

The Role of Economic Evidence in Merger Control in the State: Current and Future Practice

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1. Introduction

The definition, role and importance of economic evidence in merger control have attracted considerable attention. In 2004, for example, the OECD organised a 'Roundtable on the Use of Economic Evidence in Merger Control',¹ while the British Institute of International and Comparative Law at its annual merger conference held a session on 'Use (and abuse?) of Economic Evidence.'² 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 Depot³ and in Europe by the creation in 2002 of the Office of the Chief Economist in DG Comp⁴ and by merger cases such as Oracle/PeopleSoft.

Consistent with these developments, since the Competition Authority ("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*⁵ and various paper and presentations.⁶ 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.

After four years of merger control and over 300 merger notifications now is an appropriate time to consider the role of evidence in general and economic

* All the authors are economists working in the Mergers Division, Competition Authority. Unless otherwise indicated the views in the paper do not necessarily represent those of the Competition Authority. The paper is prepared for the Competition Authority sponsored conference on Merger Control in Ireland: Prospect and Retrospect, Croke Park Conference Centre, 11 April 2007.

¹ See, for example, ICN (2004).

² For details see Marsden and Hutchings (2005, pp. 205-225).

³ For details see Dalkir & Warren-Boulton (2004).

⁴ For further discussion of these developments see Roller (2005) and Roller & Buigues (2005).

⁵ For details see Competition Authority (2002). These guidelines were issued in 2002 after much consultation.

⁶ See, for example, Fingleton (2002, 2003a, 2003b) and Fingleton & Nolan (2003).

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? Do the comparatively tight time periods in merger assessment, as set out in the Act constrain the role of economic evidence?

The paper is structured as follows. Section 2 considers what is meant by evidence, including economic, in merger control. Next attention turns in Section 3 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.⁷ This issue is addressed in Section 4. In Section 5 the role and importance of various kinds of evidence is discussed in relation to this small set of mergers. Finally, in Section 6 some of the issues identified in the previous paragraphs are explored.

2. 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 but rather a variety of different ones are used. Furthermore the type 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! Economic evidence is reliable, but to a lesser degree, simply because it is generally based on a theory that can potentially at least be disproved.⁸ Opinion evidence is the least reliable of all, because people's opinions are rarely objective and can be affected by bias, self interest etc.

⁷ 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.

⁸ The economic evidence may use underlying assumptions on elasticities or the form of competition that have not been tested and to which the results economic evidence may be very sensitive. In addition the economic evidence may be consistent with more than one explanation.

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 requirements (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.

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) as well as reports/data collected by third parties such as AC Nielsen for food and beverage products.⁹ 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.¹⁰

Economic Evidence

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.

⁹ Even these facts may be incomplete, if for example not all food and beverage firms supply data to the data collection firm.

¹⁰ 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, whereas the former are likely to be neutral in this respect.

While no exhaustive or definitive typology of economic evidence is available the following informs the analysis in this paper.¹¹

- Defining the market
 - Elasticity estimates
 - Price correlations
 - Case studies (natural experiments/event studies)
 - Critical loss analysis
 - Cross sectional analysis
- Constraints on the undertakings involved
 - Measuring excess capacity
 - Relocation and new product introduction
 - Closeness of competition
- Measuring impact of merger
 - Simulation models

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.¹² It will also depend on the capacity of the merger control unit to be able to interpret, evaluate, estimate and weigh the economic evidence.

Opinion Evidence

Merger analysis is an example of *ex ante* assessment under the 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).¹³ 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.¹⁴ However, as alluded to above, these firms may

¹¹ This discussion draws heavily on ICN (2004).

¹² 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.

¹³ SLC might also result from a reduction in quality or innovation or variety. See Competition Authority (2002, para 1.3).

¹⁴ While there is a literature on how to interpret competitor and customer evidence, especially opinion based, there does not appear to be such a literature with respect suppliers.

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 facilitate an increase in the market price then competitors of the undertakings involved are likely to express views supporting 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.¹⁵ 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, like competitors to the merged entity, customers, particularly where the customer is an intermediate buyer, rather 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.¹⁶

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.¹⁷ Care should also be taken to ensure that the opinion evidence is based on a representative sample of (say) customers or competitors.

3. The Incidence of Factual vs. Economic & 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.

Screening Mergers¹⁸

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

¹⁵ Farrell (2004) argues against trying to determine the competitive effects on this basis of implying the motive behind the nature of a competitor's response.

¹⁶ For further discussion see Farrell (2004) and Heyer (2007).

¹⁷ Of course 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.

¹⁸ 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.

competition.” (para 3.9). As can be seen from Table 1 these thresholds depend on the level of concentration in a relevant market as given by the HHI index and the change in the value of the HHI index due to the merger or Delta. However, it should be noted that these thresholds are most relevant to horizontal mergers where unilateral effects are likely to lead to SLC.¹⁹

Table 1

Thresholds for Merger Screening, HHI Index & Delta,²⁰ Ireland

Zone	Herfindahl-Hirshmann Index	Delta
A	Less than 1000 Between 1000 & 1800 Above 1800	Any Less than 100 Less than 50
B	Between 1000 & 1800 Above 1800	Greater than 100 Between 50 & 100
C	Above 1800	Greater than 100

Source: Competition Authority (2002, p. 11).

Since more than two-thirds of those mergers that require extensive analysis because of potential competitive problems can be classified as unilateral horizontal (Table 3 below), the main focus of the discussion here is on the application of the thresholds in Table 1 to the mergers screened by the Authority between 2003 and 2006 inclusive.

Applying the Framework

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. This occurs with some frequency in those mergers notified to the Authority:

¹⁹ The Authority’s *Merger Guidelines* do not contain thresholds for either vertical mergers or where there are likely to be coordinated effects. 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 (2007, para 25).

²⁰ The HHI and Delta are defined and discussed in Competition Authority (2002, Annex A, p. 33).

- by venture capital or private equity firms. For example, the acquisition of Amitco Holding Limited, a tiling firm, by ABN AMRO Capital Buyout Fund;²¹ 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 Oracle Corporation and MetSolv Inc²² overlap on a world-wide basis in the operation of support systems segment of service fulfilment of network resource management, there is no overlap in the State.

Mergers with no overlap do not pose SLC concerns²³ and hence can be typically cleared on the basis of a Phase 1 investigation. These mergers are evaluated almost entirely with respect to factual evidence provided in the notification, not on the basis of economic or opinion evidence provided by the undertakings involved or third party evidence sought by the Authority.

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 Limited²⁴ were involved in the retail sale of womenswear in the State, the small market share of the merged entity – 0 to 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 these mergers are decided on the basis of a Phase 1 investigation using factual evidence combined with the application of the *Merger Guidelines*.

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 4637 and the Delta, 4400.²⁵

²¹ M/06/047.

²² M/06/076.

²³ Of course in some cases there may be potential competition concerns if the acquirer were a potential entrant. However, this is typically not the case, especially for purchases by investment funds.

²⁴ M/06/066.

²⁵ M/04/032, Table A, p. 31. Estimates in text based on column headed "SBCS estimates."

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 either through an extended Phase 1 or Phase 2.

The Results

Since two of the three categories identified above rely solely on factual evidence and do not raise competition concerns, these can be combined into one category. Thus in examining the incidence of factual compared to economic and opinion evidence in merger control in Ireland only two categories are presented in Table 2 below.

Several conclusions can be drawn from Table 2:

- the vast majority, 93%, of mergers notified to the Authority over the period 2003 to 2006 were assessed with reference only to factual evidence. These were mergers with little or no overlap and hence did not require 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% 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 place; and (ii) the fact that the Authority has acquired greater expertise at evaluating mergers;²⁶ 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 the State are being notified. The evidence suggests that this is indeed the case. Measures are being taken ensure that only mergers with a nexus with Ireland are notified to the Authority.²⁷

²⁶ However, given the small sample size these inferences should be viewed with caution.

²⁷ See Competition Authority (2007, pp. 32-36), Mackey (2007) and Bah and NiChualadh (2007).

Table 2²⁸

Classification of Merger Notifications,²⁹ by Use of Factual, Economic and Opinion Evidence, and Whether Raised Competition Concerns,³⁰ Annually, Ireland, 2003 to 2006

Year	SLC Decision Based on Factual Evidence: No Competition Concern	SLC Decision Based on Factual, Economic, & Opinion Evidence: Competition Concern	Total
2003	42 (89%)	5 (11%)	47 (100%)
2004	77 (94%)	5 (6%)	82 (100%)
2005	77 (92%)	7 (8%)	84 (100%)
2006	93 (95%)	5 (5%)	98 (100%)
2003-06	289 (93%)	22 (7%)	311 (100%)

Source: Competition Authority, *Annual Report*, various issues, and Annex A below.

4. Categorising Mergers that Raise Competition Concerns & 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.

²⁸ Table 2 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 Annex A below, 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.

²⁹ 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 is increased by 1 compared to the number on the Authority's *Annual Report* to take into account that Middlebrook Mushrooms/Carbury Mushrooms merger was dealt with by way of an investigation under Section 4 of the Act, rather than the merger provisions.

³⁰ The criteria for whether or not the merger raised competition concerns is set out in Annex A below together with the identity of the mergers that are deemed to fall into this category.

Out of the twenty-two mergers that raised competition concerns over the 2003 to 2006 period, 18 or 82% were horizontal, with the remaining 4 or 18% vertical in nature (Table 3). This is not a surprising result in view of the fact that horizontal mergers are more likely to be anticompetitive while vertical mergers are much more likely to be pro-competitive. 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 3
Mergers that Required Extensive Analysis, Factual, Economic & Opinion Evidence, by Merger Type, Ireland, 2003-2006

	Unilateral only	Coordinated only	Both	Total
Horizontal	11 (2) ³¹	1	6	18
Non-horizontal	4	0	0	4

Source: Annex A, Tables A.1 – A.4

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 or 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 contrast, for all the vertical mergers where competition concerns were raised only unilateral effects were present.³²

In the remainder of the paper attention is devoted to how economic evidence is used in those 17 mergers classified as horizontal with unilateral effects (“the 17 cases”).

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

The use of evidence, whether economic or not, in unilateral horizontal mergers is considered first by reference to what are the critical factors in

³¹ Numbers in parenthesis refers to mergers that were blocked by the Authority. The 2 are included within the 11.

³² It should be noted that in analyzing mergers attention is paid as to whether or not the conditions are present for coordinated effects.

assessing SLC in such mergers. Evidence is adduced in the merger assessment to throw light on these factors. The rest of the discussion in the section then addresses how economic evidence is used to assist in the merger assessment process. It should be noted that fact, economic and opinion evidence all play a part in assessing the critical factors that determine whether or not there is SLC. It is difficult, if not impossible, to predict *a priori* which type of evidence is likely to be decisive and under what conditions. It is therefore an empirical question.

What are the Critical Factors in Unilateral Horizontal Merger Analysis?

In unilateral horizontal mergers there is a clear incentive for the merged entity to raise price because a competitor has been eliminated. The merged entity is in a Zone B or a Zone C situation as set out in Table 1 above so that the competitor that is eliminated is likely to be of some importance and, under standard models of competition among the few, the merged entity would have a strong *incentive* to raise price. In these situations there is little need to develop an explicit theory of harm.³³ Given that there is a strong likelihood that price, other things being equal, will be raised as a result of the merger, the analysis focuses on the constraints that may or may not prevent the merged entity from realising the price increase. In other words, the task is to determine whether or not the merged entity has the *ability* to profitably raise prices.

For a constraint on the ability of the merged entity to raise prices to be effective, and thus for there to be no SLC, the constraint must fulfil three conditions. These conditions are illustrated with respect to capacity, but can easily be applied to other constraints:

- timely – the capacity is considered timely only if it is brought on-stream within two years, the time horizon used in the prospective analysis of mergers by the Authority;
- likely – bring the capacity on-stream. In other words, it will be profitable at pre-merger or lower prices; and,
- sufficient – the additional capacity must return prices to their pre-merger levels. For this to occur capacity must be of a sufficient scale.

³³ It is much more the case in unilateral vertical mergers that theories, sometimes quite elaborate, have to be developed. See, for example, Coillte/Weyerhaeuser, M/06/057

Efficiencies that flow from the merger – much more likely for a merger with unilateral effects than one with coordinated effects – can offset the price-enhancing effects of a merger and form part of the assessment.³⁴

Classifying the Critical Constraints

The constraints on the merged entity in a unilateral horizontal merger can be divided into three categories.³⁵

First, is market definition. Market definition is included because 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 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.

Second, are those constraints that relate primarily to the reaction of firms outside the market in which the merging parties are liable to raise price:

- entry;
- imports;
- buyer power/switching costs.

Third, there are those constraints that operate in the market in which the merged entity has the incentive to raise prices:

- excess capacity; and,
- closeness of competition.

The latter refers the degree to which the undertakings involved competed with each other pre-merger as well as the extent to which the non-merging undertakings constrain the merged entity's ability to raise price.

The Importance of Different Critical Constraints

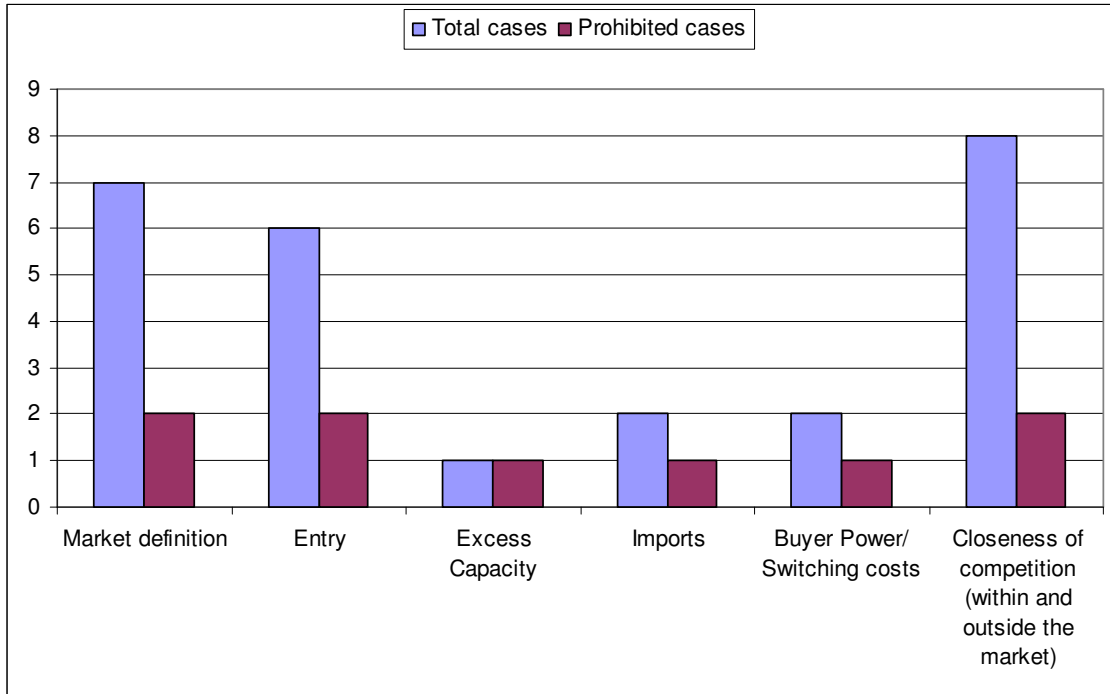
The 17 cases where extensive analysis was conducted were each examined to determine the critical or decisive constraint(s) on which the Authority decided whether or not there was SLC. It should be noted that more than one

³⁴ For further discussions see Fingleton (2003b) and Competition Authority (2002, paras 5.9 to 5.16.

³⁵ The list is not exhaustive.

constraint may have been considered as crucial. The results are presented in Figure 1 for the 17 cases, including the two mergers which were blocked by the Authority.

Figure 1:
Frequency of Critical Constraints on Merged Entity's Ability to Raise Price, Extensive Unilateral Horizontal Merger Assessments (the 17 cases), Ireland, 2003 to 2006.



Source: Annex A & text

A number of inferences can be drawn from Figure 1:

- closeness of competition, market definition and entry are the key 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 important compared to mergers which were cleared by the Authority.

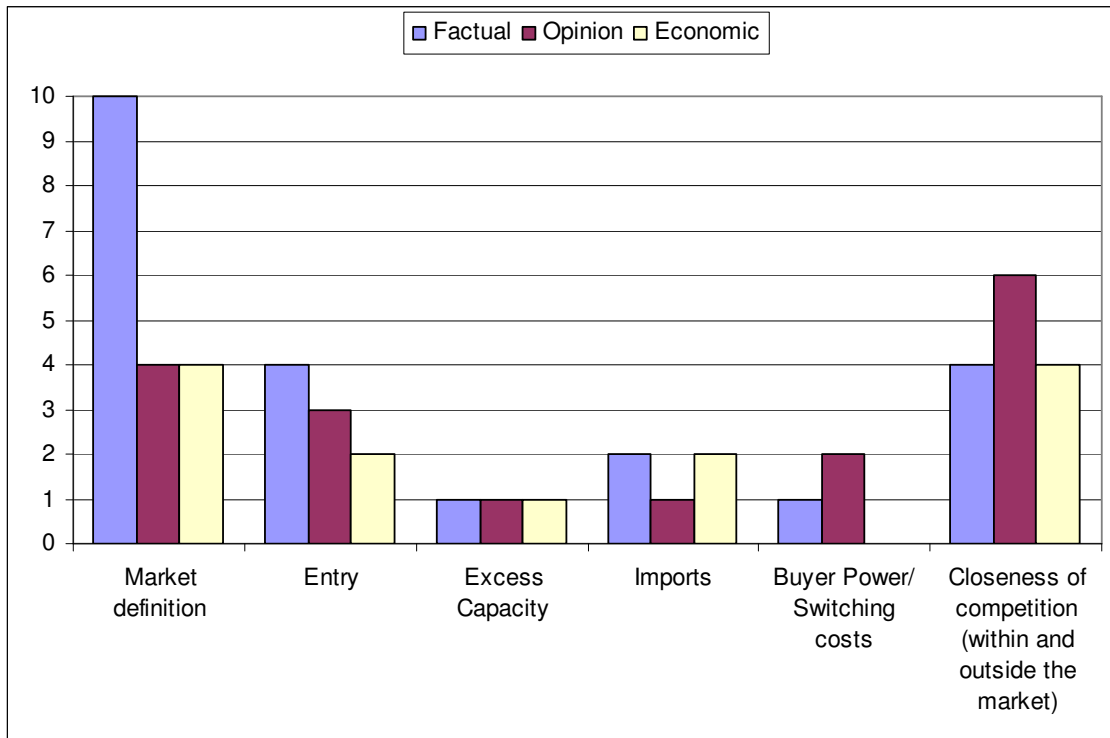
Critical Constraints and Types of Evidence

The 17 Cases

The next step in the discussion is to consider for each constraint for the 17 cases for which an extensive analysis was undertaken, 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 Figure 2.

Figure 2
The Use of Factual, Opinion & Economic Evidence, by Constraint on Merged Entity's Ability to Raise Price, Extensive Unilateral Horizontal Merger Assessments (the 17 cases), Ireland, 2003 to 2006.



Source: Annex A and text.

The major inferences to be drawn from Figure 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.

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 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. Entry was also considered likely to be sufficient based on factual evidence. However, entry was unlikely based on economic evidence (i.e., a model that estimated the extent of excess capacity) and the factual/opinion evidence of potential entrants;³⁶

- 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 undertaking involved expressed the opinion that business recovery hotsite services are part of a broader IT market. However, this was inconsistent with both factual evidence (i.e. earlier internal documents of the undertakings involved) and, opinion evidence (i.e. extensive customer survey). As a result the Authority decided there was a separate market for business recovery hotsite services;³⁷and,
- 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 the Heinz/HP merger factual (i.e., internal documents), economic (i.e., econometric estimation using different procedures) and opinion (i.e., from customers and competitors) evidence all indicated that neither BBQ sauce nor Worcestershire sauce should be treated as distinct relevant markets.³⁸

The Seven Cases

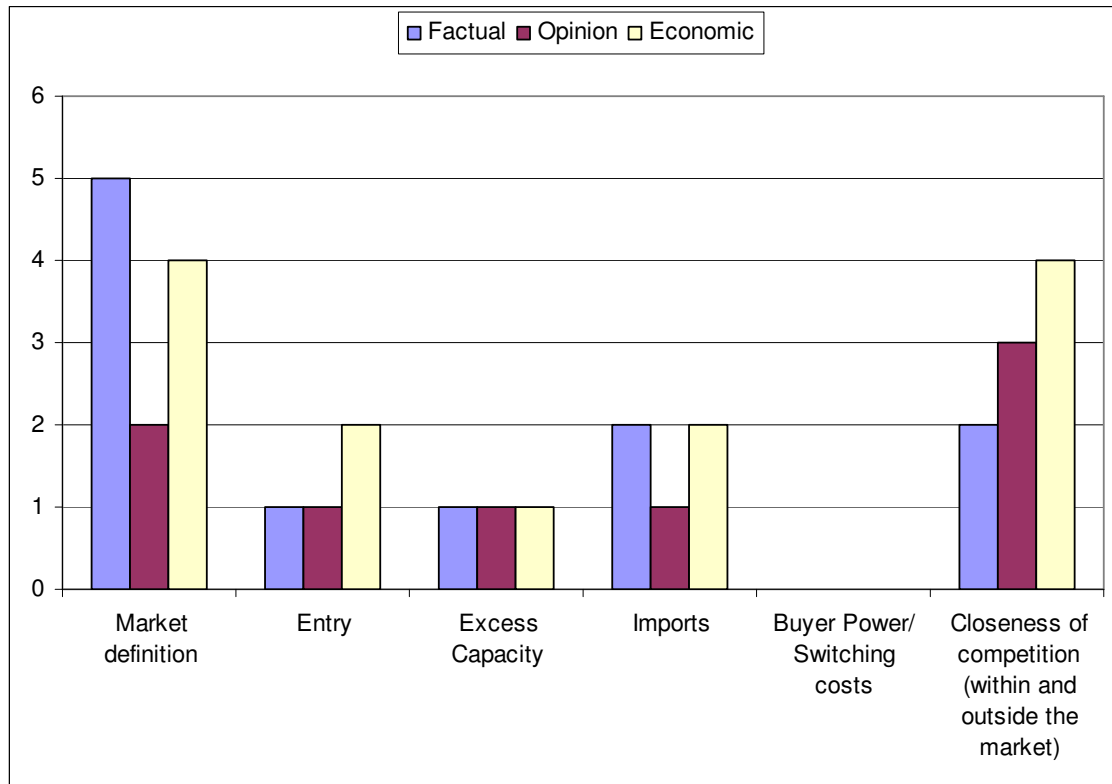
Economic evidence was only used with respect to a critical constraint in 7 of the 17 cases ("the Seven Cases"). In other words for the majority of the 17 cases the issue of SLC was determined on the basis of factual and/or opinion evidence. Here we concentrate our attention on the seven cases. Figure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

³⁶ For further discussion, see Kingspan/Xtratherm, M/06/039, paras 5.27 to 5.47.

³⁷ For further discussion, see IBM/Schlumberger, M/04/032, paras 2.20 to 2.27.

³⁸ For further discussion, see Heinz/HP, M/05/033, paras 16 to 28.

Figure 3
The Use of Factual, Opinion & Economic Evidence, by Constraint on Merged Entity's Ability to Raise Price, Extensive Unilateral Horizontal Merger Assessments Where Economic Evidence Considered (the seven cases), Ireland, 2003 to 2006



Source: Annex A and text.

The major conclusions from Figure 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:

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 (Grafton/Heiton);
- econometric techniques were used to address the issue of relevant markets in cold sauces using scanner data at the retail level (Heinz/HP);
- natural experiments (Kingspan/Xtratherm); and,
- isochrones in motor fuels retail service stations (Topaz/Statoil).

Entry/Excess Capacity

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

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 (Uniphar/Whelahan);
- econometric analysis similar to Staples-Office Depot was used to determine whether one undertaking'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. (Grafton/Heiton); and,
- application of the Shapiro model³⁹ to predict price increases resulting from a radio merger on advertising rates. First, the Authority estimated possible 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

³⁹ For details see SRH/FM104, M/03/033

FM to FM04. Second, 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 (SRH/FM 104).

As will be observed the Authority has used no simulation model, an issue discussed in Section 6 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.

6. Conclusions and Issues

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 to 2006 were assessed with reference only to factual evidence. These were mergers with little or no overlap and hence did not require 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% 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 place; and (ii) the Authority has acquired greater expertise at evaluating mergers;
- 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 the State are being notified. The evidence suggests that this is indeed the case. Measures are being taken ensure that only mergers with a nexus with Ireland are notified to the Authority;

- 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;
- economic evidence is seldom used on its own in merger assessment by the Authority, but rather in a complementary way with factual and/or opinion evidence; and,
- the Authority has used several of the types of economic evidence cited in the literature, with the noticeable exception of simulation models.

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

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? 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 in many of the mergers subject to in-depth analysis and in one case blocked a cause for concern?

To answer these questions would require some careful analysis that compared the marginal benefit of devoting additional resources to each type of evidence compared to 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. Second, mergers notified to the Authority are increasingly being informed by expert reports from economists as indicated in Table 4 below. Third, the Authority regularly attends meetings of the Commission on merger assessment as well as co-operating with the Office of Fair Trading and so is in a position to be aware of developments with respect to merger assessment.

Table 4
Use of Expert Economist⁴⁰ by the Undertakings Involved, and/or Third Parties, All Merger Notifications, Ireland, 2003-2006

	Expert Reports Submitted by Undertakings Involved	Expert Reports Submitted by Third Parties
2003	2	0
2004	3	0
2005	3	1
2006	5	3

Source: Based on Authority records.

Q2. Efficiencies: an empty economic box?

One of the striking themes in much of merger discussion dating back to at least Williamson (1968) is the role of efficiencies in merger analysis where there are also increases in market power. The Authority's *Merger Guidelines* refer to efficiencies (paras 5.9 to 5.16). 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." (para 5.9). The European Commission sponsored a book⁴¹ 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.

⁴²

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. Indeed in the two mergers that were blocked by the

⁴⁰ 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.

⁴¹ Ilzkovitz & Meiklejohn (2006)

⁴² Strategic Firm-Authority Interaction in Antitrust, Merger Control and Regulation, organized by the Amsterdam Centre for Law and Economics, 16 March 2007.

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.⁴³ 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.

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;
- 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; and,
- 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.

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.

⁴³ Although it may not have occurred in Ireland it has occurred in some US cases, such as Staples-Office Depot. See Dalkir and Warren-Boulton (2004) for details.

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.⁴⁴

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 (i.e., 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 (i.e., 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 inputted 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 firstly 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

⁴⁴ The Shapiro model estimates price increases using a firm's price-cost margin and the diversion ratio between the merging parties. A merger simulation model uses estimated elasticities to estimate the margin. In SRH/ FM104 the Authority used actual price and cost accounting data to estimate the margin. For further details see determination M/03/033.

mergers are anticompetitive.⁴⁵ This in turn perhaps places too great a focus on efficiencies. Second, 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.⁴⁶ Third, 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 only be used 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. This in some way quantifies how significant a significant 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.⁴⁷ However this would appear to be a costly screening device 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 don't impose a model of competition. This is

⁴⁵ When moving from one Nash-equilibrium to the next differentiated Bertrand predicts that firstly the merged firm 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

⁴⁶ 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, or that firms in neighbouring markets would enter, or that a large buyer such as a supermarket would use its ability redistribute shelf space or promote a rival seeking to reposition.

⁴⁷ For instance the Commission have used the PC-AIDS (proportionality calibrated almost ideal demand system) developed by Epstein and Rubinfeld 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 brand level elasticity of one of them. However the cost of this simplicity is that in the absence of inserting complicated "nests" the model doesn't allow for product differentiation and that some competitors are closer than others.

precisely what the Federal Trade Commission ("FTC") did in Staples-Office Depot. Using a cross sectional analysis based on Staples' average selling prices in towns and cities across the US the FTC found that in towns where there was only one office superstore Staples' 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 prices differed between Dublin and those areas where that party was not active.

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. The bias in competitor 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?⁴⁸ Likewise the incentives of customer do not always correspond to those of a competition authority. Farrell (2004) and Heyer (2007) 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.

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

⁴⁸ Farrell (2004) points out that there are some instance where a competitor's incentives to object to a merger are aligned with those of a consumer, for instance when a merger could create a dominant player that intimidates rivals and enforces coordination

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 (e.g., IBM/SBCS). However, even in IBM/SBCS 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 of a competitor to the merged entity held close to 20% market share and had achieved this share over a very short period of time.⁴⁹ In other words, in some instances the Authority may know more than the customers.

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.

The Authority can control for information asymmetries by presenting scenarios to customers. For instances if customers believe that a recent entrant hasn't moved far enough up its production learning curve to be an effective competitor to the merged entity but in fact it has, and the customer wasn't aware of that fact, 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 while appearing trivial is something the Authority readily encounters.

⁴⁹ Nor was it aware of another player albeit with a smaller market share (less than 10%).

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?

30 March 2007

References

- Bah, I, and L. NiChualladh (2007) "The Curious Tale of Pigs, Papers and Peru – Media Mergers in Ireland", Paper prepared for Conference Merger Control in Ireland: Prospect and Retrospect, Croke Park Conference Centre, 11 April.
- Competition Authority (2002) *Notice in Respect of Guidelines for Merger Analysis*. Decision No. N/02/004. Dublin: the Authority. This maybe accessed at: www.tca.ie.
- Competition Authority (2003) *Annual Report 2002*. Dublin: the Authority. This maybe accessed at: www.tca.ie.
- Competition Authority (2006) *Annual Report 2005*. Dublin: the Authority. This maybe accessed at: www.tca.ie.
- Competition Authority (2007) *Annual Report 2006*. Dublin: the Authority. This maybe accessed at: www.tca.ie.
- Dalkir, S, & F. Waren-Bolton (2004) "Prices, Market definition, and the Effects of Merger: Staples-Office Depot (1997)." In J. E. Kwoka & L. J. White (eds) (2004) *The Antitrust Revolution. Economics, Competition and Policy*. 4th Edition. New York: Oxford University Press. Pp. 52-72.
- Economic Advisory Group for Competition Policy (EAGCP) (2006) *Non-Horizontal Mergers Guidelines: Ten Principles*. Brussels: European Commission. Thus maybe accessed at: http://ec.europa.eu/comm/competition/mergers/legislation/non_horizontal_guidelines.pdf
- European Commission (2007) *Guidelines on the Assessment of non-horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings*. Draft Commission Notice. Brussels: the Commission.
- Farrell, J. (2004) "Listening to Interested Parties in Antitrust Investigations: Competitors, Customers, Complementors, and Relativity." *Antitrust*, Spring, Vol. 18, No. 2, pp.64-68.
- Fingleton, J. (2002) "Does Collective Dominance Provide Suitable Housing for all Anticompetitive Oligopolistic Mergers?" Paper presented at EU/IBA Merger Review Conference, Brussels, 8 November. This maybe accessed at: www.tca.ie.
- Fingleton, J. (2003a) "The Role of Economics in Merger Review." The Beesley Lecture, delivered on 18 November. This maybe accessed at: www.tca.ie.
- Fingleton, J. (2003b) "Efficiencies in Mergers." Paper prepared at American Chamber of Commerce Conference, Brussels, 18 November. This maybe accessed at: www.tca.ie.
- Fingleton, J., & D. Nolan (2003) "Mind the Gap: Reforming the EU Merger Regulation." Prepared for publication in *Mercato, Concorrenza, Regole*. This may be accessed at: www.tca.ie.

- Fingleton, J. (2004) "Balancing Economic Pros and Cons in Applying Art. 81(3)". Paper presented to the Conference for the Judiciary of Ireland, Competition Law Regulators & Practitioners, Irish Centre for European Law, 8 May.
- Heyer, K. (2007) "Predicting the Competitive Effects of Mergers by Listening to Customers." *Anitrust Law Journal*, Vol 74, Issue 1, pp. 27.
- ICN (2004) "The Role of Economists and Economic Evidence in merger Analysis." Paper presented at the OECD Roundtable on the Use of Economic Evidence in Merger Control. 17 May. Available at: www.internationalcompetitionnetwork.org/media/library/conference_2nd_merida_2003/Role_of_Economists.pdf
- ICN (2006a) *Implementation Handbook. Examples of Legislative Text, Rules, and Practices that Conform to Selected ICN Guiding Principles and Recommended Practices for Merger Notification and Review procedures.* Available at: www.internationalcompetitionnetwork.org/
- ICN (2006b) *ICN Merger Guidelines Workbook.* Available on the website: www.internationalcompetitionnetwork.org/
- Ilzkovitz, F. & R Meiklejohn (2006) *European Merger Control. Do We Need An Efficiency Defence?* Cheltenham: Edward Elgar.
- Marsden, P. Hutchings (2005) *Current Competition Law, Volume IV.* London: British Institute of International and Comparative Law.
- Noreen Mackey (2007) "Improving Merger Control in Ireland: Proposed Legislative Reforms Four Years On". Paper prepared for Conference Merger Control in Ireland: Prospect and Retrospect, Croke Park Conference Centre, 11 April.
- Roller, L-H., (2005) "Economic Analysis and Competition Policy Enforcement in Europe." In P. A. G. van Bergeijk & E. Kloosterhuis (2005) *Modelling European Mergers.* Cheltenham: Edward Elgar, pp.11-24.
- Roller, L-H, & P.A. Buigues (2005) "The Office of the Chief Competition Economist at the European Commission." Paper available at the Commission's website: http://ec.europa.eu/comm/dgs/competition/officechiefecon_ec.pdf
- Williamson, O.E. (1968) "Economies as an Antitrust Defense: The Welfare Tradeoffs." *American Economic Review.* Volume 58,

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

As noted in Section 3 above the set of mergers selected for review in this paper covering the period 2003 to 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 A.1 to A.4 below. In the text of the paper they will be referred to by the shorthand used in the tables. In all instances the actual Determination are available on the Authority's website. The only exception is the M/06/044, Topaz/Statoil Ireland where there was no Determination although it was a notified merger. Nevertheless, the background to the merger is set out in the Authority's *Annual Report, 2006* and some detail is provided on the Authority's website, www.tca.ie.

Table A.1
Selected Authority Merger Determinations, 2003

Phase 2	Horizontal/ Vertical	Anti-competitive effect
M/03/029 Dawn/ Galtee	Horizontal	Both
M/03/033 SRH/ FM104	Horizontal	Both
M/03/035 Stena/ P&O	Horizontal	Both
Phase 1 with Proposals		
M/03/001 Musgrave Express Checkout	Vertical	Unilateral
Other Phase 1		
M/03/012 Smurfit/ Litograph	Horizontal	Unilateral

Source: see text.

Table A.2
Selected Authority Merger Determinations, 2004

Phase 2	Horizontal/ Vertical	Anti-competitive effect
M/04/020 Uniphar/ Whelahan	Horizontal	Both
M/04/032 IBM/ Schlumberger	Horizontal	Unilateral
M/04/051 Grafton/ Heiton	Horizontal	Unilateral
Phase 1 with Proposals		
M/04/016 Stena/ P&O	Horizontal	Both

Other Phase 1		
E/04/001 Middlebrook Mushrooms/ Carbury Mushrooms ⁵⁰	Horizontal	Unilateral

Source: see text

Table A.3
Selected Authority Merger Determinations, 2005

Phase 2	Horizontal/ Vertical	Anti-competitive effect
M/05/024 NTL/ UPC	Horizontal	Coordinated
Phase 1 with Proposals		
M/05/025 SRH/Highland Radio	Horizontal	Both
M/05/027 M&J Gleeson/ United Beverages	Horizontal	Unilateral
M/05/028 Alphyra/ Eason Electronic	Horizontal	Unilateral
M/05/050 Eircom/ Meteor	Vertical	Unilateral
M/05/009 Kingspan/ Century Homes	Vertical	Unilateral
Other Phase 1		
M/05/033 Heinz/ HP Foods	Horizontal	Unilateral

Source: see text

Table A.4
Selected Authority Merger Determinations, 2006

Phase 2	Horizontal/ Vertical	Anti-competitive effect
M/06/027 Tetra Leval/ Carlisle	Horizontal	Unilateral
M/06/039 Kingspan/ Xtratherm	Horizontal	Unilateral
M/06/057 Coillte/ Wayerhaeuser	Vertical	Unilateral
Other Phase 1		
M/06/044 Topaz/ Statoil Ireland	Horizontal	Unilateral (?)
M/06/051 Largo/ Tayto	Horizontal	Unilateral

Source: see text

⁵⁰ Below threshold merger investigated under Section 4 (similar issues raised to M/03/029 Dawn Meats/ Galtee Meats)