



Working Paper No. 353

September 2010

Market Regulation and Competition; Law in Conflict: A View from Ireland, Implications of the Panda Judgment

Philip Andrews and Paul K Gorecki*

Subsequently published as "[The Use by Irish Courts of EU Jurisprudence to Resolve Conflicts Between National Competition Law and Regulation: Panda Waste](#)" European Competition Journal, Vol. 6, No. 3, December 2010, pp.541-573

Abstract: On 21 December 2009 the Irish High Court found that a regulatory proposal, the Variation, by the four Dublin local authorities, is a breach of national competition law. The Variation allows a single operator to collect household waste, irrespective of whether the operator is selected by competitive tender or the local authority reserves the collection function to itself. The judgment has important, possibly groundbreaking, implications. Local government is held to be an undertaking and hence its decisions susceptible to review and prohibition under national competition rules. The burden of the paper is, however, that the local authorities are not undertakings for the purposes of competition law when they made the Variation. Even if the local authorities were undertakings in this regard, competitive tendering for selecting a single operator to collect household waste collection is neither an anti-competitive agreement nor an abuse of a dominant position. If, however, the High Court judgment is affirmed by the Supreme Court on appeal, then the wider implications of the judgment will need to be explored.

Corresponding author: paul.gorecki@esri.ie

Key Words: competition policy; regulation; geographic market definition; abuse of dominance; collective dominance; household waste collection; definition of an undertaking; anticompetitive agreement; Article 86; Competition Act 2002; Waste Management Acts, 1996-2007.

* Philip Andrews is a partner in McCann FitzGerald and co-heads the firm's EU, Competition and Regulated Markets Group while Paul K Gorecki is a Research Professor at the Economic and Social Research Institute where he is programme co-ordinator of the Competition and Regulation Research Area. Neither author was involved in the High Court judgment reviewed in this paper, although both authors have advised Dublin City Council – one of the defendants in the action – on separate aspects of waste policy and competition law. The paper has benefited from helpful and valuable comments on earlier versions by John Fitz Gerald, Sean Lyons, and Fran O'Toole. Wanda Brockie helpfully supplied the graphics. The usual disclaimer applies.

ESRI working papers represent un-refereed work-in-progress by researchers who are solely responsible for the content and any views expressed therein. Any comments on these papers will be welcome and should be sent to the author(s) by email. Papers may be downloaded for personal use only.

Market Regulation and Competition; Law in Conflict: A View from Ireland, Implications of the Panda Judgment

A. Introduction

On 21 December 2009 an Irish High Court judgment¹ found that a regulatory proposal, the Variation, by the four Dublin local authorities (“the local authorities”)² to move from competition-in-the-market (or side-by-side competition) for household waste collection to a single operator, irrespective of whether selected through competitive tendering (i.e. competition-for-the-market) or by the local authority reserving the collection function to itself, was a breach of national competition law. The Panda judgment, if sustained on appeal to the Supreme Court,³ is a verdict of considerable importance for competition law jurists both in Ireland and abroad. In the High Court judgment, local authorities are held to be ‘undertakings’ and local authority policy decisions therefore to be susceptible to review and prohibition under national competition rules. Thus, national rules prohibiting abuse of dominance and anti-competitive agreements are effectively relied upon to prevent local authorities implementing, what the High Court took to be, anti-competitive policies.

While it is well established that EU Treaty rules – via Article 86⁴ – can, in certain circumstances at least, be relied on to challenge and prevent national law and policies that restrict competition, national competition law has not yet – to the authors’ knowledge – been relied upon to achieve effectively the same outcome. Hence, there is a temptation to announce the Panda judgment as truly groundbreaking.

Equally, because the High Court’s legal analysis is justified almost exclusively by reference to European Court of Justice (“ECJ”) jurisprudence (including, in particular, ECJ jurisprudence on the concept of an ‘undertaking’ – a concept imported into Irish competition law from the EU), it is tempting to characterise the High

¹ The High Court judgment, *Nurendale Limited trading as Panda Waste Services and Dublin City Council, Dun Laoghaire/Rathdown County Council, Fingal County Council, and South Dublin county Council* [2009] IHEC 588 (hereinafter the High Court judgment or the Panda judgment). The judgment was delivered on 21 December 2009, by Mr Justice William M McKechnie after a 14 day trial that started on 28 October 2008 and concluded on 20 November 2008. However, although the decision was delivered in December 2009, it was not perfected until March 2010.

² The four authorities are: Dublin City Council, Dun Laoghaire-Rathdown County Council, Fingal County Council and South Dublin County Council.

³ Dublin City Council has appealed the High Court judgment to the Supreme Court.

⁴ Although Articles 81, 82 and 86 are now Articles 101, 102 and 106, respectively, under the TFEU, in this paper the older nomenclature is used.

Court's findings as of wider interest, including to competition jurists in other countries that, like Ireland, have used EU law concepts in national competition legislation. Notwithstanding that the High Court judgment ultimately concluded that there was no appreciable affect on trade between Member States,⁵ the case demonstrates just how important ECJ jurisprudence is in influencing even purely domestic competition law outcomes.⁶ At the same time, because of the finding concerning trade between Member States, there is no opportunity for the European Courts to review decisions by national courts which rely on ECJ jurisprudence so as to ensure consistency.

The Irish market for household waste collection is unusual by international standards. In a recent study of EU Member States only two countries, Poland and Kosovo, apart from Ireland, used competition-in-the-market.⁷ Typically collection of household waste is exclusively undertaken either by the local authority itself or by a private contractor, where the latter is selected by the use competition-for-the market or competitive tendering. This latter mechanism reflects the view that competitive tendering results in lower costs and is more efficient than competition-in-the-market. The High Court judgment, if it set a precedent that was followed elsewhere in the EU, suggests that current waste collection arrangements in virtually every Member State are anticompetitive.

The High Court judgment has important implications not only for the collection of household waste in the Dublin Region and possibly beyond, but also for the scope of competition policy in regulatory activities heretofore thought to be exempt from its remit. The High Court judgment implies that regulatory agencies responsible for energy, telecommunications and transport that undertake actions that reorganise a market are involved in an economic activity and thus under the remit of competition policy. Such actions might include encouraging entry, limiting the

⁵ High Court judgment, [142-144].

⁶ It seems reasonable that these views will continue to exert an influence over competition policy in both Ireland and the wider EU, in view of the fact that the judge in the Panda case was elevated to the Irish Supreme Court in 2010 as well as being elected president of the Association of European Competition Law Judges ("AECLJ"), The AECLJ which represents judges from each of the 27 EU Member States, promotes consistency in the application of EU competition law by facilitating the exchange of knowledge and experience among the judiciary.

⁷ Eunomia Research & Consulting Ltd., Tobin Consulting Engineers, TBU, Oko-Institut, and Arcadis. *International Review of Waste Management Policy: Summary Report*. (Dublin: Department of Environment, Heritage and Local Government, 2009), at p. 20 footnote 28. Hereinafter referred to as the Eunomia Report.

pricing ability or market share of an incumbent firm with a large market share and so on. Hence a whole new vista for appeals from regulatory agencies decisions is opened up by the High Court judgment.

The High Court judgment also has implications for the private sector. Suppose a widget producer purchases 80-100% of the output of an upstream input market through a series of annual contracts with many small and medium sized suppliers. Suppose the widget producer decides to centralise all purchases in the upstream market in a single order and put the total order out to competitive tender and/or decides to self-supply by integrating backwards. Under the High Court judgment there is a distinct possibility that the decision could be challenged as anti-competitive by those suppliers in the upstream market which experience a subsequent decline in demand. Thus the ability of firms to react to changing market circumstances is curtailed by the High Court judgment, which potentially reduces the degree of flexibility in the economy.

If the High Court judgment is affirmed by the Supreme Court on appeal, then a whole series of questions will need to be addressed as the wider implications of the judgment will need to be explored. Does the judgment mean that any government policy decision with a substantial affect on a market can be challenged under national competition rules? Is the case confined to government policy decisions that favour a government-owned entity? What nexus is required between the policy decision-makers and the operational unit for the former to be considered an undertaking? More generally, what basis is there for treating national competition rules as superior to other national laws?

The Panda judgment reflected the decision by two of the leading private collectors of household waste in the Dublin Region (i.e. the four Dublin local authority areas are treated as a single geographical market), Greenstar Limited (“Greenstar”) and Nurendale Limited, trading as Panda Waste Services (“Panda”), to bring separate judicial review proceedings against the Variation of the local authorities in the Dublin Region. The grounds for the judicial review can be divided into two: competition law; and, administrative law matters. The latter set refers to issues such as bias via pre-judgment and lack of fair procedures. This paper concentrates on the competition law aspects of the judicial review.

Greenstar and Panda argued not only that the Variation breached Sections 4 and 5 of the Competition Act, but also the corresponding Articles of the EC Treaty,

81 and 82, respectively. However, since the High Court decided that there was no appreciable effect on trade between Member States, there could be no breach of Articles 81, 82 and/or 86. Nevertheless, as we shall see below, the High Court drew on European case law in deciding the issue of whether or not the local authorities were subject to competition law.

The High Court concluded that the judicial review in the Greenstar and Panda legal proceedings was “concerned with the same overall factual and legal situation.” The Panda case was heard first. The High Court felt that the “material conclusions as to fact and law” reached in respect of that case were “equally applicable in ... [the Greenstar] case and apply *mutatis mutandis*.”⁸ There was no separate judgment in the Greenstar case with respect to competition law. Hence reference will be made, apart from a few highlighted exceptions, to the Panda judgment only.

The High Court found that the Variation proposed by the four Dublin local authorities breached competition law because:⁹

1. The local authorities are undertakings for the purposes of the Competition Act, 2002 (‘the Competition Act’);
2. Household waste collection services in the Dublin Region are the relevant product and geographic markets, respectively;
3. The Variation is an agreement between undertakings or a concerted practice within the meaning of Section 4 of the Competition Act;
4. There is no objective justification which would save the Variation under Section 4(5) of the Competition Act;
5. The local authorities have therefore breached Section 4 of the Competition Act;
6. The local authorities are dominant in each of their respective areas and collectively dominant in the Dublin Region in the market for the collection of household waste;

⁸ The High Court judgment, *Greenstar and Dublin City Council, Dun Laoghaire/Rathdown County Council, Fingal County Council, and South Dublin County Council* [2009] IHEC 589 (hereinafter referred to as the Greenstar judgment). The judgment was delivered by Mr Justice William M McKechine on 21 December 2008. The two quotes in the paragraph are taken from paragraph 1 of the Greenstar judgment.

⁹ For the complete set of findings and conclusions see High Court judgment, [193]. The text is drawn largely from the wording in this paragraph, with the exception of the determination of the relevant product and geographic market definition which can be found in [74] and [77], respectively.

7. The local authorities have abused their dominant position because the Variation:
 - a. is an agreement or concerted practice in breach of Section 4 of the Competition Act; or
 - b. would substantially influence the structure of the market to the detriment of competition; or
 - c. would significantly strengthen the position of the local authorities on the market; and,
8. The Variation is not saved by virtue of any consideration of efficiencies or objective justification under Section 5 of the Competition Act;

By any reckoning this is a comprehensive set of findings that the Variation is anti-competitive.

In this paper the High Court judgment is carefully reviewed. A number of the High Court's findings are questioned. First, in deciding the issue of whether or not the local authorities are subject to competition law when they exercise their regulatory functions in making the Variation, the High Court judgment is, it is respectfully suggested, based on an incomplete application of recent European case law. The case law cited is instead considered to be more consistent with the position that the legal basis of the Variation involves the exercise of powers typical of a public authority and hence not subject to the Competition Act.

Second, the High Court judgment defines the relevant geographic market as the Dublin Region, while the economic expert opinions prepared for Panda and the local authorities suggest that the areas covered by each local authority constitute separate geographic markets. No explanation is offered by the High Court judgment as to why this obvious alternative geographic market definition is not appropriate. The High Court judgment when evaluating single firm dominance considers each local authority area to be a separate relevant geographic market, but when considering collective dominance the relevant geographic market is the Dublin Region. It is difficult to understand this approach. It may be that the High Court has decided to employ a different geographic market definition depending on the activity: for household waste collection it is the local authority areas; for the making of the Variation it is the Dublin Region. However, even if this is the case it is not clear on what economic or legal basis it is grounded.

Third, and most crucially, the finding that moving from competition-in-the market or the status quo to competition-for-the-market is anticompetitive is grounded on a questionable characterisation of competitive tendering. The High Court judgment is based on the view that competitive tendering results in the local authority's awarding the contract to a single operator, which freed from any threat of entry or competition, proceeds to act as an unconstrained monopolist and raise prices accordingly. No evidence is cited in the High Court judgment to substantiate this position. Indeed, the evidence points the other way: competitive tendering as envisaged under the Variation is, for an appropriate market at least, overall pro-competitive. There are similar questions in the reasoning with respect to the findings that the Variation is an abuse of a dominant position.

The rest of the paper is divided into seven sections. Section B describes the Variation, particularly its legal context, in more detail. Section C addresses the issue of whether or not the local authorities in exercising regulatory functions under the Waste Management Acts, 1996-2007 ("WMA") in making the Variation are undertakings and hence subject to competition law. Section D considers the issue of market definition. The next three sections deal with whether or not the Variation breaches competition law by reference to whether it is an anti-competitive agreement (Section E) or whether the local authorities are dominant – both individually and collectively (Section F) and whether or not there is an abuse of a dominant position (Section G). The paper is completed with several conclusions and observations in Section H.

B. The Variation

The Variation was an amendment or change in the Waste Management Plan for the Dublin Region 2005-2010 ("the Plan"). The Variation concerned the structure and organisation of the way in which household waste is collected from single dwelling households, other than those in purpose built apartment blocks. Prior to the Variation in three of the four Dublin local authority areas a local authority operator and one or more private operators competed to supply household waste collection services to individual households: competition-in-the-market or side-by-side competition.¹⁰

¹⁰ For details of the pattern of entry see Table 2 and footnote 63 below.

The legal basis of the Variation was the WMA.¹¹ This in turn implemented various European Union Directives on waste, including the Waste Framework Directive, the Waste Packaging Directive, the Landfill Directive and the Waste Incineration Directive.¹² The WMA provided that elected local authorities were responsible for management of waste collection¹³ and disposal within their local areas. In particular, such local authorities were required, either acting alone or jointly with neighbouring local authorities, to adopt a Waste Management Plan (“WMP”) for commercial and residential waste. In the Dublin Region the four local authorities came together for these purposes, nominating “Dublin City Council to act as regulator and lead authority on their behalf.”¹⁴

The Variation, made on 3 March 2008, proposed to radically change the market structure by making provision for a single operator to collect households waste. More specifically,

[T]he Variation provides for the insertion into the Plan of specific objectives that the collection of household waste from single dwelling households ... will be carried out in designated areas by a single operator. The single operator shall either be a Dublin Local Authority or a successful tenderer under a public tendering process (which may be on a geographic or area basis).¹⁵

The Variation left open whether the single operator was to be selected by competitive tender or whether the collection waste was to be reserved for the incumbent local authority operator.¹⁶

¹¹ The procedure and legislative background to the Variation is set out in High Court judgment, [7–31]. For the policy background on waste see Department of the Environment, Heritage and Local Government, *Waste Management: Changing Our Ways. A Policy Statement*. (Dublin: 1998), and Department of the Environment and Local Government, *Waste Management: Taking Stock and Moving Forward* (Dublin: 2004).

¹² However, Ireland was taken to the ECJ by the Commission for not complying with Directive 75/442/EEC, as amended. See ECJ, *Commission of the European Communities v. Ireland*, Case C-494/01, 26 April 2005. The Court was critical of the lax attitude towards illegal dumping of waste and lack of punishment. For example, it states at paragraph 129, “[A]s regards the handling of waste by private operators, the Court holds that ... a number of Irish local authorities have displayed tolerance towards unauthorised operations relating to significant quantities of waste in numerous places in Ireland, often over very long periods, failing to take appropriate measures to ensure that such operations ceased and were effectively punished and to prevent their recurrence.”

¹³ Unless there was an adequate waste collection service.

¹⁴ *Ibid*, [7].

¹⁵ Dublin City et al, *Variation to the Waste Management Plan for the Dublin Region 2005-2010*, (Dublin, 2008). Hereinafter referred to Dublin, *Variation*.

¹⁶ Since the two methods of designating the single operator are severable, the High Court could have concluded that one method of designation breached competition law, but the other did not. However, the High Court judgment did not consider such an approach, treating both options as having the same result – the reservation of the household waste collection market to a single operator, irrespective of

The local authorities considered the Variation justified for purposes of “ ... encouraging and supporting the recovery of waste and the prevention of environmental pollution.”¹⁷ The local authorities considered that a single operator model would be more environmentally sustainable than multiple refuse collection vehicles servicing the same route. In addition, the local authorities considered that the Variation would prevent ‘cherry picking’ of premium high density routes, leaving low income and less cost effective areas underserved and thereby threaten the local authorities ability to fulfil their public service obligations to households in those areas, while also increasing the likelihood of illegal tipping, backyard burning and other environmental problems.¹⁸

C. Are the Local Authorities Undertakings When Exercising Their Regulatory Functions Under the Waste Management Acts 1996-2007?

Competition law applies only to undertakings. Hence the definition of an undertaking is of critical importance in the application of competition law. The High Court judgment deals with the meaning of the term at some length,¹⁹ before concluding that the local authorities are undertakings for the purposes of competition law, not only because they are involved in the collection of household waste, but also because the Variation is of an economic nature. While the former inference is consistent with existing case law, it is not obvious that a similar conclusion can be reached in respect of the latter inference.

1. Is Restructuring the Market by Local Authorities an Activity of an Economic Nature?

An undertaking is defined in the Competition Act as:

which of the two options under the Variation were used to select the single operator. This paper argues that use of tendering does not breach competition law.

¹⁷ Dublin, *Variation*.

¹⁸ The High Court was not persuaded by these arguments. See High Court judgment, [151].

¹⁹ High Court judgment, [35 to 64].

A person being an individual, a body corporate or an unincorporated body of persons engaged for gain in the production, supply or distribution of goods or the provision of a service.

The High Court judgment concludes that the local authorities are undertakings as providers of a household waste collection service to single dwelling households in their respective local authority areas.²⁰ This reflects the fact that the local authorities charge households for the waste collection service and that the local authorities compete with private operators in the supply of this service.

The fact that local authorities also regulate waste collection and other aspects of municipal waste collection and disposal under the WMA does not alter the fact that the local authorities are undertakings for the purposes of providing the service of household waste collection. It is settled case law that an entity such as a local authority can be an undertaking for some purposes and hence subject to competition law, and a regulatory or administrative body for other purposes and not subject to competition law in the exercise of those powers.

In this respect the High Court judgment quotes the Advocate General's opinion in *Fenin*,

[E]ach activity carried on by the entity falls to be analysed separately, it is [therefore] quite possible for an entity to be treated as an undertaking as regards some of its activities, while others fall outside the sphere of competition law.²¹

There are several other citations in the High Court judgment of a similar nature.²²

The High Court then considers whether the exercise of the local authority's regulatory powers with respect to the Variation under the WMA is an economic activity:

62. In addition, however, they [i.e. the local authorities] also have statutory powers which they have exercised to make and thereafter vary the WMP 2005-2010 [i.e. Plan]. The Variation of 3rd March 2008 is, subject to legal challenge, now part of the Plan. The Variation seeks to alter the competitive environment on the household waste collection market. In such circumstances where the regulatory acts affect the same activity, and the impact on private operators, on the same market where the respondents commercially engage, the

²⁰ *Ibid*, [61].

²¹ High Court judgment, [42].

²² See, for example, *ibid*, [54, 58-59]. This is summarised in *ibid*, [60(iii)].

regulatory role performed will not preclude them from being found to be undertakings. This conclusion is consistent with *MOTOE* and *Ryanair*. Were this not the case, the State or other public bodies would be free to engage in all forms of regulatory abuses for commercial gain. The fact that their commercial actions are carried out under statutory powers or obligations, or done for some social or public benefit, and ostensibly at a loss, does not prevent them from being undertakings.

63. While I accept that the Variation is a regulatory function, the nature of this regulation may be examined (see *Wouters*). As is evident, the decision is aimed at directly affecting the market for domestic waste collection. In those circumstances it is clear that the Variation is of an economic, rather than administrative, nature. It seeks to substantially reorder the market as it currently exists. Were the respondents exclusively involved in the regulation of the waste market, e.g. merely imposing charges or conditions on licences and/or overseeing the market for compliance, they would not be undertakings. It is true that the waste charges themselves were introduced in the context of EU law and in order to ensure the ‘polluter pays’ principle. Nonetheless, the fact that an action is prescribed by law will not prevent it being an economic activity.

2. A Bridge Too Far: The Exercise of Regulatory Powers by the Local Authorities Should Not be Subject to the Competition Act

The High Court judgment is undoubtedly correct to conclude that the local authorities are undertakings for the purposes of household waste collection. For example, each local authority’s waste collection service competes with private sector operators in their respective area. The household waste collection service of the local authorities is provided for a price to the householder that is not merely an administrative fee. The difficulty in the High Court judgment centres on the relevance of the fact that each of the local authorities also exercises a regulatory function to make the Variation. The High Court judgment’s reasoning on this issue is set out in the two paragraphs reproduced above. Here the High Court determines that the Variation, although made pursuant to regulatory power of the local authorities, is also economic in nature and hence subject to competition law. The Variation, for which the legal basis is the WMA, directly affects the market for household waste collection. In contrast, the exercise of lesser regulatory powers such as imposing conditions on licences are administrative not economic in nature and hence not subject to competition law.

There are, however, a number of problems with classifying the making of the Variation as economic in nature and hence subject to competition law. The High Court judgment cites three judicial decisions of the Court of First Instance (“CFI”) and ECJ in coming to its conclusion: *MOTOE*, *Ryanair*, and *Wouters*²³ Of the three cases, *MOTOE* is undoubtedly most heavily relied upon by the High Court in support of its characterisation of the Variation as an economic activity. We consider each of these in turn.²⁴ In our view these CFI and ECJ judgments do not provide support for the finding that the Variation is economic in nature. Rather they provide support for the view that the Variation is the exercise of a function of a public authority and hence not subject to the Competition Act.

First, in *MOTOE*, the Automobile and Touring Club of Greece (“ELPA”) organises motorcycling events as well as sponsorship, advertising and insurance contracts. These activities were classified as economic activity by the ECJ. However, ELPA also had the power, under Greek law, to approve authorisations for motorcycling events, which could compete with its own events. The power existed by virtue of the fact that before the relevant Minister could approve such authorisations the consent of ELPA was required. The Greek Motorcycling Federation (“*MOTOE*”), sought consent of the relevant Minister to hold certain motorcycling events, but consent was refused by ELPA. *MOTOE* complained that this breached Articles 82 and 86(1) of the EC Treaty.

The ECJ concluded that the authorisation/consent powers of ELPA stem “from an act of public authority, namely Article 49 of the Greek Road Traffic Code, but it cannot be classified as an economic activity, as the Advocate General observed at point 100 of her opinion.”²⁵ Earlier in the judgment the ECJ had observed that the fact that the exercise of this power “does not prevent its being considered an undertaking for the purposes of Community competition law so far as concerns its economic activities”²⁶ in organising motorcycle events as well as sponsorship etc. The High

²³ These are the judgments referred to in paragraphs 62 and 63 of the High Court judgment, reproduced above.

²⁴ ECJ, *Motosykletistiki Osmospondia Ellados NPID (MOTOE) v Elliniko Dimosio*, Case C-49/07, 1 July 2008; ECJ, *Ryanair Ltd v Commission for European Communities supported by Association of European Airlines*, Case T-196/04, 17 December 2008; and, ECJ, in *Wouters v Algemene Raad van de Nederlandse Orde van Advocaten (Raad van de Balles van de Europese Gemeenschap intervenient)* Case C-309/99, 19 February 2002. These judgments will be referred to as: *MOTOE*, *Ryanair*, and *Wouters*, respectively.

²⁵ *MOTOE*, [46].

²⁶ *MOTOE*, [26].

Court judgment citing several paragraphs from Advocate General Kokott’s Opinion in *MOTOE*, recognises these distinctions when it concludes “[i]t is therefore clear from *MOTOE* that where a body, which has public powers operates on the same or a connected market, and where, if its actions on the market are sufficient to render it an undertaking, the fact that it exercises public powers, which could be described as non-economic, will not deprive it of the status of an undertaking.”²⁷

Nevertheless, the key distinction made by the ECJ (and the Advocate General) in the treatment of the exercise of public powers and the provision of economic activities under EU competition law is given slender, if any, weight by the High Court. If it had then arguably the local authorities would not have been considered undertakings for the purposes of the making the Variation. In *MOTOE*, the Court explicitly affirmed that “... activities which fall within the exercise of public powers are not of an economic nature justifying the application of the Treaty rules of competition.”²⁸ Further, in *MOTOE*, the ECJ explicitly stated that “... it is necessary to distinguish the participation of a legal person such as ELPA in the decision-making process of the public authorities from the economic activities engaged in by that same legal person.”²⁹ In other words, *MOTOE* clearly and deliberately affirms that the exercise of public powers remains a non-economic activity even where those powers are exercised by an entity that, in respect of other activities, engages in economic activities.³⁰

In citing *MOTOE* in support of its position, little or no recognition is given by the High Court to the central importance of Article 86 to the ECJ’s judgment.³¹ This is critical. The national rule at issue in *MOTOE* – that conferred on EPLA holds that a national rule conferring on a legal entity that competes in a downstream market

²⁷ High Court judgment, [59]. In support of this conclusion, paragraphs 29, 36 – 37, and 49 – 50 of the Advocate General’s Opinion in Kokott are cited.

²⁸ *MOTOE*, [24].

²⁹ *MOTOE*, [26].

³⁰ It is true, however, that the ECJ does explicit – and perhaps misleadingly – find that “... a legal person such as ELPA must be considered an undertaking for the purposes of Community competition law” (at para. 29). It is submitted, however, that this finding relates only to EPLA when engaged in activities clearly identified as economic activities in earlier parts of the ECJ’s judgment (such as the organisation and commercial exploitation of motorcycling events). This seems clear from paragraph 26 of the ECJ’s judgment, cited above, where the ECJ emphasises the importance of distinguishing ELPA’s “participation in the decision-making process of public authorities” from its economic activities for purposes of assessing ELPA’s status as an “undertaking.”

³¹ Article 86(1) provides that “[I]n the case of public undertakings and undertakings to which Member States grant special or exclusive rights, Member States shall neither enact nor maintain in force any measure contrary to the rules contained in this Treaty, in particular to those rules provided for in Article 12 and Articles 81 to 89.”

regulatory authority to control market entry is precluded by Article 82 and Article 86. Absent Article 86, there would be no basis in EU law to challenge the exercise of public powers as violations of Articles 81 and 82. Unlike Article 81 and 82, Article 86(1) is addressed to and imposes obligations on Member States (including manifestations of the State such as rule-making public bodies). In other words, the legal handle pursuant to which the ECJ can review MOTOE's exercise of its public powers is Article 86(1), and not Articles 81 and 82.

Second, in *Ryanair*, the Walloon Region was considered to carry on an economic activity, despite the fact that it was a public body, since it is engaged in the ownership and management of airport facilities “in return for payment of a fee the amount of which is freely fixed by that authority.”³² Furthermore, the CFI rejected the view that because a consultative committee is required to give its views on proposed airport charges that this means that the setting of such charges is that of a public authority.³³ In *Ryanair*, the public body had no regulatory function; it only provided services – access to airport facilities - considered to be economic activities. In contrast, the local authorities in the Dublin Region did, as the High Court judgment admits, have a regulatory function, which according to *Ryanair*, would be the act of a public authority and not considered as an economic activity. However, the local authorities would be undertakings for the purpose of household waste collection.

Third, *Wouters* is cited in the High Court judgment as support for examining the nature of a regulatory function. According to *Wouters*,

... the case-law of the Court, the Treaty rules on competition do not apply to activity which, by its nature, its aim and the rules to which it is subject does not belong in the sphere of economic activity ... or which is connected with the exercise of the powers of a public authority.³⁴

In other words, if the Variation is connected with the exercise of the powers of a public authority then it is not subject to competition law.

The Variation is made under the discretionary powers granted to the local authorities under section 22(4) of the Waste Management Act, 1996.³⁵ Section 22 of this statute is concerned with the preparation of waste management plans. Such plans

³² *Ryanair*, [91]

³³ *Ibid*, [93, 94]

³⁴ *Wouters*, [57]

³⁵ High Court judgment, [4]. The Waste Management Act, 1996 can be accessed at: <http://www.irishstatutebook.ie/1996/en/act/pub/0010/index.html>. Accessed 12 April 2010.

shall in respect of non-hazardous waste, contain goals to, for example, “prevent or minimise the production or harmful nature of waste” or “to ensure that in the context of waste disposal that regard is had to the need to give effect to the polluter pays principle.” These are powers that are normally exercised by a public authority rather than a private actor.

Even if one were to abstract from the underlying legal basis for the Variation and look at other jurisdictions, then the organisation of the structure of the market for household waste collection is typically the responsibility of a public authority. In the UK, for example, some years ago the view was taken that local authority publicly provided monopoly household waste collection services were inefficient and that competitive tendering should be introduced so as to lower costs and provide a more efficient service. Legislation was passed and the market structure was reorganised. The publicly run service providers were allowed to compete on an arm’s length basis with the private sector competitors for the contract to collect household waste in a particular area.³⁶

The High Court in coming to the finding that the local authorities are undertakings in making the Variation is motivated, in part at least, by an understandable concern that the local authorities are both regulators and providers of the household waste collection and that this might give rise to conflicts and concerns. The High Court judgment argues that were the local authorities not undertakings in discharging their regulatory functions,

... the State or other public bodies would be free to engage in all forms of regulatory abuses for commercial gain. The fact that their commercial actions are carried out under statutory powers or obligations, or done for some social or public benefit, and ostensibly at a loss, does not prevent them from being undertakings.³⁷

However, the Competition Act is not the tool for rectifying that problem, while Article 86 in conjunction with either Article 81 or 82 is not applicable, since the High Court finds that there is no effect on trade between Members States. Administrative law would seem a more appropriate route to address such issues. Indeed, the High Court judgment finds that the local authorities erred since the Variation was *ultra*

³⁶ Reference may be found in Competition Authority. *Alleged Excessive Pricing by Greenstar Recycling Holdings Limited in the Provision of Household Waste Collection Services in Northeast Wicklow*. Enforcement Decision Series No. E/05/002. (Dublin: 2002), Box 1, pp. 42-43. This decision is available at: www.tca.ie and will be referred to as the Greenstar Decision.

³⁷ High Court judgment, [62].

vires the regulatory powers under the WMA while there were also issues relating to bias.³⁸

In sum, it would appear the judgment is correct that local authorities are undertakings for the purposes of household waste collection. However, the High Court judgment's conclusion that the regulatory powers of the local authorities under the WMA and the Plan are economic and hence subject to competition law would not appear consistent with recent case law.

D. Market Definition: Dublin Region vs. Four Local Authority Areas

The High Court judgment found that the Dublin Region was the relevant geographic market. It is argued that the preponderance of the evidence suggests that the relevant geographic market is not the Dublin Region, but rather that each of the four local authority areas constitute four separate relevant geographic markets.

1. Product Market Definition

According to the High Court, “[T]here was no dispute ... as to the relevant product/service market; that is the market for the provision of household waste collection services, excluding apartment complexes.”³⁹ There are good grounds for agreeing with this view. The Irish Competition Authority, for example, in an extensive analysis of demand and supply side substitution in the provision of household waste collection services in northeast Wicklow, concluded that the collection of household waste is a separate product market.⁴⁰

2. Geographic Market Definition

In terms of the relevant geographic market, the High Court judgment cites case law to the effect that a separate geographic market exists where all participating firms operate under the same conditions of competition in so far as concerns

³⁸ *Ibid*, [145-192]. As previously stated, this paper does not deal with these issues.

³⁹ High Court judgment, [74].

⁴⁰ Greenstar Decision, [2.5 to 2.24].

household waste collection. It is not necessary that the conditions be perfectly homogenous.⁴¹ Based on this case law the High Court judgment concludes:

77. The question in this case is therefore is, within what area are the terms of competition sufficiently homogeneous with regards to the provision of household waste collection services? This question is in fact easily answered. The WMP [Waste Management Plan] applies to all four ... [local authorities]. The conditions of competition in these areas are therefore homogeneous. The Variation too applies to what one could call the greater Dublin area. This is therefore the [relevant] geographic market ...

Thus the relevant geographic market is the Dublin Region, rather than each of its four constituent local authority areas.

The High Court judgment does not, in this context, discuss the economic expert reports prepared for either Panda or the local authorities, nor did it consider whether each of the local authority areas were separate geographic markets.⁴² Had it done so the High Court would have found that there was little or no support from either of these reports for Dublin Region as being the relevant geographic market. Indeed, a review of these reports suggests that each local authority area is a separate relevant geographic market.

Helen Jenkins for Panda argues that regulatory factors are likely to lead to each of the four local authorities constituting a separate market.^{43,44} Although there is an overall WMP, each local authority issues separate waste collection permits which are required in order to collect household waste. Each local authority sets separate by laws which “affect the manner in which waste collection can be undertaken.”⁴⁵ Furthermore, Jenkins points out that there is no convergence in price between the four local authorities, again suggestive of separate local markets.⁴⁶ Francis O’Toole for

⁴¹ High Court judgment, [74-75].

⁴² The fact that the Variation applies to all four local authority areas does not mean that market conditions are homogeneous across all four areas, since each local authority might administer the Variation in a different way. For example, one local authority might reserve the market for itself, while another might competitively tender as the method of selecting the single operator.

⁴³ Helen Jenkins, *Economic Analysis of the Impact of Competition in Household Waste Collection in the Dublin Region*, Expert Report Prepared for Panda Waste Services. (Oxford, Oxera Consulting Ltd, 19 August 2008). Hereinafter referred to as the Jenkins Report.

⁴⁴ It should be noted that the relevant geographic market need not coincide with the local authority’s geographic remit. See, for example, the discussion of geographic market definition concerning household waste collection in Wicklow in Greenstar Decision.

⁴⁵ Jenkins Report [4.18].

⁴⁶ *Ibid*, [4.20]

Dublin City Council leaves the issue of geographic market definition open,⁴⁷ but from his review of the literature on the availability of scale economies – one indicator of that might be used to assess the appropriate market definition - in household waste collection is not inconsistent with each of the local authority areas forming a separate geographic market.⁴⁸

E. Did the Variation Breach Section 4(1) of the Competition Act 2002?

The High Court judgment found that the Variation breached Section 4(1) of the Competition Act. The Variation according to the High Court judgment is an agreement between undertakings that has both as its object and effect the prevention, restriction or distortion of competition within the State. However, there are grounds for arguing that the High Court judgment relied on a false or incomplete characterisation of the competitive tendering process by which local authorities could award the tender. Indeed, it would appear that competitive tendering is pro- not anti-competitive and thus there is no breach of Section 4(1).⁴⁹

1. Breaking New Ground: Adding to the List of By Object Breaches of Section 4(1)

In order to sustain a breach of Section 4(1) of the Competition Act:

- The parties to the Variation must be undertakings;
- The relevant product and geographic market must be defined;
- The Variation must be an agreement or concerted practice; and,

⁴⁷ Francis O'Toole, *Household Waste Collection: An Economics of Competition Policy Perspective*. An Expert Report Prepared for Dublin City Council. (Dublin, Trinity College, September 2007). Hereinafter referred to as the O'Toole Report.

⁴⁸ The O'Toole Report finds that significant economies of scale in household waste collection are exhausted at between 20,000 and 50,000 inhabitants. If it is assumed that beyond 20,000/50,000 persons there are no significant economies of scale – average costs are constant – then it is possible, given the number of households in each of the four local authority areas, that they form separate markets. Certainly there is no support in the O'Toole Report for the view that the relevant geographic market is the Dublin Region.

⁴⁹ In contrast, the judge would have been on stronger ground if he had found that the other option under the Variation – the local authority reserving household collection to itself – was anticompetitive. However, the High Court judgment does not distinguish between the two options in finding that the Variation is an anticompetitive agreement.

- The object and/or effect of the Variation must be to prevent, restrict or distort competition within the State.

For reasons set out in Section C above the High Court took the view that the parties to the Variation – the local authorities - were undertakings not only in terms of household waste collection but also when discharging their regulatory functions under the WMA with respect to the Variation. Furthermore as set out in Section D above, the relevant market is, according to the High Court judgment, household waste collection in the Dublin Region. The High Court also concluded that the Variation was an agreement between undertakings.⁵⁰

The High Court judgment deals with the issue of whether or not the Variation breaches Section 4(1) of the Competition Act in a single paragraph:

81. The next question is whether the agreement ... has as its *'object or effect the prevention, restriction or distortion of competition.'* In this regard it must be stated firstly, that any question of the Variation creating more favourable conditions for competition, albeit competition-for-the-market, as opposed to competition-in-the-market, is irrelevant. That is a justification argument which is more properly dealt with under s 4(5) of CA 2002. The real question is: does the Variation, by its object or effect, prevent, restrict or distort competition? The Variation seeks to remove private operators from a market in which there is currently competition, and instead replace it with a system whereby either the local authority, or a successful tenderer (as the former decides), will be the sole collector within in the entire region or within any single or multiple sections that the respondents should so designate. Its object is thus the removal of operators from the market and its effect will be likewise. That this prevents, restricts or distorts competition is patent. It would cause the market to move from many multiple competing undertakings to only a few, or even perhaps one, with no or limited competition between them. It would foreclose competition and prevent entry. It is therefore clear that the Variation has both its object and effect the restriction of competition contrary to s. 4(1) CA 2002 (emphasis in original).

Given this finding the judgment then considers whether the Variation meets the conditions in Section 4(5) of the Competition Act. In coming to the finding that the Variation is a breach of Section 4(1): no case law is cited; none of the arguments of the parties to the proceedings are presented and discussed; and no attempt is made to

⁵⁰ High Court judgment, [79-80].

specify the way in the competitive tendering model underpins the finding of a breach of Section 4(1). Nor is attempt made to reconcile how competition law trumped Irish environmental legislation. Again, the behaviour of the local authorities in collaborating in making the Plan was wholly in line with Irish environmental law. It was not disputed that the local authorities have the powers to create and vary the Plan.⁵¹

2. Is Characterising Competitive Tendering as Unconstrained Monopoly Pricing Appropriate?

In competition law a sharp distinction may be drawn between agreements that by their very nature restrict competition, such as price fixing or market sharing, and agreements that may restrict competition. In the former cases the *object* of the agreement is self evidently and obviously anticompetitive. There is no need to conduct an analysis of the agreement, beyond establishing that it does indeed fix prices or restricts output. There are, however, only a limited number of agreements that fall into the object box or category. These are not only set out in the Section 4(1) of the Competition Act and Article 81(1), but also developed through case law.⁵²

In contrast, there are agreements where it is not obvious that the agreement restricts competition, it may or may not depending on the facts of the situation. For example, information agreements fall into this box. In these cases the *effects* of the agreement have to be analysed to determine whether or not the agreement restricts competition. It appears that there is no case law where an agreement for deciding to change the way that a market is structured and organised from competition-in-the-market to competition-for-the-market has been found in breach by object and/or effect of Section 4(1) and/or Article 81(1). The High Court judgment is breaking new ground.

Agreements under Section 4(1) are prohibited where they prevent, restrict, or distort competition. As the Supreme Court has remarked in the Irish League of Credit Unions case the whole purpose of competition law is consumer welfare.⁵³ Thus the

⁵¹ *Ibid*, [29]

⁵² See R. Whish. *Competition Law*. 6th Edition. (Oxford: OUP, 2009) pp. 111-122 for a discussion of the difference between the object and the effect box. This source will be referred to as Whish hereinafter.

⁵³ *Competition Authority v O'Regan & ors* [2007] IESC 22 at paragraph 106. The may be accessed at: <http://www.courts.ie/Judgments.nsf/bce24a8184816f1580256ef30048ca50/c693841275fd3e1f802572d50035d296?OpenDocument>.

issue to be addressed is how a particular agreement makes consumers worse off. Typically agreements between firms lower consumer welfare by restricting output and raising price, but the agreement may also make consumers worse off by limiting innovation, restricting choice and so on.

In coming to a view as to whether or not an agreement is in breach of Section 4(1) two states of the world are being, implicitly at least, compared: the world with and the world without the agreement.⁵⁴ Let us consider a situation where the agreement has as yet to be implemented. The world without the agreement could then be proxied by the status quo, but taking into account any changes that might be reasonably expected in the near term, absent the agreement. The world with the agreement would then have to be predicted or forecast based on the nature of the agreement and the market facts, together with a view as to how competition would be affected by the agreement.

In the world of the allegedly restrictive agreement, the Variation, we have household waste collection services provided either by (a) the local authority itself or (b) a firm selected by the local through competitive tendering. In other words, under either (a) or (b) there is only one operator in the market. In the latter case, (b), based on the bids submitted by the would-be operators of the household waste collection service, the local authority awards the contract. This is competition-for-the-market.

We consider two counterfactuals concerning how competition-for-the-market might be structured. One is pro-competitive and results in no breach of Section 4(1). This is the competitive solution. The second is anti-competitive and results in a breach of Section 4(1). This solution allows an unconstrained monopolist to price accordingly. We then consider which counterfactual most appropriately characterises the Variation proposed by the local authorities.

As noted above the High Court judgment states that

81. The next question is whether the agreement ... has as its *'object or effect the prevention, restriction or distortion of competition.'* In this regard it must be stated firstly, that any question of the Variation creating more favourable conditions for competition, albeit competition-for-the-market, as opposed to competition-in-the-market, is irrelevant. That is a justification argument which is more properly dealt with under s 4(5) of CA 2002. The real question is:

⁵⁴ For example, see Whish (p. 124) and the Opinion of Advocate General Leger in *Wouters v Algemene Raad van de Nederlandse Orde van Advocaten (Raad van de Balles van de Europese Gemeenschap interevening)* CaseC-309/99, 10 July 2001.

does the Variation, by its object or effect, prevent, restrict or distort competition?

It is submitted that in evaluating whether or not competition-for-the-market is anti-competitive, attention has to be paid to whether or not competition will be restricted compared to the situation where the market is ‘organised’ as competition-in-the-market. Recall that this is the first time that such an agreement has been found to breach competition law and so some discussion of whether competition is adversely affected and how might reasonably be expected.

In the BIDS case, in which the ECJ added agreements on capacity reduction to the by object box or category, there was considerable attention devoted to the context of the agreement before the ECJ came to a conclusion. As the Advocate General stated in her opinion:

As has already been mentioned, in order to assess whether an agreement has as its object the restriction of competition, account must be taken of not only its content, but also its legal and economic context. This requirement must be taken seriously.⁵⁵

This is repeated by the ECJ when it comments that when examining an agreement there is a need to take into account the “economic context in which it is applied.”⁵⁶ It is therefore important to consider that context in evaluating the Variation although not of course to the extent of conducting the balancing exercise that is required in the analysis of Section 4(5) and/or Article 81(3).

(a) *Counterfactual #1: The Competitive Solution*

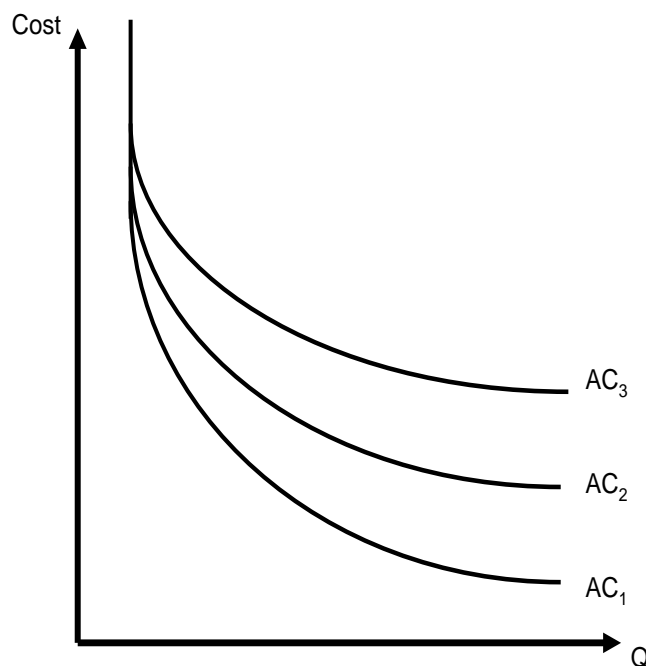
Under this scenario the local authority issues a tender in which the successful bidder is the sole provider of household waste collection services for a given local authority area, for a given period, and for a given set of services options. The period selected is long enough to ensure that the successful bidder is able to recoup its costs. Selecting the successful bidder can be thought of as a two stage process. Under the first stage the bidders are evaluated under a series of headings concerned with their technical and financial competence. In other words, are they fit for purpose? The second stage consists of evaluating the price of the bid. Typically the lowest priced

⁵⁵ Opinion of Advocate General Trstenjak in *The Competition Authority v Beef Development Society Ltd and Barry Brothers (Carrigmore) Meats Ltd*, Case C-209/07, 4 September 2008, at paragraph 50.

⁵⁶ ECJ, *The Competition Authority v Beef Development Society Ltd and Barry Brothers (Carrigmore) Meats Ltd*, Case C-209/07, 20 November 2008, at paragraph 15.

bidder is awarded the contract. This price – or schedule of prices depending on the nature of the pricing schedule - then forms the basis of the charge to the household for waste collection. The successful bidder is subject to certain performance standards, failure to meet them can result in the contract being taken away from the successful bidder.

Figure 1
Economies of Scale and Density in Household Waste Collection: An Illustrative Example.



AC_1 = average cost of household waste collection if the collection truck stops at *every* house on a street
 AC_2 = average cost of household waste collection if the collection truck stops at *every second* house on a street
 AC_3 = average cost of household waste collection if the collection truck stops at *every third* house on a street

Source: See text.

Many firms either on their own or through buying groups procure goods and services through a tendering process. The fact that they do suggests that it is more efficient and gives better value for money than the alternatives. Typically these procurement decisions are left to the discretion of individual firms with little or no

involvement of competition law. Household waste collection services are no different. Competition-for-the-market is the norm in most developed countries.⁵⁷ Evidence was laid before the High Court found that as of 2008, “[T]hroughout the ten European countries waste is exclusively collected either directly by the municipality or under contract, after award of a tender, by private operator.”⁵⁸ Furthermore evidence was opened to the High Court that suggested that household waste collection charges are lower when awarded by a competitive tendering procedure compared to competition-in-the-market.⁵⁹

These findings reflect the fact that there are both economies of scale and economies of density in household waste collection. Economies of scale refer to the fact that as output increases costs fall due to, for example, specialisation, better purchasing, spreading fixed costs over a larger output. In Figure 1 above all three cost curves show economies of scale as costs fall with output expanding. However, let us consider the situation where households along a given street are served by 1 firm (AC_1), two firms (AC_2) and three firms (AC_3). The average cost curves shifts upwards because of economies of density. If the collection truck goes to every house, as opposed to every other house (AC_2) or every third house (AC_3) then the collection costs rise accordingly because the time spent between lifts is longer, so that for a given cost less will be collected over any given time period. The evidence of expert witnesses for both the local authorities⁶⁰ and Panda⁶¹ is consistent with the view that the economies of density are significant.

In a competitive tendering process where the successful bidder is awarded the contract on the basis of the lowest bid, it would be anticipated that the bid would be made on the basis of AC_1 not AC_3 . Thus we would expect in a properly constituted

⁵⁷ For details see, for example, Greenstar Decision.

⁵⁸ RBB Economics. *Dublin Waste Report: Response to Dr Helen Jenkins' Report*. (London: RBB Economics, October 2008), paragraph 33 and Table 1, p. 10.

⁵⁹ This is consistent with the considerable body of evidence cited the Greenstar Decision.

⁶⁰ High Court judgment, [89]

⁶¹ High Court judgment, [93]. It should be noted that although Panda claims that there are economies of density these would, it argued, not be realised. The reasoning, taken from the High Court judgment is as follows: “... there would be no significant saving by doubling the density of operations of the trucks, since the trucks have limited capacity, and although there would [be] a saving in time per lift (from 1.9 bins per minute to 2.8 bins per minute, by increasing from 50% to 100% of a route) this would not be a sufficient time saving to enable an extra run per day. There would thus, on the basis of Panda’s assessment, be little or no cost savings from more efficient collection in this regard.” However, with efficiencies of this magnitude it is hard to believe that in a competitive tendering process that bidders would not be able to configure their operations so as to take advantage of these economies or that the structure of the bids could not be arranged so as to ensure that the economies were captured.

competitive tender bidders would be able to take advantage of these economies of scale and density in the price of the bid.

(b) *Counterfactual #2: An Unconstrained Monopoly*

Under this counterfactual the local authorities first evaluate the bids on the basis of whether they are fit for purpose. However, in the second stage the contract is awarded in such a way that successful bidder is able to charge the unconstrained monopoly price, confident in the knowledge that no entry will occur and the contract is secure, providing that the collection service is of the quality specified in the tender documents. A variety of criteria could be used to select the successful bidder: random; a beauty contest; or the highest price. An unconstrained monopoly solution would undoubtedly be anticompetitive by object. Nevertheless, it could be argued that the successful bidder would price based on AC_1 not AC_3 and that the price might be lower than in a situation where there is competition-in-the-market. However, this is an issue that is more appropriately dealt with under Section 4(5), rather than Section 4(1).

(c) *Selecting the Relevant Counterfactual*

The issue arises as to which of the above two counterfactuals best represents competitive tendering in the context of the Variation. To answer this question we refer to the February 2008 paper that presents the rationale for the Variation and includes the responses to the submissions received by the local authorities as part of the consultation process prior to making the Variation. This paper, which was prepared by RPS (“the RPS Paper”) for the local authorities was, of course, open to the High Court.⁶² Although the RPS Paper does not define competitive tendering, it does make a number of observations which are consistent with competitive tendering leading to the competitive solution. These are as follows:

- The RPS Paper makes reference to the policy statement which is part of the Plan. One goal is “to deliver a cost-effective and affordable system meeting the ‘polluter pays principle.’”⁶³ This is consistent with competitive tendering leading to a low not a high price.

⁶² RPS, *Uncontrolled Fracturing of the Dublin Household Waste Collection Market*. Environmental & Technical Report Including Responses to Consultation Process. (Dublin: RPS, 2008).

⁶³ *Ibid*, p. 14.

- The RPS Paper stresses the need for low prices in order to reduce fly-tipping, backyard burning and uncollected waste.⁶⁴ High waste charges are seen as a contributory factor exacerbating such behaviour;
- The RPS Paper cites with approval the Competition Authority's *Greenstar Decision* in which competitive tendering is understood to be a situation where the low priced bid wins.⁶⁵
- The RPS Paper refers to the fact that the green bin, which is for newspapers, tin containers and other items, is subject to competitive tendering.⁶⁶ Although not stated this contract was awarded to the lowest priced bidder.

In addition to these facts, all of which point to competitive tendering leading to the competitive price, it does not seem credible that local authorities would award the collection of household waste through a tendering process to a firm and let it charge the monopoly price, given the record of resistance to the introduction of household waste collection charges in Ireland.

The High Court judgment considers, however, that the appropriate counterfactual is that of an unconstrained monopolist. This characterisation is not explicit, but is implicit in that it can be inferred from the paragraph 81 cited above.⁶⁷ The High Court judgment does not provide a description of the competitive tendering

⁶⁴ *Ibid*, p. 16.

⁶⁵ *Ibid*, p. 41.

⁶⁶ *Ibid*, p. 42.

⁶⁷ Later in the judgment it is stated explicitly: "119 ... where there is a public or tendered monopolist, any increase in price will merely be borne by the public, and there will be no constraining force preventing such a situation. Further it will create a situation involving incumbent providers who will be at a significant advantage upon renewal of any contract. There is also the question of what the other competitors are to do in the meantime while they do not have a contract." A number of points can be made about these comments, for which no evidence is adduced. First, incumbency did not seem to benefit DunLaoghaire/Rathdown as the sole public operator of waste collection services prior to the entry of Panda and other private operators, as shown below. Indeed, the DunLaoghaire/Rathdown public operator rapidly lost market share. Second, while incumbency can bestow some important advantages – learning by doing as occurs in aircraft manufacture so that as the volume of output goes up, costs fall in the firm due to, for example, greater familiarity with the production process which may be embodied in the workforce and tacit knowledge which is difficult to codify - it is not clear that these or similar considerations apply in the case of household waste collection. Any tendering process will provide much information to the potential bidders so that they are aware of the expected costs of operation. Indeed, potential bidders will often have experience elsewhere of waste collection and may have innovative methods which give it a comparative advantage. Third, if there were to be a shortage of local bidders, the local authorities in the Dublin Region could structure the tenders so as to be large enough to attract bidders from Northern Ireland, Great Britain and beyond. Recall tendering is the norm for household waste collection elsewhere in the EU so there should be such bidders readily available. Fourth, when the green bin, which is for newspapers, tin containers and other items, tender period expired in the Dublin Region the subsequent successful bidder was not the incumbent. Hence the fears expressed concerning the advantages of incumbency in household waste collection in the High Court judgment would not appear to be valid.

process prior to its finding that competitive tendering is a breach of Section 4(1) by object. Thereby, the High Court judgment seems to ignore the fact that in competition-for-the-market, competition takes place in the bidding process to win the right to supply household services. In return for access to a guaranteed number of households for a defined geographic market for a given time period, the successful operator provides the best price; in contrast in competition-in-the-market operators are constantly competing for new customers and to retain new customers with other operators. Although the operator in competition-for-the-market does not have to compete with other operators, there will nevertheless be contractual conditions concerning service quality which will have to be met or the contract will be terminated and/or penalty clauses invoked.

In sum, the High Court judgment appears to rely on a mischaracterisation of the competitive tendering option under the Variation as an unconstrained monopolist and as result erroneously comes to the view that there is a breach of Section 4(1). The evidence suggests that competitive tendering under the Variation would lead to the competitive solution and it does not breach Section 4(1).

F. Are the Local Authorities Dominant?

The High Court judgment found that the local authorities are dominant. However, in so holding questions arise as to whether the High Court applied its market definition consistently. Furthermore, irrespective of the market definition used, there are grounds for questioning the High Court judgment that the local authorities are dominant. This applies to the findings concerning both single firm and collective dominance.

1. The Dublin Region: No Single Firm Dominance

The High Court judgment defines the relevant geographic market as the Dublin Region. Thus dominance needs to be considered within this geographic market. A first approximation as to whether or not there is dominance is market share. In particular, a threshold of 40% is often used.⁶⁸ Table 1 presents the market shares of the market participants in the Dublin Region as of the summer 2008, where market share is based on the number of households from which waste is collected.

⁶⁸ For details see Whish (pp. 175-178).

The three leading operators are local authorities, while Panda is the leading private operator, ranked fourth overall.

Table 1
Household Waste Collection, Market Shares, Dublin Region,
Summer,^a 2008

	Dublin Region	
Waste Operator	Households (Number)	%
Dublin City Council	125, 157	38.8
South Dublin Council	68,731	21.3
Fingal Council	65,164	20.2
Panda	31,200	9.7
DunLaoghaire/Rathdown Council	26,446	8.2
City Bin	3,500	1.1
Greenstar	2,200	0.7
Total	322,398	100

a. The Jenkins Report is dated 19 August 2008 so it would seem reasonable to assume that it represents events as of the summer of 2008.

Source: Jenkins Report [Table 4.1, p. 25].

No firm reaches the 40% threshold, although Dublin City Council has a market share of 38.8%. However, in considering dominance it is important to examine the distribution of the market shares of the other participants in the market. Both the second and third ranked operators each account for approximately 20% of the market and so are likely to be credible competitors to the market leader. The picture presented in Table 1 is a snapshot in time so attention needs to be paid to the entry of new firms. Here one noticeable development is the entry in November 2006 and rapid growth of Panda with a market share of close to 10% less than two years later. Taken together and assuming that the Dublin Region is the correct geographic market definition, it seems unlikely that any single firm is dominant. Nevertheless, the High Court judgment does, somewhat surprisingly, find single firm dominance.

This apparent paradox is ‘resolved’ (or further confused) because the High Court judgment considers single firm dominance using a different geographic market definition: each local authority area is a separate relevant market, not the Dublin Region.

2. Each Local Authority: There is Single Firm Dominance

The High Court judgment makes the following argument in coming to the finding that each local authority is dominant within the local area in which they collect waste:

133. ... Evidence was given of the relevant market share of the respondents [i.e. the local authorities] at the date of the hearing. In all cases the relevant local authority held the vast majority of the market share (>95%), except for Dun Laoghaire-Rathdown which held approximately 46% of the market; it having been the first local authority into whose area private operators penetrated. These market shares alone would be capable of supporting a presumption of dominance. Nonetheless ... market share is but one of the factors in determining dominance. The undertakings involved are unlike private dominant undertakings in that not only do they have a significant share of the market, but more importantly, they have the power to regulate it: to decide entry or no entry, to decide conditions of entry, and, if allowed, to decide operative conditions. It is that regulation, independently of any given market share which they might enjoy, that gives them the power to act independently and therefore makes them dominant in their respective markets. That they have considerable power to affect the market is evidenced by the Variation. Were it to be put into practice it would instantly give the local authorities 100% of the market share. No private undertaking would be able to do such. It is therefore clear that each respondent is dominant in each of their individual areas.

This would seem a fairly compelling set of arguments concerning dominance, market shares over the 40% threshold combined with regulatory powers that could be used to ensure that competitors do not succeed.⁶⁹ However, in the case of Dun Laoghaire/Rathdown there are good reasons for doubting that the local authority is

⁶⁹ It should be noted that the Jenkins Report [4.24-4.32] also takes the view that in Dun Laoghaire/Rathdown the local authority operator is dominant. One additional argument to those in the High Court judgment is advanced: that the local authority is able to act independently of Panda because Panda’s pricing policy is to discount from the tariff set by the local authority, rather than setting its own tariff. However, it is not clear that this is a compelling argument. Panda as the new entrant will want to price in a way which will cause customers to switch to it. By discounting from the local authority tariff the customer will be able to readily compare the higher price of the local authority operator with the lower price offered by Panda, with the result that Panda’s market share grew substantially as customers switch to it.

dominant; indeed no firm would appear to be dominant. In coming to finding in this finding the High Court judgment appears not to consider evidence which points towards the local authority in this area not being able to operate independently of its competitors.

3. An Inconvenient Truth?

There are three sets of facts that lead to the view that the local authority is not dominant in Dun Laoghaire/Rathdown.

First, in considering market share as an indicator of dominance it is important to examine the market shares of the competitors to the local authority. Table 2 presents the market shares in each of the local authority for market participants.⁷⁰ In Dun Laoghaire/Rathdown, Panda has a market share of 50%. This is not only higher than the local authority, but also given that Panda only entered the local authority area in November 2006, its market share is increasing, while that of the local authority is declining.

Second, as noted elsewhere in the High Court judgment, the entry of Panda constrained the pricing of the local authority in Dun Laoghaire/Rathdown:

97. ... As an example she [Helen Jenkins] compares the situation between Dun Laoghaire/Rathdown County Council charges and Dublin City Council charges; after the entry of Panda into the former, the Council was forced to freeze its prices, whereas in the latter the Council increased its charges over the same period.

Furthermore, in her expert report Helen Jenkins also compares the pricing of the local authority operator in Dun Laoghaire/Rathdown before and after the entry of Panda

⁷⁰ The pattern of market shares reflects the date of entry into each local authority market. For Panda these dates are as follows: Dun Laoghaire/Rathdown – November 2006; South Dublin – September 2007; Fingal – February 2008; and, Dublin City – July 2008 (High Court judgment, [12] and the Jenkins Report [3.20]). For Greenstar the dates are as follows: Dun Laoghaire/Rathdown – November 2007; and, Fingal – January 2008 (Greenstar judgment [4]). City Bin was a later entrant than either Panda or Greenstar, entering South Dublin City prior to September 2007 and Fingal subsequently (RPS, *Uncontrolled Fracturing of the Dublin Household Waste Collection Market*, Environmental and Technical Report, (Dublin, RPS, 2007, p.6)). It is not clear why both Panda and Greenstar first entered the Dun Laoghaire/Rathdown market and why Panda has had such success in gaining market share over such a short time. In all instances in the local authority markets that Panda enters it offers a discount compared to the incumbent local authority (Jenkins Report [4.29]). Perhaps the quality of the service of the local authority in Dun Laoghaire/Rathdown is not as good as that in the other local authorities. In any event this issue did not feature in the High Court judgment or the expert reports. The lack of success of Greenstar in Dun Laoghaire/Rathdown is consistent with the view that Panda was able to realise the available economies of density and thus be at an advantage compared to later entrants. The local council appears to have had a high cost base.

and concludes: “the competition from Panda appears to have halted a pattern of annual price increases which had occurred under the monopoly provision.”⁷¹

Table 2
Household Waste Collection, Market Shares, Dublin Region Local Authorities, Summer,^a 2008

	Dun Laoghaire/Rathdown		Fingal		South Dublin		Dublin City	
Waste Operator	Households (Number)	%	Households (Number)	%	Households (Number)	%	Households (Number)	%
Local authority	26,446	46.4	65,164	96.7	68,731	95.4	125,157	99.8
Panda	28,500	50.0	1,700	2.5	800	1.1	200	0.2
Greenstar	2,000	3.5	200	0.3	0	0.0	0	0.0
City Bin	0	0.0	1,000	1.5	2,500	3.5	0	0.0
Total	56,946	100	68,064	100	72,031	100	125,357	100

a. The Jenkins Report is dated 19 August 2008 so it would seem reasonable to assume that it represents events as of the summer of 2008

Source: Jenkins Report [Table 4.1, p. 25].

Third, although it may be the case that the local authority could use its regulatory powers to limit the growth of Panda and other private operators, there is no evidence that this occurred in the High Court judgment.⁷² In other words, these regulatory powers were not used to create a legal barrier to entry and/or expansion, a necessary condition for dominance. Furthermore, the Variation could lead to Dun Laoghaire/Rathdown to organise a competitive tender which might well be won by Panda.⁷³

⁷¹ Jenkins Report [3.18].

⁷² It should also be remembered as discussed in Section F.4 below and C above, the local authorities are subject various constraints, procedures and appeal mechanisms in exercising the powers under the WMA and the Plan.

⁷³ The discussion in paragraph 133, particularly the statement that, “[W]ith [the Variation] put into practice it would instantly give the local authorities 100% of the market share,” refers to the option under the Variation by which the local authority reserves the right to collect household waste to itself; it would not appear to consider the other option under the Variation: namely competitive tendering. This issue is discussed further in Section E.4 below.

In sum, in the Dun Laoghaire/Rathdown market it seems reasonable to argue that no firm is dominant. The High Court judgment appears not to have considered the above three factors in coming to a view as to dominance.

4. **Collective Dominance**

The High Court judgment finds that there is collective dominance, but here the relevant geographic market is the Dublin Region and no longer each of the four Dublin local authority areas. Again the treatment in the High Court judgment is brief, a single paragraph:

135. There is no doubt that in this case but that the respondents [the four local authorities] can and do collectively determine WMPs, and variations thereto. It should however be acknowledged that the collaboration of the councils in this regard could not be condemned. Their co-operation is specifically provided for by the WMA 1996. However, the fact that such collusion is provided for in statute will not prevent a finding of collective dominance. The fact that there is no competition between respondents, once again could not be criticised; they are local authorities who exercise their power within defined geographic bounds. However, such a situation, where there is collaborative action and no competition between undertakings, supports a finding of collective dominance. They act in concert on many issues and viewed from the outside do constitute, in many respects, a collective entity: certainly *vis-a-vis* their competitors and consumers on this market. I would therefore find that the respondents are also collectively dominant in the greater Dublin area

...

In the previous paragraph the High Court judgment makes reference to a passage in *Campagne Maritime Belge SA & Ors v. Commission*, to the effect that it is not necessary to have links such as an agreement for there to be a finding of collective dominance.⁷⁴

The High Court judgment contains no reference or discussion to any arguments that might have been advanced by either the local authorities or Panda. This is not surprising since the economic expert witness for Panda, Helen Jenkins, was not asked to examine this issue,⁷⁵ while Panda did not plead collective dominance.⁷⁶ As a result the issue of collective dominance receives only passing

⁷⁴ High Court judgment, [134].

⁷⁵ There is no reference to collective dominance in the Jenkins Report, only single firm dominance in each of the four local authorities. Helen Jenkins confirmed in her oral testimony that she was not asked to opine on collective dominance. (For details see Day 11, Q172 of the transcript).

⁷⁶ According to counsel for the local authorities, as stated in the High Court case. (For details see Day 12, p. 137).

reference in the course of the court case.⁷⁷ In other words, the issue was not argued extensively or otherwise during the Court case while the economic experts did not address the issue at all.

Collective dominance occurs in oligopolistic markets – typically concentrated markets in which firms take into account the conduct of competitors in making pricing and other decisions – where the leading firms act as a single entity *vis-a-vis* their competitors, and customers. There may or may not be a formal agreement linking the collectively dominant firms, but there is typically some form of link or connection between the firms. For a finding of collective dominance the oligopolists must “present themselves or act together on a particular market as a collective entity.”⁷⁸ They might, for example, fix common prices, prevent entry, and/or allocate customers. Such an interpretation is based on current EU case law.⁷⁹

It is not clear that the four local authorities are oligopolists in the above sense. They do not compete with each other in the household waste collection market; which is not due to any forbearance or other form of oligopolistic co-ordination. The four local authorities do not act as a single unit *vis-a-vis* their competitors and/or customers in terms of pricing and other important economic decisions. As noted above each local authority has its own pricing system and no evidence was produced to the effect that they co-ordinate their response to increased competition from non-local authority competitors such as Panda or Greenstar – apart from the Variation, discussed below. Hence on the market for household waste collection the four local authorities are not oligopolists in the economic sense. It is not clear on what grounds the High Court judgment can argue that the lack of competition between the local authorities supports a finding of collective dominance, when it would appear that the hallmark of collective dominance is that the oligopolists are competitors.

Nevertheless, as the High Court judgment argues, because the four local authorities are responsible for setting the WMP and variations thereto they act as a collective entity *vis-a-vis* their competitors and customers in this respect. However, in making the WMP and variations thereto, as noted in Section C above, the local authorities are subject to various public interest and legislative constraints and processes with respect to fairness, that they must adhere to before coming to a

⁷⁷ Based on a word search of ‘collective dominance’ of the transcripts of the case.

⁷⁸ Quoted in Whish (p. 564).

⁷⁹ For a discussion of collective dominance see Whish (pp.558-564), which discusses the criteria for collective dominance from a number of leading cases.

decision. Local authorities that do not adhere to these constraints and processes leave their decisions open to judicial review. Indeed, a substantial part of the High Court judgment is taken up in dealing with such issues.

Typically when an oligopoly that acts in a collectively dominant manner, the oligopoly does not notify its competitors and customers of proposed exclusionary conduct that may damage competitor and/or consumers interests. The decisions of oligopolies are not typically appealed to the courts on grounds of lack of fair procedures and pre-judgment. The very fact that the decisions of the local authorities in making the Variation have to abide by these constraints, processes and appeal mechanisms suggests that the local authorities may not be able to act independently of their competitors and customers. The High Court judgment does not consider these issues, implicitly assuming that they are of little or no importance; a view apparently contradicted by that part of the High Court judgment that deals with issues of fair procedures and questions of bias with respect to the Variation to the WMP.

5. Breaking New Ground: A Flexible Approach to Market Definition and Dominance

Once the High Court has defined the relevant market it then needs to apply this finding in a consistent manner in its subsequent analysis of competition in order to determine whether there is a breach of the Competition Act. The geographic market definition should not change depending on whether, for example, single firm or collective dominance is being considered. There is no ground for such an approach in, for example, the European Commission's notice on market definition or case law, whether EU or Irish.

It is not clear, however, that the High Court judgment adhered to this standard. In this respect the High Court judgment states:

128. The question of dominance must be determined in relation to the relevant market: as with the s. 4 analysis, market refers to both the product/service and geographic market; the respondents [the local authorities] must therefore be assessed with regard to the geographic market, the question being whether they are dominant in their individual and distinct markets, and/or are collectively dominant in the greater Dublin market [the Dublin Region].

The High Court judgment is certainly breaking new ground. Market definition, it appears, depends on whether single firm or collective dominance is being considered.

There is, however, no explanation of such an approach to market definition and dominance.⁸⁰

G. Was There an Abuse of a Dominant Position?

The High Court judgment comes to the view that the local authorities have abused their dominant position. In coming to this conclusion no distinction is made between abuse of collective and single firm dominance, nor is any distinction drawn as to whether the abuse takes place at the level of the Dublin Region and/or each local authority. Again the treatment is brief – five to six paragraphs.⁸¹

The grounds for the finding of abuse were threefold:⁸²

- i) By virtue of the finding that the Variation is an agreement or concerted practice contrary to s. 4 CA 2002; and/or
- ii) Because the Variation would substantially influence the structure of the market to the detriment of competition and a fortiori the consumer; and/or,
- iii) Because the Variation would significantly strengthen the position of the respondents on the market.

These abuses may be classified as exclusionary rather than exploitative. They are designed, according to the High Court judgment, to foreclose the market to private operators so the position of the public sector operators can be strengthened. The Variation “would restore them [the local authorities] to a *de facto* position of monopoly.”⁸³ Although the High Court judgment does not make the link, presumably consumers are worst off because as unconstrained monopolists, the local authorities, will raise prices compared to the status quo and/or an appropriate counterfactual.

Several points can be made concerning the reasoning of the High Court. *First*, there are two options under the Variation for the selection of the single operator of household waste collection in a specific geographical area. However, the reasoning set out above only applies when the local authority decides to reserve household waste collection to itself. It does not necessarily apply where the local authority

⁸⁰ In some dominance cases a firm may be dominant on one market but the abuse takes place on a related market, so that two markets are defined (Whish, pp. 204-205). However, it is difficult to see how this applies in the instant case – one market might for making regulations, where the local authorities would have a monopoly in the Dublin Region, but the abuse takes place on the related market of household waste collection in each of the four local authority areas. However, this argument was not advanced in the High Court judgment.

⁸¹ High Court judgment, [136-141]. One of the paragraphs is concerned with objective justification.

⁸² High Court judgment, [141].

⁸³ High Court judgment, [140].

decides use the tendering process to select the single operator, the other option in the Variation. It could, of course, be argued that the local authority would bias the outcome of the tendering process so that it would win. The fact that the local authority uses a tendering process would, however, appear to be strong *prima facie* evidence that it wants to award the right to collect household waste to the lowest priced bidder, irrespective of whether it is a private or public operator; and, if the local authority were to organise the tendering process and bias the result in favour of its own operator then this could lead to judicial review and possible damage claims. As a result the tendering option under the Variation would not be an abuse of a dominant position.

Second, there is case law that suggests that the “CFI considered that infringements of Articles 81 and 82 were conceptually independent of one another; that is why the Commission was not permitted simply to ‘recycle the facts’ used to find an infringement of Article 81 in order to determine an abuse of collective dominance.”⁸⁴ This suggests that the first of the three grounds above for finding an abuse is not consistent with case law. The High Court judgment does not discuss this issue.

Third, there is a considerable list of exclusionary abuses in the case law, from exclusive dealing arrangements to refusals to licence intellectual property rights or to provide proprietary information.⁸⁵ Not included on this list is passing regulations to reserve the right to provide a service to the regulator or competitive tendering. In view of the precedent setting nature of the High Court judgment further discussion and reasoning could have usefully been supplied, not only as aid to understanding the reasoning behind the High Court judgment, but also as a guide to local authorities and regulators that may be in a comparable position to the local authorities in the Dublin Region.

In sum, there are grounds for questioning the High Court judgment’s conclusion that the local authorities abused their dominant position. The treatment of the two options under the Variation is partial at best, while the reliance on a prior finding of a breach under Section 4 would not appear to be consistent with existing case law.

⁸⁴ Whish (p. 560).

⁸⁵ For further discussion see Whish (p. 205).

H. Concluding Observations

The Panda judgment has all the hallmarks of an active and confident judiciary that is prepared to take a forceful position on competition law even if it means cutting across established competition law.⁸⁶ However, the judgment does raise questions. It is not at all clear that local authorities are undertakings for the purposes of competition law when they made the Variation under the WMP. Even if the local authorities were undertakings in this regard, the Variation with respect to the competitive tendering option for selecting a single operator to collect household waste collection, is, it is suggested, neither an anti-competitive or restrictive agreement nor an abuse of a dominant position. Finally, the High Court judgment's definition of the relevant geographic market is not supported by the economic expert reports of either Panda or the local authorities, nor is it applied in a wholly consistent manner when examining the question of whether or not the local authorities are dominant, either for singly or collectively.

The Panda judgment, if sustained by the Supreme Court, may well be costly for society as the benefits from competitive tendering for household waste collection cannot be realised given that such arrangements breach competition law.⁸⁷ The Panda judgment is also likely to make public and private enforcement of competition law more costly and time consuming, while increasing legal uncertainty. The costs are substantial. The Panda case lasted 14 days in the High Court, with the costs of an appeal to the Supreme Court yet to be assessed. Efforts to shorten and streamline the proceedings would lower the costs and facilitate private action.⁸⁸ However, when the High Court – as argued above – does not appear to follow established case law and/or issue controversial judgments then this not only raises the costs of any appeal but also increases legal uncertainty thus making the outcome of legal proceedings difficult to

⁸⁶ The Panda judgment is also consistent with the High Court judgment in the Kerry-Breeo merger, where the High Court overturned the prohibition decision of the Competition Authority, showing little curial deference. For a discussion see, Paul K. Gorecki, "The Kerry/Breeo Merger: Two Views of Countervailing Buyer Power – the Competition Authority and the High Court." (2009) 5 *European Competition Journal*, 585.

⁸⁷ A recent report to the Minister for the Environment, Heritage and Local Government recommended competitive tendering as a way of reducing household waste collection charges, claiming a substantial drop in prices due to greater efficiency. For details see Eunomia Report.

⁸⁸ See Paul K Gorecki, "Future Challenges for Competition Policy in Ireland: A Personal Perspective," in David S. Evans and Frederic Jenny (eds) *Trustbusters: Competition Authorities Speak Out*. (Boston, MA: Competition Policy International, 2009), pp. 216-218, on possible ways in which cases could be shortened.

forecast. This might chill more aggressive competitive behaviour because of the desire not to be taken to Court. Consumers and the economy lose as a result.

Year	Number	Title/Author(s) ESRI Authors/Co-authors <i>Italicised</i>
2010		
	352	Designing a property tax without property values: Analysis in the case of Ireland <i>Karen Mayor, Seán Lyons and Richard S.J. Tol</i>
	351	Civil War, Climate Change and Development: A Scenario Study for Sub-Saharan Africa <i>Conor Devitt and Richard S.J. Tol</i>
	350	Regulating Knowledge Monopolies: The Case of the IPCC <i>Richard S.J. Tol</i>
	349	The Impact of Tax Reform on New Car Purchases in Ireland <i>Hugh Hennessy and Richard S.J. Tol</i>
	348	Climate Policy under Fat-Tailed Risk: An Application of FUND <i>David Anthoff and Richard S.J. Tol</i>
	347	Corporate Expenditure on Environmental Protection <i>Stefanie A. Haller and Liam Murphy</i>
	346	Female Labour Supply and Divorce: New Evidence from Ireland Olivier Bargain, Libertad González, <i>Claire Keane</i> and Berkay Özcan
	345	A Statistical Profiling Model of Long-Term Unemployment Risk in Ireland <i>Philip J. O'Connell, Seamus McGuinness, Elish Kelly</i>
	344	The Economic Crisis, Public Sector Pay, and the Income Distribution <i>Tim Callan, Brian Nolan (UCD) and John Walsh</i>
	343	Estimating the Impact of Access Conditions on Service Quality in Post <i>Gregory Swinand, Conor O'Toole and Seán Lyons</i>
	342	The Impact of Climate Policy on Private Car Ownership in Ireland <i>Hugh Hennessy and Richard S.J. Tol</i>

- 341 National Determinants of Vegetarianism
Eimear Leahy, Seán Lyons and Richard S.J. Tol
- 340 An Estimate of the Number of Vegetarians in the World
Eimear Leahy, Seán Lyons and Richard S.J. Tol
- 339 International Migration in Ireland, 2009
Philip J O'Connell and Corona Joyce
- 338 The Euro Through the Looking-Glass: Perceived Inflation Following the 2002 Currency Changeover
Pete Lunn and David Duffy
- 337 Returning to the Question of a Wage Premium for Returning Migrants
Alan Barrett and Jean Goggin
- 2009** 336 What Determines the Location Choice of Multinational Firms in the ICT Sector?
Iulia Siedschlag, Xiaoheng Zhang, Donal Smith
- 335 Cost-benefit analysis of the introduction of weight-based charges for domestic waste – West Cork's experience
Sue Scott and Dorothy Watson
- 334 The Likely Economic Impact of Increasing Investment in Wind on the Island of Ireland
Conor Devitt, Seán Diffney, John Fitz Gerald, Seán Lyons and Laura Malaguzzi Valeri
- 333 Estimating Historical Landfill Quantities to Predict Methane Emissions
Seán Lyons, Liam Murphy and Richard S.J. Tol
- 332 International Climate Policy and Regional Welfare Weights
Daiju Narita, Richard S. J. Tol, and David Anthoff
- 331 A Hedonic Analysis of the Value of Parks and Green Spaces in the Dublin Area
Karen Mayor, Seán Lyons, David Duffy and Richard S.J. Tol
- 330 Measuring International Technology Spillovers and Progress Towards the European Research Area

Iulia Siedschlag

- 329 Climate Policy and Corporate Behaviour
Nicola Commins, Seán Lyons, Marc Schiffbauer, and Richard S.J. Tol
- 328 The Association Between Income Inequality and Mental Health: Social Cohesion or Social Infrastructure
Richard Layte and Bertrand Maître
- 327 A Computational Theory of Exchange: Willingness to pay, willingness to accept and the endowment effect
Pete Lunn and Mary Lunn
- 326 Fiscal Policy for Recovery
John Fitz Gerald
- 325 The EU 20/20/2020 Targets: An Overview of the EMF22 Assessment
Christoph Böhringer, Thomas F. Rutherford, and *Richard S.J. Tol*
- 324 Counting Only the Hits? The Risk of Underestimating the Costs of Stringent Climate Policy
Massimo Tavoni, *Richard S.J. Tol*
- 323 International Cooperation on Climate Change Adaptation from an Economic Perspective
Kelly C. de Bruin, Rob B. Dellink and *Richard S.J. Tol*
- 322 What Role for Property Taxes in Ireland?
T. Callan, C. Keane and J.R. Walsh
- 321 The Public-Private Sector Pay Gap in Ireland: What Lies Beneath?
Elish Kelly, Seamus McGuinness, Philip O'Connell
- 320 A Code of Practice for Grocery Goods Undertakings and An Ombudsman: How to Do a Lot of Harm by Trying to Do a Little Good
Paul K Gorecki
- 319 Negative Equity in the Irish Housing Market
David Duffy

- 318 Estimating the Impact of Immigration on Wages in Ireland
Alan Barrett, Adele Bergin and Elish Kelly
- 317 Assessing the Impact of Wage Bargaining and Worker Preferences on the Gender Pay Gap in Ireland Using the National Employment Survey 2003
Seamus McGuinness, Elish Kelly, Philip O'Connell, Tim Callan
- 316 Mismatch in the Graduate Labour Market Among Immigrants and Second-Generation Ethnic Minority Groups
Delma Byrne and Seamus McGuinness
- 315 Managing Housing Bubbles in Regional Economies under EMU: Ireland and Spain
Thomas Conefrey and John Fitz Gerald
- 314 Job Mismatches and Labour Market Outcomes
Kostas Mavromaras, *Seamus McGuinness*, Nigel O'Leary, Peter Sloane and Yin King Fok
- 313 Immigrants and Employer-provided Training
Alan Barrett, Séamus McGuinness, Martin O'Brien and Philip O'Connell
- 312 Did the Celtic Tiger Decrease Socio-Economic Differentials in Perinatal Mortality in Ireland?
Richard Layte and Barbara Clyne
- 311 Exploring International Differences in Rates of Return to Education: Evidence from EU SILC
Maria A. Davia, *Seamus McGuinness* and *Philip, J. O'Connell*
- 310 Car Ownership and Mode of Transport to Work in Ireland
Nicola Commins and Anne Nolan
- 309 Recent Trends in the Caesarean Section Rate in Ireland 1999-2006
Aoife Brick and Richard Layte
- 308 Price Inflation and Income Distribution
Anne Jennings, Seán Lyons and Richard S.J. Tol

- 307 Overskilling Dynamics and Education Pathways
Kostas Mavromaras, *Seamus McGuinness*, Yin King Fok
- 306 What Determines the Attractiveness of the European Union to the Location of R&D Multinational Firms?
Iulia Siedschlag, Donal Smith, Camelia Turcu, Xiaoheng Zhang
- 305 Do Foreign Mergers and Acquisitions Boost Firm Productivity?
Marc Schiffbauer, Iulia Siedschlag, Frances Ruane
- 304 Inclusion or Diversion in Higher Education in the Republic of Ireland?
Delma Byrne
- 303 Welfare Regime and Social Class Variation in Poverty and Economic Vulnerability in Europe: An Analysis of EU-SILC
Christopher T. Whelan and *Bertrand Maitre*
- 302 Understanding the Socio-Economic Distribution and Consequences of Patterns of Multiple Deprivation: An Application of Self-Organising Maps
Christopher T. Whelan, Mario Lucchini, Maurizio Pisati and *Bertrand Maitre*
- 301 Estimating the Impact of Metro North
Edgar Morgenroth
- 300 Explaining Structural Change in Cardiovascular Mortality in Ireland 1995-2005: A Time Series Analysis
Richard Layte, Sinead O'Hara and Kathleen Bennett
- 299 EU Climate Change Policy 2013-2020: Using the Clean Development Mechanism More Effectively
Paul K Gorecki, Seán Lyons and *Richard S.J. Tol*
- 298 Irish Public Capital Spending in a Recession
Edgar Morgenroth
- 297 Exporting and Ownership Contributions to Irish Manufacturing Productivity Growth
Anne Marie Gleeson, *Frances Ruane*

- 296 Eligibility for Free Primary Care and Avoidable Hospitalisations in Ireland
Anne Nolan
- 295 Managing Household Waste in Ireland: Behavioural Parameters and Policy Options
John Curtis, Seán Lyons and Abigail O'Callaghan-Platt
- 294 Labour Market Mismatch Among UK Graduates; An Analysis Using REFLEX Data
Seamus McGuinness and Peter J. Sloane
- 293 Towards Regional Environmental Accounts for Ireland
Richard S.J. Tol , Nicola Commins, Niamh Crilly, Sean Lyons and Edgar Morgenroth
- 292 EU Climate Change Policy 2013-2020: Thoughts on Property Rights and Market Choices
Paul K. Gorecki, Sean Lyons and Richard S.J. Tol
- 291 Measuring House Price Change
David Duffy
- 290 Intra-and Extra-Union Flexibility in Meeting the European Union's Emission Reduction Targets
Richard S.J. Tol
- 289 The Determinants and Effects of Training at Work: Bringing the Workplace Back In
Philip J. O'Connell and Delma Byrne
- 288 Climate Feedbacks on the Terrestrial Biosphere and the Economics of Climate Policy: An Application of *FUND*
Richard S.J. Tol
- 287 The Behaviour of the Irish Economy: Insights from the HERMES macro-economic model
Adele Bergin, Thomas Conefrey, John FitzGerald and Ide Kearney
- 286 Mapping Patterns of Multiple Deprivation Using Self-Organising Maps: An Application to EU-SILC Data for Ireland
Maurizio Pisati, Christopher T. Whelan, Mario

Lucchini and *Bertrand Maître*

- 285 The Feasibility of Low Concentration Targets:
An Application of FUND
Richard S.J. Tol
- 284 Policy Options to Reduce Ireland's GHG Emissions
Instrument choice: the pros and cons of alternative
policy instruments
Thomas Legge and *Sue Scott*
- 283 Accounting for Taste: An Examination of
Socioeconomic Gradients in Attendance at Arts
Events
Pete Lunn and Elish Kelly
- 282 The Economic Impact of Ocean Acidification on
Coral Reefs
Luke M. Brander, Katrin Rehdanz, *Richard S.J. Tol*,
and Pieter J.H. van Beukering
- 281 Assessing the impact of biodiversity on tourism
flows: A model for tourist behaviour and its policy
implications
Giulia Macagno, Maria Loureiro, Paulo A.L.D. Nunes
and *Richard S.J. Tol*
- 280 Advertising to boost energy efficiency: the Power of
One campaign and natural gas consumption
*Seán Diffney, Seán Lyons and Laura Malaguzzi
Valeri*
- 279 International Transmission of Business Cycles
Between Ireland and its Trading Partners
Jean Goggin and Iulia Siedschlag
- 278 Optimal Global Dynamic Carbon Taxation
David Anthoff
- 277 Energy Use and Appliance Ownership in Ireland
Eimear Leahy and Seán Lyons
- 276 Discounting for Climate Change
David Anthoff, Richard S.J. Tol and Gary W. Yohe
- 275 Projecting the Future Numbers of Migrant Workers
in the Health and Social Care Sectors in Ireland
Alan Barrett and Anna Rust

2008

- 274 Economic Costs of Extratropical Storms under Climate Change: An application of FUND
Daiju Narita, Richard S.J. Tol, David Anthoff
- 273 The Macro-Economic Impact of Changing the Rate of Corporation Tax
Thomas Conefrey and John D. Fitz Gerald
- 272 The Games We Used to Play
An Application of Survival Analysis to the Sporting Life-course
Pete Lunn
- 271 Exploring the Economic Geography of Ireland
Edgar Morgenroth
- 270 Benchmarking, Social Partnership and Higher Remuneration: Wage Settling Institutions and the Public-Private Sector Wage Gap in Ireland
Elish Kelly, Seamus McGuinness, Philip O'Connell
- 269 A Dynamic Analysis of Household Car Ownership in Ireland
Anne Nolan
- 268 The Determinants of Mode of Transport to Work in the Greater Dublin Area
Nicola Commins and Anne Nolan
- 267 Resonances from *Economic Development* for Current Economic Policymaking
Frances Ruane
- 266 The Impact of Wage Bargaining Regime on Firm-Level Competitiveness and Wage Inequality: The Case of Ireland
Seamus McGuinness, Elish Kelly and Philip O'Connell
- 265 Poverty in Ireland in Comparative European Perspective
Christopher T. Whelan and Bertrand Maitre
- 264 A Hedonic Analysis of the Value of Rail Transport in the Greater Dublin Area
Karen Mayor, Seán Lyons, David Duffy and Richard S.J. Tol

- 263 Comparing Poverty Indicators in an Enlarged EU
Christopher T. Whelan and Bertrand Maitre
- 262 Fuel Poverty in Ireland: Extent,
Affected Groups and Policy Issues
*Sue Scott, Seán Lyons, Claire Keane, Donal
McCarthy and Richard S.J. Tol*
- 261 The Misperception of Inflation by Irish Consumers
David Duffy and Pete Lunn
- 260 The Direct Impact of Climate Change on Regional
Labour Productivity
Tord Kjellstrom, R Sari Kovats, Simon J. Lloyd, Tom
Holt, *Richard S.J. Tol*
- 259 Damage Costs of Climate Change through
Intensification of Tropical Cyclone Activities:
An Application of FUND
Daiju Narita, Richard S. J. Tol and David Anthoff
- 258 Are Over-educated People Insiders or Outsiders?
A Case of Job Search Methods and Over-education
in UK
Aleksander Kucel, Delma Byrne
- 257 Metrics for Aggregating the Climate Effect of
Different Emissions: A Unifying Framework
*Richard S.J. Tol, Terje K. Berntsen, Brian C. O'Neill,
Jan S. Fuglestvedt, Keith P. Shine, Yves Balkanski
and Laszlo Makra*
- 256 Intra-Union Flexibility of Non-ETS Emission
Reduction Obligations in the European Union
Richard S.J. Tol
- 255 The Economic Impact of Climate Change
Richard S.J. Tol
- 254 Measuring International Inequity Aversion
Richard S.J. Tol
- 253 Using a Census to Assess the Reliability of a
National Household Survey for Migration Research:
The Case of Ireland
Alan Barrett and Elish Kelly

- 252 Risk Aversion, Time Preference, and the Social Cost of Carbon
David Anthoff, Richard S.J. Tol and Gary W. Yohe
- 251 The Impact of a Carbon Tax on Economic Growth and Carbon Dioxide Emissions in Ireland
Thomas Conefrey, John D. Fitz Gerald, Laura Malaguzzi Valeri and Richard S.J. Tol
- 250 The Distributional Implications of a Carbon Tax in Ireland
Tim Callan, Sean Lyons, Susan Scott, Richard S.J. Tol and Stefano Verde
- 249 Measuring Material Deprivation in the Enlarged EU
Christopher T. Whelan, Brian Nolan and Bertrand Maitre
- 248 Marginal Abatement Costs on Carbon-Dioxide Emissions: A Meta-Analysis
Onno Kuik, Luke Brander and *Richard S.J. Tol*
- 247 Incorporating GHG Emission Costs in the Economic Appraisal of Projects Supported by State Development Agencies
Richard S.J. Tol and Seán Lyons
- 246 A Carbon Tax for Ireland
Richard S.J. Tol, Tim Callan, Thomas Conefrey, John D. Fitz Gerald, Seán Lyons, Laura Malaguzzi Valeri and Susan Scott
- 245 Non-cash Benefits and the Distribution of Economic Welfare
Tim Callan and Claire Keane
- 244 Scenarios of Carbon Dioxide Emissions from Aviation
Karen Mayor and Richard S.J. Tol
- 243 The Effect of the Euro on Export Patterns: Empirical Evidence from Industry Data
Gavin Murphy and Julia Siedschlag
- 242 The Economic Returns to Field of Study and Competencies Among Higher Education Graduates in Ireland
Elish Kelly, Philip O'Connell and Emer Smyth

- 241 European Climate Policy and Aviation Emissions
Karen Mayor and Richard S.J. Tol
- 240 Aviation and the Environment in the Context of the
EU-US Open Skies Agreement
Karen Mayor and Richard S.J. Tol
- 239 Yuppie Kvetch? Work-life Conflict and Social Class in
Western Europe
Frances McGinnity and Emma Calvert
- 238 Immigrants and Welfare Programmes: Exploring the
Interactions between Immigrant Characteristics,
Immigrant Welfare Dependence and Welfare Policy
Alan Barrett and Yvonne McCarthy
- 237 How Local is Hospital Treatment? An Exploratory
Analysis of Public/Private Variation in Location of
Treatment in Irish Acute Public Hospitals
Jacqueline O'Reilly and Miriam M. Wiley
- 236 The Immigrant Earnings Disadvantage Across the
Earnings and Skills Distributions: The Case of
Immigrants from the EU's New Member States in
Ireland
*Alan Barrett, Seamus McGuinness and Martin
O'Brien*
- 235 Europeanisation of Inequality and European
Reference Groups
Christopher T. Whelan and Bertrand Maitre
- 234 Managing Capital Flows: Experiences from Central
and Eastern Europe
Jürgen von Hagen and *Iulia Siedschlag*
- 233 ICT Diffusion, Innovation Systems, Globalisation
and Regional Economic Dynamics: Theory and
Empirical Evidence
Charlie Karlsson, Gunther Maier, Michaela Trippl,
Iulia Siedschlag, Robert Owen and Gavin Murphy
- 232 Welfare and Competition Effects of Electricity
Interconnection between Great Britain and Ireland
Laura Malaguzzi Valeri
- 231 Is FDI into China Crowding Out the FDI into the

- European Union?
Laura Resmini and *Iulia Siedschlag*
- 230 Estimating the Economic Cost of Disability in Ireland
John Cullinan, Brenda Gannon and *Seán Lyons*
- 229 Controlling the Cost of Controlling the Climate: The Irish Government's Climate Change Strategy
Colm McCarthy, *Sue Scott*
- 228 The Impact of Climate Change on the Balanced-Growth-Equivalent: An Application of *FUND*
David Anthoff, Richard S.J. Tol
- 227 Changing Returns to Education During a Boom? The Case of Ireland
Seamus McGuinness, Frances McGinnity, Philip O'Connell
- 226 'New' and 'Old' Social Risks: Life Cycle and Social Class Perspectives on Social Exclusion in Ireland
Christopher T. Whelan and Bertrand Maître
- 225 The Climate Preferences of Irish Tourists by Purpose of Travel
Seán Lyons, Karen Mayor and Richard S.J. Tol
- 224 A Hirsch Measure for the Quality of Research Supervision, and an Illustration with Trade Economists
Frances P. Ruane and Richard S.J. Tol
- 223 Environmental Accounts for the Republic of Ireland: 1990-2005
Seán Lyons, Karen Mayor and Richard S.J. Tol
- 2007** 222 Assessing Vulnerability of Selected Sectors under Environmental Tax Reform: The issue of pricing power
J. Fitz Gerald, M. Keeney and S. Scott
- 221 Climate Policy Versus Development Aid
Richard S.J. Tol
- 220 Exports and Productivity – Comparable Evidence for 14 Countries
The International Study Group on Exports and Productivity

- 219 Energy-Using Appliances and Energy-Saving Features: Determinants of Ownership in Ireland
Joe O'Doherty, *Seán Lyons* and *Richard S.J. Tol*
- 218 The Public/Private Mix in Irish Acute Public Hospitals: Trends and Implications
Jacqueline O'Reilly and *Miriam M. Wiley*
- 217 Regret About the Timing of First Sexual Intercourse: The Role of Age and Context
Richard Layte, *Hannah McGee*
- 216 Determinants of Water Connection Type and Ownership of Water-Using Appliances in Ireland
Joe O'Doherty, *Seán Lyons* and *Richard S.J. Tol*
- 215 Unemployment – Stage or Stigma?
Being Unemployed During an Economic Boom
Emer Smyth
- 214 The Value of Lost Load
Richard S.J. Tol
- 213 Adolescents' Educational Attainment and School Experiences in Contemporary Ireland
Merike Darmody, *Selina McCoy*, *Emer Smyth*
- 212 Acting Up or Opting Out? Truancy in Irish Secondary Schools
Merike Darmody, *Emer Smyth* and *Selina McCoy*
- 211 Where do MNEs Expand Production: Location Choices of the Pharmaceutical Industry in Europe after 1992
Frances P. Ruane, *Xiaoheng Zhang*
- 210 Holiday Destinations: Understanding the Travel Choices of Irish Tourists
Seán Lyons, *Karen Mayor* and *Richard S.J. Tol*
- 209 The Effectiveness of Competition Policy and the Price-Cost Margin: Evidence from Panel Data
Patrick McCloughan, *Seán Lyons* and *William Batt*
- 208 Tax Structure and Female Labour Market Participation: Evidence from Ireland
Tim Callan, *A. Van Soest*, *J.R. Walsh*

