement sets out a number of concerns regarding competition in grocery retailing in the UK, including the following two broad categories:
  - i. Whether any aspect of the structure of any local market for groceries, or any aspect of the conduct of grocery retailers or consumers in the market for groceries (or in any other market in which grocery retailers operate) affects competition in one or more local markets for groceries, or in any other product market; and

- ii. Whether the operation of the planning regime as it affects grocery retailing, or any conduct by grocery retailers, including any acquisition, disposal, development or use of land, affects competition in any market<sup>1</sup>.
4. Specifically, the CC is considering whether any aspect (such as concentration, or increased ownership of convenience stores by national multiple retailers) of the structure of the UK grocery retail market (at the local and national level), is having a negative effect on consumer choice. Therefore, one aspect is whether higher concentration measures (HHI, C4) in local markets reflect the ability of grocers to exercise greater market power, which ultimately leads to consumer welfare loss.
5. Another issue being considered is pricing practices of some retailers, including below-cost selling and “price flexing” and their effects on competition.
6. A further issue is whether planning and zoning regulations create barriers to entry in local markets. The CC is investigating how these regulations limit the number of large superstores, the impact that such regulation may have on local market structure, and the ability of incumbents to exercise market power. In addition, the CC is considering whether the conduct of any grocery retailers, including the acquisition, disposal development or use of land, affects competition, for example, whether it prevents entry into local markets.
7. In order to explore these issues the CC is assessing the effectiveness of competition in grocery retailing and factors affecting its effectiveness. As part of its analysis, the CC will be defining the relevant product and geographic markets to assess the extent of

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<sup>1</sup> <http://www.competition-commission.org.uk/inquiries/ref2006/grocery/index.htm>

competitive constraints that exist between different retailers and in possibly different locations.

8. This paper begins in Section 1 with a brief description of the issues that the inquiry is considering in regard to market definition and proposes a number of these issues for discussion. In Section 2, the paper considers the need to explore the relationship between market power and market structure. This Section offers a brief discussion on a number of economic models that may explain entry and the number of competitors. The CC wishes to explore the appropriateness of using any of these models for the purpose of measuring competition. Applying these models might enable the CC to conclude on the existence of local market power in the UK and identify local markets where competition between grocery retailers may not be effective<sup>2</sup>. In Section 3, the paper presents some issues regarding the identification of barriers to entry in grocery retailing in the UK and proposes some issues for discussion. Finally, in Section 4, the paper briefly considers a number of issues concerning pricing practices.

## **Section 1 - Market definition**

9. The CC issues statement sets out a summary of the various issues that it is considering in regard to market definition. For the purpose of this discussion, the following are some aspects of market definition that we would like to focus on.

### ***Product market definition***

10. The CC market investigation in 2000 focused on the supply of groceries by large grocery retailers with multiple stores, who at that time mainly operated large grocery stores. In that inquiry the CC defined the product market according to the purpose of the shopping

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<sup>2</sup> The competitive outcome may not simply be measured by list prices, but also by examining the extent of consumer choice and the quality of the product offering.

trip. It identified a market for “one stop shopping” carried out in stores of 1,400 square metres or more.

11. In delineating relevant product markets it might be appropriate to start with the product supplied; for example, in this case, the sale of groceries in a particular store format can be viewed as a product. In practice, in recent UK merger decisions the CC has delineated grocery retailing according to store size, typically classifying stores into three categories:

iii. One-stop shops: over 1,400 square metres (15,000 square feet)

iv. Mid-range stores: between 280 and 1,400 square metres (3,000 and 15,000 square feet)

v. Convenience stores: less than 280 square metres (3,000 square feet)

12. However, there are multiple dimensions to grocery retailers; in addition to store size, stores can be distinguished by fascias and characteristics as well as the offer to the consumer, which the CC has previously characterised as a combination of price, quality, product range and service.

### ***Geographic market definition***

13. In 2000 the CC considered that “taking the evidence as a whole, our view is that the ambit of consumers’ search is essentially local”. Since then some large grocery retailers have moved to national pricing and it might be argued that the relevant market(s) is wider than local.

14. In order to explore whether this indicates that the relevant market might be wider than local areas, it is necessary to understand why grocery retailers pursue national pricing. It may be optimal to set prices nationally if large multiple retailers find that there are “menu costs” associated with varying prices according to local demand and cost conditions and/or local market structure. However, until as recently as 2000 these retailers did not set the same price in all stores. Indeed, some retailers currently use a tiering system for grouping stores into pricing categories and some grocery retailers vary the price of some products locally.

15. Leaving this aside, even if some grocery retailers do set the price, range, quality and service at their stores centrally, they may still vary the “value” offered to customers at a store according to the competitive conditions of the local area. A central-pricing retailer could achieve this in a number of ways. For example, it could increase the average price of a type of product in a store in a local area where it faces less competition by varying:

- i. the product range – it could stock only the premium (more expensive) versions of the product; or,
- ii. the format of the store – it could operate only the higher-priced formats<sup>3</sup>; or,
- iii. the in-store promotions – it could stock fewer price-promoted products; or,
- iv. the vouchers sent to customers – it could choose not to send customers in the area money-off vouchers or loyalty points.

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<sup>3</sup> We have been told that some of the large national grocery retailers charge different prices for the same products sold at different formats of their stores.

16. Alternatively, a central-pricing retailer could vary the “value” offered to customers at store by altering the expenditure on service level. For example, a retailer could reduce the “value”, and increase profitability, at a store by employing fewer staff or spending less on amenities and refurbishments, as compared with other similar stores facing greater competition.
17. The standard approach to delineation of relevant markets is to understand consumer substitution patterns. This can be done by estimating a demand system. The econometric results of demand estimation yield own and cross-price elasticities that aid understanding of the consumer substitution patterns<sup>4</sup>. In 2000, using survey data the CC estimated a discrete choice model whose results help answer some of these market definition issues<sup>5</sup>.

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<sup>4</sup> For example, in “Spatial Competition in Retail Markets: Movie Theaters”, Peter Davis develops the techniques of Berry, Levinsohn and Pakes (1995) and applies it to a model of differentiation along geographic dimensions. Davis estimates demand systems for movie theatres, a spatially differentiated industry. The model incorporates geography into the framework by allowing transport costs between supplier and consumer location to negatively affect consumer utility from frequenting a supplier. Taking firms’ locations as predetermined the authors focus on the role of spatial differentiation in relaxing competitive intensity between outlets and on welfare effects of relocating outlets.

In an example of demand estimation in the UK supermarket industry, in “Supermarket Choice and Supermarket Competition in Market Equilibrium” Howard Smith uses data on profit margins and an equilibrium pricing condition to identify price parameters in consumer utility and estimates own- and cross-price elasticities.

<sup>5</sup> [http://www.competition-commission.org.uk/rep\\_pub/reports/2000/fulltext/446a7.8.pdf](http://www.competition-commission.org.uk/rep_pub/reports/2000/fulltext/446a7.8.pdf)

## Issues for discussion

- Does the practice of national pricing by some of the groceries multiples imply UK-wide markets? How best can the effect of local competition be empirically measured with a practice of national pricing?
- The CC has mostly relied on store size to delineate the relevant product market. When consumers elect to shop in a grocery store because of its proximity, the availability of parking space, the particular fascia or other reasons that may be unobserved, is this proxy appropriate to delineate grocery retailing?
- Previous inquiries in the UK grocery industry have found that markets are local, though in practice many local areas are contiguous, which makes it difficult to establish well-defined boundaries. Generally, estimation of demand models of the discrete choice family with aggregate data requires definition of the market, but the contiguity of local areas makes such an exercise difficult. How will the existence of contiguous markets affect demand estimation?
- In estimating demand models of the discrete choice family, the “outside option” must be selected, and usually this option is “outside” the relevant market. The selection of the outside option may not be innocuous and may influence the market definition outcome. How best can the “choice set” and “outside good” be selected?
- Most demand models applied to retail markets assume that consumers’ choice of retail stores is determined by transportation costs. Generally, past empirical work has used the travelling time (or distance) between the store location and where consumers live, yet consumers also visit grocery shops near to their place of work and their journey between work and home (ie train stations). How best can this be taken into account?

## **Section 2 - Market Power/Market Structure (Entry and the Number of Competitors)**

18. In order to assess the effect of increased concentration in local/national grocery markets in the UK the CC is considering the relationship between market power and market structure. In particular, the CC is considering how best to measure market power in grocery retailing, the impact of entry (and exit) on market power and how this relates to the existence (or otherwise) of barriers to entry in these markets.

19. There is a well-established tradition of competition authorities assessing the relationship between market power and market structure, in particular the relationship between price, or margins, and concentration. However, there are two features of grocery retailing in the UK that require special consideration. First, in retail markets because consumers bear substantial transport costs, it is likely that competition is localised. In this case competitive intensity may vary with spatial differentiation. Second, grocery retailers are not identical; they seek to differentiate themselves from one another with the quality/price they offer (for example), in which case competitive intensity will vary with the “distance” between firms’ locations in both “product space” and “geographic space”.

20. Various models identify the relationship between market power and the number of competitors in a market. In one class of models, following Bresnahan and Reiss (1990, 1991), competitors are assumed to sell homogenous products, and the number of competitors is determined endogenously according to the zero profit condition, with no transport costs within the market<sup>6</sup>. In a second class of models relating entry and competition (Seim, Orhun 2005), competitive intensity varies with distance from competitors, firms are heterogeneous and location choice is endogeneously

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<sup>6</sup> See Bresnahan and Reiss (1991)

determined<sup>7</sup>. Pinkse, Slade and Brett (2002) have developed an alternative empirical approach to modelling competition among differentiated products. Their semi-parametric approach is applicable where consumers have a taste for variety and might want to consume more than one product and would allow the estimation of price response functions as functions of the number of competitors.<sup>8</sup>

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<sup>7</sup> See Seim (2001)

<sup>8</sup> See J Pinkse, M Slade and C Brett (2002)

### **Issues for discussion**

- How best can product and geographic differentiation be taken into account in modelling the relationship between market power and the number of competitors?
- What are the advantages and disadvantages of using empirical models of entry (such as Bresnahan and Reiss, or Seim) as opposed to examining the simple relationship between price (or margins) and concentration?
- These models are predicated on the assumption that grocery retailers compete (locally) on price. However, whilst it appears that in many cases prices are not varied locally, it seems likely that grocery retailers compete locally on non-price strategic variables (quality, range and service). How do you take account of non-price strategic variables in demand estimation?
- In the model of entry and competition with spatial differentiation developed by Seim, stores are treated as separate entities, whilst it seems highly likely that in reality grocery multiples (chains) will consider the potential cannibalisation of revenues when choosing an optimal location for an outlet. How do you take account of chain store retailers in models of entry and competition?

### Section 3 – Identification of Barriers to Entry

21. One of the key issues raised in the OFT's reference of the UK grocery market to the CC is that barriers to entry in local markets may give rise to a lack of effective competition in some local markets<sup>9</sup>.

22. Amongst other issues, the CC is considering: whether the planning regime constrains entry or expansion; whether there are significant differences in the operation of the planning system in different parts of the UK and/or between different local authorities, and what impact any such differences have on any barriers to entry and expansion; whether any grocery retailer uses the planning regime, or land ownership and development in a way that deters or restricts entry or expansion by an actual or potential competitor; and, whether there are any other barriers to entry to grocery retailing, and whether these vary according to the scale or format of potential entry.

#### Issues for discussion

- Suitable sites for development might be a critical input for grocery retailers and may be limited in the UK. How best can the impact of the planning regime on entry and expansion be determined?
- The models that identify the relationship between market power and the number of competitors are predicated on the assumption of free entry. What is more, these models often use this and the zero-profit condition to identify bounds on observable entry. How can these models be adapted to identify barriers to entry?

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<sup>9</sup> <http://www.of.gov.uk/NR/rdonlyres/1A2D7FA2-FEA3-4459-9B25-4A737A20023D/0/oft845.pdf>

## Section 4 – Pricing Practices

23. In its reference of the UK groceries market, the OFT raised concerns that large grocery retailers may use certain pricing practices in order to behave in an aggressive manner towards smaller retailers.
24. Specifically, the CC is considering whether, as some commentators suggest, the larger retailers selling a wide range of products, sell some products below cost in order to distort consumers' perceptions of the value-for-money, thus unfairly damaging smaller competitor retailers whose more limited product ranges might restrict their ability to cross-subsidise between products to the same degree that supermarkets could.
25. It is not clear that below cost selling and the practice of applying different margins for different products is necessarily harmful to consumers. Economic theory suggests that in a competitive market where consumers choose where to shop by comparing the average price of a basket of products rather than the prices of individual products, unequal mark-ups over wholesale prices may be an efficient pricing outcome<sup>10</sup>.
26. Another concern regarding aggressive behaviour of larger retailers towards smaller rivals is below cost selling with "price flexing". This is a practice of setting lower prices where competition is strong, the purpose of which, it is argued, is to force weaker rivals to exit so that they can then raise prices (or reduce quality, range or amenities or in any way change the "value" offered to consumers) and increase profits.
27. Although low prices could be indicative of strong local competition, and are generally associated with higher consumer welfare, we cannot exclude that in some local markets

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<sup>10</sup> For example, in "A theory of retail pricing", Christopher Bliss explores Ramsey pricing for multi-product retailers and shows that retail pricing where margins are inversely proportional to the price elasticity of demand, is more efficient than equal mark-

a grocery retailer may set low prices with the aim of forcing a rival out of the market, or preventing a potential rival from entering a market. In this case, the low prices would benefit consumers only in the short term and once the weaker rival has exited the local market, the predatory retailer may increase its prices, which may lead to consumer harm.

28. Predatory behaviour has been described by Judge Bork as “an investment in future monopoly profits” and it is clear that the predatory firm must sacrifice short term profits for long term gain. This gives us two conditions that characterise a predatory strategy:

- i. The predatory firm makes short term losses; and,
- ii. To be successful, the predatory firm must recover these losses in the long term.

29. However, even if prices are observed to be lower in some markets than in others that is not by itself sufficient cause for concern. Low prices could be the result of markets that work well, and high prices could be the result of markets where competition does not work so well. Indeed, an observation that prices are different in different local areas according to the degree of competition is entirely consistent with competition and is, in fact, what we would expect to see if markets are local.

### **Issues for discussion**

- It has been suggested by some commentators that some pricing practices of large grocery multiples are exclusionary. How best can we determine whether these pricing practices are exclusionary and give rise to consumer detriment?

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