A. Introduction

After four years of merger control by the Competition Authority (“the Authority”) and over 300 merger notifications, now is an appropriate time to consider the role of evidence in general and economic evidence in particular in merger control in Ireland. Has the Authority got the correct balance between different kinds of evidence? What capabilities does it make sense for a small merger control unit to develop in merger assessment? What is the likely future course of the development of economic evidence in merger control? Are efficiencies used extensively as a merger defence?

The definition, role and importance of economic evidence in merger control have each attracted considerable attention. In 2004, for example, the OECD organised a “Roundtable on the Use of Economic Evidence in Merger Control”, while the British Institute of International and Comparative Law at its annual merger conference held a session on “Use (and abuse?) of Economic Evidence”. This interest in economic evidence no doubt reflects the increasing use of economics and economic analysis in merger control, as evidenced in the US by merger cases such as Staples/Office Depot, and in Europe by the creation in December 2007 of the European Competition Journal.


2 For details see P Marsden and M Hutchings, Current Competition Law, Vol IV (London, British Institute of International and Comparative Law, 2005), 205.

2002 of the Office of the Chief Economist in DG Comp and by merger cases such as Oracle/PeopleSoft.\(^5\)

Consistent with these developments, since the Authority assumed responsibility for merger control on 1 January 2003, it has employed an effects based approach based on sound economic theory combined with a careful evaluation of the evidence in assessing mergers. This is illustrated by the Authority’s *Merger Guidelines*\(^6\) and various paper and presentations.\(^7\) In assessing mergers under the Competition Act 2002 (“the Act”) the competition test used by the Authority is that of “substantially lessening competition” (SLC). The SLC test is interpreted in terms of consumer welfare.

The paper is structured as follows. Section B considers what is meant by evidence, including economic, in merger control. Next, attention turns in section C to the relative importance of factual compared to economic and opinion-based evidence across the over 300 merger notifications filed with the Authority between 2003 and 2006. In only a small number of cases—less than 10\% of all mergers—is economic evidence likely to be of importance.\(^8\) This issue is addressed in section D. In section E the role and importance of various kinds of evidence is discussed in relation to this small set of mergers. Finally, in section F some of the issues identified in the opening paragraph are explored.

### B. TYPES OF EVIDENCE IN MERGER ASSESSMENT

In assessing whether or not a merger is likely to result in SLC, a number of types and sources of evidence are considered by the Authority. Typically no one source is relied upon; rather, a variety of different ones are used. Furthermore, the type

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5 European Commission case COMP/M.3216 Oracle/PeopleSoft [2004].

6 For details, see Competition Authority, *Notice in Respect of Guidelines for Merger Analysis*, Decision No N/02/004 (Dublin, Competition Authority, 2002), available at www.tca.ie. These guidelines were issued in 2002 after much consultation.


8 However, the use of economic evidence should not be confused with the use of economic analysis. The latter is used widely by the Authority—based on the *Merger Guidelines*—irrespective of whether or not economic evidence is used.
of evidence varies from case to case, reflecting in part what is available and in part the specifics of how the merger might result in SLC.

For the purposes of this paper, evidence is divided into three categories: factual, economic and opinion. These do not carry equal weight. Evidence of fact will always carry weight because it can be relied upon. If a thing is a fact, it is a fact! The facts, of course, mean nothing without a theory or framework within which they can be placed or contextualised. Typically competition authorities publish guidelines for merger analysis which present such a framework.

Economic evidence is reliable, but to a lesser degree, simply because it is generally based on a theory or hypothesis that can potentially at least be disproved. Opinion evidence on post-merger effects is the least reliable of all, because people’s opinions are rarely objective and can be affected by bias, self interest etc. However, since merger analysis is forward looking, opinion evidence is likely to be particularly important in markets experiencing considerable change. There are no facts about the future.

1. Factual Evidence

Any merger assessment needs to establish the facts of the merger and the characteristics of the markets where the undertakings involved operate. Factual evidence can establish important parameters, including:

- the business and degree of overlap between the acquirer and the target (i.e., the undertakings involved);
- the nature of the overlap products;
- the number, identity and characteristics of the competitors, suppliers and customers of the undertakings involved;
- the patterns of customer switching and the conditions (if any) for customers to switch;
- the record and costs of entry and expansion in the overlap products; and
- the marketing and other strategies of the undertakings involved and their competitors.

Factual evidence may have to be supplemented by economic and opinion evidence to establish all of these parameters. For example, if goods or services are differentiated rather than homogeneous, then views of (say) consumers and/or empirical work with a model may be required.

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9 Inevitably the three sorts of evidence will on occasion shade into each other. This issue is discussed below in section B.4.

10 The economic evidence may use underlying assumptions on elasticities or the form of competition that have not been tested and to which the economic evidence may be very sensitive. In addition, the economic evidence may be consistent with more than one explanation.
The factual evidence may take the form of internal firm documents (e.g., computer printouts, marketing reports, surveys and analysis, strategic plans, board documents, merger project appraisals and presentation). Documents prepared prior to the announcement of the planned merger are likely to be more reliable than those prepared subsequently. The latter may be biased towards making the case for the merger to the competition authority, whereas the former are likely to be neutral in this respect. Factual evidence may also be found in reports/data collected by third parties, such as AC Nielsen for food and beverage products.\textsuperscript{11} It is clear that establishing the facts is a necessary step central to any merger assessment. In some cases, as discussed below, the facts may be sufficient to determine that there is no SLC since, for example, the facts indicate that there is no horizontal or vertical overlap.

2. Economic Evidence\textsuperscript{12}

Economic evidence consists of processing or transforming the facts in such a way that it permits a better or more appropriate characterisation of the market and/or the impact of the merger. The processing of the facts might consist of some relatively simple quantitative technique, such as correlation to the more complex building of a simulation model. The processing often relies on or reflects some theory as to why the merger might lead to SLC, as well as a number of important underlying assumptions.

While no exhaustive or definitive typology of economic evidence is available, the following informs the analysis in this paper.\textsuperscript{13}

- Defining the market
- Elasticity estimates
- Price correlations
- Case studies (natural experiments/event studies)
- Critical loss analysis
- Cross-sectional analysis
- Competitive constraints on the undertakings involved
- Measuring excess capacity

\textsuperscript{11} Even these facts may be incomplete, if, for example, not all food and beverage firms supply data to the data collection firm. Furthermore, it could be argued that some reports/data collected by third parties go beyond fact finding. They may, for example, be based on a methodology that incorporates various assumptions concerning economic parameters, which means the evidence may be more properly classified as “economic” rather than “factual”.

\textsuperscript{12} The anonymous referee suggested that what is characterised in this paper as economic evidence could equally be described as analytical evidence. While this argument could be made, a reclassification along these lines of the types of evidence discussed would not change the rationale for or findings of the paper.

\textsuperscript{13} This discussion draws heavily on ICN, supra n 1. For a discussion of the practical application of several of these techniques see S Bishop and M Walker, \textit{The Economics of EC Competition Law: Concepts, Application and Measurement} (London, Sweet & Maxwell, 2nd edn, 2002).
The use of economic evidence will clearly depend on the availability of data (e.g., scanning data) and the extent to which the economic evidence can inform an issue pertinent to the SLC assessment. It will also depend on the capacity of the competition authority to be able to interpret, evaluate, estimate and weigh the economic evidence.

3. Opinion Evidence

Merger analysis is an example of *ex ante* assessment under competition law. It requires the competition authority to predict, within a two-year time horizon, whether or not the merger will lead to a price increase (i.e., SLC). An important source of information about the competitive impact of the merger is the views of rivals to the undertakings involved, as well as their customers and suppliers. However, as alluded to above, these firms may give biased answers to a competition authority and therefore this opinion-based evidence typically needs to be regarded with some caution.

If, for example, the merger is likely to result in an increase in the market price, then competitors of the undertakings involved are likely to express views supporting the merger (or at least not oppose the merger), while if the merger results in a more efficient and formidable competitor, then competitors are more likely to express negative views towards the merger. Customers are also likely to be an important source of information about the degree to which the merging firms compete with each other (i.e., how close they are as substitutes), highly relevant to the impact of the merger on competition and price. However, as with competitors to the merged entity, customers who are intermediate buyers, rather than final customers, are likely to respond favorably to the merger, as they may be able to pass on the increased costs to their own customers.

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14 For example, if entry is easy because there are very low barriers to entry, there may be little or no reason to model the extent and availability of excess capacity as a possible constraint on the merged entity raising price post-merger.

15 The discussion of opinion evidence in this paper relates mainly to *ex ante* opinions of post-merger price and other competitive effects.

16 SLC might also result from a reduction in quality or innovation or variety. See Competition Authority, *supra* n 6, para 1.3.

17 While there is literature on how to interpret competitor and customer evidence, especially opinion-based evidence, there does not appear to be such literature with respect to suppliers. Complementors should, perhaps, react as would customers, but see K Heyer, “Predicting the Competitive Effects of Mergers by Listening to Customers” (2007) 74 *Antitrust Law Journal* 87.

18 J Farrell, “Listening to Interested Parties in Antitrust Investigations: Competitors, Customers, Complementors, and Relativity” (2004) 18(2) *Antitrust* 64 argues against trying to determine the competitive effects on this basis of implying the motive behind the nature of a competitor’s response.
than a firm closer to the final consumer, might also have an interest in the outcome of the merger and hence may be somewhat biased in their opinion-based responses. Such a scenario could arise where the input price increases rivals have to bear are asymmetric.19

As a result, in considering opinion evidence, attention needs to be paid to the possible existence of bias in these responses. These biases can be overcome by careful probing in order to gain a better understanding of the basis—factual, theoretical, etc.—on which the opinion is based.20 Care should also be taken to ensure that the opinion evidence is based on a representative sample of (say) customers or competitors.

4. Different Sorts of Evidence?

Inevitably the three sorts of evidence will on occasion shade into each other. In other words, the distinctions are not as clear cut as set out above. An example illustrates the point. To determine the degree of overlap as classified above is a matter of factual evidence. If there are X suppliers of (say) a standard insulation product and two merge, then it would seem straightforward to say there was complete overlap. But suppose that the insulation products of the target and the acquirer differ in certain important respects—the acquirer supplies different thicknesses from the target, the acquirer markets different colours and patterns from the target, the target and the acquirer operate in different parts of Ireland—then it is not so clear cut that the facts alone can be used to determine the degree of overlap. More evidence is needed. Recourse might have to be made to opinion evidence from customers and/or empirical work with a model—economic evidence. This is particularly the case for non-homogeneous products and services.

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19 Intermediate buyers might differ, for example, in the use they make of the merged firm as an input supplier, as well as the ease of substitution between the merged firm as an input supplier and other potential suppliers. Thus the impact of the merger might differ across intermediate buyers if price increases are asymmetric or because some are in a much better position to neutralise the price increase. Some buyers may therefore support the merger, or not oppose it, if its rivals are likely to suffer disproportionate harm. For further discussion see Farrell, ibid, Heyer, supra n 17. Of course, the situation may be compounded where a firm is both a customer and a competitor. For example, in the retail sector large supermarkets may be a customer of a branded product while at the same time competing with that product through its own private label brand.

20 In some instances mandating access to the e-mail traffic between senior managers may provide a useful check on their declared or written responses to a competition authority. In addition, senior managers could be issued with a witness summons to provide evidence under oath.
C. THE INCIDENCE OF FACTUAL v ECONOMIC AND OPINION EVIDENCE IN MERGER CONTROL

The purpose of this section is to evaluate the relative importance of factual compared to economic and opinion evidence across the 311 mergers notified to the Authority between 2003 and 2006 inclusive.

1. Screening Mergers

(a) The Framework

The Authority’s Merger Guidelines set thresholds that act for the Authority “as a screen for deciding whether to intensify its analysis of effects on competition”. As can be seen from Table I, these thresholds depend on the level of concentration in a relevant market, as given by the Herfindahl–Hirshmann Index (HHI), and the change in the value of the HHI due to the merger, referred to as the “Delta”. However, it should be noted that these thresholds are most relevant to horizontal mergers which are more likely to raise competition concerns.

Since more than 80% of those mergers that require extensive analysis because of potential competitive problems can be classified as horizontal (see Table III), the main focus of the discussion here is on the application of the thresholds in Table I to the mergers screened by the Authority between 2003 and 2006 inclusive.

21 The thresholds are used by the Authority for screening out mergers that are unlikely to raise competition concerns, but in contrast are used by legal advisors to screen in potentially problematic non-notifiable mergers.
22 Supra n 6, para 3.9.
23 The Authority’s Merger Guidelines (ibid) do not contain thresholds for vertical mergers. For vertical mergers, since both the target and the acquirer are by definition in different but related markets, there is no overlap and hence the Delta is zero. Here, for the purposes of screening, attention is confined to determining whether or not either of the undertakings involved has market power in any of the vertically related markets in which they operate. Such market power is a necessary but not sufficient condition for competitive harm from foreclosure. For a discussion of possible thresholds for market power, see Commission Regulation No 2790/1999, On the application of Article 81(3) of the Treaty to Categories of Vertical Agreements and Concerted Practices and European Commission, Guidelines on the Assessment of non-horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings, Draft Commission Notice (Brussels, European Commission, 2007) para 23. In terms of horizontal mergers, coordinated effects are more likely where market shares are symmetric. Thus, while a market with two equal-sized firms will generate an HHI of 5,000, the HHI for a market with two firms that have market shares of 90 and 10%, will be 8,200. However, coordinated effects will be much more likely in the scenario with the lower HHI. This is not to deny, of course, that higher concentration, other things equal, facilitates coordination.
Applying the Framework

1. Zone A: No Overlap, Factual Evidence

A special case of Zone A is where the Delta is zero because there is no (horizontal) overlap in the activities of the acquirer and the target, nor is there any vertical relationship. In other words, the acquirer and the target have no activities in common in the state. This occurs with some frequency in those mergers notified to the Authority:

- by venture capital or private equity firms. For example, the acquisition of Amitco Holding Limited, a tiling firm, by ABN AMRO Capital Buyout Fund;24 and,
- there is no overlap in the State, but the activities of the acquirer and target do overlap on a global basis. For example, while the activities of Oracle Corporation and MetSolv Inc25 overlap on a worldwide basis (ie in the operation of support systems segment of service fulfilment of network resource management), there is no overlap in these activities in Ireland.

Mergers with no overlap do not pose SLC concerns26 and hence can be typically cleared on the basis of a Phase 1 investigation. These mergers are evaluated...
primarily on the basis of factual evidence provided in the notification, rather than on the basis of economic or opinion evidence provided by the undertakings involved or third party evidence sought by the Authority.

1. Zone A or B: Minimal Overlap, Factual Evidence

In many cases the overlap in the activities of the acquirer and the target is minor and is unlikely to lead to concerns that the merged entity will result in SLC. For example, while both Mosaic Fashions Limited and Rubicon Retail Limited\(^27\) were involved in the retail sale of womenswear in Ireland, the small market share of the merged entity (0–10%), combined with the existence of many womenswear retailers, meant that the merged entity posed no SLC concerns. Hence in these cases it is necessary to examine the market facts, such as the degree of overlap and the degree of competition in the industry, before clearing the merger. As with Zone A mergers with no overlap, these mergers are decided on the basis of a Phase 1 investigation primarily using factual evidence combined with the application of the Merger Guidelines.\(^28\)

2. Zone B or C: Substantial Overlap, Factual, Economic & Opinion Evidence

Mergers which fall in Zone B or C, and thus experience a substantial Delta, are those where competition concerns that the merger might lead to SLC are most likely to occur. For example, in the proposed acquisition by IBM Ireland Ltd of Schlumberger Business Continuity Services (Ireland) Limited, which was blocked by the Authority, the HHI was 9,037 and the Delta was 4,400.\(^29\) Thus mergers falling in Zone B or C with substantial overlap will necessitate extensive inquiries among competitors, customers and suppliers, and the development of theories of consumer harm, before a conclusion can be reached on whether or not the merger will lead to SLC. Furthermore, these theories will have to be thoroughly tested, typically using factual, economic and/or opinion evidence. Thus an extensive analysis is required through either an extended Phase 1 or a Phase 2.

(c) The Results

Since two of the three categories identified above rely primarily on factual evidence and do not raise competition concerns, these can be combined into one category. Thus, in examining the incidence of factual compared with economic and opinion evidence in merger control in Ireland, only two categories are presented in Table II.

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\(^{27}\) M/06/066.

\(^{28}\) Supra n 6.

\(^{29}\) M/04/032, Table A. Estimates in text based on column headed “SBCS estimates”.
Several conclusions can be drawn from Table II:

- the vast majority, 93%, of mergers notified to the Authority over the period 2003–2006 were assessed primarily on the basis of factual rather than economic or opinion evidence. These were mergers with little or no overlap and hence did not require extensive, if any, use of economic and opinion evidence for the purposes of merger assessment;
- the proportion of mergers requiring extensive analysis because of competition concerns has tended to decline over time from 11% of all mergers notified to the Authority in 2003 to 5% in 2006. This is consistent

Table II: Classification of Merger Notifications,\(^b\) by Whether Raised Competition Concerns\(^c\) and by Type of Evidence Used, Annually, Ireland, 2003–2006

<table>
<thead>
<tr>
<th>Year</th>
<th>No competition concern: decision based on factual evidence only</th>
<th>Raised competition concerns: decision based on factual, economic and opinion evidence</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>42 (89%)</td>
<td>5 (11%)</td>
<td>47 (100%)</td>
</tr>
<tr>
<td>2004</td>
<td>77 (94%)</td>
<td>5 (6%)</td>
<td>82 (100%)</td>
</tr>
<tr>
<td>2005</td>
<td>77 (92%)</td>
<td>7 (8%)</td>
<td>84 (100%)</td>
</tr>
<tr>
<td>2006</td>
<td>93 (95%)</td>
<td>5 (5%)</td>
<td>98 (100%)</td>
</tr>
<tr>
<td>2003–2006</td>
<td>289 (93%)</td>
<td>22 (7%)</td>
<td>311 (100%)</td>
</tr>
</tbody>
</table>

Source: Competition Authority, Annual Report, various issues; Appendix below.

\(^a\)Table II was constructed as follows. All those cases where there were competition concerns and hence the use of economic (and opinion) evidence most likely to be used were identified as follows: all mergers cleared at Phase 1 on the basis of proposals; all mergers which went to Phase 2; and mergers cleared at Phase 1, where there was considerable investigation undertaken to come to the conclusion that the merger did not raise SLC concerns. In several cases these would have been extended Phase 1 investigations. The set of mergers, details of which are presented in the Appendix, were subtracted from the total number of merger notifications to derive those mergers which were cleared on the basis of a Phase 1 assessment, using factual evidence.

\(^b\)The total number of notified mergers is taken from the Authority’s Annual Report. They are dated by when they are notified. In 2004 the number of mergers notified was increased by one compared with the number on the Authority’s Annual Report to take into account the Middlebrook Mushrooms/Carbury Mushrooms merger, which was dealt with by way of an investigation under s 4 of the Act, rather than the merger provisions.

\(^c\)The criteria for whether or not the merger raised competition concerns is set out in the Appendix, together with the identity of the mergers that are deemed to fall into this category.
with: (i) the application of clear and consistent merger assessment by the Authority so that mergers with competition concerns are less likely to take place; and (ii) the fact that the Authority has acquired greater expertise at evaluating mergers. However, this conclusion needs to be qualified. First, the sample size is small, so that these inferences need to be viewed with caution; and secondly, there may be exogenous factors that result in fewer mergers raising competition concerns. To test for this we examined the record of the European Union, which has a similar merger notification system to Ireland, but with a somewhat different competition test. Over the period 2003–2006 there was a steady decline in the percentage of mergers notified to the Commission that raised competition concerns—from 0.90 to 0.74%, respectively; and

• the large proportion of mergers that have little or no overlap and hence can be cleared on the basis of a Phase 1 investigation raises the issue of whether the merger notification requirements in Ireland are too broad. In other words, mergers with little or no nexus with Ireland are being notified. Of course, this is not necessarily the case; mergers may have a nexus with Ireland, albeit in markets where the HHI and Delta values are low. Nevertheless, the evidence suggests that the merger thresholds have led to mergers being notified with little or no nexus to Ireland. Measures are being taken to address this issue.31

30 Mergers which raised competition concerns were defined as Phase 1 Clearance with Commitments and all Phase 2 Proceedings Initiated. The sum of these two was expressed as a percentage of all Phase 1 Decisions plus all Phase 2 Proceedings Initiated. This is the percentage reported in the text. If Phase 2 Proceedings Initiated were replaced by Phase 2 Decisions the same downward trend would be observed. For details, see http://ec.europa.eu/comm/competition/mergers/statistics.pdf (accessed on 16 July 2007). It could also be argued that the trend is consistent with a capacity constraint on the number of mergers requiring extensive analysis that can be analysed annually by the Authority, since the decline from 11 to 5% is primarily due to a rise in the denominator with the numerator remaining fairly constant. However, there is no capacity constraint in that within the Authority mechanisms exist to draw additional resources from other Divisions into the Mergers Division when there is an increase in mergers that require extensive analysis.

D. Categorising Mergers that Raise Competition Concerns and Require In-depth Analysis

Mergers are classified as horizontal or vertical, while the effects of the merger are usually divided into unilateral and coordinated, although in some cases a merger may give rise to both sets of effects. Not only is the incidence of such mergers likely to vary among those that require in-depth or extensive analysis, but also the type of evidence needed to come to a view as regards SLC. We identify the major categories or types of mergers prior to selecting a sample for further study.

Out of the 22 mergers that raised competition concerns over the 2003-2006 period, 18 (82%) were horizontal, with the remaining 4 (18%) vertical in nature (Table III). This is not a surprising result in view of the fact that horizontal mergers are more likely to be anticompetitive than vertical mergers.32 This conclusion is strengthened by the fact that the only two mergers blocked by the Authority between 2003 and 2006 were both horizontal in nature.

Table III: Mergers that Required Extensive Analysis, Factual, Economic and Opinion Evidence, by Merger Type, Ireland, 2003–2006

<table>
<thead>
<tr>
<th></th>
<th>Unilateral only</th>
<th>Coordinated only</th>
<th>Both</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td>11 (2)32</td>
<td>1</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Non-horizontal</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Appendix, Tables AI–AIV.

32 Numbers in parenthesis refers to mergers that were blocked by the Authority. The 2 are included within the 11.

When horizontal and vertical mergers are broken down by whether or not the theory of harm is one of coordinated or unilateral effects, the largest single category is horizontal/unilateral effects, accounting for 11 (50%) of the 22 cases. If the six instances of horizontal mergers where there are both unilateral and coordinated effects are added to the 11, then the percentage increases to 77%. In

32 Arguably the analysis should be taken a step further by estimating the proportion of all horizontal mergers that were notified to the Authority that raised competition concerns and similarly for vertical mergers.
contrast, for all the vertical mergers where competition concerns were raised, only unilateral effects were present. In the remainder of the paper attention is devoted to how economic evidence is used in those 17 mergers classified as horizontal where unilateral effects raise concerns that price will rise and quantity fall post-merger (“the 17 cases”).

E. How is Factual, Economic and Opinion Evidence Used in Merger Analysis?

1. The Importance of Different Critical Constraints

The 17 cases where extensive analysis was conducted were each examined to determine the critical or decisive constraints on which the Authority decided whether or not there was SLC. It should be noted that more than one constraint may have been considered as crucial. The results are presented in Fig 1 for the 17 cases, including the two mergers which were blocked by the Authority.

![Fig 1](image)

Fig 1  Frequency of Critical Constraints on the Merged Entity’s Ability to Raise Price, and Extensive Unilateral Horizontal Merger Assessments (the 17 cases), Ireland, 2003–2006. Source: Appendix and text.

33 It should be noted that, in analysing mergers, attention is always paid as to whether or not the conditions are present for coordinated effects.
Two inferences can be drawn from Fig 1:

- closeness of competition, market definition\(^{34}\) and entry are the key reported constraints that the Authority considered when assessing whether or not a merger will result in SLC; and,
- in the case of the two mergers that were blocked, excess capacity, imports and buyer power/switching costs are especially determinative when compared to mergers which were cleared by the Authority.

Of course, it could be argued that the constraints that are considered as key are endogenous. If only one factor is considered as critical and the others are not examined, then the selection of this critical factor might well be endogenous. However, the Authority considers all constraints when assessing the competitive effects of a merger. This reflects a desire in part to conduct a complete analysis, and in part to ensure that, by conducting multiple checks, a sound decision is reached on the competitive effects of the merger. If there is conflicting evidence, it is important that this is explored and weighed in coming to a conclusion about the impact of the merger. Of course, if all the constraints are consistent with the same view as to whether or not there is SLC, this considerably strengthens confidence that the correct decision has been reached. Thus there are good grounds for rejecting the claim that the selection of critical constraints is endogenous.

2. Critical Constraints and Types of Evidence

(a) The 17 Cases

The next step in the discussion is to consider each constraint across all the 17 cases for which an extensive analysis was undertaken and observe the frequency with which factual, economic and/or opinion evidence is used to evaluate that constraint. The maximum frequency for each type of evidence is 17. The results are presented in Fig 2.

The major inferences to be drawn from Fig 2 are:

- for four of the six constraints, factual, economic and opinion evidence is used in considering the relevance of the constraint for whether or not there is SLC; and,
- the most frequently used type of evidence is factual, followed by opinion and lastly economic.

\(^{34}\) Market definition is included as a constraint since, in some merger cases, it is not readily apparent which products are in the relevant market and which are not. By gaining a fuller understanding of the degree of substitutability and thus the definition of the market, the Authority is in a better position to evaluate the degree which various products might constrain the ability of the merged entity to raise price.
The fact that more than one type of evidence is used to evaluate a constraint makes good sense:

- each type of evidence can be used to throw light on a particular aspect of a constraint. For example, in Kingspan/Xtratherm factual evidence led the Authority to conclude that entry would be timely, based on the record of recent entry and the presence of at least one firm with knowledge of the relevant technology. However, entry was unlikely based on economic evidence (ie a model that estimated the extent of excess capacity) and the factual/opinion evidence of potential entrants.35
- sometimes, as noted above, there are inherent biases, contradictions and uncertainties in certain sorts of evidence. Therefore one particular type of evidence must be “tested” against another. For example, in IBM/Schlumberger the undertakings involved expressed the opinion that business recovery hotsite services are part of a broader IT market. However, this was inconsistent with both factual evidence (ie earlier internal documents of the undertakings involved) and opinion evidence (ie extensive customer survey). As a result, the

35 For further discussion, see M/06/039 Kingspan/Xtratherm, paras 5.27–5.47.
Authority decided there was a separate market for business recovery hot site services, and,
- the extent to which different types of evidence lead to the same conclusion strengthens any decision of the Authority that relies on that evidence to conclude that there is or is not SLC. For example, in Heinz/HP, factual (ie internal documents), economic (ie econometric estimation using different procedures) and opinion (ie from customers and competitors) evidence all indicated that neither BBQ sauce nor Worcestershire sauce should be treated as distinct relevant markets.

(b) The Seven Cases
Economic evidence was only used in testing a critical constraint in 7 of the 17 cases (“the seven cases”). In other words, for the majority of the 17 cases the issue of SLC was determined on the basis of factual and/or opinion evidence. Here we concentrate our attention on the seven cases. Fig 3 reproduces Fig 2 except that it refers only to the seven cases.

![Fig 3](image)

**Fig 3** The Use of Factual, Opinion and Economic Evidence, by Critical Constraint on a Merged Entity’s Ability to Raise Price, and Extensive Unilateral Horizontal Merger Assessments where Economic Evidence is Considered (the seven cases), Ireland, 2003–2006. Source: Appendix and text.

36 For further discussion, see M/04/032 IBM/Schlumberger, paras 2.20–2.27.
37 For further discussion, see M/05/033 Heinz/HP, paras 16–20.
The major conclusions from Fig 3 are as follows:

- when economic evidence is used for the seven cases it not surprisingly assumes a greater importance than when the 17 cases are considered together; and,
- economic evidence is used together with factual and opinion evidence. This is consistent with the earlier discussion that various types of evidence are complements rather than substitutes.

In the earlier part of the paper various categories of economic evidence were outlined. The major examples of the use of economic evidence in the seven cases are as follows:

1. Market Definition

- a consumer survey was conducted for the Authority to determine whether there was a separate market for DIY superstores. The evidence suggested that there was a separate DIY superstore market \( (\text{Grafton/Heiton}) \);
- econometric techniques were used to address the issue of relevant markets in cold sauces using retail scanner data \( (\text{Heinz/HP}) \);
- natural experiments \( (\text{Kingspan/Xtratherm}) \); and,
- isochrones were used to establish geographic markets for motor fuels retail service stations \( (\text{Topaz/Statoil}) \).

2. Entry/Excess Capacity

- a model of excess capacity based on factual evidence provided by the undertakings involved, non-merging competitors and suppliers of machinery \( (\text{Kingspan/Xtratherm}) \).

3. Closeness of Competition

- econometric analysis was conducted to determine whether discounts offered outside Dublin, where there were three wholesale suppliers to pharmacists, was lower than inside Dublin, where there was an additional wholesale supplier. The answer was that, other things equal, there was no difference in the discounts \( (\text{Uniphar/Whelahan}) \);
- econometric analysis similar to Staples/Office Depot was used to determine whether one DIY Superstore’s pricing was constrained either by other DIY superstores or independent home improvement stores. The results indicated that the prices were not adjusted to reflect local competitive conditions. Prices were set on a national basis \( (\text{Grafton/Heiton}) \); and,
- application of the Shapiro model\(^{38}\) to predict price increases resulting from a radio merger on advertising rates. First, the Authority estimated possible

\(^{38}\) The Shapiro model refers to a technique developed by Carl Shapiro for estimating post-merger effects, under certain conditions regarding costs and the form of the demand function, for
diversion ratios on the basis of a “buy-round” analysis. The conclusion was that it would be reasonable to assume there would be significant diversion of advertising revenues from Today FM to FM04. Secondly, the margin earned by Today FM was estimated using rate cards and cost accounting data. Using the Shapiro formula, a range of post-merger price increases was estimated. However, when the results were market tested it appeared that there would be no diversion of advertising from Today FM to FM104.39 In other words, a key assumption underlying the buy-round analysis was not supported by reliable credible evidence.

As will be observed, the Authority has not used simulation models, an issue discussed in section F below. An important factor that has facilitated the use of economic evidence in the seven cases is the availability of extensive data sets at the retail level, which is not the case for many of the 17 cases. Hence, while the use of economic evidence undoubtedly reflects the readiness of the Authority to accept and consider such evidence, it also depends partly on the nature of the merger that is notified.

F. Conclusions and Issues

1. Conclusions and Findings

The major findings of the paper are as follows.

- The vast majority (93%) of mergers notified to the Authority over the period 2003–2006 were assessed primarily on the basis of factual rather than economic or opinion evidence. These were mergers with little or no overlap and hence did not require extensive, if any, use of economic and opinion evidence for the purposes of merger assessment.

- The proportion of mergers requiring extensive analysis because of competition concerns has tended to decline over time from 11% of all mergers notified to the Authority in 2003 to 5% in 2006. This is consistent with (i) the application of clear and consistent merger assessment by the Authority so that mergers with competition concerns are less likely to take

mergers involving differentiated products. The technique uses pre-merger gross margins \( M \) and the diversion ratio \( D \) of the two brands using the following formula: \( (M \times D)/(1 - M - D) \). C. Shapiro, “Mergers with Differentiated Products”, paper presented to the American Bar Association & International Bar Association Conference “The Merger Review Process in the US and Abroad” (November 1995) noted that the estimation technique only forms part of an assessment that must also include dynamic reactions of suppliers as well as an examination of efficiencies.

39 For details see M/03/033 SRH/FM104. The merger was cleared.
place; and (ii) the greater expertise that Authority has acquired at evaluating mergers. However, this conclusion must be regarded as tentative as there may be—judging by the record of the European Union over a comparable time period—exogenous factors explaining the decline.

- The large proportion of mergers that have little or no overlap and hence can be cleared on the basis of a Phase 1 investigation raises the issue of whether the merger notification requirements in Ireland are too broad. In other words, mergers with little or no nexus with Ireland are being notified. Of course, this is not necessarily the case; mergers may have a nexus with Ireland, albeit in markets where the HHI and Delta are low. Nevertheless, the evidence suggests that the merger thresholds have led to mergers being notified with little or no nexus to Ireland. Measures are being taken to address this issue.

- For those 17 horizontal mergers that raise competition concerns because of unilateral effects and thus require an extensive analysis:
  - only a minority—7 out of the 17—have used economic evidence to assess a critical constraint to the merged entity raising price post-merger;
  - closeness of competition, market definition and entry are the key reported constraints that the Authority considered when assessing whether or not a merger will result in SLC; and,
  - in the case of the two mergers that were blocked, excess capacity, imports and buyer power/switching costs are especially determinative when compared to mergers which were cleared by the Authority.

- It could be argued that the constraints that are considered as key are endogenous. If only one factor is considered as critical and the other constraints are not examined, then the selection of this critical factor might well be endogenous. However, typically in merger analysis the Authority considers all constraints. This reflects a desire in part for a complete analysis, and in part to ensure that, by conducting multiple checks, a sound decision is reached on the competitive effects of the merger. Thus, there are good grounds for rejecting the accusation that the selection of critical constraints is endogenous.

- Economic evidence is seldom used on its own in merger assessment by the Authority, but rather is used in a complementary way with factual and/or opinion evidence. This should increase the probability that appropriate decisions are being reached with respect to SLC.

- The Authority has used several of the types of economic evidence cited in the literature, with the noticeable exception of simulation models, an issue discussed further below.

The paper has given rise to several issues which are worth exploring and discussing.
2. Issues and Questions

Q1 Does the Authority have the balance right between the different types of evidence in merger assessment, particularly for in-depth cases?

It is difficult to judge whether the Authority has the balance right between the different types of evidence in conducting its merger assessment. Should the Authority, for example, increase its capacity to build simulation models? Have they been used successfully elsewhere? Are there classes of evidence or approaches to merger assessment that have not been employed in Irish merger assessment that need to be given greater prominence? Is the lack of economic evidence used in many of the mergers subject to in-depth-analysis, including one of the two mergers that were blocked, a cause for concern?

To answer these questions would require careful analysis comparing the marginal benefit of devoting additional resources to each type of evidence with the additional benefits. This is not an easy or straightforward exercise. An alternative approach would be to compare the distribution of the use of different types of evidence in Irish merger assessment with other jurisdictions. However, such comparisons are not easy, given the different legal, economic and administrative regimes that exist.

Nevertheless, a number of factors would suggest that the balance is probably not greatly that out of line with that of other competition agencies. First, for mergers where extensive analysis is conducted, the Authority regularly informs its assessment by retaining competition economists for their advice and comment. Secondly, mergers notified to the Authority are increasingly being informed by expert reports from economists, as indicated in Table IV. Thirdly,

<table>
<thead>
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<th>Year</th>
<th>Expert reports submitted by undertakings involved</th>
<th>Expert reports submitted by third parties</th>
</tr>
</thead>
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<tr>
<td>2003</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2004</td>
<td>3</td>
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<tr>
<td>2006</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: based on Authority records.

As indicated by an economic report. This is likely to underestimate the influence of economists, since in some instances the economist might assist the undertakings involved in preparing and completing the notification form, rather than preparing a separate report.
the Authority regularly attends meetings of the Commission on merger assess-
ment as well as cooperating with the Office of Fair Trading, and so is in a
position to be aware of developments with respect to merger assessment.

Q2 Efficiencies: an empty economic box?

One of the striking themes in much of merger discussion dating back to at least
Williamson\textsuperscript{40} is the role of efficiencies in merger analysis where there are also
increases in market power. The Authority’s Merger Guidelines refer to efficiencies.\textsuperscript{41}
They state, for example, that, “If a merger gives rise to anti-competitive effects, it
is possible that these could be compensated for by improvements in efficiencies
resulting directly from the merger\textsuperscript{42}.” The European Commission sponsored a
book\textsuperscript{43} on the issue of an efficiency defence as part of the background for the
introduction of such a defence in the 2004 European Commission Merger
Regulation. At a recent conference attended by one of the authors there were
several papers on the trade-off between efficiency and market power in merger
assessment.\textsuperscript{44}

Despite all this interest in the role of efficiencies in merger assessment in the
300 plus mergers notified to the Authority since 2003, efficiencies have not
played a decisive role.\textsuperscript{45} Indeed, in the two mergers that were blocked by the
Authority no serious attempt was made by the merging parties to document the
efficiencies that would accrue to consumers in the State that might be directly
related to the merger and how these would more than offset any merger-induced
price increases.\textsuperscript{46} Typically in a merger notification there is only a statement to
the effect that the merger will lead to efficiencies that will be of benefit to the
consumer, with little actual detail. This raises the question of why there is such a
dearth of quantification of efficiencies.

The role of efficiencies is also linked to the existence (or not) of competitive
constraints in a merger case. Firms merge so as to increase their profits. This can
happen if prices rise or costs fall. In a situation where there are limited
competitive constraints, the merged entity is likely to be in a position to raise
prices. If there is not strong evidence of efficiency gains, this would suggest that the result, if not necessarily the object, of the merger is to increase prices rather than reduce costs.

Since, in most cases, mergers do not raise competition concerns and are cleared at Phase 1, there is no need to quantify any efficiency. While this argument applies correctly to the vast majority of mergers notified to the Authority, it does not apply to those mergers which raise competition concerns and hence could be blocked or cleared with conditions. Credible efficiencies would obviate the need for such outcomes. Thus, any comments about the lack of evidence with respect to efficiencies applies to the subset of mergers where the Authority conducts an in-depth or extensive analysis.

For this set, it is not clear why efficiencies are not documented in any credible manner, but several reasons can be suggested:

- efficiencies are much rarer than commonly supposed and much harder to document;
- the merged entity does not want to pass on to consumers the benefits of the merger but prefers to retain the benefits for itself. In documenting the efficiencies, this raises the need for them to be shared;
- the acquirer has an estimate of the efficiency gains that substantially exceeds the premium paid to the target and does not wish to reveal this lest there be some attempt by the target to renegotiate the terms and conditions of the merger;
- by the time that the undertakings involved have become aware that the Authority has competition concerns it is too late in the merger review process to quantify the efficiencies;
- discussion of efficiencies detracts from the firm’s primary goal of proving no competitive harm. It can also lead to competition authorities to think that efficiencies are being proposed as an offset to anticompetitive effects of the merger;
- it is particularly difficult to show merger specificity; and,
- efficiencies are very idiosyncratic and, as such, are difficult to fit within standard models of the impact of a merger.

We have no way of determining which, if any, of these and other explanations might account for the muted role played by efficiencies in merger analysis in Ireland. Perhaps a competition authority could signal that if merging parties were to provide evidence of efficiencies then this would not be interpreted as evidence that the merger might lead to SLC.

Q3 Should the Authority make greater use of simulation models?

Having reviewed the economic evidence and associated techniques used and relied on by the Authority, it is clear that some techniques have not been used
extensively or even at all. This raises the issue of whether the Authority, which is keen to boost its expertise in merger assessment, should invest resources in such techniques.

One technique is the use of merger simulation models which combine industrial organisation theory with econometric modelling to predict the price effects of a merger. The Shapiro model, which was used by the Authority in SRH/FM104 to estimate potential post-merger price increases, was essentially a long-hand (non-econometric) version of a simulation model.

A merger simulation begins by using qualitative industry information on supply and demand to assume a particular model of competition. The most common model is differentiated Bertrand competition (ie where firms compete on prices but have differentiated products), which resolves the Bertrand paradox where two firms competing on prices price at cost. A less popular model is the homogenous Cournot model (ie where firms with some degree of market power compete on quantities). Based on the model of competition, a particular demand system for econometric modelling is selected.

Next, reliable market shares and sales/prices per product or firm are input into the model. The econometric model estimates industry and firm level elasticities, as well as diversion ratios. The simulation takes place when market structure is changed in the model by combining the market shares of the merging parties. Using the already estimated elasticities and diversion ratios, a potential price increase is estimated.

Merger simulation models have a number of flaws which affect, first, their application and, secondly, their reliability.

First, the standard models of differentiated Bertrand and Cournot competition nearly always predict price increases and therefore assume that all horizontal mergers are anticompetitive.\textsuperscript{47} This, in turn, perhaps places too great a focus on efficiencies. However, if the merger is likely to lead to a price increase, then the prediction is not a flaw. Secondly, while the models claim to take into account the reactions of other firms, they do so in a static context and ignore product repositioning by rivals, entry from outside the market and buyer power.\textsuperscript{48} Indeed, the nature of the competitive interaction of the firms may change post-merger, which may be difficult, if not impossible, to predict. However, such

\textsuperscript{47} When moving from one Nash-equilibrium to the next, differentiated Bertrand predicts that the merged firm first unilaterally increases its price and that non-merging firms also unilaterally increase their price. Cournot competition predicts that the merged firm reduces its output and that the non-merging firms increase their output by less than the merged firm’s reduction, and that this results in an overall reduction in output in the market.

\textsuperscript{48} For instance, in a market for differentiated goods such as fast moving consumer goods, one would imagine that a non-merging firm could reposition its product so as to increase its diversion ratio with the merged firm, that firms in neighbouring markets would enter, or that a large buyer such as a supermarket would use its ability to redistribute shelf space or promote a rival seeking to reposition itself.
knowledge may be vital to use in a simulation model. Thirdly, the pricing data used in the simulation model may be not entirely appropriate. The merger may occur at the wholesale level between, say, two producers of carbonated soft drinks, but the simulation may be relying on retail data and, while there is undoubtedly a relationship between the wholesale and retail elasticities, there is likely to be some error in our estimates and therefore the estimated price increases.

It could be argued that merger simulation models should be used only where all of the constraints have already been analysed and it has been shown that a merged firm would have the “ability” to raise its price post-merger. In other words, entry, buyer power, excess capacity and dynamic responses from rivals do not represent competitive constraints. The simulation model would therefore quantify how significant a lessening in competition is likely to be. This therefore rules out all but two mergers which the Authority has looked at. Even with respect to these two cases, in neither instance did the parties put forward an “efficiencies defence”, meaning that there was nothing to compare a predicted price increase with. Alternatively, a simulation model could be used as a screening device along with, or as an alternative to, HHI indicators. However, this would appear to be a costly screening devise for a small agency.

Merger simulation models are not the only method for predicting likely price effects. Recall that merger simulation models use industrial organisation models of competition to predict price effects. Suppose we simply use econometric techniques but do not impose a model of competition. This is precisely what the Federal Trade Commission (FTC) did in Staples/Office Depot. Using a cross-sectional analysis based on Staples’s average selling prices in towns and cities across the US, the FTC found that in towns where there was only one office superstore Staples’s prices were 7–9% higher than in towns where there were two or more office superstores. The merging parties and the Authority followed this approach in Grafton/Heiton to test for the presence of local price effects. A similar approach was taken in Uniphar/Whelahan, where one of the parties only competed in the relevant market in Dublin. The Authority was able to test if discounts offered by wholesalers as a proxy for wholesale prices differed between Dublin and those areas where that party was not active.

49 For instance, the Commission have used the PC-AIDS (proportionality calibrated almost ideal demand system) developed by R Epstein and DL Rubinfeld “Merger Simulation: A Simplified Approach with New Applications” (2001) 69 Antitrust L.J. 883 as a quick first screening device. This model has been lauded for its simplicity as it requires only two inputs: the pre-merger market shares of the merging firms and the brand level elasticity of one of them. However, the cost of this simplicity is that, in the absence of inserting complicated “nests”, the model does not allow for product differentiation and that some competitors are closer than others.
So the issue is what is the value added to a small agency in investing in the resources needed to perform merger simulations, given their obvious flaws, in a situation where it made two prohibitions in four years and where there are no efficiencies to compare the results of any post-merger price increases?

**Q4 Does the Authority place too much emphasis on opinion evidence?**

We have already averred to the literature on the use (and sometimes abuse) of customer and competitor opinion evidence on post-merger competitive effects. The bias in competitor opinion evidence is obvious. What motivates a competitor to object to a merger that will lead to higher prices which presumably that competitor can benefit from?\(^{50}\) Likewise, the incentives of customer do not always correspond to those of a competition authority. Farrell\(^{51}\) and Heyer\(^{52}\) identify conditions why a customer might not object to a merger which would be expected to raise prices, especially with respect to intermediate goods markets.

Fig 2 above shows the emphasis that the Authority has placed on opinion evidence. As Fig 2 demonstrates, opinion evidence has had the same and a sometimes greater significance than economic evidence. However, the data presented in Fig 3 show that, in those cases where economic evidence was used, opinion evidence diminished in importance compared with economic evidence.

The Authority has tended not to use competitor opinion evidence on the competitive effects of the merger. In respect of competitors, the Authority focuses mainly on testing data and other forms of factual evidence presented by the merging parties by seeking quantitative evidence on issues such as the costs of entry, expansion and the acquisition of customers. Rather, it is in the case of customers that the Authority has relied on opinion evidence (eg *IBM/Schlumberger*\(^{53}\)). However, even in *IBM/Schlumberger* the opinion evidence was mainly relied upon in conjunction with internal documents of the merging parties and focused on the ability of customers to switch to other forms of disaster and business recovery solutions, rather than on what customers thought of the merger.

Notwithstanding the incentives that customers may have and inherent biases in their views of the merger, sometimes customer views are erroneous due to lack of information. A recent economic report submitted to the Authority on behalf of a third party was based on assumptions that were incorrect and therefore undermined the report. In another instance, a third party was not aware that a customer

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\(^{50}\) Farrell, *supra* n 18, points out that there are some instances where a competitor’s incentives to object to a merger are aligned with those of a consumer, eg when a merger could create a dominant player that intimidates rivals and enforces coordination.

\(^{51}\) *Supra* n 18.

\(^{52}\) *Supra* n 17.

\(^{53}\) *Supra* n 36.
competitor to the merged entity held close to 20% market share and had achieved this share over a very short period of time. In other words, in some instances the Authority may know more than the customers. The customers are, to use Heyer’s phrase, “rationally ignorant”.

Given that customers may be biased and sometimes lack information to comment on post-merger effects, does this mean that forward-looking statements by customers are of little value? As with the application of economic and factual evidence, forward-looking customer opinion evidence should be tested against other forms of evidence, thereby in some way controlling for bias. However, in dynamic markets with short product lives and rapid turnover in the leading suppliers there may be no facts, no natural experiments that can point to the future; there may be only opinion evidence. Thus, in these circumstances, controlling for bias is likely to be very difficult.

The Authority can control for information asymmetries by presenting scenarios to customers. For instance, if customers believe that a recent entrant has not moved far enough up its production learning curve to be an effective competitor to the merged entity but in fact it has, then the Authority could ask “assuming that the recent entrant has moved up its learning curve, what are the costs associated with switching to it in the event of a price increase?” This example of customer evidence, which may appear trivial, is something the Authority readily encounters.

Thus the issue is not so much does the Authority rely too much on opinion evidence, but rather, for customer evidence, does the Authority correctly control or take into account the possible biases in opinion evidence, particularly with respect to the competitive effects of the merger?

**APPENDIX: SELECTION OF MERGER CASES FOR REVIEW OF USE OF ECONOMIC EVIDENCE**

As noted in section C above, the set of mergers selected for review in this paper covering the period 2003–2006 inclusive are divided into three categories:

- all Phase 1 mergers approved with proposals;
- all Phase 2 mergers; and,
- all “interesting” Phase 1 mergers cleared with no conditions.

These are detailed by year in these three categories in Tables AI–AIV. In the text of the paper they will be referred to by the shorthand used in the tables. In all

54 Nor was it aware of another player albeit with a smaller market share (less than 10%).

55 Supra n 17, 103–7.
### Table AI: Selected Authority Merger Determinations, 2003

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<thead>
<tr>
<th>Merger ID</th>
<th>Merger Description</th>
<th>Phase</th>
<th>Horizontal/vertical</th>
<th>Anti-competitive effect</th>
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<td>M/03/029</td>
<td>Dawn/Galtee</td>
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<td>Horizontal</td>
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<td>SRH/FM104</td>
<td>Phase 2</td>
<td>Horizontal</td>
<td>Both</td>
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<td>Phase 2</td>
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<td>Musgrave Express Checkout</td>
<td>Phase 1 with Proposals</td>
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<td>M/03/012</td>
<td>Smurfit/Litograph</td>
<td>Other Phase 1</td>
<td>Horizontal</td>
<td>Unilateral</td>
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Source: see text.

### Table AII: Selected Authority Merger Determinations, 2004

<table>
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<th>Horizontal/vertical</th>
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</thead>
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<td>Middlebrook Mushrooms/Carbury Mushrooms*</td>
<td>Other Phase 1</td>
<td>Horizontal</td>
<td>Unilateral</td>
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Source: see text.

*Below threshold merger investigated under section 4 of the Competition Act 2002 (similar issues raised to M/03/029 Dawn Meats/Galtee Meats).*
instances the actual Determinations are available on the Authority’s website. The only exception is M/06/044 Topaz/Statoil Ireland, where there was no Determination even though it was a notified merger. Nevertheless, the background to the merger is set out in the Authority’s Annual Report 2006\textsuperscript{56} and some detail is provided on the Authority’s website, www.tca.ie.

\textsuperscript{56} Supra n 31.