

Department of Accounting, School of Business

Merger Remedies in EU: Design under the Entire Competition Law Structure

Wei Wang



Merger Remedies in EU: Design under the Entire Competition Law Structure

Wei Wang

Main dissertation advisor

Professor Matti Rudanko, Aalto University, Finland

Opponent

Dr. Mika Oinonen, Lexia Attorneys Ltd, Finland

Aalto University publication series

DOCTORAL DISSERTATIONS 19/2016

© Wei Wang

ISBN 978-952-60-6638-7 (printed)

ISBN 978-952-60-6639-4 (pdf)

ISSN-L 1799-4934

ISSN 1799-4934 (printed)

ISSN 1799-4942 (pdf)

<http://urn.fi/URN:ISBN:978-952-60-6639-4>

Unigrafia Oy

Helsinki 2016

Finland

Author

Wei Wang

Name of the doctoral dissertation

Merger Remedies in EU: Design under the Entire Competition Law Structure

Publisher School of Business**Unit** Department of Accounting**Series** Aalto University publication series DOCTORAL DISSERTATIONS 19/2016**Field of research** Business Law**Date of the defence** 4 March 2016 **Monograph** **Article dissertation** **Essay dissertation****Abstract**

In both antitrust and merger cases, remedies serve the same purpose, namely to stop the infringement of competition and restore competition. However, the practice of remedy policy in these two areas is varied; for example, structural remedies are preferred in merger cases but strictly limited in antitrust. As remedies have direct effects on the relevant markets once implemented, an inappropriate remedy may lead to anti-competitive results. So it worth a deep examination on how to design appropriate merger remedies.

This study analyses the merger remedy practise of the Commission in comparison with its practise under Article 102 TFEU, with the goal of developing a way to minimize the errors in designing merger remedies. For this purpose, articles included in this study examine the remedies having adopted by the Commission, compare EU merger control practice with its counterpart in China, explain the extremely different positions of remedies in antitrust and merger control, and demonstrate that antitrust and merger control are not coherent with each other as the former is too weak and the latter too strong.

It finds out that a remedy decision should balance a number of important, sometimes competing, considerations, such as efficacy, proportionality and costs. It is fair to say that the adoption of remedies under competition law is largely affected by the leverage in the hand of the Commission at that time, not solely based on the merits of the competition harms in question. On account of the relatively short time window and limited information available for the Commission to assess whether or not a merger would significant impede competition and choose appropriate remedies, the real effects of some remedies may not be in good agreement with the expectation of the Commission. Moreover, risk exists that the Commission be tempted to use merger remedies as an opportunity to redistribute resource among firms in the industry. The general conclusion of this study is that remedy practice under the EU competition law should be coherent and consistent and merger remedies should be considered and designed under the whole EU competition law structure, not solely under merger control. It proposes three ways to achieve this purpose as follows.

1) Converging remedies practice under the whole competition law.

The application of remedy under competition law should be consistent, that is, if applicable, the same competition harm should be resolved by the same type of remedies under similar terms.

2) Considering Article 102 in merger assessment.

The deterrent power of Article 102 should be considered in the merger assessment, in particular in vertical and conglomerate merger cases.

3) Postponing the implementation of merger remedies on conditions.

Keywords merger remedy, antitrust remedy, EU competition law, merger control**ISBN (printed)** 978-952-60-6638-7**ISBN (pdf)** 978-952-60-6639-4**ISSN-L** 1799-4934**ISSN (printed)** 1799-4934**ISSN (pdf)** 1799-4942**Location of publisher** Helsinki**Location of printing** Helsinki**Year** 2016**Pages** 196**urn** <http://urn.fi/URN:ISBN:978-952-60-6639-4>

Acknowledgements

These past several years have not been an easy ride, both academically and personally. For many times, I questioned whether there would ever be a completion date for my doctoral study. Now I have come this far. I owe my gratitude to all those people who have made this dissertation possible.

First and foremost I wish to offer my sincerest gratitude to my supervisor, Professor Matti Rudanko. He has been supportive throughout all my doctoral study with his knowledge, patience and compassion. He helped me to develop research ideas and provided me with scientific instructions, whilst allowing me plenty of freedom to formulate my own research. When I felt that I could never finish this dissertation, he always gave me the warmest encouragement and helped me to figure out solutions. He guided me both academically and emotionally to finish this dissertation. To me, Matti is more than a scientific tutor. He is also a dear friend and a spiritual mentor.

Special thanks to the pre-examiners: Professor Risto Nuolimaa and Doctor Antti Aine, and the opponent: Dr. Mika Oinonen. Their valuable comments significantly improved the quality of this dissertation and encouraged me to move on with an academic career.

I would like to convey thanks to the Finnish Cultural Foundation and the HSE Foundation for the financial support to my doctoral study.

In addition, I thank all my friends in Finland for their friendship and companies in the beautiful but lonely country.

Finally, my deep appreciation goes to my family. I thank my mother for her encouragement and love. I thank my elder brother and sister-in-law for supporting me all the time without any conditions. I thank my husband, Lei Wang, for his love and patience. This dissertation would not have been possible without his support. Lei is always sticking by my side, even when I was depressed and didn't have faith in myself. I feel also grateful to my little boy. His birth enriched my life and made me to look at this world with a more positive view. His smile is the best gift I would like to have every day.

Helsinki, 10 November, 2015
Wei Wang

Contents

Acknowledgements.....	1
List of Abbreviations and Symbols.....	7
List of Publications.....	8
Author's Contribution.....	9
1. Introduction.....	11
1.1 Background.....	11
1.1.1 Competition and Competition Law.....	11
1.1.2 The EU Competition Law System.....	12
1.1.3 What is the Merger Remedy?.....	13
1.1.4 Antitrust Remedies.....	14
1.1.5 The Economics of Competition Law.....	14
1.2 Research Aims.....	15
1.2.1 The Significance of Merger Remedies.....	15
1.2.2 Research Questions.....	16
1.2.3 General Conclusion.....	17
1.3 Methodologies.....	17
1.3.1 Legal Dogmatics.....	17
1.3.2 Comparative Law.....	17
1.3.3 Law and Economics.....	18
1.4 Articles Included in This Study.....	18
2. EU Merger Remedies.....	21
2.1 The Purpose of EU Merger Remedies.....	21
2.2 Principles of Acceptable Merger Remedies.....	21
2.2.1 Effectiveness.....	22
2.2.2 Proportionality.....	23
2.2.3 Legal Certainty.....	25
2.3 Classification of Merger Remedies.....	26
2.4 The Costs of Merger Remedies.....	29

3.	Merger Remedies and Competitive Concerns in EU Merger Review	31
3.1	Horizontal Effects: Non-coordinated Effects	31
3.1.1	Assessment of Market Power	32
3.1.2	Merging Firms Have Large Market Shares.....	33
3.1.3	Merging Firms are Close Competitors.....	34
3.1.4	Customers Have Limited Possibilities of Switching Supplier	35
3.1.5	Competitors Are Unlikely to Increase Supply if Prices Increase	36
3.1.6	Merged Entity Able to Hinder Expansion by Competitors..	37
3.1.7	Merger Eliminates an Important Competitive Force	38
3.2	Horizontal Effects: Coordinated Effects.....	39
3.2.1	Reaching terms of coordination.....	39
3.2.2	Deterrent mechanisms.....	40
3.2.3	Monitoring deviations.....	40
3.2.4	Reactions of outsiders.....	41
3.3	Vertical Effects.....	41
3.3.1	Ability to foreclose access	42
3.3.2	Incentive to foreclose access	42
3.3.3	Coordinated effects	42
3.4	Conglomerate Effects	43
3.5	Merger Remedies Addressing Different Competition Concerns	44
4.	EU Merger Control and Article 102	45
4.1	The Origin of EU Merger Control.....	45
4.2	A Comparison between EU Merger Control and Antitrust Practices	46
4.2.1	Similarity.....	46
4.2.2	The difference	46
4.3	Antitrust Remedy	47
4.3.1	Remedies under Article 7.....	48
4.3.2	Remedies under Article 9	48
4.4	Differences in Remedy Practice under EU Merger Control and Article	102
	50	
4.4.1	Preference for Structural Remedies in Merger Control.....	50
4.4.2	The Limited Use of Structural Remedies in Antitrust Cases	51
4.4.3	Reasons	51
5.	Designing Merger Remedies under the Entire Competition Law	
	Structure.....	52

5.1	EU Competition Law Structure	52
5.2	The Convergence of Remedies Practice under Competition Law 53	
5.3	Considering Article 102 in Merger Assessment.....	54
5.4	Postponing the Implementation of Merger Remedies on Conditions 55	
6.	Summary and Conclusion	58
6.1	Summary.....	58
6.2	Conclusion	59
6.3	The Significance of This Study.....	60
6.4	Future Studies.....	60
	References.....	61
	Legislations.....	65
	Cases	66
	Publication 1	69
	Publication 2.....	101
	Publication 3.....	129
	Publication 4.....	161

List of Abbreviations and Symbols

CFI	the Court of First Instance
Commission	the European Commission
EC	the European Community
ECJ	the European Court of Justice
ECMR	the EC Merger Regulation
EU	the European Union
ICN	the International Competition Network
S-C-P	structure-conduct-performance
TFEU	the Treaty on the Functioning of the European Union
the parties	the merging parties
US	the United States

List of Publications

This doctoral dissertation consists of a summary and of the following publications which are referred to in the text by their numerals

1. Wei; Wang, Matti; Rudanko, 2012. EU Merger Remedies and Competition Concerns: An Empirical Assessment, Blackwell Publishing Ltd. *European Law Journal*, volume 18, issue 4, page 555–576. ISSN 1351-5993, DOI: 10.1111/j.1468-0386.2012.00610.x.

2. Wei; Wang, Lei; Wang, 2014. Merger Control and Merger Remedies in China: Comparison with the EU Approach, Sweet & Maxwell, *Journal of Business Law*, Issue 6, page 449-466. ISSN 0021-9460.

3. Wei; Wang, Lei; Wang, Compulsory Licensing as Antitrust and Merger Remedy in EU, (unpublished).

4. Wei; Wang, 2011. Structural Remedies in EU Antitrust and Merger Control, Wolters Kluwer Law & Business, *World Competition*, Volume 34, Issue 4, page 571–596. ISSN 1011-4548.

Author's Contribution

Publication 1: EU Merger Remedies and Competition Concerns: An Empirical Assessment

Research idea developing, writing the essay in its entirety.

Publication 2: Merger Control and Merger Remedies in China: Comparison with the EU Approach

Research idea developing, writing the essay in its entirety.

Publication 3: Compulsory Licensing as Antitrust and Merger Remedy in EU

Research idea developing, writing the essay in its entirety.

Publication 4: Structural Remedies in EU Antitrust and Merger Control

Sole author.

1. Introduction

1.1 Background

1.1.1 Competition and Competition Law

When talking about competition law, we should first define competition. In simple terms, competition is fighting between rivals. Most economics textbooks neglect to provide a direct definition of the term.¹ Thus, we can turn to dictionaries. Merriam-Webster defines competition in business as "the effort of two or more parties acting independently to secure the business of a third party by offering the most favourable terms". Competing parties make offers and the third parties decide which one to choose. Apparently, competition is also a process of selection. In business, the third party is the customers. Failure to be selected means going out of business.

Adam Smith has explained the operation of competitive markets in *The Wealth of Nations*.² In the long run, the price after full competition would equal the long-term "natural price", i.e., the cost of production. If, for example, apples' market price is higher than the "natural price", which means that there is a higher profit than the natural return, more resources will be invested into apple market, and the resulting increase in production will lead to a decrease in the market price. The resource owner will leave the market when apples' market price equals to its "natural price". The movement of resources from one market to another will stop only when natural prices prevail in all markets. At that point, customers can obtain goods at the lowest possible cost. This is an optimum allocation of resource.

For a very long time, economists claimed that competitive markets did not need any government intervention because economic systems based on competitive markets work much better than the alternatives. However, this stand has changed slightly following the Great Recession. History told us that the market cannot always be trusted to either inspire or preserve competition.³ When competition is seriously jeopardized, consumers will pay. At that point, intervention from a "visible hand" might be needed, followed by a competition law to protect competition when the market fails to so.

¹ See Phedon Nicolaides, *An Essay on Economics and the Competition Law of the European Community*, (2000) 27 *Legal Issues of Economic Integration*, pp.11

² See eg. Adam Smith, *the Wealth of Nation*, (Bantam Classics; Reprint edition, March 4, 2003).

³ See the Chapters of Market Failure in textbooks of microeconomics, eg. Michael Parkin, *Microeconomics*, 11th ed. (Pearson Education, Inc.2010).

Defined literally, competition law (in the United States (US), antitrust law) is a law to promote fair competition, and therefore to protect consumer welfare.

“Antitrust laws in general are the Magna Carta of free enterprise. They are as important to the preservation of economic freedom and our free-enterprise system as the Bill of Rights is to the protection of our fundamental personal freedoms.”⁴

Competition law intervenes in the competition process when the market fails. However, the role of competition law in regulating the market is highly controversial and varies from jurisdiction to jurisdiction. Protecting consumer welfare has been treated as the main (or in some jurisdictions, the only) objective of competition law.⁵ Competition law condemns practices that harm the competitive process, particularly anti-competitive agreements, abusive behaviours and mergers.

1.1.2 The EU Competition Law System

The European Union’s (the EU) competition law is based on Article 3(1)(b) of the Treaty on the Functioning of the European Union (TFEU),⁶ which provides that EU has exclusive competence in “establishing of the competition rules necessary for the functioning of the internal market” (in succession to the Article 3(1)(g) TEC⁷ which authorizes the establishment of “a system ensuring that competition in the internal market is not distorted”). Apparently, the role of competition law in the EU is not limited to ensuring that competition in the common market is not distorted. Instead, it undertakes to safeguard the common market.⁸

The EU competition law system put in place by the TFEU is primarily contained in Title VII, Chapter 1 (Articles 101-109), which indicates that the four policy areas, in which measures must be taken indicate to prevent anticompetitive activities, include the following:

- Cartels, or control of collusion and other anti-competitive practices under Article 101 TFEU which prohibits all agreements and concerted practices between undertakings “which may affect trade between Member States and which have as their object or effect the prevention, distortion or restriction of competition within the internal market”. The cartel prohibition applies to the agreement between operators acting either at the same level (horizontal agreements) or at different levels (vertical agreements) of the economy.
- Antitrust,⁹ or prevention of the abuse of a dominant market position under Article 102 TFEU, which prohibits “any abuse by one or more

⁴ United States v. Topco Assocs., Inc., 405 U.S. 596, 610 (1972).

⁵ See eg. Giorgio Monti, *EC Competition Law*, (Cambridge University Press, 2007), Richard Whish and David Bailey, *Competition Law*, 7ed (OUP Oxford; 12 Jan. 2012).

⁶ The Treaty on the Functioning of the European Union, OJ 2008 C 115/47.

⁷ The Treaty Establishing the European Community, OJ C 325, 24 December 2002.

⁸ For more information on the purpose of EU competition law, please refer to textbooks, eg. Alison Jones, Brenda Sufirin, *EC Competition Law*, 3rd ed, (Oxford University Press, 2008).

⁹ The term “antitrust” has multiple meaning. It refers to the whole competition law system in the United States. In the EU competition law system, it has two meanings. One refers to the infringements of Article

undertakings of a dominant position within the internal market or in a substantial part of it”. The dominant market position can be held either individually by one undertaking or collectively by two or more undertakings (joint dominance).

- Mergers, control of proposed mergers, acquisitions and joint ventures under the EC Merger Regulation (the ECMR)¹⁰ which bans any merger which would “significantly impede effective competition in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position”. Merger control examines the potential to create or to strengthen a dominant market position.
- State aid, i.e., control over EU Member States’ direct and indirect aid to companies under Articles 107 -109 TFEU. (For the purposes of this study, this policy area is not included in the term “competition law”.)

Article 101 (cartel), Article 102 (antitrust) and the ECMR (merger) are often referred to as the “three pillars” of EU competition law.

1.1.3 What is the Merger Remedy?

Merger control in the EU is the procedure of reviewing mergers to decide whether they are compatible with the common market and, more precisely, whether they are acceptable under the ECMR. A merger with a Community dimension should be subject to exclusive scrutiny under the ECMR. The European Commission (the Commission) is the competition agency that enforces the competition rules at the EU level.

“Effective competition brings benefits to consumers, such as low prices, high quality products, a wide selection of goods and services, and innovation. Through its control of mergers, the Commission prevents mergers that would be likely to deprive customers of these benefits by significantly increasing the market power of firms.”¹¹

Mergers will be permitted if the Commission finds that they “would not significantly impede effective competition in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position”¹². The merger-review process has two phases:

Phase I: Any concentration with a Community dimension shall be notified to the Commission before its implementation. Most phase I transactions obtain the Commission's approval either with or without conditions. In some cases, the Commission will be obliged to initiate phase II procedures based on serious doubts about their compatibility with the common market.

¹⁰ 101 and 102 TFEU, the other is narrowed to those of Article 102 TFEU. To avoid confusions, in this article, antitrust refers to the infringements of Article 101 TFEU.

¹⁰ Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings, Official Journal L 24, 29.01.2004, at 1-22

¹¹ Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentration between Undertakings (the EU Horizontal Merger Notice), 2004/C 31/03, OJ 2004 C 31/5, para. 8.

¹² ECMR, Article 2(2).

Phase II: At the end of a phase II investigation, the Commission will make a decision to either approve or prohibit the merger. As in phase I, an approval can be either conditional or unconditional.

The Commission issues three types of final merger decisions: acceptance, prohibition and conditional clearance. Prohibition and conditional clearance decisions both indicate that a merger might significantly impact effective competition. For a merger that might significantly impede effective competition, prohibition is not always the best choice, because although prohibition might prevent the potential damages to the competition, it may also prevent the possible competitive benefits provided by almost all mergers. In such cases, if the merging parties (the parties) make a commitment to restore competition that might otherwise be undermined, the competition agencies will approve. These types of commitments are known as merger remedies. The reason for prohibiting a merger, instead of permitting it with conditions, is that either a) no remedies were able to restore the competition that would be significantly impacted, or b) the remedies proposed were inadequate and therefore rejected by the Commission. This is true in most cases. In this sense, remedies offer an opportunity for a merger to go forward even when it creates competition concerns.

1.1.4 Antitrust Remedies

Remedies may also be imposed for the infringement of Article 102 TFEU. To rectify unlawful behaviours in the area of antitrust, the Commission can require remedies and/or impose fines, and private parties may claim monetary damages. An antitrust remedy must aim “to bring the infringement effectively to an end”.¹³ In many cases, the Commission may achieve this purpose with a straightforward “cease and desist” order. In other cases, the Commission must take measures to avoid the recurrence of abusive practice in addition to merely enjoining a conduct and imposing a fine. Those additional measures are antitrust remedies.

1.1.5 The Economics of Competition Law

One distinctive feature of competition law is its deep roots in the science of economics, which provides a starting point for competition law’s analyses¹⁴ and gives the law and its decisions a more solid, rational foundation.

“While lawyers including judges are in control of prosecutorial choices and judicial decisions ... it is fair to say that, from a longer term perspective, decade-to-decade, or era-to-era, antitrust has been shaped more importantly by the arguments of economists.”¹⁵

¹³ Id, recital 12 and Article 7.

¹⁴ Richard A. Posner, *Antitrust Law, An Economic Perspective*, (the University of Chicago Press, 1976), at 3.

¹⁵ J. B. Baker, A Preface to Post-Chicago Antitrust, in A. Cucinotta, R. Pardolesi and R. Van den Bergh (eds.) *Post-Chicago Developments in Antitrust Law* (Cheltenham: Edward Elgar, 2002) at 68.

It is always useful to understand some basic concepts of economics that have been widely used in competition law, including competition, monopoly and dominance.

“Competition is inherently a process in which rivals seek to exclude one another”.¹⁶ According to Adam Smith, rational businessmen driven by the profit motive will use their resource to achieve the highest value.¹⁷ They improve productive technology, enhance management, lower marginal costs, and encourage innovation. Taken together, these strategies not only provide consumers with good deals, but also improve the welfare of the economy and society overall. The Microeconomics textbooks always describe the competition process in terms of the perfect competition model, in which market price is decided by market supply and demand and no firm has any control over market prices.¹⁸

A monopoly is the extreme opposite of competition and indicates the presence of only one seller in a market. Posner notes that monopolies are the basic concern of competition law.¹⁹ In particular, competition law addresses the issue of dominance. Under the EU competition law, a dominance refers to “a position of economic strength enjoyed by an undertaking, which enables it to prevent effective competition being maintained on a relevant market, by affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of consumers”.²⁰

A firm enjoys a dominant position if it has significant market power.²¹ The assessment of dominance is also an appreciation of market power. The assessment of market power is discussed in part 3.1.1.

1.2 Research Aims

1.2.1 The Significance of Merger Remedies

“For both empirical and theoretical reasons, *ex post* merger remedies are at least as important as *ex ante* rules and guidelines for the implementation of beneficial public policy regarding economic concentration of industry.”²²

¹⁶ Robert Bork, *the Antitrust Paradox: A Policy at War with itself*, (New York: Free Press, 1978), at 49.

¹⁷ Smith (2003), *supra note 2*.

¹⁸ See, eg. Parkin (2010), *supra note 3*.

¹⁹ Posner (1976), *supra note 14*, at 3.

²⁰ Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, OJ C 45, 24.2.2009, p. 7–20, para 10. See also, Case 85/76, *Hoffmann-La Roche & Co AG v Commission* [1979] ECR 461, para. 39. Dominance is “such a position does not preclude some competition, which it does where there is a monopoly or a quasi-monopoly, but enables the undertaking which profits by it, if not to determine, at least to have an appreciable influence on the conditions under which that competition will develop, and in any case to act largely in disregard of it so long as such conduct does not operate to its detriment”.

²¹ See eg. Robert O'Donoghue and A Jorge Padilla, *The Law and Economics of Article 82 EC*, (Hart Publishing, 2006), Chapter 3.

²² François Lévêque and Howard Shelanski, Introduction, in François Lévêque and Howard Shelanski (ed.), *Merger Remedies in American and European Union Competition Law*, (Edward Elgar Pub, 2003) at xix.

Remedies are important in EU merger control because, empirically speaking, most competition-concerned mergers are cleared on the condition of remedies.²³ Merger remedies as a government intervention in the market have direct effects once they have been implemented. On the one hand, remedies free merger decisions from a simple yes/no option and prevent the prohibition of mergers that have both pro- and anti-competitive effects. Using the remedy tool, competition authorities can expand the scope of merger control and regulate market behaviours on a finer level, e.g. they can accept a merger in one market and remove its competitive harm in another market by adopting remedies.²⁴ On the other hand, as a direct intervention in the market process, an inappropriate remedy may lead to anti-competitive results. Choosing the right package of remedies for a competition concerned merger is not easy. There might be two types of errors in merger remedies: under-fixing and over-fixing.

Accordingly, a deep examination on how to design appropriate merger remedies is warranted. Since the EU and the US have released their guidance and empirical research on merger remedies, more competition law scholars have directed their attention to this topic. A few studies have discussed the post-merger effects of remedies and the principles of a good remedy. That notwithstanding, merger remedies receive much less academic attention than other merger-control issues.

1.2.2 Research Questions

This study analyses the Commission's merger remedy practise in comparison with its practise under Article 102 TFEU, with the goal of developing a way to minimize errors in designing merger remedies. The study's main focus is on the following major questions:

- (1) What is the merger remedies practise in the EU?
- (2) What is the relationship among various types of remedies and competition concerns under EU merger control?
- (3) What is the difference between the remedies adopted in the field of EU merger control and Article 102? And why?
- (4) How could the Commission improve its remedy practise?

For this purpose, the articles included in this study examine the remedies adopted by the Commission, compare EU merger control practice with its counterpart in China, explain the extremely different positions of remedies in antitrust and merger control, and demonstrate that antitrust and merger control are inconsistent with each other because the former is too weak and the latter too strong.

²³ From 1990 to the end of 2008, the Commission has made a total of 3,860 final merger decisions, including 265 conditional clearances (177 Phase I and 88 Phase II decisions) and 20 prohibitions. Only 7% of competition-concerned mergers were blocked and others got carried out on condition that remedies were put into place. See, Wei Wang & Matti Rudanko, EU Merger Remedies and Competition Concerns: An Empirical Assessment, 18(4) *European Law Journal* 555 (2012), at 555.

²⁴ Patrick Ray, Economic Analysis and the Choice of Remedies, in François Lévêque and Howard Shelanski (2003), *supra* note 22, at 130.

1.2.3 General Conclusion

This study's general conclusion is that the EU's remedy practises under Article 102 and the ECMR are inconsistent and merger remedies should be considered and designed under the EU competition law structure as a whole, not solely under merger control.

1.3 Methodologies

Essentially, this study is legal research. According to Aulis Aarnio, ordinary legal research includes the history of law, the sociology of law, comparative law and legal dogmatics.²⁵ This dissertation used three methods: legal dogmatics, comparative law, and law and economics.

1.3.1 Legal Dogmatics

The primary method used in this study is legal dogmatics. Legal dogmatics is the traditional method of legal research. It does not have an unequivocal definition. The central task of legal dogmatics is to interpret and systematise legal norms.²⁶ Interpretation involves manufacturing knowledge by employing theories in law.²⁷ Systematisation involves organising the norms under study into a coherent system.²⁸ Systematisation is the theoretical aspect of legal dogmatics and interpretation is its practical aspect.²⁹

This study's third and fourth article only use legal dogmatics to explain the differences in EU competition law practise related to antitrust and merger remedies and to determine how to harmonize that practice under the structure of EU competition law.

1.3.2 Comparative Law

Comparative law is the study of differences and similarities between the laws of various countries. Comparative law has been proven useful not only in framing domestic legislation with the assistance of foreign laws but also in interpreting national rules of law.³⁰ Comparative law as a research method is suitable for a critical observation of various cases and countries' legal norms and solutions related to similar legal issues.

This study's second article adopts the comparative law method to analyse the similarities and difference among the merger control policies (particularly the merger remedies) of China and the EU.

²⁵ Aulis Aarnio, "Introduction by Aulis Aarnio", in Aleksander Peczenik, Jaap Hage, *On Law and Reason*, (Springer Science & Business Media, Jan 12, 2014), at 2.

²⁶ *Id.*, at 3.

²⁷ Aulis Aarnio, *Essays on the Doctrinal Study of Law*, (Springer Science & Business Media, 2011), at 183.

²⁸ Jaakko Husa, *A New Introduction to Comparative Law*, (Bloomsbury Publishing, 2015), at 31

²⁹ Aulis Aarnio (2014), *supra note* 25, at 3.

³⁰ Konrad Zweigert, Hein Kötz, *An Introduction to Comparative law*, (CLARENDON PRESS; OXFORD University Press, 3 ed, 1998), at 16-21.

1.3.3 Law and Economics

The methodology of law and economics is “the application of economic theory and econometric methods to examine the formation, structure, processes and impact of law and legal institutions the economic analysis of law”.³¹ Economics provided a theoretic tool for lawyers to predict and evaluate how the law will affect behaviour. Based on neoclassic economic theories, law and economics assumes not only that law-breakers are rational calculators that view legal sanctions as implicit prices for certain types of behaviour, but also that these prices can be set to guide behaviours in a socially desirable direction.³²

Law and economics has two subfields: positive analysis and normative analysis. Positive law and economics predict how individuals will act when subject to a given rule by using simplified economics models.³³ Normative analysis asks how the law can be improved to better achieve the goal of efficiency.³⁴ Law and economics claims that efficiency is a goal that the law should reflect, and that legal rules should be changed when they fail to achieve that efficiency.³⁵

This study primarily uses law and economics methods in two ways. First, it creates an economic model to explain how to assess market power (Chapter 3.1.1 of the Summary). Second, the analyses in this dissertation, including both the summary and and articles, use economic theories and models to interpretate and systematise legal norms, eg., the classification of merger remedies, the purposes of merger remedies and the appropriateness of remedies. In other words, the law and economics approach is applied along with legal dogmatics.

1.4 Articles Included in This Study

This study includes four articles and a summary. The four articles are listed as follows:

1) Wei Wang & Matti Rudanko, EU Merger Remedies and Competition Concerns: An Empirical Assessment, *European Law Journal*, Vol. 18, Issue. 4, July 2012, pp. 555–576.

Abstract: The purpose of merger remedies is to relieve the potential competitive detriments as to preserve the efficiencies. The European Community (EC) Merger Remedies Notice requires remedies able to remove the identified competition concerns entirely and proportionately. The scope of each merger remedy package is confined by the competition concern in question. This study analyses, from an empirical point of view, the relationship between competition concerns and merger remedies. It reviews all remedies accepted in Phase II EU merger investigation and categorises them into seven sets according to their nature. Results of the empirical assessment present the frequencies of

³¹ MacKaay, E, “History of Law and Economics”, *Encyclopedia of Law and Economics*, vol. 1, (Cheltenham, UK:Edward Elgar Publishing, 2000) ,at 65, available at: <http://encyclo.findlaw.com/0200book.pdf>.

³² Thomas J. Miceli, *The Economic Approach to law*, (Stanford University Press, 2004) at 1.

³³ Alan Devlin, *Principles of law and economics*, (Routledge, 2015), at 2.

³⁴ Thomas J. Miceli (2004), *supra note 32*, at 2.

³⁵ *Id*, at 3.

each remedy type accepted for resolving various competitions concerns and reveal that merger remedy design does vary for different competition concerns. Horizontal effects require divestiture remedies more. Other structural remedies, especially access commitment and supply commitment, have a good chance to be accepted in resolving vertical and conglomerate effects.

2) Wei Wang & Lei Wang, Merger Control and Merger Remedies in China: Comparison with the EU Approach, *Journal of Business Law*, Issue 6, 2014, 449-466

Abstract: This Article reveals how the abstract foreign concepts are embedded in the Chinese merger control regime and the imported analytical techniques has been applied in practise through comparing the merger control practice in the European Union and China, with particular focus on merger remedies.

3) Wei Wang, Compulsory Licensing as Antitrust and Merger Remedy in EU, (unpublished)

Abstract: The European Commission adopted compulsory licensing as remedy in both antitrust and merger cases, but the accepting criteria and design of compulsory licenses varied. In merger cases, compulsory licensing is often adopted as a supplementary or alternative to divestitures with favourable terms for licensees, while in antitrust cases, compulsory licensing is rare and controversial. Recently, the application of compulsory licensing to high-tech markets attracts more criticism and studies towards compulsory licensing. It is worth rethinking about compulsory licensing as a competition remedy in the context of high-tech. The focus of this article is on compulsory licensing under Article 102 TFEU and merger control in EU. It elaborates the EU practise of compulsory licensing in antitrust and merger cases, explains the differences between competition licensing adopted under Article 102 and merger control, and claims that application of compulsory licensing under antitrust and merger control should be consistent and the experience gained in one policy area may be shared with and help reaching better remedies in the other.

4) Wei Wang, Structural Remedies in EU Antitrust and Merger Control, *World Competition* 34, no. 4 (2011): 571-596.

Abstract: In both antitrust and merger cases, remedies serve the same purpose, namely to stop the infringement of competition and restore competition. However, the practice of remedy policy in these two areas is varied, for example, structural remedies are preferred in merger cases but strictly limited in antitrust. This article analyses the extremely different positions of structural remedies in antitrust and merger control. It also reviews the facts and remedies of the E.ON Electricity case, the first antitrust decision with structural remedies adopted or imposed by the European Commission. It argues that EU competition law is not a coherent system for while antitrust enforcement is too weak, merger control is too strong. Furthermore, this article argues that the deterrent power of Article 102 should be reinforced to increase its weight in

fighting unilateral anticompetitive behaviours, but merger control should show more tolerance to the efficiency-enhanced mergers.

2. EU Merger Remedies

2.1 The Purpose of EU Merger Remedies

Merger remedies are adopted to prevent and resolve the potential harms to market competition created by a merger.³⁶ They free merger decisions from being limited to a simple yes/no option and prevent the prohibition of mergers with both pro- and anti-competitive effects. The remedy tool enables competition authorities both to extend the scope of merger control and to regulate market behaviours on a finer level, e.g., they can accept a merger in one market and refuse it in another market, reallocate assets in a questionable market by divestiture, or influence market price with a supply guarantee.³⁷ “Through remedies we seek to restore or maintain competition while permitting the realisation of relevant merger efficiencies and other benefits.”³⁸

Any decision about merger remedies must follow a confirmation of the competitive harms that are expected to arise from a merger transaction. The Commission has no power to impose any remedy on the merging parties on a unilateral basis. The Commission cannot rewrite the notified operation on its own initiative. It can only impose remedies on the notified operation once the parties have proposed such changes themselves. Accordingly, merger remedies are agreements about the line between the harmless and harmful parts of a merger. The Commission should assess its effectiveness and necessity of each merger based on the facts and circumstances of individual cases.³⁹

2.2 Principles of Acceptable Merger Remedies

According to Balto, the choice of remedy has three objectives: first, to determine which remedies will effectively and fully preserve competition, second, to select a remedy that will preserve competition with as much certainty as possible, and third, to preserve the efficiency-enhancing potential of a merger, to the extent that is possible without compromising the obligation to preserve

³⁶ Commission Notice on remedies acceptable under the Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004, (The EU Merger Remedies Notice), OJ 2008/C 267/1, para. 2.

³⁷ Patrick Rey, (2003), *supra note 24*, at 129.

³⁸ ICN Merger Working Group, Analytical Framework Subgroup, MERGER REMEDIES REVIEW PROJECT Report for the fourth ICN annual conference Bonn, (June 2005), at 3, available at: <http://www.internationalcompetitionnetwork.org/uploads/library/doc323.pdf>.

³⁹ See OECD, *Remedies and Sanctions in Abuse of Dominance Cases*, OECD Policy Roundtables, DAF/COMP(2006)19 (15 May 2007), at 187, available at <http://www.oecd.org/competition/abuse/38623413.pdf>, 28 Mar. 2015.

competition.⁴⁰ This is consistent with the guiding principles of competition remedies in the EU, i.e., effectiveness, proportionality and legal certainty.⁴¹

2.2.1 Effectiveness

An appropriate merger remedy must be able to effectively preserve competition. As Justice Brennan recognized in *DuPont* case: “the key to the whole question of an antitrust remedy is of course the discovery of measures effective preserve competition.”⁴² If there is no remedy available that can effectively eliminate competition problems, the Commission has no choice but to block the merger.

Elements of Effectiveness

The EU Merger Remedies Notice does not elaborate the elements of the effectiveness of acceptable remedies. However, it does provide some basic conditions, which largely overlap with the four distinct dimensions of the effectiveness of a remedy given in the Merger Remedy Review Project Report of the International Competition Network (ICN):⁴³

- (1) “Comprehensive impact. The remedy should seek to deal with all the competitive detriments expected from the merger.”

The Commission requires remedies to be “comprehensive and effective from all points of view”.⁴⁴

- (2) “Acceptable risk. The eventual impact of any remedy is, to some extent, uncertain. Competition authorities will seek to implement effective remedies that generally have low levels of risk of not adequately addressing competitive detriments. This is particularly important where a competition authority is restricted in its ability to modify a remedy in the event of it failing to perform as anticipated.”

The Commission indicates that the requisite degree of certainty is an element of the assessment of the effectiveness of a remedy. It should be possible to implement an acceptable remedy and the new commercial structures resulting from it will be sufficiently workable and lasting to ensure that no significant impediment to effective competition will materialize.⁴⁵

- (3) “Practicality. An effective remedy should be capable of practical implementation, monitoring and enforcement within the jurisdiction of the relevant competition authority. This will also imply that the implementation and operation of the remedy should be clearly expressed.”

⁴⁰ See, Richard Parker & David Balto, *The Evolving Approach to Merger Remedies*, (2000), available at: <http://www.ftc.gov/public-statements/2000/05/evolving-approach-merger-remedies>.

⁴¹ See, Alexander Italianer, *Legal certainty, proportionality, effectiveness: the Commission's practice on remedies*, Brussels Charles River Associates Annual Conference (05 Dec, 2012).

⁴² *United States v. E. I. Du Pont de Nemours & Co.*, 366 U.S. 316, (1961) at 326.

⁴³ ICN Merger Working Group (2005), *Supra note 38*, para 2.5

⁴⁴ EU Merger Remedies Notice, *supra note 36*, para 9.

⁴⁵ *Id.*, para 11.

The Commission emphasises practical implementation and the ability to monitor the remedy, particularly for the non-divestiture remedies.⁴⁶

- (4) “Appropriate duration and timing. It is desirable or remedies to address the competitive detriments effectively over their expected duration. Remedies that act quickly in addressing competitive concerns are preferable to remedies that are expected to have an effect only in the longer term or where the timing of the effect is uncertain.”

This point is also shared by the Commission. It expects the remedy to be capable of being effective implementation within a short period of time because competitive conditions will not be maintained until the remedy is fulfilled.⁴⁷

Assessment of Effectiveness

To be effective, remedies are supposed to maintain effective market competition. What should be used as the benchmark of the effective competition? Competition at pre-merger levels is mostly used by competition agencies.⁴⁸ A rigorous assessment of the effectiveness of remedies requires a close examination of each case taking into account various scenarios either with alternative remedies or without any remedy at all. Of course, during merger review, the available information is so poor that it is almost impossible to perform such an assessment. Therefore, the pre-merger competition can be a reasonable benchmark, although not an optimal one, for assessing the effectiveness of remedies.

All of the relevant factors relating to the proposed remedy will be taken into consideration for assessing its effectiveness, including, inter alia, the type, scale and scope of the remedy proposed, judged by reference to the structure and particular characteristics of the market in which the competition concerns arise, including the position of the parties and other players on the market.⁴⁹ The US Department of Justice (DOJ) also indicates that the remedy should not only be tailored to the violation but also flow from the theory or theories of competitive harm.⁵⁰

2.2.2 Proportionality

The objective of the EU merger remedies’ objective is to eliminate competition concerns, but the scope of those remedies is not explicitly provided. Instead, the ECMR introduces the principle of proportionality to merger design which requires the remedies both to be proportional to the competition problem and to completely eliminate it.⁵¹

⁴⁶ Id, para 13.

⁴⁷ Id, para 9.

⁴⁸ OECD, 'Merger remedies', round table series, DAF/COMP (2004) 21, At 7.

⁴⁹ EU Merger Remedies Notice, *Supra note* 36, para 12.

⁵⁰ U.S. Dep't of Justice, Antitrust Division, Policy Guide to Merger Remedies (June 2011), at 4.

⁵¹ ECMR, para. 30.

The principle of proportionality is one of the general principles of EU law. It constitutes an important limit to the use of the EU's power, including the Commission's discretion in providing merger remedies. Article 5(4) of TFEU provides that "under the principle of proportionality, the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties". According to settled case law, the principle of proportionality the following: (1) that the measures adopted by EU institutions should not exceed the limits that are appropriate and necessary to attain the legitimate objective pursued;⁵² (2) when there is a choice between several appropriate measures, recourse must be made to the least onerous; and (3) the disadvantages caused must not be disproportionate to the aims pursued.⁵³

In the context of a merger remedy, the principle of proportionality requires a close fit among the competition concern, the remedies available to the Commission and a balance between competing values. This principle emphasizes the remedy's ability to eliminate the competition problem in light of the remedy's size, degree, or intensity in relation to that problem.⁵⁴ A desirable remedy should adequately address the competition problem without unnecessarily restricting firms' freedom to seek efficiencies and profitable opportunities.⁵⁵ If a remedy is proportional to the underlying competition concern, the remedial restrictions placed on the parties will not exceed the efficiency gains achieved.⁵⁶

"As to proportionality, the Commission has made it clear that a remedy cannot be made binding if it does not adequately address competition concerns. Also, if equally effective, the Commission will prefer the less burdensome remedy for companies."⁵⁷

Although the Commission should evaluate the proportionality of merger remedies, the scope of its proportionality assessment is unclear. The ECJ has indicated in the 2010 *Arosa Appeal* that within the field of EU competition law, the application of the principle of proportionality may not always be uniform.⁵⁸ The *Arosa Appeal* addressed the application of Article 9 of Regulation 1/2003. The case confirms the obligation on that the Commission's obligation to ensure that the principle of proportionality is observed may have a different scope and content based on the characteristics of the mechanisms involved and actions available under the various competition law provisions.⁵⁹ Under Article 7 of Regulation 1/2003, the Commission must impose remedies "which

⁵² See, Case 15/83 *Denkavit Nederland* [1984] ECR 2171, para 25, Case T-65/98 *Van den Bergh Foods v. Commission* [2003] ECR II – 4653, para 201.

⁵³ See, Case 265/87 *Schröder* [1989] ECR 2237, para 21; Case C-331/88 *Fedesa and Others* [1990] ECR I-4023, para 13; Joined Cases C-133/93, C-300/93 and C-362/93 *Crispoltoni and Others* [1994] ECR I-4863, para 41; and Case C-189/01 *Jippes and Others* [2001] ECR I-5689, para 81.

⁵⁴ See, E. Thomas Sullivan, *Antitrust Remedies in the U.S. and E.U.: Advancing a Standard of Proportionality*, 48(2) *the Antitrust Bulletin*, 377 (2003 Summer), at 414.

⁵⁵ Bruce Lyons & Andrei Medvedev, *Bargaining over Remedies in Merger Regulation*, CCP working Paper 07-3, 2 (2007), available at <http://ssrn.com/abstract=970250>, accessed on 28 March 2011.

⁵⁶ See, Sullivan (2003), *Supra note 54*, at 424.

⁵⁷ See, Alexander Italianer, *Supra note 41*, at 3.

⁵⁸ Case C-441/07 P, *European Commission v Arosa*, 29 June 2010.

⁵⁹ *Id.*, para 38.

are proportionate to the infringement committed and necessary to bring the infringement effectively to an end”,⁶⁰ but under Article 9, the Commission’s obligation in relation to the principle of proportionality “is confined to verifying that the commitments in question address the concerns it expressed to the undertakings concerned and that they have not offered less onerous commitments that also address those concerns adequately”.⁶¹

The *Alrosa Appeal* did not give direct instruction about how to assess the proportionality of a merger remedy. However, the ECJ indicates that if the Commission is not legally required to make a finding of infringement and the remedies are offered by the undertakings concerned, then the Commission could enjoy wide discretion with respect to the principle of proportionality.⁶²

2.2.3 Legal Certainty

Legal certainty is one of the general principles of EU law. According to settled case law, the principle of legal certainty requires that “rules of law be clear, precise and predictable in their effects, in particular where they may have negative consequences on individuals and undertakings”.⁶³

Legal certainty is connected to transparency and consistency. Transparency implies that the policies and major issues of accepting merger remedies in each case should be “clear, obvious and understandable without doubt or ambiguity”.⁶⁴ It concerns access to documents, knowledge of who made the decisions and how they are made, simplification of the legal process, consultation, a duty to give reasons and other issues.⁶⁵ Consistency is a major method of maintaining predictability, which in turn facilitates the realisation of legal certainty.⁶⁶ The Commission is required to act consistently when accepting merger remedies to provide a reliable basis for corporate decisions and expectations.⁶⁷

Legal certainty is important so that business can know the legal framework within which it operates. The Commission sets useful precedents for merger remedies so that merging parties will know the types of remedies that are likely to be accepted in the future.⁶⁸ Legal certainty in merger remedy practice may reduce legal risk and facilitate business investment not only by telling merging parties that their plan may be carried on with proper remedy proposal

⁶⁰ *Id.*, para 39.

⁶¹ *Id.*, para 41.

⁶² *Id.*, para 40-41.

⁶³ Case C-158/07 Förster [2008] ECR I-8507, para. 67

⁶⁴ Opinion of AG Ruiz-Jarabo Colomer of 16 December 2004 in C-110/03 Belgium v. Commission, 2005, ECR I-2801, para 44.

⁶⁵ Liza Lovdahl Gormsen, *A Principled Approach to Abuse of Dominance in European Competition Law*, Cambridge University Press, 2010, at, 154.

⁶⁶ Ester Herlin-Karnell and Theodore Konstadinides, The Rise and Expressions of Consistency in EU Law: Legal and Strategic Implications for European Integration, in Catherine Barnard, Albertina Albers-Llorens, Markus W Gehring (ed), *Cambridge Yearbook of European Legal Studies*, (Bloomsbury Publishing, Vol 15 2012-2013, 2013) at 148.

⁶⁷ See, e.g. ICN Merger Working Group (2005), *Supra note 38*.

⁶⁸ See, Alexander Italianer (2012), *Supra note 41*, at 4.

but also assuring other market players that competition will either remain undistorted or be restored.

2.3 Classification of Merger Remedies

The most common classification of merger remedies is the structural/behavioural distinction.⁶⁹ Definitions of this distinction can be found in both competition authorities' documents and academic articles. However, this distinction is not as lucid as it sounds.

Sullivan gives his interpretation of this distinction as follows:

“Structural remedies change the structure of the market at issue. This is achieved by divestiture, which severs a business or business share from the company under scrutiny, and

Behavioural remedies control the conduct of the merging entities or the dominant firm without disrupting the market structure.”⁷⁰

Here, “structure” is understood as market structure and “behaviour” or “conduct” refers to the merged firm'. Structural remedies change market structure, but behavioural remedies do not. All agree that changes to market structure are primarily achieved by sales of physical assets, which might cause confusion. According to the structure-conduct-performance (S-C-P) paradigm of traditional industrial organisation economics, market structure determines business conduct and performance in industrial economics; conversely, business conduct and performance may affect market structure indirectly.⁷¹ Basically, marketers affect each other with their conducts all of which eventually has an impact on market structure. Take remedies as an example, compulsory licensing a key patent to potential competitors lowers barriers to entry, whereas a price cap will shape the market-price curve (more or less) in the short or long run. Thus, a remedy other than divestiture can also alter market structure.

The definitions provided by the ICN Merger Remedies Review avoid this confusion by confining the definition of structural remedies to those remedies that have a direct impact on market structure.

“Structural remedy: remedy that addresses the competitive detriment of a merger through direct intervention in the structure of the market.

Behavioural remedy: remedy that addresses the competitive detriment of a merger by changing the behaviour of the merger parties or others”⁷²

The 2004 US Merger Remedies Guide once distinguished structural and behavioural remedies as follows: “one addresses the structure of the market, the

⁶⁹ For an excellent literature review on merger remedies, see S. Davies & B. Lyons, *Mergers and Merger Remedies in the EU: Assessing the Consequences for Competition*, (Edward Elgar Publishing 2008), Chapter 3.

⁷⁰ Sullivan (2003), *Supra note 54*, at 396.

⁷¹ See e.g. L.W. Weiss, “Structure-Conduct-Performance Paradigm and Antitrust”, 127 *University of Pennsylvania Law Review* (1979) 1104. D.F. Greer, *Industrial Organization and Public Policy*, (New York, Macmillan Publishing Company, 3rd Ed, 1992).

⁷² ICN Merger Working Group (2005), *Supra note 38*, Glossary of terms, at 20-21.

other the conduct of the merged firm".⁷³ However, this statement was removed from the 2011 revision. It is worth noting that the 2011 US Merger Remedies Guide signals an expansive approach to behavioural remedies in merger cases.⁷⁴

Motta, Polo and Vasconcelos classify merger remedies in a slightly different ways.

"Structural remedies modify the allocation of property rights and create new firms: they include divestiture of an entire ongoing business, or partial divestiture (possibly a mix and match of assets and activities of the different firms involved in the merger project).

Non-structural remedies set constraints on the property rights: they might consist of engagements by the merging parties not to abuse certain assets available to them. They might also consist of contractual arrangements such as compulsory licensing or access to intellectual property."⁷⁵

This definition avoids explaining "structure" and introduces property rights as a benchmark that draws a clear line between two types of remedies. Patrick Rey also emphasizes the effects that a remedy has on asset by noting "behavioural remedies often tend to promote asset sharing, whereas divestitures insist more on asset transfers."⁷⁶

Despite the above sources' different interpretation of the distinction, all of them agree that divestiture is the major structural remedy, and that solutions related to post-merger business conduct are behavioural remedies. However, some remedies, such as those involving access to intellectual property rights, are particularly difficult to categorise.⁷⁷

⁷³ US Department of Justice, Antitrust Division Policy Guide to Merger Remedies, (the US Merger Remedies Guide 2004), (October 2004), available at: <http://www.justice.gov/atr/archived-antitrust-division-policy-guide-merger-remedies-october-2004>.

⁷⁴ See, US Department of Justice, Antitrust Division Policy Guide to Merger Remedies, (the US Merger Remedies Guide 2011), (June 2011), available at: <http://www.justice.gov/sites/default/files/atr/legacy/2011/06/17/272350.pdf>. John E. Kwoka and Diana L. Moss. Behavioral Merger Remedies: Evaluation and Implications for Antitrust Enforcement, available at: http://www.antitrustinstitute.org/sites/default/files/AAI_wp_behavioral%20remedies_final.pdf.

⁷⁵ M. Motta, M. Polo & H. Vasconcelos, Merger Remedies in the European Union: An Overview, (2007) 52 *the Antitrust Bulletin*, at 606.

⁷⁶ Patrick Rey, (2003), *supra note 24*, at 130.

⁷⁷ See, ICN Merger Working Group (2005), *Supra note 38*, at 7.

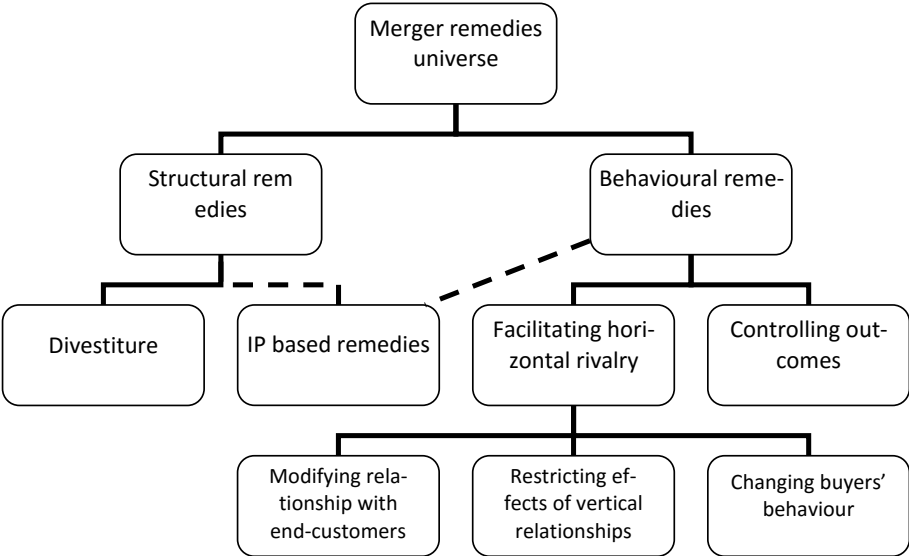


Figure 1. Overview of the merger remedies universe (The ICN Merger Remedies Review)⁷⁸

The Remedies Notice does not define structural and behavioural remedies. Instead, it vaguely refers to structural remedies as "commitments which are structural in nature"⁷⁹ and to behavioural remedies as other types of solutions,. It sorts remedies into three types:⁸⁰

- 1) Divestiture;
- 2) Other structural remedies, such as granting access to key infrastructure or inputs and changing existing long-term contracts; and
- 3) Commitments related to the future behaviour of the merged entity, such as undertaking not to raise prices, to reduce product ranges or remove brands.

The Remedies Notice clearly provides that structural remedies include not just divestiture but also other remedies which are “equivalent in its effects to a divestiture”.⁸¹ Conversely, behavioural remedies have a narrow scope and can be accepted only in exceptional cases.

The first article in this study applies a different classification of remedies.

1	Commitments to transfer a business (transfer remedies)	requiring the merging entities to sell part of their business to suitable purchasers in the overlapping markets.
2	Commitments to exit from a joint venture (exit remedies)	requiring the merging entities to sell their shares or stakes in a joint venture which would lead to their exit from the joint venture.
3	Commitments to limit shareholding (shareholding remedies)	aiming to restrain the merging entities from fully exercising their shareholder's rights in some joint ventures.
4	Commitments to grant access (access remedies)	requiring the merging entities to offer competitors or buyers of the divested business access to intellectual property rights (IPRs) or infrastructure on a non-discriminatory or favourable

⁷⁸ See, *Id.*, at7

⁷⁹ EU Merger Remedies Notice, *Supra note 36*, para. 15.

⁸⁰ *Id.*, para. 17.

⁸¹ *Id.*, para. 61.

		basis.
5	Commitments to change supply relationships (supply remedies)	urging the merging entities to enter into, alter or terminate supply contracts for the benefit of competitors or customers.
6	Commitments to be abstained from certain conducts (abstention remedies)	prohibiting the merging entities from specific conduct that are established to have negative effects on competition.
7	Other commitments	these remedies cannot be categorized into any type listed above.

Table 1. Categories of merger remedies⁸²

The first article in this study, *EU Merger Remedies and Competition Concerns: An Empirical Assessment*, reports empirical research to reveal the relationship between competition concerns and merger remedies. The results show that horizontal effects are more likely to require structural remedies, such as transfer commitments and exit commitments, whereas vertical effects are more behavioural remedies, such as supply commitments and access commitments.

2.4 The Costs of Merger Remedies

The great advantage of merger remedies is that they allow the realisation of some of a merger's potentially competitive benefits, which would otherwise be lost in the event of a prohibition decision. However, conditional clearance of mergers always comes at a price. The acceptable merger remedies accepted for competition concerns may create various costs. The International Competition Network listed issued a report that listed and explained three types of potential costs imposed by merger remedies:⁸³

1) Remedy operating costs, or direct costs.

Operating costs exist at the design, monitoring and enforcement stages. At the design stage, competition agencies may need to seek more information to devise a proportionate remedy in a short period of time. At the monitoring and enforcement stages, costs are typically linked to medium or long-term monitoring and implementation measures related to behavioural remedies, e.g., employing trustees, collecting monitoring information, etc..

2) Remedy impact costs, or indirect costs

Impact costs may arise if a remedy distorts competition. This is more likely to be the case with behavioural remedies in which potential pro-competitive activities may be restrained or inefficiencies may be generated. For example, when an abstention remedy is imposed, the merged firm may devote additional efforts to avoiding violating the remedy's provision, regardless of whether its activities are pro- or anti-competitive. Price maintenance might create inefficiency by discouraging investment.

3) Merger efficiencies or other benefits foregone.

The choice and design of merger remedies are a competition agency's processes of defining and prioritizing a merger's efficiencies and other competitive benefits. Generally, a merger's expected efficiencies are only likely to be con-

⁸² Wei Wang & Matti Rudanko (2012), *Supra note 23*, at 563–568.

⁸³ See, ICN Merger Working Group (2005), *Supra note 38*, at 4-5.

sidered relevant if they are expected to result in significant benefits to customers.⁸⁴ Other benefits might be neglected. Moreover, the ex-ante assessment of remedies involves risk and uncertainty. Because of the limited information at the time a remedy is designed, a competition agency may be unable to fully understand the relevant industry's business model. Subsequently, the designed remedy may result in either under-, or over-fixing. If a decision turns out to be wrong or a market situation changes, the remedies adopted may have negative effects on efficiency. It is possible to adjust behavioural remedies to the changing circumstances, but a structural remedy's impact on the concerned firm is irreversible.

⁸⁴ *Id.*

3. Merger Remedies and Competitive Concerns in EU Merger Review

The substantive test under the ECMR is that a merger will be blocked if it would “significantly impede effective competition in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position”.⁸⁵ The test is based on the evaluation of market conditions beyond market concentration that affect the likelihood that a proposed merger will have adverse effects on competition.⁸⁶ Competition concerns are raised only when potential impediments to competition are caused or strengthened by a merger. There must be causal links between mergers and potential harms to competition. If, for example, one of the parties has already been or will be in a dominant position even without a merger, the merger will not trigger competition concerns because it does not cause or facilitate any effect on competition.

Different competition concerns may arise in different types of mergers. Horizontal mergers eliminate competitors and vertical mergers unite buyers and sellers. Conglomerate mergers bring smaller (but not absent) effects on market structure.⁸⁷ These changes (more or less) alter either competition structure or efficiency. Corresponding to merger types, competition concerns can be classified into three types, i.e., horizontal, vertical and conglomerate effects. Horizontal effect is the most common and complicated of the three effects. It has two main subtypes: non-coordinated effects and coordinated effects. The following parts will discuss those competition effects.

3.1 Horizontal Effects: Non-coordinated Effects

One direct result of a horizontal merger is the convergence of all of the parties’ resources into a single firm. The merged firm possesses all of the market power that the parties once owned separately. A horizontal merger may have non-coordinated effects “by eliminating important competitive constraints on one or more firms, which consequently would have increased market power, without resorting to coordinated behaviour.”⁸⁸

⁸⁵ ECMR, Art. 2(2).

⁸⁶ See, eg. Roscoe B. Starek III & Stephen Stockum, What Makes Mergers Anticompetitive?: “Unilateral Effects” Analysis under the 1992 Merger Guidelines, 63 *Antitrust Law Journal* 801 (1994), at 801.

⁸⁷ See, eg. Williams James Adams, ‘Market Structure and Corporate Power: the Horizontal Dominance hypothesis Reconsidered’, 74(7) *Columbia Law Review* 1276 (1974), at 1277.

⁸⁸ EU Horizontal Merger Notice, *Supra* note 3, para. 22(a).

3.1.1 Assessment of Market Power

Market power refers to the ability of a firm (or a group of firms) to profitably raise prices above the competitive level over a period of time, or to behave analogously by, e.g., either reducing output or limiting consumer choice.⁸⁹ The firm with significant market power enjoys a dominant position.

The Lerner index was first developed by Abba Lerner⁹⁰ to measure market power. Because the economic definition of market power is the firm's ability to maintain prices above competitive levels, the Lerner index proposes to measure market power directly by a firm's margin, i.e., the ratio of profit over price, as in equation (1)

$$L = \frac{P^m - C}{P^m} \quad (1)$$

where L denotes market power, P^m denotes the price of the firm and C is the marginal cost.

Landes and Posner note that in practice it is difficult to calculate marginal cost, so market power cannot be measured in equation (1). They develop the Lerner index into another form by combining the firm's market share with other factors such as market elasticity of demand,⁹¹

$$L = \frac{P^m - C}{P^m} = \frac{s_i}{\varepsilon_D + (1 - s_i)\varepsilon_j} \quad (2)$$

where s_i is the firm's market share, ε_D is the market elasticity of demand and ε_j is the elasticity of supply of the competitive fringe.

Landes and Posner provide an economic rationale for inferring market power from three market characteristics and indicate that a firm's market power increases with its market share and decreases with market demand elasticity and fringe supply elasticity.

- (1) Market share: higher market shares and smaller demand elasticity reflect higher market power.
- (2) Market demand elasticity: a high market elasticity of demand implies that there are good substitutes in the market for the firm's product, so the firm's market power can be limited.
- (3) Fringe supply elasticity: a high fringe supply elasticity implies that fringe competitors can sharply increase their output when price increases slightly, so a firm cannot earn profit solely by raising its prices.

Of course, a real market structure includes much more complicated elements than the factors in this formula, including market dynamic and multimarket dominance. Some scholars have noted that this formulation is not accurate.⁹²

⁸⁹ See Landes and Posner, Market power in antitrust cases, 94 *Harvard Law Review* 937 (1981); Vickers, Market power in competition cases, 2 *European Competition Journal* 3 (2006).

⁹⁰ See, eg. Abba Lerner, the Concept of Monopoly and the Measurement of Monopoly Power, 1 *Review of Economics Study* 157 (1934).

⁹¹ See, eg. William W. Landes & Richard A. Posner, Market Power in Antitrust Cases, 84 *Harvard Law Review* 937 (1981).

⁹² See, eg. Richard Schmalensee, Another Look at Market Power, 95 *Harvard Law Review* 1789 (1982), Timothy J. Brennan, Mistaken Elasticities and Misleading Rules, 95 *Harvard Law Review* 1849 (1982), L

As a fact, this formula cannot apply directly in competition cases to assess market power. However, it still presents some insight into how to measure market power and its implications are applicable in the practise of merger control.

According to the Commission, an Article 102 market-power assessment should take into account the competitive structure of the market, particularly the following three factors:

- “ — constraints imposed by the existing supplies from, and the position on the market of, actual competitors (the market position of the dominant undertaking and its competitors),
- constraints imposed by the credible threat of future expansion by actual competitors or entry by potential competitors (expansion and entry),
- constraints imposed by the bargaining strength of the undertaking's customers (countervailing buyer power).”⁹³

In the context of merger review, the EU Horizontal Merger Notice lists a number of factors that may “influence whether significant non-coordinated effects are likely to result from a merger”.⁹⁴ The Commission indicates that none of these factors is necessarily decisive and that this list is not exhaustive. The foregoing parts discuss the factors listed in the EU Horizontal Merger Notice that are necessary to consider when assessing market power.

3.1.2 Merging Firms Have Large Market Shares

Market share may be a clear indicator of market power. The formula proposed by Landes and Posner suggests that market share, together with other market characteristics, may reflect market power. The greater the firm's market share, the less likely that other firms will be able to expand production to defeat a unilateral price increase. As a general rule, a significant market share is necessary for a firm to have the ability to exercise unilateral market power.⁹⁵ The imperfect connection between market share and market power has also been recognised. Landes and Posner note that the mechanical use of market share data alone to measure market power is misleading if it disregards market demands and supply elasticities.⁹⁶ Werden claims that market shares “are just descriptive statistics for an industry, intended to describe usefully the relative sizes of competitors in the relevant market”⁹⁷ and “never come close to telling the whole market power story”.⁹⁸

Kaplow, the Accuracy of Traditional Market Power Analysis and a Direct Adjustment Alternative, 95 *Harvard Law Review* 1817(1982), B Klein, Market Power in Antitrust: Economic Analysis after Kodak, 3 *Supreme Court Economic Review* 43 (1993).

⁹³ Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, *supra note*, para 12.

⁹⁴ EU Horizontal Merger Notice, *Supra note* 3, para. 26

⁹⁵ See eg. R.B. Starek III and S. Stockum, What Makes Mergers Anticompetitive?: “Unilateral Effects” Analysis under the 1992 Merger Guidelines, 63 *Antitrust Law Journal* 801 (1994), 804.

⁹⁶ See eg. Landes & Posner, *supra note* 19, at 947.

⁹⁷ George J. Werden, Assigning Market Share, 70 *Antitrust Law Journal*, (2002), at 104.

⁹⁸ *Id.*, at 67.

Like its US counterpart, the Commission has recognised market share and concentration levels as “useful first indication of the market structure and of the competitive importance”.⁹⁹ “Although the importance of market shares may vary from one market to another, very large shares are in themselves, and save in exceptional circumstances, evidence of the existence of a dominant position”.¹⁰⁰

A standard procedure for evaluating market power always starts by computing market share, which is identified for each merging party, then summed up for the merged firm. Market share can be calculated in terms of, inter alia, value or volume.

The EC case law has established that “very large market shares – 50% or more – may in themselves be evidence of the existence of a dominant market position”¹⁰¹. Here, a 50% or more market share could be considered particularly high, but this finding is not strictly necessary to define a dominant position. Several other factors need to be taken into account. In some cases, the Commission raised concerns even though the post-merger market shares might not exceed 40%.¹⁰² In general, the Commission presumes that a merger that results in a market share of less than 25% will not be harmful to the common market.¹⁰³

3.1.3 Merging Firms are Close Competitors

Close competitors offer similar products. Product differentiation is a source of market power. When there is high degree of substitutability between the products of the merging firms and those of its rivals, it is less likely that the merger will significantly jeopardize effective competition.¹⁰⁴ If a merger is between firms that produce the only two substitutable products of a particular type, non-coordinated effects would be more likely to occur because the merger would significantly reduce the degree of product differentiation, thus increasing the parties’ market power. For example, one reason to block *Volvo / Scania*¹⁰⁵ is that they are close competitors.

Market demand elasticity may indicate whether a firm’s products have close substitutes. A high market elasticity of demand implies that there are good substitutes for a firm’s product of the firm in the market, so the firm cannot raise its price without losing significant sales. Demand elasticity may show whether it is possible for the merged firm to obtain extra profit by individually increasing prices or decreasing output because it has differentiated products. The method of measuring demand elasticity involves capturing customers’ reactions to a price increase. Assuming that a company increase its prices, if

⁹⁹ EU Horizontal Merger Notice, *Supra* note 3, para. 14.

¹⁰⁰ Case T-210/01 *General Electric v Commission*, judgement of 14 December 2005, para. 115.

¹⁰¹ EU Horizontal Merger Notice para. 17. See also, 85/76 *Hoffmann-La Roche v Commission*, para. 41, Case C-62/86 *Akzo v Commission*, para. 60

¹⁰² See, cases IV/M.1221, COMP/M.2337.

¹⁰³ EU Horizontal Merger Notice, *Supra* note 3, para. 18.

¹⁰⁴ *Id.*, para. 28.

¹⁰⁵ Case COMP/M.1672, para. 80

there are many competitors in the same market, buyers will switch to other companies whose same or similar product has a lower price, and if the company has a monopoly or very little competition, it will not lose many buyers because customers have few alternatives. The magnitude of customer reaction to changes in price is measured by the own-price elasticity of demand, “which equals the percentage change in a firm’s sales that results from a 1 percent change in price.”¹⁰⁶

$$\eta_x = -\frac{\Delta Q_x / Q_x}{\Delta P_x / P_x} \quad (3)$$

where η_x denotes the own-price elasticity of demand experienced by firm X, Q_x denotes the quantity sold by firm X, and P_x denotes the price.

In practice, demand elasticity is difficult to calculate because of insufficient market data. The Commission may need to consider others factors that can show product differentiation among the product of the merged firm and those of its competitors and those of the parties.

“Substitutability is a question of degree. In assessing the competitive constraint imposed by rivals, it must therefore be taken into account what is the substitutability of their products with those offered by the allegedly dominant undertaking.”¹⁰⁷

3.1.4 Customers Have Limited Possibilities of Switching Supplier

The possibility of switching suppliers gives customers bargaining power for a competitive price. If this switching possibility is very small, it will cause market demand elasticity to be low, and, the few suppliers may charge higher prices without worrying about losing customers. There are two factors used to determine customers’ options: the availability of alternatives and switching costs¹⁰⁸.

The availability of an alternative supply is very important for price bargaining. If there are few or no alternative, customers are vulnerable to price increases. The Commission has noted in *VIAG / Continental Can* that customers use dual- or multiple-sources to play suppliers against each another.¹⁰⁹ A merger might significantly weaken customers who have used dual sourcing from the two merging firms.¹¹⁰

Sometimes even if there is another product available, customers must accept the price increase because of the cost of changing supplier. Switching costs occur when consumers decide to change supplier. For instance, the consumers

¹⁰⁶ Besamko, D., Dranove, D. & Shanley, M. , *The Economics of Strategy*, (John Wiley & Sons, INC., 1996) at 277

¹⁰⁷ DG Competition, *Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuses*, Brussels (2005), para. 33, available at <http://ec.europa.eu/competition/antitrust/art82/discpaper2005.pdf>.

¹⁰⁸ EU Horizontal Merger Notice, *Supra note 3*, para.31

¹⁰⁹ Case COMP/M.081 *VIAG / Continental Can*, para. 21

¹¹⁰ EU Horizontal Merger Notice, *Supra note 3*, para.31

of printers will continue to buy the same brand of cartridges after they choose their printers because if they want to change cartridge suppliers, they have to buy new printers. Switching costs can be learning, transactional, contractual or psychological costs.¹¹¹ They may serve as a barrier to prevent customers from changing suppliers, which in turn, enables producers to charge higher prices to existing customers. In *Agfa Gevaert / Dupont*, the supplier provided a “package deal” to end-users in which it agreed to provide equipment free of charge or on favourable conditions, and the customer agreed to purchase consumables from the equipment supplier for a period of time, generally two to three years, with the cost of the equipment assimilated into the prices charged for the consumables.¹¹² The Commission identified that “package deal” as a barrier to switching for end-users.¹¹³

The presence of a switching cost gives firms more incentives to attract new consumers, because, once consumers are locked in, a higher price can be charged. To attract new consumers, suppliers are willing to give all or part of their ex post rent to consumers, for example, by providing new consumers with a special discount. This practice drives intensified ex ante competition. Switching costs themselves might change the competition structure, but they do not cause competitive problems. However, in combination with other factors, such as scale economies, switching costs can be a cause for competition concerns.¹¹⁴

3.1.5 Competitors Are Unlikely to Increase Supply if Prices Increase

The final factor determining market power, as indicated by Landes and Posner, is fringe supply elasticity. High fringe supply elasticity implies that fringe competitors can increase large output when market price increases slightly, so the merged firm cannot profit solely by raising prices. The increasing output may come from either existing competitors or potential new incomers. Let us take a simple example. There are two firms in a market: a dominant Firm A with an 80% market share, and a fringe Firm B with a 20% market. Firm A would like to increase market price, so it just cut down its output. Naturally, market price would increase after this supply decrease. However, whether this price increase can last depends on Firm B’s reaction. If Firm B can increase its supply to meet market demand, market price will decrease and Firm A will lose market share. In the other case, if Firm B cannot increase its supply because of, e.g., capacity constraints or limited resources, the market price will remain higher and Firm A will not lose market share. Once a firm’s drop in output can be supplemented by other competitors, the total supply will not decrease, and then, market price will not increase. In this sense, non-

¹¹¹ See eg. Joseph Farrell & Paul Klemperer, Ch. 31: Coordination and Lock-In: Competition with Switching Costs and Network Effects, in Richard Schmalensee & Robert Willig (ed.) (2007) *Handbooks of Industrial Organization*, Volume 3, at 1971-1979.

¹¹² Case IV/M.986 *Agfa Gevaert / Dupont*, para.21.

¹¹³ *Id.*, para 64-67.

¹¹⁴ Joseph Farrell & Paul Klemperer, *Supra note* 111, at 2005

coordinated effects are less likely if other rivals can expand their production in a timely fashion.

The competitors' incapability of to substantially increase their supply might encourage a merged entity to reduce its output. This failure to expand production can result from either capacity constraints or costly expansion.¹¹⁵ The Commission has also noted that rivals' capacity is a more important factor in homogenous-product cases than in differentiated-product ones.¹¹⁶ In *CVC / Lenzing*, the Commission examined the historical capacity of European VSF producers and found that Lenzing is the only one that "actually raised its production capacity, against the common trend of capacity reductions"¹¹⁷. Because the company's other rivals were less likely to increase their capacity for a price increase, the merging entities "would control a substantial share of total capacity and have an incentive to create shortage of supply in order to keep prices high"¹¹⁸.

3.1.6 Merged Entity Able to Hinder Expansion by Competitors

In light of the discussion above about rivals' capacity to be a factor that counteracts non-coordinated effects, a firm with unilateral market power might have an intention to hinder either the expansion of its competitors or the entry of new ones. A merged entity may have the ability to hinder rivals' expansion because it controls some necessary resources for expansion, such as the supply of input, intellectual property, or access to infrastructure or platforms.¹¹⁹ These controls are more related to vertical relationships, which are discussed in detail in part 2.3.

The ability to hinder competitors' expansion may also emanate from the dominant firm's greater efficiency than its rivals. A dominant firm's cost advantages of enable it to produce the same products at a lower cost and to sell them at a lower price than its competitors. This low-price strategy can be used either to squeeze competitors out of the market or to limit them to a very small fraction of the market. A dominant position might be supported by cost advantages. It is necessary for a dominant firm to maintain prices at a competitively low level to prevent both new entry and existing fringes' expansion. Dominance based on cost advantage is pro-competitive because in the market, consumer welfare can be improved by low prices. Therefore, the cost-advantage-supported ability to hinder competitors' expansion not inherently anti-competitive. This is why the Commission will take into account "the financial strength of the merged entity relative to its rivals"¹²⁰.

¹¹⁵ EU Horizontal Merger Notice, *Supra note 3*, para. 34

¹¹⁶ *Id.*, para. 35

¹¹⁷ Case COMP/M.2187, *CVC / Lenzing*, para. 162

¹¹⁸ *Id.*, para. 163.

¹¹⁹ EU Horizontal Merger Notice, *Supra note 3*, para. 36

¹²⁰ *Id.*, para. 48.

3.1.7 Merger Eliminates an Important Competitive Force

In some markets, a competitor is particularly aggressive and has driven the market to be more competitive than it would have been otherwise. This competitor is a maverick. “Maverick” is an economics term to describe an aggressive competitor whose product is deemed by customers as a close substitute for that of another party. A maverick may be able to maintain a competitive market price because it is so eager to expand its market share that it always uses aggressive competition strategies, e.g. lowering price, promoting quality, and developing new technology. It does not have to be large to act as an important competitive force in the market, and often, small competitors have more incentives to compete aggressively. Thus, a merger that removes a maverick may significantly change the nature and intensity of competition. *Schneider v Commission* supports that if the rivalry between the parties was extremely significant, “the merger will be to eliminate a key factor in competition”¹²¹. The Commission has identified two specific “mavericks” in its horizontal merger guidelines: promising new-comers and important innovation drivers.¹²²

A new or potential entrant can form an important competitive force even with a very small or no market share. Empirical studies have supported the idea that although potential competition is less effective than actual competition, it can still be competitive.¹²³ In some cases, even if the merger did not create any horizontal overlap in certain markets, the Commission still assess the effects of merger on potential competition. The Commission explains the conditions under which eliminating a potential competitor may cause concerns as follows:

“...in order to assess whether the elimination of DB/EWS as potential competitors on each other’s market may have significant anticompetitive effects, two conditions would have to be fulfilled: i) the potential competitor would have to already exert a significant constraining influence or there would have to be a significant likelihood that it would grow into an effective competitive force and ii) there is not a sufficient number of other potential competitors which could maintain sufficient competitive pressure after the merger.”¹²⁴

Additionally, in some markets innovation is an important competition force because innovation can alter market structure given that “rapid technological change leads to markets in which firms compete through innovation for temporary market dominance, from which they may be displaced by the next wave of product advancements”.¹²⁵ However, neither economic theories nor empirical data have demonstrated whether innovation would increase competition,

¹²¹ Case T-310/01, para. 418

¹²² EU Horizontal Merger Notice, *Supra* note 3, para.37-38

¹²³ See, eg. M.A. Bergman and F. Rudholm, The relative importance of actual and potential competition, Empirical evidence from the pharmaceuticals market, 51 (4) *Journal of Industrial Economics* 455 (2003), at 455-467, Austan Goolsbee & Chad Syverson, How do Incumbents Respond to the Threat of Entry? Evidence from the Major Airlines, 123(4) *The Quarterly Journal of Economics* 161 (2008 November) at 1611-1633,

¹²⁴ Case COMP/M.4746, *DEUTSCHE BAHN / ENGLISH WELSH & SCOTTISH RAILWAY HOLDINGS (EWS)*, para. 72

¹²⁵ *United States v Microsoft Corp.*, 253 F 3d 35, 49 (DC Cir 2001)

because the rapid pace of innovation may have two seemingly contradictory results: preventing monopoly or creating a strong monopoly.¹²⁶ Likewise, a merger's effect on innovation is ambiguous. A merger may increase the merged entity's ability and incentive to innovate, whereas in other cases, it may hinder innovation by eliminating an innovation driver. The result depends on the specific facts of the case.

3.2 Horizontal Effects: Coordinated Effects

Coordinated effects in the merger context involve tacit collusion, which occurs when the merged firm's unilateral price increase "is not profitable unless there are accommodating responses by other significant competitors".¹²⁷ Firms act individually, but in recognition of their interdependence, they manage to combine their market power. The phenomenon of coordinated effects has also been referred to as "creating or strengthening a collective dominant position" under the EU merger control. In addition to enhancing an individual firm's market power, a merger may magnify oligopoly problems in the market by creating or strengthening a collective dominant position. A merger may make coordination easier, more stable or more effective for firms that coordinate in advance.¹²⁸

The key to the investigation of coordinated effects in a merger context is to learn 1) whether collusion is likely to be feasible, and 2) why the merger makes coordination more likely.¹²⁹ For collusion to be feasible, three conditions must be presented: 1) the firms must be able to reach consensus; 2) the coordinating firms must be able to detect deviations, and 3) if there is a deviation, there must be a creditable punishment.¹³⁰

3.2.1 Reaching terms of coordination

The prerequisite for collective dominance is reaching terms of coordination. If firms can not arrive at an agreement about how coordination should work, e.g., which actions would be considered to be aligned with their coordination, there cannot be collective dominance. In *Exxon / Mobil*, the Commission found that in the Luxembourg market, seven motor-fuel retailers systematically adapted their prices to the maximum price set by the government and the price cap fixed by the Luxembourg government provided firms a benchmark for coordinating.

¹²⁶ See, Federal Trade Commission Staff, (1996) *Anticipating the 21st Century: Competition Policy in the New High-Tech, Global Marketplace*, available at: http://www.ftc.gov/opp/global/report/gc_v1.pdf, Ch.7, at 16. Ilene Knable Gotts, Scott Sher & Michele Lee, *Antitrust Merger Analysis in High-Technology Markets*, *European Competition Journal*, (2008), Vol.4 No. 2, pp 463.

¹²⁷ Scheffman, D.T. & Coleman, M. 2004, "Quantitative Analyses of Potential Competitive Effects from A Merger", *George Mason Law Review*, vol. 12, 319.: at 321.

¹²⁸ EU Horizontal Merger Notice, *Supra note 3*, para. 39

¹²⁹ Scheffman & Coleman, *supor note* , at328

¹³⁰ Cabral, L. 1996, *Introduction to Industrial Organization*, MIT Press, Cambridge.

The EU Horizontal Merger Notice notes that coordination between firms is more likely in a less complex, more stable market.¹³¹ When assessing coordinated effect, the Commission ascertains whether the market structure is conducive to collective dominance. In *SCA / Metsä Tissue*, the market demand for tissue products is relatively inelastic and technical innovation is relatively moderate; these two factors are considered as market characteristics conducive to collective dominance.¹³²

Moreover, coordination is easier to achieve in a symmetric market in terms of market share, cost structures, capacity levels.¹³³ In *Nestle / Perrier*, the Commission notes that in a symmetric duopoly,

“Any aggressive competitive action by one would have a direct and significant impact on the activity of the other and most certainly provoke strong reactions with the result that such actions could considerably harm both suppliers in their profitability without improving their sales volumes. Their reciprocal dependency thus creates a strong common interest and incentive to maximize profits by engaging in anti-competitive parallel behaviour.”¹³⁴

3.2.2 Deterrent mechanisms

Coordination normally requires coordinating firms to accommodate to a price higher than the competitive level. Firms may find that if they individually lower prices, they could make higher profits. To sustain coordination, coordinating firms should be convinced that consequences of deviation are sufficiently severe. The Commission has made it clear in *BP / E.ON* that “the retaliation mechanism must be sufficiently plausible and effective to counterbalance the existing degree of probability and incentives to deviate in the market situation of the individual case”.¹³⁵

Deterrent mechanisms are plausible only when coordinating firms believes in the deterrents’ credibility. If firms do not believe that punishment would be severe or there would be any retaliation, deviations are highly likely. In *Air Liquide / Messer Targets*, selective undercutting has been identified as a likely and effective retaliation in the German bulk markets.¹³⁶

3.2.3 Monitoring deviations

Credible deterrent mechanisms have the ability to prevent coordinating firms from deviating only when the deviations can be timely detected. To catch deviations in a timely fashion, markets need to be sufficiently transparent.¹³⁷ In *Airtours*, the CFI requires that to determine whether firms are coordinating

¹³¹ EU Horizontal Merger Notice, *Supra note 3*, para 45.

¹³² Case COMP/M.2097, para 148.

¹³³ EU Horizontal Merger Notice, *Supra note 3*, para 48.

¹³⁴ Case IV / M.190, para. 123

¹³⁵ Case COMP/M.2533, para 111.

¹³⁶ Case COMP/M.3314.

¹³⁷ EU Horizontal Merger Notice, *Supra note 3*, para. 65

their actions, the Commission must establish that each coordinating firm has the ability to gain information about other members' behaviour.¹³⁸

The key element of evaluating market transparency is to "identify what firms can infer about the actions of other firms from the available information".¹³⁹ In *MCI WorldCom / Sprint*, product homogeneity and the price transparency prices made it easy for firms to monitor their competitors' behaviour, and the excess refining capacity renders retaliation plausible.¹⁴⁰

3.2.4 Reactions of outsiders

The three conditions described above are analyzed from the coordinating firms' perspectives. Sometimes, the outsiders, e.g., non-coordinating firms, potential competitors and customers, can jeopardise coordination by their reactions. For instance, the price increases resulting from coordination may induce potential competitors to enter the market. The countervailing buy power may also make coordination between sellers less likely. The Commission did not find coordinated effects in the newsprint market in *Enso / Stora* partly because there is some potential competition from Canada and some of the largest buyers appear to have countervailing purchasing power.¹⁴¹

3.3 Vertical Effects

Vertical mergers are mergers between firms that operate at different levels of the supply chain. In contrast to horizontal mergers which might either directly eliminate competition, or increase the scope of collusion, vertical mergers are less likely to harm competition. Normally, a vertical merger will have negative effects on competition if the merged firm may make it difficult for its competitors to access to production supplies or distribution channel.

The anticompetitive effects of a vertical merger are either to increase competitors' costs or to decrease competitors' revenue.¹⁴² These effects are associated with the foreclosure of input or customers. Input foreclosure will increase rivals' costs and customer foreclosure will decrease rivals' revenues.

On 28th November 2007, the Commission issued *Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings* (the EU Non-horizontal Merger Notice) to elaborate the appraisal process on vertical and conglomerate mergers.¹⁴³ The EU Non-horizontal Merger Notice notes that non-horizontal mergers are "less likely to significantly impede effective competition" both because no competition is directly eliminated and because efficiency gains are pro-

¹³⁸ Case T-342/1999, *Airtours v Commission*, 2002 E.C. R. II-2585, para 62.

¹³⁹ EU Horizontal Merger Notice, *Supra note 3*, para. 50

¹⁴⁰ Case COMP/M.1741, para. 261.

¹⁴¹ Case COMP/M.1225, OJ L 254, 1999, para. 68.

¹⁴² Church (2004), *Supra note 28*, at v.

¹⁴³ Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 265, 18.10.2008, p. 6–25 .

vided.¹⁴⁴ In assessing the anticompetitive effects of vertical mergers, primarily foreclosure, the Commission first examines the merged firm's ability to foreclose access to input or customers and second examines that firm's incentive to do so.¹⁴⁵

3.3.1 Ability to foreclose access

Foreclosure could be workable only when there are very few (or no) alternatives for competitors besides the resources, input or customers controlled by the merged firm. An investigation of input foreclosure focuses on alternative supply sources and switching costs, whereas customer foreclosure focuses on the distribution channels of other upstream firms. Supply foreclosure was found in *E.ON / MOL*,¹⁴⁶ in which the Commission concluded that the merged firm would have the ability to foreclose its competitors' access to wholesale gas, because E.ON would be the only gas retailer with access to the TOP import contracts for MOL WMT on Hungary's post-merger market.¹⁴⁷ In addition, customer foreclosure was identified in *ENBW/ EN / GVS*¹⁴⁸. The Commission found that EnBW's subsidiary NWS is one of GVS's ten shareholders, with a stake of 33.40% and thus, the merger would secure GVS's sale to NWS, which would create a certain degree of customer foreclosure.¹⁴⁹

3.3.2 Incentive to foreclose access

A firm's incentive to foreclose depends on the degree to which it is profitable.¹⁵⁰ Increased downstream sales should not only compensate for decreased upstream sales but also create more profit for the merged firm. In *NESTE / IVO*, the merged firm would be able to compensate for a decrease in natural gas sales volumes through increased electricity sales and its decision about pricing natural gas would be of crucial importance, not only in the market for natural gas sales, but also in the wholesale electricity market.¹⁵¹ This could create an incentive to foreclose.

3.3.3 Coordinated effects

Vertical mergers might have the potential to facilitate market coordination. Collusion requires market transparency. Vertical integration enables a firm to obtain full information of both its up- and down-stream market. This information will allow the firm to communicate, more easily monitoring its rivals. The

¹⁴⁴ Id, para. 11-13

¹⁴⁵ Id, para 32

¹⁴⁶ Case COMP/M.3696.

¹⁴⁷ Id, para. 404.

¹⁴⁸ Case COMP/M.2822.

¹⁴⁹ Id, para. 54-57.

¹⁵⁰ EU Non-horizontal Merger Notice para. 68

¹⁵¹ Case IV/M.931, para 47

Commission has discussed this type of concern in *Accor / Hilton / Six Continents*.¹⁵²

3.4 Conglomerate Effects

Conglomerate mergers are mergers between firms that have no existing or potential competitive relationship as competitors, suppliers or customers.¹⁵³ The parties to a conglomerate merger operate in different markets, with no horizontal or vertical overlap, so conglomerate mergers generally will not lead to any competition problems.

Competition concerns about conglomerate effects are very special cases and are based primarily on the theory of portfolio effects (or range effects in the US), which is based on the theory that “the market power deriving from a portfolio of brand exceeds the sum of its parts”.¹⁵⁴ That is to say, a firm may extend its market power in one market to another by tying, bundling or other practices. This type of action could end competition if the firm has a dominant position in a production market. For example, Firm 1 produces two closely related products A and B, where A provides Firm 1 with a dominant position. Firm 1 can then bundle products A and B as a package offer. Because of the popularity of A, most customers might choose the bundling product instead of buying B from other suppliers. In this way, Firm 1 expands its market power in A’s product market to B’s product market.

Conglomerate merger appraisal focuses on mergers between firms active in closely related markets,¹⁵⁵ where the merged firm could possibly leverage its strong market position from one market to another by tying, bundling or other practices. The Commission has raised concerns about conglomerate effects that fall into in this group only a very few cases, e.g., *General Electric / Honeywell* and *Procter & Gamble / Gillette*. In *Procter & Gamble / Gillette*, the Commission identified several brands of the parties to be “must stock brands” that would enable the merged firm to leverage its market power from these market to others.¹⁵⁶

The conglomerate effects identified by the Commission are controversial in both academic and legal practise. Some competition concerns about conglomerate effects have been overruled by the CFI, e.g., *Tetra pak / Alfa-Laval* and *General Electric / Honeywell*.

¹⁵² Case COMP/M.3101, para 23-28

¹⁵³ Damien J. Neven, 2005, *The analysis of conglomerate effects in EU merger control* Available at: <http://ec.europa.eu/dgs/competition/economist/conglomerate.pdf> [2009, 04/25]. at6.

¹⁵⁴ Lisa M. Renzi, *The GE/Honeywell Merger: Catalyst in the Transnational Conglomerate Merger Debate*, 37 *New England. Law Review*. 109, pp123.

¹⁵⁵ EU Non-horizontal Merger Notice, para. 91

¹⁵⁶ Case COMP/M.3732, para. 110

3.5 Merger Remedies Addressing Different Competition Concerns

The first article of this dissertation reported quantitative research identifying the Commission’s most frequently accepted merger remedies for each type of competition concerns. The results show that horizontal effects are more likely to require structural remedies, such as transfer commitments and exit commitments, whereas vertical effects are more likely to require behavioural remedies, such as supply commitments and access commitments.

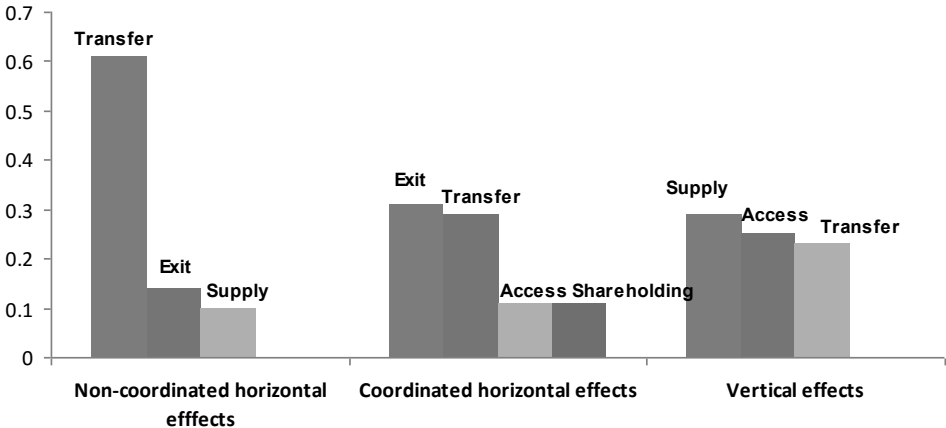


Figure 2. Frequently accepted remedies and competition concerns

4. EU Merger Control and Article 102

4.1 The Origin of EU Merger Control

Prior to the ECMR, merger control in Europe was mainly within the purview of national competition authorities. Although the Treaty of Rome¹⁵⁷ that established the European Economic Community grants the Commission extensive regulatory power in other areas of competition law, it does not contain any express merger control provisions and is silent about the Commission's authority over merger control. The principal competition law rules are contained in Articles 101 and 102, TFEU. Article 101 prohibits agreements or concerted practices between undertakings that restrict and distort competition within EU. Article 102 bans the abuse of a dominant position by one or a group of undertakings insofar as it may affect trade between member states. The Commission attempted to control mergers that affected competition at Community level with Articles 101 and 102.¹⁵⁸ Article 102 was used to stop acquisitions by firms that enjoyed a dominant position in the Community or a substantial part of it. Moreover, the acquisition of a minority share might be caught by Article 101.¹⁵⁹ The Commission's position in this regard was upheld by the European Court of Justice (ECJ) in *Continental Can*¹⁶⁰ (1971). However, Articles 101 and 102 are not sufficient to control all concentrations that may prove incompatible with the common market.¹⁶¹ Obviously, the direct use of Articles 101 and 102 to control mergers has numerous limitations, for example, Article 102 could not be applied if the acquiring company did not have a dominant position.

To solve this problem, the ECMR was adopted in 1989 to establish a Community-level merger control system to assess mergers with a Community dimension on competition grounds. This represented a significant transfer of authority from member states to the Community. Based on the "one-stop shop" principle, the Commission has the sole authority to assess mergers with a Community dimension and its merger decisions are valid throughout the EU. From then on, merger control operated independently under EU competition law, as one of the four main policy areas together with Article 101 (control of

¹⁵⁷ Treaty Establishing the European Economic Community, Mar. 25, 1957, 298 U.N.T.S. 11.

¹⁵⁸ See Commission's Memorandum on the Problems of Concentrations in the Common Market, Brussels 1966.

¹⁵⁹ *BAT*, Case 142, [1987] ECR 4487, and *Reynolds v. Commission*, case 156/84, [1988] 4 CMLR 24.

¹⁶⁰ Case C-6/72 *Continental Can v Commission* [1973] ECR 215, [1973] CMLR 199, paras 24 and 26.

¹⁶¹ ECMR, recital 7.

collusion), Article 102 (prevention of abuse of dominant position) and control of state aid.

4.2 A Comparison between EU Merger Control and Antitrust Practices

4.2.1 Similarity

Among the four policy areas of EU competition law, the practice of merger control and Article 102 are more similar than the other two because of their consideration of dominance. In both merger and antitrust cases, it is crucial to determine whether the firm(s) concerned might create/strengthen or have already enjoyed a dominant position in either the common market or a substantial part of it.

The substantive test of EU merger control is whether a merger would “significantly impede effective competition in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position”.¹⁶² Therefore, a merger with a Community dimension that creates or strengthens a dominant position should be declared incompatible with the common market. It has been found that “a significant impediment to effective competition generally results from the creation or strengthening of a dominant position.”¹⁶³ In most fully-invested merger cases, a competitive analysis establishes whether a dominant position would be created or strengthened by the merger.

In antitrust cases, it is also necessary to define a dominant position in antitrust cases. Because Article 102 will only condemn the abusive behaviours of a firm in a dominant position, an antitrust investigation should establish two factors: a dominant position and abusive conduct. The Commission’s current approach to assessing abusive conduct is a two-step process: first, to determine whether the firm in question enjoys a dominant position; and second, if dominance is identified, to assess whether the firm’s behaviour is abusive.

4.2.2 The difference

Although the practices of merger control and Article 102 serve the same purposes, they have difference related to their intervention time and targets.

Ex ante v.s. Ex post

Merger control and Article 102 provide competition with two types of protection to competition: ex ante and ex post. Merger control works ex ante. It assesses the merger’s consequences before they occur. Article 102 operates ex post by detecting violation on the basis of the facts of a firm’s actual conduct in a particular situation.

The ex ante nature of merger control makes it a very powerful competition policy tool. Pursuant to the ECMR, merging firms must notify the Commission

¹⁶² ECMR, Article 2(2).

¹⁶³ Id, recital 26.

before implementing a merger within a week of concluding a merger agreement or making a public announcement of the transaction, and the merger should then be suspended until it has been declared compatible with the common market.¹⁶⁴ The prior notification and suspension of transactions have changed the game and given the Commission considerable leverage to demand remedies. First, merger investigation can take several months. In the EU, the phase I investigation may take one or two month (the latter, if remedies are proposed), whereas if the phase II investigation is triggered, the delay can be prolonged for several additional months. Second, suspension extends to the entire merger. Even if competition concerns were only raised in one or two relevant markets, merger activities in other markets also pause until the concerned markets are cleared. Consequently, to accelerate the investigation process, the merging firms may choose to actively cooperate with the Commission and accommodate their remedies design to materially fulfil the Commission's expectation.

Article 102, in contrast, involves ex post correction. The Commission makes decisions based on firms' actual behaviours. To condemn an antitrust infringement, the Commission must establish that the specific behaviour(s) of a dominant firm is abusive. It does not have the leverage of suspending any of the firm's business before Article 102 violation is confirmed. The Commission's intervention and the threat of enormous fines might lead the firm to commit to behavioural remedies, but this remains far different from requiring it to change its corporate structure.

Potential effect v.s. Actual behaviour

Merger control and Article 102 have different targets, potential effects and actual behaviours.

Merger control intends to detect a merger's potentially negative effects on competition. For instance, if the Commission proves that a dominant position would be created, the merger is unacceptable. There is no further requirement to demonstrate the specific competition problem that may be caused by the negative effect.

Conversely, Article 102 aims at preventing a firm in a dominant position from abusing its position. Under Article 102, a dominant position held by one or more firms is not illegal per se; only abuse of a dominant position is forbidden. Thus, the focus of Article 102 is unitary behaviours. To condemn an antitrust infringement under Article 7 of Regulation 1/2003, the Commission must establish that a dominant firm has committed specific abusive behaviour(s) has been committed in the past.

4.3 Antitrust Remedy

Regulation 1/2003 has empowered the Commission to impose any remedy, whether behavioural or structural, to bring the infringement of Article 101 and

¹⁶⁴ ECMR, Article 4(1) and 7(1).

102 effectively to an end.¹⁶⁵ Remedies can be imposed under either Article 7 or Article 9 of Regulation 1/2003. These two articles have varied provisions on the adoption of remedies and the Commission has the discretion to decide which procedure it will follow when making a decision.

4.3.1 Remedies under Article 7

According to Article 7, the Commission may impose any behavioural or structural remedies that are both proportionate to the infringement committed and necessary to bring the infringement effectively to an end, but “structural remedies can only be imposed either where there is no equally effective behavioural remedy or where any equally effective behavioural remedy would be more burdensome for the undertaking concerned than the structural remedy.”

First, the remedies under Article 7 should be imposed by the Commission on its own initiative and based on the findings of an infringement of Article 101 or 102 TFEU. The Commission has to adduce evidence in its decision for both the condemnation of an unlawful behaviour and the suitability of the remedies imposed.

Second, Article 7 sets a high bar for the adoption of structural remedies. Structural remedies can only be used as a last resort by the Commission to cease and deter similar infringements when there is no equally effective behavioural remedy. As indicated by Regulation 1/2003, a structural remedy that changes an undertaking’s structure can be proportionate only when “there is a substantial risk of a lasting or repeated infringement derives from the very structure of the undertaking.”¹⁶⁶ One way to justify the adoption of a structural remedy is to find that the firm concerned has previously committed similar infringement. Repeated, abusive conduct by the same dominant firm suggests that the behavioural remedies adopted in the previous cases have failed and more drastic measures, i.e., structural remedies, are warranted.

Third, the text of Article 7 establishes the principle of proportionality as a rule for remedies. Under Article 7, the Commission must impose remedies “which are proportionate to the infringement committed and necessary to bring the infringement effectively to an end.”¹⁶⁷

4.3.2 Remedies under Article 9

According to Article 9, if the Commission intends to adopt a decision requiring that an infringement be stopped and the undertakings concerned offer commitments to resolve the concerns expressed in the Commission’s preliminary assessment, the Commission may decide to make commitments binding on the undertakings. There is no limitation on the adoption of structural remedies.

¹⁶⁵ Council Regulation (EC) No 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 the Treaty, OJ L 1, 4.1.2003, recital 12.

¹⁶⁶ Regulation 1/2003, recital 12.

¹⁶⁷ *Ibid*, para 39.

First, Article 9 remedies are offered by the concerned firm, and the Commission may decide whether or not to accept those remedies. If the Commission accepts the remedies, it shall decide whether to make the remedies legally binding on the firm.

Second, the purpose of Article 9 remedies is not to condemn infringement, but to alleviate the concerns expressed by the Commission in its preliminary assessment. Remedies are proposed in the course of antitrust investigation and do not support the existence of unlawful behaviours. Once the Commission accepts the remedies, the investigation is ended. It is worth noting that a decision under Article 9 does not conclude whether there has been an infringement, and the appropriateness of the remedies is assessed in light of the concerns expressed in the Commission's preliminary assessment.

Third, according to Recital 13 of Regulation 1/2003, the Commission cannot impose both fines and remedies in an Article 9 decision because it has made no conclusion about the existence of antitrust conduct or cartel infringement. Once the Commission accepts the remedies proposed by the concerned firm, it should terminate its investigation and cannot levy any fine unless the firm violates the remedy agreement.

Fourth, the principle of proportionality is not mentioned in Article 9. This does not mean that the Commission can neglect making a proportionality assessment for Article 9 remedies. The Court of First Instance (CFI) clearly noted in its *Alrosa* judgment that although Article 9 does not refer to the principle of proportionality, the Commission is obliged to comply with that principle when it adopts decisions based on Article 9.¹⁶⁸

That said, the extent of proportionality assessment is different under Article 7 and 9. The CFI once held that Article 7 should serve as a reference for the extent of the commitments accepted under Article 9,¹⁶⁹ but this conclusion has been overruled by the ECJ in its *Alrosa appeal* judgement.¹⁷⁰ The ECJ confirms the different application of the principle of proportionality under these two provisions. Under Article 9, the Commission's obligation with respect to the principle of proportionality 'is confined to verifying that the commitments in question address the concerns it expressed to the undertakings concerned and that they have not offered less onerous commitments that also address those concerns adequately.'¹⁷¹ The ECJ further confirms that under Article 9, 'the Commission has a wide discretion to make a proposed commitment binding or to reject it.'¹⁷² In practice, the Commission's proportionality assessment considers whether remedies are voluntarily proposed by the concerned firm.¹⁷³

In sum, antitrust remedies can be adopted under either Article 7 or 9 of Regulation 1/2003. In contrast, Article 7 has stricter requirements for the condemnation of violations and the proportionality of remedies. Article 7 reme-

¹⁶⁸ Case T-170/06, *Alrosa v European Commission* [2007] ECR II-2601, 11 July 2007, para 92.

¹⁶⁹ *Ibid*, para 101.

¹⁷⁰ Case C-441/07 P, *European Commission v Alrosa*, 29 June 2010, para 45.

¹⁷¹ *Ibid*, para 41.

¹⁷² *Ibid*, para 94.

¹⁷³ See Case COMP/39.402 *RWE Gas Foreclosure* (18 March 2009), OJ 2009/C 133/ 10, para 46.

dies are expected to effectively put an end to an infringement, but Article 9 remedies need only address the concerns expressed in the Commission's preliminary assessment. Article 9 provides a sort of shortcut to or bypass of anti-trust remedies, particularly structural remedies, avoiding the strict stipulation in Article 7. In antitrust cases, structural remedies have only been imposed in the context of Article 9 decisions, and they remain unknown under Article 7.

4.4 Differences in Remedy Practice under EU Merger Control and Article 102

Remedies adopted under merger control and Article 102 have the same purpose, which is to relieve potentially competitive detriments to preserve the efficiencies.¹⁷⁴ However, the practice of remedy policy in these two areas is varied, e.g., structural remedies are preferred in merger cases, whereas they are strictly limited in antitrust.

4.4.1 Preference for Structural Remedies in Merger Control

Structural remedies are preferred to behavioural remedies in EU merger control. The EU Merger Remedies Notice indicates that structural remedies are preferable because of their structural nature, which is more suitable to achieve the basic aim of commitments: i.e., ensuring competitive market structures.¹⁷⁵

The ICN Merger Remedies Review notes that, compared to a behavioural remedy, a structural remedy is likely to be more effective because it directly dissolves the source of the competitive harm directly and causes lower ongoing monitoring costs or possible market distortion, which is why, at least for horizontal mergers, many jurisdictions consider structural remedies preferable to behavioural remedies.¹⁷⁶

The results of this study's first article confirmed the predominance of structural remedies in EU conditional merger decisions. That article shows that from 1990 to 2008, the Commission made 88 phase II conditional clearance decisions; 75% of the competition concerns of those cases were resolved by divestiture remedies.¹⁷⁷ More specifically, transfer commitments are the most popular remedy for non-coordinated horizontal effects, and exit commitments are the best for coordinated horizontal effects, such as supply commitments for vertical effects.¹⁷⁸

¹⁷⁴ Efficiency, in economics, refers to the use of resources so as to maximize the production of goods and services (Sullivan, Arthur & Steven M. Sheffrin, *Economics: Principles in action* (Upper Saddle River, New Jersey 07458: Pearson Prentice Hall, 2003), 15. There are several types of efficiency, such as productive efficiency, allocative efficiency, and technical efficiency. In EU competition law practice, the term 'efficiency' receives different interpretations, which lead to different approaches adopted by the Commission. The debate is on what efficiency is the ultimate goal of the competition law, only allocative efficiency or all types of efficiency as a whole.

¹⁷⁵ EU Merger Remedies Notice, *Supra note 36*, para 15.

¹⁷⁶ ICN Merger Remedies Review, para.3.7

¹⁷⁷ Wei Wang & Matti Rudanko(2012), *Supra note 23*, 570

¹⁷⁸ *Id.*, 575.

4.4.2 The Limited Use of Structural Remedies in Antitrust Cases

Conversely, structural remedies are very rare under Article 102. Because the Commission began to fight the abuse of dominant positions in the 1960s, it never required or imposed any structural remedies until 2008. Regulation 17, the processor of Regulation 1/2003, was silent with respect to whether remedies might be adopted under Article 102. It was not until 2003 that Regulation 1/2003 explicitly allowed the adoption of remedies under Articles 101 and 102.

In light of Regulation 1/2003, structural remedies can be adopted as a last resort only when there is no equally effective behavioural remedy available or where any equally effective behavioural remedy would be more burdensome than a structural remedy.¹⁷⁹ The first structural remedy was accepted in *E.ON Electricity* (2008).¹⁸⁰

4.4.3 Reasons

This study's third article gives four reasons for the different treatment of structural remedies under merger control and Article 102.¹⁸¹

(1) Regulatory Empowerment: 2004 v. 1990

The first reason for this situation is EU secondary law accepts structural remedies for merger control in 1989, but not for antitrust until 2003.

(2) Objectives of Correction: Behaviours v. Incentive

The second reason is related to the differing objectives of antitrust and merger control. Merger control enables competition authorities to regulate changes in market structure, in particular, concentration, and Article 102 aims at preventing a firm in a dominant position from abusing its position.

(3) Time of Intervention: ex-post v. ex-ante

The third reason lies in the differing time of intervention between antitrust and merger control. Merger control and Article 102 provide two kinds of protection to competition, ex-ante and ex-post.

(4) Practical Difficulties: Divestiture v. Fines

The fourth and the most obvious reason might be the practical difficulties of splitting a unitary firm without causing efficiency loss. The clear demarcations between the merging firms facilitate application of structural remedies.

¹⁷⁹ Council Regulation (EC) No 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 the Treaty, OJ L 1, 4.1.2003, recital 12.

¹⁸⁰ Case COMP/39.388 *German Electricity Wholesale Market* & COMP/39.389 *German Electricity Balancing market* (26 November 2008), OJ 2009/ C 36/ 8, available at http://ec.europa.eu/competition/antitrust/cases/dec_docs/39388/39388_2796_3.pdf, accessed on 28 March 2011.

¹⁸¹ Wei Wang, *Structural Remedies in EU Antitrust and Merger Control*, *World Competition* 34, no. 4 (2011): 571 – 596, at 576-581.

5. Designing Merger Remedies under the Entire Competition Law Structure

Remedies are a tool used by the competition authorities to correct and discipline firms' conducts; most importantly, however, they are a mechanism to realise the purposes of competition law. Merger remedies prevent potential competitive harms while enabling other efficiencies and competitive benefits. Conversely, merger remedies are always accompanied by direct costs, indirect costs and potential efficiency losses.

Merger remedy design is a complex process and depends on every perspective of the delicate situations involved in each case. It can be more challenging than determining whether a merger is harmful because it requires a far more complex, forward-looking assessment of all unlawful conduct that could create the same anticompetitive effects under plausible future circumstances.

“The call for a more dynamic approach is confounding because there is no learning presently available—nothing ready to wear, as it were—to give a greater temporal dimension to the analysis of a proposed merger or to the long-run effects of a business practice.”¹⁸²

Accordingly, remedy designs need a systematic and consistent framework based on an effective competition law policy. An effective system only functions through consistent, balanced *ex ante* and *ex post* enforcement. Merger remedy design should be considered under the entire EU competition law structure. There are at least three ways to achieve this goal. The first is to coordinate remedy practise under merger control and antitrust, the second is to consider Article 102 when designing merger remedy, and the third is to postpone the implementation of merger remedies on conditions.

5.1 EU Competition Law Structure

The first modern competition law, the Sherman Act, was passed in the US in 1890; it was intended to combat against big trusts and monopolization.¹⁸³ Section 1 of the Act prohibits contracts, combinations, and conspiracies in restraint of trade, and section 2 bans monopolization, conspiracies and attempts to monopolize. The Clayton Act was passed in 1914 to stop mergers or acquisitions that are likely to substantially lessen competition. The EU competition

¹⁸² Douglas H. Ginsburg & Joshua D. Wright, *Dynamic Analysis and the Limits of Antitrust Institutions*, 78 *Antitrust Law Journal* No. 1 (2012), at 20-21.

¹⁸³ For a good view of the US competition law history, please see eg. Phillip Areeda, Louis Kaplow, Louis Kaplow, *Antitrust Analysis: Problems, Text, and Cases*, (Aspen Publishers, 6th ed, 2004).

law system built after the World War II adopted a structure similar to that of the US. The EU competition law has three main policy areas, which are also referred as three pillars, i.e., Article 101, Article 102 and the ECMR.

Although guided by different competition rules, the three policy areas together form a dynamic competition system.

First, the three areas serve the same purpose: preventing the distortion of competition in the common market.

Second, the three areas apply the same economic and legal analysis tools and therefore, one area's experiences and lessons can be shared by the other areas.

Third, the three areas address different anti-competitive activities and complement each other in preserving competition. Article 101 prevents anti-competitive activities by two or more undertakings. Article 102 stops abusive conduct by, in most cases, a single dominant firm. ECMR monitors mergers. Jointly, the three policy areas build a safety net for market competition.

Fourth, the three areas supervise business at all stages. Article 102 governs undertakings that already hold dominant positions. The ECMR governs undertakings that are attempting to obtain or strengthen dominant positions through mergers. Article 101 shows no preference for any particular business stage. In the course of its development, an undertaking may experience more competition-related discipline.

5.2 The Convergence of Remedies Practice under Competition Law

Although structural remedies are more favourable in merger cases whereas behavioural remedies are more favorable in cases of abusive misconduct, the principles of an appropriate remedy are the same. The application of a remedy under competition law should be consistent, that is, if it is applicable, the same competition harm should be resolved by the same type of remedies under similar terms. The experience gained through remedy design in one policy area may be shared with the other policy area to help create better remedies in the other instrument.¹⁸⁴

A clear example is the first antitrust case closed with structural remedies, *E.ON Electricity*.¹⁸⁵ A structural solution was used to fix the problem because the abusive behaviours were derived from the structure of the market.¹⁸⁶ The Commission's investigation ended with the first divestiture remedy package accepted under Article 9 of Regulation 1/2003. The divestiture experience obtained by the Commission in merger control must have provided good support for this first antitrust divestiture remedy.

¹⁸⁴ See, Alexander Italianer (2012), *Supra note 41*, at 7.

¹⁸⁵ Case COMP/39.388 *German Electricity Wholesale Market* & COMP/39.389 *German Electricity Balancing market* (26 November 2008), OJ 2009/ C 36/ 8, available at http://ec.europa.eu/competition/antitrust/cases/dec_docs/39388/39388_2796_3.pdf, accessed on 28 March 2011.

¹⁸⁶ Inquiry pursuant to Article 17 of Regulation (EC) No 1/2003 into the European gas and electricity sectors (Final Report), Brussels, 10.1.2007, recital 437-448.

Experience may also flow from antitrust to merger control. For example, in *Intel/ McAfee*, Intel undertook to ensure that, on an ongoing basis and in a timely manner, instruction, interoperability, and optimization information is documented and available for use by third-party vendors of endpoint security software on a royalty-free basis.¹⁸⁷ The Commission found that this would be an effective solution based on both market testing and its experience in *Microsoft*.¹⁸⁸

The third article in this study, *Compulsory Licensing as Antitrust and Merger Remedy in EU*, argues that the experience of remedy design in the area of compulsory licensing should be shared between merger control and antitrust.

5.3 Considering Article 102 in Merger Assessment

In light of the applicable rules, when assessing the likelihood of post-merger conduct that would hinder effective competition in a relevant market, the Commission should analyse both its possible anti-competitive effects and the relevant countervailing factors.¹⁸⁹ The deterrent effects of the competition law and other relevant rules may help prevent the occurrence of anti-competitive behaviours. There is also a question of whether the Commission should consider the deterrent effect of Article 102 when assessing the possibility that merging firms might adopt a particular type of abusive behaviour. If that is the case, what should the Commission do?

These issues were considered first in *Tetra Laval I*.¹⁹⁰ The CFI ruled that in the Commission's merger analysis, it should consider the likelihood of compliance with Article 102.

“When the Commission, in assessing the effects of such a merger, relies on foreseeable conduct which in itself is likely to constitute abuse of an existing dominant position, it is required to assess whether, despite the prohibition of such conduct, it is none the less likely that the entity resulting from the merger will act in such a manner or whether, on the contrary, the illegal nature of the conduct and/or the risk of detection will make such a strategy unlikely. While it is appropriate to take account, in its assessment, of incentives to engage in anti-competitive practices, ... the Commission must also consider the extent to which those incentives would be reduced, or even eliminated, owing to the illegality of the conduct in question, the likelihood of its detection, action taken by the competent authorities, both at Community and national level, and the financial penalties which could ensue.”¹⁹¹

The Commission appealed to the ECJ in 2003 and the ECJ handed down its decision in *Tetra Laval II* in 2005.¹⁹² The ECJ held that the CFI was right to

¹⁸⁷ M.5984 INTEL/ MCAFEE,

¹⁸⁸ “Here the lessons learnt from merger divestitures also served us well.” Alexander Italianer (2012), *Supra note 41*, At 5.

¹⁸⁹ EC Horizontal Merger Notice, para. 12.

¹⁹⁰ Case T-5/02, *Tetra Laval BV v Commission of the European Communities*, 25 October 2002, ECR 2002 II-04381.

¹⁹¹ Case T-5/02. ECR 2002 II-04381, para. 159.

¹⁹² Case C-12/03 P, *Commission v Tetra Laval* [2005] ECR I-987, 15 February 2005.

decide that the likelihood of a merged firm's adopting abusive conduct must be examined comprehensively.¹⁹³ The ECJ also noted that requiring such an extensities examination by the CFI "would run counter to the Regulation's purpose of prevention".¹⁹⁴

"It follows that, at the stage of assessing a proposed merger, an assessment intended to establish whether an infringement of Article 82 EC is likely and to ascertain that it will be penalised in several legal orders would be too speculative and would not allow the Commission to base its assessment on all of the relevant facts with a view to establishing whether they support an economic scenario in which a development such as leveraging will occur."¹⁹⁵

Neither *Tetra Laval I* nor *Tetra Laval II* indicated whether considering Article 102 in a merger assessment should be confined to the conglomerate effect or whether instead it should be generally applied to all types of mergers. In the later *GE* case, when discussing a merger's vertical effect, the CFI followed *Tetra Laval II* and held that the Commission should consider the potentially deterrent effect of Article 102 based on evidence available at the time.¹⁹⁶

"The Commission must, in principle, take into account the potentially unlawful, and thus sanctionable, nature of certain conduct as a factor which might diminish, or even eliminate, incentives for an undertaking to engage in particular conduct. That appraisal does not, however, require an exhaustive and detailed examination of the rules of the various legal orders which might be applicable and of the enforcement policy practised within them, given that an assessment intended to establish whether an infringement is likely and to ascertain that it will be penalised in several legal orders would be too speculative.

.....

It follows that, although the Commission is entitled to take as its basis a summary analysis, based on the evidence available to it at the time when it adopts its merger-control decision, of the lawfulness of the conduct in question and of the likelihood that it will be punished, it must none the less, in the course of its appraisal, identify the conduct foreseen and, where appropriate, evaluate and take into account the possible deterrent effect represented by the fact that the conduct would be clearly, or highly probably, unlawful under Community law."¹⁹⁷

These cases indicate that when assessing the likelihood of post-merger conduct, particularly in vertical and conglomerate merger cases, which could hinder effective competition in a relevant market, the competition agencies should consider not only the factors that might trigger unlawful behaviour but also the deterrent effects of the competition law and other relevant rules.

5.4 Postponing the Implementation of Merger Remedies on Conditions

Typically, merger remedies are fully provided in the commitments made by the merged firms to the Commission, containing specific conditions and obliga-

¹⁹³ Case C-12/03 P, *Commission v Tetra Laval* [2005] ECR I-987, 15 February 2005, para. 74.

¹⁹⁴ *Id.*, para. 75.

¹⁹⁵ *Id.*, para. 77.

¹⁹⁶ Case T-210/01, *General Electric Company v the Commission*, [2005] II-05575, paras 302-12,424-25.

¹⁹⁷ *Ibid.*, Para 73 & 75.

tions that the parties must take to render the merger compatible with the common market. Because the purpose of merger remedies is to remove concerns about likely anti-competitive effects, a merger remedy should prevent the merged firm from anti-competitive activities by countering the merger's effects on incentives. In other words, well-crafted merger remedies suppress the merged firm's incentive to act against competition rules.

Like the ex post discipline under Article 102, merger remedies are a deterrent mechanism to prevent a merged firm from engaging in unilateral anti-competitive behaviours following the merger. It has been observed that merger remedies (even those that are merely behavioural) that are attached to a merger decision are more effective than excessive reliance on Article 102 and constitute an instrument superior to Article 102.¹⁹⁸ If an optimal remedy is the one that produces the greatest overall efficiency gains net of enforcement and administrative costs,¹⁹⁹ assessment of the efficacy of merger remedies should be made in the context of the entire competition law system, not just one policy area.

“A weaker ex-post enforcement means an increased likelihood of false negatives, i.e., situations where competition law should have been used but was not (for various reasons).”²⁰⁰ To resolve this problem, merger control has been introduced with strong ex-ante intervention. The strong ex-ante power of merger control may compensate the weak antitrust enforcement in some perspectives but also bring the risk of false positive where remedies are implemented without an actual competition problem.

Given the poor quality of the information available when a merger decision is adopted, and given that every merger remedy comes with various types of costs, I propose an alternative method of enforcing enforce merger remedies: conditional merger remedies. Such remedies will not be immediately implemented and their implementation would be triggered only by certain conditions, such as a violation of Article 101 or 102 TFEU. Conditional merger remedies put a merger on probation for a period of time subject to conditions imposed by the Commission. Remedies will be enforced only if the merged firm violates the conditions during the time frame provided in the merger decision. There should be a time frame for conditional merger remedies and after expiration of the time frame, the conditional merger remedy will be no longer effective. Like probation adopted in criminal cases, conditional merger remedies should be applicable to the mergers that pose the risk of relatively minor harms.

Conditional merger remedies may be used on the following occasions:

¹⁹⁸ Torsten Käseberg, “Are Merger Control and Article 82 EC in the Same Market? – The Assessment of Mergers Which Facilitate Exclusionary Conduct under EC Merger Control”, 7 *European Competition Law Review* 409 (2006), at 423.

¹⁹⁹ Howard A. Shelanski & J. Gregory Sidakt, “Antitrust Divestiture in Network Industries”, 68:1 (2001) *University of Chicago Law Review* 1, at 5.

²⁰⁰ Pierre Larouche, ‘Legal Issues Concerning Remedies in Network Industries’, in *Remedies in Network Industries: EC Competition Law vs. Sector-specific Regulation*, ed. Damien Gérardin (Antwerp: Intersentia, 2004), 21., 32.

1) When divestiture is not proportionate or feasible. For example, if a divestiture is not feasible at the time of the merger review because of lack of a suitable purchaser, the Commission may agree to put the divestiture on hold, and once the merged firm is found guilty, e.g., under Article 102, the divestiture assets will be sold at a very low price to a competitor.

2) When behavioural remedies requires long-term, costly monitoring. For example, the Commission has found that firewalls are virtually impossible to monitor;²⁰¹ therefore, a firewall remedy may be replaced with a conditional remedy under which the merged firm shall be penalized with a fine if it is found violating Article 101 within e.g., five years.

3) When a remedy's impact on efficiencies is unclear. For example, because the compulsory license of a patent might have a negative impact on innovative efficiency, the Commission and the merged firm may agree that if the merged firm violates the obligations provided in the commitment agreement, the patent will be licensed under more favourable terms, such as free royalties.

The purpose of a conditional merger remedy is to suppress the merged firm's incentive to violate competition rules by increasing the price of engaging in anti-competition actions. In this way, it attempts to achieve more competitive benefits at a lower cost. On the one hand, the postponement of a remedy may allow potential efficiency to take place and decrease the potential for false negatives. On the other hand, the pre-established commitment agreement can save a great deal of the administrative cost of designing and justifying a remedy, particularly a structural remedy, in cartel and antitrust cases. Once the Commission has established that the merging firm violates competition rules, merger remedies will be enforced automatically.

²⁰¹ See, Alexander Italianer (2012), *Supra note 41*, at 6.

6. Summary and Conclusion

6.1 Summary

This study reviews EU merger remedy practice and attempts to find a way to mitigate the risks of merger remedies. It consists of four articles, each of which addresses a specific research question.

The first article analyses the relationship between merger remedies and competition concerns. The empirical results reveal that merger remedy design varies for various competition concerns. Horizontal effects require more structural remedies, such as transfer commitments and exit commitments, whereas vertical effects require more behavioural remedies, such as supply commitments and access commitments. More specifically, the Commission might require the parties to divest a portion of their overlapping business or assets to decrease the merged firm's market share when it is concerned about non-coordinated horizontal effects, or to relinquish its stocks in a joint venture to break the connection between the parties and their competitors to prevent coordinated horizontal effects. Supply commitments and access commitments could be good choices to alleviate vertical concerns.

The second article reviews merger control, particularly merger remedy practice, in China, compared to the EU approach. It finds that China's system of merger control is clearly patterned on the EU approach and simultaneously has unique Chinese characteristics. MOFCOM (the Chinese merger control agency) is struggling both to develop a merger control due process and to forge its own approach through daily practice. Compared to the Commission, MOFCOM is not aggressive, and its approach is relatively conservative and pro-consumer. However, MOFCOM's merger decisions continue to lack detail about how its conclusions are reached. Thin reasoning in the previous cases definitely increased the difficulties of anticipating the outcome of a merger assessment. The efficacy of these behavioural remedies might be questionable, because of their imprecise terms and lax monitoring measures. The combination of the Anti-Monopoly Law's multiple missions and the lack of transparency in merger review have created grave doubts about the goals of Chinese merger control.

The third article focuses on a specific type of remedy--compulsory licensing--and explores and compares its applications under Article 102 and merger control. This article explains that although EU antitrust and merger control adopted and designed compulsory licenses with significantly different agendas and conditions, the purpose of compulsory licensing is consistent: to spur in-

novation and protect consumer interests. One essential rule of designing a compulsory licence is that it is particularly important to strike an appropriate balance between preserving innovation incentives and addressing competitive detriments. To preserve competition, the mechanisms adopted under either Article 102 or merger control should not be confined to a single policy area. Antitrust and merger control should share their experience of compulsory licensing to ensure the proper application of compulsory licensing under the entire competition law system.

The fourth article explores the extremely different positions of EU antitrust and merger control with respect to structural remedies. It argues that the predominance of structural remedies in EU merger cases is primarily due to the Commission's leverage from prior notification mechanism and the clear demarcations between the merging firms that facilitate structural solutions. This indicates that EU competition law is not a coherent system because merger control is too strong and antitrust is too weak. Remedies, particularly structural remedies, are tools used by the competition authorities to correct and discipline the firms' conducts, but most importantly, they are mechanisms to realise the purposes of competition law. Remedy designs need a systematic and consistent framework based on an effective competition law policy. An effective system only functions through consistent, balanced ex ante and ex post enforcements. Thus, Article 102's deterrent power should be reinforced to increase its ability to fight unilateral anticompetitive behaviours; that said, merger control can show more tolerance for efficiency-enhanced mergers.

6.2 Conclusion

In conclusion, competition remedies, under both merger control and Articles 101 and 102, relieve potential detriments to competition so that efficiencies can be preserved. A remedy decision should balance numerous important, sometimes competing, considerations, such as efficacy, proportionality and costs. It is fair to say that the adoption of remedies under competition law is largely affected by the Commission's leverage at that time, which is not solely based on the merits of the case. Because of the relatively short time window and limited information available for the Commission to assess whether a merger would significantly impede competition and choose appropriate remedies, the real effects of some remedies may not agree with the Commission's expectation. Moreover, there is a risk that the Commission will be tempted to use merger remedies as an opportunity to redistribute resources among firms in an industry.

This study claims that remedy practice under the EU competition law should be coherent and consistent and that merger remedies should be considered and designed under the entire EU competition law structure, not merger control alone. It proposes three methods of achieving this goal:

- 1) Converging remedies practice under the entire competition law.

The application of remedies under competition law should be consistent, that is, if applicable, the same competition harm should be resolved by the same type of remedies imposed under similar terms.

2) Considering Article 102 when designing merger remedies.

The deterrent power of Article 102 should be considered in the merger assessment, particularly in vertical and conglomerate merger cases.

3) Postponing the implementation of merger remedies on conditions.

In some cases, the implementation of merger remedies may be postponed on conditions, e.g., when concerns are raised in the Commission's preliminary assessment.

6.3 The Significance of This Study

This study makes a useful contribution to the understanding of EU merger remedies in the context of the entire EU competition law structure. Studies on merger remedy are rare and very few studies discuss merger remedy design from the perspective of the competition law system in its entirety. This study fills the gap by exploring the differences between merger remedies and anti-trust remedies in the EU and offering suggestions improving the appropriateness of merger remedies by harmonising the remedy practise under Article 102 and the ECMR. It certainly has implications both for policymakers evaluating the current EU competition policy and for researchers exploring similar constructs for various issues under EU competition law.

6.4 Future Studies

Designing competition remedies, especially merger remedies, is always a complex task because remedies should effectively resolve competition problems while minimizing the impacts of those remedies on efficiencies. This study proposes considering merger remedies under the entire EU competition law structure. However, because of both resource limits and practical difficulties, this solution will require further assessment (both economic and juristic) of its reasonability and applicability. There are a lot of room for future studies. For example, in an antitrust case, can fines be imposed if the pre-agreed conditional merger remedies have been triggered? Can other types of measures be used as remedies in a competition case?

References

- Aarnio, Aulis. (2014). "Introduction by Aulis Aarnio", in Aleksander Peczenik, Jaap Hage, *On Law and Reason*, (Springer Science & Business Media).
- Aarnio, Aulis. (2011). *Essays on the Doctrinal Study of Law*, (Springer Science & Business Media).
- Adams, Williams James (1974). Market Structure and Corporate Power: the Horizontal Dominance hypothesis Reconsidered, 74(7) *Columbia Law Review* 1276.
- Areeda, Phillip & Kaplow, Louis. (2004). *Antitrust Analysis: Problems, Text, and Cases*, (Aspen Publishers, 6th ed).
- Klein, B. (1993). Market Power in Antitrust: Economic Analysis after Kodak, 3 *Supreme Court Economic Review* 43.
- Baker, J. B. (2002). A Preface to Post-Chicago Antitrust, in A. Cucinotta, R. Pardolesi and R. Van den Bergh (eds.) *Post-Chicago Developments in Antitrust Law* (Cheltenham: Edward Elgar,).
- Bergman M.A. & Rudholm, F. (2003). The relative importance of actual and potential competition Empirical evidence from the pharmaceuticals market, 51 (4) *Journal of Industrial Economics* 455.
- Besanko, D., Dranove, D. & Shanley, M. (1996). *The Economics of Strategy*, (John Wiley & Sons, INC.,).
- Bork, Robert. (1978). *the Antitrust Paradox: A Policy at War with itself*, (New York: Free Press).
- Brennan, Timothy J. (1982). Mistaken Elasticities and Misleading Rules, 95 *Harvard Law Review* 1849.
- Bruce Lyons & Andrei Medvedev, (2007). *Bargaining over Remedies in Merger Regulation*, CCP working Paper 07-3, 2, available at <http://ssrn.com/abstract=970250>.
- Cabral, L. (1996). *Introduction to Industrial Organization*, (MIT Press, Cambridge,).
- Commission's Memorandum on the Problems of Concentrations in the Common Market, (1966). Brussels.
- Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, OJ C 45, 24.2.2009
- Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, *supra* note.
- Davies S. & Lyons, B. (2008). *Mergers and Merger Remedies in the EU: Assessing the Consequences for Competition*, (Edward Elgar Publishing).
- Devlin, Alan. (2015). *Principles of law and economics*, (Routledge).
- DG Competition. (2005). *Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuses*, Brussels, available at <http://ec.europa.eu/competition/antitrust/art82/discpaper2005.pdf>.
- Farrell, Joseph & Klemperer, Paul. (2007). Ch. 31: *Coordination and Lock-In: Competition with Switching Costs and Network Effects*, in Richard Schmalensee & Robert Willig (ed.) *Handbooks of Industrial Organization*, Volume 3.

- Federal Trade Commission Staff. (1996). *Anticipating the 21st Century: Competition Policy in the New High-Tech, Global Marketplace*, available at: http://www.ftc.gov/opp/global/report/gc_v1.
- Ginsburg, Douglas H. & Wright, Joshua D. (2012). *Dynamic Analysis and the Limits of Antitrust Institutions*, 78 *Antitrust Law Journal* No. 1
- Goolsbee, Austan & Syverson, Chad. (2008). *How do Incumbents Respond to the Threat of Entry? Evidence from the Major Airlines*, 123(4) *The Quarterly Journal of Economics* 161.
- Gormsen, Liza Lovdahl. (2010). *A Principled Approach to Abuse of Dominance in European Competition Law*, Cambridge University Press,
- Gotts, Ilene Knable, Sher, Scott & Lee, Michele. (2008). *Antitrust Merger Analysis in High-Technology Markets*, *European Competition Journal*, Vol.4 No. 2.
- Greer, D.F. (1992). *Industrial Organization and Public Policy*, (New York, Macmillan Publishing Company, 3rd Ed).
- Herlin-Karnell, Ester & Konstadinides, Theodore. (2013). *The Rise and Expressions of Consistency in EU Law: Legal and Strategic Implications for European Integration*, in Catherine Barnard, Albertina Albors-Llorens, Markus W Gehring (ed), *Cambridge Yearbook of European Legal Studies*, (Bloomsbury Publishing, Vol 15 2012-2013).
- Husa, Jaakko. (2015). *A New Introduction to Comparative Law*, (Bloomsbury Publishing,).
- ICN Merger Working Group. (2005). *Analytical Framework Subgroup, MERGER REMEDIES REVIEW PROJECT Report for the fourth ICN annual conference Bonn*, available at: <http://www.internationalcompetitionnetwork.org/uploads/library/doc323.pdf>.
- Italianer, Alexander. (2012). *Legal certainty, proportionality, effectiveness: the Commission's practice on remedies*, Brussels Charles River Associates Annual Conference.
- Jones, Alison & Sufrin, Brenda. (2008). *EC Competition Law*, 3rd ed, (Oxford University Press,).
- Kaplow, L (1982). *the Accuracy of Traditional Market Power Analysis and a Direct Adjustment Alternative*, 95 *Harvard Law Review* 1817.
- Käseberg, Torsten. (2006). *Are Merger Control and Article 82 EC in the Same Market? – The Assessment of Mergers Which Facilitate Exclusionary Conduct under EC Merger Control*, 7 *European Competition Law Review* 409.
- Kwoka John E. & Moss, Diana L. *Behavioral Merger Remedies: Evaluation and Implications for Antitrust Enforcement*, available at: http://www.antitrustinstitute.org/sites/default/files/AAI_wp_behavioral%20remedies_final.pdf.
- Landes William W. & Posner, Richard A. (1981). *Market Power in Antitrust Cases*, 84 *Harvard Law Review* 937.
- Larouche, Pierre (2004). *Legal Issues Concerning Remedies in Network Industries, in Remedies in Network Industries: EC Competition Law vs. Sector-specific Regulation*, ed. Damien Gérardin (Antwerp: Intersentia).
- Lerner, Abba. (1934). *the Concept of Monopoly and the Measurement of Monopoly Power*, 1 *Review of Economics Study* 157.
- Lévêque, François & Shelanski, Howard. (2003). *Introduction*, in François Lévêque and Howard Shelanski (ed.), *Merger Remedies in American and European Union Competition Law*, (Edward Elgar Pub,).

- MacKaay, E. (2000). *History of Law and Economics*, Encyclopedia of Law and Economics, vol. 1, (Cheltenham, UK:Edward Elgar Publishing), available at: <http://encyclo.findlaw.com/o200book.pdf>.
- Miceli, Thomas J. (2004). *The Economic Approach to law*, (Stanford University Press).
- Monti, Giorgio. (2007). *EC Competition Law*, (Cambridge University Press,), Whish, Richard & Bailey, David. (2012). *Competition Law*, 7ed (OUP Oxford).
- Motta, M. Polo M. & Vasconcelos, H. (2007). *Merger Remedies in the European Union: An Overview*, 52 the Antitrust Bulletin.
- Neven, Damien J. (2005). *The analysis of conglomerate effects in EU merger control* Available at: <http://ec.europa.eu/dgs/competition/economist/conglomerate.pdf>.
- O'Donoghue, Robert & Padilla, A Jorge. (2006). *The Law and Economics of Article 82 EC*, (Hart Publishing).
- OECD, (2007). *Remedies and Sanctions in Abuse of Dominance Cases*, OECD Policy Roundtables, DAF/COMP(2006)19, available at <http://www.oecd.org/competition/abuse/38623413.pdf>.
- OECD, (2010). *Merger remedies*, round table series, DAF/COMP x 21, At 7.
- Parker, Richard & Balto, David. (2000). *The Evolving Approach to Merger Remedies*, available at: <http://www.ftc.gov/public-statements/2000/05/evolving-approach-merger-remedies>.
- Parkin, Michael. (2010). *Microeconomics*, 11th ed. (Pearson Education, Inc.).
- Posner, Richard A. (1976). *Antitrust Law, An Economic Perspective*, (the University of Chicago Press,).
- Ray, Patrick. (2003). *Economic Analysis and the Choice of Remedies*, in François Lévêque and Howard Shelanski. Phedon Nicolaidis, (2000). *An Essay on Economics and the Competition Law of the European Community*, 27 *Legal Issues of Economic Integration*.
- Renzi, Lisa M. (2002). *The GE/Honeywell Merger: Catalyst in the Transnational Conglomerate Merger Debate*, 37 *New England Law Review* 109.
- Scheffman, D.T. & Coleman, M. (2004). *Quantitative Analyses of Potential Competitive Effects from A Merger*, *George Mason Law Review*, vol. 12, 319.
- Schmalensee, Richard. (1982). *Another Look at Market Power*, 95 *Harvard Law Review* 1789.
- Shelanski, Howard A. & Sidakt, J. Gregory. (2001). *Antitrust Divestiture in Network Industries*, 68:1 *University of Chicago Law Review* 1.
- Smith, Adam. (2003). *the Wealth of Nation*, (Bantam Classics; Reprint edition).
- Starek Roscoe B. III & Stockum, Stephen. (1994). *What Makes Mergers Anticompetitive?: "Unilateral Effects" Analysis under the 1992 Merger Guidelines*, 63 *Antitrust Law Journal* 801.
- Sullivan, Arthur & Steven M. Sheffrin, (2003). *Economics: Principles in action* (Upper Saddle River, New Jersey 07458: Pearson Prentice Hall,).
- Sullivan, E. Thomas. (2003). *Antitrust Remedies in the U.S. and E.U.: Advancing a Standard of Proportionality*, 48(2) the *Antitrust Bulletin*, 377.
- Vickers, (2006). *Market power in competition cases*, 2 *European Competition Journal* 3.
- Wang, Wei & Rudanko, Matti (2012). *EU Merger Remedies and Competition Concerns: An Empirical Assessment*, 18(4) *European Law Journal* 555.
- Wang, Wei. (2011). *Structural Remedies in EU Antitrust and Merger Control*, *World Competition* 34, no. 4: 571–596.
- Weiss, L.W. (1979). "Structure-Conduct-Performance Paradigm and Antitrust", 127 *University of Pennsylvania Law Review* 1104.

Werden, George J. (2002). Assigning Market Share, 70 *Antitrust Law Journal*,
Zweigert, Konrad & Kötz, Hein. (1998). *An Introduction to Comparative law*, (CLAR-
ENDON PRESS; OXFORD University Press, 3 ed).

Legislations

Commission Notice on remedies acceptable under the Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004, (the EU Merger Remedies Notice), OJ 2008/C 267/1.

Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings, (the ECMR) Official Journal L 24, 29.01.2004. Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentration between Undertakings (the EU Horizontal Merger Notice), 2004/C 31/03, OJ 2004 C 31/5.

Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, (the EU Non-horizontal Merger Notice) OJ C 265, 18.10.2008.

Inquiry pursuant to Article 17 of Regulation (EC) No 1/2003 into the European gas and electricity sectors (Final Report), Brussels, 10.1.2007.

The Treaty Establishing the European Community, (the) OJ C 325, 24 December 2002.

The Treaty on the Functioning of the European Union, (the TFEU) OJ 2008 C 115/47.

The Treaty Establishing the European Economic Community, (the Rome Treaty) Mar. 25, 1957, 298 U.N.T.S. 11.

U.S. Dep't of Justice, Antitrust Division, Policy Guide to Merger Remedies (June 2011).

US Department of Justice, Antitrust Division Policy Guide to Merger Remedies, (the US Merger Remedies Guide 2004), October 2004.

US Department of Justice, Antitrust Division Policy Guide to Merger Remedies, (the US Merger Remedies Guide 2011), June 2011.

Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, (Regulation 1/2003) OJ L 1, 04.01.2003.

Cases

EU

- Case 15/83 Denavit Nederland [1984] ECR 2171
- Case 265/87, Schröder [1989] ECR 2237,
- Case 85/76, Hoffmann-La Roche & Co AG v Commission [1979] ECR 461,
- Case C-12/03 P, Commission v Tetra Laval [2005] ECR I-987, 15 February 2005.
- Case C-158/07, Förster [2008] ECR I-8507, para. 67
- Case C-189/01, Jippes and Others [2001] ECR I-5689,
- Case C-331/88, Fedesa and Others [1990] ECR I-4023,
- Case C-441/07 P, European Commission v Alrosa, 29 June 2010.
- Case C-6/72, Continental Can v Commission [1973] ECR 215, [1973] CMLR 199.
- Case C-62/86, Akzo v Commissio
- Case COMP/39.388, German Electricity Wholesale Market & COMP/39.389 German Electricity Balancing market (26 November 2008), OJ 2009/ C 36/ 8,
- Case COMP/39.402, RWE Gas Foreclosure (18 March 2009), OJ 2009/C 133/ 10.
- Case COMP/M.081, VIAG / Continental Can,
- Case COMP/M.1225, ENSO / STORA.
- Case COMP/M.1672, VEBA / VIAG
- Case COMP/M.1741. MCI WorldCom / Sprint
- Case COMP/M.2097. SCA / Metsä Tissue
- Case COMP/M.2187, CVC / Lenzing
- Case COMP/M.2337. Nestlé / Ralston Purina.
- Case COMP/M.2533. BP / E.ON
- Case COMP/M.2822. ENBW/ EN / GVS
- Case COMP/M.3101, Accor / Hilton / Six Continents
- Case COMP/M.3314. Air Liquide / Messer Targets
- Case COMP/M.3696. E.ON / MOL
- Case COMP/M.3732 Procter & Gamble / Gillette
- Case COMP/M.4746, DEUTSCHE BAHN / ENGLISH WELSH & SCOTTISH RAILWAY HOLDINGS (EWS),
- Case IV / M.190, Nestle / Perrier
- Case IV/M.1221, Rewe/Meinl.
- Case IV/M.986, Agfa Gevaert / Dupont.
- Case M.5984, INTEL/ MCAFEE.
- Case T-170/06, Alrosa v European Commission [2007] ECR II-2601, 11 July 2007.
- Case T-210/01, General Electric Company v the Commission, [2005] II-05575.
- Case T-310/01, Schneider v Commission
- Case T-342/1999, Airtours v Commission, 2002 E.C. R. II-2585, para 62.
- Case T-5/02, Tetra Laval BV v Commission of the European Communities, 25 October 2002, ECR 2002 II-04381.
- Case T-65/98 Van den Bergh Foods v. Commission [2003] ECR II – 4653.
- Cases 142 and 156/84, British American Tobacco Ltd. v Commission [1987] ECR 4487
- Joined Cases C-133/93, C-300/93 and C-362/93 Crispoltoni and Others [1994] ECR I-4863,
- Opinion of AG Ruiz-Jarabo Colomer of 16 December 2004 in C-110/03 Belgium v. Commission, 2005, ECR I-2801.

US

United States v. E.I. Du Pont de Nemours & Co., 366 U.S. 316, (1961) at 326.

United States v. Microsoft Corp, 253 F 3d 35, 49 (DC Cir 2001)

United States v. Topco Assocs., Inc., 405 U.S. 596, 610 (1972).

Please, note.

The articles/essays within this publication have been omitted due to issues related with copyright



ISBN 978-952-60-6638-7 (printed)
ISBN 978-952-60-6639-4 (pdf)
ISSN-L 1799-4934
ISSN 1799-4934 (printed)
ISSN 1799-4942 (pdf)

Aalto University
School of Business
Department of Accounting, School of Business
www.aalto.fi

**BUSINESS +
ECONOMY**

**ART +
DESIGN +
ARCHITECTURE**

**SCIENCE +
TECHNOLOGY**

CROSSOVER

**DOCTORAL
DISSERTATIONS**