FACULTY OF ECONOMICS AND
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AN INTERDISCIPLINARY ANALYSIS OF THE MORE ECONOMIC APPROACH IN EU COMPETITION POLICY

AT THE CROSSROAD OF MARKETS AND GOVERNMENTS

An-Sofie Cottyn

Supervisors: Prof. Dr. Frank Naert, Prof. Dr. Patrick Van Cayseele

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Table of contents

Introduction

The subject of this doctorate is the reform towards a more economic approach ("MEA") in EU competition policy. The MEA was an organic development in response to evolving economic insights and legal-institutional maturation, which was captured by DG Competition – led by a succession of economist Commissioners – following ongoing critique on the traditional approach. In the eighties, EU competition policy started to attract heavy criticism for being too legal form-based and too structuralist (see e.g. Hawk, 1995) and for protecting competitors instead of competition, to the detriment of consumers (for a discussion, see Fox, 2003; Swaine, 2002). From the late nineties, the Commission has gradually introduced substantive reforms in all subparts of competition policy. The MEA has initiated a reorientation towards consumer welfare goals and an effects-based approach grounded in modern industrial economics ("IO") principles and empirical evidence. The MEA gave rise to a reform of secondary law,[1] a consumer welfare-based rhetoric, and the appointment of a Chief Economist (Team) to enhance DG Competition's economic capacities and quantitative skills. The aim of my research is threefold, first, to identify *fundamental trends* that determine the scope and limits of an economic approach in an EU context, secondly, to capture the essence of the MEA, and thirdly, to quantify how the MEA translates into EU merger policy.[2]

Almost 20 years into the reform, the role of economics in EU competition policy remains an ongoing source of controversy. At a certain point in time, it may have looked as though EU competition policy was gradually going to embrace a welfare standard. Yet, the 2008 financial crisis, the consequent eurocrisis and novel antitrust challenges in a digital economy have shown that the discussion over the division of tasks between governments and markets has not been silenced with the arrival of the MEA. EU competition policy is implemented in an increasingly politicized environment. The Commission faces increased pressure to consider growth and competitiveness more directly in its application of the competition rules. On paper, it refused to succumb to popular pressure, emphasizing the long-term benefits for consumers to secure waning political acceptance of the competition agenda. Commissioner Vestager, however, seems to have (re)introduced a broader approach to competition than her immediate predecessors. Vestager recognised that EU competition policy is based on 'political values and principles', and that the Commission's 'wider political priorities' can inform regulatory action, albeit not at individual case level (Vestager, 2015b). '[It is] not the law of the jungle but the law of democracy that works' (Financial Times, 2017a). The winds of change are illustrated by the Commission's stretch

1 First, vertical restraints policy was reformed with the adoption of a new vertical block exemption regulation ("BER") (European Commission, 1999) and new guidelines (European Commission, 2000c). The Commission also issued new BERs for R&D and specialisation agreements (European Commission, 2000a, 2000b) and guidelines on the application of art. 101(3) (European Commission, 2004a). Next, merger control was reformed with a new merger regulation (Council of the EC, 2004) and the adoption of guidelines on the assessment of (non-)horizontal concentrations (European Commission, 2004b, 2008). Lastly, abuse of dominance policy was reformed with a guidance on the Commission's enforcement priorities in applying art. 102 (European Commission, 2009a).

2 All papers are single-authored, but I am grateful to my supervisors, examination board and internship supervisors for their insightful comments and constructive criticism.

of power regarding fiscal rulings,[3] the rebirth of excessive abuses,[4] and an increased concern for consumer choice[5] and economic and social fairness[6]. Some recent cases in digital industries may suggest that the Commission is testing the boundaries between competition policy and regulation even further. Examples of novel regulatory issues include the potential role of competition policy in supporting broader socioeconomic policies regarding the protection of innovation, net neutrality, media pluralism and privacy, and even financial stability.[7]

This contextual outline shows that the rather strict distinction between a freedom/legal formalism-nexus (the "less economic" approach) and a welfarism/empiricism-nexus (the "economic" approach) that dominates current literature on the role of economics in EU competition policy cannot capture the true essence of the MEA, to the contrary, it creates apparent inconsistencies. Therefore, I adopt an *interdisciplinary approach*, which combines the insights of economics, law and new institutionalism. This implies that "less" or "fully" economic approaches to competition policy are treated as the extrema of a continuum on which the MEA can be located. The interdisciplinary perspective tackles some hard-rooted myths about EU competition policy, such as the perception that pre-reform policy was not effects-based at all, or the idea that it is only a matter of time before the MEA results in the adoption of a pure welfare standard. Only an interdisciplinary approach allows to explain why welfarist goals sit alongside non-welfarist goals, why legal formalism is combined with an effects-based approach, and why this less than "economic" approach is economically sound in an EU setting.

The interdisciplinary aspect is present in two ways. *First*, it is reflected in my work's core perspective, which is the premise that the scope and boundaries of the MEA are inevitably determined by whether an economic approach is normatively desirable, legally possible and institutionally feasible. As explained above, this belief is less self-evident than it sounds. The MEA has not only polarized the debate, to an extent, it has left lawyers and economists lost in translation. They use the same concepts, but it is easily forgotten that the meaning they attach to them does not fully overlap. The most obvious examples are probably 'restriction of competition' and 'consumer welfare'. An economist's interpretation of these concepts is a lot narrower than the legal definition. What is more, the legal goals

3 SA.38375 State aid which Luxembourg granted to Fiat [2015]; SA.37667 Excess profit exemption in Belgium [2016]; SA.38373 - Alleged aid to Apple [2016].

4 Vestager (2016) stated that whereas generally competition policy protects consumers indirectly by guaranteeing a competitive market structure, direct intervention sometimes is needed to correct excessive prices or other exploitative abuses e.g. the Gazprom case and cases involving the pharmaceutical sector or standard-essential patents.

5 See Vestager's announcement of the Google fine (2017), the Commission's press release regarding the final report on the e-commerce sector inquiry (European Commission, 2017b) and three recent investigations into suspected anticompetitive practices in that sector. For an analysis of the role of consumer choice in EU competition policy, see Nihoul (2012).

6 See e.g. Laitenberger (2017); Vestager (2015b). The idea of fairness has recently re-entered the policy discourse underpinning competition law enforcement in the EU (and beyond), see the 13th GCLC Annual Conference: "Fairness" in Competition Law and Policy (25-26 January 2018, Brussels).

7 For indications for the introduction of an innovation theory of harm, see the Google cases and COMP/M.727 Novartis/GlaxoSmithKline oncology business [2015]; COMP/M.7559 Pfizer/Hospira [2015]; COMP/M.7932 Dow/Dupont [2016]; COMP/M.7962 ChemChina/Syngenta [2017] and COMP/M.8084 Bayer/Monsanto (ongoing). As to net neutrality, see the case against Google's comparison shopping service (European Commission, 2016b). Arguably, media pluralism and content choice played a role in the conditional approval of the Liberty Global/De Vijver merger (Case M.7194 [2015]). Also see the investigations into Google, Amazon and Disney. As to privacy, whereas in the Facebook/WhatsApp merger, the Commission stated that 'privacy-related concerns flowing from the increased concentration of data [...] do not fall within the scope of EU competition law' (European Commission, 2014), in the Microsoft/LinkedIn merger case, it 'concluded that data privacy was an important parameter of competition' (European Commission, 2016a). Interestingly, in the meanwhile, the Commission has fined Facebook for providing misleading information about its ability to establish reliable automated matching between the two companies' user accounts (European Commission, 2017a). Mid 2019, Vestager announced that the Commission is investigating if Facebook's planned cryptocurrency will harm competition. The potential role of competition policy in these regulatory matters is a hot issue on both sides of the Atlantic, see Bush (2010); Goldstein and Véron (2011); Markham Jr (2011); Stucke (2012) (firms that are too big to fail); Becker, Carlton, and Sider (2010); Ohlhausen (2016); Ratliff and Rubinfeld (2014) (net neutrality); Evens and Donders (2016); Iosifidis (2014) (media pluralism) and Costa-Cabral and Lynskey (2017); Drexl (2017) (privacy).

of competition policy cannot be accommodated by the main workhorse of modern IO – neoclassical price theory - which is static in essence. My research tries to rise above the polarization and not take side. Moreover, it adds an extra dimension which is as good as absent from current literature on EU competition policy – the particularities of the EU as an institution and the idiosyncratically European system of beliefs. These institutions in the broadest sense of the word form the background against which law and economics interact, as they help shape the meaning of concepts such as consumer welfare and restrictions of competition. The insights from law, economics and new institutionalism are merged into the analytical framework that is developed in the first paper. This framework defines the continuum on which to locate the MEA in terms of its objectives and means for different types of firm behaviour. *Secondly*, the interdisciplinary approach is used to empirically analyse the nature of the MEA in EU merger policy. EU merger policy was at the forefront of an economic approach to competition policy and is generally believed to be grounded in sound economic analysis. Yet, more than fifteen years into the reform, it remains unclear whether and how the MEA has affected EU merger decisions. While all the details and nuances that are discussed in the first paper and in the overview of legal-institutional goals of merger policy cannot be moulded into econometric models, both for practical and technical reasons, the multidisciplinary framework is implemented in several ways. First, the analytical framework helps to define the MEA as a quantifiable concept. Based on the insights of the interdisciplinary framework, the MEA was identified as a decreased, though lasting reliance on structural measures of market power and a continuing effect on non-competition factors, such as the integration rationale. This in turn informed the design of the econometric models for decision outcomes and the chance of errors in terms of their explanatory variables. Finally, the interdisciplinary aspect is present in the interpretation of the results where I explicitly distinguish between economic *variables* and an economic *approach*. Whereas the economic model includes economic variables such as market shares, I did not treat these as purely economic variables, but as proxies for the way competition is interpreted as a legal-institutional concept, namely as a commitment to the process of competition.

The first paper adopts a qualitative approach to develop the interdisciplinary framework to analyse the scope and limits of an economic approach in EU competition policy and to identify the exact nature of the MEA. The analytical framework is based on a review of competition policy paradigms that have had an eclectic and evolving influence on EU competition policy. I discuss the "less" economic approaches of ordoliberalism and old-Harvard structuralism and the "fully" economic approach of the (Post-)Chicago school to construct a two-dimensional continuum on which to locate the MEA in terms of its objectives and the means by which to find an infringement. Next, I discuss EU competition policy in its wider historical context to create a point of reference and to situate the origins of the reform towards a MEA. Finally, the MEA is located on the continuum in terms of its objectives and means. The object of analysis is the Commission's secondary law and priority setting, the Courts' case law and the legal-institutional setting, which conditions the optimal design of EU competition policy from a broader welfarist perspective. The empirical papers are based on a sample of phase I merger decisions before and after the reform. I collected the variables of interest myself through an intensive reading of non-confidential decisions published on the website of DG Competition. The second paper employs a method developed by McFadden (1975, 1976) to deduce the preferences of government bureaucracies from the outcomes of their decisions. The Commission's merger decision rule is inferred using a binary logistic regression model that estimates the weight the Commission attaches to competition and non-competition factors before and after the reform. Next, the estimated weights before and after the reform are compared to analyse whether the MEA caused a structural break in the Commission's decision rule. While this method does not allow to judge the quality of EU merger policy before and after the reform in terms of accuracy, it enables an ex-post evaluation of the quality of merger control in terms of transparency, predictability, internal consistency and conformity to economic theory. The methodology used in the third paper *does* permit to evaluate the impact of the reform on the accuracy of decision-making. I rely on the event study approach, which provides an objective, market-based instrument to analyse the broader welfare effects of the reform in terms of the accuracy of decision-making, the efficiency of remedies and the impact on legal certainty.

Abstracts

Paper 1:
More economics, but still more than economics – An interdisciplinary analysis of the more economic approach in EU competition policy

Roughly fifteen years into the reform, the exact scope of the more economic approach ("MEA") remains controversial. Both believers and non-believers of the reform have quoted recent decisions and judgments to proof their case. Literature on the role of economics in EU competition policy traditionally has focused on whether the MEA is too much or too little economic from either a legal or an economic viewpoint. The more essential matter of what exactly defines a truly economic approach given the legal-institutional setting in which the policy is implemented has largely been ignored. This has resulted in a rather strict distinction between a freedom/legal formalism-nexus (the "less economic" approach) and a welfarism/empiricism-nexus (the "economic" approach). This article adopts an interdisciplinary approach to lift the debate beyond the absolutist view that dominates current literature. We find that EU competition policy has always tried to reconcile a mixed normative framework with an effects-based approach. After the reform, consumer welfare has been given greater weight, but the traditional commitment to the competitive process prevails. Yet, recent decisions and judgments show a more analytical approach to better substantiate the assumed link between harm to the competitive process and harm to consumers. Considering the legal-institutional setting of EU competition policy, this less than "economic" approach may be perfectly economically sound from a broader welfarist perspective.

Paper 2:
More economics, but still more than economics – An empirical analysis of the Commission's merger decision rule

This paper investigates the Commission's Phase I merger decision rule before and after the reform towards a 'more economic approach'. We constructed a database with 160 Phase I decisions covering the years 1992 to 2013. First, we inferred the impact of (non-)competition factors on merger decisions for both regimes using logistic regressions. Next, we compared estimates across regimes to detect a structural break. We find that the role of structural measures of market power has diminished, but post-reform merger control still seems to be affected by some non-competition factors and industry effects.

Paper 3:
A broader welfarist analysis of the reform of EU merger control: an empirical assessment

Against the background of the ongoing legal and economic debate on the (desired) scope of the more economic approach in EU competition policy, the welfare effects of competition policy are raising an increased interest among policy makers and scholars. This paper analyses the welfare effects of the 2004 reform of merger control in terms of the accuracy of decisions, the efficiency of remedies and legal certainty. We use event studies, which provide an objective instrument to analyse the welfare effects of the reform beyond allocative efficiency. We find that the reform has not dramatically improved the accuracy of decision-making. Whereas the chance of errors decreases significantly, this evolution can be fully ascribed to a drop in the probability of unnecessary remedies. Decisional errors are largely explained by non-competition factors, such as traditional structuralism and economic integration. Furthermore, the reform has had a positive impact on the predictability of merger decisions, but mainly for merging parties (and not rivals). Finally, both before and after the reform, remedies seem to be far less efficient than claimed in the Commission's remedy study. Yet, there are some indications that the introduction of the efficiency defence has improved the design of remedies in terms of the preservation of efficiencies.

More economics, but still more than economics – An interdisciplinary analysis of the more economic approach in EU competition policy

1 Introduction

The role of economics in EU competition policy is an ongoing source of controversy.[8] The debate so far has focused on whether the MEA is too little or too economic from either a legal, or a modern industrial organisation ("IO") viewpoint. In the meantime, the more essential debate over what exactly *defines* an economically sound competition policy for the EU has been neglected.

From the start in 1957, the EU has enjoyed extensive powers in the field of competition. Competition policy was the first truly supranational policy and it has been called the very cornerstone of the EU itself (McGowan & Wilks, 1995). The needs posed by a premature common market and fledgling institutions dictated the first twenty odd years of the policy (see e.g. Gerber, 1994b). In the eighties, the traditional approach started to attract criticism for being too legal form-based and too structuralist (see e.g. Hawk, 1995) and for protecting competitors instead of competition, to the detriment of consumers (for a discussion, see Fox, 2003; Swaine, 2002). From the late nineties, the Commission has gradually introduced substantive reforms, popularly known as 'the MEA', in all subparts of competition policy.[9] The MEA initiated a reorientation towards welfarist goals and an effects-based approach grounded in modern IO principles and empirical evidence.[10] The MEA gave rise to a reform of secondary law,[11] a consumer welfare-based rhetoric, and the appointment of a Chief Economist (Team) to enhance DG Competition's economic capacities and quantitative skills.

Yet, fifteen years into the reform, the exact scope of the MEA remains vague. It is unclear *how much* more economic the MEA is, and why and how it is *only* more and not fully economic. Overall, the Commission's approach to agreements seems to be grounded in sound economics. The Commission appears more reluctant, however, to depart from the traditional approach to abuse of dominance. Meanwhile, the political momentum for the MEA may have vanished. Competition policy is implemented in an increasingly politicized environment. The 2008 financial crisis has put back on the

8 The term 'competition policy' is used to refer to the whole of substantive norms, procedures, case law, decisional practice and priorities.
9 The substantive reform coincided with a procedural modernization by which art. 101(3) has become directly applicable (Council of the EC, 2003).
10 '[An economic approach] implies that the assessment of each specific case will not be undertaken on the basis of the form that a particular business practice takes […] but rather will be based on the assessment of [its] anticompetitive effects. This implies that competition authorities will need to identify a competitive harm, and assess the extent to which such a negative effect on consumers is potentially outweighed by efficiency gains. The identification of competitive harm requires spelling out a consistent business behaviour based on sound economics and supported by facts and empirical evidence. Similarly, efficiencies and how they are passed on to consumers should be properly justified on the basis of economic analysis and grounded on the facts of each case' (EAGCP, 2005a, p. 3) . Also see Röller and Stehmann (2006).
11 First, vertical restraints policy was reformed with the adoption of a new vertical block exemption regulation ("BER") (European Commission, 1999) and new guidelines on vertical restraints (European Commission, 2000c). The Commission also issued new BERs for R&D and specialisation agreements (European Commission, 2000a, 2000b) and guidelines on the application of art. 101(3) (European Commission, 2004a). Next, merger control was reformed with a new merger regulation (Council of the EC, 2004) and the adoption of guidelines on the assessment of (non-)horizontal concentrations (European Commission, 2004b, 2008). Lastly, abuse of dominance policy was reformed with a guidance on the Commission's enforcement priorities in applying art. 102 (European Commission, 2009a).

table the debate over the right division of tasks between markets and governments. The Commission faces increased pressure to consider growth and competitiveness more directly in its application of the competition rules. On paper, it refused to succumb to popular pressure, emphasizing the long-term benefits for consumers to secure waning political acceptance of the competition agenda (Almunia, 2014). Commissioner Vestager, however, seems to have (re)introduced a broader approach to competition than her immediate predecessors. For the first time since the introduction of the MEA, DG Competition is led by a Commissioner who is in no hurry to emphasize the similarities between the EU and the (welfarist) US approach to antitrust.[12] Vestager recognised that EU competition policy is based on 'political values and principles', and that the Commission's 'wider political priorities' can inform regulatory action, albeit not at individual case level (Vestager, 2015b). '[It is] not the law of the jungle but the law of democracy that works' (Financial Times, 2017a). The winds of change are illustrated by the Commission's stretch of power regarding fiscal rulings,[13] the rebirth of excessive abuses,[14] and an increased concern for consumer choice[15] and economic and social fairness[16]. Some recent cases in dynamic industries may suggest that the Commission is testing the boundaries between competition policy and regulation even further. Examples of novel regulatory issues include the potential role of competition policy in supporting broader socioeconomic policies regarding the protection of innovation, net neutrality, media pluralism and privacy.[17]

Disagreement over the (proper) role of economics, and therefore the scope and boundaries of the MEA, largely reverts to the unresolved debate on the goals of EU competition law. Literature on the normative foundations of EU competition policy is generally polarized between (mostly legal) scholarship asserting that a welfarist approach is undesirable, or at least incompatible with the case law (Andriychuk, 2011; Behrens, 2014, 2015; Lovdahl Gormsen, 2007, 2010a, 2010b; Schweitzer, 2008; Van Rompuy,

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[12] In a speech at the 2017 Web Summit technology conference, Vestager confessed she never feels more European than when she is in the US, because the EU was 'different' in recognizing the limitations of free markets. She attacked technology companies for undermining democracy and allowing 'fear' and 'greed' to drive anticompetitive behaviour and criticised the US for not going further to regulate big technology companies (Financial Times, 2017a).

[13] SA.38375 State aid which Luxembourg granted to Fiat [2015]; SA.37667 Excess profit exemption in Belgium [2016]; SA.38373 - Alleged aid to Apple [2016].

[14] Vestager (2016) stated that whereas generally competition policy protects consumers indirectly by guaranteeing a competitive market structure, direct intervention sometimes is needed to correct excessive prices or other exploitative abuses e.g. the Gazprom case and cases involving the pharmaceutical sector or standard-essential patents.

[15] See Vestager's announcement of the Google fine (2017), the Commission's press release regarding the final report on the e-commerce sector inquiry (European Commission, 2017b) and three recent investigations into suspected anticompetitive practices in that sector. For an analysis of the role of consumer choice in EU competition policy, see Nihoul (2012).

[16] See e.g. Laitenberger (2017); Vestager (2015b). The idea of fairness has recently re-entered the policy discourse underpinning competition law enforcement in the EU (and beyond), see the upcoming 13th GCLC Annual Conference: "Fairness" in Competition Law and Policy (25-26 January 2018, Brussels).

[17] For indications for the introduction of an innovation theory of harm, see the Google cases and COMP/M.727 Novartis/GlaxoSmithKline oncology business [2015]; COMP/M.7559 Pfizer/Hospira [2015]; COMP/M.7932 Dow/Dupont [2016]; COMP/M.7962 ChemChina/Syngenta [2017] and COMP/M.8084 Bayer/Monsanto (ongoing). As to net neutrality, see the case against Google's comparison shopping service (European Commission, 2016b). Arguably, media pluralism and content choice played a role in the conditional approval of the Liberty Global/De Vijver merger (Case M.7194 [2015]). Also see the investigations into Google, Amazon and Disney. As to privacy, whereas in the Facebook/WhatsApp merger, the Commission stated that 'privacy-related concerns flowing from the increased concentration of data […] do not fall within the scope of EU competition law' (European Commission, 2014), in the Microsoft/LinkedIn merger case, it 'concluded that data privacy was an important parameter of competition' (European Commission, 2016a). Interestingly, in the meanwhile, the Commission has fined Facebook for providing misleading information about its ability to establish reliable automated matching between the two companies' user accounts (European Commission, 2017a). The potential role of competition policy in these regulatory matters is a hot issue on both sides of the Atlantic, see Bush (2010); Goldstein and Véron (2011); Markham Jr (2011); Stucke (2012) (firms that are too big to fail); Becker et al. (2010); Ohlhausen (2016); Ratliff and Rubinfeld (2014) (net neutrality); Evens and Donders (2016); Iosifidis (2014) (media pluralism) and Costa-Cabral and Lynskey (2017); Drexl (2017) (privacy).

2011; Wils, 2014b) and (mostly economic) scholarship asserting that the pursuance of non-welfarist goals is irreconcilable with modern competition policy (Ahlborn & Padilla, 2008; Akman, 2009; Bishop & Ridyard, 2002; Kallaugher & Sher, 2004; Nazzini, 2006; Odudu, 2006; Sher, 2004; Venit, 2014, 2016). Discussions on the optimal legal test often mirror the polarisation in the goals-related debate. Legal form- and effects-based approaches are contrasted as distinct universes (Bishop & Ridyard, 2002; Petit, 2009). Advocates of the welfarist approach claim that the legal form-based approach is overinclusive and therefore detrimental to consumer welfare, whereas critics of the welfarist approach rate the formalist approach for being more administrable and for protecting legal and economic certainty. As a result, existing literature draws a rather strict distinction between an economic freedom/legal formalism-nexus (the "less" economic approach) and a welfarism/empiricism-nexus (the "economic" approach). Few scholars try to overcome this absolutist view. They attempt to reconcile possible tensions between welfarist and non-welfarist goals by adopting a constitutional economics perspective (Jones, 2010a; Kerber, 2008; Vanberg, 2011);[18] by renouncing doctrinal monoculturism in competition economics (Budzinski, 2008), or by suggesting a cost-benefit analysis to balance welfarist and public policy objectives by converting them into a common denominator (Townley, 2009). Christiansen and Kerber (2006) aim to harmonize an effects-based approach and legal-formalism by advancing a model for the formulation of optimally differentiated rules. Nonetheless, EU literature generally ignores that the optimal design of a competition policy regime depends upon the institutional framework within which it operates. Some exceptions are Gifford and Kudrle (2003), McDonnell and Farber (2003) and Evans (2009), who discuss some institutional factors to assess the latitude for convergence with the welfarist US antitrust regime.

The purpose of this study is to lift the debate on the (proper) role of economics beyond the traditional absolutist approach by combining the insights of legal, institutionalist and economic literature. The scope and boundaries of the MEA are inevitably defined by whether an economic approach is normatively desirable, legally possible and institutionally feasible. An interdisciplinary approach therefore performs better in explaining how competition goals sit alongside non-competition goals, and how EU competition policy combines legal formalism with an effects-based approach. Also, an interdisciplinary perspective allows to explain how the reform towards a MEA resembles an Echternach procession without a fixed endpoint, rather than a unidirectional journey towards a "fully" economic approach. Furthermore, an interdisciplinary approach calls into question the supposition that modern IO principles are the only criteria by which to evaluate whether EU competition policy is grounded in sound economics. So far, the debate has focussed on whether the MEA is too little, or too economic from either a legal, or a modern IO viewpoint. The true controversy may well revolve around what exactly defines an economically sound competition policy in an EU setting. I analysed the Commission's secondary law and priority setting regarding agreements and abuse of dominance to locate the MEA on a continuum between "less" and "fully" economic approaches to competition policy. Administrative practice is confronted with the case law and situated against the legal-institutional context of EU competition policy to analyse the broader welfare implications of the adoption of legal rules based on modern IO principles. This article has a diagnostic, rather than a solution-oriented

[18] Constitutional economics is related to classical political economy as found in the writings of Adam Smith. In contrast to neoclassical economics, which takes the existing legal-institutional setting as a given, it explains the working properties of alternative sets of legal-institutional rules that define the framework within which economic and political agents make choices. Accordingly, normative considerations enter the analysis in a much more complex manner than through the neoclassical efficiency criteria of welfare economics (see e.g. Buchanan, 1991).

purpose. Yet, lessons drawn from the interdisciplinary analysis may provide insights in how the Commission and the Courts try to reconcile seemingly mutually distinct nexuses.

Section 2 develops the analytical framework on the basis of a review of competition policy paradigms that have had an eclectic and evolving influence on EU competition policy. I discuss the "less" economic approaches of ordoliberalism and Harvard structuralism and the "fully" economic approach of the (Post-)Chicago school to construct a continuum on which to locate the MEA in terms of its objectives and the means by which to find an infringement. Section 3 discusses EU competition policy in its wider historical context to create a point of reference and to situate the MEA. Section 4 locates the MEA on the continuum between "less" and "fully" economic approaches in terms of its objectives and means. Both sections confront the Commission's secondary law and priority setting with the Courts' case law and the legal-institutional setting, which conditions the optimal design of EU competition policy from a broader welfarist perspective. Section 5 discusses the findings and concludes.

2 Analytical framework: 'less' and 'fully' economic approaches to competition policy

Key to analysing the MEA is understanding the meaning of the adverb "more". The use of the adverb begs the question *how much* more economic the MEA is (or should be). The analytical framework is developed on the basis of a review of three contending competition policy paradigms that have had an eclectic and evolving impact on EU competition policy. The paradigms give meaning to economic concepts (e.g. barriers to entry) and their legal implications (e.g. restriction of competition) (Lianos, 2010, p. 230). Accordingly, they reflect particular views on competition and the well-functioning of markets and governments (Jacobs, 1995, p. 225). I discuss the "less" economic approaches of ordoliberalism and Harvard structuralism, which exerted a great influence on early EU competition policy, and the "fully" economic approach of the (Post-)Chicago schools (referred to as modern IO), which is commonly seen as the main intellectual source for the MEA.[19]

2.1 Freiburg school ordoliberalism: economic freedom and legal formalism

Ordoliberalism is commonly referred to as the intellectual foundation of EU competition policy (Gerber, 1998; Vanberg, 2004).[20] The school's central concern was the economic and political freedom of the individual. Ordoliberalism was founded in the 1930s at the University of Freiburg by the economist Eucken and the lawyer Böhm.[21] The failing Weimar Republic had paved the way for a totalitarian regime with a centrally planned economy, which resulted in a concentration of economic and political power. The protection of the competitive process therefore was at the heart of ordoliberal competition policy. Because competition disperses economic power, only an economic system based on economic freedom can guarantee a free society (Eucken, 2006, p. 231). As a corollary, free competition safeguards

19 None of the schools discussed are monoliths. However, for reasons of analytical clarity, I only discuss orthodox forms.

20 Some authors challenge this view (see eg. Akman, 2009; Akman & Kassim, 2010; Maier-Rigaud, 2012, also see Section 2).

21 For a review of 'second generation' ordoliberalism, see Behrens (2014). Whereas second generation ordoliberals stay true to the protection of individual freedom and consumer choice, and the idea of orders, they renounce perfect competition as a proper benchmark for policy purposes (Mestmäcker & Schweitzer, 2004).

political freedom, and hence democracy itself (Böhm, 1961, p. 269). Ordoliberals put forward as a policy benchmark the textbook example of 'perfect competition (*vollständiger Konkurrenz*), in which all market players are price takers (Eucken, 1952, p. 248). Clearly, they adhered to a Smithian view of competition as a process of rivalry.[22] Given this normative framework, a restriction of competition was legally defined as a *restriction of economic freedom*. From their classical understanding of competition, ordoliberals believed that economic freedom results in efficiency (Behrens, 2014, pp. 27-28). However, should both collide, economic freedom as a fundamental right got the upper hand. Indeed, general welfare effects cannot be attributed to individual market transactions. They are the result of the process of competition as such. Hence, the evaluation of the merits of individual business strategies was not up to competition authorities, but to consumers in the market (ibid.).

Despite obvious influences from classical liberalism, the collapse of the Weimar Republic led ordoliberals to reject the idea of well-functioning markets as natural phenomena. The school advocated an *ordered* economy, not a laissez-faire one. Competition law should be part of the constitutional order, which recreates the economic order by defining the rules of the game (W*irtschaftsverfassung*) (Eucken, 1989, p. 52). Rules had to be general and privilege-free, so that all market participants could interact as legal equals (Böhm, 1980, p. 141). The school thereby stressed the need for a strong government that could guarantee compliance with the rules. However, to construct a truly free society, the competitive process had to be sheltered from *both* market players and politics by the rule of law (Böhm, 1937, p. 161). Clear-cut rules not only outlined the boundaries of economic freedom, they also limited administrative discretion and rent-seeking. This resulted in a *legal form*-based approach which focused on juridical-technical analysis to establish a restriction of competition.

In practice, all power-creating conduct, such as cartels and mergers, were forbidden. Avoidable monopolies had to be split up, unavoidable monopolies had to be regulated. The few firms left standing with market power should behave *as if* they had none (Miksch, 1947, pp. 98-99).[23] This precluded any (ab)use of power: a dominant company could not adopt conduct it could only adopt *because of* its dominant position. Abuse of market power was defined in contrast to 'fairness'. Firms should compete on performance (*Leistungswettbewerb*), not by restraining competitors (*Behinderungswettbewerb*) (Eucken, 1952, p. 247). Furthermore, ordoliberals banned vertical restrictions, because they have a tendency to curb the economic freedom of other market participants and to restrict free market access (Gerber, 1994a, p. 53).

2.2 Harvard School: competitive market structure and structuralist determinism

Structuralism was the dominant approach to market analysis in the US in the 1950s-70s. The school is associated with Harvard school economists such as Mason and Bain.[24] The central concern was the

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22 This view is shared by Austrian economists such as Hayek (1968, pp. 9, 10), who considered competition 'as a procedure for discovering facts which, if the procedure did not exist, would remain unknown or at least would not be used'. The only value of competition therefore is that 'its outcomes are unpredictable and on the whole different from those that anyone would have been able to consciously strive for'.

23 However, some authors point out that the 'as if' doctrine was controversial, even in ordoliberal circles (Schweitzer, 2008, pp. 133-134 and sources cited there).

24 In the late seventies, a 'new Harvard' school started to develop based on the ideas of Turner, Areeda and Breyer. New Harvard in many aspects is reconcilable with Chicago (reduced concern with entry barriers and vertical integration, bigger focus on economic efficiency, concern with over-enforcement etc.). However, its focus on administrability and the limitations of competition enforcers in understanding and

protection of a competitive market structure. For decades, US competition policy had been lenient towards big firms (Hofstadter, 2008, p. 193), which resulted in excessively concentrated, overpriced and inefficient industries (FTC, 1940). Moreover, the Great Depression and the rise of imperfect competition theory had caused profound distrust in markets (Hovenkamp, 2010, p. 614). On a normative level, Harvard scholars stressed that the Sherman Act's initial concern was to curb the economic and political power of large trusts (Piraino Jr, 2007, p. 349). From a structuralist perspective, competition was instrumental in bringing about desirable economic results (e.g. allocative efficiency, technological progress, stability of employment), but it had value in itself also: competition was considered a public good as it prevents the accumulation of economic and political power, ensures fairness and individual freedom and controls wealth transfers.[25]

The school relied on oligopoly theory, which is structuralist in nature. Harvard scholars believed that any deviation of the market structure from basic competitive conditions would result in anticompetitive behaviour (Bain, 1959). Empirical inter-industry studies[26] had revealed a statistical link between industry concentration and respectively barriers to entry[27] and price-cost margins (Bain, 1956; Mason, 1939). These findings were formalized in the structure-conduct-performance paradigm: market structure determines the way in which firms compete and hence the overall performance of the market. Performance indicators were not only of an individual nature, they also included e.g. social progress (Bain, 1959, pp. 11-12). Maintaining a competitive market structure therefore was at the heart of structuralist competition policy. This implies that a restriction of competition was legally defined as a *deterioration of the competitive market structure*. The deterministic link between market structure and market performance translated into a *per se* approach, which focused on a structuralist analysis to find a restriction of competition (i.e. market shares, concentration indices and barriers to entry).

What does this imply in practice? Competition policy should engineer a level of *workable* competition (Clark, 1940). Structuralist criteria for this more realistic alternative to perfect competition included: as many firms as economies of scale permit, no artificial barriers to entry and moderate and price-sensitive product differentiation (F. Scherer & Ross, 1990, p. 53). Accordingly, market power that did not result from economies of scale, low prices or superior products was considered 'unreasonable' and illegal *per se* (Kaysen & Turner, 1959, pp. 4-5). Firms in concentrated industries were deterred from transactions that increased concentration levels. As market forces were considered too weak to challenge big firms and barriers to entry were considered persistent and omnipresent, Harvard proposed to break-up economic giants (Kaysen & Turner, 1959, pp. 111-119). Vertical integration and vertical restrictions were also treated harshly as some of these practices were feared to stifle competition in complementary markets (the so-called 'leverage theory') (Turner, 1958).

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correcting market failures creates tension with the rule of reason advocated by the Chicago school. For a discussion of new Harvard policy prescriptions and its impact on US antitrust policy, see Hovenkamp (2005) and Kovacic (2007).

[25] This implied a degree of active protection of individual businessmen and small firms (Van den Bergh & Camesasca, 2001, pp. 30-32). This fact contributed to the structuralist school being referred to as the 'populist school' of antitrust (see the Warren Court).

[26] Inter-industry studies are tools that permit predictions about real world markets based on relatively stable, observable variables (Schmalensee, 1989, p. 954).

[27] Bain defines barriers to entry rather broadly as factors that make entry costly e.g. economies of scale and cost and product differentiation advantages of incumbent firms (Bain, 1956, p. 43). For a discussion of the concept of barriers to entry and its application in practice, see Schmalensee (1987).

2.3 (Post-)Chicago: consumer welfare and microeconomic empiricism

The ideas of the Chicago and post-Chicago schools are commonly viewed as the main intellectual source for current antitrust policy in the US and for the reform towards a MEA in the EU. The Chicago school has dominated antitrust thinking in the US since the late 1970s and 80s.[28] The school builds on the ideas of Director, Bowman, Bork and Posner. Its central concern is consumer welfare and efficiency. Several developments prompted a new approach to competition policy: US firms were feared to have lost ground internationally after decades of structuralist antitrust policy (Fox & Sullivan, 1987, pp. 944-945); the contestability theory restored trust in self-regulating markets (Baumol, 1982); the role of inter-firm cooperation in boosting efficiency was demonstrated (Williamson, 1973) and Harvard's inter-industry studies were attacked on data and methodology grounds (Schmalensee, 1989). So, with the rise of the Chicago school, a less interventionist era of competition policy was announced, which centred around one goal only: consumer welfare. Legal scholar Bork, who coined the term, equated it with allocative efficiency (1978, p. 90). Therefore, in theory, the benchmark for Chicagoan competition policy is a *total* welfare standard.[29] Social and political goals, such as the dispersion of power and the protection of small market players, are considered unjustifiable because they decrease welfare.

The Chicago school builds on a single model of competition to analyse firm behaviour, namely neoclassical price theory, which relies on the assumptions of profit and utility maximizing actors and perfect information. Chicagoans trust markets are generally self-correcting through the threat of entry, so market power and supranormal profits are considered to be temporary at best (Easterbrook, 1984, p. 15). To Chicagoans, contrary to structuralists, barriers to entry are largely insignificant (Demsetz, 1976a, p. 382; Stigler, 1964).[30] Concentration and 'bigness' therefore stem from superior efficiency instead of anticompetitive behaviour (Demsetz, 1974, p. 164). Rather than a particular market structure, competition becomes a *result* that is definable in pure welfarist terms. Accordingly, a restriction of competition is legally defined as a *reduction in consumer welfare*, irrespective of the market form or conduct that creates this welfare loss. With the exception of practices that are clearly detrimental or beneficial (*per se* rules), firm practices therefore should be assessed case-by-case to directly balance welfare-reducing effects and efficiency gains (Baker & Shapiro, 2008, pp. 236, 238-239; F. Scherer & Ross, 1990, pp. 533-535). This results in an effects-based approach grounded in microeconomic empiricism, including the adoption of an efficiency defence, to find a restriction of competition.

What does this imply in practice? Chicagoans are more concerned with type I errors than type II errors (see e.g. Easterbrook, 1984).[31] Chicago School competition policy therefore is minimalist. Competition authorities should only intervene where an 'as efficient' competitor is eliminated or when artificial barriers to entry are erected (Posner, 2001, pp. 194-195). The school assumes efficiency reasons for most firm behaviour but naked horizontal restrictions[32] and mergers-to-monopoly. Nonetheless, cartels

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[28] This Chicago School is to be distinguished from the First Chicago School of the late 1930s (with proponents such as Knight, Viner, Simons), which showed important similarities with the Harvard School (see e.g. Van Horn & Mirowski, 2009). For a review of the different Chicago schools, see Crane (2009).

[29] Especially regarding mergers and innovative monopolies, a consumer and total welfare benchmark can yield substantially different results (see Williamson, 1968).

[30] Contrary to Bain, Stigler defines barriers to entry narrowly as the extra costs a new entrant faces that the incumbent did not have to incur (Schmalensee, 1987, pp. 43-44).

[31] Type I errors refer to 'false negatives' or wrongful conviction, type II errors refer to 'false positives' or wrongful acquittal.

[32] These are horizontal restrictions that aim to restrict competition without apparently producing pro-competitive effects, e.g. direct and indirect forms of price-fixing, output restrictions and market sharing.

are seen as inherently unstable because of strong temptations to cheating (Posner, 2001, p. 67). In its strongest version, Chicago advocates a presumption of legality for vertical agreements, small horizontal mergers and all vertical and conglomerate mergers as their procompetitive effects are assumedly ubiquitous (Bork, 1978, p. 288). As a result, Chicagoans are not really concerned about exclusionary practices. E.g. they do not belief in the rationality of predatory pricing strategies: low prices are thus likely to reflect procompetitive behaviour instead of foreclosure strategies (see e.g. McGee, 1980).

The late 1980s saw the rise of the eclectic post-Chicago School, with proponents such as Fox, Lande and Sullivan. While the contributions of the school are hard to summarize (for a discussion, see Cucinotta, Pardolesi, and Van den Bergh (2002)), post-Chicago scholars demonstrated that firms *can* make profits without being efficient by taking strategic advantage of market failures. Accordingly, in a post-Chicago era the room for enforcement remains a heavily debated matter amongst academics and practioners. Building on modern IO insights, Van Cayseele (2002) provides an analytical framework that illustrates the different paradigms of the Harvard and Chicago schools, and determines some of the factors that modern IO has added to the discussion. He shows that, depending on a number of features of the industry involved, the outcome will be closer to the Chicago or Harvard predicted outcomes. The main advantage of such a framework is that it can be used by competition authorities to determine their priorities. At case level, both economic and institutional factors will play a role in the outcome of the enforcement activities of competition authorities.

2.4 Conclusion: analytical framework

The review of “less” and “fully” economic approaches to competition policy defined a continuum on which to locate the MEA in terms of its objectives (between economic freedom and consumer welfare) and means (between legal formalism and empiricism). Figure 1 gives a schematic overview.

Figure 1: overview of ‘ less’ and ‘fully’ economic approaches to competition policy in terms of their objectives and means

Less/fully economic approaches	***Objectives dimension***	***Means dimension***
Ordoliberalism	Economic freedom	Legal formalism (rule of law)
Structuralism	Economic and political goals	Structuralist determinism
Welfarist approach	Consumer welfare	Effects analysis (rule of reason)

The overview allows us to make two conclusions about the role of economics in competition policy. First, economics can contribute to competition policy in several ways. As a theoretical tool, economics informs the protective aim of the law and it provides input for legal presumptions in terms of necessary and sufficient conditions for anticompetitive harm to occur. As an analytical tool, economics offers possible theories of harm as a guiding framework for the competitive assessment of cases and the apparatus for the quantification of effects.[33] The expressions “less” and “more” economic therefore are equivocal. All schools are ‘economic’ in that they all apply economic insights to design legal rules and/or assess individual cases. First, what differentiates schools is the e*conomic model* they build on:

[33] Recently, there has been an increased interest in policy post-evaluation studies, an area in which economic input can be of considerable importance (see e.g. Buccirossi, Ciari, Duso, Spagnolo, & Vitale, 2013; Ormosi, Mariuzzo, & Havell, 2015). This application of economics in competition policy however goes beyond the purpose of this study.

the welfarist schools are grounded in neoclassical economics, the traditional schools in classical economics. Although the objectives of competition policy are a legal matter entirely, the conception of competition inherent in these models informs the protective aim of the law. From a neoclassical economics perspective, competition is a static result which does not rely on the way in which firms organize and compete. On the contrary, classical economics views competition as a dynamic process of rivalry between firms competing over market shares. Consequently, under a welfarist approach, competition law directly protects consumers welfare, whereas the traditional schools protect the process of competition. This does not mean that traditional schools do not care about the *effects* of firm conduct. Rather, they focus on the effects on the *competitive process*, which in itself is the source of anticompetitive harm. Once harm to the process of competition is established, there is no need to show actual effects. Competition law based on a process-oriented conception of competition is not necessarily less rational economically speaking. It may weaken incentives of firms to compete for dominance, but it will strengthen incentives to enter markets and compete (Schweitzer, 2008, p. 155). Whether a competition policy regime wants to focus on the former, or rather the latter ultimately is a normative choice. Secondly, whether theories of harm and legal tests are based on harm to consumer welfare or rather the competitive process does not necessarily say anything about the amount and intensity of economic analysis at the individual case level. Because ordoliberalism lacks an economic analytical model (Hildebrand, 2002, p. 4), economic analysis in individual case assessment is inevitably limited. The use of economics is concentrated at the level of the design of legal rules, which incorporate the idea of the sociopolitical embeddedness of competition. Accordingly, welfarist goals should be considered at the constitutional level, not at the individual level (this relates to a constitutional economics viewpoint, see e.g. Kerber, 2008; Vanberg, 2011).[34] Structuralism, however, *does* rely on economic analysis to assess individual cases. Yet, building on oligopoly theory, a structuralist analysis evolves around those economic indicators that allow to determine whether firm conduct makes it more difficult for (potential) competitors to compete, expand or gain access to the market instead of on the ability and incentives of firms to profitably raise prices or restrict output. At the same time, even under a welfarist approach, an effects analysis does not need to be restricted to hard data or involve complex econometric analyses and may be based on more readily available qualitative evidence. However, a truly economics-based competition policy minimises the *expected total social costs* of enforcement. Hence, secondly, competition policy is more than (industrial) economics. Norms and values determine a society's beliefs regarding the appropriate division of tasks between markets and governments. From a constitutional economics viewpoint, competition policy should reflect this consensus to pass the democratic legitimacy test (Brennan & Buchanan, 1985; Buchanan, 1987). In this sense, a restriction of competition is a legal, not an economic concept (Bishop & Walker, 2010, pp. 15-50; Eilmansberger, 2005, p. 137). Moreover, the expected costs of errors, their relative incidence and the system costs of enforcement depend upon the institutional set-up. As a result, from a broader welfarist perspective, the proper role of economics in competition policy is subject not only to the state of economic science, but also to the legal-institutional environment in which the policy is implemented.

In the following sections, I locate the MEA on the continuum between "less" and "fully" economic approaches to competition policy. The analytical framework consists of a two-dimensional study of the objectives and means of EU competition policy before and after the reform (see Figure 2). The objectives dimension concentrates on the normative framework and the conception of competition; the

[34] Note that this does not prevent an update of the rules in line with new developments in economic theory.

means dimension concentrates on the object of the effects analysis and the need to show effects. The unit of analysis is the Commission's priority setting and secondary law regarding agreements and abuse of dominance. The evolving role of economics in the Commission's administrative practice is confronted with the case law and is situated within the legal-institutional context, which permits a broader welfarist analysis of an economic approach in an EU setting.

Figure 2: Two-dimensional analytical framework

MEA	***Objectives*** ***Freedom ↔ welfare***	***Means*** ***Form ↔ effect***
Competition policy before the reform: more economic than what?	*Normative framework* *Conception of competition*	*Object of the effects* *Need to show effects*
Competition policy after the reform: how much more economic?	*Normative framework* *Conception of competition*	*Object of the effects* *Need to show effects*

3 More than what? EU competition policy before the reform

The following section analyses the objectives and means of EU competition policy in its wider historical context to create a point of reference and to situate the reform towards a MEA. Administrative practice is confronted with the Court's case law and the legal-institutional setting. The analysis shows that, from the beginning, the foundations were laid for a hybrid regime: welfarist goals sit alongside non-welfarist goals and the boundaries between a formalist approach and an effects-based approach are sometimes vague. Given the legal-institutional setting of early EU competition policy, a mixed normative approach and a certain reliance on legal formalism were rational choices from a broader welfarist perspective.

3.1 Substantive and procedural norms

The history of EU competition policy is 'necessarily and peculiarly European' (Amato, 1997, p. 45). Competition policy was unknown territory in post-war Europe.[35] What is more, the member states did not agree on the policy's importance, or desirability even. While France fiercely guarded its sovereignty over industrial policy, Germany favoured strong competition provisions and a strong competition authority (Küsters, 1982, p. 364).[36] The other member states took intermediate positions (ibid.). The struggle between different legal and social traditions converted into a hybrid competition policy regime that combines (and falls outside) the paradigms discussed above. The substantive norms set out in the Treaty merge ordoliberal and structuralist elements with a welfare-based approach. First, art. 101(1) TFEU prohibits restrictive agreements such as naked cartels, but also discrimination and unfair

[35] None of the Founding Six had a competition policy regime in place. Germany had enacted the Act against Restraints of Competition in 1957, without however having experience implementing it.

[36] Yet, some authors point out that the German delegation was internally divided despite ordoliberal influences on economic policy in Germany (see e.g. Buthe & Swank, 2007, p. 23).

contractual conditions. Yet, art. 101(3) TFEU provides for efficiency-based exemptions provided that consumers receive a fair share of the resulting benefits. Nonetheless, the two-pronged structure of art. 101 makes little sense from a welfarist viewpoint: an agreement that produces a net benefit for consumers cannot be restrictive of competition. Moreover, an exemption can only be granted insofar the agreement does not eliminate competition (ibid.). Secondly, the Treaty provides for a policy towards dominant firms (art. 102 TFEU). It does not however forbid market dominance, not even *avoidable* monopolies, but only the *abuse* of such dominant position. Examples of abuse include the limitation of production or technical development to the prejudice of consumers, but also unfair prices and other unfair trading conditions.[37] In contrast to any of the competition policy paradigms discussed above, the Treaty does not provide for preventive merger control. The member states could not reach an agreement on the transfer of such politically sensitive competence until 1986 (Bulmer, 1994). As to procedural norms, the Treaty of Rome left the matter of the degree of centralisation to be dealt with by Community legislation. The 1962 and 1965 Council Regulations created the strong competition authority ordoliberalism prescribed: the Commission was firmly put at the centre of a truly supranational competition policy (Council of the EEC, 1962, 1965). The 1962 Implementing Regulation gave the Commission broad investigative powers and near-judicial decision authority. On the basis of the Implementation Regulation, the Commission installed a centralized notification system for agreements, which came with the monopoly to grant exemptions under art. 101(3). In 1965, the Council even granted the Commission the quasi-legislative power to declare by way of block exemption regulations (BERs) that certain categories of agreements and concerted practices were generally compatible with the provisions of art. 101(3) and therefore automatically exempted. However, the Commission's unique measure of discretion in the field of competition (Cini, 1996, p. 23) should not be interpreted as a pure token of ordoliberal influences. The Commission's victory was possible only because member states misjudged the rigour with which the former was going to use its extensive powers (Gerber, 1994b, p. 103; Wilks & Bartle, 2002). They continued exercising control in formal and informal ways, e.g. by keeping DG Competition understaffed through low budget allocations (Buthe & Swank, 2007, p. 19).

3.2 Administrative practice

3.2.1 Objectives and priority setting[38]

With the substantive and procedural norms in place, the Commission embarked on institution building and policy development. Its first task was to tackle national hostility towards competition policy, *especially* a supranational one. To create a common competition culture and to legitimize its extensive powers in the field, the Commission needed to connect the policy with a unifying goal. Integration fitted the purpose. Supranational competition law became politically acceptable because it was critical to achieving the internal market (Gerber, 1994b, p. 114; 1998, pp. 347-348). The integration imperative

37 Contrary to US antitrust law, EU law prohibits exclusionary as well as exploitative abuses. This has been linked (rightly so or not) to the latter's ordoliberal roots, more specifically the 'as if' doctrine (O'Donoghue & Padilla, 2014) and the notion of fairness (Gal, 2004).

38 The Commission enjoys a large margin of discretion in prioritising cases as long as it respects the tasks entrusted to it by the Treaty. See e.g. Case T-24/90 Automec Srl v Commission [1992] ECR II-2223, para. 77 and Case C-119/97 P Ufex v Commission [1999] ECR I-1341, paras 88, 92.

has been called 'perhaps the most original feature' of EU competition policy (Cini & McGowan, 1998, p. 10). The internal market is at the core of a distinctively European conception of competition. Popular endorsement for integration was based on the association with economic freedom and the rule of law (Andriychuk, 2011, p. 8; Patel & Schweitzer, 2013, pp. 1-2).[39] The internal market was therefore at once the goal of competition *and* the means by which to give meaning to the concept of competition. Competition was regarded as a *process* grounded in the exercise of economic freedom. As a result, restrictions of competition and abuse were defined in terms of harm to integration or economic freedom (Akman, 2014, p. 193; Ehlermann, 1992, p. 261; Kallaugher & Sher, 2004, pp. 265, 271; M. Monti, 2001; Verouden, 2003, pp. 527, 530). Both integration and competition were considered to be 'the two great strategies' by which to achieve the Treaty's fundamental objectives, such as increased competitiveness, technological progress, higher living standards etc. (European Commission, 1972, pp. 11-14; 1992, p. 13). Hence, early competition policy build on the holy trinity of integration and competition and the broad range of socioeconomic benefits they are expected to produce. This normative underpinning is reflected in the Commission's priority setting. For over a decade, EU competition policy exclusively dealt with vertical restraints, which were regarded as particularly harmful to integration and economic freedom. Large firms and inter-firm cooperation initially faced little scrutiny, because they were believed to promote integration and competitiveness through increased efficiency (European Commission, 1972, p. 14). From the late seventies, however, the Commission activated the sleeping art. 102 and stepped up its policy towards horizontal agreements (Büthe, 2007, p. 183).

3.2.2 Means to find an infringement of the law

Whether or not the Commission has to show effects to find infringements of the law depends on the practice. EU competition policy put in place some sort of structured rule of reason, which determines the burden of proof.[40] Art. 101(1) distinguishes *by object* and *by effect* restrictions of competition. Whereas art. 102 does not formally distinguish between by object and by effect infringements, a similar classification is found in abuse cases, albeit rarely in so many words.[41] A by object infringement is considered harmful to competition by its very nature.[42] The classification is based on the serious nature of the infringement, or on experience

39 The instrumental value attached to market integration can be derived directly from the Treaty. Art. 2 EEC reads: 'It shall be the aim of the Community, by establishing a Common Market […], to promote […] a harmonious development of economic activities, a continuous and balanced expansion, an increased stability, an accelerated raising of the standard of living and closer relations between its Member States'. Also see art. 2 TEU: 'The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights […].'

40 The burden of proof is related to the standard of proof, which refers to the level of certainty and the degree of evidence necessary to establish proof, which may vary according to the type of conduct.

41 See Case 85/76 Hoffmann-La Roche v Commission [1979] ECR 461, paras 90-91 [HLR], Irish Sugar, para. 170; Case 62/86 AKZO v Commission [1991] ECR I-3359, para. 71 [AKZO]; Case T-203/01 Michelin II, para. 241 [Michelin II]; Case T-340/03 France Télécom v Commission [2007] ECR II-107, para. 195 [Wanadoo]; Case C-457/10 P AstraZeneca v Commission [2012] nyr, para. 165 [AstraZeneca] and Case T 286/09 Intel v Commission [2014] nyr, para. 203 [Case T-286/09 Intel]. However, in Irish Sugar (para. 170), the GC stated that art. 102 does not distinguish between the object and the effect of dominant firms' conduct. In Michelin II, it added that establishing the anticompetitive object and the anticompetitive effect are the same, since if it is shown that the conduct has the object to limit competition, that conduct will also be liable to have such an effect (para. 241). For a discussion, see Sinclair (2004) and Colomo (2016).

42 The Commission has to examine the aims pursued by the agreement as such to find an infringement by object (Joined cases 96-102, 104, 105, 108 and 110/82 IAZ v Commission [1983] ECR3369, para. 25; Joined cases 29/83 and 30/83 CRAM v Commission [1984] ECR1679, para. 26). The Commission does not need to prove subjective intent, nor can the parties invoke a lack of intent as a defence. However, intent can be taken into account to find a by object infringement (see Joined cases T-24/93, T-25/93, T-26/93 and T-28/93 Compagnie maritime belge transports v Commission [1993] ECR II-1201, para. 147-148 [Compagnie maritime belge]; Case T-228/97 Irish Sugar [1999] ECR II-2969, para. 114 [Irish Sugar] and Case C-501/06 P GlaxoSmithKline Services v Commission [2009] ECR I-9291, para. 58 [GSK].)

showing that the conduct is likely to produce negative effects on the market or the aims pursued by the competition rules (European Commission, 2004a, para. 21). Accordingly, the list of by object infringements is non-exhaustive and adaptable.[43] Once the Commission has established a by object infringement, 'there is no need to take account of the concrete effect'.[44] Indeed, anticompetitive object and anticompetitive effect are 'not cumulative but alternative requirements'.[45] Effects are irrelevant in the sense that a showing of a lack thereof cannot prevent the finding of an anticompetitive object.[46] If the Commission finds a by object infringement, the burden of proof is shifted onto the defendant, who, unlike with per se rules, can rebut the presumption of harm by raising an efficiency defence or objective justification. Only where it is not clear that a practice has an anticompetitive object, the Commission has to perform a factual analysis to show that competition has been or is likely to be distorted to an appreciable extent.[47] The concept of restriction by object has always been heavily debated (Bailey, 2012; Jones, 2010b; S. King, 2011; Korah, 1981; Manzini, 2002; Whish & Sufrin, 1987). At the heart of the matter is whether all restraints of integration or economic freedom automatically infringe competition law, or whether some initial assessment of their anticompetitive effects is needed to find a by object infringement. The Commission's administrative practice reflected the first approach: agreements that were capable of threatening integration or economic freedom were routinely classified as by object infringements (Bishop & Ridyard, 2002, p. 410; Hawk, 1995, p. 973; Jones, 2010b, p. 787). To some, the freedom paradigm therefore resulted in 'anaemic economics' (Hawk, 1995, p. 981).

The competitive analysis under art. 101(1) was limited to verifying the *potential* of anticompetitive effects in respect of the legal nature of contract clauses. This is most clear regarding vertical restrictions. In accordance with the freedom paradigm, a restriction of *intra*brand competition could in itself constitute a restriction of competition without an investigation into the effects on *inter*brand competition. Indeed, once a restriction of intrabrand competition was established, the Commission seldomly proceeded to properly defining the relevant market and analysing the position of the parties on this market. The latter was diverted to art. 101(3) (Verouden, 2003, p. 534). The Commission's approach implied a broad interpretation of by object restrictions, which was however offset by a lenient, almost ad hoc attitude towards individual exemptions. Early administrative practice classified as by object restrictions naked cartels, absolute territorial protection ("ATP") and other restrictions of parallel trade, exclusivity agreements and resale price maintenance ("RPM"). Legal formalism was amplified by the use of vertical BERs. The vertical BERs were organised along legal categories (i.e. franchising, exclusive distribution, exclusive purchasing) and contained detailed whitelists, which effectively functioned as a blueprint for firms' vertical agreements (Hawk, 1995, p. 982).

The same legal formalism was characteristic of the Commission's approach to abuse of dominance. Depending upon the legal category, absent an objective justification, a cursory analysis of the practice's formal features could suffice to find an abuse. The by object category ('*prima facie* abuses') was even

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[43] Case C-209/07 Beef Industry Development and Barry Brothers v Commission [2008] ECR I-8637, para. 23 [BIDS].

[44] Case 56-58/64 Consten and Grundig v Commission [1966] ECR 429, p. 342 [Consten and Grundig].

[45] STM, p. 249

[46] See Kokott's opinion in Case C-8/08 T-Mobile Netherlands v Commission [2009] ECR I-4529 [T-Mobile]: '[…] the prohibition on 'infringements of competition by object' resulting from Article 81(1) EC is comparable to the risk offences (Gefährdungsdelikte) known in criminal law: in most legal systems, a person who drives a vehicle when significantly under the influence of alcohol or drugs is liable to a criminal or administrative penalty, wholly irrespective of whether, in fact, he endangered another road user or was even responsible for an accident. In the same vein, undertakings infringe European competition law and may be subject to a fine if they engage in concerted practices with an anti-competitive object; whether in an individual case, in fact, particular market participants or the general public suffer harm is irrelevant' (para. 47).

[47] Case C-56/65 Société Technique Minière v Maschinenbau Ulm [1966] ECR 235, p. 249 [STM].

broader for firms in a dominant position than for firms lacking market power. Some conduct that could be regarded as 'normal' competitive behaviour was considered prima facie capable of restricting competition if applied by a dominant firm, such as exclusivity rebates, below average variable cost ("AVC") pricing, tying and refusals to deal. The competitive analysis under art. 102, if any, was structuralist in nature. For a start, the establishment of a dominant position heavily relied on structural criteria, such as high market shares and barriers to entry. The Commission's analysis of barriers to entry was Bainsian in nature as it focused on a firm's competitive advantages (e.g. product range, distribution networks, brand awareness, knowhow). Next, the competitive analysis centred on the conduct's exclusionary potential. Once it was shown that the conduct was capable to have a negative effect on market access, customers' freedom to choose suppliers and consumers' freedom of choice, no actual proof of foreclosure was required, let alone of consumer harm. The Commission's competitive assessment of abuse therefore ignored the dominant firm's capability and incentives to harm consumers once its rivals had been foreclosed. There are however some references to an as-efficient competitor ("AEC") test in early Commission decisions.[48]

3.3 Legal framework

3.3.1 Legal objectives

The Union Courts are the final interpreters of the Treaty (art. 19 TEU). A pro-active ECJ upheld and reinforced the Commission's normative framework in some law-making judgments (Gerber, 1998, p. 264). Taking a teleological approach,[49] the Court assigned various objectives to competition law, including, but not restricted to consumer welfare. First, the ECJ confirmed that competition law should promote market integration, a core Treaty objective, by preventing the private reconstruction of barriers to trade.[50] Secondly, the Court held that the aim of the competition provisions is to protect the competitive process (Wils, 2014b, pp. 417-418).[51] To that effect, the Court frequently referred to the Union's task to create a 'system ensuring that competition in the internal market is not distorted' and the Treaty principle of 'an open market economy with free competition'. Merging ordoliberalism as a politico-economic ideology with the structuralist analytical model it is lacking, the ECJ implicitly approached competition as a 'structural process of rivalry' (Gyselen, 2006, p. 291).[52] Accordingly, whereas the concept of economic freedom is difficult to operationalize, its boundaries were marked by the preservation of a competitive market structure. Parallels between ordoliberalism and structuralism

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[48] See Case IV/30.698 - ECS/AKZO [1985] OJ L 374, para. 77 and Case COMP/C-1/37.451, 37.578, 37.579 Deutsche Telekom [2003] OJ L 263, paras 102, 108, 141.

[49] Interpreting and applying Treaty provisions, it is 'necessary to consider the spirit, general scheme and wording of those provisions' (Case 26/62 van Gend en Loos v Nederland [1963] ECR 1, p. 12 [van Gend en Loos]). A principal corollary to the teleological method is the 'effet utile' doctrine which provides that once the purpose of a provision is clearly identified, its detailed terms will be interpreted so 'as to ensure that the provision retains its effectiveness' (see e.g. Case 9/70 Grad v Finanzamt Traunstein [1970] ECR 825, para. 5) (for a discussion, see Fennelly, 1997).

[50] Consten and Grundig, p. 340; Case 6/72 Europemballage and Continental Can v Commission [1973] ECR 215, para. 25 [Continental Can].

[51] Also see AG Kokott's Opinion in Case C-95/04 P British Airways v Commission, para. 68.

[52] Art. 102 is 'not only aimed at practices which may cause damage to consumers directly, but also at those which are detrimental to them through their impact on an effective competition structure' (Continental Can, para. 26). Interestingly, in Continental Can, the Commission was advised by Mestmäcker – an ordoliberal scholar. Also see Joined Cases 40–48/73, 50/73, 54–56/73, 111/73, 113 & 114/73 Suiker Unie v Commission [1975] ECR 1663, para. 518 [Suiker Unie); HLR, paras. 89 and seq.; Case 322/81 Michelin v Commission [1983] ECR 3461, para. 71 [Michelin I].

are strong in the sense that the protection of economic freedom will protect market access and maintain deconcentrated markets, and vice versa.[53] Economic freedom therefore has several faces in the Court's case law: it incorporates the freedom to compete (i.e. equal opportunities to start a business and the freedom to conduct a business at one's own discretion) and consumer sovereignty (i.e. consumer choice and variety). This is especially clear from the case law on abuse of dominance. Whereas the possession of a dominant position is not prohibited, EU competition law was quick to find one.[54] Dominance was defined broadly as the power to act independently from competitors, customers and ultimately consumers.[55] Accordingly, dominance refers to the *power to harm the competitive process*, either by harming competitors or by harming consumers (Chalmers, Davies, & Monti, 2010, p. 999). As a result, abuse was defined as an *objective* concept relating to further harm to the competitive market structure, which has already been weakened by the very presence of the dominant firm, through recourse to methods different from those governing competition on the merits.[56] Firms in a dominant position therefore had a 'special responsibility' not to eliminate residual competition or hinder its growth.[57] Lastly, the ECJ held that competition rules have to be read (and may have to be weakened) in the light of the Treaty's overarching goals such as employment, environmental protection, cultural and regional development, public health etc..[58]

3.3.2 Means to find an infringement of the law

While the Court endorsed the Commission's normative framework, it rejected the latter's formalist approach to agreements. Notably, early case law may have better fit a consumer welfare standard than pre-reform administrative practice (Hancher & Lugard, 2004, p. 411). It was the *Court* that initiated a

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[53] Yet, ordoliberals were opposed to discretionary intervention in the market structure for this would jeopardise the privilege-free order of the market. The 'optimal' market structure is the one that emanates from the enforcement of the rules defined at the constitutional level, whether or not this market structure is desirable in economic terms (see e.g. Hoppmann, 1967; Mestmäcker, 1987, pp. 26-27).

[54] The Court stated that 'very large [market] shares are in themselves, and save in exceptional circumstances, evidence of the existence of a dominant position' (HLR, para. 41). 'That is the situation where there is a market share of 50% ' (AKZO, para. 60; Case T-30/89, Hilti v Commission [1991] ECR II-1439, para. 92 [Hilti]). Next to high market shares, the Court accepted an extensive list of factors which may contribute to the protection or creation of dominance (see Case 22/78 Hugin Kassaregister v Commission [1979] ECR 1869 (ownership of intellectual property rights); Michelin I, paras 55-59 (product range, efficiency service network); United Brands (access to capital, economies of scale) para. 122; Case T-65/98 Van den Bergh Foods v Commission [2003] ECR II-4653 [Van den Bergh] (brand awareness)).

[55] The ECJ defined dominance as 'a position of economic strength […] which enables [an undertaking] to prevent effective competition being maintained […] by affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of consumers' (Case 27/76 United Brands v Commission [1978] ECR 207, para. 65 [United Brands]).

[56] Abuse is defined as an 'objective concept relating to behaviour that influences the structure of a market' (HLR, para 91). This was repeated in Michelin I: 'Art. 102 covers practices which are likely to affect the structure of a market where, as a direct result of the presence of the undertaking in question, competition has already been weakened and which, through recourse to methods different from those governing normal competition in products or services based on traders' performance [i.e. 'competition on the merits'], have the effect of hindering the maintenance or development of the level of competition still existing on the market (para. 70).

[57] 'Irrespective of the reasons for which it has such a dominant position, the undertaking concerned has a special responsibility not to allow its conduct to impair undistorted competition' (Michelin I, para. 57). The special responsibility doctrine is often linked to ordoliberalism. The fact that one of the judges that decided Michelin I, Ulrich Everling, was an ordoliberal may not be sufficient proof to conclude that the doctrine is inspired by ordoliberalism. Yet, the doctrine arguably would have met the approval of ordoliberals as it seems consistent with an ordoliberal point of view.

[58] The Treaty requirement that 'competition shall not be distorted implies the existence on the market of workable competition, that is to say the degree of competition necessary to ensure the observance of the basic requirements and the attainment of the objectives of the Treaty […]. In accordance with this requirement the nature and intensiveness of competition may vary to an extent dictated by the products or services in question and the economic structure of the relevant market sectors' (Case 26-76 Metro v Commission [1977] ECR 1875, para. 20 [Metro I]). Also see art. 7 (TFEU), which urges the Union to ensure consistency between its policies and activities, taking all of its objectives into account. For examples of public policy objectives, see G. Monti (2002), Schweitzer (2007) and Townley (2009).

greater role for economics under art. 101 by introducing the notion of appreciability,[59] the cumulative effects doctrine for exclusive dealing[60] and the counterfactual method[61] (Gerard, 2012, p. 22). Also, the case law made clear from the beginning that the applicability of art. 101(1) could not be determined simply by examining the formal terms of an agreement (Whish, 2000, p. 889).[62] In Sociéte Technique Minière ("STM"), the Court held that the finding of a by object restriction should involve at least some economic analysis.[63] This implies that, next to a formalist assessment of the content and aim of the provisions, the Commission had to consider the 'economic and legal context' in which the agreements were concluded.[64] Once a by object infringement was established, there was no need to show concrete effects.[65] In theory, by object restrictions could qualify for exemption under art. 101(3). This was unlikely, though, as the very nature of by object restrictions suggests that it is improbable that they will create efficiencies while allowing consumers a fair share of the benefits (Jones, 2010b, p. 669; Nagy, 2013, p. 542). If the context analysis failed to reveal sufficiently harmful effects on competition, the Commission had to proceed to a more in-depth effects analysis. This assessment involved the nature and quantity of the products or services covered by the agreement, the position of the parties and the structure of the market.[66] Next, importantly, the Court recognized that not every restriction of economic freedom necessarily constitutes a restriction of competition.[67] To that effect, the analysis under art. 101(1) could extend *beyond* the verification of an agreement's capability to produce anticompetitive effects. Restrictions of competition could fall outside the scope of art. 101(1) if they were shown to be objectively necessary for the obtainment of otherwise legitimate aims. This is known as the ancillary restraints doctrine.[68] The Court has accepted (by object or by effect) restrictions of competition on the basis of efficiencies relating to free-rider arguments,[69] the opening up of new markets,[70] the protection of reputation and knowhow[71] etc.. Nevertheless, the economic analysis under art. 101(1) was still mainly

[59] 'For [an agreement] to be caught by the prohibition it is then necessary to find that those factors are present which show that competition has in fact been […] distorted to an appreciable extent' (STM, p. 249). 'An exclusive dealing agreement, even with absolute territorial protection, may, having regard to the weak [market position], escape the prohibition laid down in Article 85(1)' (Case 5/69 Völk/Vervaecke [1969] ECR 295, p. 302).

[60] See Case C-234/89 Stergios Delimitis v Henninger Bräu [1991] ECR I-935, para. 23, where the Court performed an effects analysis based on the risk of foreclosure, the presence of barriers to entry and the competitive conditions on the relevant market.

[61] STM, p. 250 'The competition in question must be understood within the actual context in which it would occur in the absence of the agreement in dispute.'

[62] Restrictions of parallel trade, RPM and naked cartels arguably faced a stricter, more formalist treatment than other restrictions. In Consten and Grundig, the ECJ dismissed the parties free-rider argument and ruled that an effects analysis would not have changed its conclusion on the anticompetitive object of the agreement (p. 342-343). Yet, in Case 262/81 Coditel [1982] ECR 3381, the ECJ found that ATP did not have as its object the restriction of competition. Also see Case 19/77 Miller International Schallplaten v Commission [1978] ECR 131, paras 7, 18. For a formalist treatment of RPM, see e.g. Case 30/78 Distillers v. Commission [1980] ECR 2229; Case 107/82 AEG-Telefunken v Commission [1983] ECR 31513 and Joined cases 43/82 and 63/82 VBVB & VBBB v Commission [1984] ECR 19.

[63] Art. 101(1) is based on an economic assessment of the effects of an agreement and cannot therefore be interpreted as introducing any kind of advance judgment with regard to a category of agreements determined by their legal nature (STM, p. 248).

[64] STM, p. 249. Also see Consten and Grundig, p 343, Case 23/67 Brasserie De Haecht v Wilkin [1967] ECR 407, p. 415 and Joined cases T-374/94, T-375/94, T-384/94 and T-388/94 European Night Services [1998] ECR II-3141, para. 136 [ENS].

[65] Consten and Grundig, p. 342.

[66] ENS, para. 136. Also see STM, p. 250.

[67] STM, p. 248.

[68] In its most general meaning, the ancillary restraints doctrine is essential to justify restrictions that are 'necessary' for the full preservation of value in certain types of transactions (Diaz, 1996, p. 955). In practice, the ancillary restraint has been interpreted in multiple ways by the Court and the Commission (Nazzini, 2006, pp. 530-534).

[69] Metro I, para. 27, Case 75/84 Metro v Commission [1986] ECR 3021, para. 45.

[70] STM, p. 250; Case 258/78 Nungesser v Commission [1982] ECR 2015, para. 57.

[71] Case 161/84 Pronuptia de Paris v Pronuptia de Paris Irmgard Schillgallis [1986] ECR 353, para. 24.

related to intrabrand competition (Verouden, 2003, p. 559). The ancillary restraints doctrine generally does not require an overall competitive analysis in terms of interbrand competition. In this sense, it should be distinguished from the efficiency defence under art. 101(3), which directly balances the anticompetitive effects of restrictive agreements against the economic benefits they produce (Hancher & Lugard, 2004, p. 411; Nazzini, 2006, p. 521). Indeed, the General Court ("GC") denied the existence of a 'rule of reason' under art. 101(1).[72] While the above applies to vertical as well as horizontal restraints, the Court has been more willing to accept a formalist analysis of horizontal restraints (Diaz, 1996, p. 953). Yet, from the seventies, the ECJ engaged in a substantial assessment of the economic effects of concerted practices.[73] In ICI, it ruled that parallel conduct in itself should not be treated as sufficient proof of concertation.[74] This was confirmed in Woodpulp II, where the Court insisted that the Commission should verify whether the parallel conduct cannot be explained by normal conditions of the market.[75] In both cases the Court appointed economic experts to study the existence of price parallelism and the causal link with the alleged concertation.

The ECJ was less of a progressive actor in its approach to abuse of dominance (Waelbroeck, 2005, p. 162). The case law largely solidified the Commission's formalist-structuralist approach. The Court defined strict legal categories of abuse, which were each subject to a specific legal test. The Court classified as *prima facie* abusive: exclusive dealing,[76] rebates that are conditional upon (quasi-)exclusive dealing ("exclusivity rebates", "loyalty rebates" or "fidelity rebates"),[77] pricing below AVC,[78] pricing below average total cost if part of a plan to eliminate a competitor[79] and tying[80]. These practices were considered by their very nature capable to produce anticompetitive effects, because they could not be motivated by any economic rationale but the exclusion of competitors. Accordingly, there was no legal requirement to proof effects. Even evidence that the dominant firm had lost market share to allegedly

[72] Case T-112/99 Métropole Télévision v Commission [2001] ECR II-2459, paras 88, 72-79.

[73] Case 48/69 Imperial Chemical Industries v Commission [1972] ECR 619, paras 69 and seq. [ICI] and Suiker Unie, paras 36 and seq.

[74] ICI, para. 66.

[75] Joined Cases C-89/85, C-104/85, C-114/85, C-116/85, C-117/85 and C-125/85 to C-129/85 Ahlström Osakeyhtiö v Commission [1993] ECR I-1307, para. 72 [Woodpulp II].

[76] HLR, para. 89. However, in Van den Bergh, the GC deviated from this ruling by not treating exclusive dealing as prima facie abusive.

[77] HLR, para. 90: 'Obligations of this kind […] are incompatible with the objective of undistorted competition within the common market, because - unless there are exceptional circumstances which may make an agreement between undertakings in the context of article 85 and in particular of paragraph (3) of that article , permissible - they are not based on an economic transaction which justifies this burden or benefit but are *designed* to deprive the purchaser of or restrict his possible choices of sources of supply and to deny other producers access to the market' (emphasis added).

[78] 'Prices below average variable costs […] by means of which a dominant undertaking seeks to eliminate a competitor must be regarded as abusive. A dominant undertaking has no interest in applying such prices except that of eliminating competitors so as to enable it subsequently to raise its prices by taking advantage of its monopolistic position, since each sale generates a loss […] (AKZO, para. 71). Also see Case C-333/94 P Tetra Pak v Commission [1996] ECR I-5951, paras 4, 41 [Tetra Pak I]; Wanadoo, paras 195-196. The AKZO rule is based on a price-cost test ('sacrifice test') à la Areeda and Turner (1975).

[79] '[P]rices below average total costs, […], but above average variable costs, must be regarded as abusive if they are determined as part of a plan for eliminating a competitor. Such prices can drive from the market undertakings which are perhaps as efficient as the dominant undertaking but which, because of their smaller financial resources, are incapable of withstanding the competition waged against them' (AKZO, para. 72, repeated in Wanadoo, para. 197 and Case T-83/91 Tetra Pak v Commission [1994] ECR II-755, para. 151 [Tetra Pak II).

[80] '[W]here an undertaking in a dominant position directly or indirectly ties its customers by an exclusive supply obligation, that constitutes an abuse since it deprives the customer of the ability to choose his sources of supply and denies other producers access to the market (Tetra Pak II, para. 137). Also see Hilti and Case T-201/04 Microsoft Corp. v Commission [2007] ECR II-3601 [Microsoft].

foreclosed competitors could not overturn the finding of a by object abuse.[81] For other categories of abuse, the Commission was required to at least consider 'all the circumstances' of the case. For rebates that are neither pure volume rebates (generally not abusive),[82] nor pure loyalty rebates (prima facie abusive), this involved an examination of 'the criteria and rules for the grant of the discount'.[83] The analysis relied on whether the discount increased the pressure on the customer to source *more* from the dominant supplier (the 'fidelity-building' or 'loyalty-enhancing' nature).[84] This nature could be derived from criteria such as retroactivity,[85] a 'relatively long reference period',[86] uncertainty regarding the final purchasing price[87] and progressivity,[88] but also from divergence between the dominant firm's market share and those of its main competitors[89].[90] Once it was proven that a rebate scheme was loyalty-enhancing, it was deemed abusive by its very nature. Indeed, such rebates are considered capable to restrict competition, because they tend to 'restrict the buyer's freedom to choose his sources of supply or to bar competitors from access to the market'.[91] Absent an economic justification, there was no legal requirement to show concrete effects.[92] The required factual analysis was more intense for cases involving other pricing abuses (low pricing and margin squeeze) or refusals to deal, where the Commission was required to demonstrate anticompetitive effects. The Courts even adopted an AEC benchmark and seemed to (implicitly) endorse a quantitative price-cost test.[93] Yet, even regarding by effect abuses, the standard of proof remained one of capability. In other words, it is not necessary to show that the conduct had *concrete* effects on the market in terms of successful foreclosure[94] or of likely recoupment of losses[95] (i.e. the necessary conditions for direct consumer harm to occur). It suffices to

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[81] The fact that the market share of a competitor increased does not mean that the practice was without any effect, given that the rival's share might have increased more significantly but for the practice (Compagnie maritime belge, para. 149). Also see Michelin II, paras 235–246 and Case C-95/04 P British Airways v Commission [2007] ECR I- 2331, paras 96–100 [Case C-95/04 P British Airways].

[82] Pure volume rebates (i.e. rebates that are solely linked to the volume of purchases) are considered as competition on the merits, since their objective is to maximise sales. Accordingly, they represent economies of scale that are passed on to the purchaser (HLR, paras 89-90, 100; Michelin II, paras 58, 98).

[83] Michelin I, para. 73, Case C-95/04 P British Airways, para. 67.

[84] Without saying it in so many words, the Courts refer to the so-called 'suction effect' of certain rebate schemes. See Michelin I, paras 76-78, 84; Michelin II, para. 51, 75; Case C-95/04 P British Airways, paras 52, 74 .

[85] Michelin II, para. 85, Case C-95/04 P British Airways, para. 74.

[86] Michelin I, para. 81.

[87] Michelin I, para. 83.

[88] Case C-95/04 P British Airways, para. 75.

[89] Michelin I, para. 82, Case C-95/04 P British Airways, paras 24, 76.

[90] For a discussion of the criteria taken into account to establish whether a discount has a fidelity-building character, see Gyselen (2006). For a critique on the lack of clarity as to which of these criteria are sufficient or necessary to conclude that a rebate is loyalty-enhancing and the inappropriate application of the criteria set out for target rebates to quantity rebates (e.g. in Michelin II), see Colomo (2015b).

[91] Michelin I, para. 73; Michelin II, para. 239; C-95/04 P British Airways, para. 68.

[92] Michelin II, para. 258.

[93] Case T-5/97 Industrie des poudres sphériques v Commission [2000] ECR II-3755, para. 179; Case T-271/03 Deutsche Telekom v Commission [2008] ECR II-477, para. 194 (margin squeeze) [Case T-271/03 Deutsche Telekom]; AKZO, para. 72 (predatory pricing); Case C-7/97 Bronner v Mediaprint [1998] E.C.R. I-7791, para. 38 (to constitute an abuse, a refusal to deal should be likely to eliminate *all* competition).

[94] '[W]here one or more undertakings in a dominant position actually implement a practice whose aim is to remove a competitor, the fact that the result sought is not achieved is not enough to avoid the practice being characterized as an abuse of a dominant position […]' (Compagnie Maritime Belge, para. 149; Irish Sugar, para. 191 and Wanadoo, para. 196). 'It must be possible to penalize predatory pricing whenever there is a risk that competitors will be eliminated. […] The aim pursued, which is to maintain undistorted competition, rules out waiting until such a strategy leads to the actual elimination of competitors' (Tetra Pak I, para. 44).

[95] Case C-202/07 P France Télécom v Commission [2009] ECR I-2369: the case law 'does not require that the possibility of recoupment of losses be demonstrated. […] The mere existence of [a dominant] position is sufficient to determine that recoupment of losses is possible (para.

prove that the conduct is capable to raise barriers to entry or limit the growth of competition to find an abuse.[96] Clearly, the object of the competitive analysis under art. 102 is the effect on market structure (i.e. the capability to foreclose), rather than the direct effects on consumers. Nonetheless, from the beginning, the ECJ accepted dominant firms' right to advance an objective economic justification[97] or efficiency defence[98], although many commentators criticized the impossibly high evidentiary burden placed on a dominant firm, particularly regarding dynamic efficiencies (Ahlborn & Padilla, 2008; Fox, 2006).

3.4 A legal-institutionalist view on the role of ordoliberalism in early EU competition policy

While the above demonstrated that early EU competition policy was a hybrid regime, ordoliberal traces are evident. This subsection adopts a legal-institutionalist viewpoint to situate and nuance the role of ordoliberalism on pre-reform policy from a broader welfarist perspective and identifies the factors that created a momentum for the MEA.

The reliance on ordoliberal principles was an ideological choice as well as a pragmatic one. Ordoliberalism was instrumental in institution and policy building. First, the ordoliberal normative framework provided useful content for the Treaty's economic provisions, which could be read as a law-based order committed to guaranteeing economic freedoms (Joerges, 2002, pp. 10-11; Mestmäcker, 1994, p. 626 ff.). This granted the fledgling Union (and its institutions) a legitimacy of its own (Cruz, 2002, p. 1). The rivalry norm was endorsed by the most powerful political forces and the business community. Adherence to it minimized threats to the European project (Gifford & Kudrle, 2003, p. 749 ff.). Moreover, ordoliberalism justified the supremacy of EU law (Joerges, 2002, pp. 10-11),[99] which was essential to safeguarding the level playing field. Forming the basis of a stand-alone legal system, the internal market and competition provisions de facto established an 'economic constitution' for Europe (Joerges, 2002, pp. 10-11; also see Wilks, 2015). Secondly, ordoliberalism legitimized the legal form-based approach which the embryonic stage of institution and policy building required. A weakening of competition provisions at the national level was a genuine threat as member states lacked experience in competition policy (and, to a large extent, the willingness to gain it). The centralized notification system for agreements generated a flow of decisions, which explained the Commission's interpretation of art. 101 (European Commission, 1999, p. 3). The notification system facilitated a uniform application of the law across the Union (ibid.). At the same time, it offered legal and economic certainty to businesses – undeniably an important benefit in a new law system (Forrester & Norall, 1984, pp. 12-13; Wils, 2002, p. 118). The extensive view on restrictions of competition under art. 101(1)

102). 'Moreover, the lack of any possibility of recoupment of losses is not sufficient to prevent the undertaking concerned reinforcing its dominant position […] (para. 112). Also see Tetra Pak I, para. 44.

[96] Case T-271/03 Deutsche Telekom, para. 235.

[97] United Brands, para. 184; HLR, para. 90; Michelin I, para. 73; Irish Sugar, para. 114 and Case C-52/09 Konkurrensverket v TeliaSonera Sverige [2011] ECR I-527, paras 31, 75 [TeliaSonera]. For a discussion of different types of objective justification under art. 102, see Van der Vijver (2012).

[98] Case T-203/01, Michelin II, paras 98, 108-109 (economies of scale linked to volume rebates), confirmed in Case C-95/04 P British Airways, paras 69, 86 and Microsoft, paras 1114 et seq.

[99] The legal doctrine of supremacy was founded on the fact that 'the Community constitutes a new legal order of international law […] the subjects of which comprise not only member states but also their nationals' (van Gend en Loos, p. 12).

served to maximize the Commission's regulatory reach through its monopoly to grant exemptions under art. 101(3) (Jones, 2010b, pp. 787-788).[100] The overinclusiveness of the formalist approach to art. 101(1) was offset by a lenient, almost ad hoc attitude towards individual exemptions. Furthermore, legal rules served as an apolitical shield that protected the Commission against external pressures. Legal language dominated the discourse as an activist Court provided generally applicable norms and legal tests - emanating from the authoritative source of the Treaty - in some law-making judgments (Gerber, 1994b, p. 98). Lastly, the effective administration of goal pluralism requires detailed legislation. Clear-cut rules had to make the goal-balancing process more predictable by demarcating its boundaries. This necessarily involved the creation of legal categories (Gifford & Kudrle, 2003, p. 778). At the same time, ordoliberal principles sometimes stood in the way of institution and policy building, and were ignored accordingly. An overly strict application of the competition rules would have met fierce resistance from the member states (Moravcsik, 1999, p. 219), which would have stifled the development of EU competition policy. This may explain in part why the Court started to reject the Commission's formalist approach to agreements from the late sixties, why art. 102 was activated not until the late seventies (Büthe, 2007, p. 183) and why it took sixteen years of combined pressure from the Commission, the ECJ and a growing cross-border business community for member states to find a consensus on a supranational merger regime in 1989 (Bulmer, 1994). Also, inter-firm cooperation and large firms were believed to serve other (political) Treaty goals, such as the protection of small and medium-sized enterprises ("SMEs"), integration and European competitiveness (European Commission, 1972, pp. 14, 16; Gerber, 1998, pp. 355-356). Industrial and political considerations are further illustrated by the use of sector-specific BERs and the tolerance of crisis cartels.[101]

Wilks and McGowan (1996, pp. 245-248) identified three factors that created a momentum for the MEA. First, the eighties saw the rise of 'neoliberalism'. The new ideology stimulated the growth of a global antitrust epistemic community and offered a broad validation for competition policy and its instrumental role in fostering economic competitiveness (Akman & Kassim, 2010, p. 113; also see Buch-Hansen & Wigger, 2010). The deregulatory consensus amongst the Council and the Commission gave a new impetus to EU competition policy (Cini & McGowan, 2009, p. 31), which was further strengthened by a renewed faith in economic integration.[102] Secondly, a number of charismatic Commissioners for competition such as Andriessen, Sutherland and Brittan increased the prestige of DG Competition and reinforced its political leadership (Büthe, 2007, p. 184). Finally, a vast body of established case law and solid staff experience bolstered the sociolegal maturation of EU competition policy. At the national level too, member states had gained experience and had developed sophisticated competition regimes. A fourth factor can be added: competition law increasingly was applied extraterritorially given fast globalization and the proliferation of competition policy regimes worldwide. Accordingly, there was much to be gained from relying on universally applicable economic theories as big cases would simultaneously be handled by different jurisdictions (see e.g. M. Monti, 2002a).

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[100] The other side of the coin was that the Commission interpreted art. 101(3) at its own discretion.

[101] Case IV/30.810 Synthetic fibres [1984] OJ L 207; Case IV/30.863 BPCL/ICI [1984] OJ L 212; Case IV/31.055 ENI/Montedison [1986] OJ L 5 and Case IV/34.456 Stichting Baksteen [1994] OJ L 131.

[102] After a period of eurosclerosis, in 1986, the member states signed the Single European Act, which represented an important step forward for economic integration through the abolishment of non-tariff barriers to trade and through the objective of establishing a single market by the end of 1992.

3.5 The reform towards a MEA

From the nineties, the traditional approach, especially regarding vertical restrictions and abuse of dominance, started to draw criticism in terms of rigid legal formalism and structuralism, lack of quantitative analysis and the protection of competitors to the detriment of consumers (Hawk, 1995; Korah, 1986; Sher, 2004). The MEA addressed these concerns. First, vertical restraints policy was reformed with the adoption of a broadened vertical block exemption regulation (European Commission, 1999, "VBER") and the publication of Guidelines on vertical restraints (European Commission, 2000c, "VGL"). The Commission also issued horizontal BERs for R&D and specialisation agreements (European Commission, 2000a, 2000b) and Guidelines on horizontal agreements (European Commission, 2001b, "HGL"). Furthermore, the centralized notification system for agreements was abandoned and art. 101(3) gained direct effect (Council of the EC, 2003). To guide firms in their self-assessment exercise, the Commission published interpretative guidelines on the application of individual exemptions (European Commission, 2004a, pp., "art. 101(103) GL"). Next, merger control was reformed with the political agreement on a new Merger Regulation (Council of the EC, 2004, "EUMR") and the adoption of Guidelines on the assessment of (non-)horizontal concentrations (European Commission, 2004b, "HMGL"; 2008). Lastly, abuse of dominance policy was reformed, which resulted in a Guidance on the Commission's enforcement priorities in applying art. 102 (European Commission, 2009a, "Guidance"). In 2003, Commissioner Monti appointed DG Competition's first Chief Economist and populated its team with reputable economists to give 'guidance on analytical methodology, advice on the direction of investigations and direct assistance in the most complex cases' in order to enhance DG Competition's economic skills (M. Monti, 2002b). In the same year, the Economic Advisory Group on Competition Policy ("EAGCP") was set up as an academic advisory body consisting of leading European industrial economists. Its main purpose is to support DG Competition in improving the economic reasoning and in the use of sophisticated econometric techniques in competition policy analysis. The substantive and procedural reforms were accompanied by frequent references by Commission officials to consumer welfare as the cornerstone of competition policy.[103]

4 The MEA: reformed secondary law and the legal framework

This section locates the MEA in terms of its objectives and means on the continuum between "less" and "fully" economic approaches. The Commission's reformed secondary law and priority setting are confronted with post-reform case law. The analysis shows that EU competition policy remains a hybrid regime: the mixed normative approach persists and the boundaries between a formalist and an effects-based approach still seem vague at times. Next, as explained above, from a broader welfarist perspective, the proper role of economics in competition policy is subject not only to the state of economic science, but also to the legal-institutional environment in which the policy is implemented. Whereas the legal-institutional balance has slightly shifted (and may continue to do so in the future), a

103 'The goal of competition policy, in all its aspects, is to protect consumer welfare by maintaining a high degree of competition in the common market.' (Monti, 2001, p. 2). 'Consumer welfare is now well established as the standard the Commission applies when assessing mergers […]. Our aim is simple: to protect competition in the market as a means of enhancing consumer welfare and ensuring an efficient allocation of resources.' (Kroes, 2005). '[I]n our enforcement we can place greater emphasis on the promotion of economic efficiency and consumer welfare. […] those practices should be prohibited which have the effect of harming consumers' (Lowe, 2007, pp. 3-4). 'The Commission places consumers' concerns at the heart of its competition activities and considers it essential that the main thrust of competition policy should be on maximizing consumer welfare' (European Commission, 2009b, para. 108).

mixed normative approach and a certain reliance on legal formalism remain efficient choices for EU competition policy as they minimize expected total social costs.

4.1 The MEA: between freedom and welfare

4.1.1 Reformed secondary law and priority setting

At first sight, reformed secondary law seems to have narrowed the scope of anticompetitive effects to a decrease in consumer welfare. With a more lenient approach to vertical agreements and the abandonment of the centralized notification system (Council of the EC, 2003), the Commission has shifted priorities towards those practices that harm consumers most: naked cartels (Vickers, 2005, p. 244). The VGL accept that 'vertical restraints are generally less harmful than horizontal restraints' (2010, para. 6) and elaborate on a number of procompetitive effects (paras 106-109). The HGL also seem to put forward a welfarist approach: they interpret market power as the ability to cause negative effects on the market in terms of output and prices (HGL, para. 27). At the same time, the window for non-economic objectives is narrowed: public policy concerns can be considered only to the extent that they can be subsumed under the four conditions for individual exemption (art. 101(3) GL, para. 42). The Guidance too points towards a welfare-based approach. In applying art. 102, the Commission will prioritize those types of conduct that are most harmful to consumers (para. 5). Accordingly, the Guidance introduces an economics-based definition of dominance as 'substantial market power' (para. 10) or the capability to 'profitably increase prices above the competitive level for a significant period of time' (para. 11). For the first time, the Commission operationalized the concept of anticompetitive foreclosure in terms of an alteration of the parameters of competition to the detriment of consumers (para. 19), instead of a deterioration of the market structure. Also for the first time, there is an explicit recognition of an efficiency defence for dominant firms (para. 30).

Nonetheless, a closer look at the Commission's interpretation of consumer welfare reveals that post-reform policy is still based on a mixed normative approach. The Commission's definition of 'consumer welfare' - used interchangeably with variations on the expression 'consumer benefits' - is vague, or at best comprehensive. Contextual reading of post-reform documents shows that consumer welfare is interpreted more broadly than in a strict Chicago sense. Next to low prices and high output, it includes new or improved products (art. 101(3) GL, para. 10), innovation, variety, high quality (GL VR, 2010, para. 97; HMGL, 2010, para. 3), consumer choice (Guidance, para. 19) and a wide selection of goods (HGL, para. 8). 'Consumers' are defined comprehensively too. The term encompasses 'all direct or indirect users' (art. 101(3) GL, para. 84; HGL, para. 84; Guidance, fn. 15) and even 'future consumers' (HGL, para 87). In a subtle way, extensive definitions of 'consumers' and 'consumer benefits' enable the Commission to uphold the old normative framework. In essence, the MEA has not supplanted the holy trinity that was at the heart of pre-reform policy: market integration and competition are still perceived as the mutually reinforcing 'great strategies' by which to achieve the Treaty's wider socioeconomic objectives:

> *The protection of competition is the primary objective of [EU] competition policy, as this enhances consumer welfare and creates an efficient allocation of resources. […] Market integration is an additional goal of [EU] competition policy. [It] enhances competition in the [Union].*
> *(Guidelines on vertical restraints, 2000, para. 7)*

> *The objective of Article 101 is to protect competition on the market as a means of enhancing consumer welfare and of ensuring an efficient allocation of resources. Competition and market integration serve*

these ends since the creation and preservation of an open single market promotes an efficient allocation of resources throughout the Community for the benefit of consumers.
(Art. 101(3) guidelines, 2004, para. 13)

[The effective enforcement of Article 102] helps markets to work better for the benefit of businesses and consumers. This is particularly important in the context of the wider objective of achieving an integrated internal market.
(Guidance, para. 1)

Consequently, the process-oriented view on competition as a structural process of rivalry is retained. In reformed secondary law, the economic definition of market power as the capacity to profitably alter the parameters of competition sits alongside the traditional, structuralist definition as the ability to act independently (Guidance, para. 10; EUMR, recital 6; HMGL, Case 85/76 Hoffman La Roche). Relatedly, the Guidance still relies on a Bainsian interpretation of entry barriers as factors that make entry costly to establish dominance (e.g. economies of scale and scope, established distribution and sales networks) (para. 17). As a corollary, the Guidance recalls the special responsibility doctrine (para. 1). The persisting focus on the competitive process has clear repercussions for the treatment of efficiencies. In EU competition law, an efficiency defence can only be taken into account insofar *competition is not eliminated*. This imposes a heavy burden of proof on firms that want to advance an efficiency defence.

Ultimately the protection of rivalry and the competitive process is given priority over potentially pro-competitive efficiency gains [...]. [...] [R]ivalry between undertakings is an essential driver of economic efficiency, including dynamic efficiencies in the shape of innovation. [...] When competition is eliminated the competitive process is brought to an end and short-term efficiency gains are outweighed by longer-term losses [...]
(Art. 101(3) guidelines, 2004, para. 105)

Where there is no residual competition and no foreseeable threat of entry, the protection of rivalry and the competitive process outweighs possible efficiency gains.
(Guidance, para. 30)

4.1.2 Legal framework

Due to the drop in enforcement activity under art. 101 (beside cartels),[104] the limited number of convictions and the increased reliance on commitment decisions, the opportunities for the Courts to clarify or overturn old case law are rare. At any rate, the teleological approach leaves little leeway to depart from settled case law. Hence, the ECJ seems to hold on to traditional goal pluralism, which implies that the welfare-based approach is met with some resistance. On the one hand, the Court stated that the ultimate purpose of the competition rules is to increase the well-being of consumers[105] and that competition on the merits is 'such as to benefit consumers'.[106] However, first, the Court censured the GC for having committed an error in law for superseding the goal of market integration by reading a

[104] With the procedural reform, the enforcement of art. 101 has moved almost entirely to the national level.
[105] Joined Cases T-213/01 and T-214/01 Österreichische Postsparkasse v Commission [2006] ECR II-1601, para. 115
[106] AstraZeneca, para. 129

consumer welfare standard in art. 101,[107] and, secondly, the ECJ reaffirmed that direct harm to consumers is not necessary for EU competition law to apply:

> *[The competition rules in the Treaty aim] to protect not only the interests of competitors or of consumers, but also the structure of the market and, in so doing, competition as such. Consequently, for a finding that an agreement has an anti-competitive object, it is not necessary that final consumers be deprived of the advantages of effective competition in terms of supply or price".*[108]

> *The function of the competition rules is 'to prevent competition from being distorted to the detriment of the public interest, individual undertakings and consumers, thereby ensuring the well-being of the European Union'.*[109]

> *Article [102] is aimed not only at practices which may cause prejudice to consumers directly, but also at those which are detrimental to them through their impact on competition. It is in the latter sense that the expression 'exclusionary abuse' […] is to be understood.*[110]

> *"In order to assess the existence of anti-competitive effects […], it is necessary to consider whether that pricing policy, […], produces an actual or likely exclusionary effect, to the detriment of competition and, thereby, of consumers' interests.*[111]

Clearly, the reform has not altered the protective aim of the law, which is the protection of competition as a structural process of rivalry. Consumer interests and broader Treaty objectives are safeguarded *indirectly* through the protection of the competitive process. Consequently, the Court retains the classic definition of abuse as conduct which has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth thereof.[112] However, in Post Danmark I, the ECJ inserted the parenthesis 'to the detriment of consumers'.[113] This is a novelty, but it is too early to conclude whether this demarche implies that the Court has moved towards a consumer welfare-based definition of abuse. At any rate, on several occasions, the Court reaffirmed the special responsibility doctrine.[114]

4.2 The MEA: between form and effect

4.2.1 Reformed secondary law

The new VBER redresses the straight-jacket effect of the old VBERs in two ways: first, it applies to *all* agreements affecting the purchase or sale of goods or services; and secondly, it follows a more flexible *black* clause-approach (VBER, 2010, art. 4). In creating a safe harbour for suppliers with a market share below 30% (art. 3), the VBER reflects economic consensus that anticompetitive effects are only likely if interbrand competition is weak (also see VGL, paras 25-26). Importantly, there is no presumption of

[107] GSK, para 62, 63. Also see Case C-439/09 Pierre Fabre Dermo Cosmetics [2011] ECR I-9419, paras 44-46 [Pierre Fabre].

[108] Case T-286/09 Intel, para. 105.

[109] TeliaSonera, para. 22.

[110] Case C-209/10 Post Danmark A/S v Konkurrencerådet [2012] nyr, para. 20 [Post Danmark I]. Also see Case C-52/09 TeliaSonera, para 24. For a similar position by the GC in a merger judgment, see Case T-342/07 Ryanair v Commission [2010] ECR II-3457, paras 222-228.

[111] Post Danmark I, para. 44.

[112] Case C 280/08 P Deutsche Telekom v Commission [22010] ECR 9555, para. 174 [Case C 280/08 P Deutsche Telekom].

[113] Post Danmark I, para. 24.

[114] TeliaSonera, para. 24; AstraZeneca, para. 74; Post Danmark I, para. 23; Case C-23/14 Post Danmark v Konkurrenceradet [2015] nyr, para. 71 [Post Danmark II]; Case C-413/14 P Intel v Commission [2017] nyr, para. 135 [Case C-413/14 P Intel].

harm for agreements falling outside the scope of the VBER (recital 9): the establishment of an infringement requires an individual assessment of the likely or actual effects (art. 101(3) GL, para. 24). The art. 101(3) GL adopt the Court's approach set out in STM. First, restraints that restrict intrabrand competition may fall outside art. 101(1) if they are 'objectively necessary' for the well-functioning of an agreement (para. 18(2)); secondly, the establishment of a by object restriction should be based on an analysis of the content, context and objective aims of the agreement (para. 22).

Nonetheless, a closer look at post-reform documents reveals that the move towards an effects-based approach is not absolute. Intrabrand competition still plays a central role in art. 101 policy (Nazzini, 2006, p. 521). The art. 101(3) GL repeat that a restraint of intrabrand competition *in itself* may violate art. 101(1), irrespectively of the results on interbrand competition (para. 18). Relatedly, the list of hardcore restrictions in the VBER mirrors the old hostility towards agreements that restrict economic freedom or threaten integration (Jones, 2010b, pp. 792-793). Regardless of market shares, restrictions of parallel trade and RPM remain by object restrictions,[115] which are to be analysed under art. 101(3). Indeed, the art. 101 GL replicate formalist case law in stating that 'the balancing of restrictive and pro-competitive effects is conducted exclusively within the framework laid down by art. 101(3)' (para. 30). However, these 'severe restrictions of competition' are unlikely to fulfil the conditions for exemption (art. 101(3) GL para. 46), especially when applied by dominant firms (VGL, para. 135). Some fear that the reform may even have worsened the situation. The MEA has reduced the scope of art. 101(3) as a result of which the bar is lifted for firms claiming efficiencies (Hancher & Lugard, 2004, pp. 419-420; Jones, 2010b, pp. 810-811).[116] Since the abandonment of the Commission's exemption monopoly, positive exemption decisions have been scarce though. A lack of decisional practice arguably has created greater legal uncertainty (Jones, 2010b, p. 793). The BERs and guidelines are supposed to fill the void, but they are too general and too intricate to replace case-by-case guidance. Ironically, this may force firms to rely increasingly on abstract categories and general presumptions based on these documents (Gerard, 2012, p. 35).

At first sight, the Guidance too seems to abandon legal formalism by proposing a more generalised approach to exclusionary abuses. While avoiding to create an explicit safe harbour,[117] the Commission tries to downgrade the role of market shares by labelling them as a 'useful first indication', which will be qualified 'in the light of the relevant market conditions' (paras 13-14). The Guidance makes explicit that what matters is 'protecting an effective competitive process, not simply competitors', which 'may well mean that competitors who deliver less to consumers […] will leave the market' (para. 6). This implies that the Commission will prioritise cases where the conduct is capable of hampering competition from as efficient competitors (paras 23, 41). Intervention will be based on cogent and convincing evidence that the allegedly abusive conduct is likely to lead to anticompetitive foreclosure (para. 20).

[115] Gerard (2012) even observes a tendency towards systematically treating cases as by object restrictions (see Commission decisions cited there). However, paradoxically, e.g. in Joined Cases COMP/34.579 MasterCard, COMP/36.518 EuroCommerce and COMP/38.580 Commercial Cards [MasterCard] and Case COMP/D1/38606 Cartes Bancaires, the Commission performed an elaborate effects-analysis after establishing a by object restriction

[116] See e.g. MasterCard, where the Commission stated that 'to the extent that objective efficiencies cannot be established empirically, they cannot be balanced with the restrictive effects' (para. 695) in reply to MasterdCard's claim that the Commission imposed too high a burden of proof in demanding empirical evidence (para. 694).

[117] The Commission introduces a soft safe harbour by stating that a finding of dominance is generally unlikely if the undertaking's market share is below 40 per cent (Guidance, para.14).

To that effect, the Commission endorses an AEC test in the form of price-cost tests for price-based exclusionary abuses (para. 27). As shown above, this is not new in the context of predatory pricing and margin squeeze. More controversially, i.e. in respect of standing case law, the Guidance expands the scope of the AEC test to all 'conditional rebates',[118] including exclusivity rebates (paras 41-45). Also provocative in view of settled case law is that the Commission elaborates on the importance of establishing a counterfactual (or causal analysis) (para. 21).

Nonetheless, with the publication of enforcement priorities, the Commission opted for a particularly soft law instrument to underpin the reform of its administrative practice under art. 102: the Guidance is 'not intended to constitute a statement of the law' (para. 3). This unusual caveat was needed since the Commission ignored case law in several aspects (Lovdahl Gormsen, 2010b, p. 46). In a deliberate attempt to leave open a margin of discretion, the Guidance includes general and vague wording and several exceptions (Gravengaard & Kjærsgaard, 2010, p. 286). It is still dubious from the definition of anticompetitive foreclosure (para. 19) what the *object* of the effects analysis is: is it enough to infer consumer harm from the elimination of an as-efficient rival to find an abuse, or does the Commission need to demonstrate the likeliness of direct effects on consumers (Akman, 2010, p. 614). At any rate, the list of relevant assessment factors seems to focus on showing *foreclosure effects*, rather than direct consumer harm (para. 12) (also see G. Monti, 2010, p. 3; Petit, 2009, p. 496).[119] Moreover, at its own discretion, refering to dynamic efficiencies, the Commission may take into account the competitive constraints exerted by *less efficient* and *potential* competitors (paras 24, 36). Also, the Guidance provides leeway to dismiss with the requirement to show effects altogether if 'it appears that the conduct can only raise obstacles to competition and that it creates no efficiencies' (para. 22). The Commission provides no further guidance on when and how it will resort to these exceptions, which creates legal uncertainty (Ridyard, 2009, p. 233). Finally, whereas the Guidance allows dominant firms to advance an efficiency defence, the possible efficiencies are defined narrowly (i.e. mainly relating to cost savings) (para. 30).

4.2.2 Legal framework

Post-reform, the concept of restriction by object remains a heavily debated subject. The Courts delivered some art. 101 judgments and preliminary rulings that directly touched upon the issue. It has been settled case law since STM that a restriction of competition cannot be established purely on the basis of a formalist analysis of the content and aim of the agreement. The competitive assessment under art. 101(1) should comprise an analysis of the economic and legal context in which the agreement is concluded, including an analysis of whether the restrictions are objectively necessary for the obtainment of otherwise legitimate aims. This is confirmed in post-reform case law.[120] Yet, the standard of proof and the intensity of the economic analysis to find a by object restriction remain controversial. First, on some

118 Conditional rebates are rebates granted to customers to reward them for a particular form of purchasing behaviour. The usual nature of a conditional rebate is that the customer is given a (retroactive or incremental) rebate if its purchases over a defined reference period exceed a certain threshold (Guidance, para. 37).

119 Yet, according to G. Monti (2010, p. 3), the Guidance suggests a two-stage test to determine what abuse of dominance cases will be pursued: first, proof of anticompetitive foreclosure, and second, proof that such foreclosure is likely to cause harm to consumers.

120 Joined Cases C-403 & 429/08 Football Association Premier League [2011] ECR I-9083, para. 136 [Premier League]; Pierre Fabre, para. 35; Case C-226/11 Expedia [2012] nyr, para. 21 [Expedia]; Case C32/11 Allianz Hungária [2013] nyr, paras 33, 36 [Allianz Hungária].

occasions, the *capability* or *potential* of a practice to result in anticompetitive effects sufficed to establish a by object restriction.[121] Arguably, this amounts to an overly broad interpretation of infringements by object (Bailey, 2012, p. 589; Jones & Sufrin, 2014, pp. 57-58). In a consequent judgment, the Court seems to have introduced a higher standard of proof. In Cartes Bancaires, the ECJ stressed that the category of by object restrictions must be interpreted *restrictively*.[122] Potential anticompetitive effects do not suffice.[123] Firms' conduct has to be *likely* or *liable* to lead to anticompetitive effects to imply that an agreement restricts competition by its very nature.[124] Next, it is unclear how much economic analysis is needed to find a by object infringement. Post-reform case law seems to have blurred the by object/by effect dichotomy. On the one hand, the Court repeated that it is not necessary to examine the effects on competition once the anticompetitive object of an agreement is established.[125] An agreement that has an anticompetitive object constitutes, by its nature and independently of any concrete effect that it may have, an appreciable restriction of competition.[126] Because proof of anticompetitive effects is not required, evidence of the absence cannot overrule this qualification. Consequently, the effects analysis, i.e. the weighing of anti- and procompetitive effects, is diverted to art. 101(3).[127] On the other hand, the ECJ ruled that an agreement that is capable of restricting competition should reveal a *sufficient degree of harm* for it to be considered a by object restriction.[128] To this effect, the ECJ seems to have enlarged the scope of the context analysis: besides the analysis of the content and aim of the provisions and their economic and legal context, 'it is also appropriate to take into consideration the nature of the goods or services affected, as well as the real conditions of the functioning and structure of the market or markets in question'.[129] Whereas it seems safe to assume that such limited factual analysis is less comprehensive than a full-blown effects analysis, according to some, this evolution harbours the risk of creating a 'third box', next to the existing dichotomy (Whish & Bailey, 2015, p. 127; also see Nagy (2013)).

Post-reform, the Courts also got several opportunities to provide clarity on the legal tests to find an infringement for different categories of abuse. Recent judgments largely confirm pre-reform case law, but the judgments in Post Danmark and Intel may announce a more effects-based approach to art. 102. At first sight, recent case law regarding rebates reminds of the traditional formalist approach. The Courts reaffirmed the tripartite classification of discounts and their corresponding legal tests.[130] Hence, contrary to third category rebates,[131] the Commission does not need to consider all the circumstances in its assessment of exclusivity rebates.[132] Furthermore, the Courts legally distinguished rebate schemes from other pricing abuses, because, in contrast with exclusivity, price levels cannot be regarded as

121 See e.g. T-Mobile, para. 31 and Allianz Hungária, para. 38.
122 Case C 67/13 P Groupement des cartes bancaires v Commission [2014] nyr, para. 58 [Cartes Bancaires].
123 Cartes Bancaires, para. 69. Also see C-345/14 - Maxima Latvija [2015] nyr, paras. 22-23 [Maxima Latvija].
124 See e.g. Cartes Bancaires, para. 51; Maxima Latvija, para. 18; C-286/13 P Dole Food and Dole Fresh Fruit Europe v Commission [2015] nyr, para. 115 [Dole Food] and Pierre Fabre, para. 38.
125 Premier League, para. 135; Allianz Hungária, para. 34; Maxima Latvija, para. 17.
126 Expedia, para. 37.
127 BIDS , para. 17; GSK, paras 55, 62-64; T-Mobile, para. 36; Premier League, paras 28, 135, Pierre Fabre, para. 34; Dole Food, para. 123.
128 Cartes Bancaires, paras 69, 49. Also see Allianz Hungária, paras 34, 46.
129 Expedia, para. 21; Allianz Hungária, para. 36; Cartes Bancaires, para. 53 and Case T-168/01 GSK [2006] ECR II-2969, para. 119.
130 Case T-286/09 Intel, paras 74-78. Also see Post Danmark II, paras 27-29. Interestingly, in Post Danmark II, the ECJ omitted the controversial terms 'loyalty-inducing' and 'fidelity-building'.
131 Case C-549/10 P Tomra v Commission [2012] nyr, para. 18 [Tomra]. Also see Post Danmark II, para. 29, 68.
132 Case T-286/09 Intel, paras 96-99.

unlawful in themselves.[133] Hence, to establish the potential foreclosure effect of rebates, the Commission does not need to perform an AEC test such as in cases involving margin squeeze or low pricing.[134] It is enough to show that a rebate tends to restrict competition without the need to prove actual effects or establish a counterfactual.[135] Recent judgments regarding other pricing abuses largely confirm pre-reform case law too. The Courts repeated that the Commission has to demonstrate anticompetitive effects to find a low price or margin squeeze abusive, but these effects do not have to be concrete. Indeed, the fact that the exclusion of competitors is not ultimately achieved cannot prevent the finding of an abuse.[136] Accordingly, it suffices to show that a practice is *capable* to restrict the buyer's freedom to choose suppliers, to restrict market access or to hinder the growth of competition.[137] While endorsing an AEC benchmark and the use of price-cost tests, the Court clarified that even a positive margin squeeze or a positive AEC test does not rule out that a pricing practice is capable of producing anticompetitive effects.[138] Hence, it cannot always be assumed that an abuse exists *only* where an AEC is excluded.[139] The case law therefore also takes into account competitive pressure exerted by not yet AECs or potentially AECs.[140] It is up to (national) competition authority to show in what respect the practice is likely to produce anticompetitive effects.[141] Finally, post-reform case law reaffirmed that dominant firms are allowed to raise an objective justification or efficiency defence.[142]

However, some proponents of the MEA saw signs of hope in the ECJ's judgments in Post Danmark and Intel. In Post Danmark II, the ECJ clarified the relevant criteria in determining whether a standardised rebate is liable to foreclose. It extended the scope of the 'all the circumstances' test by including an assessment of the 'extent of the dominance' and the 'conditions of competition'.[143] According to some, this suggests that the Court has introduced an effects-based approach to third category rebates (Colomo, 2015a; for an opposing view, see Venit, 2016). Yet, the judgment has not changed that retroactive rebates remain by object abuses once a formalist analysis has established a suction effect.[144] The supplementary analysis of the competitive conditions merely seemed to serve to corroborating this finding.[145] In this light, it seems but a trivial concession that the Court did not dismiss, 'on principle', recourse to the AEC test in rebate cases.[146] The ECJ concluded in quite general terms that the AEC test must be regarded as 'one tool amongst others'.[147] Certainly, to say that it is s*ufficient* to demonstrate

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[133] Case T-286/09 Intel, para. 99

[134] Tomra, paras 73-74; Case T-286/09 Intel, paras 103-105, 144-145 and Post Danmark II, paras 56-57, 62. The AEC test can only verify that market access has been made impossible, it cannot rule out that it has been made more difficult (Case T-286/09 Intel, paras 150-152).

[135] Tomra, paras 68, 79, Case T-286/09 Intel, paras 103-104, Post Danmark II, para. 66.

[136] Case C 280/08 P Deutsche Telekom, para. 254.

[137] Case C 280/08 P Deutsche Telekom, paras 175, 250-253; TeliaSonera paras 61-63; Post Danmark I, para. 26.

[138] TeliaSonera, para. 74.

[139] Case C 280/08 P Deutsche Telekom, para. 177 ('inter alia'); Post Danmark I, para. 25.

[140] Case C 280/08 P Deutsche Telekom, para. 178, TeliaSonera, para. 94.

[141] Post Danmark I, paras 38-40.

[142] Case C 280/08 P Deutsche Telekom, paras 85-86; TeliaSonera, para. 76; Post Danmark I, paras 40-42, Post Danmark II, paras 47-48 and Case C-413/14 P Intel, para. 94.

143 Post Danmark II, paras 30, 50.

144 Post Danmark II, para. 35-38.

145 Post Danmark II, paras 39-42.

146 Post Danmark II, para. 58.

147 Post Danmark II, para. 61.

that the practice has the potential to exclude an AEC[148] does not mean that it is *necessary*. In Intel, interestingly referring to a *low pricing case* (Post Danmark I), the Court stressed that art. 102 does not aim to keep less efficient competitors on the market.[149] The ECJ affirmed that loyalty rebates are prima facie abusive,[150] but insisted 'that case law must be further clarified'.[151] If the dominant firm submits evidence that its conduct was *not* capable of restricting competition, the Commission is required to analyse this evidence by means of the extended 'all the circumstances' test proposed in Post Danmark II.[152] The application of this test to loyalty rebates is arguably revolutionary. However, it is too early to conclude from the ruling that the ECJ has introduced an effects-based approach.[153] After all, whether the Commission was required to perform an AEC test was not a ground of appeal.[154] The referral of the case back to the GC therefore may be a matter of legal review, rather than of substance. Indeed, since the Commission decided to supplement its formalist analysis with a detailed AEC test, which played an important role in the capability analysis, the ECJ ruled that the GC was required to examine Intel's arguments calling into question the validity of the analysis.[155] Arguably the most noteworthy post-reform judgment regarding other pricing abuses was Post Danmark I, where the ECJ extended the use of the AKZO test to *selective* low pricing.[156] To some, this represented 'a climate change' as it departs from previous case law, which suggested that the mere selectivity of a price could be an indication of anticompetitive intent (Rousseva & Marquis, 2012, p. 36).

4.3 A new legal-institutional balance?

4.3.1 European system of beliefs regarding the well-functioning and the role of markets and governments

Norms and values determine a society's beliefs regarding the role of markets and governments. Europeans are traditionally wary of economic power and they doubt the ability of markets to erode it (Hawk, 2008, pp. 884-885). Post-reform, the social consensus has not changed. On the contrary, the 2008 crisis has reinforced the European system of beliefs.[157] Firstly, compared to Americans, Europeans do not generally acclaim big firms, nor their economic role in society. Market outcomes are rarely perceived as fair. Wealth and success are regarded as the outcome of luck and connections, rather than of talent and entrepreneurship (Alesina & Angeletos, 2003, p. 2). This may be explained by a tradition of state-created monopolies: large firms did not necessarily earn their place through innovation or business acumen (Devlin & Jacobs, 2010, p. 283). At the same time, public opinion and public policy

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148 Post Danmark II, para. 66 (emphasis added).
149 Case C-413/14 P Intel, paras 133-134.
150 Case C-413/14 P Intel, para. 137.
151 Case C-413/14 P Intel, para. 138.
152 Case C-413/14 P Intel, paras 138-139.
153 'This holding represents the first time that the [Courts have] required an effects-based analysis in an exclusivity rebate case' and 'changes the framework for future dominance investigations" (Giles & Modrall, 2017). 'This ruling raises the burden of proof for Europe's antitrust watchdog to make a case against pricing incentives offered by dominant companies' (Financial Times, 2017b).
154 Case C-413/14 P Intel, para. 119. The Court is only obliged to respond to the pleas in law.
155 Case C-413/14 P Intel, paras 141-144, 147.
156 Post Danmark I, paras 25, 37-38.
157 Even in the US, voices are raised for an intensification of competition policy to prevent the creation of 'too big to fail'-firms (Markham Jr, 2011) and to tackle antitrust's 'democracy deficit' (First & Waller, 2012). Ironically, 'there is already much talk of the US' antitrust regime becoming more harmonious with EU competition law' (Devlin, 2010, p. 603).

in the member states are sympathetic to SMEs, which are the true backbone of Europe's economy. Representing over 90 per cent of businesses, they are more numerous in relation to (mostly foreign) large firms. They provide two-thirds of total private sector employment and have created around 85 per cent of new jobs in the last five years.[158] The suspicion towards large firms extends beyond the realm of the market. Even after the liberalisation wave, many supposedly private firms still have close relations with supportive governments. The popular conviction that economic power is used to shape politics is deep-rooted, and may be warranted. Indeed, the combination of a relatively stronger executive branch, a relatively weaker legislative branch, and probably a weaker judicial branch than the US federal government results in a lack of transparency, which may make the European institutions 'even more vulnerable to capture' than their American counterparts (McDonnell & Farber, 2003, p. 815).[159] Secondly, Europeans largely doubt the potential of markets to keep economic power in check. This is not only a matter of belief, but an economic fact. The idea of self-correcting markets, which underpins the Chicago paradigm, 'presupposes the existence of an integrated market' (Sir Leon Brittan in Lowe, 2007, p. 3). This proposition is much more appropriate for the US economy. Whereas the single market in goods is well-advanced, the digital single market and the single market in services and labour lag behind. A study by the European Parliament's Research Service estimated the cost of non-Europe (i.e. the gains of integration-related growth) at €1597 billion, representing approximately 12 per cent of current EU GDP (EPRS, 2015, pp. 10-11).[160] A lower degree of market integration means that the proposition of self-correcting markets is less credible in an EU setting (Schweitzer, 2008, p. 162). Hence, barriers to entry – and therefore market power – probably are more persistent within the EU.[161] As a result of this particular value system, Europeans generally rely on governments, rather than markets, to set the boundaries between economic freedom and market power (Amato, 1997, p. 54; Jebsen & Stevens, 1996, p. 452). Governments are expected to facilitate a just distribution of market outcomes (McDonnell & Farber, 2003, p. 829) and to keep supplier-distributor relations fair (Gifford & Kudrle, 2003, p. 753). Indeed, most major political forces on the continent place stability of production and employment ahead of efficiency and growth (Gifford & Kudrle, 2003, p. 776). This preference for a fairer distribution of wealth, pluralism, freedom of trade, access to markets and consumer choice contributes to EU competition law's summarizing norm: a commitment to the competitive process (Fox & Sullivan, 1987, p. 936), including an explicit policy choice to treat dominant firms differently. Competition understood as such prevails as the best guarantee to provide legitimacy to the European project in general, and competition policy in particular.

Accordingly, from a broader welfarist perspective, a policy bias in favour of type I errors (which naturally follows from a commitment to the process of competition) may be an efficient choice for EU competition policy. First, type I errors are not only less costly, they are also less likely. The EU economy probably is less dynamic than the US economy, so European enforcers tend to give less weight

158 See https://ec.europa.eu/growth/smes_en, retrieved on 12/11/2017. SMEs are enterprises that employ fewer than 250 persons and that have an annual turnover not exceeding €50 million, and/or an annual balance sheet total not exceeding €43 million.

159 A case in point is the recent capture of the German government by the powerful car lobby regarding the Commission's proposal to reform EU car emission test, which resulted in a down-tuning of CO2 emission targets. Also see the open letter of Financial Times columnist John Kay to Neelie Kroes: 'There is not much wrong with the current status of [art. 102] – and you should reaffirm it. If it is unclear today it is mainly because your officials, battered by those lobbyists who have enjoyed such success across the Atlantic, have lost confidence in its application' (Financial Times, 2005).

160 Also see the Commission's sector inquiry into e-commerce, which concluded that geo-blocking is still widespread throughout the EU (European Commission, 2015, 2016c). A new EU regulation is set to ban unjustified online geo-blocking in certain circumstances.

161 Although the integration rationale arguably does not have the same unifying power as in the 1950s-60s, the persistence of national division lines demonstrates that integration and competition still are mutually reinforcing in an EU context. Vestager (2015a) made a priority of fostering the digital single market in her term as Commissioner for competition.

to the idea that the prospect of monopoly rents will spur Schumpeterian innovation. In the US, it is easier to start a business, the culture of entrepreneurship is more established and there is a mature venture capital industry that bets on innovation (Evans, 2009, pp. 181-182). Innovation-intensive industries such as information technology and biotechnology have thrived better in the US than in Europe (ibid.). Secondly, the expected costs of type II errors are relatively higher in a legal system that treats economic freedom as an absolute right (as opposed to a derogatory right that is conditional upon current static efficiency). Whereas a restriction of economic freedom does not necessarily entail a decrease in consumer welfare in its strictest sense, it is likely that a practice that has negative effects on consumer welfare also restricts (other aspects of) economic freedom. Hence, the costs of false acquittals may extend beyond harm to consumer welfare. Finally, type II errors are expected to be relatively more persistent in less integrated (and more rigid) markets. Since European markets are less successful in eroding market power, market forces may take longer, or even fail, to correct type II errors.

4.3.2 Institutional set-up of EU competition policy

First, with the decentralisation of art. 101(3), EU competition policy has transformed towards an enforcement system based on ex post monitoring and legal exceptions. The concomitant creation of the supranational European Competition Network ("ECN"), EU competition policy has transmuted into a form of network competition enforcement (for a discussion, see Wilks, 2005). As a result, first, the Treaty competition provisions have to be applied in their entirety by national competition authorities, and second, private parties can take legal action against firms before national judges in all member states - a power which has been strengthened by recent initiatives to increase private enforcement (see below). The introduction of the MEA represents both an opportunity and a threat in an decentralized setting. On the one hand, different jurisdictions may vary in their interpretation of EU law. To be operational and deliver consistent outcomes, the ECN needs a common language that assures a uniform application of the law across the member states (Gerard, 2012, p. 21). The language of economics promises a means to identify non-welfare-oriented divergences among national competition regimes more easily (Gerber, 2010, p. 198). As a result, transparency and legal certainty should improve. On the other hand, effects analysis is burdensome and it demands an impressive amount of skills on the part of antitrust enforcers (Melamed, 2006, p. 381 ff.; Stucke, 2009, pp. 1384-1385). National competition authorities and courts still vary widely in their competence and available resources (Wilks, 2005, pp. 440-441), which may create an *un*level playing field instead. Indeed, according to some, the complexity of effects analyses has resulted in national competition authorities avoiding effects cases (or increasingly framing them in by object terms), which ironically results in a *less* economic approach (Lamadrid, 2011) and more uncertainty.

Secondly, EU competition policy is enforced primarily at the public level. To the contrary, the US system relies heavily on private enforcement, which implies that a large proportion of antitrust cases are decided upon by lay juries and that infringements can give rise to treble damages.[162] In some aspects,

[162] In the period 1975-2012, over 90% of antitrust cases filed in US District Courts were civil cases (Sourcebook of criminal justice statistics, http://www.albany.edu/sourcebook/pdf/t5412012.pdf, retrieved on 15/09/2017). A study commissioned by the Commission revealed that the use of private damage actions across the EU is diverse and underdeveloped. The study has found only around 60 judged cases for damages actions on the basis of EU or national law (Waelbroeck, Slater, & Even-Shoshan, 2004, p. 1).

the EU system creates more leeway for a MEA. The prevalence of private enforcement implies that the majority of cases is decided by an epistemic community of antitrust enforcers who are well-versed in dealing with complex economic assessments. It also implies that firms and their legal counsel can fall back on a vast amount of administrative decisions, case law, guidelines and notices. This suggests that EU competition policy in general is relatively predictable, which compensates for the decrease in transparency and legal certainty that comes with an effects-based approach.[163] On the other hand, the higher administrative burden may have severe repercussions on the effectiveness of public enforcement systems – especially in civil law jurisdictions, such as prevalent in continental Europe, which are characterised by inquisitorial legal systems. The number of cases being handled by the Commission may decrease (Gerard, 2012, p. 33) or resources may be pulled away from other areas of enforcement, such as cartels, which are more detrimental to consumer welfare.[164] Moreover, the economic resources mobilized by the Commission (let alone the national competition authorities) are an order of magnitude smaller than those of big firms and this imbalance is a source of concern (Neven, Vickers, & Coyle, 2006, pp. 741, 752). Unintentionally so, competition policy may become too lenient as the Commission fails to proof anticompetitive effects to the lifted standard of proof (Baker & Shapiro, 2008; Maier-Rigaud & Parplies, 2009). All these scenarios imply a direct, and possibly an indirect welfare loss due to decreased deterrence. Moreover, there may be a lesser need for a MEA in the EU. In the US system, it makes sense to introduce a higher standard of proof in order to diminish the private litigant's prospects for success and to prevent excessive compensation, and therefore overdeterrence (Kovacic, 2007, pp. 60-62). Easterbrook (1984, p. 34) asserts that 'the books are full of suits by rivals for the purpose, or with the effect, of reducing competition and increasing price'. Succeeding plaintiffs are eligible to recuperate lawyer fees from the defendant, but the defendant does not have an equal right. In the EU, a narrowly defined substantive standard and concrete evidence of effects and causation may be less important than in the US antitrust system. Arguably, malicious prosecution is less of a concern since unfounded complaints are prevented by the fact that the majority of cases are handled by seasoned antitrust specialists. Moreover, litigation costs are (partly) borne by the losing party. Recently, the Commission and the Council have taken initiatives to facilitate private enforcement actions under civil law (Council of the EU, 2014; European Commission, 2013), albeit with mixed success for the time being. A potential rise in private actions may change the balance in favour of a less permissive substantial standard and a higher standard of proof in the future.

Finally, the Commission is a monist authority. It combines the roles of investigator, prosecutor and judge in competition cases (for a discussion, see Wils, 2014a). A thorough legal review is arguably more important than in the case of dualist competition authorities, such as in the US. Especially since the dramatic rise in fines has given administrative sanctions a criminal sanction-like nature, it is

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[163] While modern IO is highly developed as an academic discipline, the application of economic models in concrete cases is fraught with difficulty and uncertainty (Vesterdorf, 2005, p. 17). First, for each type of conduct, there are several possible theories of harm, each with different policy implications (Crandall & Winston, 2003, p. 3). Competition authorities lack clear decision-making protocols to choose between different models or alternative explanations (Manne & Wright, 2010, p. 163; Wright, 2012, p. 313 ff.). Next, the robustness of econometric results crucially depends upon the underlying assumptions, which are not always transparent. Finally, whereas modern IO is familiar with models that predict future competitive conditions based upon current inputs (see Ginsburg and Wright (2012, pp. 1-2)), it cannot accurately predict the long-run effects of (non-)intervention on innovation and risk-taking (Sidak & Teece, 2009; Werden, 2006, p. 431). Ironically, an economic approach may therefore decrease transparency and legal certainty (Piraino Jr, 2007).

[164] See the Opinion of AG Kokkott in Post Danmark II.

indispensable that the Courts fully engage with the legal and factual elements of appeals that are brought before them. This has been confirmed by the ECJ on several occasions.[165] The Courts have unlimited jurisdiction to review decisions whereby the Commission has fixed a fine, which can be cancelled, reduced or increased (Council of the EC, 2003, art. 31). Yet, the Commission is granted quite some deference in case assessments of an economic nature.[166] This is due to the epistemic asymmetry problem raised by the reliance on economic arguments before courts. The ECJ devised the 'manifest error of assessment test' to review the legality of 'complex economic assessments'.[167] Hence, the Courts' legal review is limited to verifying 'whether the evidence relied on is factually accurate, reliable and consistent'.[168] The marginal review creates an imbalance between the Commission and the defendants. The sustainability of the more effects-based approach in combination with a criminalisation of competition law thus depends on the Courts exercising full appellate jurisdiction in reviewing the merits of antitrust decisions imposing fines (for a discussion, see Gerard, 2011). For now, the Courts seem more willing to engage in a thorough review of complex economic assessments in merger cases than in (behavioural) antitrust cases.[169] However, the Court's Intel judgment may indicate that the Courts will respond to the Commission's increased reliance on economic evidence with a more comprehensive legal review in the future. This evolution may however call for the introduction of more systematic rules for the admissibility of economic proof to avoid expert bias and partisanship (see e.g. the Daubert standard in the US). Also, an adaption of the written procedure before the Courts may be needed to make the economic evidence more accessible to judges and to enhance procedural efficiency (for a discussion, see Lianos, 2010).

5 Conclusion

Roughly fifteen years into the reform, the exact scope of the MEA remains vague. One of the reasons is that most analyses of the reform depart from a rather strict distinction between a freedom/legal formalism-nexus (the "less economic" approach) and a welfarism/empiricism-nexus (the "economic" approach). I carried out an interdisciplinary analysis to lift the debate on the role of economics in EU competition policy beyond the prevailing absolutist view. I found, first, that EU competition policy has always been and remains a hybrid regime, and secondly, that a less than "economic" approach may be perfectly economically sound given the legal-institutional setting in which the policy is implemented.

First, EU competition policy has always been and remains a hybrid regime - both in terms of objectives and means. In terms of *objectives*, from the beginning, administrative practice and case law have attempted to merge economic freedom and consumer welfare goals. The balancing exercise has not always produced logical results from a modern IO viewpoint, especially with the integration imperative added to the mix. However, a more consistent picture emerges once it is recognized that the protective aim of EU competition law is the structural process of rivalry. For a broad range of firm practices, the protective aim of the law defined as such yields similar results as a welfare-based approach. Yet, where economic freedom and welfare threatened to clash disproportionately, EU competition policy has left

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165 See Case C-386/10 P Chalkor v Commission [2011] ECR I-13085 and C-389/10 P KME Germany v Commission [2011] ECR I- 13125.

166 Joined cases C-68/94 and C-30/95 France v Commission [1998] ECR I-01375, para. 223.

167 Also see Case 42/84 Remia v Commission [1985] ECR 2545, para 34.

168 See Case C-12/03 P Tetra Laval v Commission [2005] ECR I-987 [Tetra Laval], para. 39 and Case T-271/03 Deutsche Telekom, para. 185.

169 See e.g. Tetra Laval and Case T-342/07 Ryanair v Commission [2010] ECR II-3457.

the trade-off to be dealt with by the process of competition. The normative framework helps explaining why art. 101 policy has always been more welfare-based than art. 102 policy. Indeed, the potential for conflict is higher when dominant firms are involved. Nevertheless, to correct for the overinclusiveness that flows from a process-based standard, EU competition law has always confirmed dominant firms' right to advance an efficiency defence - at least in principle. The MEA has not profoundly transformed the mixed normative framework. Whereas the evolution towards a greater acceptance of (proportionate) restrictions of economic freedom in exchange for direct welfare gains continues, economic freedom still is not protected *only* where it benefits consumer welfare. Behind the welfarist exterior of updated definitions of anticompetitive effects, market power, foreclosure etc., the same old balancing exercise takes place, albeit less overtly. Indeed, welfarist and non-welfarist goals now are absorbed by a comprehensive notion of consumer welfare. By broadening the interpretation of consumers to future consumers and customers, and by including consumer choice, variety and innovation in the definition of welfare, conflicts are now balanced from *within* the consumer welfare standard.

In terms of *means*, EU competition policy has always been effects-based in that the finding of a restriction or abuse relied on the presumption that the practice was capable of producing anticompetitive effects eventually. The *intensity* and the *object* of the effects analysis therefore are more revealing issues. EU competition policy has built on a kind of structured rule of reason, which is based on the distinction between by object and by effect infringements. But, even within these categories, the intensity of the factual analysis has varied. Early on, the Court ruled that except for hardcore restrictions (naked cartels, (most) restrictions of parallel trade and exclusivities implemented by a dominant firm), an infringement could not be established simply on the basis of an examination of the content and aim of the contract clauses. Indeed, the analysis under art. 101(1) should involve a more intensive substantial analysis of the legal and economic context and of possible legitimate objectives. Similarly, dominant firms' pricing practices other than exclusivities have required at least a consideration of all the circumstances and, on occasion, a more elaborate analysis of market conditions. With the MEA, the Commission has brought secondary law and decisional practice in line with the Court's early progressive case law. At times, it has gone even further than the requisite legal standard while conducting an effects analysis after having established a by object restriction, e.g. in the bank card cases and Intel. Interestingly, recent case law also seems to blur the boundaries between by object and by effect restrictions by demanding a more thorough factual analysis before finding a by object infringement (e.g. Cartes Bancaires). The intensity of the effects analysis therefore seems to remain the most puzzling matter in EU competition law. However, the Commission and the courts may be establishing the necessary groundwork for a broader application of the effects-based approach. Indeed, the list of by object infringements is non-exhaustive and adaptable. A more in-depth analysis into the anticompetitive effects of (new) practices (or new sectors) generates the necessary insights and experience to update the by object box (e.g. regarding the economics of two-sided markets). Notwithstanding a continued increase in the intensity of the factual analysis, harm to the competitive process - from which anticompetitive harm is deduced - in principle remains the object of the effects analysis. Whereas the ECJ has advocated at least some economic analysis to trade-off effects on economic freedom and welfare under art. 101(1), if dominant firms are involved, the object of the effects analysis clearly was and remains the structural process of rivalry (i.e. the capability to foreclose). This is best illustrated by the different treatment of exclusivities under art. 101 and art. 102. This does not imply that the MEA has had no impact on abuse of dominance policy. To the contrary, the Commission's approach to abuse of dominance is more analytical than before the reform. The increased reliance on AEC tests in exclusivity cases may be seen as a way to counter criticism by better substantiating the link between harm to competition and harm to consumers. Meanwhile, the Guidance has created enough leeway to resort to other legal tests to account for the non-welfarist objectives of EU competition law if necessary.

Recent case law does not depart too radically from this line of thought. The ECJ has not excluded on principle recourse to the AEC test in exclusivity cases. Indeed, practices that eliminate even AECs are a fortiori capable of harming competition. This is not to say that the Courts *require* an AEC test or complex econometric evidence (even in effects cases). Indeed, the Courts have not established a hierarchy between economic and other evidence. To withstand the Courts' legal review, the only condition is that the evidence relied upon is accurate, consistent and convincing. Summarizing, since the formative period has ended, EU antitrust enforcers by and large have faced the same two challenges: first, how to merge and balance the objectives of economic freedom, integration and consumer welfare, and secondly, how to reconcile this mixed normative framework with an increasingly effects-based approach.

Secondly, the less than "economic" approach just described may be efficient given the legal-institutional setting in which EU competition policy is implemented. Indeed, the interdisciplinary analysis shed an alternative light on what exactly defines a sound economic approach for the EU. In terms of *objectives*, the legal-institutionalist analysis showed that a commitment to the competitive process is efficient from a broader welfarist perspective. The lower intervention threshold reflects the European consensus on the proper division of tasks between governments and markets as Europeans expect governments, rather than markets, to set the boundaries between freedom and market power. The efficiency of legal rules aimed at protecting the process of competition is also consistent with economic reality. A lower degree of market integration and less dynamic market competition imply that barriers to entry - and therefore market power - are more persistent within the EU. Put in terms of the error-cost framework: the expected costs of type II errors are relatively higher and long-lasting. Accordingly, it is economically rational for EU competition policy to err on the side of overenforcement as this strategy will minimize the expected costs of errors. Yet, the evolution of EU competition policy towards a form of network competition enforcement may shift the institutional balance towards a welfare-based standard. According to some, increased decentralisation strengthens the need for a greater reliance on "the common language of economics" to identify non-welfare-oriented divergences among national competition regimes that may threaten the level playing field. In terms of *means*, the institutionalist analysis showed that there are opportunities and limits to a more effects-based approach. On the one hand, the prevalence of private enforcement implies that the majority of cases is decided by seasoned antitrust enforcers who can handle the complexity of effects analysis. It also means that firms can rely on a vast amount of administrative practice and case law, which compensates for the decrease in transparency and legal certainty that comes with an effects-based approach. On the other hand, national competition authorities and courts still vary widely in their competence and available resources, which may create an *un*level playing field instead. Moreover, the higher administrative burden may have severe repercussions on the effectiveness of EU competition policy: the number of cases being handled may decrease or resources may be pulled away from other areas of enforcement, such as cartels, which are more detrimental to consumer welfare. At any rate, to ensure due process, an increased dependence on effects analysis by the Commission will have to be met with a more thorough legal review than the 'manifest error of assessment test' the courts are currently relying on to review the legality of complex economic assessments.

To conclude, the controversy surrounding the MEA could be largely eradicated if EU competition policy was to be accepted for what it is, rather than for what competition economists or lawyers would wish it to be. Our analysis showed that the scope of the MEA is inevitably determined by whether an economic approach is normatively desirable, legally possible and institutionally feasible. Accordingly, "less" or "more" economic approaches to competition policy are not only relative concepts, they merely are the extrema of a continuum. The analysis of the legal-institutional setting helped explaining why welfarist goals sit alongside non-welfarist goals, why EU competition policy combines legal formalism with an effects-based approach, and why this less than "economic" approach is economically sound. The interdisciplinary approach also accounted for the stop-go rhythm with which the policy develops towards a more economic approach and provided an explanation for why EU competition policy will never be "fully" economic in a strictly Chicagoan sense.

More economics, but still more than economics - An empirical analysis of the Commission's merger decision rule

1 Introduction

This paper investigates the European Commission's merger decision rule before and after the reform. In 2004, Regulation (EEC) No 4064/89 on the control of concentrations between undertakings (hereafter "ECMR") was replaced by Regulation (EC) No 139/2004 (hereafter "EUMR"). The reform of merger control was part of a broader reorientation of EU competition policy towards a 'more economic approach' ("MEA") after the traditional structuralist approach had attracted heavy criticism. In essence, the MEA entails a reorientation towards welfarist goals and an effects-based approach grounded in modern industrial organization principles and empirical evidence.[170] The reform was backed by the appointment of a Chief Competition Economist and a team of high-level economists to enhance DG Competition's economic capacities.[171] Formally, the MEA in merger control includes the replacement of the structuralist dominance test by the more effects-based Significant Impediment of Effective Competition ("SIEC") test, the introduction of an efficiency defence and modern industrial economics-based merger guidelines (European Commission, 2004b, 2008).

The legal and procedural implications of EU merger reform have been intensively discussed in theoretical literature. Yet, more than fifteen years into the reform, it remains unclear whether and how the MEA has affected EU merger decisions. On the one hand, it is argued that the Commission already applied the dominance test flexibly enough to assess the competitive nature of mergers in terms of their effects on prices, output and quality (Boge & Muller, 2002; Heimler, 2008; Lowe, 2002; G. Monti, 2008; Röller & De La Mano, 2006). Indeed, in laying out some broadly accepted economic principles, the Horizontal Merger Guidelines (European Commission, 2004b, "Horizontal Guidelines") merely commit to paper the Commission's experience with the assessment of mergers under the *old* merger regulation (para. 6). On the other hand, the new merger regulation (recital 6) and the Horizontal Guidelines (art. 2) explicitly recall the traditional structuralist definition of dominance as the ability to harm the structure of competition. Moreover, even in recent case law, the European Court of Justice ("ECJ") denied that consumer harm is necessary for EU competition law to apply as it reconfirmed that competition law should protect the structure of the market.[172] According to some, the mix of the old and the new results

[170] The Commission's Economic Advisory Group on Competition Policy (EAGPC) defined an economic approach as follows: '[It] implies that the assessment of each specific case will not be undertaken on the basis of the form that a particular business practice takes […] but rather will be based on the assessment of the anti-competitive effects generated by business behaviour. This implies that competition authorities will need to identify a competitive harm, and assess the extent to which such a negative effect on consumers is potentially outweighed by efficiency gains. The identification of competitive harm requires spelling out a consistent business behaviour based on sound economics and supported by facts and empirical evidence. Similarly, efficiencies and how they are passed on to consumers should be properly justified on the basis of economic analysis and grounded on the facts of each case' (EAGCP, 2005b, p. 3). Also see Röller and Stehmann (2006).

[171] In 2003, Monti appointed DG Competition's first ever Chief Competition Economist and populated its team with reputable economists to give 'guidance on analytical methodology, advice on the direction of investigations and direct assistance in the most complex cases' in order to enhance the DG's economic skills (M. Monti, 2002a). In the same year, the EAGCP was set up as an academic advisory body consisting of leading European industrial economists. Its main purpose is to support DG Competition in improving its economic reasoning and in the use of sophisticated econometric techniques in competition policy analysis.

[172] See Case C-8/08 T-Mobile Netherlands v NMA [2009] ECR I-4529, para. 38; Cases C-501/06 P, C-513/06 P, C-515/06 P, C-519/06 P, GlaxoSmithKline v Commission [2009], para. 63; Case C-52/09 Konkurrensverket v TeliaSonera Sverige [2011] ECR I-00527, para. 24; Case C-202/07 P France Télécom SA v Commission, [2009] ECR I-2369, para. 105.

in ambiguous theories of harm and therefore legal uncertainty (Witt, 2012). Indeed, whereas it is evident that the goal of EU merger control is to preserve 'effective competition', it remains ambiguous whether the concept is operationalized in welfarist, structuralist, or even broader terms. Accordingly, there is disagreement over whether or not the new substantive test has led to a more permissive approach (see e.g. Levy, 2010; Werden, 2008) or rather excessive enforcement (Heimler, 2008).

The purpose of this paper is to provide clarity on the factors that affect the Commission's merger decisions before and after the reform using empirical analysis. Post-evaluation of competition policy in terms of its determinants and welfare effects is raising an increased interest in the policy debate and in the academic literature (for an overview, see DG Competition, 2015; OECD, 2016). Merger control is an ex-ante policy instrument: the Commission has to make an assessment of future competitive effects of firm behaviour. This inevitably involves uncertainty. Insight in the Commission's merger decision rule is important for at least two reasons: it preserves economic and legal certainty, and it enables an ex-post evaluation of the quality of merger control in terms of transparency, predictability, internal consistency and conformity to economic theory. As such, increased understanding of the factors that guide merger decisions contributes to lowering the system costs of enforcement by enabling firms to adapt the design of mergers and commitments and to improve the quality of their arguments.

Earlier empirical research has studied the determinants of EU merger decisions. Lindsay, Lecchi, and Williams (2003); Bergman, Jakobsson, and Razo (2005) and Aktas, de Bodt, and Roll (2007) analysed EU merger decisions *before* the reform; Fernández, Hashi, and Jegers (2008) *after* the reform. There is broad consensus on the fact that EU competition policy is fairly predictable. Also, competition factors seem to have the expected influence, whereas non-competition factors, except for market integration, do not appear to play an overly important role in merger assessments. However, to date, there is no empirical study into the *comparative* effects of the reform on the Commission's merger decision rule. Duso, Gugler, and Szücs (2013) focus on the impact of the reform on *ex ante* predictability. As such, Duso et al.'s simple model for the Commission's decision rule only allows a partial comparison of the factors that affect merger decisions across regimes.[173] Moreover, previous research mostly focused on the factors that trigger or determine a *Phase II* investigation. The decision process in Phase I investigations, the vast majority of cases, therefore is under-researched. It is often assumed that Phase I investigations are less interesting from an economic viewpoint. This assumption ignores that a sound economic approach need not be restricted to hard data or involve complex economic and econometric analyses, even under an effects-based approach. Indeed, economic insights can be harnessed into simple filters and safe harbours (Manne & Wright, 2010, p. 163). An update of the rules in line with modern industrial organization teachings is an integral and equally exciting part of the reform towards a MEA and it should be perfectly detectable - albeit in less visible ways - in Phase I decision-making.

I constructed a database with 160 Phase I merger decisions (encompassing 1113 horizontally affected relevant markets) covering the years 1992 to 2013. Applying a method developed by McFadden (1975,

[173] Duso et al. (2013)'s model is based on *observable* merger characteristics only, such as the nature of the merger, the firms' country of origin, measures of past merger policy enforcement and industry dummies. In other words, the model does not incorporate variables that are only available *after* a competitive assessment of the proposed merger, such as market shares, concentration indices, barriers to entry etc..

1976), I deduce the Commission's merger decision rule by way of logistic regression models. First, an economic model was estimated, which includes (structure- and effects-based) competition variables only. The economic model was then nested into the institutional model, which contains non-competition variables also (market integration, other institutional factors and sector dummies). The models are estimated for both regimes separately. Next, I compared coefficients before and after the reform to detect a structural break in the Commission's decision rule.[174] I find that structural measures of market power still play an important role after the introduction of the MEA, but this role seems to have diminished. Nonetheless, the models that include competition as well as non-competition variables better fit the Commission's decision rule than the model containing competition variables only, even after the reform. I conclude that whereas the reform of merger policy has introduced more economics, EU merger control may still be about more than mere economics.

Section 2 describes the legal framework of EU merger control and elaborates on the substantive changes that were introduced with the MEA. Section 3 discusses the competition and non-competition factors that in theory may determine the Commission's merger decision rule and the expected impact of the reform. Section 4 reviews previous empirical literature on the factors that influence competition authorities' decisions. Section 5 discusses the data collection process, sample descriptives and econometric issues. Section 6 sets out the methodology and looks into some possible econometric issues. Next, Section 7 discusses the regression results and the identification of a structural break. Section 8 concludes.

2 EU merger control and the reform towards a more economic approach

2.1 Legal basis of EU merger control

In 1989, after sixteen years of combined pressure from the Commission, the ECJ and a growing cross-border business community (Bulmer, 1994), the European Council adopted the European Community Merger Regulation, which first authorised a systematic review of concentrations at a European level (Council of the EEC, 1989, reviewed in 1997, "ECMR"). Concentrations cover mergers, acquisitions of control and the establishment of full-function joint ventures (hereinafter "mergers"). The Commission has exclusive jurisdiction to review mergers with a community dimension, which is determined by global and community turnover thresholds ('one-stop shop' principle). Mergers that reach the thresholds have to be notified prior to implementation. The Commission then assesses whether the merger is 'compatible with the single market' in terms of the need to preserve 'effective competition' (Recital 13, ECMR). In so doing, it must place its appraisal within the general framework of the achievement of the fundamental objectives of the Treaty (ibid.). Furthermore, the Commission should consider whether a concentration will likely result in 'the development of technical and economic progress' (art. 2(1)(b) ECMR). However, this does not support an explicit balancing of pro- and anticompetitive effects as efficiencies can only be taken into account so far as the concentration 'does not form an obstacle to competition' (ibid.). The analysis is conducted in one or two phases, which are bound by strict deadlines. A phase I investigation needs to be completed within 25 working days, after which the Commission can clear the deal (with or without commitments). If a merger raises serious

[174] We depart from the official decisions published on the website of DG Competition, which may create endogeneity issues. Furthermore, the lack of a clear counterfactual means that any claim of measuring the causal impact of the reform has to be treated with caution. These econometric issues are discussed in more detail in Section 6.

concerns in terms of its compatibility, an in-depth phase II investigation is launched in which the Commission has up to 90 working days to either clear the merger (with or without commitments) or block it. Firms can challenge the Commission's decisions in the General Court ("GC"), which exercises a judicial review of the facts and the application of the law to the facts. GC judgments can be appealed to the ECJ on points of law.

The reform of European merger policy started off in 2001 with a Green paper assessing the working of the ECMR (European Commission, 2001a, "Green paper"). The Commission considered a reform necessary for its merger review to meet some upcoming challenges that would prompt major corporate reorganisations. These challenges included the introduction of the EMU, the pending enlargement of the Union and the increased pace at which companies, markets and merger control regimes were globalising (Green paper, paras 5-9). While the main layout of European merger review was retained, the Green paper put some jurisdictional, procedural and substantive issues up for discussion. The reform process resulted in a political agreement on a new merger regulation, which entered into force May 1st, 2004 (Council of the EC, 2004). This article focuses on the substantive dimension of EU merger reform, which is popularly known as the MEA. The MEA refers to a narrowing of the goals of competition policy to consumer welfare only, a greater reliance on modern industrial economics, and advanced quantitative techniques to demonstrate the competitive effects of firm behaviour on consumer welfare.

2.2 The 'more economic approach' in EU merger control

The Commission initially had little intention to introduce extensive substantive changes to merger policy. However, in 2002, the CFI annulled three merger decisions on the basis of flawed economic analysis. The defeat in court was used as an opportunity for deeper reform than originally envisaged (M. Monti, 2002b, p. 3). Formally, the MEA in EU merger policy consists of a new substantive test, an efficiency defence and the adoption of economics-based merger guidelines.

The new substantive test is the most prominent element of EU merger reform. A structuralist approach, which built on the notion of dominance, guided the first decennia of EU merger control.[175] The dominance test declared incompatible with the common market 'concentrations which create or strengthen a dominant position *as a result of which* effective competition would be significantly impeded' (art. 2(3), ECMR, emphasis added).[176] The exact interpretation of the dominance test was controversial. Officially, the CFI treated the dominance test as a cumulative *two-tier test* for which dominance was a necessary, but not a sufficient condition for finding a significant impediment of

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[175] The Court defined dominance as 'a position of economic strength [...] which enables [an undertaking] to prevent effective competition being maintained [...] by affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of consumers' (Case 27/76, *United Brands v Commission* [1978] ECR 207, para. 65).

[176] In the nineties, the concept of dominance was expanded to include *collective* dominance. Henceforth, the dominance test could catch oligopoly mergers that would not create or strengthen dominance, but that would produce a market structure prone to tacit collusion (Vickers, 2004, p. 458). Hence, the concept of dominance for the purpose of merger control is defined as 'a situation where one or more undertakings wield economic power which would enable them to prevent effective competition from being maintained in the relevant market by giving them the opportunity to act to a considerable extent independently of their competitors, their customers and, ultimately, of consumers' (Case T-102/96 *Gencor v Commission*, [1999] ECR II-753, para. 200 and Joined Cases C-68/94 and C-30/95 *France v Commission*, [1998] ECR I-1375, para. 221 [Kali and Salz]).

competition.[177] However, in a later judgement, the CFI stated that 'the creation or strengthening of a dominant position may *in itself* have the consequence that competition is significantly impeded'.[178] The Green paper invited the competition community to reflect on the relative merits of the dominance test and a Substantial Lessening of Competition ("SLC") test as used e.g. by the US antitrust authorities. The consultation process revealed that the competition community thought an SLC test more suitable in providing effective control in non-collusive oligopolies (European Commission, 2003, para. 53, "Commission proposal"). Indeed, non-coordinated effects were perceived as the 'enforcement gap' in European merger policy (Volcker, 2004). Also, a SLC test was deemed more suitable for an economic approach as it directly focuses on the *effects* of mergers on competition (Kokkoris, 2005, p. 43). The new substantive test in the EUMR, the SIEC test, is a hybrid that resulted from a compromise between the proponents of a dominance test and those of a SLC test (Voigt & Schmidt, 2004, p. 584; Witt, 2012, pp. 225-226). The SIEC test declares incompatible with the common market 'concentrations which would significantly impede effective competition, *in particular* as a result of the creation or strengthening of a dominant position' (art. 2(3), EUMR, emphasis added). A significant impediment to effective competition includes the creation or strengthening of a dominant position, which is a *primary form* of such competitive harm, and it is extended '*only* to the anticompetitive effects of a concentration resulting from the non-coordinated behaviour of undertakings which would not have a dominant position' (recital 25, EUMR, emphasis added).

The introduction of an efficiency defence is another important element of EU merger reform. Traditionally, the Commission has rarely exempted mergers that created or strengthened a dominant player on the basis of an efficiency defence. On the contrary, it often saw projected efficiencies as a means by which the merging parties would strengthen their dominant position (the so-called efficiency *offence*) (Levy, 2005, pp. 118-119).[179] Under the new regime, the Commission should take into account 'any substantiated and likely efficiencies which may counteract the effects on competition, and in particular the potential harm to consumers' to determine the competitive effect of a merger (recital 29, EUMR).[180] Nonetheless, the acceptance of an efficiency defence remains highly unlikely for mergers approaching a monopoly (Horizontal Guidelines, para. 84).

Next, the Commission published merger guidelines to provide a 'sound economic framework' for the assessment of horizontal and non-horizontal concentrations (EUMR, recital 28).[181] The Guidelines draw on the Commission's experience with the assessment of mergers under the ECMR and on the case law of the Courts (Horizontal Guidelines, para. 6). They lay out some general and broadly accepted economic principles for assessing the likelihood of anticompetitive effects. The economic framework consists of a discussion of initial indicators (or scanning variables) such as market shares, concentration

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[177] Case T-2/93 *Air France v Commission* [1994] ECR II-323, para. 79 (emphasis added).

[178] Case T -87/05 *EDP v Commission* [2005] ECR II-03745, para. 46 (emphasis added).

[179] See e.g. Case IV/M050 AT&T/NCR [1991] OJ C016/1, para. 30: 'It is not excluded that potential advantages flowing from synergies may create or strengthen a dominant position.' Also see (M. Monti, 2001, p. 6), '[Conglomerate mergers] can lead to exclusionary effects and a worsening of competition conditions. The conglomerate aspects of mergers may also constitute an additional factor to existing horizontal and/or vertical effects.'

[180] Note however that the Merger Regulation's recitals are not legally binding.

[181] In the remainder, we focus on horizontal concentrations as these are the subject of the empirical analysis.

levels and ease of entry; and countervailing factors such as buyer power, merger-specific efficiencies and a failing firm defence (ibid., para. 12). The Horizontal Guidelines also provide guidance on the (restrictive) conditions under which the Commission may take into account efficiencies (para. 78).[182]

3 Factors influencing merger decisions and the impact of the reform

This section discusses the factors that may affect the Commission's merger decision rule and the expected impact of the reform on this rule, taking into account the legal objectives and the institutional setting of EU merger control. I distinguish competition factors and non-competition factors. For the purpose of this paper, the former are defined as necessary and sufficient market conditions for anticompetitive effects to occur, the latter are defined as all other factors that may influence merger decisions, but which do not directly affect allocative efficiency on the relevant market.

3.1 Competition factors: structuralist versus welfarist approaches to market power

Horizontal mergers can decrease welfare through non-coordinated or coordinated effects. Non-coordinated effects stem from the internalization of competition between the merging firms, which enables the new entity to unilaterally raise prices (Werden & Froeb, 2008, p. 43). In turn, the elimination of competitive constraints between the merging parties may reduce competitive pressure on the remaining rivals. Coordinated effects arise when the merger changes the nature of competition such that the industry becomes (more) prone to collusion (Motta, 2004, p. 231). Industrial economics delivers important insights in the necessary and sufficient conditions for these anticompetitive effects to occur. However, economic doctrines are not neutral. They reflect a particular view on the well-functioning of markets and governments, which shapes the approach to competition policy (Jacobs, 1995, p. 225). I briefly discuss two contending competition policy paradigms which have had an eclectic and evolving influence on EU competition policy: the structuralist Harvard school and the welfarist (post-)Chicago school.

The Harvard school (1950s-70s) greatly relied on Cournot oligopoly theory, which is structuralist in nature. Harvard scholars believed that any deviation of the market structure from basic competitive conditions would result in anticompetitive behaviour (Bain, 1959).[183] Accordingly, Harvard defined market power in structuralist terms, rather than in terms of the ability to profitably raise prices or reduce output (Hovenkamp, 2005, p. 35). This structuralist determinism translated into a commitment to a competitive market structure.[184] Under a structuralist approach, the assessment of mergers centred on market definition, market shares, the number of rivals and concentration indices, which function as

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[182] Especially the merger specificity requirement imposes a heavy burden of proof upon the merging parties.

[183] Inter-industry studies had revealed a statistical link between price-cost margins on the one hand and industry concentration and barriers to entry on the other (Bain, 1956; Mason, 1939). These findings were formalized in the structure-conduct-performance paradigm: market structure determines the way in which firms compete and hence the overall performance of the market. Good market performance was defined rather broadly. It included economic benefits such as allocative efficiency and technological progress, but also not strictly economic benefits such as stability of employment, the protection of small competitors and the dispersion of economic and political power (Van den Bergh & Camesasca, 2001, pp. 30-32).

[184] Basic structural criteria for 'workable competition' included: as many firms as economies of scale permit, no artificial barriers to entry and moderate and price-sensitive product differentiation (F. Scherer & Ross, 1990, p. 53).

proxies for market power (Baker & Shapiro, 2008, p. 237). Harvard scholars denied that market forces were strong enough to challenge powerful firms and they believed that barriers to entry were persistent and omnipresent.[185] Combined with the fact that economists of the time doubted efficiencies associated with large-scale firms (Kovacic & Shapiro, 1999, p. 52), a presumption of illegality was triggered at relatively low market share and concentration levels. Structuralism had an important impact on early merger control (Ivaldi & Verboven, 2005). The focus on the structure of competition is often linked to ordoliberal influences, which pay particular attention to the protection of the process of competition as such (see below).

With the rise of the Chicago school (late 1970s-80s), a less interventionist era of competition policy was announced. The school built on a single model of competition to analyse firm behaviour: neoclassical price theory. Chicagoans trust markets are generally self-correcting through the threat of entry, so market power and supranormal profits are considered to be temporary at best. To Chicagoans, barriers to entry are largely insignificant (Demsetz, 1976b, p. 382; Stigler, 1964). They therefore believe that concentration and bigness stem from superior efficiency instead of anticompetitive behaviour (Demsetz, 1974, p. 164). Accordingly, instead of a particular market structure, competition becomes a *result* that is definable in purely welfarist terms. Market power is interpreted in terms of a firm's ability to harm consumer welfare, so mergers should be analysed through an effects-based approach which directly balances the welfare-reducing effects and efficiency gains of mergers (Baker & Shapiro, 2008, pp. 236, 238-239; F. Scherer & Ross, 1990, pp. 533-535). By the late 1980s, Chicago was criticized for its overly simplistic assumptions. The post-Chicago school showed that real-life markets are less robust than Chicagoans believed, which warranted a more interventionist approach. Building on game-theoretic probability models, it was demonstrated that firms can make profits *without* being efficient by taking strategic advantage of market imperfections (high information and entry costs, failing capital markets, reputation effects etc.). The most significant contribution of Post-Chicago was the rise of unilateral theories of anticompetitive effects (Hovenkamp, 2001, p. 332). However, post-Chicagoans mostly stayed true to the consumer welfare benchmark and the effects-based approach (Baker, 1989; Hovenkamp, 1985). The Chicago and post-Chicago schools form the main intellectual input for an economic approach to competition policy.

With the reform, the dominance test, with its focus on the structural dimension of market power (see fn. 175), was replaced by the SIEC test, which focuses more directly on the effects of mergers in terms of prices, output and quality. This suggests structural measures of market power will be less decisive after the reform and will merely be used as a first screening device, while the levels for presumptions of harm will be raised significantly. At the same time, merger control will be broadened with other industry variables (excess capacity, demand elasticity, transparency, countervailing buyer power, efficiencies etc.) to assess competitive effects and to detect possible countervailing factors that may rebut the initial presumption of harm. However, the EUMR clearly states that the notion of SIEC has extended the concept of dominance *only* to non-coordinated effects (recital 25). Moreover, standards of competitive harm as applied in the past have to be retained (recitals 26). Also, the Horizontal Guidelines recall the traditional, structuralist definition of dominance as 'intended to apply to all concentrations […] insofar as they are likely, because of their *effect on the structure of competition*, to prove incompatible with the system of undistorted competition' (para. 3, emphasis added). Whether the reform caused a structural

[185] Bain defines barriers to entry rather broadly as economies of scale and cost and product differentiation advantages of incumbent firms (Bain, 1956, p. 43). For a discussion of the concept of barriers to entry and its application in practice, see Schmalensee (1987).

break in the effect of competition factors will therefore depend, on the one hand, on the flexibility by which the dominance test was applied in the past, and on the other, on the extent to which structuralism is preserved under the new regime.

3.2 Non-competition factors

The Treaty (and the MRs) remain vague about the operational goals of EU merger control. Taking a teleological approach,[186] the Courts assigned various objectives to competition law, including, but not restricted to consumer welfare.

First, competition law should promote *market integration* by preventing the private reconstruction of trade barriers.[187] The integration imperative has been called 'perhaps the most original feature' of EU competition policy' (Cini & McGowan, 1998, p. 10). It may prompt the Commission to support cross-border mergers and mergers in markets that are still defined along national borders to promote the creation of 'European champions' (see e.g. Thatcher, 2014). The impact of the MEA on the integration objective is hard to predict. The idea of self-correcting markets, which underpins the Chicago paradigm, 'presupposes the existence of an integrated market' (Sir Leon Brittan in Lowe, 2007, p. 3). Whereas the single market in goods is well-advanced, the digital single market and the single market in services lags behind.[188] Moreover, European labour markets are more rigid and the free movement of workers is limited by language, cultural and fiscal barriers. A lower degree of market integration means that the proposition of self-correcting markets is less credible in an EU setting (Schweitzer, 2008, p. 162). Hence, barriers to entry – and thus market power – arguably are more persistent than assumed by the Chicago paradigm.[189] This may imply that structuralism retains an important role in merger control after the reform.

Secondly, the Court held that the aim of the competition provisions is to protect the *process of competition*. To that effect, the Court frequently referred to the Union's task to create a 'system ensuring that competition in the internal market is not distorted' (Protocol 27 (TFEU)) and the Treaty principle of 'an open market economy with free competition' (art. 119 (TFEU)). The typically European concept of 'dominance' is directly linked to this interpretation of competition as a process. The commitment to the competitive process is often explained by the ordoliberal roots of EU competition

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[186] Interpreting and applying Treaty provisions, it is 'necessary to consider the spirit, general scheme and wording of those provisions' (Case 26/62 van Gend en Loos v Nederland [1963] ECR 1, p. 12. A principal corollary to the teleological method is the 'effet utile' of Treaty provisions (for a discussion, see Fennelly, 1997).

[187] See Case 56-58/64 Consten and Grundig v Commission [1966] ECR 429, p. 340. Recently, the Court censured the GC for having committed an error in law for superseding the goal of market integration by reading a consumer welfare standard in art. [101], reaffirming the primary role of the internal market objective (GSK, para 62, 63. Also see Case C-439/09 Pierre Fabre [2011] ECR I-9419, paras 44-46). The relevance of the integration imperative for merger policy was affirmed in Kali and Salz, para. 169: '[T]he Regulation is founded on the premise that the objective of instituting a system to ensure that competition in the common market is not distorted is essential for the achievement of the internal market'.

[188] A study by the European Parliament's Research Service estimated the cost of non-Europe at €1597 billion, representing approximately 12 per cent of EU GDP (EPRS, 2015, pp. 10-11). Also see the Commission's sector inquiry into e-commerce, which concluded that geo-blocking is still widespread throughout the EU (European Commission, 2015, 2016c). A new EU regulation is set to ban unjustified online geo-blocking in certain circumstances. Vestager (2015a) made fostering the digital single market a priority during her tenure as Competition Commissioner.

[189] Although the integration rationale arguably does not have the same unifying power as in the 1950s-60s, the persistence of national division lines demonstrates that integration and competition still are mutually reinforcing in an EU context. Vestager (2015a) made a priority of fostering the digital single market in her term as Commissioner for competition.

law and the focus on economic freedoms (Gerber, 1998).[190] Ordoliberalism adheres to a classical economics view on competition as a process of rivalry between firms competing over market shares (e.g. Smith, Ricardo, J.S. Mill, also see Austrian economists such as Hayek (1968)). The protection of the competitive process has often been translated in the case law into a protection of the *structure of competition,* i.e. a great focus on market shares and concentration indices and a broad definition of barriers to entry.[191] Again, the impact of the reform is hard to predict. The commitment to the competitive process may turn out to be more than mere rigidity of established case law and decisional practice. Indeed, the interpretation of competition as a process may better fit European values. Europeans are wary of economic power and they doubt the ability of markets to erode it (Hawk, 2008, pp. 884-885). This (normative) belief may be in keeping with economic reality given the lower degree of market integration (see above). Accordingly, Europeans rely on governments instead of markets to set the boundaries between freedom and economic power and to provide distributional justice (Amato, 1997, p. 54). The arrival of the MEA has not changed the social consensus. On the contrary, the European value system has been reinforced with the 2008 crisis, which has further challenged faith in markets and free trade. This may imply that structural measures of market power and a comprehensive interpretation of barriers to entry continue to play an important role in merger appraisals after the reform.[192]

Thirdly, the ECJ held that competition rules have to be read (and may have to be weakened) in the light of the *Treaty's overarching goals* such as employment, environmental protection, regional development, public health etc..[193] The merger regulations confirm that the Commission must place its appraisal within the general framework of the Treaty objectives and that it must take into account 'technical and economic progress'. The extent to which these provisions create room for socioeconomic or industrial policy goals is unclear. However, in principle, secondary objectives cannot justify an authorisation that frustrates the fundamental aim of merger control, which is protecting competition.[194] Public policy considerations in merger decisions are difficult to uncover, let alone quantify. However, they may be reflected in a different treatment of mergers in strategic sectors such as finance and services of general (economic) interest. Indeed, the last decade, the Commission has become increasingly determined to speed up competition in the network industries (DG ECFIN, 2013). Another special interest sector is the media and information sector. Although media concentration can be motivated by efficiency reasons, excessive concentration can jeopardise media pluralism and media diversity (Iosifidis, 2014, p. 462), which are highly valued by the Commission.[195] The impact of the reform on industrial policy motives is hard to predict. Whereas industrial policy in principle should not play a role in a more economics-based merger policy, G. Monti (2008, p. 19) argues that a possible side (or intended?) effect

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[190] The protection of the competitive process is at the heart of ordoliberal competition policy. Since competition disperses power, a free society requires an economic system based on free competition (Eucken, 2006, p. 231). Through the protection of economic freedom, competition also protects political freedom, and hence democracy (Streit & Wohlgemuth, 2000, p. 8). Some authors challenge the ordoliberal roots of EU competition policy (see eg. Akman, 2009; Akman & Kassim, 2010; Maier-Rigaud, 2012).

[191] C-8/08 T-Mobile Netherlands v NMA [2009] ECR I-4529, para. 38 : Competition rules are designed to protect 'the structure of the market and thus competition as such'. Also see AG Kokott's Opinion in Case C-95/04 P British Airways v Commission, para. 68.

[192] Also see Markham Jr (2011) on the potential role of merger control in preventing the creation of firms that are 'too big to fail'.

[193] The Treaty requirement that 'competition shall not be distorted implies the existence on the market of workable competition, that is to say the degree of competition necessary to ensure the observance of the basic requirements and the attainment of the objectives of the Treaty […]. [Accordingly], the nature and intensiveness of competition may vary to an extent dictated by the products or services in question and the economic structure of the relevant market sectors' (Case 26-76 Metro SB-Großmärkte v Commission [1977] ECR 1875, para. 20).

[194] Kali and Salz, para. 99.

[195] In 2009, the Commission ordered a study to develop a monitoring tool to assess risks for media pluralism in the member states and to identify threats to such pluralism (Valcke, 2009).

of the wider SIEC test is that the Commission has greater discretion to use merger control as an industrial policy tool.

Finally, the *institutional setting* may influence merger decisions too. Some argue that the Commission, a primarily political body, is more vulnerable to capture than its American counterparts (for a discussion, see McDonnell & Farber, 2003, p. 815; Weiler, 1999, p. 266). Accordingly, EU merger control may be prone to lobbying from member states, trading partners or industry lobbies (Christiansen, 2006, p. 18 ff.). First, the decades-long struggle to come to an agreement on a common merger policy illustrates the member states' reluctance to give up control over industry concentrations (Schwartz, 1993). Within the EU, attitudes and policies towards FDI and cross-border mergers differ widely. Moreover, most member states have broader powers in merger control than the Commission, which allows them to assess the impact of mergers not only regarding their competitive effects, but also in terms of their effects on the public interest (Jones & Davies, 2014, p. 456). To regain control, they may try to influence the Commission to shield strategic national sectors from foreign involvement, to support national champions or to protect employment. Larger member states arguably have greater leeway for political lobbying in merger investigations (Neven, Nuttall, & Seabright, 1993). Next, a different view on competition has given rise to the catchphrase that EU competition law 'protects competitors' (for a discussion, see Fox, 2003). This has caused frictions on the other side of the Atlantic, up to the highest echelons of politics and business (a clear example is the GE-Honeywell merger, see Evans and Salinger (2002) for a discussion). Mergers and acquisitions by firms that are incorporated in other jurisdictions may be treated more favourably to prevent conflicts with major trading partners. However, it is also possible that European industrial interests reverse this effect. Again, it is difficult to predict what the impact of the reform will be on the level of capture. Arguably, a greater reliance on economics should make the Commission's assessment more transparent and hence less vulnerable to capture (for an opposite view, see Devlin and Jacobs (2010, p. 272 ff.) and Ginsburg and Wright (2012, pp. 14-15)). Aktas, De Bodt, and Roll (2004) and Aktas et al. (2007) find some evidence for protectionism in EU merger control in the 1990s. In a follow-up study for the period 2001-2007, they find that the Commission no longer is more likely to intervene against non-European bidders when domestic rivals are harmed (Aktas, de Bodt, Delanghe, & Roll, 2011).

4 Previous literature on the decision-making process of competition authorities

Earlier literature has investigated the factors that influence competition authorities' decisions for various jurisdictions, including EU merger policy.[196] Lindsay et al. (2003); Bergman et al. (2005) and Aktas et al. (2007) analyse EU merger decisions before the reform; Fernández et al. (2008) after the reform. To date, Duso et al. (2013) is the only empirical study of the comparative effects of EU merger reform. However, Duso et al.'s restricted model does not allow a full-blown comparison of the Commission's decision rule before and after the reform.

Most articles focus on the effects of *competition factors* on merger decisions. All authors insert basic structural measures for market power such as concentration indices and (change in) parties' market shares. Nearly all authors conclude that the more concentrated the market and the higher the parties'

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[196] Coate, Higgins, and McChesney (1990) and Coate and McChesney (1992) address merger decisions by the FTC; Weir (1992, 1993) address merger decisions by the MMC; Khemani and Shapiro (1993) address merger decisions by the Canadian competition authority.

market shares, the higher the chance of an adverse finding. Lindsay, et. al, on the contrary, claim that EU merger decisions are not influenced by industry concentration. Also, Weir (1992) finds that large market shares do not negatively affect the chance of a merger being allowed by the UK Monopolies and Mergers Commission ("MMC"). The majority of models contain a barriers to entry dummy to control for the mitigating effect of market contestability on market power. All authors conclude that the presence of entry barriers raises the chance of the competition authority blocking the merger or imposing conditions. Only few authors examine the effect of an efficiency or failing firm defence. They unanimously find that efficiencies have little impact on merger decisions. Coate, et. al (1992) conclude that economic staff's efficiency claims have no apparent influence on the US Federal Trade Commission ("FTC") merger decisions. They presume this is because lawyers seem to have more impact on the FTC than do economists. Khemani, et. al (1993) also take efficiencies into account, but their findings are inconclusive due to multicollinearity problems. Weir (1992) concludes that increased efficiencies and the profitability of mergers have no significant impact on the MMC's verdict.

Only few studies analyse the effects of *non-competition* factors on merger decisions. Lindsay et al. and Bergman et al. attempt to measure the impact of the integration goal on EU merger policy. The results are dubious. Lindsay, et. al find that the chances of non-clearance are higher the greater the number of geographic markets, which is claimed to reflect the federal nature of the EU Commission's mandate. To the contrary, Bergman et al. find no statistically significant effect for the size of the relevant geographical market (local or national). Both studies also control for capture by including the origin of the bidder firm. Their findings indicate that EU merger decisions are not affected by the country of incorporation of the bidding parties (Nordic countries, large member states or US firms). Aktas, et al., also conclude that bidder nationality by itself is not sufficient to arouse scrutiny. Yet, they find some (cautious) indication of protectionist motives in EU merger decisions during the nineties: regulatory intervention is more likely when European firms are harmed by increased competition. However, Duso et al. reject earlier studies claiming that mergers involving US firms are less likely to be challenged, both before and after the reform. Finally, Bergman et al. explore the presence of industrial policy motives in EU merger policy by including a dummy for network industry mergers. They find no significant impact on the Commission's decision. As to the impact of non-competition factors on the FTC's merger decisions, Coate, et al. (1992) include two political pressure variables. The first is the number of Wall Street Journal articles on the merger prior to the FTC's decision in order to account for high-profile transactions. The second is the number of times Congress summoned FTC commissioners or politically-appointed staff to defend their antitrust records. The model including political variables is superior to the models including competition variables only. Weir (1992, 1993) are the sole studies explicitly addressing other public policy objectives. The analyses show that stressing the potential benefits of mergers – e.g. more employment and better R&D - seems to play little part in merger assessments by the MMC. Only increased competition as a positive side effect seems to have a significant impact on merger decisions. Hence, as far as the MMC is concerned, the public interest as a concept is dominated by competition issues.[197]

[197] Some studies compare US and EU merger enforcement practice. Lévêque (2007) confirms that both regimes base their assessment primarily on market characteristics such as market shares, concentration rates and entry barriers. Neither of them is more interventionist all of the time.

5 Data

Our research covers phase I decisions in the years 1992 to 2013 (see Table 1 for population and sample statistics). During this period, the Commission issued 4,929 phase I merger decisions (2,023 before and 2,906 after the reform). Approximately 5 per cent of these decisions were approved subject to conditions and obligations. The sample includes 160 phase I merger decisions. Because commitment decisions are so-called rare events, decisions were selected through stratified random sampling with endogenous stratification to improve the efficiency of data collection (see e.g. G. King & Zeng, 2001).[198] Accordingly, I oversampled decisions that were subject to commitments: 20 per cent of decisions in the sample are compatible subject to commitments. Contrary to previous research, which retains only the *main* relevant market for analysis, *all horizontally affected* relevant markets were studied to control for intra-decision effects. So, for each decision, I gathered information on all markets which the Commission considered to be horizontally affected.[199] This gives a total sample size of 1,113 horizontally affected relevant markets for 160 decisions. In 197 markets, the Commission concluded the transaction raised serious doubts as to its compatibility with the internal market. This finding was always addressed with commitments, either in anticipation of, during, or following the Commission's investigation.[200]

I extracted information on phase I merger cases from non-confidential decisions published on the website of DG Competition.[201] All information recorded therefore reflects the view of the Commission (for possible endogeneity issues, see Section 6). A phase I merger decision typically includes an elaborate discussion of the relevant market, which focuses heavily on the findings of market investigations with competitors, suppliers and customers (both before and after the reform). More advanced econometric techniques to determine the competitive pressure that merging partners are exerting on each other are very rare, especially before the reform. The relevant market discussion is followed by a competitive assessment of the transaction. In most cases, this assessment relies on combined market shares, increments, whether the merging parties are close competitors, the number and strength of remaining competitors, and an evaluation of barriers to entry. Some case information can be derived objectively from the decision texts, e.g. market shares, concentration indices and parties' and rivals' nationalities. However, some information is of a more indistinct nature, e.g. the exact width of the relevant market and the importance of barriers to entry. In case of uncertainty, I retained the Commission's most conservative interpretation of the facts.

The divergence of decisions depends on the type of merger. Bergman, Coate, Jakobsson, and Ulrick (2010) broadly support these findings. They state that US and EU regimes share a focus on market structure while stressing that there remain important differences too.

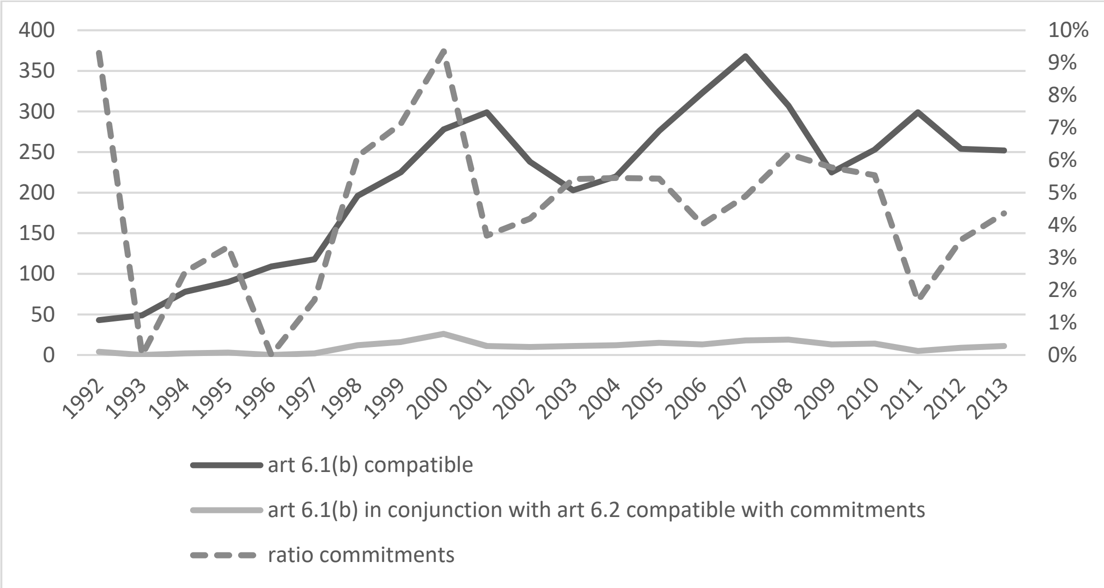
198 Stratification is based on the discrete response variable using standard stratified sampling: I collected the full sample of non-confidential phase I decisions published for the selected period from the website of DG Competition, split the sample in events and non-events and took a random sample out of both of them.

199 Two cases were dropped because they involved vertically affected markets only.

200 Accordingly, despite the Commission's finding that the concentration would have adverse effects in a particular relevant market, some cases were concluded with an 'Art 6.1(b) - compatible decision' following commitments proposed by the merging partners that removed the Commission's concern. These relevant markets are included in the database as positive events insofar the Commission conducted a competitive analysis of the market without taking into account the proposed commitments.

201 http://ec.europa.eu/competition/mergers/cases/

Table 1: Population and sample statistics



Decision type	Population		Sample	
	Before reform	After reform	Before reform	After reform
Art 6.1(b) - compatible	1926	2777	80	80
Art 6.1(b) - compatible with commitments (Decisions with commitments %)	97 (5%)	129 (4.6%)	20 (25%)	20 (25%)
Relevant markets affected[202] (Relevant markets raising serious doubts %)			507 (28%)	606 (9%)

Note: number of decisions left-hand scale, ratio of commitments right-hand scale.
Source: DG Competition, http://ec.europa.eu/competition/mergers/statistics.pdf, retrieved on July 12th 2016.

Table 2 provides sample-corrected descriptives before and after the reform of the ECMR.[203] First, before the reform, the Commission found the transaction raised serious doubts for 8% of affected relevant markets, which is significantly more than the 2% of affected markets after the reform. This could indicate a less interventionist policy under the EUMR. Secondly, after the reform, competitive assessments on average contain a more comprehensive analysis of competition factors such as discussed in the Horizontal Guidelines which is in line with a more elaborate analysis of competitive effects beyond structural indicators of market power. The adjusted sample composition is very similar across regimes. Accordingly, a structural break in the Commission's decision rule cannot be ascribed to differences in sample composition.[204] Differences in means are statistically significant for two variables only: a finding of serious concerns and the number of competition factors discussed.

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[202] Because of missing values, the regression sample dropped to 480 and 588 observations, respectively before and after the reform.

[203] The sample means are corrected for oversampling by using sample weights that are inversely proportional to the probability of sample selection (Cameron & Trivedi, 2005, p. 817 ff.). See Section 6.

[204] As an additional check, we matched the samples before and after the reform using propensity scoring and performed the same analyses as those reported in Section 7. The results are the same as for the full sample.

Table 2: Sample-corrected descriptives before and after the reform

	N	Sample-adjusted mean before reform	Sample-adjusted mean after reform	Difference (after – before)
Competitive concerns at relevant market level	1113	0.08	0.02	-0.06 **
Notifying party EEA	1113	0.68	0.65	-0.04
Notifying party large member state (UK, FR, DE)	1113	0.42	0.43	0.00
Notifying party US/Japan firm	1113	0.30	0.31	0.01
Intra-EEA cross-border transaction	1113	0.30	0.29	-0.01
Relevant market = EEA	1113	0.24	0.23	-0.01
Relevant market = national	1113	0.70	0.66	-0.04
Main rival EEA firm	1113	0.80	0.72	-0.08
Foreign acquirer EEA firm	1113	0.12	0.20	0.08
Number of relevant markets	1113	12	15	3
Number of member states involved	1113	4	6	2
Disagreement on definition relevant market	1113	0.28	0.29	0.01
Duration (days)	1113	40	39	-1
Combined market share post-merger	1066	27	23	-4
HHI - current	521	2072	2177	105
HHI - post	521	2434	2416	-18
HHI - delta	854	291	234	-57
Barriers to entry	1113	0.05	0.01	-0.03
Number of competition factors discussed	1113	0.87	1.65	0.77 *

** p≤0.05, **p≤0.1*

6 Methodology

6.1 General

I apply a method developed by McFadden (1975, 1976) to deduce the preferences of government bureaucracies from the outcomes of their decisions. By way of discrete choice models, 'an implicit choice criterion such that the organization behaves as if it were following this decision rule' can be uncovered (1975, p. 401).

First, I infer the Commission's merger decision rule using a binary logistic regression model that estimates the weight the Commission attaches to competition and non-competition factors. The logistic model can be derived from a latent variable model.[205] The unobserved continuous latent variable ${y_{ij}}^*$ represents the Commission's evaluation of the extent to which a proposed merger raises serious doubts on a relevant market. ${y_{ij}}^*$ is linearly related to the vector of explanatory competition and non-competition variables x_{ij}. The latent variable model can be written as:

[205] The following discussion is based on Long and Freese (2006, pp. 132-135); Wooldridge (2010, pp. 457-458).

$$y_{ij}^{*} = x_{ij}\beta + \varepsilon_{ij},$$

where i is the merger decision and j is a horizontally affected relevant market identified in decision i. The link between the latent variable y* and the observed outcome y_{ij}, which takes on a value of 1 if the concentration raises serious doubts and 0 otherwise, is given by the indicator function:

$$y_{ij} = \begin{cases} 1 \ if \ y_{ij}^{*} > 0 \\ 0 \ if \ y_{ij}^{*} \leq 0 \end{cases}$$

For a given value of the explanatory variables x_{ij}, the probability that a concentration raises serious doubts (i.e. the response probability) is given by:

$$P(y_{ij}^{*} = 1 | x_{ij}) = P(y_{ij}^{*} > Z | x_{ij}) = \pi_{ij} = P(\varepsilon_{ij} > -x_{ij}\beta | x_{ij}) = G(x_{ij}\beta),$$

where G is the logistic cumulative distribution function which maps the index $x_{ij}\beta$ into the response probability π_{ij}, restricting it strictly between 0 and 1. To make the model identifiable, by assumption, ε follows a standard logistic distribution with a fixed variance of $\pi^2/3$. The binary logit model is then defined by:

$$P(y_{ij}^{*} = 1 | x_{ij}) = \Lambda(x_{ij}\beta) = \frac{\exp(x_{ij}\beta)}{1 + exp(x_{ij}\beta)}$$

Because of endogenous sampling (see section 5), the conditional maximum likelihood (ML) estimator is inconsistent (Solon, Haider, & Wooldridge, 2015, p. 310). Accordingly, differences in event ratios between the population and the sample have to be corrected for. To that end, I maximise the weighted ML function (Cosslett, 1981; Manski & Lerman, 1977):

$$\max_{\beta} \sum_{i,j=1}^{N_{ij}} w \log P(y_{ij}^{*} = 1 | x_{ij}, \beta) \quad (1)$$

where w is the inverse probability of a decision being selected for the sample. The inverse-probability-weighted ML estimator is consistent and asymptotically normal (Wooldridge, 2010, pp. 859-861).[206]

Next, estimated weights β before and after the reform are compared to analyse whether the MEA caused a structural break in the Commission's decision rule. Whereas a comparison of coefficients is straightforward in linear regression models (see Chow, 1960), it is not in logistic models. Because the error term in latent variable models is unobserved, logit coefficients are only identified up to a scale factor which depends upon residual variation (Long & Freese, 2006, p. 102). The coefficients' magnitude is therefore determined both by effect sizes *and* the degree of unobserved heterogeneity (Mood, 2010, p. 79). Differences in residual variation between regimes can produce differences in logit coefficients that do not necessarily indicate differences in causal effects (Allison, 1999, p. 187). Incorrectly assuming that residual variation is the same for both regimes therefore has serious consequences. In the presence of even fairly small differences, comparisons of coefficients can reveal differences where none exist, conceal differences that do exist or even switch the sign of the difference (Hoetker, 2004, p. 17). It is unwarranted to presume residual variation is the same before and after the reform of EU merger policy. If anything, I expect unobserved heterogeneity to be smaller after the reform. After all, the explicit aim of the more economic approach was to increase predictability by grounding merger decisions in competition factors only. Several authors put forward ways to deal with unobserved heterogeneity in comparing logit coefficients across regimes. Allison (1999) developed a straightforward method to detect differences in residual variation. He relies on the assumption of equality of true effects for at least one variable and on the fact that unobserved heterogeneity affects all coefficients in the same way. His method performs reasonably well, especially if the difference in variation is large. However, Allison's routine falls short in identifying true differences in the value of specific coefficients across regimes (Hoetker, 2004, p. 10). Williams (2009, p. 241) states that the assumption that only one grouping variable is needed to capture differences in residual variation may be highly problematic in practice. As an alternative, he proposes to use heterogeneous choice models, which allow a lot more flexibility in specifying the variance equation. However, as Keele and Park (2006) point out, heterogeneous choice models can be even more biased and inefficient than heteroscedastic logit models of the form used by Allison if the variance equation is misspecified. Given the sensitivity of solutions proposed to deal with heteroscedasticity in logit models, I refrain from modelling the variance. Instead, I compare changes in predicted probabilities, i.e. marginal effects, to compare coefficients across regimes (see Long, 2009; Mood, 2010). Predicted probabilities and marginal effects are unaffected by residual variation. Moreover, one does not need to make rash assumptions about the equality of some of the true effects.

As the linear predictor $x_{ij}\beta$ is transformed into a response probability π_{ij} through a link function G, the calculation of the marginal effect of a covariate requires conditioning on *all* covariates in the model, which involves making choices. All estimates in the next section are based on *average* fitted values for π_{ij}. The advantage of this approach is that it reflects the full distribution of the covariates. Standard errors for π_{ij} are calculated using linearization. The linearized variance estimator uses the variance estimator for the total of a score variable for π_{ij} as an approximate estimator for $\hat{\sigma}^2_{\pi_{ij}}$ to account for the sampling variability of the covariates and for cluster effects (Korn & Graubard, 2011, p. 341). Marginal effects are calculated as the change in π_{ij} for a discrete change in the covariate of interest x averaged

[206] Sample weights are calculated at case level.

across observations (so-called average marginal effects ("AME")). $\hat{\sigma}^2_{AME}$ is calculated as the sum of $\hat{\sigma}^2_{\pi_{ij}|x=0}$ and $\hat{\sigma}^2_{\pi_{ij}|x=1}$.

6.2 Possible econometric issues

First, as the data are based on the Commission's presentation of the facts, there may be endogeneity issues regarding decision factors that are not (always) easily quantifiable, such as market shares, barriers to entry, efficiencies etc.. It cannot be excluded that the Commission misrepresents these factors in order to provide an ex-post justification for a decision outcome that is not based on the merits of the case. As a result, non-competition concerns may be hidden behind too narrowly defined relevant markets, inflated market shares, overstated barriers to entry, or the other way around. Without access to internal documents or external information on market characteristics, endogeneity problems are difficult to detect. However, while the Commission has a margin of discretion in developing a merger policy, it is legally obliged to act within the confines of the merger regulations and guidelines. Compliance with the latter is scrutinized by the Courts. Indeed, inconsistencies in decisional practice are likely to be challenged by the parties (Bergman et al., 2005, p. 724). The analysis of the sample showed that both parties and the Commission heavily rely on earlier decisions. Deviation from standing decisional practice (or the results from the market investigation) is extensively explained and substantiated. As a result, the legal system provides a continuous consistency check regarding the definition of relevant markets, the calculation of market shares, the evaluation of barriers to entry etc.. To detect possible endogeneity, Coate and McChesney (1992, p. 282) check the correlation between each pair of guidelines factors. A lack of correlation can be viewed as an indication for an independent evaluation of the facts by the Commission. I find a statistically significant, but low, positive correlation between combined market shares and the presence of barriers to entry in our sample (16% before, 35% after the reform). However, this observation may reflect a structuralist approach to barriers to entry (see fn. 185). There is no significant correlation between the presence of countervailing factors and respectively combined market shares or barriers to entry. Nonetheless, given possible endogeneity issues and given the fact that some factors that influence the decision-making process may be missing from the decisions, one should be careful in giving a causal interpretation to the individual weights. The model should however allow to evaluate the quality of merger control in terms of transparency, predictability, internal consistency and conformity to economic theory.

Secondly, differences in individual weights may be wrongly attributed to the introduction of the MEA if the model does not properly account for external factors that may have affected the Commission's decision rule. I included several dummies for network industries to control for increased liberalisation efforts in these industries since the late nineties. I also added a linear time trend to pick up other potential confounding factors, such as the Commission's learning curve. However, one should remain careful in interpreting differences in predicted probabilities as measuring the causal impact of the reform.

7 Results

For each regime, I estimated two model specifications. The *economic model* contains competition variables only (combined market shares, barriers to entry and countervailing factors).[207] The economic

[207] Because of the large amount of missing values, the models do not include concentration indices or increments.

model is nested into the *institutional model*, which also contains non-competition variables (market integration and other institutional variables) and sector dummies. Table 3 provides a description of the (in)dependent variables. First, I discuss the regression results to infer the Commission's decision rule before and after the reform. The statistical significance and the signs of the coefficients reveal which (non-)competition factors affect the Commission's finding of serious concerns and in what direction. However, the size of the effects cannot be compared directly across regimes (see Section 6). Therefore, next, I compare average marginal effects (AME) for some decision factors selected on the basis of the regression results.

Table 3: Description of dependent and independent variables

DEPENDENT VARIABLE	
CONCERN	Competitive concerns at relevant market level; takes on a value of 1 if the concentration raises serious doubts as to its compatibility with the internal market and 0 otherwise.
COMPETITION FACTORS	
MSCOMB	Combined market share post-merger. In most cases, the Commission merely reported a market share bracket in view of confidentiality reasons. I used the midpoint of the provided market share bracket. If the combined market share was absent, where possible, I calculated it from reported individual market shares and/or increments. Market shares referred to as 'insignificant' were assigned an arbitrary value of 5%.
BTE	Barriers to entry; takes on a value of 1 if the Commission finds barriers to entry in the relevant market and/or if entry is not timely or sufficient . If the Commission did not explicitly mention the presence of barriers to entry, I presumed there were none.
COUNTER	Countervailing factors; takes on a value of 1 if the Commission discusses countervailing factors, e.g. countervailing buyer power, efficiencies or a failing firm defence.[208]
NON-COMPETITION FACTORS	
Market integration	
EEACROSS	Intra-EEA cross-border transaction, takes on a value of 1 if the transaction concerns a concentration between firms from different EEA member states.
RM_NAT	Relevant geographic market national; takes on a value of 1 if the relevant geographic market is defined as national as compared to world, EEA or local.
Other institutional factors[209]	
NOT_LARGE	Nationality parties, takes on a value of 1 if at least one of the notifying parties is from a large member state (France, Germany, United Kingdom).
NOT_US	Nationality parties, takes on a value of 1 if at least one of the notifying parties is a US firm.
ACQ_FOREIGN	Nationality parties, takes on a value of 1 if an EEA firm is acquired by a non-EEA firm
RIVAL	Nationality rivals; takes on a value of 1 if the main rival of the merged firm is an EEA firm.

[208] None of the sampled cases exhibit a 'pure' efficiency defence in the sense that proven efficiencies overruled a preliminary finding of anticompetitive effects. Efficiencies include the strengthening of a competitor, the acquisition of a failing firm, merger synergies and one-stop-shopping to the benefit of consumers. Interestingly, in some cases, economies of scope gave rise to competitive concerns (see below).

[209] We collected data on the lobbying activities of trade and business associations from https://lobbyfacts.eu/reports/lobby-costs/all and aggregated them at sector level on the basis of their activities as reported on the website of the associations. None of the lobbying activity variables were statistically significant (i.e. lobby costs, the number of passes to the European Parliament, the number of meetings with high-ranking EU officials). However, we did not include these lobby variables in the final model. The EU's lobby register (on which the database of LobbyFacts is based) is not mandatory and contains self-reported data that are not independently double-checked. LobbyFacts expects that the data underestimate true lobbying activities. Moreover, aggregated lobby statistics at sector level likely are too rude a proxy for merger-specific lobbying activities.

TREND	Linear time trend[210]
SECTOR DUMMIES[211]	
PHARMA	Sector variable; takes on a value of 1 if the transaction concerns a concentration in the pharmaceutical sector (relevant market level).
ENERGY	Sector variable; takes on a value of 1 if the transaction concerns a concentration in the energy sector (electricity and gas supply) (relevant market level).
TRANSPORT	Sector variable; takes on a value of 1 if the transaction concerns a concentration in the transport sector (land, water and air transport) (relevant market level).
FINANCE	Sector variable; takes on a value of 1 if the transaction concerns a concentration in the financial sector (financial services and insurance) (relevant market level).
MEDIA_INFO	Sector variable; takes on a value of 1 if the transaction concerns a concentration in the media and information sector (publishing activities; motion picture, video and television programme production, sound recording and music publishing activities; or programming and broadcasting activities) (relevant market level).

7.1 Decision rule before and after the reform

The regression results are collected in Table 4. Adjusted Wald tests show that the institutional model enhances the fit of the economic model for both regimes. Model specification has little impact on the specificity of the model: over 90% of non-events are correctly classified in both models, for both regimes. However, the institutional model is a better classifier for positive events. After including non-competition variables, sensitivity is improved from 67% to 74% before the reform, and from 55% to 68% after the reform. Based on these results, the reform does not seem to improve the predictability of regulatory intervention. This may be due to a loss in transparency resulting from a greater reliance on a case-by-case approach after the reform.[212] However, merger control seems to be more consistent after the reform: the Commission deviated from its own decision rule in 7% of cases only, as compared to 15% of cases before the reform. As is to be expected under a case-by-case approach, contrary to the pre-reform period, there is no systematic pattern in these deviations post-reform (see below).

The competition variables *MSCOMB* and *ENTRY* are statistically significant at the 1% level and they have the expected positive sign in all model specifications: higher combined market shares and the presence of entry barriers significantly increase the log odds ratio ("LOR") of the Commission raising serious concerns, both before and after the reform. Countervailing factors do not play a significant role in merger decisions before the reform. This may be explained in part by the fact that, in our pre-reform sample, economies of scale, commercial synergies and a broad product range seem to have been treated by the Commission as an efficiency *offense*, rather than an efficiency defence. The interpretation of competitive advantages as contributing to the creation or strengthening of a dominant position is in line with a structuralist conception of market power (i.e. as the power to behave to an appreciable extent independently from competitors, distributors and consumers). To the contrary, in line with a more economic approach, the presence of countervailing factors significantly reduces the LOR at the 1% level after the reform.

210 The results reported below are robust to the use of higher order polynomials for the time trend.

211 Sector dummies are at the second level of the Nace Rev. 2 classification.

212 On the dubious relationship between predictability and the effects-based approach, see e.g. Easterbrook (1984) and Stucke (2009).

Table 4: Logit regression results for the economic and the institutional model (before and after the reform)

MODEL (REGIME) ***Y=CONCERN***	**Economic (Before reform)**	**Economic (After reform)**	**Institutional (Before reform)**	**Institutional (After reform)**
MSCOMB	0.103***	0.117***	0.101***	0.150***
	(0.01)	(0.01)	(0.01)	(0.02)
ENTRY	2.939***	4.425***	3.101***	7.390***
	(0.75)	(1.27)	(0.77)	(1.31)
COUNTER	-0.198	-2.820***	-0.234	-4.688***
	(0.86)	(0.93)	(1.28)	(1.28)
RM_NAT			0.785	-0.731
			(1.41)	(1.19)
EEACROSS			0.184	0.548
			(0.93)	(0.94)
NOT_LARGE			-0.036	1.058
			(0.83)	(0.75)
NOT_US			-1.224	-4.615***
			(1.14)	(1.59)
RIVAL			0.074	0.136
			(0.44)	(0.92)
ACQ_FOREIGN			1.493	5.055*
			(1.34)	(2.71)
PHARMA			1.305*	3.272***
			(0.72)	(0.89)
ENERGY			4.116***	2.975*
			(1.37)	(1.78)
TRANSPORT			-0.288	0.781
			(1.68)	(1.32)
FINANCE			0.564	0.376
			(1.03)	(1.23)
MEDIA_INFO			1.203	4.696***
			(1.52)	(1.18)
TREND	0.485***	-0.318*	0.399**	-0.730***
	(0.10)	(0.17)	(0.14)	(0.21)
CONSTANT	-11.144***	-8.046***	-11.021***	-8.334***
	(1.21)	(0.98)	(1.29)	(1.92)
N	480	588	480	588
Specificity	93%	99%	94%	99%
Sensitivity	67%	55%	74%	68%

* p<0.1, ** p<0.05, *** p<0.01; sample-corrected estimates and cluster-robust standard errors in round brackets.

Market integration does not appear to affect the Commission's merger decision rule. None of the single market variables is statistically significant, either before or after the reform.[213] In line with previous research, whether or not one of the notifying parties is incorporated in a large member state does not affect the Commission's assessment either (see e.g. Bergman et al., 2005). This suggests the Commission is not vulnerable to political capture by powerful member states – at least in Phase I

[213] The coefficient for the number of member states involved at relevant geographic market level is statistically significant and positive at the 1% level before the reform as found by Lindsay et al. (2003). However, we omitted the variable because of possible multicollinearity issues.

investigations. Contrary to popular critique, there seems to be no trace of protectionism in pre-reform merger policy. The results are inconclusive as to the presence of protectionist motives in post-reform policy. On the one hand, the fact that the main rival of a merged entity is an EEA firm does not seem to affect merger decisions. Moreover, in line with Duso et al. (2013), transactions that involve US notifying parties seem to face *less* scrutiny. The *NOT_US* dummy is significant at the 1% level.[214] The interpretation of this finding is dubious. At least two effects can be at play (simultaneously or not). US firms (and/or US authorities) may be more successful in lobbying as the Commission may be more cautious to prevent conflicts with an important trading partner, or the Commission may be keen to prove that with the introduction of the more economic approach, the EU and US antitrust regimes are converging. However, this result may also simply mean that US and EU firms may differ in a systematic way that is not controlled for by the competition variables. On the other hand, interestingly, the chance of the Commission being more stringent than predicted by its own decision rule raises if a European firm is targeted by a foreign acquirer.[215]

Lastly, the regression results indicate a statistically significant effect of sector dummies in the Commission's decision rule. Both before and after the reform, concentrations in the pharmaceutical and energy sectors face a higher LOR of an adverse finding. Transactions in the media and information sector too face more intense scrutiny, but only in the period after the reform. The interpretation of these sector effects is ambiguous. It is difficult to tell whether specific market conditions not accounted for by the competition variables make anticompetitive effects in these industries more likely, or whether industrial policy or political considerations are at play. At any rate, the pharmaceutical sector has proven in the past to be vulnerable to collusion, which may clarify a stricter approach to mergers between pharmaceutical firms. Moreover, pharmaceutical mergers seem to substantially reduce research and development efforts and innovation by the merging parties *and* their rivals (Haucap & Stiebale, 2016; Ornaghi, 2009) to the detriment of (particularly vulnerable) consumers. The positive sign on the *ENERGY* dummy may be explained by the fact that progress towards an integrated EU energy market is a slow process. Consequently, the introduction of competition in the energy sector too is slow, which may explain the Commission's tougher attitude towards energy concentrations. Finally, the positive sign for the *MEDIA_INFO* dummy may illustrate that the Commission pays attention to aspects of cultural diversity, freedom of choice and plurality of information in assessing the impact of proposed transactions on consumers.[216] [217]

7.2 Regime break

To detect a structural break in the Commission's decision rule, response probabilities and AMEs for the competition variables and the sector dummies that were statistically significant for *both* regimes are

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[214] The AME is statistically significant at least at the 10% level for combined market shares over 45%, lowering the likelihood of an adverse finding with between 10 and 50 p.p. (peak at 90% combined market share).

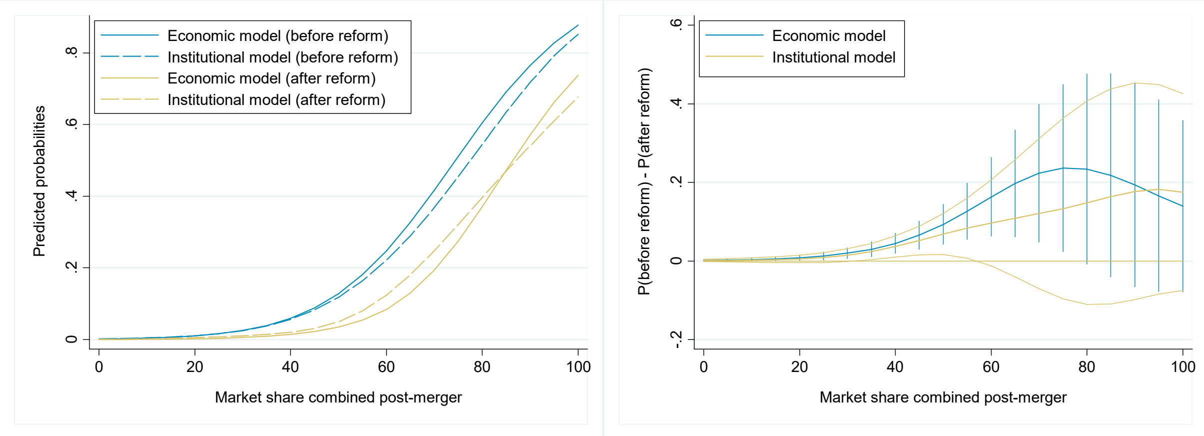
[215] The AME is statistically significant at least at the 10% level for combined market shares over 50%, raising the likelihood of an adverse finding with between 30 and 40 p.p. (peak at 65-70% combined market share).

[216] The AME is statistically significant at least at the 10% level for combined market shares over 35%, raising the likelihood of an adverse finding with between 20 and 40 p.p. (peak at 65-70% combined market share).

[217] This is explicitly acknowledged by the Commission in e.g. Case M.6884 - ACCESS/ PLG.

compared (see Figures 1 and 2). For both regimes, the probability of the Commission raising competitive concerns increases with the size of the merged entity in terms of combined market shares (see Figure 1).[218] However, except for minor transactions, the old regime is stricter than the new regime. The difference in predicted probabilities is statistically significant for merged entities with a combined market share between 25 and 80% for the economic model, and between 35 and 60% for the institutional model. The difference is larger for the economic model, though not significantly so. These findings suggest a rise in the combined market share threshold that triggers an intervention.

Figure 1: Predicted probabilities of a transaction raising serious concerns (left) and differences in predicted probabilities before and after the reform (right).



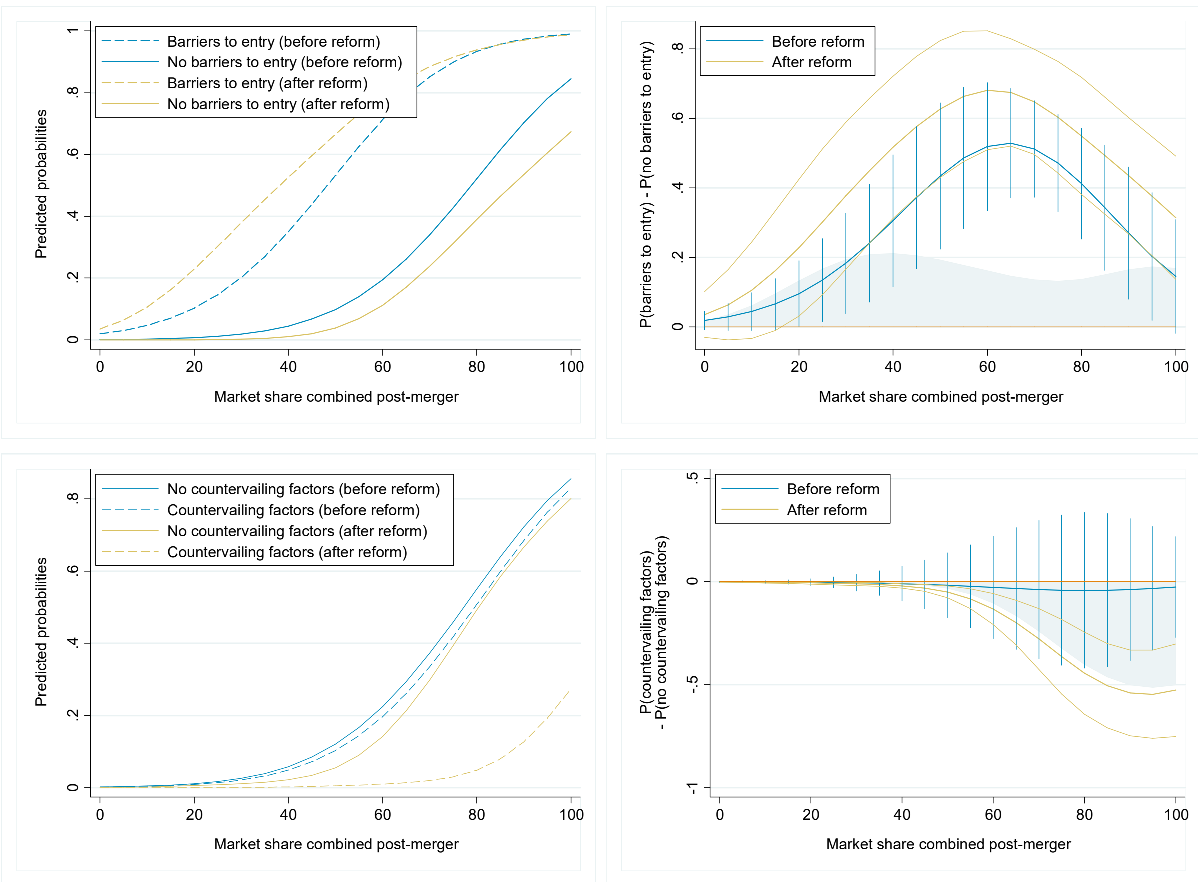
Note: 90% confidence intervals in RHS plot are marked by vertical lines for the economic model and by top and bottom lines for the institutional model.

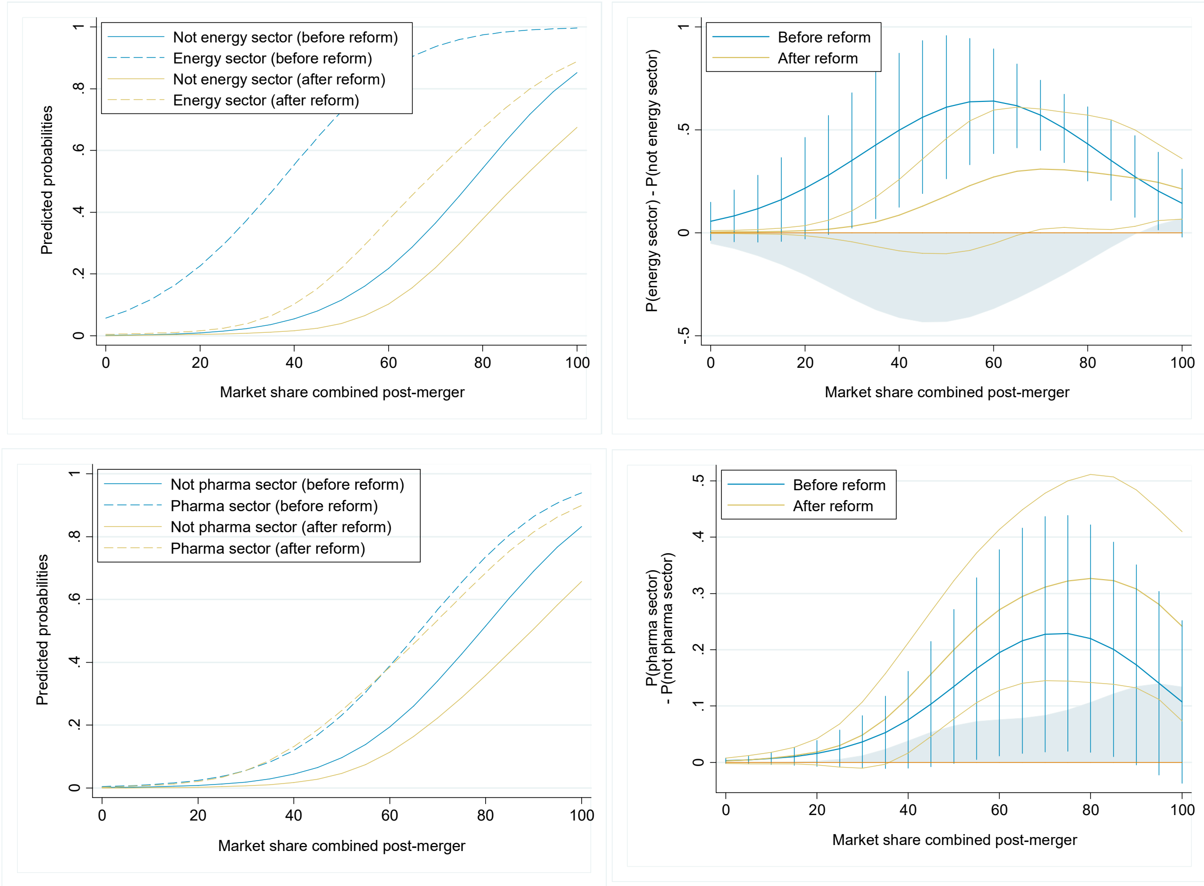
Barriers to entry increase the chance of an adverse finding significantly under both regimes - except for low combined market shares, which face little scrutiny anyway - but the effect is generally stronger after the reform. Under both regimes, the AME of barriers to entry is at its highest for combined market shares around 60%, lowering the chance of the Commission raising serious concerns with up to 68 p.p. after, compared to 53 p.p. before the reform. For mergers creating larger firms, the favourable impact of market contestability decreases considerably as merger control becomes stricter even in the absence of entry barriers. The difference between the two regimes is largest for firms reaching the traditional dominance threshold of 40% and for combined market shares of 80% and more. Interestingly, the first peak seems to be explained by the Commission taking entry barriers more seriously after the reform. Indeed, whereas the Commission detected less often barriers to entry after the reform, a detection of the latter results in a higher response probability than before the reform. As explained above, this could be due to a departure from a 'Bainian' definition of barriers to entry. The second peak suggests that the Commission is relatively more confident that the threat of entry will discipline even giant firms, which is in line with a MEA. Next, after the reform, countervailing factors significantly lower the response probability for combined market shares over 25%. The AME of countervailing factors increases with the size of the combined entity. In line with an effects-based approach, countervailing factors are taken into account even for very large firms, lowering the chance of an adverse finding with up to 55 p.p. A comparison of response probabilities before and after the reform shows that the approach towards countervailing factors is an important determinant for the more lenient approach post-reform. Indeed,

[218] Henceforth, references to the size of the merged entity are to be interpreted in terms of combined market shares.

in the presence of countervailing factors, the probability of a positive event is small. Overall, the findings regarding the competition variables suggest a substitution of structuralist presumptions by more effect-based theories of harm, as is to be expected under a MEA. As to the sector dummies, for both regimes, the chance of a positive event is larger for transactions in the energy sector. The AME is statistically significant for combined market shares over 30% before the reform, and over 70% after the reform. Across the line, the effect is larger for the pre-reform period, raising the response probability with up to 64 p.p. as compared to 31 p.p. post-reform. The difference in AMEs peaks for combined entities reaching around 50% market shares. The cause of these differences is dubious, but could be found in a slow, but steady introduction of competition as liberalisation efforts continue. Lastly, for both regimes, the chance of an adverse finding is larger for transactions in the pharmaceutical sector. The AME is statistically significant for combined market shares between 55 and 85% before the reform, and over 40% after the reform. The effect is larger after the reform, raising the probability of a positive event with up to 33 p.p. as compared to 23 p.p. post-reform. Interestingly, a comparison of predicted probabilities shows that both regimes are equally strict when it comes to concentrations in the pharmaceutical sector.

Figure 2: Predicted probabilities of a transaction raising serious concerns in function of combined market shares (left) and AMEs at different levels of combined market shares before and after the reform (right).





Note: 90% confidence intervals in RHS plot are marked by vertical lines for the pre-reform period and by top and bottom lines for the post-reform period. The shaded area represents the difference in AMEs before and after the reform for a given covariate.

8 Conclusion

This paper investigated whether there is a structural break in the Commission's Phase I merger decision rule since the introduction of the MEA. To that end, I identified the factors that affect the chance of the Commission raising serious doubts before and after the reform using a sample of 160 Phase I decisions covering the years 1992 to 2013.

Regarding the competition variables, I find that structural measures of market power still play a role after the reform, but this role seems to have diminished. First, merger policy after the reform has become more lenient in terms of combined market share levels, which suggests an increasingly effects-based approach. Next, the Commission appears to be relatively more confident that the threat of entry will discipline (even very large) firms. Interestingly, there is some indication for a less structuralist definition of barriers to entry after the reform. Finally, contrary to the old regime, the presence of countervailing factors reduces the chance of an adverse finding. On the basis of these results, it may be concluded that high market shares are not necessarily interpreted as proof of anticompetitive effects anymore, and that EU merger policy has moved towards a more effects-based approach. On a grimmer note, the possible softening of EU merger control may be down to the increased burden of proof to demonstrate anticompetitive effects to the required legal standard, which could increase the number of false negatives. However the model, that includes competition as well as non-competition variables still is a better fit for the Commission's decision rule than the model containing competition variables only (and a better classifier for positive events). The Commission seems to be more lenient towards US notifying firms, but more strict when a non-EEA firms acquires an EEA firm. The results, however, do not support allegations that the Commission protects European competitors. I also find some statistically significant sector effects. The chance of an adverse finding is higher for transactions in the pharmaceutical, energy, or media and information sectors. It is difficult to determine whether or not these findings are to be explained by market conditions that make anticompetitive effects more likely. The latter seems to be the case for the pharmaceutical sector. However, it cannot be excluded that non-competition factors are at play in the energy or media and information sectors, such as the promotion of a single European energy market or the protection of cultural diversity and media pluralism. Consequently, the Commission's interpretation of 'effective competition' possibly extends beyond the competitive effects of mergers on consumer welfare in its strictest sense.

I conclude that whereas the reform of merger policy has introduced more economics, EU merger control may still be about more than economics.

A broader welfarist analysis of the reform of EU merger control: an empirical assessment

1 Introduction

Since Crandall and Winston (2003) concluded in a heavily debated paper that antitrust has brought little benefit for consumers, the welfare effects of competition policy are raising an increased interest in the policy debate and in the academic literature.[219] This paper analyses the welfare effects of the 2004 reform of EU merger control *beyond* the effects on allocative efficiency.

EU merger reform was part of a broader reorientation of EU competition policy towards a 'more economic approach' ("MEA") after the traditional structuralist approach had attracted heavy criticism. The MEA entails a reorientation towards consumer welfare goals and an effects-based approach grounded in modern industrial organization principles and empirical evidence.[220] Merger reform included the replacement of the structuralist dominance test ("DT") by the more effects-based Significant Impediment of Effective Competition ("SIEC") test, the introduction of a merger efficiency defence and modern industrial economics-based merger guidelines (European Commission, 2004b, 2008). The MEA to merger policy is expected to improve allocative efficiency by improving the accuracy of decision-making and the effectiveness of remedies. However, the broader welfare effects of the reform depend on a trade-off between accuracy and the costs of enforcement and compliance.[221] Building on the error-cost framework, we extend the analysis of the welfare effects of the reform of EU merger control beyond the effects on allocative efficiency by including the system costs relating to legal uncertainty. A lack of predictability and transparency has indirect welfare costs in terms of economic uncertainty (Voigt & Schmidt, 2005), which may either chill procompetitive behaviour or lower the deterrence effect of competition policy (Crane, 2007; First & Waller, 2012). Furthermore, legal uncertainty may make the decision-making process more vulnerable to capture (Gifford & Kudrle, 2005).

More than fifteen years into the reform, it remains unclear whether and how the MEA has affected EU merger decisions. Whereas the legal and procedural implications of EU merger reform have been intensively discussed, theoretical literature is divided. On the one hand, it is argued that the Commission already applied the dominance test flexibly enough to assess the competitive nature of mergers in terms of their effects on prices, output and quality (Boge & Muller, 2002; Heimler, 2008; Lowe, 2002; G. Monti, 2008; Röller & De La Mano, 2006). Indeed, in laying out some broadly accepted economic

[219] For an overview of competition policy post-evaluation studies, see DG Competition (2015) and OECD (2016).
220 '[An economic approach] implies that the assessment of each specific case will not be undertaken on the basis of the form that a particular business practice takes […] but rather will be based on the assessment of the anti-competitive effects generated by business behaviour. This implies that competition authorities will need to identify a competitive harm, and assess the extent to which such a negative effect on consumers is potentially outweighed by efficiency gains. The identification of competitive harm requires spelling out a consistent business behaviour based on sound economics and supported by facts and empirical evidence. Similarly, efficiencies and how they are passed on to consumers should be properly justified on the basis of economic analysis and grounded on the facts of each case' (EAGCP, 2005b, p. 3).
[221] This is the starting point of the error-cost framework, see (Easterbrook, 1984) and Beckner and Salop (1999).

principles, the Horizontal Merger Guidelines (European Commission, 2004b, "Horizontal Guidelines") merely commit to paper the Commission's experience with the assessment of mergers under the old merger regulation (para. 6). On the other hand, the new merger regulation ("EUMR", recital 6) and the Horizontal Guidelines (art. 2) explicitly recall the traditional structuralist definition of dominance as the ability to harm the structure of competition. Moreover, even in recent case law, the European Court of Justice ("ECJ") denied that consumer harm is necessary for EU competition law to apply as it reconfirmed that competition law should protect the structure of the market[222] and that competition rules have to be read in the light of the Treaty's overarching goals such as employment, environmental protection, regional development, public health etc.. Hence, whereas it is evident that the goal of EU merger control is to preserve 'effective competition', it remains ambiguous whether the concept is operationalized in welfarist, structuralist, or even broader terms. According to some, the mix of the old and the new results in ambiguous theories of harm and therefore legal uncertainty (Christiansen & Kerber, 2006; Witt, 2012).

The purpose of this paper is to provide clarity on the broader welfare effects of EU merger reform using empirical analysis. I rely on event study methodology, which provides an objective, market-based instrument to analyse the welfare effects of the reform in terms of the accuracy of decision-making, the efficiency of remedies and legal certainty. Contrary to previous research, I focus on phase I investigations, which constitute the large majority of cases, but remain heavily under-researched. It is often assumed that phase I investigations are less interesting from an economic viewpoint. This assumption ignores that a sound economic approach need not be restricted to hard data or involve complex economic and econometric analyses, even under an effects-based approach. As economic insights can be harnessed into simple filters and safe harbours (Manne & Wright, 2010, p. 163), the MEA is equally relevant for phase I decision-making.

Section 2 describes the set-up of EU merger control, the substantive changes introduced with the MEA and the legal-institutional framework. Section 3 sets out the methodology of event studies and discusses the limits of the latter applied to merger control. Section 4 discusses the theoretical welfare effects of the MEA on accuracy, legal certainty and the effectiveness of remedies; and how these hypotheses can be tested by examining stock market reactions to the announcements of mergers and regulatory decisions. Section 5 reviews previous empirical literature using event studies to assess merger control. Section 6 discusses the data collection process and provides sample descriptives. Section 7 discusses the results of our welfare analysis of the reform. Section 8 concludes.

[222] See Case C-8/08 T-Mobile Netherlands v NMA [2009] ECR I-4529, para. 38; Cases C-501/06 P, C-513/06 P, C-515/06 P, C-519/06 P, GlaxoSmithKline v Commission [2009], para. 63 [GSK]; Case C-52/09 Konkurrensverket v TeliaSonera Sverige [2011] ECR I-00527, para. 24; Case C-202/07 P France Télécom SA v Commission, [2009] ECR I-2369, para. 105.

2 EU merger control and the more economic approach

2.1 EU merger control: jurisdiction and procedures

In 1989, the European Council adopted the European Community Merger Regulation, which first authorised a systematic review of concentrations at a European level (Council of the EEC, 1989, reviewed in 1997, "ECMR").[223] The European Commission has exclusive jurisdiction to review mergers with a community dimension, which is determined by global and community turnover thresholds ('one-stop shop' principle). The Commission has to assess whether the notified merger is 'compatible with the single market' in terms of the need to preserve 'effective competition'. Furthermore, it should consider whether a concentration will likely result in 'the development of technical and economic progress' (art. 2(1)(b) ECMR).[224] The analysis is conducted in one or two phases, which are bound by strict deadlines. A phase I investigation needs to be completed within 25 working days, after which the Commission can either clear the deal or launch an in-depth investigation, which gives the Commission up to 90 working days to either clear or block the merger. If a concentration raises serious concerns, the merging parties may offer commitments to address the competition issues (arts 6(2) and 8(2) ECMR). Firms can challenge the Commission's decisions in the General Court ("GC"), which exercises a judicial review of the facts and the application of the law to the facts. GC judgments can be appealed to the ECJ on points of law.

The reform of European merger policy started off in 2001 with a Green paper assessing the working of the ECMR (European Commission, 2001a, "Green paper"). While the main set-up of European merger review was retained, the Green paper put some jurisdictional, procedural and substantive issues up for discussion. The reform process resulted in a political agreement on a new merger regulation, which entered into force May 1st, 2004 (Council of the EC, 2004, "EUMR"). This article focuses on the substantive dimension of EU merger reform, which is popularly known as the MEA. The MEA refers to a narrowing of the goals of competition policy to consumer welfare only, a greater reliance on modern industrial economics, and advanced quantitative techniques to demonstrate the competitive effects of firm behaviour on consumer welfare (EAGCP, 2005a, p. 3).

2.2 The reform towards a 'more economic approach'

The Commission initially had little intention to introduce extensive substantive changes to merger policy. However, in 2002, the CFI annulled three merger decisions on the basis of flawed economic analysis. The defeat in court was used as an opportunity for deeper reform than originally envisaged (M. Monti, 2002b, p. 3). Formally, the MEA in EU merger policy consists of a new substantive test, an efficiency defence and the adoption of economics-based merger guidelines and easier and quicker commitment procedures. Furthermore, a Chief Competition Economist and a team of high-level

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[223] Concentrations cover mergers, acquisitions of control and the establishment of full-function joint ventures (hereinafter "mergers").

[224] This does not however support an explicit balancing of pro- and anticompetitive effects as efficiencies can only be taken into account so far as the concentration 'does not form an obstacle to competition' (ibid.).

economists were appointed to enhance DG Competition's economic capacities.[225] At the rhetorical level, the MEA was accompanied by frequent references by Commission officials to 'consumer welfare' as the cornerstone of EU competition policy.[226]

The new substantive test is the most prominent element of EU merger reform. A structuralist approach, which built on the notion of dominance, guided the first decennia of EU merger control.[227] The DT declared incompatible with the common market 'concentrations which create or strengthen a dominant position *as a result of which* effective competition would be significantly impeded' (art. 2(3), ECMR, emphasis added).[228] The exact interpretation of the DT was controversial. Officially, the CFI treated the DT as a cumulative *two-tier test* for which dominance was a necessary, but not a sufficient condition for finding a significant impediment of competition.[229] However, in a later judgement, the CFI stated that 'the creation or strengthening of a dominant position may *in itself* have the consequence that competition is significantly impeded'.[230] The Green paper invited the competition community to reflect on the relative merits of the DT and a Substantial Lessening of Competition ("SLC") test as used e.g. by the US antitrust authorities. The consultation process revealed that the competition community thought an SLC test more suitable in providing effective control in non-collusive oligopolies (European Commission, 2003, para. 53, "Commission proposal"). Indeed, non-coordinated effects were perceived as the 'enforcement gap' in European merger policy (Volcker, 2004). Also, a SLC test was deemed more suitable for an economic approach as it directly focuses on the *effects* of mergers on competition (Kokkoris, 2005, p. 43). The new substantive test in the EUMR, the SIEC test, is a hybrid that resulted from a compromise between the proponents of a DT and those of a SLC test (Voigt & Schmidt, 2004, p. 584; Witt, 2012, pp. 225-226). The SIEC test declares incompatible with the common market 'concentrations which would significantly impede effective competition, *in particular* as a result of the creation or strengthening of a dominant position' (art. 2(3), EUMR, emphasis added). A SIEC therefore includes the creation or strengthening of a dominant position, which is a *primary form* of such competitive harm, and it is extended '*only* to the anticompetitive effects of a concentration resulting

225 In 2003, Monti appointed DG Competition's first ever Chief Competition Economist and populated its team with reputable economists to give 'guidance on analytical methodology, advice on the direction of investigations and direct assistance in the most complex cases' in order to enhance the DG's economic skills (M. Monti, 2002a). In the same year, the EAGCP was set up as an academic advisory body consisting of leading European industrial economists. Its main purpose is to support DG Competition in improving its economic reasoning and in the use of sophisticated econometric techniques in competition policy analysis.

226 'The goal of competition policy, in all its aspects, is to protect consumer welfare by maintaining a high degree of competition in the common market' (Monti, 2001, p. 2). 'Consumer welfare is now well established as the standard the Commission applies when assessing mergers […]. Our aim is simple: to protect competition in the market as a means of enhancing consumer welfare and ensuring an efficient allocation of resources.' (Kroes, 2005). '[I]n our enforcement we can place greater emphasis on the promotion of economic efficiency and consumer welfare' (Lowe, 2007, pp. 3-4).

227 The Court defined dominance as 'a position of economic strength […] which enables [an undertaking] to prevent effective competition being maintained […] by affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of consumers' (Case 27/76, United Brands v Commission [1978] ECR 207, para. 65).

228 In the nineties, the concept of dominance was expanded to include collective dominance too. Henceforth, the DT could catch oligopoly mergers that would not create or strengthen dominance, but that would produce a market structure prone to tacit collusion (Vickers, 2004, p. 458). Hence, for the purpose of merger control, dominance is defined as 'a situation where one or more undertakings wield economic power which would enable them to prevent effective competition from being maintained in the relevant market by giving them the opportunity to act to a considerable extent independently of their competitors, their customers and, ultimately, of consumers' (Case T-102/96 Gencor v Commission, [1999] ECR II-753, para. 200 and Joined Cases C-68/94 and C-30/95 France v Commission, [1998] ECR I-1375, para. 221 [Kali and Salz]).

229 Case T-2/93 Air France v Commission [1994] ECR II-323, para. 79 (emphasis added).

230 Case T -87/05 EDP v Commission [2005] ECR II-03745, para. 46 (emphasis added).

from the non-coordinated behaviour of undertakings which would not have a dominant position' (recital 25 EUMR, emphasis added).

The introduction of an efficiency defence is another important element of EU merger reform. Traditionally, the Commission has rarely exempted mergers that created or strengthened a dominant player on the basis of an efficiency defence. On the contrary, it often saw projected efficiencies as a means by which the merging parties would strengthen their dominant position (the so-called efficiency *offence*) (Levy, 2005, pp. 118-119). Under the new regime, the Commission should take into account 'any substantiated and likely efficiencies which may counteract the effects on competition, and in particular the potential harm to consumers' to determine the competitive effect of a merger (recital 29 EUMR).[231] Nonetheless, the acceptance of an efficiency defence remains highly unlikely for mergers approaching a monopoly (HGL, para. 84).

Next, the Commission published merger guidelines to provide a 'sound economic framework' for the assessment of horizontal and non-horizontal concentrations (recital 28 EUMR).[232] The Guidelines draw on the Commission's experience with the assessment of mergers under the ECMR and on the case law of the Courts (HGL, para. 6). They lay out some general and broadly accepted economic principles for assessing the likelihood of anticompetitive effects. The economic framework consists of a discussion of initial indicators (or scanning variables) such as market shares, concentration levels and ease of entry; and countervailing factors such as buyer power, merger-specific efficiencies and a failing firm defence (ibid., para. 12). The HGL also provide guidance on the (restrictive) conditions under which the Commission may take into account efficiencies (para. 78).[233]

2.3 Legal-institutional setting of EU merger policy

The Commission's competitive assessment of a transaction must be placed within the general framework of the achievement of the fundamental objectives of the Treaty (recital 13 ECMR). However, the Treaty (and the merger regulations) remain vague about the operational goals of EU merger control. Taking a teleological approach,[234] the Courts assigned various objectives to competition law, including, but not restricted to consumer welfare. First, competition law should promote *market integration* by preventing the private reconstruction of trade barriers.[235] The integration imperative has been called 'perhaps the most original feature' of EU competition policy' (Cini & McGowan, 1998, p. 10). It may prompt the Commission to support cross-border mergers and mergers in markets that are still defined along national borders to promote the creation of 'European champions' (see e.g. Thatcher, 2014). Secondly, the Court

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231 Note however that the Merger Regulation's recitals are not legally binding.
232 In the remainder, we focus on horizontal concentrations as these are the subject of the empirical analysis.
233 The merger specificity requirement in particular imposes a heavy burden of proof upon the merging parties.
234 Interpreting and applying Treaty provisions, it is 'necessary to consider the spirit, general scheme and wording of those provisions' (Case 26/62 van Gend en Loos v Nederland [1963] ECR 1, p. 12. A principal corollary to the teleological method is the 'effet utile' of Treaty provisions (for a discussion, see Fennelly, 1997).
235 See Case 56-58/64 Consten and Grundig v Commission [1966] ECR 429, p. 340. In 2009, the Court censured the GC for having committed an error in law for superseding the goal of market integration by reading a consumer welfare standard in art. [101], reaffirming the primary role of the internal market objective (GSK, para 62, 63. Also see Case C-439/09 Pierre Fabre [2011] ECR I-9419, paras 44-46). The relevance of the integration imperative for merger policy was affirmed in Kali and Salz, para. 169: '[T]he Regulation is founded on the premise that the objective of instituting a system to ensure that competition in the common market is not distorted is essential for the achievement of the internal market'.

held that the aim of the competition provisions is to protect the *process of competition*. To that effect, the Court frequently referred to the Union's task to create a 'system ensuring that competition in the internal market is not distorted' (Protocol 27 (TFEU)) and the Treaty principle of 'an open market economy with free competition' (art. 119 (TFEU)). The typically European concept of 'dominance' is directly linked to this interpretation of competition as a process. The protection of the competitive process has often been interpreted in the case law as the protection of the *structure of competition,* which translated into a great focus on structural measures of competition, such as market shares, concentration indices and a broad definition of barriers to entry.[236] Thirdly, the ECJ held that competition rules have to be read (and may have to be weakened) in the light of the *Treaty's overarching goals* such as employment, environmental protection, regional development, public health etc..[237] Public policy considerations in merger decisions are difficult to uncover, let alone quantify. However, they may be reflected in a different treatment of mergers in strategic sectors such as services of general (economic) interest. Indeed, the last decade, the Commission has become increasingly determined to speed up competition in the network industries (DG ECFIN, 2013). The extent to which these provisions create room for socioeconomic or industrial policy goals is unclear. However, in principle, secondary objectives cannot justify an authorisation that frustrates the fundamental aim of merger control, which is protecting competition.[238] Finally, the *institutional setting* may influence merger decisions too. Some argue that the Commission, a primarily *political* body, is more vulnerable to capture than its American counterparts (for a discussion, see McDonnell & Farber, 2003, p. 815; Weiler, 1999, p. 266). Accordingly, EU merger control may be prone to lobbying from (large) member states, trading partners or industry lobbies (Christiansen, 2006, p. 18 ff.). Mergers and acquisitions by firms that are incorporated in other jurisdictions may be treated more favourably to prevent conflicts with major trading partners. However, it is also possible that European industrial interests reverse this effect. Aktas et al. (2004) and Aktas et al. (2007) find some evidence for protectionism in EU merger control in the 1990s. In a follow-up study for the period 2001-2007, they find that the Commission no longer is more likely to intervene against non-European bidders when domestic rivals are harmed (Aktas et al., 2011).

3 Event study methodology

Event studies use financial market data to examine the effects of a firm-specific or economy-wide event on the valuation of firms. Stock market reactions to an event are a timely and unbiased estimate of the economic impact of the event in terms of firms' future profits under the following assumptions: first, stock prices rapidly adjust to new publicly available information,[239] and secondly, share prices represent investors' rational reflection of the present value of a firm's future cash flows.[240] Applied to merger

[236] C-8/08 T-Mobile Netherlands v NMA [2009] ECR I-4529, para. 38 : Competition rules are designed to protect 'the structure of the market and thus competition as such'. Also see AG Kokott's Opinion in Case C-95/04 P British Airways v Commission, para. 68.

[237] The Treaty requirement that 'competition shall not be distorted implies the existence on the market of workable competition, that is to say the degree of competition necessary to ensure the observance of the basic requirements and the attainment of the objectives of the Treaty […]. [Accordingly], the nature and intensiveness of competition may vary to an extent dictated by the products or services in question and the economic structure of the relevant market sectors' (Case 26-76 Metro SB-Großmärkte v Commission [1977] ECR 1875, para. 20).

[238] Kali and Salz, para. 99.

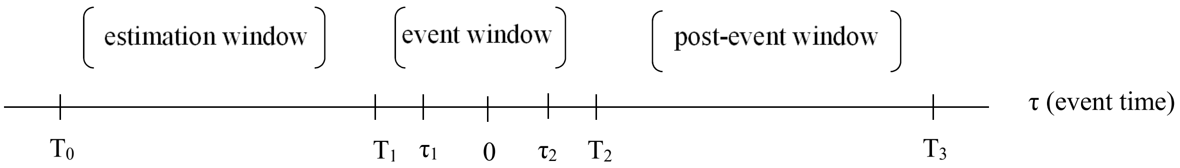
[239] This relates to the semi-strong form of the efficient market hypothesis, see Fama (1970).

[240] For a theoretical proof of the link between stock prices and the expected present value of future dividends, see Samuelson (1973). For some empirical evidence regarding the positive link between ex ante stock market returns and the ex post profitability of firms applied to mergers, see Kaplan and Weisbach (1992) and Duso, Gugler, and Yurtoglu (2010). For a critique, see Caves (1989).

(policy), event studies examine the value creating or destroying effects of mergers and regulatory interventions and regimes (see sections 4 and 5).

Modern event studies still use the methodology introduced by Ball and Brown (1968) and Fama, Fisher, Jensen, and Roll (1969). However, the framework has since been modified to deal with violations of the original statistical assumptions. Figure 1 visualizes the event study timeline.

Figure 1: Event study time line



Note: τ = 0 represents the time of the event (Source: MacKinlay, 1997, p. 20).

A first step in conducting an event study is to generate a measure for the *normal return* i.e. the expected return of a share in the absence of the event – here a merger or acquisition. While there are different approaches to modelling a firm's normal return, short-term event study methodology is robust to the choice of the normal return model (Brown & Warner, 1985). We use the market model, a statistical model that assumes a stable linear relation between the market portfolio return, $R_{m\tau}$, and the return on security *i*, $R_{i\tau}$, at event time τ:

$$R_{i\tau} = \alpha_i + \beta_i R_{m\tau} + \varepsilon_{i\tau},$$

where τ is part of the estimation window [T_0, T_1], firm *i* is either a merging party or a rival firm and $\varepsilon_{i\tau}$ is the zero mean disturbance term. The parameters of the normal return model are estimated over the estimation window, which usually is a period prior to, and not including, the event so as not to distort the estimators (Campbell, Lo, & MacKinlay, 1997). We use standard OLS to estimate the market model.[241] OLS estimators for α_i and β_i are consistent and efficient under the assumption that asset returns are jointly multivariate normal and i.i.d. through time. However, inferences tend to be robust to deviations from this distributional assumption (MacKinlay, 1997, p. 17).[242] Next, to provide a measure for the economic impact of the event on firm *i* at event time τ, *abnormal returns* are calculated as the difference between the observed return on share *i*, $R_{i\tau}$, and the predicted return, $\hat{R}_{i\tau}$:

$$AR_{i\tau} = R_{i\tau} - \hat{\alpha}_i - \hat{\beta}_i R_{m\tau},$$

where τ is part of the event window [τ_1, τ_2]. The event window should be long enough to incorporate the full impact of the event, but short enough to restrict the possibility of introducing effects on share prices exogenous to the event (Brown & Warner, 1985, pp. 13-14). Besides the event day (τ = 0), the event window typically includes several days surrounding the event to allow for information leakage

[241] Scholes and Williams (1977) developed a method to address bias in the estimators of the market model caused by non-synchronous trading. However, Eckbo (1983, p. 251) and Aktas et al. (2004, p. 741) found no distinguishable difference between test results based on the Scholes and Williams method and those based on standard OLS.

[242] The non-normality of daily returns is mostly problematic for small samples and long term event studies. The event studies in this research rely on 200 observations for each firm in the sample and the event window is no longer than 7 days. Accordingly, non-corrected t-tests are appropriate in testing the significance of (C)(A)ARs (also see Brown and Warner (1980), (1985)).

prior to the official announcement date and for gradual dispersion of information regarding the nature of the merger and the probability of regulatory intervention after the official announcement date (Banerjee & Eckard, 1998). Under the null hypothesis of efficient markets, one-day abnormal returns will be jointly normally distributed with zero mean and variance equal to:

$$\hat{\sigma}^2_{AR_{i\tau}} = \hat{\sigma}^2_{\varepsilon_i} + \frac{1}{L}\left[1 + \frac{(R_{m\tau} - \hat{\mu}_m)^2}{\hat{\sigma}^2_m}\right],$$

where $\hat{\sigma}^2_{\varepsilon_i}$ is the disturbance variance of the market model over the estimation window, L is the length of the estimation window, and $\hat{\mu}_m$ and $\hat{\sigma}^2_m$ are the mean and variance of the market return. Accordingly, the variance of ARs has two components: *first*, the disturbance variance of the market model over the estimation window to correct for the market model's efficiency in predicting an individual stock's return, and secondly, additional variance to correct for the sampling error of the parameters $\hat{\alpha}_i$ and $\hat{\beta}_i$ as ARs are based on out-of-sample predictions of $\hat{R}_{i\tau}$. This last component approaches zero for large values of L. To get a measure for the *overall* economic impact of the event on firm *i*, the abnormal returns for security *i* are accumulated over the event window. The *cumulative abnormal returns* (CAR) for firm *i* are given by:

$$CAR_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{i\tau},$$

where $\tau_1 \leq \tau = 0 \leq \tau_2$. The *cumulative average abnormal returns* (CAAR) provides an overall measure of the impact of the event on the merging parties (or their rivals), and is given by:

$$CAAR(\tau_1, \tau_2) = \frac{1}{N}\sum_{i=1}^{N} CAR_i\ (\tau_1, \tau_2),$$

where N = number of firms. Typically, the null hypothesis to be tested is whether the C(A)ARs around the event date are equal to zero. Accordingly, a traditional t-statistic is computed:

$$t = \frac{C(A)AR_{(i)}\ (\tau_1, \tau_2)}{\sqrt{\sigma^2_{C(A)AR_{(i)}\ (\tau_1, \tau_2)}}},$$

where

$$\sigma^2_{CAR_i\ (\tau_1, \tau_2)} = (\tau_2 - \tau_1 + 1) \sum_{\tau=\tau_1}^{\tau_2} \hat{\sigma}^2_{\varepsilon_i}$$

and

$$\sigma^2_{CAAR\ (\tau_1, \tau_2)} = (\tau_2 - \tau_1 + 1) \frac{1}{N^2} \sum_{\tau=\tau_1}^{\tau_2} \hat{\sigma}^2_{\varepsilon_i}$$

A final step in conducting an event study is often to run a cross-sectional regression model to get more insights into the determinants of the abnormal returns:

$$AR_j = \delta_0 + \delta_1 x_{1j} + \ \dots + \delta_M x_{Mj} + \eta_{j,}$$

where AR_i is the i[th] AR observation, m=1…M are M characteristics for the i[th] observation and $E(\eta_j) = 0$.

On the limits of the use of event studies to analyse merger policy, see section 4.4.

4 The welfare effects of the MEA and stock market reactions: hypotheses

This section discusses the hypothetical welfare effects of the more economic approach in terms of its impact on the accuracy of merger control, legal certainty, and the efficiency of remedies; and the way in which these welfare effects can be derived from stock market reactions to the announcement of mergers and regulatory decisions. In practice, confirmation of the hypotheses will depend upon the flexibility with which the dominance test has been applied in the past, the importance of the alleged enforcement gap, and the extent to which firms succeed in meeting the high burden of proof to get an efficiency defence accepted (see section 2).

4.1 The effect of the reform on accuracy

The accuracy of merger control relates to its success in *minimizing the social costs of errors*. A distinction is made between type I errors and type II errors. Type I errors refer to false positives i.e. wrongful remediation or blocking of a procompetitive merger, type II errors refer to false negatives i.e. unconditional clearance of an anticompetitive merger. A comparison of investors' competitive assessment of a merger and the Commission's decision outcome can give a first insight into the accuracy of EU merger control (see e.g. Neven & Röller, 2002). Rivals' stock price reactions to the announcement of a horizontal merger provide a market-based measure for the competitive nature of the transaction (see e.g. Eckbo, 1983; Eckbo & Wier, 1985; Stillman, 1983). Following standard static oligopoly theory, merging parties' stock prices will invariably rise upon the announcement of a horizontal merger as investors project an increase in future firm profits. Increased profits may result from (non-)coordinated effects, which enable the new entity to raise prices or restrict output (*market power/collusion hypothesis*), and/or from increased efficiency in production and distribution (*efficiency hypothesis*) (Ellert, 1976, p. 715).[243,244] Accordingly, an analysis of merging parties' stock prices cannot distinguish pro- from anticompetitive mergers.[245] However, under fairly general conditions, standard oligopoly models predict that pro- and anticompetitive mergers will affect rivals differently (Farrell & Shapiro, 1990). Under the market power/collusion hypothesis, rivals' expected future profits will rise either because the internalization of competitive constraints between the merging parties reduces competitive pressure on the remaining rivals, or because the merger changes the nature of competition such that the industry becomes (more) prone to collusion (Stigler, 1964). Both scenarios enable competitors to raise

243 For an overview of efficiency rationales for mergers, see F. M. Scherer (1988).
244 The net welfare effect of a merger depends upon a trade-off between these pro- and anticompetitive effects (Williamson, 1968).
245 Event studies have been used extensively to measure the economic value of firm combinations (for an overview, see e.g. Andrade, Mitchell, and Stafford (2001)). This body of US research generally confirms that mergers increase merging parties' shareholder wealth on average. The impact on bidder firms' returns is dubious, but stock price reactions for target firms are positive and significant. Aktas et al. (2007) confirm this pattern for mergers in Europe during the 1990s.

prices or restrict output. So, stock prices will rise upon the announcement of an anticompetitive merger. On the contrary, under the efficiency hypothesis, rivals' expected future profits will drop as the merging parties' increased efficiency may exert a downward pressure on industry prices. So, stock prices will fall upon the announcement of a procompetitive merger (see Figure 2).

Figure 2: Expected market reactions of merging parties and their rivals under market power and efficiency hypotheses

Hypotheses	**Merger announcement**	
	Merging parties	**Rivals**
Market power/collusion	+	+
Efficiency	+	-

In theory, the exclusive consideration of competition variables and the advanced quantitative approach should improve the quality of the competitive assessment, such that both types of errors are reduced in general. The introduction of an efficiency defence should lower the frequency of type I errors in particular, whereas the extension of the substantive test to non-collusive oligopolies should reduce the incidence of type II errors. If the reform has indeed improved the accuracy of merger control, we should observe a decline in the frequency of discrepancies between investors' assessment of the competitive nature of the merger and the decision outcome. However, not all discrepancies are necessarily errors on the part of the Commission. Investors sometimes fail to correctly anticipate a merger's competitive nature due to uncertainty regarding its set-up, the complexity involved in multiproduct mergers etc.. If the Commission has access to better information, event studies may wrongly suggest the former's competitive assessment is faulty (Neven & Zenger, 2008, p. 487). Therefore, it is important to analyse whether or not there are systematic patterns in the occurrence of discrepancies. If discrepancies generally constitute unintended mistakes, neither competition nor non-competition factors should systematically affect the chance of discrepancies. To this end, we test a cross-sectional probit model containing competition and non-competition variables for both types of errors.

4.2 The effect of the reform on legal certainty

Legal certainty relates to the transparency, and therefore the predictability, of regulatory intervention. A lack of predictability has indirect welfare costs. Indeed, uncertain decision outcomes generate economic uncertainty (Voigt & Schmidt, 2005, pp. 1-5), which may either chill procompetitive behaviour or lower the deterrence effect of competition policy (Crane, 2007, p. 84; First & Waller, 2012, p. 2571). Furthermore, legal uncertainty may make the decision-making process more vulnerable to regulatory discretion and capture (Gifford & Kudrle, 2005, p. 468). It was an explicit aim of the reform to increase predictability by grounding merger decisions in competition factors only. Theoretically, the effect of an economic approach on legal certainty is debated. Some believe that a more economic approach produces a more transparent and consistent, and therefore more predictable, decision-making process. However, others believe that a case-by-case approach introduces *more* uncertainty regarding the decision outcome (see e.g. Easterbrook (1984) and Stucke (2009)). Specifically in an EU setting, some fear that the opaque mix of traditional and welfarist theories and concepts of harm may reduce legal certainty (see e.g. Witt, 2012). On the other hand, using a probit model for the Commission's merger decision rule, Duso et al. (2013) found that the reform had slightly improved the predictability of merger decisions. Therefore, it is difficult to predict what the effect of the reform on legal certainty will be a priori.

We use several stock market-based proxies for the predictability of merger policy. First, if investors correctly anticipate the nature of regulatory intervention, the decision outcome itself will contain little added information. Accordingly, we should observe normal returns for both merging parties and their rivals around the decision date (Aktas et al., 2007; Brady & Feinberg, 2000). Secondly, uncertainty delays the flow of information into stock market prices and creates greater price drift (Zhang, 2006). If merger policy is predictable, stock prices should consolidate swiftly around the decision announcement date. Hence, trading ranges should be narrow and volatility should be low around the decision announcement date. If the MEA has improved the predictability of EU merger control, decision CAARs should be closer to zero, trading ranges should be narrower and there should be less volatility in stock prices after the reform.

4.3 The effect of the reform on the efficiency of phase I remedies

The basic aim of remedies is to ensure competitive market structures (recital 8 EUMR). Hence, remedies can be considered *effective* if they fully eliminate all competition concerns in a timely manner (usually 2 to 5 years). To be *efficient*, remedies should be designed such that consumer benefits resulting from merger-specific efficiency gains are preserved.[246] In 2005, DG Competition published an ex post evaluation study of the design and implementation of a representative number of remedies for the pre-reform period 1996- 2000.[247] The study revealed that 57% of the remedies in the sample completely removed anticompetitive concerns, 24% were considered only partially effective and 7% of remedies proved to be ineffective. Phase I remedies generally are more effective then phase II remedies: 62% of phase I remedies were fully effective, while only 2% were deemed ineffective. This finding is ascribed to the relatively more clear-cut nature of phase I remedies, as opposed to the greater complexity of phase II cases and commitments (DG Competition, 2005). In theory, the reform should have improved the efficiency of merger remedies. An effects-based approach grounded in modern industrial economics permits a more accurate identification and a deeper understanding of the competition issues at hand and the reliability of parties' efficiency claims. This should allow a more thorough assessment of the efficiency of proposed remedies in terms of their design, implementation and monitoring, and prevent that remedies are too comprehensive in that they destroy efficiency gains.

Figure 3: Expected market reactions of merging parties and their rivals under market power and efficiency hypotheses

Hypotheses	**Conditional clearance**	
	Merging parties	**Rivals**
Market power/collusion	-	-
Efficiency	>0	<0

Investors' reactions to the announcement of conditional clearance decisions can provide a crude measure for the efficiency of merger remedies. Stock market reactions to decision announcements reflect the economic effect of regulatory intervention (Eckbo & Wier, 1985). If the effectiveness of commitments relies on

[246] Three types of merger remedies can be distinguished: structural remedies include the full or partial divestiture of an ongoing business; behavioural remedies involve promises by the parties to abstain from certain commercial behaviour, such as bundling products, reducing product ranges etc.; access remedies regulate the granting of access to key infrastructure, networks, technology and essential inputs. As a rule, commitments which are structural in nature are preferable. However, non-structural commitments may be acceptable in very specific circumstances (European Commission, 2008).

[247] The Commission's study is qualitative in nature. It is based on interviews with merging parties, licensors, buyers, licensees and trustees.

their potential to eliminate all competition concerns, an effective remedy should fully reverse anticompetitive rents (Duso, Gugler, & Yurtoglu, 2011). Accordingly, upon the announcement of a conditional clearance, both merging parties and rivals should experience a negative market reaction as the prospect of future anticompetitive profits disappears. Ultimately, a modified merger should at best be value neutral for the remaining rivals. Ideally, remedies preserve efficiencies such that the net value of a revised merger is positive for parties, but negative for rivals (see Figure 3).

4.4 The limits of event studies

Some caution is warranted when interpreting the results of event studies applied to merger control. Several authors have questioned the ability of event studies to distinguish between pro- and anticompetitive mergers. First, increasing stock prices for competitors are not necessarily proof of the collusion hypothesis. An increase in the market value of rival firms may be consistent with the efficiency hypothesis if the merger signals a chance for rivals to implement more cost-efficient production technologies in the future (Eckbo, 1983; Eckbo & Wier, 1985). Secondly, rising stock prices may reflect an increased opportunity for rivals to become a merger target themselves (so-called information effects, see Kim & Singal, 1993; Song & Walkling, 2000). However, Clougherty and Duso (2009) found no significant relation between rivals' positive returns and the likelihood of future acquisitions. Thirdly, event studies may fail to detect anticompetitive effects if rivals are large multiproduct firms that derive only a small fraction of their revenues from the affected market (McAfee & Williams, 1988). Also, there may be endogeneity between stock market reactions and regulatory intervention. Because investors take into account the probability of regulatory intervention, stock prices do not reflect the full economic value of a merger (Aktas et al., 2004, 2007; Eckbo, Maksimovic, & Williams, 1990). For the purpose of our study, the direction i.e. the sign of stock market reactions generally suffices. However, we control for expectations to measure the degree of rent reversal induced by conditional clearance decisions i.e. the extent to which remedies eliminate anticompetitive rents (see section 7.3). Lastly, more generally, event studies may suffer from a selection bias as the sample is per definition restricted to traded firms.

5 Previous literature

The first applications of event study methodology to competition law enforcement concerned the US merger regime. This research mainly focussed on the need for merger control and the US authorities' success in selecting anticompetitive mergers. Early studies for the US found little empirical foundation to support government intervention in horizontal mergers. Ellert (1976) examined the effects of challenges on merging parties' shareholder wealth and concluded that mergers reallocate resources from less to more efficient firms. Eckbo (1983) and Stillman (1983) were the first to use event studies to empirically test for the market power/collusion hypothesis. They concluded that US antitrust authorities perform poorly in selecting anticompetitive mergers. Eckbo and Wier (1985) observed no significant improvement in the agencies' case selection record after the introduction of the Hart–Scott–Rodino Antitrust Improvements Act in 1979. More recent event studies for the US corroborate the findings of early research, see e.g. Song and Walkling (2000) and Shahrur (2005).

Brady and Feinberg (2000) were the first to apply event studies to EU merger policy. They examined the effects of merger control on merging parties' stock prices for the years 1991-1995. Investors seemed to correctly anticipate phase I clearance decisions, as stocks generated normal returns around the decision date (also see Aktas et al. (2007)). To the contrary, the opening of phase II proceedings and the suspension of a merger gave rise to negative abnormal returns.

Aktas et al. (2004, 2007) examined whether EU merger control is protectionist by studying price reactions of merging parties to merger announcements and regulatory activity for the period 1990-2000. While (combinations involving) EU bidders generated normal returns upon the announcement of a phase II investigation, non-EU bidders faced significant value destruction. Investors therefore seemed to assume that EU merger control favours European firms. The authors found some justification for this assumption as the probability of intervention against foreign bidders seems to be higher if European rivals are harmed. The authors suggest this finding could be consistent with a protectionist hypothesis, but it could also signal less effective lobbying by foreign firms. However, in a follow-up study for the period 2001-2007, Aktas et al. (2011) claimed that EU merger control no longer was biased against foreign acquirers. They ascribed this result to the 2002 Court judgments and the subsequent reform of EU merger policy.

Neven and Röller (2002) first used event studies to analyse the accuracy of EU merger control by studying rivals' returns during the years 1990-2000. The authors found that type II discrepancies were more frequent than type I discrepancies. They linked this finding to the limited scope of the dominance concept and the lack of an explicit efficiency defence. An examination of the determinants of discrepancies revealed that the political economy of merger control (i.e. the influence of third parties on the decision-making process) systematically explained discrepancies. Divergences seemed to be more common when large member states were involved. Furthermore, competitors appeared to play a role in the clearance of anticompetitive deals, though not in the prohibition of efficient mergers. In a study for the years 1990-2002, Duso, Neven, and Röller (2007) no longer found an influence of third parties on merger decision outcomes. However, the institutional and political environment still seemed to affect merger control. In line with the integration imperative, the Commission was less likely to prohibit a procompetitive merger if the relevant market was defined as EEA-wide.

Duso et al. (2011) was the first event study to examine the effectiveness of EU Commission remedies. The results partly confirmed the findings of the ex-post remedy evaluation study conducted by DG Competition (2005): contrary to outright prohibitions, remedies were only partly capable of reversing anticompetitive rents. However, there appeared to be a learning effect as conditions applied to remedy-heavy industries were more efficient. Also, remedies seemed to be more effective after a phase I investigation.

Serdarevic and Teplý (2011) and Duso et al. (2013) used event studies to examine the effects of the 2004 reform. The results vary. Both studies found that the reform has increased accuracy. However, Serdarevic and Teplý (2011) found that the reform has resulted in a lower probability of type II errors, whereas Duso et al. (2013) detected significantly less type I errors post-reform. Both studies analysed the determinants of errors and found that the institutional environment and procedural issues have continued to play a role in the occurrence of discrepancies after the reform. Serdarevic and Teplý (2011) reported that large member states have a lower chance of facing unnecessary conditions. However, their results do not support the protectionist hypothesis as the probability of type I errors is lower for foreign bidders too. This result is in line with Duso et al. which found a more lenient approach towards US firms. Both studies find a significant impact of the width of the relevant market definition on the occurrence of errors. Duso et al. reported that a narrowly defined geographical market increased the chance of type I errors before and after the reform, but it lowers the chance of type II errors only before the reform. The latter is confirmed in Serdarevic and Teplý. The latter also found that the probability of underdeterrence increased for intra-EU mergers, which may be proof for the integration imperative. Only Duso et al. (2013) examined the effect of the reform on the predictability of merger policy and the efficiency of remedies. Using a probit model, they found that the 2004 reform has increased predictability. However, the effectiveness of remedies have not improved after the reform. Given the higher effectiveness of prohibitions in terms of rent reversal and deterrence, the authors suggested that the Commission has blocked too little mergers.

6 Data

Data collection for event studies proceeds in two phases. First, we collected data on events from the EU merger decisions database (see section 6.1). Next, we collected event dates and stock market data for the events selected in the previous phase (see section 6.2).

6.1 Data on EU merger decisions

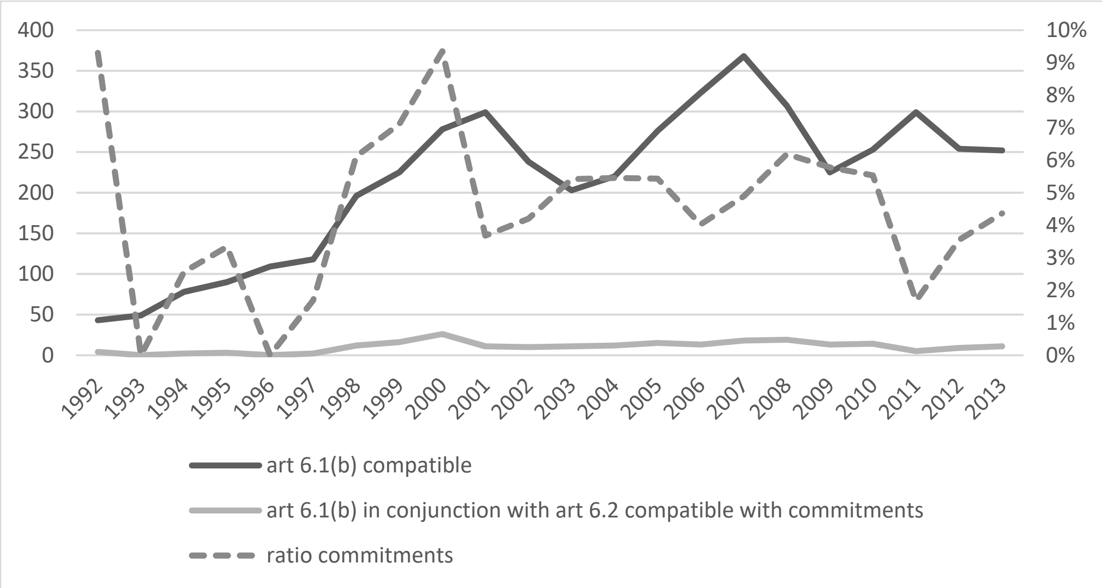
Our research covers phase I decisions in the years 1992 to 2013 (see Table 1 for population and sample statistics). During this period, the Commission issued 4,929 phase I merger decisions (2,023 before and 2,906 after the reform). Approximately 5 per cent of decisions were approved subject to conditions and obligations. The initial sample includes 160 phase I merger decisions. Decisions were selected through stratified random sampling with endogenous stratification to improve the efficiency of data collection (see e.g. G. King & Zeng, 2001). Accordingly, we oversampled decisions that were subject to commitments: 20 per cent of decisions in the sample are compatible subject to commitments. Contrary to previous research, which examined merger decisions at *case* level, this study analysis the Commission's merger decisions at the actual level at which the Commission conducts its competitive assessment: the relevant market level.[248] This gives a total initial sample size of 1,113 horizontally affected relevant markets. [249] In 197 relevant markets, the Commission concluded the transaction raised serious doubts as to its compatibility with the internal market. This finding was always addressed with commitments, either in anticipation of, during, or following the Commission's investigation.[250]

248 This approach has some important advantages. First, the welfare effect of a transaction or regulatory intervention may depend on the relevant market at issue. Therefore, announcement and decision CAARs averaged over all rivals involved in a case will be biased towards zero. This will distort the results of the analysis of the accuracy of merger policy, legal certainty and the efficiency of remedies. Secondly, an analysis at relevant market level can detect whether or not remedies are directed at the correct relevant market i.e. the market that raises competitive concerns. This will give a more accurate picture of the nature and incidence of errors than an analysis at case level. Thirdly, an analysis at relevant market level offers a more precise insight into the determinants of decision errors as the variables of interest in the cross-sectional analysis may vary across different markets.

249 Two cases were dropped because they involved vertically affected markets only.

250 Accordingly, despite the Commission's finding that the concentration would have adverse effects in a particular relevant market, some cases were concluded with an 'Art 6.1(b) - compatible decision' following commitments proposed by the merging partners that removed the Commission's concern. These relevant markets are included in the database as positive events insofar the Commission conducted a competitive analysis of the market without taking into account the proposed commitments.

Table 1: Population and sample statistics



Decision type	**Population**		**Sample**	
	Before	**After**	**Before**	**After**
Art 6.1(b) - compatible	1926	2777	80	80
Art 6.1(b) - compatible with commitments (Decisions with commitments %)	97 (5%)	129 (4.6%)	20 (25%)	20 (25%)
Relevant markets affected[251] (Relevant markets raising serious doubts %)			507 (28%)	606 (9%)

Note: Number of decisions left-hand scale, ratio of commitments right-hand scale.
Source: DG Competition, http://ec.europa.eu/competition/mergers/statistics.pdf, retrieved on July 12th 2016.

To analyse the determinants of errors and to calculate the extent of rent reversal induced by remedies, we extracted information on decision determinants from non-confidential decisions published on the website of DG Competition.[252] All information recorded therefore reflects the view of the Commission. This may give rise to endogeneity issues regarding decision factors that are not (always) easily quantifiable, such as market shares, barriers to entry, etc.. It cannot be excluded that the Commission misrepresents these factors in order to provide an ex-post justification for a decision outcome that is not based on the merits of the case. As a result, legal-institutional factors may be hidden behind too narrowly defined relevant markets, inflated market shares, overstated barriers to entry, or the other way around. Without access to internal documents or third party information on market characteristics, endogeneity problems are difficult to detect. However, the Commission is legally obliged to act within the confines of the merger regulations and guidelines. Compliance with the latter is scrutinized by the Courts. Indeed, inconsistencies in decisional practice are likely to be challenged by the parties (Bergman et al., 2005, p. 724). The analysis of the sample showed that both parties and the Commission heavily rely on precedent. Deviation from standing decisional practice (or the conclusions from the market investigation) is extensively discussed and substantiated. As a result, the legal system provides a continuous consistency check regarding the definition of relevant markets, the calculation of market

[251] Because of missing values, the regression sample dropped to 480 and 588 observations, respectively before and after the reform.
252 http://ec.europa.eu/competition/mergers/cases/

shares, the evaluation of barriers to entry etc.. Nonetheless, given possible endogeneity issues and given the fact that some factors that influence the decision-making process may be missing from the decisions, one should be careful in giving a causal interpretation to the regression results in the following sections.

Table 2 provides sample-corrected descriptives before and after the reform of the ECMR.[253] The adjusted sample composition is very similar across regimes. Accordingly, a structural break in the Commission's decision practice cannot be ascribed to differences in sample composition.[254] Differences in means are statistically significant for two variables only: a finding of serious concerns and the number of competition factors discussed. First, before the reform, the Commission found the transaction raised serious doubts for 8% of affected relevant markets, which is significantly more than the 2% of affected markets after the reform. This could indicate a less interventionist policy under the EUMR. Secondly, after the reform, competitive assessments on average contain a more comprehensive analysis of competition factors such as discussed in the Horizontal Guidelines which is in line with a more elaborate analysis of competitive effects beyond structural indicators of market power.

Table 2: Sample-corrected descriptives before and after the reform (relevant market level)

	N	Sample-adjusted mean before reform	Sample-adjusted mean after reform	Difference (after – before)
Competitive concerns relevant market level	1113	0.08	0.02	-0.06 **
Notifying party EEA	1113	0.68	0.65	-0.04
Notifying party large member state (UK, FR, DE)	1113	0.42	0.43	0.00
Notifying party US/Japan firm	1113	0.30	0.31	0.01
Intra-EEA cross-border transaction	1113	0.30	0.29	-0.01
Relevant market = EEA	1113	0.24	0.23	-0.01
Relevant market = national	1113	0.70	0.66	-0.04
Main rival EEA firm	1113	0.80	0.72	-0.08
Duration (days)	1113	40	39	-1
Combined market share post-merger	1066	27	23	-4
Barriers to entry	1113	0.05	0.01	-0.03
Number of competition factors discussed	1113	0.87	1.65	0.77 *

Note: Sample means are corrected for oversampling by using sample weights that are inversely proportional to the probability of sample selection (Cameron & Trivedi, 2005, p. 817 ff.). (p≤0.05, **p≤0.1)*

6.2 Data on event dates and market returns

The final sample consists of parties and rivals identified in the initial sample of merger decisions (see previous section) for which stock market data are available for the full estimation and event windows.

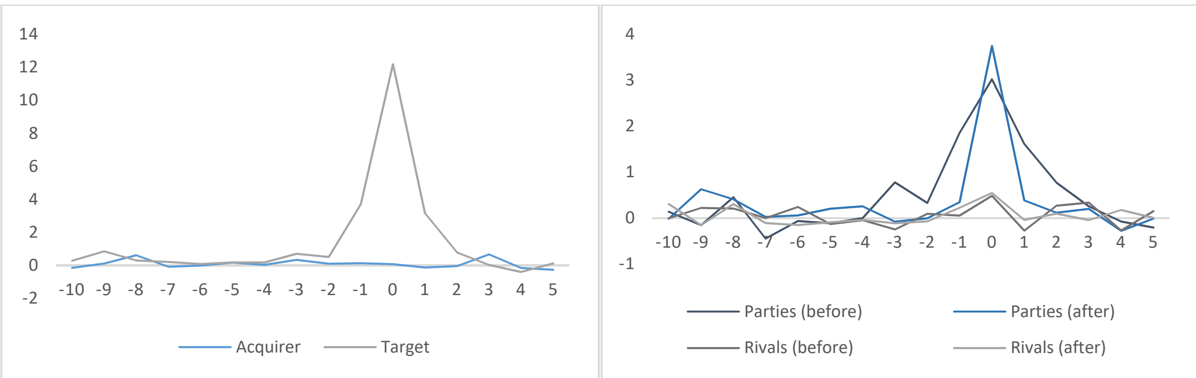
253 The sample means are corrected for oversampling by using sample weights that are inversely proportional to the probability of sample selection (Cameron & Trivedi, 2005, p. 817 ff.).

254 As an additional check, we matched the samples before and after the reform using propensity scoring and performed the same. The qualitative results are the same as for the full sample.

For each decision in the sample, we identified the event date by crosschecking the announcement date in the Thomas Reuters Eikon transaction record (if available) with reports in the financial press. The estimation window was set at 200 trading days, ending 30 days prior to the event. The final sample for parties consists of 53 cases, both before and after the reform ((of which respectively 31% and 28% raised serious concerns in at least one relevant market). The final sample for rivals consists of 55 cases before the reform and 66 cases after the reform. This involves 288 unique relevant markets (of which 33% raised serious concerns) before the reform and 340 relevant markets (of which 9% raised concerns) after the reform. We collected total return data for all merging parties and their rivals and for a national market index based on the primary quote of the individual firm stock from the Eikon database.[255]

Figure 4 shows the evolution of abnormal returns for merging parties and their rivals around the merger announcement date. As stock market reactions are strongest around event time t=0, we are confident we identified the dates at which the first rumours about the transaction reached the market with reasonable precision. The information of the merger seems to be largely absorbed over a 7 days event window. Our analysis of the welfare effects of mergers confirm previous empirical literature (see e.g. Andrade et al. (2001). On average, mergers create value for stockholders both before and after the reform. Over a 7 days event window, combined firms gain 10.98% before the reform and 5.61% after the reform. Accordingly, mergers on average seem to create significantly less welfare for shareholders after the reform (1% significance level). As found in previous research, the creation of shareholder value depends on the role of the merging party. Acquiring firms in our sample generate normal returns around the merger announcement date, whereas shareholders of target firms gain upon the announcement of a takeover. On average, concentrations created value for shareholders of rival firms, before and after the reform (also see Clougherty and Duso (2009), cf. Aktas et al. (2011)).

Figure 4: Abnormal returns parties and rivals around the time of the merger announcement over the 11 days event window



[255] The total return index R_{it} includes the stock's price change and dividend. The percentage change in total return was calculated as $(Price_{t+1} + Dividend)/Price_t$.

Table 3: Cumulative average abnormal returns parties and rivals at announcement date before and after the reform

	t = 0		t = [-1;1]		t = [-2;2]		t = [-3;3]	
CAAR (%)	**before**	**after**	**before**	**after**	**before**	**after**	**before**	**after**
Acquirer	0.24	-0.02	0.70	-0.28	0.74	-0.18	1.82	0.80
	(0.62)	*(0.34)*	*(1.02)*	*(0.59)*	*(1.28)*	*(0.71)*	*(1.52)*	*(0.84)*
Target	9.58***	14.23***	20.62***	17.83***	*23.26****	*18.09****	25.23***	17.85***
	(1.12)	*(0.57)*	*(1.73)*	*(0.97)*	*(2.25)*	*(1.06)*	*(2.66)*	*(1.30)*
Rivals	0.47***	0.51***	0.26	0.62***	0.61*	0.59*	0.74*	0.32
	(0.16)	*(0.14)*	*(0.27)*	*(0.24)*	*(0.35)*	*(0.31)*	*(0.42)*	*(0.37)*

Note: Sample-adjusted means. (p<0.1, ** p<0.05, *** p<0.01)*

7 Results

7.1 Effects of the reform on accuracy

7.1.1 Competitive nature of notified transactions and accuracy

The effects of the reform on accuracy are analysed at relevant market level. Accordingly, type I errors are defined as the application of remedies to markets where rivals on average have normal or negative returns upon the merger announcement; type II errors are defined as the lack of intervention in markets where rivals on average have abnormal positive returns upon the merger announcement.[256] Table 4 presents the evolution of the competitive nature of notified transactions before and after the reform for the 5 and 7 days event windows. The frequency of relevant markets for which there were *no* welfare effects increased. This rise is compensated with a decline in the frequency of both negatively and positively affected relevant markets (also see Duso et al. (2013)). While it is difficult to distinguish regulatory effects from economic and industrial effects that may have affected the nature of notified mergers, the fall in the incidence of negatively affected relevant markets may suggest that the reform has increased deterrence, possibly through greater predictability (see section 7.2). The lower frequency of positively affected relevant markets is harder to explain. Possibly, the streamlining of the remedies procedure combined with the restrictive conditions for the efficiency defence may have curbed parties' incentives to go through the costly effort of designing a transaction such that it generates efficiencies (on the incentive trade-off between remedies and the efficiency defence, see Cosnita-Langlais and Tropeano (2012)).

[256] (C)(A)ARs are defined as normal when the absolute value is smaller than 1.5%. (C)(A)ARs below -1.5% (above +1.5%) are defined as abnormal negative (positive) returns (see Duso et. al (2013)). A transaction is defined as welfare neutral at relevant market level if rivals present in that market generate normal returns on average. The results in this and the following sections are largely robust for the choice of threshold value.

Table 4: Competitive nature notified transactions and accuracy of EU merger policy pre- and post-reform

	CAAR(-2;+2)			CAAR(-3;+3)		
	before	**after**	**Δ (pp)**	**before**	**after**	**Δ (pp)**
A. Competitive nature						
% neutral	23.6%	56.1%	+32,5***	24.4%	49.3%	+24.9***
% procompetitive	34.2%	20.8%	-13.4*	36.2%	21.3%	-14.9**
% anticompetitive	42.2%	23.2%	-19.0**	39.4%	29.4%	-10.0
B. Accuracy						
% type I	10.5%	2.7%	-7.7*	7.6%	2.5%	-5.1*
% type II	95.0%	96.1%	+1.1	91.0%	96.1%	+5.1
Δ discrepancies	46.2%	24.3%	-21,9***	40.4%	30.0%	-10.4

*Note: Sample adjusted means for the 5 and 7 days event windows. (* p<0.1, ** p<0.05, *** p<0.01).*

As discussed in section 4.1, we expect the reform to have improved the accuracy of EU merger policy in terms of type I as well as type II errors. This prediction is only partly confirmed by the data (see). Our results are generally in line with Duso et. al (2013), but contradict those of Serdarevic and Teplý (2011). The rate of discrepancies between the market's and the Commission's competitive assessment decreases with 22 p.p. (10 p.p.) for the 5 (7) days event window. This suggests the introduction of the more economic approach has enhanced the quality of the Commission's competitive assessment of mergers overall. However, this improvement can be fully ascribed to a better track record in type I errors. As reported in previous studies, type I errors appear to be much less common than type II errors. The reform has further lowered the chance of unnecessary remedies. Post-reform, the probability of type I errors decreases with 8 p.p. (5 p.p.) for the 5 (7) days event window. To the contrary, the reform does not seem to have had a significant impact on the occurrence of type II errors. The persistently high rate of type II errors begs the question of whether phase I investigations, given their limited time frame, are appropriate to investigate complex transactions. This worry seems confirmed by the fact that previous studies (see e.g. Duso et al., 2013; Serdarevic & Teplý, 2011), which rely on samples that include phase II investigations *also* report much lower percentages of type II errors (between 50 and 60%).

7.1.2 Determinants of errors

With no access to confidential case records, it is difficult to tell apart discrepancies and errors. However, a cross-sectional analysis of the determinants of discrepancies can provide some insights. For both types of discrepancies, we ran separate probit models for the pre- and post-reform sample. All probability models incorporate competition as well as legal-institutional factors (see Table 5 for a description). For the post-reform sample, we also ran a model that controls for possible effects of the eurocrisis. Unless the Commission is consistently better at estimating market shares and barriers to entry than markets, which is unlikely, competition factors should not have a systematic effect on the probability of discrepancies. Furthermore, if discrepancies constitute random mistakes in general, neither competition nor non-competition factors should systematically affect the chance of discrepancies.

Table 5: Description of dependent and independent variables cross-sectional analysis determinants discrepancies

DEPENDENT VARIABLE	
TYPE I	Type I errors at relevant market level; takes on a value of 1 if the Commission committed a type I error and 0 otherwise.
TYPE II	Type II errors at relevant market level; takes on a value of 1 if the Commission committed a type II error and 0 otherwise.
COMPETITION FACTORS [257]	
MSCOMB	Combined market share post-merger. In most cases, the Commission merely reported a market share bracket in view of confidentiality reasons. We used the midpoint of the provided market share bracket. If the combined market share was absent, where possible, we calculated it from reported individual market shares and/or increments. Market shares referred to as 'insignificant' were assigned an arbitrary value of 5%.
BTE	Barriers to entry; takes on a value of 1 if the Commission finds barriers to entry in the relevant market and/or if entry is not timely or sufficient . If the Commission did not explicitly mention the presence of barriers to entry, we presumed there were none.
LEGAL-INSTITUTIONAL FACTORS	
EEACROSS	Intra-EEA cross-border transaction, takes on a value of 1 if the transaction concerns a concentration between firms from different EEA member states.
RM_NATIONAL	Relevant geographic market national; takes on a value of 1 if the relevant geographic market is defined as national as compared to world, EEA or local.
LARGE_MS	Nationality parties, takes on a value of 1 if at least one of the notifying parties is from a large member state (France, Germany, Italy, Spain, United Kingdom).
US	Nationality parties, takes on a value of 1 if at least one of the notifying parties is a US firm.
RIVAL_EEA	Nationality rivals; takes on a value of 1 if the main rival of the merged entity is an EEA firm.
CRISIS	Financial crisis dummy, takes on a value of 1 for the years 2010-2013.
RIVALCAAR	Cumulative average abnormal returns rivals at relevant market level.
SECTOR DUMMIES	
NWI	Sector variable; takes on a value of 1 if the transaction concerns a concentration in a network industry (electricity and gas supply; land, water and air transport; postal sector; telecom) (relevant market level). [258]

The results of the cross-sectional analysis are collected in Table 6. In line with previous literature, our analysis shows that discrepancies are not random. All models correctly predict over 80% of decision outcomes, outperforming the base model.

Contrary to previous research, we find no effect of legal-institutional factors on the probability of *type I errors*, either pre- or post-reform. Accordingly, there are no indications that the Commission is more likely to intervene in procompetitive mergers if the bidder is a US firm or when European rivals are harmed, or less likely if the bidder firms are headquartered in a large member state. However, competition factors seem to play a role in the chance of type I errors, both before and after the reform. Higher combined market shares are associated with a higher probability of unnecessary remedies. The presence of barriers to entry also increases the chance of type I errors. This may indicate that the

[257] For the purpose of this paper, competition factors are defined as necessary and sufficient market conditions for anticompetitive effects to occur, legal-institutional factors are defined as all other factors that may influence merger decisions, but which do not directly affect allocative efficiency on the relevant market.
[258] Sector dummies are at the second level of the Nace Rev. 2 classification.

Commission still attaches great importance to structural measures of market power. However, as explained above, the Commission may misrepresent the importance of market shares and entry barriers to mask the influence of non-competition concerns on decision outcomes. The welfare effect of the transaction for rivals is significant for the pre-reform model only. We find no support for the often-heard criticism that EU competition policy protects competitors however. To the contrary, the more negative the effect of the merger on rivals i.e. the more procompetitive the market's assessment of the merger, the lower the chance of overdeterrence. The crisis does not seem to have had an impact on the systematic pattern in type I errors. Interestingly, however, the probability of an overzealous approach to remedies seems to be lower during the crisis years.

Both competition and legal-institutional factors play a role in the probability of *type II errors*. Before and after the reform, type II errors are less likely for higher combined market shares. As explained above, these findings may be cautiously linked to a structuralist approach to market power. The same applies to the presence of barriers to entry, but only before the reform. We find some support for the market integration imperative both before and after the reform. First, the probability of type II errors is lower if the relevant market is defined as national. However, the width of the relevant market definition has no effect on the probability of type II errors post-reform (also see Duso et. al (2013)). Secondly, both before and after the reform, the Commission appears to be too lenient towards combinations of European firms (also see Serdarevic and Teplý (2011)). This does not however translate into a protectionist stance towards US firms. To the contrary, US bidders have a higher chance of getting an anticompetitive merger cleared before the reform, while the bidder being a US firm has no impact after the reform. Contrary to Serdarevic and Teplý (2011), we found no evidence that the Commission is vulnerable to capture from large member states.[259] The results also indicate some interesting sector effects. Before the reform, the chance of type II errors is higher for transactions in network industries, while it is lower after the reform. This finding could be explained by a slow, but steady introduction of competition in network industries as liberalisation efforts continue. The welfare effects for rivals only play a role in the probability of type II errors after the reform: the more anticompetitive the merger, the lower the chance of erroneous clearance. Finally, the crisis does not seem to have affected the systematic pattern in type II errors. This might indicate that the Commission has not succumbed to popular calls to conduct a more lenient competition policy in response to the crisis.

Table 6: Cross-sectional regression results determinants of type I and type II errors before and after reform

	Type I			**Type II**		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Before	**After (a)**	**After (b)**	**Before**	**After (a)**	**After (b)**
mscomb	0.047***	0.076***	0.087***	-0.071***	-0.052**	-0.050**
	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
entry	1.585*	3.883***	3.361***	-3.430***	-1.390	-1.249
	(0.80)	(1.13)	(1.00)	(0.72)	(1.15)	(1.18)
rm_national	1.023	-0.195	0.051	-3.456***	-0.661	-0.623
	(0.87)	(0.37)	(0.37)	(0.53)	(0.72)	(0.65)
eeacross	0.621	0.308	-0.377	0.806***	1.007**	1.170***
	(0.65)	(0.38)	(0.45)	(0.23)	(0.43)	(0.41)

[259] However, the coefficient of the US dummy is negative and significant after the reform and the coefficient of the large member state dummy is positive and significant before the reform for the model based on a threshold of 2.5%.

largems	0.104	0.723	0.685	0.566	-0.750	-0.494
	(0.59)	(0.46)	(0.36)	(0.35)	(0.78)	(0.68)
us	1.112	-0.607	-1.053	1.710**	-0.678	-0.537
	(0.77)	(1.49)	(1.35)	(0.62)	(0.57)	(0.54)
rival_eea	-0.322	0.677	0.655	0.518	-0.364	-0.520
	(0.37)	(0.60)	(0.61)	(0.38)	(0.85)	(0.72)
nwi	-0.142	0.196	0.239	1.518*	-1.977**	-1.990**
	(0.65)	(0.58)	(0.38)	(0.84)	(0.77)	(0.73)
caar33all	0.216**	-0.144	-0.076	0.018	-0.185**	-0.217***
	(0.11)	(0.12)	(0.14)	(0.16)	(0.07)	(0.07)
crisis			-1.236*			0.399
			(0.64)			(0.37)
_cons	-4.287***	-6.766***	-6.651***	5.983***	5.999***	5.743***
	(0.79)	(1.20)	(1.29)	(1.18)	(1.38)	(1.32)
N	171	273	273	109	64	64
Correct	83%	96%	96%	91%	91%	91%

*Note: To correct for oversampling, estimates are based on the weighted maximum likelihood function (Cosslett, 1981; Manski & Lerman, 1977). Standard errors are cluster-robust at case level. (* p<0.1, ** p<0.05, *** p<0.01)*

7.2 Effects of the reform on legal certainty

The theoretical effects of the more economic approach on legal certainty are dubious (see section 4.2). This section examines if and how the reform has affected legal certainty for merging parties and their rivals. The starting point of our analysis is that to provide legal certainty, merger control should be *predictable*. We use two proxies for predictability: the trading range and the volatility of abnormal returns around the decision announcement date. If the more economic approach has increased legal certainty both measures should decrease.[260]

7.2.1 Legal certainty for merging parties

Parties generate normal returns for both types of decisions before and after the reform *(unreported results*). This suggests that both before and after the reform, the outcome of phase I investigations is fairly predictable for merging parties. Table 7 shows the trading range for the 7 days event window. We are interested in the *scope* of the abnormal returns around the decision date, rather than their *sign*. So the trading range is calculated as the absolute value of daily abnormal returns averaged over parties and cumulated over the 7 days event window. Merging parties generally react less strongly to the announcement of regulatory decisions after the reform (see Figure 5). The average trading range following an unconditional clearance decreases with 1.81 p.p.. The average trading range following a conditional clearance falls with 3.87 p.p. However, only the first drop is significant (10% level).

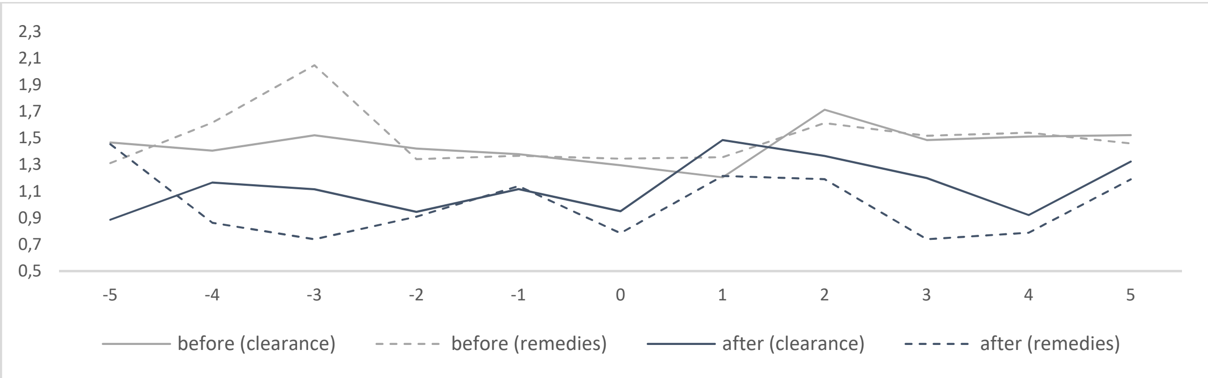
[260] To get a full view on the predictability of EU merger control, we retained the full sample, including type I and II errors.

Table 7: Trading range for different decision outcomes before and after the reform – parties

Trading range					
No remedies			**Remedies**		
before	**after**	**Δ (pp)**	**before**	**after**	**Δ (pp)**
9.99	8.18	-1.81*	10.59	6.72	-3.87
(0.57)	(0.39)	(0.96)	(1.55)	(1.03)	(2.58)

*Note: * p<0.1.*

Figure 5: Trading range for different decision outcomes before and after the reform – parties



As an alternative proxy for the predictability of merger control, Table 8 reports the volatility of average daily abnormal returns over the 11 days event window around the decision date. The volatility of market reactions is lower for both types of decisions after the reform. Volatility drops with 22% for unconditional clearances (from 1.75 to 1.37), and with 30% for conditional clearance decisions (from 1.80 to 1.25). Both effects are significant at the 1% level.

Table 8: Average volatility of daily abnormal returns for different decision outcomes before and after the reform – parties

Volatility	**Unconditional clearance**			**Conditional clearance**		
11 days event window	**before**	**after**	**Δ**	**before**	**after**	**Δ**
	1.75	1.37	-0.38*	1.80	1.25	-0.55*
	(0.17)	(0.11)	(0.03)	(0.19)	(0.17)	(0.05)

*Note: Average volatility $\overline{\sigma_{returns}}$ is measured as the standard deviation of a stock's observed daily abnormal returns $\sigma_{returns}$ for the 11 days event window averaged over parties. Standard errors of the average volatility $\sigma_{\overline{\sigma_{returns}}}$ are calculated as $\sigma_{\overline{\sigma_{returns}}}/\sqrt{N}$ where N is the number of firms. The standard error of the difference in means is calculated as $\sqrt{\sigma_{\overline{\sigma_{returns},\ before}}^{2}/N_{before} + \sigma_{\overline{\sigma_{returns},\ after}}^{2}/N_{after}}$. * p<0.01.*

7.2.2 Legal certainty for rivals

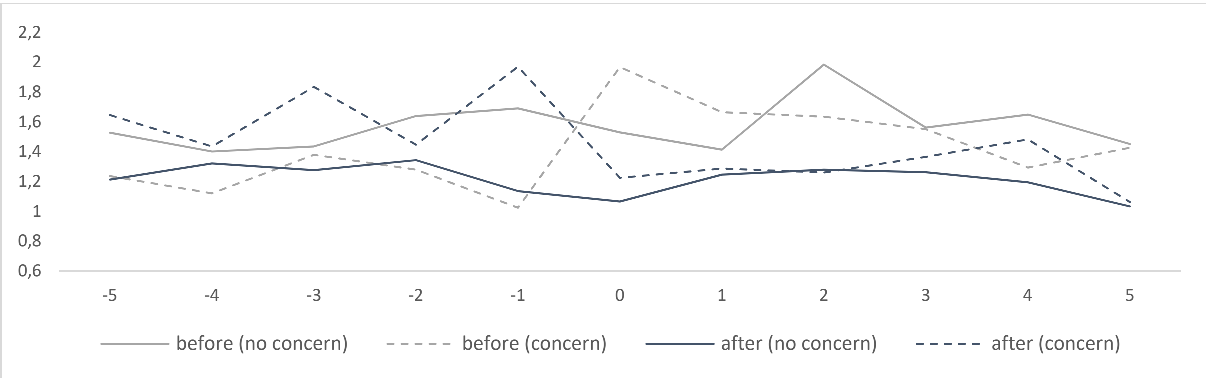
The analyses of the effects of the reform on legal certainty for rivals are conducted at relevant market level, so I examine rivals' reactions to decisions concerning the market in which they are active. The results suggest that rival firms appear to face generally *more uncertainty* about decision outcomes than merging parties. The reform seems to have improved the predictability of unconditional clearances for rivals, while there is no significant impact on the predictability of conditional clearances. Table 9 shows the trading range for the 7 days event window. The average trading range following an unconditional clearance subdecision decreases with 2.70 p.p. over the 7 days event window. This reduction is significant at the 1%-level. The average trading range following a conditional clearance decision falls with 0.11 p.p. over the 7 days event window, but this effect is not statistically significant. After the reform, rivals react more modestly to unconditional clearances over the 11 days event window (see Figure 6). The effect of the reform on the predictability of decisions imposing remedies is less distinctive. Rivals' trading ranges are smaller only for the second half of the 11 days event window.

Table 9: Trading range for different decision outcomes before and after the reform – rivals

Trading range					
No concern			**Concern**		
before	**after**	**Δ (pp)**	**before**	**after**	**Δ (pp)**
11.20	8.51	-2.70*	10.50	10.38	-0.11
(0.33)	(0.27)	(0.60)	(0.54)	(0.69)	(1.23)

*Note: * p<0.01.*

Figure 6: Trading range for different decision outcomes before and after the reform – rivals



The volatility analysis confirms that the reform seems to have improved the predictability of unconditional clearances, but not that of conditional clearances (see Table 10). The volatility measure for unconditional clearances falls with 25% (from 1.95 to 1.47). This drop is significant at the 1% level. The volatility of market reactions to the imposing of remedies at relevant market level remains unchanged.

Table 10: Volatility of average daily abnormal returns for different decision outcomes before and after the reform

Volatility	**No concern**			**Concern**		
11 days event window	**before**	**after**	**Δ (pp)**	**before**	**after**	**Δ (pp)**
	1,95	1,47	-0,48***	1,71	1,76	+0,05
	(0,11)	(0,08)	(0,01)	(0,14)	(0,21)	(0,04)

*Note: Average volatility $\overline{\sigma_{returns}}$ is measured as the standard deviation of a stock's observed daily abnormal returns $\sigma_{returns}$ for the 11 days event window averaged over parties. Standard errors of the average volatility $\sigma_{\overline{\sigma_{returns}}}$ are calculated as $\sigma_{\overline{\sigma_{returns}}} / \sqrt{N}$ where N is the number of firms. The standard error of the difference in means is calculated as $\sqrt{\sigma_{\overline{\sigma_{returns},\ before}}^2 / N_{before} + \sigma_{\overline{\sigma_{returns},\ after}}^2 / N_{after}}$. *** p<0.01.*

7.3 Effects of the reform on the efficiency of phase I remedies

This last section examines the efficiency of phase I remedies before and after the reform. Remedies are efficient if they eliminate all competitive concerns while preserving merger-related efficiencies (see section 4.3). Our analysis builds on *market reactions to the announcement of conditional clearance decisions* and the *average net value of modified transactions*. If remedies are efficient, decision CAARs should be negative for merging parties *and* their rivals as market power rents are destroyed. Moreover, a remedied merger should at best be value-neutral for rivals. Provided that the merger generates efficiencies that are technically separable from market power effects, and that the remedy is able to isolate the latter, rivals will ultimately lose, while parties may gain from a remedied merger.

Table 11 reports decision CAARs and the average net value of modified transactions for merged entities and their rivals. The sample is restricted to correct decisions only, which greatly reduces the number of observations. While the results should therefore be considered tentative, our analysis suggests that phase I remedies are not as efficient as claimed in the Commission's remedy study (DG Competition, 2005). The imposition of remedies does destroy market value for merged entities, but only before the reform. Post-reform, parties on average generate normal returns around the decision announcement date. This finding may be explained by the increased predictability of EU merger policy for merging parties (see above). Revised mergers generate significantly more welfare for merging parties after the reform. This may indicate that the mergers in the post-reform sample on average create more efficiency gains and/or that post-reform remedies are more successful in separating pro- and anticompetitive effects. However, these propositions are at odds with the observed market reactions of rivals. The average net value of remedied mergers for rivals is significantly positive pre- and post-reform.

Table 11: Decision CAARs upon the announcement of a conditional clearance and average net value of modified transactions before and after the reform - merged entity and their rivals

CAAR	**Merged firm**			**Rivals (relevant market level)**		
7 days event window	**Conditional clearance**			**Conditional clearance**		
	before	**after**	**Δ (pp)**	**before**	**after**	**Δ (pp)**
Decision	-3.27*	1,65	+4,92*	3.16***	2,01	-1.15
	(1.41)	(1,37)	(2.78)	(0.71)	(1,88)	(2.59)
Average net value	-2.63	6,21**	+8.84**	6.75***	5,69*	-1.06
	(1,99)	(1,93)	(3.92)	(1.01)	(2,66)	(3.67)

*Note: The sample includes correct decisions only i.e. conditional clearances of anticompetitive mergers so as not to distort the results. This reduces the dataset to 15 unique cases involving 26 horizontally affected relevant markets. The net value of mergers is calculated as the sum of announcement and decision CAARs. (* p<0.1, ** p<0.05, *** p<0.001)*

To get a deeper insight in the efficiency of *individual remedies*, I analyse the market's assessment of the competitive nature of the revised merger at case and relevant market level using the net value of the revised merger for rivals (see Table 12*Table 11*). Before the reform, none of the remedies applied after a phase I investigation were fully effective at case level. In other words, competitive issues persisted in at least one relevant market. The reform seems to have brought little improvement. Post-reform, remedies fully restored competition on all relevant markets in only one case of nine. On a positive note, the remedies applied in that particular case preserved at least part of the generated efficiencies as the net value of the revised merger for rivals became negative at relevant market level. Unfortunately, the sample is too small to reliably ascribe this result to the introduction of the efficiency defence.

Table 12: Efficiency of individual phase I remedies at case and relevant market level - before and after the reform

Efficiency remedies	**Case level (all relevant markets)**		**Relevant market level**	
	before	**after**	**before**	**after**
Fully effective	0/6	1/9	1/17	1/9
Preservation efficiencies	0/0	1/1	0/1	1/1
Partially/not effective	6/6	8/9	16/17	8/9

The above findings indicate that the majority of phase I remedies are at best only partially effective, both pre- and post-reform. To estimate the *degree* of rent reversal induced by the imposition of remedies, I adapt a method used in Duso et al. (2013). The starting point is that decision CAARs should be systematically negatively related to merger announcement CAARs for both merging parties and competitors if remedies are effective. Indeed, the higher market power rents, the larger announcement CAARs will be, and the more rent reversal is needed for regulatory intervention to be effective. Accordingly, decision CAARs are regressed on the interaction term of the announcement CAARS and the decision outcome dummy (*conditional/unconditional clearance*). To estimate the effect of the reform, the former interaction term is interacted with the reform dummy (*pre-reform/post-reform*). For the purpose of this analysis, I use expectation-corrected CAARs to control for (the effect of the reform on) predictability.[261] I control for learning effects by including sector dummies for remedy-intense sectors (*chemicals; paper; food, beverages and tobacco and energy*, see Davies and Lyons (2008)), the timeliness of the decision, the nationality of the notifying parties (*EU vs. non-EU*) and the accuracy of the decision (*correct/type I error/type II error*). I also included a time trend. The results are collected in Table 13. The reversal coefficient for the merged firm is significant and negative before the reform (-15%), but insignificant after the reform. As expectations are controlled for, the increased predictability of conditional clearances for parties after the reform cannot explain this finding. So, regarding parties, the more economic approach does not seem to have increased rent reversal. To the contrary, the reform has had a desirable effect on rent reversal for rivals. After the reform the degree of rent reversal is significantly higher for rivals (+ 58 p.p.). The reversal coefficient for rivals is not significant before the reform, but it is significantly negative post-reform (-47%). Again, this result may be explained by the introduction of the efficiency defence, but this assumption cannot be verified with the method used.

Table 13: Degree of rent reversal for the merged firm and their rivals before and after the reform

Rent reversal	**Merged firm**			**Rivals (relevant market level)**		
	Remedies			**Concern**		
	before	**after**	**Δ (pp)**	**before**	**after**	**Δ (pp)**
Announcement CAAR * decision outcome	-0.150***	-0.068	+0.083	0.112	-0.470*	-0.582*
	(0.02)	(0.13)	(0.12)	(0.32)	(0.21)	(0.13)
N		*79*			*279*	
R²		*17%*			26%	

*Note: * p<0.1, *** p<0.01 (one-sided t-tests)*

8 Conclusion

The purpose of this paper was to conduct a broader welfarist analysis of the reform of EU merger control. The reform aimed to promote consumer welfare through increased accuracy and better designed merger remedies. I extended the analysis beyond these direct effects on static efficiency, and examined the effects of the reform on legal certainty, which indirectly influences consumer welfare through increased economic certainty and more efficient deterrence. Event studies were used as an objective, market-

[261] CAARs are corrected for the market's expectations of the merger decision outcome by dividing them by the chance of clearance. To obtain the latter, we inferred the Commission's merger decision rule using a binary logistic regression model that estimates the weight the Commission attaches to competition and non-competition factors (McFadden, 1975, 1976). For the latter, we used the initial sample containing all horizontally affected relevant markets.

based tool to analyse the welfare effects of the reform on the accuracy of the decision-making process, legal certainty and the efficiency of remedies.

The results suggest that *the reform has not dramatically improved the accuracy of decisions*. Whereas the chance of errors falls significantly after the reform, this positive evolution can be fully ascribed to a decrease in the probability of unnecessary remedies, which were already rare before the reform. The probability of type II errors remains high at over 90%, and increases even further after the reform. Paradoxically, the increased number of false negatives may be down to the increased burden of proof to demonstrate anticompetitive effects under an effects-based approach. Cross-sectional analyses of the determinants of discrepancies between the market's and the Commission's assessment of mergers show that errors are not random. They are largely driven by the legal-institutional setting of EU competition policy. First, the results show that the traditional structuralist approach is still present in post-reform merger policy. Both before and after the reform, high combined market shares increase the chance of unnecessary intervention, while low combined market shares increase the chance of false negatives. However, the presence of barriers to entry increases the change of type I errors and lowers the probability of type II errors only before the reform. This may suggest that the MEA has introduced a less structuralist interpretation of barriers to entry. Secondly, the typically European integration rationale plays a role in the occurrence of type II errors. Both before and after the reform, the Commission appears to be too lenient towards cross-border combinations of European firms. Yet, contrary to some previous studies, our research does not find evidence of protectionism, nor of the influence of large member states or rivals on the chance of errors.

Furthermore, I find that *the reform has improved legal certainty for merging parties* for both unconditional and conditional clearance decisions. The *impact of the reform on legal certainty for rivals is less unambiguously positive*. Whereas the reform has increased the predictability of unconditional clearances, the predictability of unconditional clearances remains largely unchanged. This finding may be explained by the fact that the Commission has streamlined the remedies procedure, which mainly benefits merging parties.

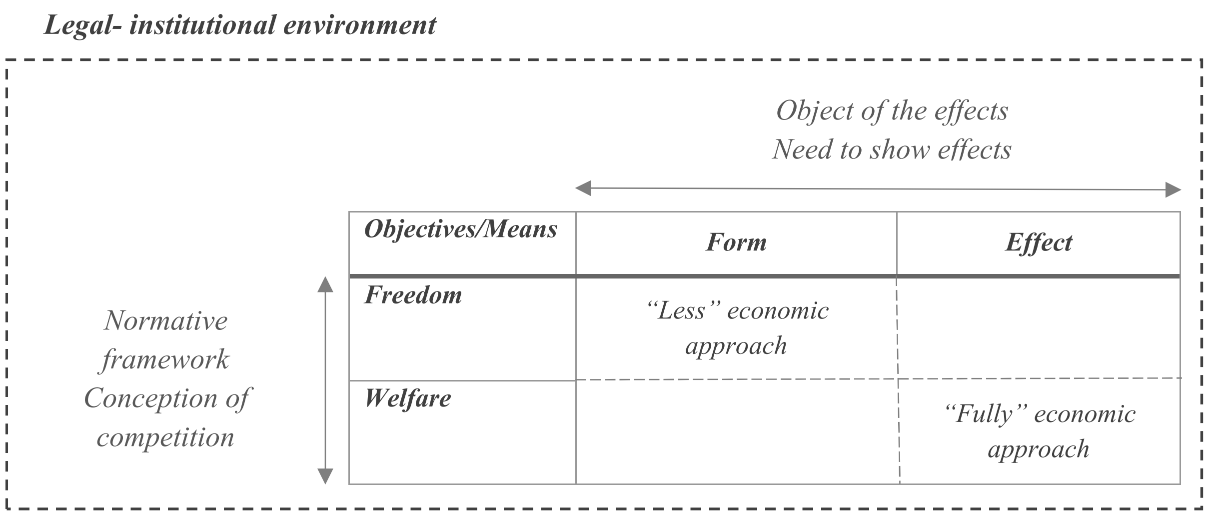
Finally, our analysis into the efficiency of phase I remedies confirms previous research in that generally *only prohibitions fully eliminate competitive concerns*. Remedies seem to be far less efficient than claimed by the Commission in its remedy study. The majority of merger remedies is at best only partially effective. The reform does not seem to have influenced the degree of rent reversal by the imposition of remedies for merging parties. On a positive note, the reform has increased the degree of rent reversal for rivals. Whereas the sample is too small to make firm conclusions, these results may suggest that the introduction of the efficiency defence has improved the design of remedies in terms of the preservation of efficiencies.

Conclusion

The subject of this doctorate was the reform towards a more economic approach ("MEA") in EU competition policy. The aim of my research was threefold, first, to identify *fundamental trends* that determine the scope and limits of an economic approach in an EU context, secondly, to capture the essence of the MEA, and thirdly, to quantify how the MEA translates into EU merger policy. I adopted a qualitative approach to develop the interdisciplinary framework to analyse the scope and limits of an economic approach in EU competition policy and to identify the exact nature of the MEA in terms of its objectives and means. This analytical framework was used to empirically analyse the nature of the MEA in EU merger policy. The insights from the qualitative research are reflected in the definition of the MEA as a quantifiable concept, the design of the econometric models and the interpretation of the results.

On the basis of an overview of some well-known competition policy paradigms, I distilled four elementary components that define a jurisdiction's approach to competition policy. These defining elements are the normative framework, the conception of competition, the object of effects analysis and the need to show effects to find an infringement of competition law. They are structured in a two-dimensional matrix along two dimensions: objectives and means (see Figure 1).

Figure 1: Analytical framework to analyse the MEA



Current literature on the role of economics in EU competition policy makes a rather strict distinction between a freedom/legal formalism-nexus (the "less economic" approach) and a welfarism/empiricism-nexus (the "economic" approach). This polarized view takes too little account of the legal-institutional setting of competition policy, and therefore the welfare effects of competition policy beyond allocative efficiency, and it creates apparent contradictions where there are none.

Point of departure of my research is, first, that "less" and "more" approaches to competition policy are *relative* concepts, and secondly, that the objectives and means dimensions define *continuums* rather than quadrants. Economics can contribute to competition policy in several ways. As a theoretical tool, economics informs the protective aim of the law and it provides input for legal presumptions in terms of necessary and sufficient conditions for anticompetitive harm to occur. As an analytical tool, economics offers possible theories of harm as a guiding framework for the competitive assessment of cases and the apparatus for the quantification of effects. What differentiates approaches to competition is not per se how much they rely on economics, but the e*conomic model* they build on. The conception of competition inherent in these models informs the protective aim of the law. From a neoclassical economics perspective, competition is a static result which does not rely on the way in which firms organize and compete. On the contrary, classical economics views competition as a dynamic process of rivalry between firms competing over market shares. Consequently, under a welfarist approach, competition law directly protects consumer welfare, whereas the traditional schools protects it indirectly through safeguarding the process of competition. This does not mean that traditional schools do not care about the *effects* of firm conduct. Rather, they focus on the *effects on the competitive process*, which in itself is the source of anticompetitive harm. Accordingly, once harm to the process of competition is established, there is no need to show actual effects on welfare. Moreover, whether legal tests and theories of harm are based on harm to consumer welfare or rather the competitive process does not necessarily say anything about the *amount and intensity* of economic analysis at the individual case level. Whether a competition policy regime wants to focus on the process of competition, or rather on consumer welfare directly ultimately is a normative choice. From a constitutional economics viewpoint, competition policy should reflect social consensus to pass the democratic legitimacy test. As a result, from a perspective broader welfarist perspective, what defines a truly economic approach for EU competition is subject not only to the state of economic science, but also to the legal-institutional environment in which the policy is implemented.

Accordingly, I adopt an interdisciplinary perspective that rises above the polarized debate that is omnipresent in current literature on the MEA.

My analysis shows that, contrary to popular criticism, pre-reform policy could not be situated in the upper-left quadrate, nor can the MEA be located in the lower-right quadrant. This is even so for merger policy, an area where the economic approach is generally perceived as most advanced. The main reason is that EU competition policy builds on the idea that market integration and competition are 'the two great strategies' to achieve the Treaty's fundamental objectives, such as competitiveness, social and technological progress, higher living standards etc.. Accordingly, EU competition policy protects integration and competition as an *indirect* means to protect the broad range of socioeconomic benefits they are expected to produce, including consumer welfare. This implies that competition is perceived as a *process of rivalry*, rather than a static result. In practice, this is reflected in a *structural definition* of, and a focus on *structural measures* of market power. This implies that market shares, concentration levels and structurally defined barriers to entry play a role in the analysis of the competitive effect effects of firm behaviour at individual case level. This normative framework is clearly illustrated in the empirical work. As to the integration rationale, there are some indications that the promotion of a single energy market may influence the Commission's merger decision rule. Interestingly, the Commission appears to be too lenient towards cross-border combinations of European firms. As to the conception of competition as a process, combined market shares and market barriers are significant factors in explaining EU merger decision outcomes. Higher market shares post-merger and the presence of entry barriers significantly increase the probability of the Commission raising serious concerns. Moreover, the structural approach to market power is an important determinant of the chance of errors. High combined market shares increase the chance of unnecessary interventions, while low combined market shares increase the chance of wrongful acquittal. The institutionalist analysis revealed that a conception of competition as a process is a rational choice given the particularities of the EU as an institution and the typically European system of beliefs. The lower intervention threshold implicit in this normative framework reflects the European consensus on the proper division of tasks between governments and markets. Indeed, Europeans expect governments, rather than markets, to set the boundaries between freedom and market power. The efficiency of legal rules aimed at protecting the process of competition is also consistent with economic reality. A lower degree of market integration and less dynamic markets competition imply that barriers to entry - and therefore market power - are more persistent within the EU.

The above findings have several repercussions for the scope and limits of the MEA. *First*, EU competition policy pursues goals that go *beyond* consumer welfare. This is reflected in the empirical studies. The model that includes competition as well as non-competition variables still is a better fit for the Commission's decision rule than the model containing competition variables only (and a better classifier for regulatory intervention). Also, decision errors appear to be largely driven by the legal-institutional setting of EU competition policy. *Secondly*, the Commission does not always need to prove effects on consumer welfare to find an infringement of competition law. It may suffice to show that a firm's practice deteriorates the structure of competition. This is reflected in the continued impact of structural measures of market power on the Commission's merger decision rule and on the probability of errors. However, my analysis also showed that the Commission increasingly supplements its structural analysis with an analysis of the effects on consumer welfare to better substantiate the presumed causal relation between *harm to competition* and *harm to consumers*. In merger control, this translated into a decreased influence of structural measures of market power. First, all else equal, the chance of a conditional clearance is 12 p.p. lower than before the reform for combined market shares exceeding the traditional dominance threshold of 40%. Next, the Commission appears to be relatively more confident that the threat of entry will discipline (even very large) firms. Interestingly, post-reform, there is some indication for a more effects-based definition of barriers to entry in terms of the capability to raise prices. Finally, contrary to the old regime, the presence of countervailing factors reduces the chance of an adverse finding. On the basis of these results, it may be concluded that high market shares and structural barriers to entry are not necessarily interpreted as proof of anticompetitive effects anymore, and that EU merger policy has moved towards a more effects-based approach.

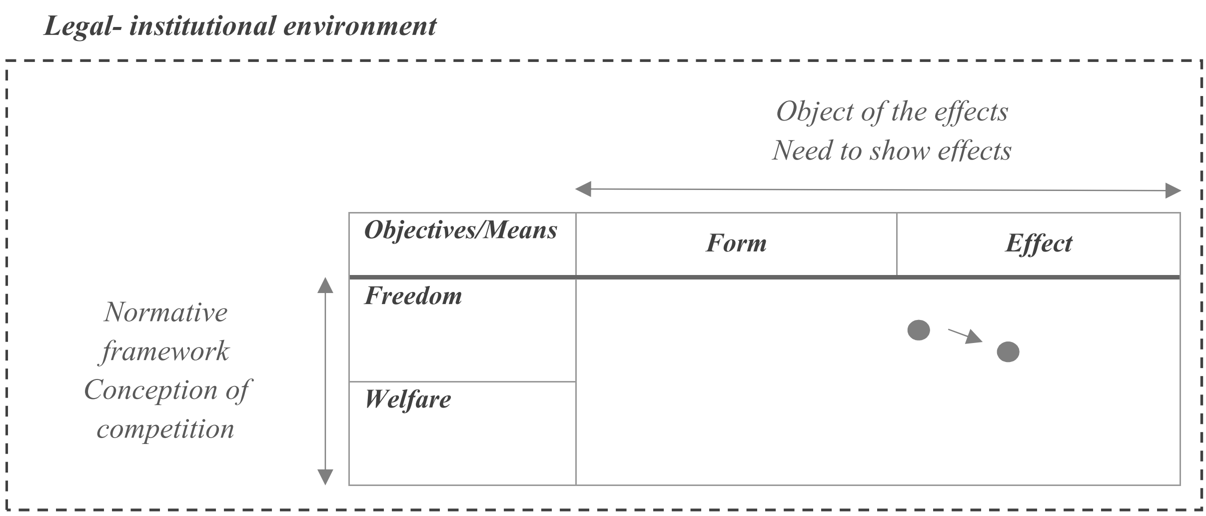
Interestingly, however, from a broader welfarist perspective, the effects of the MEA are dubious. The results suggest that the reform has not dramatically improved the *accuracy of decisions*. Whereas the probability of errors falls significantly after the reform, this positive evolution can be fully ascribed to a decrease in the probability of unnecessary remedies, which were already rare before the reform. The probability of type II errors remains high at over 90%, and increases even further after the reform. Paradoxically, the increased number of false negatives may be down to the increased burden of proof to demonstrate anticompetitive effects under an effects-based approach. As in an EU setting, market power may be more persistent, this has serious repercussions on welfare, both directly and indirectly through decreased deterrence. On a positive note, whereas the sample is too small to make firm conclusions, the results may suggest that the introduction of the efficiency defence has improved the design of remedies in terms of the preservation of merger-related efficiencies.

My research shows that the MEA is what is says on the tin. The traditional approach was not *non*-economic, nor is the post-reform approach *fully* economic. EU competition policy remains a hybrid regime - both in terms of objectives and means. In terms of *objectives*, the case law still attempts to merge economic freedom and consumer welfare goals. Whereas the evolution towards a greater acceptance of (proportionate) restrictions of economic freedom in exchange for direct welfare gains continues, economic freedom still is not protected *only* where it benefits consumer welfare. More surprisingly perhaps, administrative practice does not fundamentally depart from the mixed normative framework either. Behind the welfarist exterior of updated definitions of anticompetitive effects, market power, foreclosure etc., the same old balancing exercise takes place, albeit less overtly. Indeed, welfarist and non-welfarist goals now are absorbed by a comprehensive notion of consumer welfare. The protective aim of EU competition policy therefore remains the *process* of competition. For a broad range of firm practices, the protective aim of the law defined as such yields similar results as a welfare-based approach. Yet, where economic freedom and welfare threatened to clash disproportionately, EU competition policy has left the trade-off to be dealt with by the process of competition. This has obvious repercussions on the *means* dimension. Harm to the competitive process in principle is the *object of the effects analysis*. This is best illustrated by the different treatment of exclusivities under art. 101 and art. 102. Whereas the ECJ has advocated at least some economic analysis to trade-off effects on economic freedom and welfare under art. 101(1), if dominant firms are involved, the Commission does not need to demonstrate actual effects on consumers once it has shown that the practice is capable of harming the structural process of rivalry. Accordingly, the main change brought about by the MEA seems to be the *intensity* of the factual analysis. The Commission increasingly tries to corroborate the results of a structuralist analysis in traditionally legal-form based cases with a welfarist effects analysis to quantify the link between competition as a *process* and competition as a *result*. The Court goes along in this demarche - as long as the Commission does it properly - without however demanding an effects-based analysis in these cases as of yet. These findings are visualized in Figure 2.

I conclude with some policy recommendations.

Since the formative period has ended, EU antitrust enforcers by and large have faced the same two tests: first, how to merge and balance the objectives of economic freedom and consumer welfare, and secondly, how to reconcile this mixed normative framework with an increasingly effects-based approach. As to the objectives dimension, disagreement over the (proper) role of economics, and therefore the scope and boundaries of the MEA, largely reverts to the unresolved debate on the goals of EU competition law. My research showed that the welfare standard inherent in an economic approach is not in line with the normative framework of EU competition policy. What is more, the political momentum to abandon the traditional framework has gone. With the desertion of a purely consumer welfare-based rhetoric and by stressing the typically European identity of EU competition policy, current DG Competition officials such as Vestager and Lowe play an important role in painting a more accurate picture of the normative nature of EU competition policy than their predecessors. So, the challenge remains to provide clarity on how the policy is trading-off freedom and consumer welfare goals. This seems to involve an illumination of the policy's interpretation of the revived (and contested) concept of fairness. The Commission and courts should stress that the concept of fairness in EU competition policy is linked to *equity*, rather than *equality*. In that respect, it is not *un*fair that some businesses are more successful than others, provided that they have equal opportunity to become successful. And this is where it ties in with competition-specific concepts such as the idea of competition on the merits. These merits are to be evaluated by consumers, and that is where consumer freedom plays a part. As the concept of fairness is so hard to define it cannot serve as a substantive standard in individual cases, and I think generally it is not used as such. Fairness seeps in at a higher level - that of legal rules and policy priorities. At this level, fairness comes in all sorts and colours, such as the protection of equal market access, the freedom to choose suppliers, the criteria for selective distribution, consumer choice etc.. However, competition policy should continue its efforts to substantiate the presumed link between freedom and welfare to lay the necessary groundwork for a gradual update of the legal rules and tests in line with modern economic insights. At any rate, to ensure due process, an increased dependence on effects analysis by the Commission will have to be met with a more thorough legal review than the 'manifest error of assessment test' the courts are currently relying on to review the legality of complex economic assessments.

Figure 2: The MEA in the two-dimensional continuum in terms of objective and means



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