Institution: University of East Anglia		
Unit of Assessment: 16 – Economics and Econometrics		
Title of case study: Strengthening EU Policy and Practice for Effective Merger Control in a Globalising Economy		
Period when the underpinning research was undertaken: 2000 - 2016		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	**Role(s) (e.g. job title):**	**Period(s) employed by submitting HEI:**
Professor Bruce Lyons Professor Amelia Fletcher	Professor of Economics Professor of Competition Policy	1985 – to present 2013 – to present
Period when the claimed impact occurred: 2016 – 2020		
Is this case study continued from a case study submitted in 2014? No		

1. Summary of the impact

The purpose of merger control (competition policy) is to prohibit harmful, price-raising mergers while allowing those which enhance efficiency and innovation. The analysis starts with the calculation of market shares. Low combined shares mean that a merger is unlikely to be challenged, but high shares build a presumption of higher consumer prices, so it may be prohibited. An essential step in calculating market shares is to establish the geographic scope of sales. In 2014-15, influential European industrialists lobbied vociferously that merger appraisal by the European Commission assumed an overly narrow geographic market definition (GMD), excluding international rivals (e.g. China) and over-stating market shares such that mergers were wrongly prohibited. The Commission asked UEA Professors Lyons and Fletcher to write a report on best practice for GMD. The report resulted in A) the protection of consumer interests by clarifying the appropriate approach to international competition in merger appraisal; B) the improvement of the technical details of GMD in individual cases; C) a shift in the public debate from static shares to dynamic effects.

2. Underpinning research

Underpinning research for the case study comes from Lyons's substantial contribution to the better understanding the interface between GMD, market share and market structure [R1-3], research on merger policy [R4-5] and the EU commissioned report [R6].

Why Geographic Market Definition (GMD) Matters for Merger Regulation

Effective competition disciplines firms to sell at a fair price. When two firms join forces via a merger, this can reduce competition, resulting in higher prices and harms via lower consumer welfare unless sufficient, strong rivals remain in the market. Merger regulation aims to prohibit harmful mergers while allowing those which enhance efficiency and innovation. The European Commission enforces merger regulation for mergers which may affect cross-border trade in the EU. To assess whether a merger is likely to reduce competition, every competition authority looks first at market shares, the portion of a market controlled by each firm. For example, a merger of firms with 60% and 30% of the market would create a near-monopoly with a strong presumption of consumer harm, while a merger of firms with 20% and 10% of the market likely leaves strong independent rivals to discipline pricing.

In a globalising economy, it is not obvious how much competitive discipline is provided by firms located in distant countries, particularly if they do not currently supply large volumes into a local area. For example, two European firms may supply 90% of European demand, while strong local suppliers in Asia and America supply their own continental demands and, if prices rose, could sell into Europe. In this situation, the European firms have only 30% of the market if defined globally. A similar issue arises with mergers that have regional effects within the EU or a nation. The key question for policy is how to determine which geographic market should be used to calculate shares for merger appraisal?

Contributions on GMD, Market Shares and Market Structure
UEA research has shown that the answer is important because calculated market shares establish a presumption that guides the regulatory investigation and go on to affect merger regulatory decisions especially via threshold effects. Garrod & Lyons [R2] provide econometric evidence that the probability of the European Commission intervening to prohibit a merger or require divestitures jumps sharply once the joint market share of merging firms exceeds 40%. This contrasts with most economics literature that highlights important caveats to the link between market power and market share. These findings help explain why market definition is often so hotly contested between the merging parties and the Commission.

In contrast to the product market, the geographical dimension of market definition has received little academic attention. An exception is Lyons et al [R1] who applied the theory of market structure and a novel econometric approach to show how the gradual creation of a Single European Market in the 1990s resulted in competition taking place at the European (as distinct to Member State) level. As predicted by the theory, this evolution took place more quickly in R&D intensive industries than for other manufactured products. A unique and central part of the research was to measure market shares and concentration at both geographical levels.

Most research focuses on the price effects of market share and concentration, but competition is important for a much wider range of dynamic consumer benefits. UEA research [R3] exploited the natural experiment of national regulation of the number of mobile providers with access to spectrum rights to show how concentration affected the speed of consumer uptake of mobile phones. Uptake was fastest in countries with 3-5 firms and an independent regulator, but the international identity of the firms had no effect.

Contributions on Merger Policy
Beyond his research on GMD highlighted above, Professor Lyons has published a range of competition policy papers and books, particularly in relation to merger policy. His analysis of the evolving implementation of merger control by the European Commission since its inception draws on his earlier publications to highlight the importance of attention to economic effects and how inconsistencies resulted in reversals in court [R4]. Although mergers are rarely fully prohibited, it is common practice to require merging firms to divest overlapping businesses which sell into the same market. For example, in a merger in the pharmaceuticals industry, one of the parties may be required to sell its capacity in a therapeutic area or in a particular geographic market to a third party. UEA research provided a large-scale evaluation of such ‘remedies’ and identified how remedy design could be improved [R5].

Drawing on this previous research on market definition, market shares and the economic approach to practical merger regulation, UEA was offered unique access to confidential submissions by merging parties, as well as the Commission’s own analysis, to write a report on geographic market definition in EU merger regulation [R6]. Detailed analysis of ten contentious merger cases (across multiple European countries and sectors) was used to appraise the Commission’s approach against best economic practice. The new research focused on whether geographic markets for merger appraisal are more usefully defined widely, to include all potential suppliers of a product into Europe, or more narrowly based on the location of existing suppliers. One major insight was to show the latter is preferable if dynamic entry from outside the narrow geographical market is properly taken into account at the (later) competitive assessment. While Commission practice had generally been to use the appropriate market definition, it had lacked consistency and clarity in the assessment of competition from outside the defined market. Another finding relates to markets with high transport costs. The Commission’s analysis would improve if it was more willing to define geographic markets on the basis of distance and travel times (‘isochrones’) and was less tied to Member State political boundaries.

3. References to the research

UEA authors are in bold

Research on interface between GMD, market share and market structure

R1 ‘Industrial Concentration and Market Integration in the European Union’
Lyons, B., Matraves, C. and **Moffatt, P**.
Economica, **2001**, vol. 68, no. 269, 1-26. DOI: 10.1111/1468-0335.00230

R2 'Early Settlement in European Merger Control'
Garrod, L. and **Lyons, B**
Journal of Industrial Economics, **2016,** vol. 64(1), pp.27-63. DOI: 10.1111/joie.12093

R3 'Market Structure, Regulation and the Speed of Mobile Network Penetration'
Lyons, B. and **Li, Y.**
International Journal of Industrial Organization, **2012**, vol. 30(6), 697-707.
DOI: 10.1016/j.ijindorg.2012.08.004

Research on merger policy

R4 'An Economic Assessment of European Commission Merger Control: 1958-2007'
Lyons, B.
Vives. X (ed.) Competition Policy in the EU: Fifty Years on from the Treaty of Rome, *Oxford University Press*, **2009**, book chapter 6, pp.135-175. ISBN: 978-0-19-956635-8

R5 'Mergers and Merger Remedies: Consequences for Competition'
Davies, S. and **Lyons, B**.
Edward Elgar Publishing, Inc., **2007**, ISBN: 978-1847207418

Key impact paper

R6 'Geographic Market Definition in European Commission Merger Control'
Fletcher, A. and **Lyons, B.**
Report commissioned by DG Competition, **2016.** Available at http://ec.europa.eu/competition/publications/reports/study_gmd.pdf and held on file at UEA.

4. Details of the impact

Lyons's research led to his appointment to European Commission academic advisory bodies continuously for over twenty years. He was one of four members of the original Academic Advisory Group to the Merger Task Force at DG Comp (1996-2004), and then of the larger *Economic Advisory Group for Competition Policy* (EAGCP) 2004-17. A number of academic opinions of subgroups are published on the DG Comp website. During that period, he made presentations to Commissioners Kroes and Vestager in their personal offices.

The EU Commissioned Report on Geographic Market Definition

In 2014-15, "...*a number of business interest groups and stakeholders were challenging what they saw as an overly restrictive approach to geographic market definition*...", one example being steel mergers and the rise of Asian imports [S1]. DG Comp commissioned an independent academic report to identify the appropriate approach. A testimonial written by the Head of Unit, and approved by the European Commission and the Vestager Cabinet, explains why Lyons was asked to write it:

> *Professor Lyons, in particular was selected on the basis of his ability to apply economic research to practical competition economics. He was well known for his work on mergers and market structure, had already coordinated two EAGCP sub-group "opinions" and was one of the "Three Wise Men" who had provided an independent opinion on the coherence of a novel economic theory used in a contested steel merger at the time."* [S1]

The Commission was open-minded about the outcome, welcomed his proposal for Fletcher to co-author, and gave Fletcher & Lyons (F&L) complete editorial independence.

A. Protecting consumer interests in European Commission merger policy

Before the publication of UEA's report, consumer interests in Europe were under threat by the prospect that the EU might allow mergers that would create European 'champions'/ monopolies. The report influenced the highest levels of the EU Commission to keep focus on consumer rather than business interests. F&L made a personal (one-hour) interactive presentation to Commissioner Vestager in her office (01/12/15), during which she asked questions and raised issues about the report's recommendations. UEA recommendations were used by the commission to support the appropriate approach to GMD and to develop the rigour of its practice.

The broader impact of the report on the Commission is summarised by Head of Merger Analysis, [redacted]:

> *"The attention to detail, the coherence of the economic analysis and the sharp policy*

focus of the report was impressive, which has helped make it influential, both internally within DG Competition and externally with stakeholders. The report played an important role in explaining and supporting DG Comp practice and in responding to external criticism." [S1]

At a political level, F&L's report provided a compelling counterweight to the powerful industrial lobby which had gained parliamentary support and, had it succeeded, would have changed merger policy to allow the creation of dominant firms at the expense of European consumers. The policy impact of the report has been enduring and widespread across industries and sectors. Four years on (2019), Commissioner (now Vice-President) Vestager made a major policy announcement of a review of the Market Definition Notice in a flagship speech setting out the direction for defining markets in a new age. In this major policy announcement, F&L's report is discussed as a central motivating factor; its recommendations prompting the Commission to make its market definition clearer. Vestager said:

"…in 2015, we asked two independent competition economists, Bruce Lyons and Amelia Fletcher, to take a look at how we define geographic markets. The main message of their report was that we're on the right track. They believe that our way of defining geographic markets is generally in line with the latest economic thinking, and the practice of other leading competition enforcers around the world. At the same time, they also offered some suggestions on how we could do things better. For example, they suggested that we could make it clearer that market definition is not an end in itself." [S3]

Beyond politics and parliament, the report has informed a historical perspective of EU competition policy and been used by two senior DG Comp officials to communicate the benefits of competition policy to ordinary consumers in their 2018 review of '60 years of competition policy in the EU' [S4]. The report was also used in DG Comp's annual review [S5] and it underpins a two-page spread on 'Taking the world as it is: Defining markets in the age of globalisation', in a public-facing glossy brochure on EU Competition Policy in Action [S6], which is disseminated to inform lay publics about the work and benefits of DG Comp and competition policy on their daily lives.

B. Improving European Commission case analysis and presentation

Prior to the publication of the report [R1], there was sometimes a lack of clarity and consistency in the way the Commission incorporated actual and potential import competition and market definition in its analysis of specific cases. F&L's report provided the Commission with a clear methodology for merger case teams and for the way their analysis is presented to merging parties and the wider public. For example, the proposed Alstom-Siemens merger (high speed trains) was supported by the French and German governments and became highly politically charged. The key issue was whether Chinese firms not currently supplying Europe provided a sufficient potential constraint on what would have become a dominant European supplier of very high-speed trains and signalling systems. On global market definition, it is likely that the merger would have been allowed, but consistent with the report's findings, the Commission decided on a European GMD and blocked the merger. [redacted] notes that the UEA report's…

"…influence continues. For example, its finding[s] *were relevant in the context of the public debate which followed the decision of the Commission prohibiting the proposed acquisition of Alstom by Siemens in February 2019."* [S1]

For more regional mergers, F&L's recommendations accelerated the use of sophisticated economic techniques for market definition within Europe when transport costs are high. In particular, geographic markets can be defined, not on political boundaries, but on the basis of distance and travel times ('isochrones'). [redacted] writes:

"The report usefully supported other aspects of the analysis undertaken by the Commission. For example, we had begun to use isochrones to define localised markets at the time (in markets such as cement, industrial chocolate and beverage cans), and the report confirmed that this approach was well grounded for relevant cases (e.g. markets with high local delivery costs)." [S1]

The influence of F&L's report in relation to the use of isochrones is acknowledged in [S7, p.72].

C. Shifting public debate from static shares to dynamic effects

Whether for competition suppression motives or due to lack of clarity by the Commission, market definition had become the focus of business concerns. As one example, the European Roundtable of Industrialists (ERT) is an influential lobby group with an invited membership of individual CEOs and Chairs of sixty leading industrial groups across Europe. Prior to F&L's report, its position paper on 'An EU Competition Policy for Growth' had argued:

> *"…in order to get a better understanding of the market reality in an increasingly globalised and converging economy, it is of utmost importance to take supply-side factors into account* ***at the market definition stage****" (ERT, 2014, p.3; bold added)* [S8]

'Supply-side factors' is jargon for potential entry by geographically distant firms. This claim was one of the motivations for the Commission to seek clarity from Lyons & Fletcher. Five years later and following the report [R1], the ERT had moved on from market definition in a new paper on 'Competing at Scale: EU Competition Policy fit for the Global Stage':

> *"…there is a need for a broader and more dynamic assessment… replacing the traditional static analysis (which relies too heavily on historic market shares) with a broader assessment…" (ERT, 2019, p.9)* [S8]

The ERT's new position is consistent with F&L's conclusion that supply-side factors are best considered as part of the dynamics of competition, and not for calculating market shares.

As a second example, the world business organization, the International Chamber of Commerce, wrote an unsolicited and detailed response to [R6], describing F&L's report as "*important*". ICC highlights substantial points of agreement saying it "*...fully agrees with the Study recommendation that rapid entrants, swing capacity and capacity shares should play a more important role...*" and "*it would be useful for the European Commission to not only use* [isochrone] *methodology but also to provide some guidance for national authorities*." [S9].

A third example evidences political impact. The report [R1] was Commissioner Vestager's sole reference in her response to the European Parliament's request for the Commission to "*re-evaluate the market definitions and the current set of EU competition rules to take into account the evolution of the global rail supply market*" [S2].

5. Sources to corroborate the impact

S1 Letter from Head of Unit CE.1 (Empirical analysis in complex merger and antitrust cases) in the Chief Economist Team of the Directorate General for Competition of the European Commission (DG Comp), 03.12.19.

S2 Answer to European Parliament by European Commissioner for Competition

S3 Speech by Vice-President of European Commission 'Defining markets in a new age' (09/12/2019)

S4 Fabienne Ilzkovitz & Adriaan Dierx: '60 ans de politique de concurrence européenne' *Revue du Droit de l'Union Européenne* 3/2018, 31-53

S5 DG COMP Annual Competition Report (2017), p.22

S6 EU Competition Policy in Action (2016), p.44-45

S7 Katarina Resar Krasulova, 'The BRICS in Global Merger Review: Diverging Goals, Converging Methods', 9 *Geo. Mason J. Int'l Com. L*. 42 (2017)

S8 ERT position papers: Competition Policy for Growth -December 2014 and Revised ERT position on GMD - October 2019.

S9 E-mail from the Policy Manager for the ICC Commission on Competition.