

# The relevance of surveys to the ‘relevant market’

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## Abstract

In this paper we discuss the UK Competition Commission’s (CC’s) extensive use of customer surveys in merger control. We point out how the UK’s ‘phase two’ merger regime compels the CC to decide upon, design, and commission a customer survey almost immediately its merger investigation begins. We highlight the effect this has on two areas of the CC’s merger control process that use customer surveys—definition of the relevant market, and assessment of the competitive effects of a merger in the relevant market. We illustrate how to avoid seven consequential pitfalls in using customer surveys with case-study examples from two recent CC horizontal merger inquiries. We suggest that customer surveys, carefully done, have provided useful insights for the CC but the complications of doing them have meant that they always have been considered in the context of other evidence.

\*UK Competition Commission. Please do not quote without permission of the authors. The views expressed in this paper are those of the authors alone. Chris Walters worked for the UK Competition Commission on both cases used as case studies in this paper. Examples from CC inquiries are illustrative only and should not be taken as official summaries of CC cases, full details of which may be found at [www.competition-commission.org.uk](http://www.competition-commission.org.uk). We are grateful to colleagues at the CC for helpful comments, and to seminar participants at the 2005 Economists in Competition and Regulation conference and from the University of East Anglia. Errors and omissions are our own.

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## 1. Introduction

1. There is an extensive management and business consulting literature that uses customer surveys to evaluate the impact of mergers on corporate performance.<sup>1</sup> There also is an extensive economic literature—both theoretical<sup>2</sup> and empirical<sup>3</sup>—on assessing the effects of horizontal mergers on competition. But there does not appear to be much discussion in the literature of using customer surveys to assess the economic effects of mergers on competition.<sup>4</sup> In this paper we attempt to plug that gap by using two examples from recent merger control inquiries at the UK Competition Commission—which extensively uses customer surveys—to highlight seven common complications in using customer surveys as empirical tools for definition of the relevant antitrust market, and for the competitive assessment of horizontal mergers within the relevant market.
2. We suggest that customer surveys have been a valuable part of the CC's evidence base but to be useful as evidence, the CC must have confidence in the accuracy of results. Various pitfalls affecting that accuracy can be avoided by careful design of the survey: to do this, the CC asks sequentially about matters of fact, matters of behaviour, matters of choice and matters of attitude. Naturally, surveys have not been the only source of evidence in CC merger investigations. The importance of careful survey design and of placing survey findings in the context of this other evidence are reinforced by the short amount of time the CC has to do surveys. Despite this, customer surveys, carefully done, have provided useful insights for the CC.
3. The remainder of this paper is structured as follows. Section 2 discusses the CC's use of surveys in its merger-control process. Section 3 discusses the use of customer surveys in defining the relevant antitrust market (one part of that merger control process), illustrating how to avoid four pitfalls with an example from a recent CC merger inquiry. Section 4 discusses the use of customer surveys in assessing the impact on competition of horizontal mergers within the relevant market (a subsequent part of that merger control process), illustrating how to avoid three pitfalls with an example from a recent CC merger inquiry. Section 5 concludes.

## 2. The UK Competition Commission and its use of customer surveys in the merger control process

4. The CC is a phase two merger control organization. As such, it conducts in-depth investigations into a relatively small number of potentially problematic mergers, which often may utilize customer surveys. In this section, we briefly give some background

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<sup>1</sup>For a summary of some of this literature, see Paulter (2003) the bibliography for which may be found at [www.ftc.gov/be/rt/Bibliography.pdf](http://www.ftc.gov/be/rt/Bibliography.pdf). This also was discussed in a 2002 US Federal Trade Commission roundtable on *Understanding Mergers: Strategy & Planning, Implementation and Outcomes* (see [www.ftc.gov/be/rt/mergerroundtable.htm](http://www.ftc.gov/be/rt/mergerroundtable.htm)).

<sup>2</sup>Seminal theoretical papers on the incentives to merge, and the welfare effects of such endogenous mergers, for asymmetric firms in the homogenous-good Nash-Cournot model are Perry and Porter (1985), Farrell and Shapiro (1990) and McAfee and Williams (1992). Previous theoretical literature tended to treat firms as symmetric and/or mergers as exogenous until some bizarre side-effects of this were noticed by Salant, Switzer and Reynolds (1983), eg that mergers are always unprofitable: Davidson and Deneckere (1985) found the opposite for differentiated-good Nash-Bertrand competition. The US Department of Justice's 1992 Merger Guidelines ignited further interest in differentiated-good Nash-Bertrand mergers ([www.ftc.gov/bc/docs/horizmer.htm](http://www.ftc.gov/bc/docs/horizmer.htm), especially section 2.21), an early example of which is McAfee, Simons and Williams (1992). Shapiro (1996) is a well-cited treatment. A literature search for any of these articles will return hundreds of subsequent citations. A more recent theoretical literature deals with coordinated effects in mergers, eg see Compte *et al* (2002) and Kühn (2004).

<sup>3</sup>Early so-called structural empirical models evaluated whether observed equilibrium prices were consistent with Nash pricing or collusive pricing, eg see Gollop and Roberts (1979), Bresnahan (1982, 1987), Lau (1982), Roberts (1983) and Porter (1983). Building on this literature, further structural empirical models simulated the unilateral effects of mergers in Nash-Bertrand models, eg see Werden and Froeb (1994), Berry (1994), Hausman *et al* (1994), Berry *et al* (1995) and Nevo (2001). For a recent discussion of the simulation of coordinated effects of mergers in Nash-Bertrand models, see Davis (2006).

<sup>4</sup>Hughes and Beale (2005) and Dubow (2003) are exceptions.

on the work of the CC,<sup>5</sup> to provide a context for our discussion of its use of customer surveys: essentially, this context compels the CC to decide upon, design, and commission a customer survey almost as soon as its merger inquiry begins.

## 2.1 *The UK Competition Commission*

5. In common with many international competition jurisdictions, the UK has two phases to its merger control regime. The CC is the phase two organization that conducts in-depth investigations into a relatively small number of potentially problematic mergers.<sup>6</sup> These mergers principally are referred to the CC by the UK's 'phase one' merger control organization, the Office of Fair Trading (OFT).<sup>7</sup>
6. Unlike many international competition authorities, the CC has no powers to conduct inquiries under its own initiative. Also unlike many international competition authorities, the CC is independent and determinative.<sup>8</sup> Although mergers in the UK are not litigated, the CC's decisions may be subject to judicial review by the Competition Appeal Tribunal (a specialist court) and, subsequently, the Court of Appeal.
7. At the first phase of the merger control process, the OFT has 20 to 40 working days (4 to 8 weeks) to decide if there is (or may be) a relevant merger situation that has resulted in (or may be expected to result in) a substantial lessening of competition (SLC).<sup>9</sup> If so, the OFT has a duty to refer the merger to the CC.<sup>10</sup> The OFT's published referral decision will normally provide details of the parties involved, the transaction in question, the determination of jurisdiction, the relevant market(s) and the competitive assessment of the merger. When the OFT refers a merger to the CC, the CC has 24 weeks to publish its final report (with an extension of up to 8 weeks if the CC 'considers that there are special reasons why the report cannot be prepared and published within that period'<sup>11</sup>).
8. In practise, the CC aims to complete its work in a shorter time than the statutory maximum allowed. According to its 2004/5 annual report, the CC took 23 weeks on average to publish reports on the 13 merger inquiries it completed.<sup>12</sup> However, the CC found an SLC ('reached an adverse finding' in the CC's terminology) in five of these 13 cases. As Figure 1 shows the inquiry procedure branches off to include

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<sup>5</sup>Scott *et al* (2005) is a comprehensive look at current merger control in the UK, part III of which is especially relevant to this section.

<sup>6</sup>As well as merger inquiries, the CC also conducts other inquiries (eg market investigations, regulatory appeals) but a discussion of these is beyond the scope of this paper. However, the CC almost always uses customer surveys (generally both qualitative and quantitative) for market investigations, for which it also faces the issues we discuss in this paper. Recent examples include Home Credit (2006), Store Cards (2006), Liquefied Petroleum Gas (2006) and Classified Directory Advertising Services (2006).

<sup>7</sup>Principally but not exclusively. The Secretary of State for Trade and Industry may refer mergers raising public interest issues (see Table 1 in CC 2003a). The OFT also is responsible for much more than just phase one merger control (eg antitrust, consumer protection) but a discussion of these responsibilities is beyond the scope of this paper.

<sup>8</sup>The CC was established as an independent public body by the 1998 Competition Act and replaced the Monopolies and Mergers Commission (MMC) from 1 April 1999. The 2002 Enterprise Act introduced a new merger control regime in the UK under which the CC is responsible for (i) deciding whether a merger substantially lessens competition and (ii) designing and implementing remedies for mergers that substantially lessen competition. Under the 1973 Fair Trading Act that the Enterprise Act replaced, the CC (and before it the MMC) was responsible for (i) deciding whether mergers were against the public interest (a test not confined to the mergers' effect on competition) and (ii) recommending remedies to the Secretary of State for Trade and Industry.

<sup>9</sup>Unlike many international competition jurisdictions, notification of mergers is not mandatory in the UK. The period that the OFT has to review a merger essentially depends on whether it has been formally notified or not. The OFT also offers a range of guidance of varying degrees of formality to companies contemplating merger plans ahead of their implementation or notification.

<sup>10</sup>According to the CC's annual report, the annualized referral rate of mergers was around 17 per cent for 2004/05. That is, roughly one-in-six mergers examined by the OFT were referred to the CC.

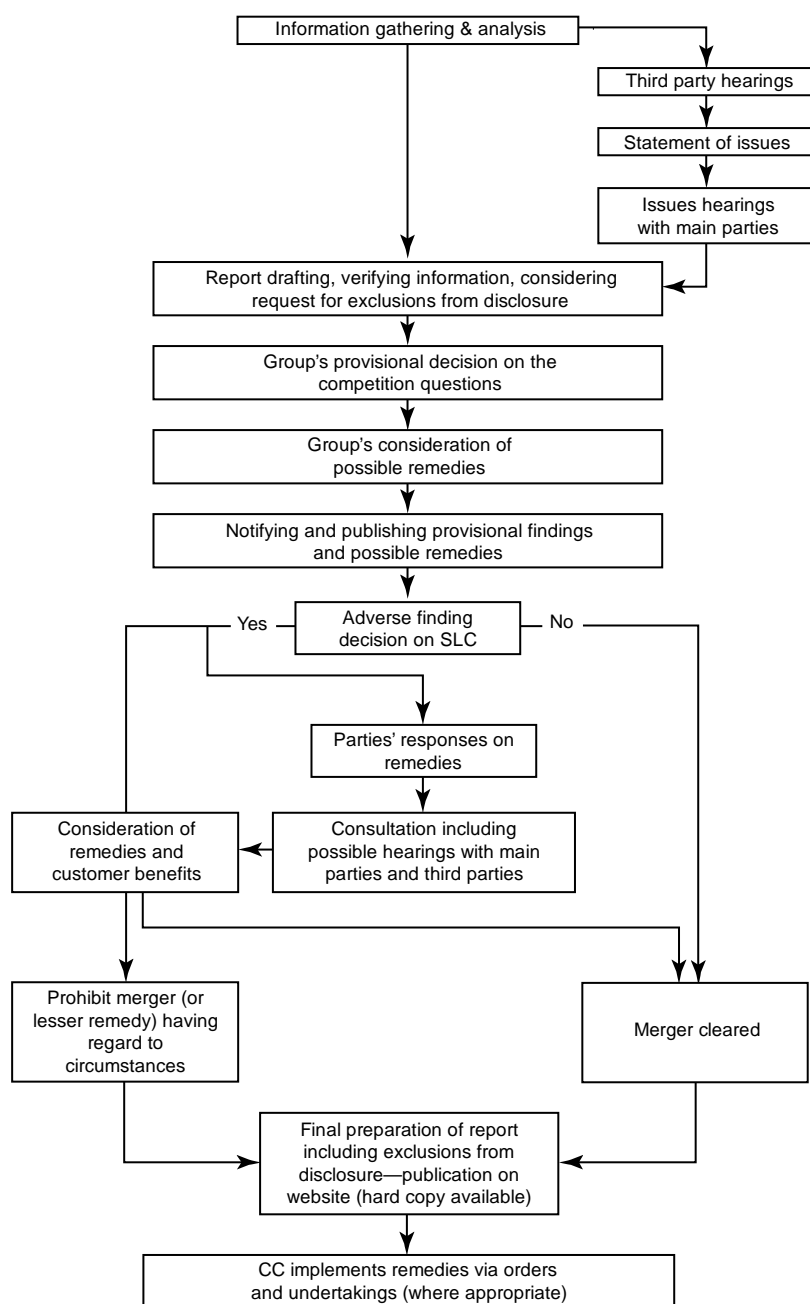
<sup>11</sup>Source: CC (2003a), paragraph 6.7.

<sup>12</sup>Source: report summaries on pages 19 to 37 of CC 2004/05 annual report. The CC extended one case, where it found an SLC by six weeks. The average excluding this case was 22 weeks.

several extra steps if an adverse finding on an SLC is reached. The process of considering how to remedy an SLC—which also should fit in the 24 week statutory timetable—therefore compresses the time available to reach a finding. (The process of agreeing and implementing remedies with the parties has a separate timetable, as the last box in Figure 1 shows, and took 13 weeks on average for four of the five SLC cases in 2004/05, according to the CC’s annual report. The fifth SLC case was prohibited outright.)

FIGURE 1

Typical shape of a CC merger inquiry<sup>13</sup>



Source: Table 2, CC (2003a).

9. This means a better measure of the time available to the CC to carry out its analysis is the time it has to publish what it calls 'provisional findings' (PFs, see Figure 1).<sup>14</sup> While by no means representing an irrevocable conclusion on the part of the CC,<sup>15</sup>

<sup>13</sup>In practice, the CC may receive comments from third parties in cases where it makes no adverse finding and before it clears the merger.

<sup>14</sup>The CC may undertake further analysis in response to comments on its PFs but the bulk of its analysis will have been done before PFs.

<sup>15</sup>For example, when further evidence was presented, the CC reversed its adverse finding of an SLC between PFs and the final report in its 2005 British Salt/New Cheshire Salt and Somerfield/Morrisons merger inquiries (in the latter case, the CC found an SLC in 14 local markets in its provisional findings but in only 12 local markets in its final report).

the PFs offer a strong indication of the likely decision and are intended to offer concerned parties a formal public statement of the CC's developed thinking. For 2004/5, the CC took 15 weeks on average to publish PFs on the 13 merger inquiries it completed.<sup>16</sup>

## 2.2 *The CC's use of surveys*

10. Although the CC's timetable gives it considerably more time to conduct its in-depth investigations than the four to eight weeks the OFT has for its phase one assessment, time and resource constraints limit the ability to collect large quantities of information that are specific to the merger. There are four broad sources of such information: official government statistics; industry sources; the merging parties and other firms in the relevant market (including customers and suppliers); and original data collected as a survey.
11. Most official government statistics are collected at a level that is too aggregated for merger control purposes.<sup>17</sup> This may also be the case for industry sources—for example, commercial organizations that collect data on specific sectors to sell to firms wanting to benchmark (say), or trade associations—although the sectors for which such data are collected may be suggestive of how participants perceive the market (which may be different from the relevant antitrust market discussed in section 2.3). Data also are routinely provided by the merging parties<sup>18</sup> and, in some cases, their customers and competitors<sup>19</sup> (especially if they have strong views about the merger or if they are requested to provide such information).
12. When it appears likely that it could add to other data sources—eg because the CC thinks there may be a gap in the data—the CC may commission a customer survey (eg of consumers or business customers), especially where there are a large number of customers in the market, the views of whom it may be otherwise hard for the CC to canvass. The CC usually commissions market research organizations to undertake surveys rather than doing them itself.<sup>20</sup> Typically, CC customer surveys are postal or self-completion questionnaires, telephone interviews or face-to-face interviews.<sup>21</sup> Each mode of data collection has its own pros and cons (eg in terms of costs, time, coverage): for example, face-to-face surveys tend to have higher response rates than telephone surveys, which in turn tend to have higher response rates than self-completion surveys.<sup>22</sup> Conversely, face-to-face surveys tend to take longer and cost more.

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<sup>16</sup>Source: CC annual report 2004/05, p.11.

<sup>17</sup>Moreover, even disaggregated official government statistics tend to be collected for industries, which in general will not be the same as the relevant market in a merger inquiry.

<sup>18</sup>The CC sends the merging parties a 'market questionnaire' for this purpose. The parties also sometimes submit the results of their own customer surveys, either existing market research work or (less often) those specially commissioned for the CC's merger investigation.

<sup>19</sup>For example, in the 2006 Heinz/HP and Cott/Macaw merger inquiries, the CC requested sales data from retailers which would not otherwise have been available from the merging parties.

<sup>20</sup>As a public body, the CC submits invitations to tender to a predetermined list of market research organizations, selected every four years by advertising in the Official Journal of the European Union (see [ted.europa.eu](http://ted.europa.eu)). The current framework agreement was awarded to eight suppliers on March 25 2004 for 'market research and related survey services' (award notice 2004/S 60-051000). On occasion the CC can and does commission market research from suppliers not on its predetermined list, should the need arise (eg if they have specialist knowledge of surveying customers relevant to the CC's merger inquiry).

<sup>21</sup>The CC uses such large-scale quantitative surveys more frequently than small-scale qualitative surveys, which tend to be focus groups or in-depth interviews. When qualitative surveys are used they tend to precede quantitative surveys and allow the CC to understand customers in order to more appropriately phrase and target its quantitative surveys. See, for example, the CC's 2004 Archant/INM merger inquiry, which had qualitative and quantitative surveys of business customers ([www.competition-commission.org.uk/inquiries/completed/2004/archant/index.htm](http://www.competition-commission.org.uk/inquiries/completed/2004/archant/index.htm)). This paper concentrates on quantitative surveys.

<sup>22</sup>The response rate is the proportion of customers surveyed who answer the survey questions.

13. A summary of the CC's customer surveys undertaken in merger inquiries under the Enterprise Act is given in TABLE 1.<sup>23</sup> To get an idea of scale, the CC completed 22 merger inquiries (not including cancelled references<sup>24</sup>) under the Enterprise Act up until the end of 2005 (10 in 2004 and 12 in 2005), and 12 (55 per cent) used a survey.<sup>25</sup>

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<sup>23</sup>The CC sometimes sends postal questionnaires to many customers (dozens or even hundreds) in merger inquiries. These are excluded from TABLE 1 because (i) they typically are not based on a sample of the population of customers but sent to as many of the population of customers as the CC can identify, (ii) they typically ask more detailed questions than can be accommodated in a large-scale survey, and (iii) they typically also ask for data and/or quantitative evidence that cannot be extracted in a survey. See, for example, Ardagh/Redfearn Glass (2005) or SDEL/Coors (2005). The CC's customer questionnaire in DS Smith/Linpac Containers (2004) may be an interesting exception, having been essentially more of a self-completion survey than a questionnaire and having been conducted in-house by the CC. It is mentioned in the notes to TABLE 1.

<sup>24</sup>In two cancelled references in 2005 (First Group/Inter City East Coast and Brittany Ferries/P&O) the CC completed customer surveys before cancellation.

<sup>25</sup>To emphasize that the CC investigates only a relatively small number of potentially problematic mergers, in the same period the OFT examined around 380 mergers (including those referred to the CC). The majority of these were found not to qualify for further examination because they were not large enough (ie had combined turnover less than £70 million and/or combined share of supply less than 25 per cent). Source: [www.of.gov.uk/Business/Mergers+EA02/Case+lists/2004/index.htm](http://www.of.gov.uk/Business/Mergers+EA02/Case+lists/2004/index.htm) and [www.of.gov.uk/Business/Mergers+EA02/Case+lists/2005/index.htm](http://www.of.gov.uk/Business/Mergers+EA02/Case+lists/2005/index.htm).

TABLE 1 The CC's use of customer surveys in merger control under the 2002 Enterprise Act up until the end of 2005

				<i>Survey</i>				
				<i>Respondents</i>				
<i>Merger inquiry</i>	<i>Year*</i>	<i>Sector</i>	<i>Finding</i>	<i>Number</i>	<i>Type</i>	<i>Type(s) of survey</i>	<i>Mode†</i>	<i>Response rate‡</i>
Archant/Independent News & Media	2004	Local newspapers	No SLC	579	Businesses	Qualitative & quantitative	Telephone	Not reported
Firstgroup/Scotrail	2004	Rail transport	SLC	1,404	Consumers	Quantitative	Telephone	Not reported
National Express/Greater Anglia	2004	Bus and rail transport	No SLC	1,212§	Consumers	Quantitative	Self-completion¶	Not reported
Stena/P&O	2004	Ferries	SLC	400	Businesses	Qualitative & quantitative	Telephone	16%
British Salt/New Cheshire Salt	2005	Salt	No SLC	516	Businesses	Quantitative	Telephone	Not reported
Bucher/Johnston	2005	Road sweepers	No SLC	100#	Businesses	Qualitative & quantitative~	Telephone	26%
Emap/ABI	2005	Business information	SLC	480	Businesses	Qualitative & quantitative	Telephone	Not reported
Francisco Partners/G International	2005	Electronic data interchange	No SLC	316	Businesses	Quantitative	Self-completion♦	10%
Napier Brown/James Budgett	2005	Sugar	No SLC	218	Businesses	Quantitative	Telephone	25%
National Express/Thameslink	2005	Rail transport	No SLC	1,177	Consumers	Quantitative	Self-completion¶	Not reported
SDEL/Coors	2005	Beer pumps	SLC	501	Businesses	Quantitative	Telephone	Not reported
Somerfield/Morrisons	2005	Supermarkets	SLC	5,444	Consumers	Quantitative	Face-to-face	Not reported

Source: CC.

\*Year CC report published.

†Mode for quantitative survey as all qualitative surveys are either telephone or face-to-face. The qualitative survey in Emap/ABI was conducted in-house by the CC.

‡For quantitative survey.

§1,212 original respondents and 832 follow-ups.

¶On-board with responses collected by interviewer before passenger disembarked.

#100 quantitative interviews and 22 qualitative interviews.

~Qualitative survey was a follow-up to the quantitative survey.

♦Online.

Note: The CC's customer questionnaire in DS Smith/Linpac (2004), in which the CC found no SLC, is excluded from Table 1. The CC itself surveyed 234 customers (response rate 48%) in the corrugated cardboard sheet sector with a quantitative, self-completion questionnaire.

14. These surveys take a considerable time to specify, commission, implement, and analyse, so they must be designed early in the 15-week period the CC has to publish PFs. This is reinforced by the CC always giving the merging parties the opportunity to comment on its survey questions, and the need to pre-test ('pilot') its surveys.<sup>26</sup> This means that, in terms of Figure 1, important hearings with the merging parties and third parties, and the gathering of other evidence, will not have been completed. The CC's views on the key issues in a merger inquiry are therefore unlikely to be fully formed, so it is impossible to design a perfectly tuned survey.
15. To help ensure its surveys elicit meaningful answers to less-than-perfectly-tuned questions, the CC tries to get respondents to re-live their purchasing decisions. The CC does this by asking questions in stages: matters of fact, matters of behaviour, matters of choice and matters of attitude.<sup>27</sup> These are discussed in sections 2.2.1 to 2.2.4.

### 2.2.1 *Matters of fact*

16. CC survey questions first address simple factual points and the context in which the decision was made (eg purchasing motives). For example, in its 2004 Archant/INM (Independent News and Media) local newspaper merger inquiry (further discussed in section 3.1), the CC asked advertisers 'screening' questions about whether they advertised in various print and non-print media.<sup>28</sup>
17. Similarly, in its 2005 Somerfield/Morrisons supermarkets merger inquiry (further discussed in section 4.1), the CC asked shoppers what kind of shopping trip they were on (eg one-stop shop, top-up shop), and whether they normally shopped on this day and at this store.<sup>29</sup>

### 2.2.2 *Matters of behaviour*

18. CC survey questions next ask which alternatives were considered and which were thought to be most effective. For example, in Archant/INM, the CC asked advertisers how important local newspaper advertising was to them and in which local newspapers, relative to the alternatives.<sup>30</sup> Likewise, in Somerfield/Morrisons, the CC asked shoppers what attracted them to the store, relative to the alternatives.<sup>31</sup>

### 2.2.3 *Matters of choice*

19. CC survey questions next ask what factors (eg price) led to one choice among the alternatives identified as matters of behaviour. For example, in Archant/INM, the CC asked advertisers which other newspapers, print and non-print media they could have used instead.<sup>32</sup> Also, in Somerfield/Morrisons, the CC asked shoppers how

<sup>26</sup>The CC does not disclose its pilot results but does give the merging parties the opportunity to comment on any changes the CC makes to its survey in response to them. The CC pilots its surveys by pre-testing both the questions and the mode of data collection.

<sup>27</sup>These stages are similar to those identified by Herbert Simon, who won the 1978 Nobel Prize in Economic Sciences for 'his pioneering research into the decision-making process within economic organizations' (source: [nobelprize.org/economics/laureates/1978](http://nobelprize.org/economics/laureates/1978)). Simon identified five stages, with an implementation stage between the 'matters of choice' and 'matters of attitude' stages (eg see Simon, 1977), but this stage does not usually concern the CC as it is generally self-evident how customers made their purchases.

<sup>28</sup>See questions S1 to S8 in the Appendix to [www.competition-commission.org.uk/inquiries/completed/2004/archant/synovate\\_research\\_report.pdf](http://www.competition-commission.org.uk/inquiries/completed/2004/archant/synovate_research_report.pdf).

<sup>29</sup>See questions 1 to 4 in Appendix B to the consumer survey in [www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/consumer\\_survey\\_by\\_nop.pdf](http://www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/consumer_survey_by_nop.pdf).

<sup>30</sup>See questions 1 to 9 in the appendix to the consumer survey referenced in footnote 28.

<sup>31</sup>See question 5 in Appendix B to the consumer survey referenced in footnote 29.

<sup>32</sup>See questions 10 to 13 in the appendix to the consumer survey referenced in footnote 28.

much they had spent, how far they had travelled and whether they always used the store for their shopping.<sup>33</sup>

#### 2.2.4 *Matters of attitude*

20. Finally, CC survey questions ask what the respondent would have done under different circumstances, eg what would you do if the price rose by 5 per cent? For example in Archant/INM, the CC asked advertisers whether prices had increased (or non-price factors worsened) and what advertisers would do if they did.<sup>34</sup> And in Somerfield/Morrisons, the CC asked shoppers what they would have done had the store been closed and how much worse this choice would have been.<sup>35</sup>
21. Because the complexity of each stage varies depending on what was bought, the number of questions in each survey varies considerably, from less than a dozen to over 50. The market research company typically also asks questions that help characterize the decision maker (eg age, gender, and income for consumers).
22. This four-stage framework provides a way of ordering CC survey questions that involves asking first about behaviour and then about attitudes.<sup>36</sup> Asking first about behaviour reminds respondents of relevant facts and experiences, so that responses to attitudinal questions are likely to be better informed. In particular, the CC hopes to ensure respondents' attitudinal answers (eg on price sensitivity or the effects of the merger) are internally consistent with their behavioural answers, in order to mitigate concerns arising from 'virtuous responses'<sup>37</sup> or misunderstanding hypothetical questions.

#### 2.3 *The CC's merger control process*

23. The CC uses large-scale customer surveys mainly to inform two stages of its merger control process: definition of the relevant market; and the competitive assessment of the merger in the relevant market. Customers' behavioural and attitudinal survey responses are relevant for both stages.
24. The CC often begins its analysis of mergers by defining the relevant market, known as an 'antitrust market'. This differs from two other popular definitions of markets used by economists: trading markets and strategic markets. A trading market is a narrow definition based on the minimum area over which the law of one price holds.<sup>38</sup> A strategic market is a wide definition based on the minimum area that a firm needs to serve to be viable and, consequently, the area within which it makes its strategic decisions.<sup>39</sup> The relevant antitrust market generally lies between the two.<sup>40</sup> It is defined as the minimum area over which a hypothetical monopolist could profitably impose a small but significant and non-transitory increase in price (SSNIP):<sup>41</sup> a relevant antitrust market is therefore something worth monopolizing. The 'hypothetical monopolist test' is the standard way of defining antitrust markets in

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<sup>33</sup>See questions 6 to 9 in Appendix B to the consumer survey referenced in footnote 29.

<sup>34</sup>See questions 14 to 23 in the appendix to the consumer survey referenced in footnote 28.

<sup>35</sup>See questions 10 and 11 in Appendix B to the consumer survey referenced in footnote 29.

<sup>36</sup>This distinction is sometimes made in terms of revealed preference and state preference.

<sup>37</sup>That is, telling the interviewer what the respondent believes to be the 'right' answer, instead of what the respondent really believes.

<sup>38</sup>So a trading market may correspond to the intuitive definition of a market being the place where trading happens (eg a financial market).

<sup>39</sup>The 'global market', in which many firms' annual reviews suggest they compete, is an example of such a strategic market.

<sup>40</sup>See Geroski (1998) for a discussion of the relationships between these three concepts of economic markets.

<sup>41</sup>In all three economic markets (trading, antitrust, and strategic) area is used to mean products as well as geography.

international jurisdictions.<sup>42</sup> For the CC, a SSNIP is normally 5 per cent. Other jurisdictions use different percentages, such as 5 to 10 per cent.<sup>43</sup>

25. The CC then measures concentration in the relevant market as a screen for potential competition problems. The CC generally uses the familiar Herfindahl-Hirschmann Index (HHI)—the sum of all firms' squared market shares—to do this. The higher the HHI and the increment to it arising from the merger, the more concerned the CC is likely to be.<sup>44</sup> The CC also considers the post-merger market share of the merged firm, a threshold of 25 per cent giving the CC possible cause for concern.<sup>45</sup> This is lower than the 40 to 50 per cent post-merger market share commonly used by authorities in other merger control jurisdictions.<sup>46</sup>
26. Subsequently, the CC's analysis identifies and tests theories of competitive harm arising from changes in market power associated with changes in market structure, ie the competitive assessment of the merger. Broadly, these theories of harm may be unilateral (non-coordinated) effects or coordinated effects.<sup>47</sup> Unilateral effects arise where the merged firm is able on its own to exploit market power, though its rivals may benefit independently. Coordinated effects arise where a group of firms collectively attain greater market power because of increased concentration and the perceived interdependence between them.
27. The CC will then identify and test countervailing factors to the relevant competitive harm. For example, ease of entry or the buyer power of large customers.<sup>48</sup> Then it will assess any rivalry-enhancing efficiencies arising specifically from the merger,<sup>49</sup> and undertake remedial action where necessary. These latter stages come into play only if an adverse finding is made.<sup>50</sup>
28. The CC most commonly uses customer surveys to assist with market definition and competitive assessment because it is for them that customers' attitudes and behaviour are the most relevant.<sup>51</sup> These stages are also those where other data may be less able to answer the merger-specific types of questions that the CC

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<sup>42</sup>The hypothetical monopolist test originated in the 1992 horizontal merger guidelines issued by the US Federal Trade Commission and Department of Justice. For examples of the many international jurisdictions using the hypothetical monopolist test for market definition, see Table 4.1 in Bishop and Walker (2002).

<sup>43</sup>See CC (2003b) paragraphs 2.7 and 2.8.

<sup>44</sup>The OFT regards an HHI of 1,000 as high and an HHI of 1,800 as very high. The OFT regards a merger as indicating possible cause for concern when there is an increment of 100 to a high HHI and of 50 to a very high HHI. Where it uses the HHI, the CC has regard to these threshold levels but only as one factor in its wider assessment of competition.

<sup>45</sup>See CC (2003b) paragraph 3.4.

<sup>46</sup>For example, the EU (see paragraph 17 in 'Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings', *Official Journal of the European Union*, 2004, 47:C31/03, 5-18.). The USA uses only the HHI—and the increment to it—as a screen (see section 1.51 of the US Horizontal Merger Guidelines, [www.ftc.gov/bc/docs/horizmer.htm](http://www.ftc.gov/bc/docs/horizmer.htm)).

<sup>47</sup>Unilateral and coordinated effects may appear to arise most naturally in horizontal mergers but also arise in vertical and conglomerate mergers (a conglomerate merger is a merger between firms in separate but related relevant markets, eg between firms producing complements, not substitutes).

<sup>48</sup>Buyer power means more than just the ability of large customers to walk away. If it did not, then every customer large or small would have buyer power. Buyer power in this narrow sense is just the normal competitive process. By buyer power the CC means the ability of large customers to disrupt the normal relationship between seller concentration, supplier power and price. For the CC, it is not sufficient for large customers' countervailing buyer power simply to exist to mitigate the competitive harm to them arising from a merger. The exercise of large customers' countervailing buyer power must also protect the interests of small customers who do not have it. The CC also recognizes that any such exercise of large customers' countervailing buyer power can itself lead to competitive harm, if it arises from a merger between customers, not suppliers.

<sup>49</sup>For example, rivalry-enhancing efficiencies may increase cost asymmetries between firms, reducing the likelihood of coordinated effects. Unlike some other international merger-control jurisdictions, the CC also considers efficiencies in the form of customer benefits at the remedies stage, eg marginal cost reductions that are passed on to customers.

<sup>50</sup>Broadly speaking, remedial action can restore the status quo ante market structure (eg divestment), can increase the competition faced by the merged firm (eg access to an essential input), or can prevent the abuse of market power (eg a price cap). See CC (2003b), part 4.

<sup>51</sup>The CC sometimes uses surveys to address buyer power but more often the CC addresses buyer power with customer questionnaires, not surveys. This is because surveys tend to be synonymous with large numbers of small customers whereas buyer power tends to be synonymous with small numbers of large customers.

poses. The basic issues the CC faces in using customer surveys for market definition and competitive assessment are the choice of survey participants and the questions asked. These are discussed in turn for market definition and competitive assessment in the following two sections. For another detailed discussion of these issues in the context of some recent CC's merger cases, see Hughes and Beale (2005).

### **3. The CC's use of customer surveys for definition of the relevant market**

29. Onerous data and econometric requirements in estimating demand-side substitution mean it is unusual for the CC to implement the hypothetical monopolist test directly in practice. For this reason, the CC often uses customer surveys to gauge customers' price-sensitivity and where possible implement the SSNIP test. This section explains how and explores four issues in doing this, with an example from a recent CC merger inquiry.
30. The hypothetical monopolist test that the CC uses for market definition can 'fail' for two reasons: demand-side substitution and supply-side substitution. Demand-side substitution can render a SSNIP unprofitable when the price makes a product less attractive to customers, who therefore purchase less of it and more of substitute products. Supply-side substitution can render a SSNIP unprofitable when it prompts other firms to start supplying, at short notice, an effective substitute to the product in question.
31. It is unusual for the CC to implement the hypothetical monopolist test literally in practice.<sup>52</sup> To do so requires robust econometric estimates of own- and cross-price elasticities of demand at the level of individual products, as well as estimates of individual products' marginal costs. This requires price, quantity and cost data for all plausible substitute products, not just the merging parties' products. This also requires complex decisions to be evaluated about the functional form of the demand system to be estimated.<sup>53</sup>

#### **3.1 Case study 1: using a survey to help define the relevant market—Archant/INM (2004)**

32. However, it is possible to get some estimate of the responsiveness of demand to a SSNIP from a customer survey.<sup>54</sup> For example, in its inquiry into Archant's 2004 acquisition of INM's 27 weekly local newspapers in Greater London, the CC commissioned a telephone survey of 579 advertisers (of property, jobs, motors etc) in weekly local newspapers in these 27 largely-contiguous local areas and asked about their price-sensitivity.

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<sup>52</sup>The CC's Heinz/HP (2006) merger inquiry is the most recent exception. Here, however, the parties implemented the SSNIP test, not the CC. See paragraphs 26 to 35 of Appendix C to the report ([competition-commission.org.uk/rep\\_pub/reports/2006/fulltext/511ac.pdf](http://competition-commission.org.uk/rep_pub/reports/2006/fulltext/511ac.pdf)), which contains a discussion of the associated difficulties. See also Hosken *et al* (2005) for a discussion of issues in estimating demand systems, such as the nested logit model used by the parties in Heinz/HP. The CC used the SSNIP test in Arcelor/Corus (2004) to test the parties' proposition that hot rolled steel sheet piling and concrete were in the same 'retaining structures' market. Large increases in scrap steel prices resulted in price increases for all sheet piling products—equivalent to a hypothetical monopolist. Demand-side substitution was negligible, so the CC rejected the claim that concrete would constrain a hypothetical monopolist of steel piling from a 5 per cent price increase. Modelling price changes closer to 5 per cent happens more often in geographic market definition. For example, in both Ardagh/Redfearn (2005) and British Salt/New Cheshire Salt (2005), the CC assessed in detail the question of whether the additional cost involved in importing from continental Europe would be covered by a 5 per cent UK price rise.

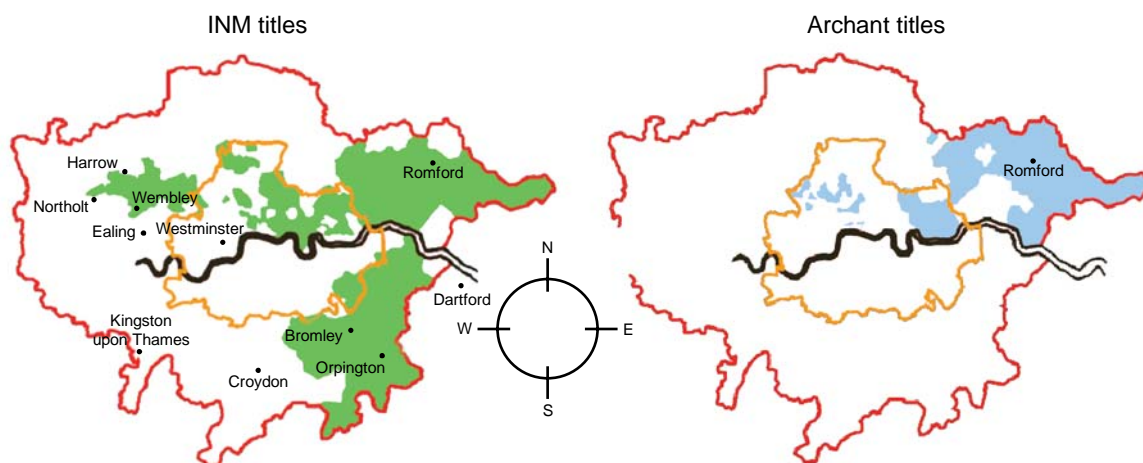
<sup>53</sup>Moreover, one might argue that were the CC to have perfect data and to know the shape of the aggregate demand curve, then the CC would have all it needs to directly estimate the impact of the merger, which may remove the need to reach a conclusion on market definition. For arguments why this may not be the case, see Walker (2005) for example.

<sup>54</sup>See CC (2003b) paragraphs 2.16 and 2.18, which mention using surveys of customers' responses to the SSNIP test for market definition.

33. Figure 2 shows the practical importance of the CC's SSNIP test for market definition in this case. INM's 27 newspapers were circulated/distributed widely in Kent (to the South-East of London), east London and Essex (to the East of London), and also were circulated/distributed in north and north-west London (see the left panel of Figure 2).<sup>55</sup> The acquirer Archant's newspapers also were circulated/distributed widely in east London and Essex but were circulated/distributed in north and north-west London only to a very limited extent, and were not circulated/distributed in Kent at all (see the right panel of Figure 2).

FIGURE 2

### Circulation of INM and Archant weekly local newspaper titles in Greater London pre-merger



Source: CC from Newspaper Society data (adapted from Figures 1 and 2 in Appendix I to the report).

Notes:

1. Black line is River Thames.
2. Orange line marks Inner London.
3. Red line marks Greater London.
4. Circulation/distribution shown only for VFD (Verified Free Distribution) or ABC (Audit Bureau of Circulation) local newspaper titles with 10 per cent penetration of readership in local areas defined by JICREG, the Joint Industry Committee for Regional Press Research, an industry body. JICREG areas approximate postcode areas.

34. Were the relevant market for advertisers in Archant/INM just weekly local newspapers *in each local area* (eg a postcode area), then there would have been many significant overlaps between the titles of Archant and INM in East London and Essex, at the very least. Given there were at most three publishers of weekly local newspapers in most of Greater London,<sup>56</sup> these overlaps would have generated large increments in already concentrated markets (eg merger to monopoly in many local areas).
35. Conversely, were the market for weekly local newspapers *Greater London-wide*, then the overlaps would not have been large enough to cause the CC concern.<sup>57</sup> Even more so were the product market wider than only weekly local newspapers (eg if it included advertising-only publications like *Exchange & Mart* or *Loot*, the London-wide daily newspapers the *Evening Standard* and *Metro*, or other non-print media).

<sup>55</sup>Where a local newspaper is free to readers, it is said to be distributed. Where it is paid for, it is said to be circulated. Most of INM's 27 titles were free. Even for those that were paid for, advertising revenue dwarfed cover-price revenue.

<sup>56</sup>See, for example, Figure 2 in Appendix I to the report ([competition-commission.org.uk/rep\\_pub/reports/2004/fulltext/491ai.pdf](http://competition-commission.org.uk/rep_pub/reports/2004/fulltext/491ai.pdf)).

<sup>57</sup>In the end, the picture was mixed, given the CC concluded that the geographic market was supra-local but not as wide as Greater London.

36. To investigate this, one of the pieces of analysis that the CC carried out was to ask respondents to its telephone survey if there was likely to be some level of increase in the cost of advertising in weekly local newspapers that would stop the customer advertising in them and, if so, what percentage increase that would be (the ‘critical price increase’). Two generic complications in asking this question are worth noting, which are discussed in sections 3.2 and 3.3.

### **3.2 Distinguishing between residual and market elasticities of demand**

37. The CC was careful to distinguish between the elasticity of *residual demand* facing Archant or INM and the elasticity of *market demand* for all local weekly newspapers.<sup>58</sup> That is, the CC asked about critical price increases across all local newspapers, not just for the respondent’s relevant Archant or INM title(s). It is the elasticity of market demand that is relevant for market definition.

### **3.3 Measuring total rather than partial substitution**

38. The CC asked about when the respondent would *stop* advertising after a critical price increase, not whether the respondent would *reduce* advertising after a critical price increase. That is, the CC asked about total substitution and not partial substitution. In this context, this avoided the CC being too hypothetical (‘what price increase would make you reduce your advertising and by what amount?’).<sup>59</sup> Asking about total substitution has two effects on the SSNIP test:

- customers that stop advertising may not be representative in expenditure terms, so losing 23 per cent of customers may not imply that 23 per cent of advertising revenues would actually be lost in response to a SSNIP—in Archant/INM, the CC concluded that there was no reason to suppose this was an issue because responses did not differ according to how much respondents spent on advertising;<sup>60</sup> and
- customers that do not stop advertising in response to a SSNIP are assumed not to reduce their expenditure at all—the CC noted that the effect of this is to underestimate the revenue that would be lost to a SSNIP.

39. The cumulative distribution of respondents’ critical price increases is given in Figure 3, which shows that 23 per cent of customers said that they would stop advertising in local newspapers for a 5 per cent price increase (a SSNIP). Using estimates of the costs saved from such a loss of advertising custom, the CC concluded that a SSNIP would not be profitable and that the relevant market was wider than only local newspapers in a given local area.<sup>61</sup> Given the effect of total substitution was to underestimate the revenue lost to a SSNIP, this made the CC’s finding more robust.

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<sup>58</sup>The price elasticity of residual demand will in general be much more elastic than the price elasticity of market demand.

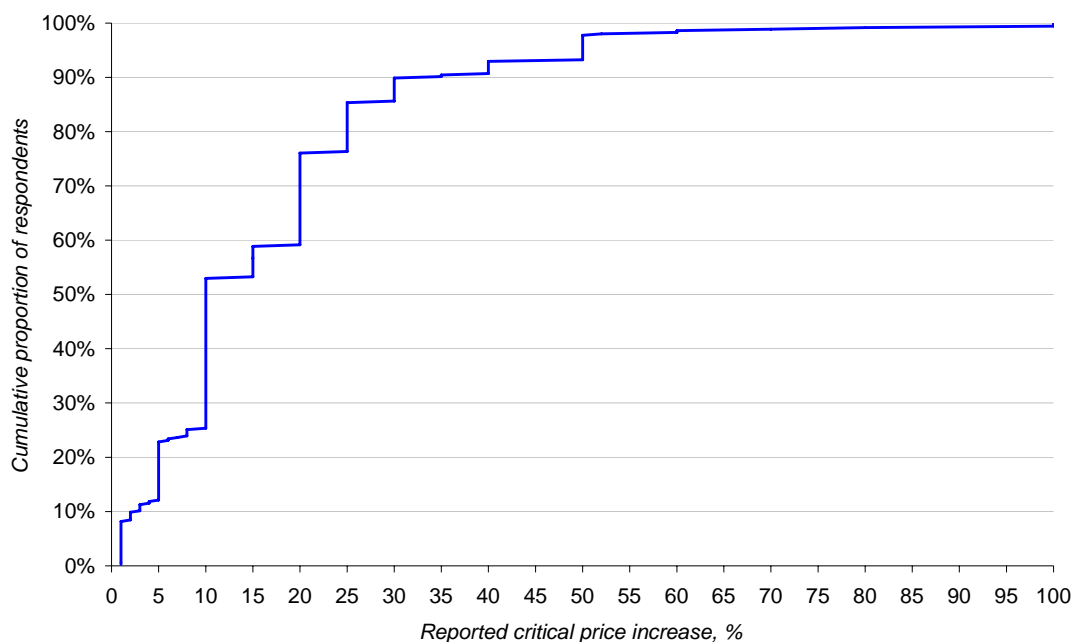
<sup>59</sup>This is not to say that more open or closed SSNIP-type questions may be inappropriate in other contexts.

<sup>60</sup>See Table 3 in Appendix E to the report ([www.competition-commission.org.uk/rep\\_pub/reports/2004/fulltext/491ae.pdf](http://www.competition-commission.org.uk/rep_pub/reports/2004/fulltext/491ae.pdf)). For example, if most customers had just one advertisement—regardless of how much it cost—then any substitution would have been total substitution.

<sup>61</sup>Not all 579 respondents gave useable answers to this question. In particular, if respondents answered ‘nothing’ to the question, the CC could not be sure whether they meant a 0 per cent price increase would make them switch (ie they were planning to switch in any event), or whether they meant no price increase would make them switch. However, even under the extreme assumption that advertisers who did not give useable answers would not have switched for any price increase, 15 per cent of customers would still be lost to a 5 per cent price increase. The CC also investigated whether a strategy of price-discriminating price rises, targeting increases to avoid the most price-sensitive advertisers, would alter the results. This was important because of the practice of negotiating rates but it did not reverse the initial conclusions (see paragraphs 30 to 49 in Appendix E to the report, [www.competition-commission.org.uk/rep\\_pub/reports/2004/fulltext/491ae.pdf](http://www.competition-commission.org.uk/rep_pub/reports/2004/fulltext/491ae.pdf)).

FIGURE 3

**Cumulative distribution of Archant/INM customer survey respondents' reported critical price increases**



Source: CC from Synovate survey results.

- 40. In fact, on the basis of a wide range of evidence the CC concluded that the relevant market was wider geographically than just the local circulation/distribution 'footprint' of each local newspaper, and could also extend to other printed media.
- 41. There were two further generic complications in using a customer survey for market definition that the CC faced in Archant/INM, which are discussed in sections 3.4 and 3.5.

**3.4 Ensuring respondents understand a SSNIP**

- 42. The CC was able to exploit the fact that respondents were (mostly) business customers<sup>62</sup> to avoid problems in implementing the SSNIP test associated with the received market-research wisdom that 'consumers do not understand percentages'.<sup>63</sup> However, with business customers a different problem may arise in that the respondent to the survey may not be the decision maker, budget holder and user of the product, and so answers may differ depending on the respondent within a business. The CC's surveys commonly ask screening questions to ensure the respondent is the appropriate one within a business.<sup>64</sup> In other contexts, the CC

<sup>62</sup>A very small number of respondents were individuals advertising in categories like child care, private tuition, and health and beauty. The vast majority of respondents were businesses advertising in the property, motor, recruitment and retail categories.

<sup>63</sup>The chairman of the UK's financial services regulator the Financial Services Authority suggested in a 2005 speech that one in five adults in Britain do not understand percentages (source: [www.fsa.gov.uk/pages/Library/Communication/Speeches/2005/1124\\_cm.shtml](http://www.fsa.gov.uk/pages/Library/Communication/Speeches/2005/1124_cm.shtml)). Although he was talking about percentage interest- and growth-rates for financial products, the point seems more general.

<sup>64</sup>See, for example, questions S1 and S2 in the Appendix to the consumer survey in Archant/INM ([www.competition-commission.org.uk/inquiries/completed/2004/archant/synovate\\_research\\_report.pdf](http://www.competition-commission.org.uk/inquiries/completed/2004/archant/synovate_research_report.pdf)).

might avoid this problem by asking about actual price increases<sup>65</sup> (see footnote 91 for complications with this approach).

### **3.5 The proportions of marginal and infra-marginal customers in the sample**

43. It is the behaviour of marginal customers that is relevant for market definition (marginal to all firms in the market, that is, not just the merging parties).<sup>66</sup> However, the CC frequently constructs the samples for its surveys from the customer lists of the merging parties. The proportion of marginal and infra-marginal customers that can be sampled from these customer lists may not be the same as the proportions in the population of customers. In Archant/INM, the CC supplemented 420 respondents who were customers of Archant or INM with 159 who were not (and were drawn from a random sample of businesses in the Yellow Pages classified advertising directory), partly for this reason.<sup>67</sup> In the past, the CC has also surveyed 'lapsed' customers (eg in its 2005 Emap/ABI merger inquiry<sup>68</sup>). In general, however, the CC does not sample so-called non-customers because this can introduce noise into a survey and cause problems with the integrity of the sample.<sup>69</sup> Where the number of competitors in a market is large, there may also be problems in identifying non-customers.

## **4. The CC's use of customer surveys for the competitive assessment of unilateral effects in horizontal mergers**

44. Customer survey evidence has been used by the CC to assess unilateral competitive effects in horizontal mergers. This section explores three complications in using customer surveys to assess unilateral competitive effects in horizontal mergers, with a case-study example from a recent CC merger inquiry.
45. Unlike definition of the relevant market, there is no prescribed 'test' for identifying unilateral effects arising from a loss of competitive rivalry between merging firms. However, a good measure of the degree of rivalry between two firms is the diversion ratio between them. A diversion ratio from firm A to firm B represents the proportion of sales from customers who would choose firm B (as opposed to firms C, D, and so on) as their second choice.<sup>70</sup> Suppose that A's price increases and that as a result its sales fall by 1,000. Suppose that 400 of these lost sales are captured by B: then the diversion ratio from A to B is  $400/1,000 = 0.4$ , as B captured 40 per cent of A's lost sales.
46. Diversion ratios may follow market shares if suppliers' products or locations are similar to one another. If A, B, and C have 40 per cent, 30 per cent, and 30 per cent of the market respectively, A's customers might well divert evenly between B and C (and both diversion ratios would be 50 per cent, assuming sales per customer were constant). However, if two-thirds of any customers leaving A would choose B and only one-third would choose C, then it appears that B is a closer substitute for A than

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<sup>65</sup>That is, by asking how much respondents paid, increasing it by 5 per cent and asking what they would have done had the price been higher.

<sup>66</sup>Arguably, however, the number and views of infra-marginal 'trapped' customers of the merging parties may be more informative for the competitive assessment of a merger.

<sup>67</sup>See paragraphs 52-54 in Appendix E to the report for a discussion ([www.competition-commission.org.uk/rep\\_pub/reports/2004/fulltext/491ae.pdf](http://www.competition-commission.org.uk/rep_pub/reports/2004/fulltext/491ae.pdf)).

<sup>68</sup>In Emap/ABI the CC conducted in-house a qualitative survey of lapsed customers, see [www.competition-commission.org.uk/inquiries/completed/2005/abi/surveys\\_of\\_emap\\_and\\_abi\\_commissions\\_business\\_advise.pdf](http://www.competition-commission.org.uk/inquiries/completed/2005/abi/surveys_of_emap_and_abi_commissions_business_advise.pdf).

<sup>69</sup>Essentially, the CC sees four advantages in defining the research population from which to sample only from the merging parties' customers: (i) respondents are likely to be better informed about the issues that are relevant to the CC, (ii) respondents are likely to be affected by the merger, (iii) the CC can accurately assess whether the sample is representative, and (iv) the CC can accurately stratify the sample if necessary (eg because the CC can ask the merging parties for revenue data).

<sup>70</sup>Formally, the diversion ratio from A to B is the ratio of the cross-price elasticity of demand of A to B divided by the own-price elasticity of demand for A. For a formal derivation, see Chapter 10 of Bishop and Walker (2002).

is C. Consequently, other things being equal, a merger between A and B would be more likely to result in an SLC than would a merger between A and C.

47. For example, in recent transport merger inquiries, the CC has used survey evidence on diversion ratios in 'profit incentive analysis'. Profit incentive analysis asks whether the merger would make an unprofitable strategy pre-merger of increasing price or reducing service into a profitable one post-merger. It answers this question by combining econometric estimates of how consumers would respond to an increase in price or deterioration in service, with survey evidence on what alternatives they might switch to and in what proportions (ie diversion ratios), and financial estimates of the cost savings enjoyed by the merged firm from selling less or providing a worse service. See, for example, the CC's recent Firstgroup/Scotrail (rail transport), National Express/Greater Anglia (rail and bus transport) and National Express/Thameslink (rail transport) merger inquiries.

#### **4.1 Case study 2: using a survey to help assess the competitive effects of a merger—Somersetfield/Morrisons (2005)**

48. Similarly, in its 2005 inquiry into Somersetfield's acquisition of 115 supermarkets from Morrisons, the CC conducted a face-to-face survey of 5,444 shoppers at 56 of these former Morrisons supermarkets and asked:<sup>71</sup>
- if the acquired Morrisons supermarket had not been available which, if any, type of store the respondent would have used instead;<sup>72</sup> and
  - which brand of grocery store (known as a 'fascia') the respondent would have used instead.
49. The aggregate results for all surveyed supermarkets are shown in Figure 4.<sup>73</sup> The key is the proportion of customers diverting between the merging parties. Since Somersetfield had completed its acquisition of the Morrisons supermarkets before the merger was referred by the OFT to the CC, the acquired Morrisons supermarkets had been re-branded under the Somersetfield fascia.<sup>74</sup> So the relevant diversion ratio is the Somersetfield-to-Somersetfield one of 10 per cent.<sup>75</sup>

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<sup>71</sup>The CC previously had identified these 56 as potentially problematic essentially by measuring concentration in plausible candidate local markets for each.

<sup>72</sup>Respondents were prompted with 'large, out of town supermarket', 'same size supermarket', 'smaller convenience store', 'corner shop', 'petrol station forecourt', 'several different shops for different purposes', 'other' and 'would not have shopped'.

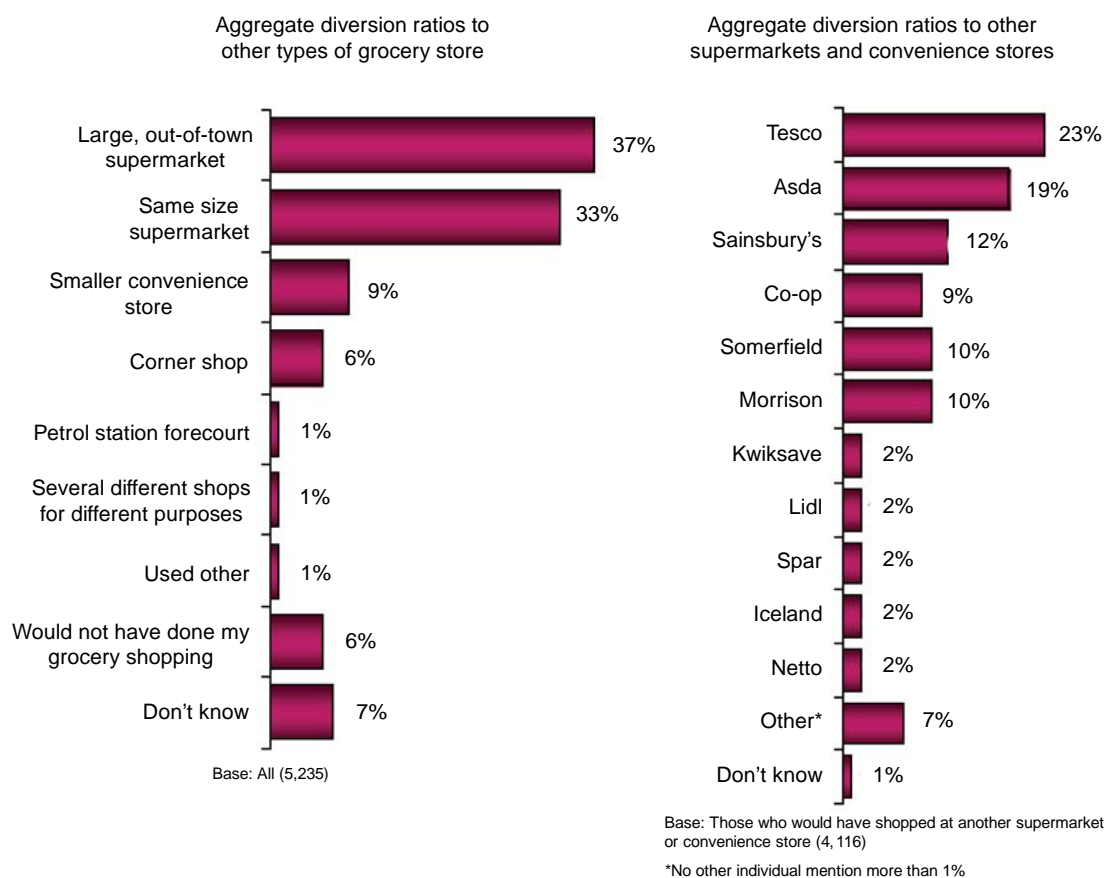
<sup>73</sup>There are ways to measure diversion ratios other than through a customer survey. See, for example, Baker *et al* (2002).

<sup>74</sup>Morrisons had previously acquired these stores from Safeway and most of them had not been re-branded to Morrisons before their subsequent acquisition by Somersetfield and re-branding to the Somersetfield fascia.

<sup>75</sup>Somersetfield also operates the Kwik Save fascia, so the relevant aggregate diversion ratio is actually 12 per cent (ie 10 per cent Somersetfield—Somersetfield + 2 per cent Somersetfield—Kwik Save). See also the notes to Figure 5.

FIGURE 4

**Aggregate proportions of Somerfield/Morrisons survey respondents diverting to other types of grocery store, and to alternative fascias of supermarket and convenience store**



Source: NOP survey results

([www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/consumer\\_survey\\_by\\_nop.pdf](http://www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/consumer_survey_by_nop.pdf), charts 25 and 29).

Notes:

1. The 'All' sample size is 5,235 and not 5,444 because the survey report from which the charts are taken was published before survey results for two supermarkets were available. The addition of survey results for these two extra supermarkets does not qualitatively alter the results in the figure.
2. The aggregate diversion ratios to other supermarket and convenience store fascias are given only for the 79 per cent of respondents who said they would divert to them. The results are qualitatively unaffected if instead the aggregate diversion ratios are given for all respondents.
3. Diversion ratios given are customer diversion ratios and do not take account of revenue weighting.

50. Figure 4 shows that—across the 56 localities surveyed—the degree of local competition to Somerfield from Morrisons, on average, was exceeded by that from Tesco, Asda, and Sainsbury's. This is not surprising given their much larger national shares of the UK grocery market: Somerfield is the fifth largest supermarket group in the UK and Morrisons is the fourth.<sup>76</sup>

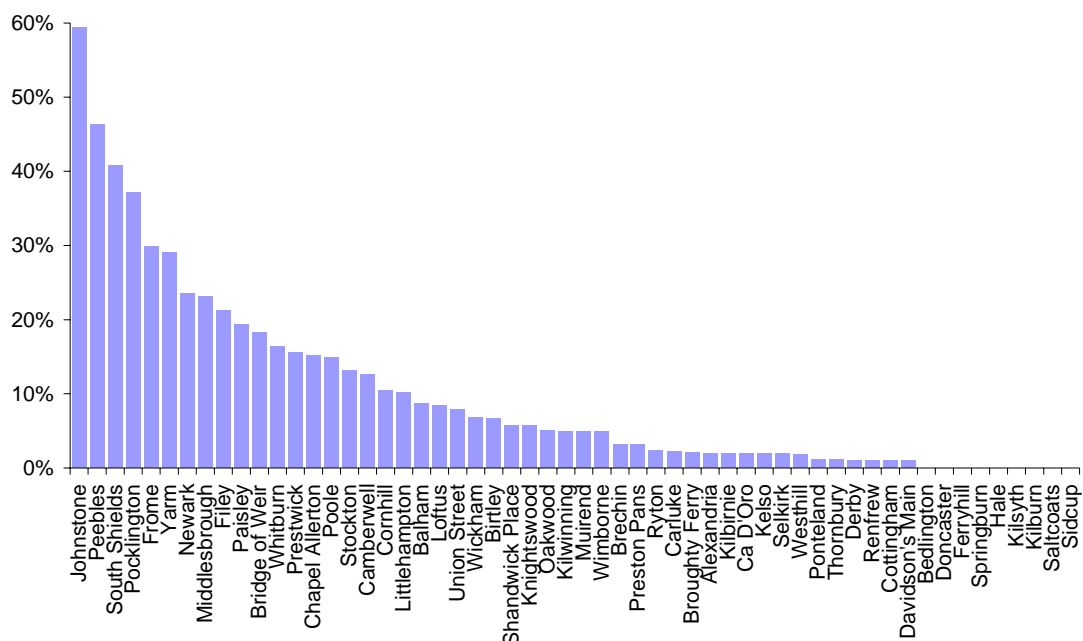
51. This aggregate diversion ratio between the merging parties hid a great deal of underlying variation across these 56 locations, however. This is illustrated in Figure 5, which shows that the diversion ratio between the merging parties varied from nothing to nearly 60 per cent. Partly on the basis of its surveyed diversion ratios,

<sup>76</sup>The report gave the national market shares for traditional groceries (ie excluding non-food items) of Tesco, Sainsbury's, Asda, and Somerfield as 29.5 per cent, 17.3 per cent, 15.5 per cent, and 5.9 per cent respectively (source: Table 4 in section 9 in [www.competition-commission.org.uk/rep\\_pub/reports/2005/fulltext/501.pdf](http://www.competition-commission.org.uk/rep_pub/reports/2005/fulltext/501.pdf)).

the CC concluded there were SLCs in 12 locations. These locations were those where the diversion ratio between the merging parties was highest, and in most cases was higher than the diversion ratio between Somerfield and any of its other competitors.<sup>77</sup>

FIGURE 5

**Somerfield (former Morrisons) to Somerfield diversion ratios for 56 survey locations**



Source: CC from NOP survey results.

Notes:

1. Survey report gives diversion ratios for 54 stores, not 56 as in the figure.
2. Survey report also gives diversion ratios for respondents switching only to other supermarkets and convenience stores, whereas diversion ratios in the figure are for all respondents.
3. Survey report also gives diversion ratios for Somerfield to Somerfield, whereas the figure gives them for Somerfield to Somerfield and Kwik Save, given Somerfield owns the Kwik Save fascia.
4. Diversion ratios are customer diversion ratios and do not take account of revenue weighting.

52. Three aspects of the CC's customer survey in Somerfield/Morrisons are worth noting, which are discussed in sections 4.2 to 4.4.

**4.2 Surveying after acquisitions have been completed**

53. Of necessity, the CC conducted its survey after the transaction was completed. This might have meant that the post-merger Somerfield–Somerfield diversion ratio was not a good proxy for the pre-merger Morrisons–Somerfield one, for example because:

- any shoppers having already suffered as a result of the loss of competition between the merging parties may already have switched (meaning the survey would tend to underestimate switching);<sup>78</sup> and

<sup>77</sup>The CC used (confidential) revenue-weighted diversion ratios as part of its analysis and not the (non-confidential) customer diversion ratios given in Figures 4 and 5. This sentence refers to the revenue-weighted diversion ratios.

<sup>78</sup>This is particularly relevant for two of the 12 SLC stores, where the nearest acquiring Somerfield store had shut (leaving just the acquired Morrisons) by the time of the survey. The CC estimated what the diversion ratio may have been had the

- the preference for alternative, competing supermarket fascias of (new) Somerfield shoppers may be different to the preferences of (previous) Morrisons shoppers—specifically that new Somerfield shoppers may be fascia-loyal (meaning the survey would tend to overestimate switching to a nearby Somerfield).<sup>79</sup>

54. In respect of the latter, however, the CC considered that ‘this preference seems unlikely to vary locally. What will vary locally, and is unchanged by the merger, is the location of the stores’.<sup>80</sup> Given the survey results indicated that 77 per cent of respondents thought geographical convenience was the most important reason for choosing where to shop (and 89 per cent gave it as a reason),<sup>81</sup> the CC did not consider that this significantly affected its results.<sup>82</sup>

### **4.3 Assuming symmetry between acquired and acquiring stores**

55. The CC surveyed shoppers at the acquired Morrisons stores and not those at the nearby, acquiring Somerfield stores. The competitive constraint being removed by the merger was the bilateral constraint between both stores. So it would have been preferable to survey both as these constraints need not be symmetric. However, at the time the survey was commissioned, the CC did not know the identity of every relevant nearby Somerfield store.<sup>83</sup>

56. Further, given each acquired Morrisons store may have had several relevant Somerfield stores nearby, the scope of the survey may have been too wide to be practical. At the very least, it would have been twice as large (if every acquired Morrisons store had just one acquiring Somerfield store nearby) when, as it was, the consumer survey in Somerfield/Morrisons was the largest conducted by the CC in a merger inquiry at that time.<sup>84</sup>

### **4.4 Distinguishing between the survey responses of marginal and infra-marginal customers**

57. The CC’s survey asked customers where they would have shopped if the Somerfield store was unavailable, without asking what kind of a price increase might cause them to switch. The CC did this partly because ‘consumers do not understand percentages’ (in contrast to the CC’s approach to surveying business customers in Archant/INM, discussed above)<sup>85</sup> and partly because ‘the formal pricing policy applied by Somerfield in its supermarkets is only one of the dimensions upon which it com-

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Somerfield remained open and used this in its deliberations instead (see the Annex to Appendix D to the report, [www.competition-commission.org.uk/rep\\_pub/reports/2005/fulltext/501ad.pdf](http://www.competition-commission.org.uk/rep_pub/reports/2005/fulltext/501ad.pdf)).

<sup>79</sup>The CC also surveyed respondents as they left the former Morrisons supermarket and not when they were at home choosing where to shop. This could have led respondents to prefer nearby stores but would not have systematically affected the diversion ratios between the merging parties unless Somerfield was consistently nearer to the former Morrisons supermarkets than were the other fascias in the right panel of Figure 4. This was not the case.

<sup>80</sup>Source: paragraph 9 in Appendix D to the report.

<sup>81</sup>Source: Chart 9 in [www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/consumer\\_survey\\_by\\_nop.pdf](http://www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/consumer_survey_by_nop.pdf).

<sup>82</sup>Specifically, ‘it had some relevance but only in assessing the threshold level at which diversion ratios were high enough to give concern’ (source: paragraph 9 in Appendix D to the report).

<sup>83</sup>The CC did not know the identity of every possible, relevant nearby Somerfield store because verification of the isochrone analysis of candidate local markets submitted by the parties had not at that stage been completed (see [www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/independent\\_analysis\\_by\\_geobusiness.pdf](http://www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/independent_analysis_by_geobusiness.pdf) for details of this verification analysis).

<sup>84</sup>The first customer survey undertaken by the CC in a merger was in its 2001 Kodak/ColourCare inquiry (see Appendix 5.1 to the report for details [www.competition-commission.org.uk/rep\\_pub/reports/2001/fulltext/461a5.1.pdf](http://www.competition-commission.org.uk/rep_pub/reports/2001/fulltext/461a5.1.pdf)).

<sup>85</sup>Somerfield recognized that the simplicity of the question carried many advantages but called for care in making inference from it (see paragraph 6.5 and footnote 18 in [www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/somerfield\\_response\\_prov\\_findings.pdf](http://www.competition-commission.org.uk/inquiries/ref2005/somerfield/pdf/somerfield_response_prov_findings.pdf)).

petes',<sup>86</sup> ie the CC considered that customers could be marginal to more than price. This meant that the CC's survey could not distinguish between infra-marginal and marginal customers; when what the CC wanted to know were the alternatives of marginal customers, not average ones.

58. However, the CC noted that 'all customers will have second choices and there is no obvious reason why a more price-sensitive customer's second choice is more likely to be (say) Sainsbury's than is represented by the Sainsbury's diversion ratio in the sample as a whole'.<sup>87,88</sup> Moreover, although the CC surveyed around 100 consumers at each acquired former-Morrisons store, the effective sample size of its survey may have been significantly reduced had the CC asked what kind of price increase (or equivalent decrease in non-price factors such as quality, range of groceries and service) would have caused customers to switch, and used only survey responses for marginal customers. To mitigate this, the CC may have had to survey very many more shoppers at each store in what was already (at that time) its largest ever customer survey in a merger inquiry.<sup>89</sup>

## 5. Final thoughts

59. The CC has used customer surveys in over half its completed merger inquiries under the Enterprise Act. The legal and administrative framework in which the CC operates means its decision to commission a customer survey must be taken very early in a merger inquiry. This paper has explored seven consequential complications that the CC has faced using customer surveys for definition of the relevant market and for the competitive assessment of horizontal mergers in the relevant market. We have used as case studies two recent CC merger inquiries to illustrate these complications.
60. These case study examples suggest that customer surveys have been a valuable part of the CC's evidence base but to be useful as evidence, the CC must have confidence in the accuracy of results. Various pitfalls affecting that accuracy can be avoided by careful design of the survey: to do this, the CC asks sequentially about matters of fact, matters of behaviour, matters of choice and matters of attitude.
61. Naturally, surveys have not been the only source of evidence in CC merger investigations and the seven complications discussed (and others) have meant that the CC has always considered (and will always consider) surveyed customers' attitudinal responses (eg on the SSNIP test, or diversion ratios) in the light of this other evidence on customers' behaviour.
- For example, in Archant/INM the CC asked respondents whether their advertising rates had increased in the previous year and, if so, what they had done. The large majority of respondents said their advertising rates were unchanged. Most of the minority who reported increases said they had decreased their volume of advertising in response.<sup>90</sup> This was consistent with survey responses to the SSNIP test.<sup>91</sup>

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<sup>86</sup>Source: paragraph 7.3 on page 40 of the report.

<sup>87</sup>Source: footnote 4 to paragraph 7 in Appendix D of the report.

<sup>88</sup>In contrast, for example, to the price elasticity of demand: a marginal customer's price elasticity of demand will exceed (in absolute terms) the average by definition.

<sup>89</sup>For example, if the true proportion of marginal customers at a surveyed store was 10 per cent—and if the CC maintained that a sample of 100 marginal customers per store was necessary for its survey results to be robust—then the CC would have had to survey ten times as many shoppers as the 5,444 it actually surveyed, ie over 54,000. This would not have been practical.

<sup>90</sup>The average increase in advertising rates reported by respondents was around 10 per cent.

<sup>91</sup>There are (at least) three reasons to be cautious about asking survey respondents about previous price increases. First, data on actual price increases and switching may be better collected from the merging parties rather than through a survey.

- More commonly, this other evidence also comes from other sources. For example, in Somerfield/Morrisons, the CC analysed the impact of the opening of different supermarket fascias in several hundred areas on the revenues of Somerfield stores in those localities.<sup>92</sup> The CC concluded that the competitor fascias that had the biggest impact on Somerfield sales when they opened in an area were the 'Big 4' UK supermarkets,<sup>93</sup> results that were consistent with the diversion ratios from its customer survey.
62. The importance of careful survey design and of placing survey findings in the context of this other evidence are reinforced by the short amount of time the CC has to do surveys. Despite this, consumer surveys, carefully done, have provided useful insights for the CC.

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Secondly, what is being surveyed is respondents' price sensitivity and not their ability to recall historical price changes and their reactions to them. And thirdly, there is no reason necessarily to expect respondents' previous reactions to an increase in a lower price to be the same as their future reactions to an increase in the higher current price.

<sup>92</sup>See Appendix B to the report ([www.competition-commission.org.uk/rep\\_pub/reports/2005/fulltext/501ab.pdf](http://www.competition-commission.org.uk/rep_pub/reports/2005/fulltext/501ab.pdf)).

<sup>93</sup>That is, Asda, Morrisons, Sainsbury's, and Tesco.

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