Competition Law and the Bounded Rationality of Firms

Shilpi Bhattacharya

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List of Abbreviations

BTF	Behavioural Theory of the Firm
CAT	UK Competition Appellate Tribunal
CEO	Chief Executive Officer
DOJ	US Department of Justice
EC	European Commission
ECJ	European Court of Justice
EU	European Union
FTC	US Federal Trade Commission
ICN	International Competition Network
M&A	Mergers and Acquisitions
MBA	Masters in Business Administration
OFT	UK Office of Fair Trading
R&D	Research and Development
SC	Supreme Court
TFEU	Treaty on the Functioning of the European Union
US	United States

CHAPTER I

INTRODUCTION

1. Background and Motivation

Today neoclassical economics and the field of industrial organisation dominate the understanding of competition law. They influence the questions asked, the lines of enquiry developed and the data gathered in competition law.[1] This is based on the conception of the firm as a rational, profit maximizing entity. Yet, scholars from different disciplines have long questioned the traditional understanding of the firm. One strand of literature finds that instead of maximizing profits firms take decisions that maximize other objectives, such as maximizing managerial utility (Williamson, 1964), maximizing revenue growth (Baumol, 1959) and maximizing firm growth (Marris, 1964).[2] The other strand of literature questions the very notion of maximization by firms and this literature is classified as the behavioural theory of the firm.

The behavioural theory of the firm argues that firms, just like individuals, are subject to biases and limitations. Further, firms are susceptible to complexities and conflicts in their internal organisation and functioning. Recent events such as the financial

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[1] *See* Felix Oberholzer-Gee & Dennis A. Yao, *Antitrust: What Role for Strategic Management Expertise*, 90 BOSTON L. REV. 1457, 1464 (2010).
[2] *See* Steven Toms & John F. Wilson, *Revisiting Chandler on the Theory of the Firm*, *in* HANDBOOK ON THE ECONOMICS & THEORY OF THE FIRM 297, 299 (Michael Dietrich & Jackie Krafft eds., Edward Elgar, 2012).

crisis have highlighted problems in the traditional understanding of the firm. Much scholarly attention has been devoted to understanding limitations in the current theoretical framework conceptualising firm decision-making. Moreover, there is a growing sentiment that the actual behaviour of businesses is very different from the manner in which this behaviour has been theorized in economics. Contrary to the assumption of economic models, many successful and fast-growing companies do not see maximizing revenues or profits as their goal. This is because, as areas such as competitive strategy and marketing are teaching business executives, achieving lasting market share is the key to survival in dynamic markets.[3] Porter argues that every firm competing in an industry has a competitive strategy, whether explicit or implicit, and every firm is concerned about how to achieve market power or defend itself against competitive forces in the industry.[4]

The gap between theory and the reality of firm behaviour is portrayed humorously in the following dialogue from the TV show Silicon Valley, which is partially inspired by real-life experiences in Silicon Valley. In the dialogue below, Hanneman who is an investor, advises Hendricks, the inexperienced new CEO of a start-up company that the goal of companies is not to make money.[5]

> “Hanneman: No one wants to see revenue.
> Hendricks: Oh, uh I just thought that mainly the goal of companies is to make money.
> Hanneman: …That’s not how it works… if you show revenue, people will ask how much, and it will never be

[3] *See* Spencer Weber Waller, *The Language of Law and the Language of Business*, 52 CASE W. RES. L. REV. 283, 317-18 (2001-02).
[4] *See* Waller, *id.* at 319.
[5] Farhad Manjoo, *‘Silicon Valley’ Recap: It’s Not About How Much You Earn*, NEW YORK TIMES (Apr. 26, 2015), http://artsbeat.blogs.nytimes.com/2015/04/26/silicon-valley-recap-season-2-russ-hanneman/.

> enough. But if you have no revenue, you can say you're pre-revenue. You're a potential pure play… It's not about how much you earn but what you're worth…and who is worth the most? Companies that lose money."[6]

Hanneman's point is not too far away from the reality. As one commentator points out, Google bought the home-device company, Nest last year for $3.2 billion, a relatively small amount for a company that actually sold products and made profits.[7] Meanwhile companies that did not have earnings, like Snapchat and Pinterest, were valued at much higher amounts.[8]

This work aims to address this gap between theoretical models of firm decision-making and the reality of firm behaviour as it pertains to competition law. This is inspired from the work of certain business theorists who are also gradually moving away from the key assumptions of price theorists and orthodox economic analysis.[9] Further, this work is motivated by the argument that rational choice theory provides a more limited view of firm behaviour when compared to the richer understanding found in managerial and behavioural theories. Thus, importing business strategy into competition law may help in understanding aspects of firm behaviour that economics cannot provide.

2. Research Question

This study draws on the existing literature on firm behaviour to examine the following questions. Firstly, are firms boundedly rational and do they exhibit behavioural biases? If so, what forms do these biases take? Secondly, if firms are boundedly rational,

[6] *Silicon Valley: Bad Money* (HBO Entertainment, Apr. 26, 2015).
[7] *See* Manjoo, *supra* note 5.
[8] *See* Manjoo, *id*.
[9] *See* Waller, *supra* note 3, at 319.

does this have an impact on competitive decisions taken by firms in the market? In other words, can these biases be cured within the firm or by the competitive process? Or, do firms commonly depart from rationality when taking competitive decisions? Finally, if markets are not able to correct bounded rationality in firms, is this of relevance to competition law? How and to what extent are firm's biases normatively relevant to competition law? What kind of impact does bounded rationality have on the competitive decision-making of firms? Do biases cause welfare losses? Can a behavioural understanding of the firm have any implications for competition law? Should existing competition law rules be changed to accommodate this literature?

3. Contribution

The majority of scholarship, particularly in the US, advocates that competition law should follow a strictly economic approach. The emphasis on the application of economic principles to competition law has also created a minority view that is slowly gaining in strength, which argues that a rigidly economic approach can be harmful to competition law because it departs from the realities of market behaviour. Behavioural antitrust is based on the idea that if the economic models used to evaluate anticompetitive behaviour rest on flawed assumptions of firm rationality, the resulting analysis may not give useful predictions for competition law.[10] This work seeks to contribute to the existing literature in 'behavioural antitrust' by showing how bounded rationality can affect the decision-making of firms in ways that may be relevant to competition law.

Despite the richness of the literature on bounded rationality, with certain notable exceptions, the study of behavioural biases in competition law remains an under-explored area of study. The

[10] Elizabeth M. Bailey, *Behavioral Economics and U.S. Antitrust Policy*, 47(3) REV. INDUSTRIAL ORGANIZATION 355, 356 (Nov., 2015).

bounded rationality of consumers has gained wider acceptance than the bounded rationality of firms and there is more literature applying consumer biases to competition law, compared to firm biases.[11] This is also because experimental evidence of firms' bounded rationality is more limited. Consumers have been more compellingly found through experimental evidence to have bounded rationality, bounded will power and bounded self-interest.[12]

A substantial amount has been written on behavioural biases of firms in different fields ranging from management and finance to economics and law. However, comparatively little has been done to determine to what extent this literature has implications for competition policy. A few review articles survey this literature and introduce the readers to its diversity but do not draw any policy inferences from it.[13] Given the substantial amount of scattered theoretical and empirical literature indicating that firms are boundedly rational there is an incongruity in terms of the comparatively little work done to critically evaluate it to determine the possibility of drawing policy implications from it for competition law. This study aims to address this gap in assessing the policy relevance of behavioural literature.

Various scholars have argued that management studies can contribute to competition analysis. As Sidak and Teece wrote in the context of dynamic competition, "By embedding recent developments in evolutionary economics, the behavioural theory

[11] *See* Mark Armstrong & Steffen Huck, *Behavioral Economics as Applied to Firms: A Primer,* 6 COMPETITION POL'Y. INT'L. 33 (2010).

[12] *See* Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1476 (1998).

[13] *See e.g.,* Christoph Engel, *The Behaviour of Corporate Actors: How Much Can We Learn from the Experimental Literature*, 6(4) J. INSTITUTIONAL ECON. 445, 446 (2010); Armstrong & Huck, *supra* note 11, at 33; Weiland Müller & Hans-Theo Normann, *Experimental Economics in Antitrust*, *in* THE OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS 229 (Roger D. Blair & D. Daniel Sokol eds., Oxford University Press, 2014).

of the firm and strategic management into antitrust analysis, one can develop a more robust framework for antitrust economics."[14] This work supports the work of these scholars from a legal perspective by highlighting how insights from management studies and behavioural theories can be relevant to understanding firm behaviour in competition law. In addition, this thesis examines the relevance of management insights to particular types of anticompetitive behaviour. This thesis also contributes to behavioural antitrust by comparing how behavioural insights are incorporated differently into the competition law framework in the US and EU.

4. Methodology

This thesis brings together literature on firm behaviour from different disciplines. These include the fields of economics, law, management studies, psychology, institutional theory, organisational theory, behavioural economics, evolutionary economics, behavioural theory of the firm etc. The principle that brings these disciplines together in this study is that of bounded rationality. The inter-disciplinary nature of the evidence of bounded rationality in firms enriches this study because it shows how similar conclusions can be drawn by employing insights from different perspectives.

Another method of analysis employed in this study is comparative. This study compares the law in the US and the EU from the perspective of the extent to which each jurisdiction is open to behavioural insights. The comparative nature of this analysis means that this study does not provide a comprehensive overview of the law in each jurisdiction. Rather, it seeks to highlight selective aspects of the law that are particularly relevant to the objectives of this study. In this way, the focus of this study

[14] J. Gregory Sidak & David J. Teece, *Dynamic Competition in Antitrust Law*, 5(4) J. COMPETITION L. & ECON. 581 (2009).

is to provide a view of the law in so far as it is relevant from a behavioural perspective.

This research also uses the case study method by examining individual competition cases. The advantage of this approach is that it allows an in-depth examination of particular situations. The objective of these case studies is to examine in more detail the decision-making processes of firms and how firm's decisions depart from rationality. This analysis is motivated by the classic legal method of studying cases. In other respects, these case studies are inspired by the methodology used in management studies and borrow some of the tools from that literature. In essence, the case studies in this book use a mixture of methods employed in management studies and legal studies. Further, since the case study approach involves an in-depth investigation into individual firm behaviour, it is also compatible with a central aspect of the behavioural theory of the firm i.e., that firm behaviour is heterogeneous. The limitation of this approach is that it does not offer generalizable conclusions but the benefit of it is that it enables a deeper understanding of actual firm behaviour.

5. Structure of the thesis

This book comprises six chapters. Chapters two and three (following this Introduction) set the foundation for chapters four and five and these chapters must be read in conjunction with each other. Chapter two examines the insights from management studies and behavioural theories of the firm with the objective of determining whether these insights can lead to a better understanding of firm behaviour. This chapter establishes the substantive idea of bounded rationality in firms. It explains what is meant by the term 'bounded rationality' used in this thesis, the reasons for bounded rationality in firms and the contexts in which decisions in firms are boundedly rational. The discussion in this chapter contrasts the rationality assumption in traditional economic approaches with the use of bounded rationality in behavioural and management studies. This chapter also serves to introduce the issues that are addressed in subsequent chapters of this thesis namely, the normative relevance of bounded rationality to competition law (addressed in chapter three) and the application of behavioural and managerial insights to competition law (addressed in chapters four and five).

Chapter three sets the normative foundation for the thesis. It addresses the issue introduced but left open in chapter two i.e., the contribution of the literature on bounded rationality to the normative debate in competition law. It examines whether and to what extent behavioural insights have a normative significance to competition law. This chapter is an essential part of this thesis as it brings together competition law with insights from behavioural studies and examines the possibilities and limitations of applying the learning from chapter two to competition law. It highlights the dominant approaches to competition goals, the difficulty in arriving at a consensus on what the goal of competition law should be and which of the different goals of competition law are more compatible with behavioural studies. Since the discussion of competition goals is extensive, this chapter does not provide a comprehensive overview but only summarizes some of the more pertinent aspects of the literature in so far as they are connected to the theme of this book.

Chapters four and five examine how insights from the bounded rationality of firms can be applied to particular aspects of competition law. Chapter four considers predatory pricing and chapter five deals with merger analysis. Both chapters follow a similar approach to examining the contribution of the literature from behavioural and management studies to particular aspects of competition law. Both chapters compare US and EU law and both provide a broad overview of the areas where behavioural insights can potentially contribute to the law before more specifically examining individual cases. Chapter four focuses on two aspects of the law of predatory pricing viz., the requirements of intent and recoupment. Specifically, this chapter examines to what extent firms engaged in predation are motivated by recoupment and by the intent to eliminate competitors. The difficulty lies in distinguishing anticompetitive predation from competition on the merits. Here, the normative discussion in chapter three can be used to resolve some of the issues raised in chapter four. Finally, with respect to merger analysis in Chapter five, there is a substantial amount of literature on bounded rationality pertaining to mergers. Chapter five focuses on the motivations to merge and to what extent mergers are carried out to achieve efficiencies or in order to eliminate a potential or a close competitor. Further, this chapter examines the relevance of behavioural insights to mergers in dynamic markets.

6. Criticisms and Limitations

The idea that firms are boundedly rational and that biases in firms are systematic and persist despite market processes has received a critical response. For instance, Bailey argues that existing evidence of firms' deviations from profit maximization is anecdotal and suggests "non-systematic mistakes or actions" by a firm attempting to reach interim goals such as maximizing revenues or market shares, which will evolve over time to profit maximization.[15] One reason for the skepticism surrounding firm bounded rationality is that much of the evidentiary support for this comes from experimental economics. Experimental economics is based on laboratory experiments where a firm's decision-making behaviour is simulated and its decisions are observed within an artificial environment. The results from experimental economics have been criticised for not providing

[15] Bailey, *supra* note 10, at 356.

conclusions with external validity since laboratory conditions may not be replicated in reality. For this reason, this study has relied to a greater extent on management studies as a source of data on bounded rationality because it is largely based on empirical rather than experimental work and it does not have the external validity problem because it studies decision-making in actual firms rather than in simulated conditions in a laboratory. Yet, the literature in management studies has its own limitations. A majority of these studies have a narrow scope and are confined to certain types of decisions taken in specific industries. The firms and industries studied may have their own various peculiarities. For instance, the behaviour of firms in dynamic industries will differ from those in more slow-growth industries. Consequently, the results of these studies may not be generalizable to all firms across all industries. While this work has attempted to resolve some of these criticisms, for instance by using a diversity of studies from across different industries, it does not comprehensively address the variety of critiques offered against the evidence on firm bounded rationality.

The other section of scholars who agree that firms do not always act rationally are skeptical because they feel that an alternative model of firm behaviour will not be able to replace profit maximization as the way of providing clear predictions of how firms behave.[16] Another section of scholars believes that behavioural scholarship has been unable to provide a convincing theory of firm behaviour. As Wright and Stone argue, "without a comprehensive framework for discerning which individuals or firms will suffer from which biases, to what extent, and when, the

[16] *See* Roger Van den Bergh, *Behavioural Antitrust: Not Ready for the Main Stage*, 9(1) J. COMPETITION L. & ECON. 203 (2013); Roundtable Interview with Joseph Farrell, Director, Bureau of Economics, FTC & Carl Shapiro, Deputy Assistant Attorney General for Economic Analysis, DOJ Antitrust Division (Interview conducted by Elizabeth M. Bailey *in* 9(3) THE ANTITRUST SOURCE, Feb., 2010), http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/Feb10_FullSource2_25.authcheckdam.pdf.

implications of a behavioural approach are simply incoherent."[17] Further, behavioural scholarship imputes biases to some classes of individuals or firms and not to others.[18] This causes ambiguity about the precise conditions under which biases inhere and take effect.[19] Behavioural scholarship has also been criticised for focusing on the irrationality of certain market participants to the exclusion of others and thus applying cognitive biases asymmetrically "either to a monopolist or to potential entrants, but not to both, and certainly not market-wide".[20] Wright and Stone argue that it is essential at a minimum to determine the magnitude of a bias and the direction in which the bias will affect a firm's predicted behaviour to draw any implications for competition law. This author agrees that behavioural scholarship does not offer an alternative theoretical paradigm to rational choice theory. More work needs to be done to understand the behaviour of firms descriptively before any outcome-oriented contributions can be made.

In its place, this thesis takes the perspective that indeterminacy in predicting outcomes is inherently connected to the nature of firms as heterogeneous entities. Behavioural scholarship does not attempt to replace the existing neoclassical economic framework of firm behaviour. Rather, this work shows how behavioural scholarship can be important to the understanding of firm behaviour. Moreover, this book does not offer any final answers on normative questions as to the role of behavioural insights in competition law. Instead, it seeks to inform the existing normative debates within competition law. One reason for this is that the nature of this work does not lend itself to arriving at normative conclusions. Accordingly, the purpose of this study is

[17] Joshua D. Wright & Judd E. Stone, *Still Rare Like a Unicorn? The Case of Behavioral Predatory Pricing*, 8 J. L. ECON. & POL'Y 859, 866 (2012).
[18] Wright & Stone, *id.* at 865.
[19] Wright & Stone, *id.* at 865.
[20] Wright & Stone, *id.* at 866.

to offer more of a descriptive narrative about the nature of bounded rationality and its applicability to competition law and to offer some suggestions from a normative perspective without arriving at any prescriptions.

Another aspect to note is that behavioural scholarship in competition law has been accused of promoting greater intervention into markets. Existing scholarship in this area suggests such an ideological bent, particularly because this scholarship finds that markets are not necessarily self-correcting. Yet, advocating for greater intervention is not the objective of most behavioural scholarship and it is certainly not the objective of the present study. As critics argue, it may be that applying behavioural biases to firms does not change the results of the competitive effects analysis from the results achieved under rational choice analysis.[21] Applying behavioural analysis could create a more and not less competitive environment.[22] We are still at a stage where we have not arrived at conclusive answers to these questions. The direction of the results, whether advocating for greater or lesser intervention, are not relevant to the present study and are still speculative.

This thesis compares US antitrust law and EU competition law. It does not analyse the competition laws of other jurisdictions. Competition law in each jurisdiction has its own features that are based on various factors including the cultural and historical context of each country. Accordingly, the applicability of behavioural scholarship will vary in each jurisdiction, depending on the existing structure of competition law in that jurisdiction.

Finally, this study does not provide a comprehensive overview of the legal issues it surveys. It does not address all the points of debate in the law and in the ‘law and economics’ literature. The

[21] *See* Wright & Stone, *id.* at 868-70.
[22] *See* Wright & Stone, *id.* at 870.

inter-disciplinary nature of this scholarship requires considering points of law from the perspective of behavioural and management studies and this comes at the cost of considering other perspectives.

CHAPTER II

COMPETITION LAW, FIRM BEHAVIOUR AND THE CONTRIBUTION OF MANAGEMENT STUDIES[23]

1. Introduction

Competition law regulates the conduct of firms in the market. To this end, agencies and courts enforcing competition law are often required to make predictions regarding the conduct of firms. These predictions are generally based on a view of the firm as a rational, profit maximizing entity. Firm rationality plays a role in several aspects of competition law such as cartels, vertical restraints, abuses of dominance and mergers. Firms rationally decide to collusively fix prices because they can set a higher price by colluding rather than competing on price, provided incentives to defect are not too high. The treatment of resale price maintenance as a vertical restraint on the theory that downstream firms have incentives to free ride is also based on firm rationality. Further, the law of predatory pricing assumes that rational firms will only engage in predation when there is recoupment. Accordingly, an alternative conception of the firm as boundedly rational may impact the understanding of firm conduct in competition law.[24]

[23] This chapter is partly based on the following publication: Shilpi Bhattacharya & Roger Van den Bergh, *The Contribution of Management Studies to Understanding Firm Behaviour and Competition Law*, 37 WORLD COMPETITION 515 (2014).
[24] *See* Avishalom Tor, *Understanding Behavioral Antitrust*, 92 TEXAS L. REV. 573, 658 (2013) [Hereinafter Tor I].

Nevertheless, the conception of the firm as a rational, profit maximizing entity has been disputed. Starting from Barnard,[25] Simon[26] and then Cyert and March's[27] contributions, a substantial theoretical and empirical literature has evolved that questions the idea of the firm as a solely profit maximizing entity.[28] This literature builds on empirical observations of market behaviour and the heterogeneity of firms in markets to argue that firms often fall short of rationality in their operations. For instance, a significant finding of this literature (which departed from traditional conceptions) was Simon's idea that firms seek to 'satisfice' rather than maximize profits in certain situations.[29] Satisficing firms take decisions by selecting purposively satisfactory and sufficient rather than profit maximizing alternatives.[30] Another contribution of this literature was to introduce the idea of the bounded rationality of firms.[31] Experiments conducted in the laboratory are an additional source of evidence of bounded rationality in firms.[32]

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[25] CHESTER I. BARNARD, THE FUNCTIONS OF THE EXECUTIVE (Harvard University Press, 1938).

[26] *See e.g.* Herbert Simon, *A Behavioral Model of Rational Choice*, 69(1) Q. J. ECON.99 (1955).

[27] *See e.g.* RICHARD M. CYERT & JAMES G. MARCH, A BEHAVIOURAL THEORY OF THE FIRM (Prentice Hall, 1963).

[28] *See* Dennis C. Mueller, *The Corporation and the Economist*, 10 INT'L. J. INDUS. ORG. 147, 153-54 (1992) (reviewing the work of different scholars arguing against the conception of the firm as profit maximising).

[29] *See* HERBERT A. SIMON, ADMINISTRATIVE BEHAVIOR: A STUDY OF DECISION MAKING PROCESSES IN ADMINISTRATIVE ORGANIZATION (3d ed., Free Press, 1976).

[30] *See* Reva Brown, *Consideration of the Origins of Herbert Simon's Theory of 'Satisficing' (1933-1947)*, 42(10) MGMT. DECISIONS 1240, 1241 (2004). The concept of satisficing was later connected by Selten to build a theory of the firm based on adapting to the aspiration levels of decision-making agents. *See* Reinhard Selten, *Bounded Rationality*, 146(4) J. INSTITUTIONAL & THEORETICAL ECON. 649, 649 (1990) [Hereinafter Selten I].

[31] *See* Simon, *supra* note 26, at 99.

[32] *See e.g.,* Engel, *supra* note 13, at 446 (providing an excellent overview of the existing experimental literature which sheds light on different aspects of firm behaviour across disciplines such as economics, law and psychology).

Since the early contributions by Simon, other well-known economists have also been wary of considering firms as solely profit maximizing entities. For instance, according to Alchian, inherent uncertainty in a firm's environment makes it difficult to consider profit maximization as a meaningful guide for firm decisions.[33] Alchian has observed that the relevant decision-making criteria for firms is not profit maximization but improving relative positions since a firm's success in a market depends on its ability to improve its position relative to its competitors.[34] The greater concern for relative positions strengthens the argument that firms are not concerned with maximizing profits.[35]

The increasing evidence of the bounded rationality of firms warrants a closer examination of this literature and its possible implications for competition law. Behavioural antitrust scholars have argued that since deviations from profit-maximizing assumptions are systematic, structural approaches that assume profit-maximization might detect increases in welfare when, in fact, welfare may be reduced.[36] Accordingly, proponents of behavioural approaches believe that it requires a re-thinking of several competition problems.[37] For instance, an alternative conception of the firm as boundedly rational may affect the analysis of predatory pricing by finding that firms can price predatorily in cases where claims would be dismissed because

[33]*See* Armen A. Alchian, *Uncertainty, Evolution and Economic Theory*, 58(3) J. POL. ECON.211, 213 (1950).
[34]*See* Alchian, *id.* at 213.
[35]*See* Tor I, *supra* note 24, at 596-97.
[36] Armstrong & Huck, *supra* note 11, at 34.
[37]*See* Maurice E. Stucke, *Behavioral Economics at the Gate: Antitrust in the Twenty-First Century*, 38 LOY. U. CHI. L. J. 513 (2007); *see also* Amanda P. Reeves & Maurice E. Stucke, *Behavioral Antitrust*, 86 IND. L. J. 1527, 1581 (2011); *see also* Avishalom Tor, *The Fable of Entry: Bounded Rationality, Market Discipline and Legal Policy*, 101 MICH. L. REV. 482, 565 (2002) [Hereinafter Tor III].

recoupment is not possible.[38] Further, traditional models may overstate the likelihood of harm from the exercise of market power.[39] Merger simulation may also be inaccurate if the assumption is strictly that firms maximize profits. This is because if the acquiring firm is not maximizing profits, conventional economic models of pricing based for instance, on the relationship between gross profit margins and own-price elasticity of demand won't provide useful predictions about post-merger price increases and market power.[40]

Competition law scholars have had a mixed response to the literature criticizing the rationality assumption in firms. One group of scholars has criticised behavioural economics as either irrelevant for competition law or, in spite of its explanatory potential in specific cases, not yet ready to provide normative conclusions.[41] Several reasons have been advanced to justify the reluctance to accept the bounded rationality of firms as a blueprint for competition policy. For instance, biases found to exist at the individual (consumer) level and in artificially constructed firms in laboratories cannot be blindly applied to real-world firms, due to concerns about the external validity of such experimental evidence. In addition, quantitative evidence of firm behaviour is limited.[42] Also, individual behavioural biases

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[38]*See* Avishalom Tor, *Illustrating a Behaviorally Informed Approach to Antitrust: The Case of Predatory Pricing*, 18 ANTITRUST A.B.A. 52 (2003); Thomas B. Leary, *The Dialogue Between Students of Business and Students of Antitrust*, 47 N.Y. L. SCH. L. REV. 1, 13 (2003).

[39]*See* Tor I, *supra* note 24, at 598.

[40]*See* Bailey, *supra* note 10, at 358.

[41]*See* Roger Van den Bergh, *Behavioural Antitrust: Not Ready for the Main Stage*, 9(1) J. COMPETITION L. & ECON. 203 (2013); *see also* Douglas H. Ginsburg & Derek D. Moore, *The Future of Behavioral Economics in Antitrust Jurisprudence*, 6 COMPETITION POLICY INT'L. 89, 98 (2010); *see also* Joshua D. Wright & Judd E. Stone, *Misbehavioral Economics: The Case Against Behavioral Antitrust*, 33 CARDOZO L. REV. 1517, 1526 (2012).

[42]*See* Avishalom Tor, *The Market, The Firm, and Behavioral Antitrust*, *in* THE OXFORD HANDBOOK OF BEHAVIORAL ECONOMICS AND THE LAW 539 (Eyal Zamir & Doron Teichman eds., Oxford University Press, 2014).

may not translate to biases at the firm level, since firms may have internal devices to rid themselves of these biases.[43] Moreover, even if individuals within firms are biased, market mechanisms may correct departures from rationality. In this respect the role of learning, market competition and evolutionary processes must be acknowledged.[44] Most importantly, critics argue that there is insufficient evidence that departures from rationality within firms affect market outcomes.[45] Since competition law is concerned with the ultimate performance of markets and not just with explaining individual firm behaviour, caution should be exercised before proposing a more interventionist competition law.[46]

The rest of this chapter is divided into the following sections. Section 2 introduces the literature on the behavioural theory of the firm. Section 3 correlates this literature with management studies. Section 4 describes some of the findings of firm bounded rationality in management studies and in the behavioural literature. It describes prominent biases found to exist in choices made by managers[47] and internal decision processes within firms that cause departures from rationality. Section 5 questions the novelty of these behavioural findings in light of the existing

[43] *See* Gregory J. Werden, Luke M. Froeb & Mikhael Shor, *Behavioral Antitrust and Merger Control*, 167 J. INSTITUTIONAL & THEORETICAL ECON. 126 (2011).
[44] *See* Werden et al., *id.* at 126.
[45] Experimental evidence shows that consumers are subject to bounded rationality, bounded will power and bounded self-interest, see Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1476 (1998). However, experimental evidence of firms' bounded rationality is more limited. As a result, the bounded rationality of consumers has gained wider acceptance than the bounded rationality of firms. *See* Armstrong & Huck, *supra* note 11, at 33.
[46] *See* Armstrong & Huck, *id.*
[47] This is not to say that only managers and not lower level employees are subject to behavioural biases or that only biases at the managerial level affect firm behaviour. However, this work focuses on the study of biases at the managerial level because these biases are given greater importance in the existing literature and are likely to have a greater impact on firm behaviour given that responsibility for decisions in firms is borne in greater proportion by managers rather than lower level employees.

knowledge within neo-classical economics. Section 6 examines whether behavioural biases can be overcome by learning or may be eliminated by competitive market processes. Section 7 investigates the relevance of behavioural findings to competition law. The impact of behavioural biases among managers or irrationalities in decision processes within firms is unclear. In the absence of such evidence, there remains a gap between the behavioural literature and competition law and any normative conclusion is premature. Section 8 concludes the discussion.

2. The Behavioural Theory of the Firm

In the mid-twentieth century a number of empirical studies were conducted where managers were interviewed about their pricing and output decisions.[48] These studies showed that managers did not take decisions in the manner predicted by price theory. The field called the 'Behavioural Theory of the Firm' or BTF arose from these divergences between theory and practice regarding the decision-making practices of firms and the consequent need for theory to better describe how decisions are actually made within firms.[49]

The central aspect of BTF is that firms are boundedly rational. Bounded rationality describes decision-making under cognitive constraints.[50] Bounded rationality in firms is said to be a result of human limitations arising due to: uncertainty, particularly in the future consequences of decisions, inconsistent preferences, changing risk preferences[51] and limited knowledge of available

[48]For a review of these studies see*,* Mueller, *supra* note 28, at 151 (narrating the historical evolution of the concept of the profit maximizing firm in economics and describing its inadequacies and methods for developing a more realistic conception of the firm in accordance with empirical evidence).
[49]*See generally* Selten I, *supra* note 30, at 649.
[50]Selten I, *id.* at 649.
[51] *See* James G. March, *Understanding How Decisions Happen in Organizations, in* ORGANIZATIONAL DECISION-MAKING 9, 12-15 (Zur Shapira ed., Cambridge University Press, 1999).

and feasible alternatives.[52] As described by Selten, the two essential aspects of bounded rationality are non-optimization and cognitive constraints. Selten used experimental evidence on framing effects, preference reversal and the intransitivities in choice to argue that decisions are not taken with the objective of optimising particular goals; rather firms are said to take 'satisficing' decisions.[53] Selten further clarified that motivation, adaptation and cognition are three aspects of human behaviour that produce limits to rationality.[54] Motivation represents the objectives of human behaviour.[55] Many different factors may motivate people to act in particular ways and so it may be hard to impute definite objectives to human actions. The second factor, adaptation, refers to routine learning behaviour without the use of reasoning.[56] This builds a connection between the actions of individuals and what they learn from their everyday experiences. Thus, people may behave in certain ways because of previous learning. Finally, cognition describes all conscious and unconscious reasoning processes of the human mind.[57] Cognitive limitations are often cited as the primary reason for bounded rationality.

Since firms operate in an inherently complex environment, it pushes them to take decisions using rules of thumb and standard operating procedures rather than on rationality.[58] Some of the complexity in the environment of firms arises from: new and changing technologies; unpredictable actions of competitors; changing consumer-spending choices; dispersed information and

[52] *See* JAMES G. MARCH & HERBERT A. SIMON, ORGANIZATIONS (Wiley, 1958).
[53] *See* Selten I, *supra* note 30, at 650.
[54] Reinhard Selten, *Features of Experimentally Observed Bounded Rationality*, 42 EUROPEAN ECON. REV. 413, 414 (1998).
[55] Selten, *id.* at 414.
[56] Selten, *id.* at 414.
[57] Selten, *id.* at 414.
[58] *See* Christos N. Pitelis, *A Note on Cyert and March (1963) and Penrose (1959): A Case for Synergy*, 18(3) ORGANIZATION SCIENCE 478 (2006).

limited cognition.[59] Other scholars argue that firms follow many objectives such as expanding sales, reducing costs and increasing revenue and balancing between these sometimes-competing considerations causes departures from rationality.[60]

The understanding of bounded rationality in firms has evolved with time and with intellectual assistance from the contributions of different disciplines to this field.[61] At the same time, ideas from BTF and firm bounded rationality find a place in a broad range of disciplines including economics, organisational theory, management or business studies, psychology, sociology and law. The multi-disciplinary nature of this scholarship has helped to provide a richer understanding of firm behaviour.

3. Management Studies and Firm Bounded Rationality

Various linkages can be drawn between management studies and BTF. Both disciplines relate a firm's internal processes to its competitive position in the market.[62] Both disciplines also emphasize factors such as cognitive limitations of managers and organisational obstacles for understanding firm behaviour.[63] Moreover, behavioural findings have been gaining acceptance in business studies. For instance, the idea that managers in firms are

[59] *See* Peter E. Earl, *Behavioral Theory, in* HANDBOOK OF THE ECONOMICS AND THEORY OF THE FIRM 96 (M. Dietrich and J. Krafft, eds., Edward Elgar Publishing, 2012).
[60] *See* Earl, *id*.
[61] Institutional theory also supports the view of the firm in BTF scholarship. Both theories take a similar view that firms are embedded in their own internal institutional environments, which consist of established structures, systems and practices, and the external institutional environment, which a firm shares with other firms. Both internal and external environments influence a firm's actions. *See* Jane W. Lu, *Intra and Inter-organizational Imitative Behavior: Institutional Influences on Japanese Firms: Entry Mode Choice*, 33(1) J. INT'L BUS. STUD. 19 (2002).
[62] *See* Oberholzer-Gee & Yao, *supra* note 1, at 1462.
[63] *See e.g.* Oberholzer-Gee & Yao, *id.* at 1464.

subject to biases is now widely accepted. A number of top-ranked MBA programmes offer courses on behavioural biases in decision-making to future executives.[64] There is also a growing awareness of the importance of potential flaws in managers' decision-making. For instance, a survey of approximately 2,000 executives by McKinsey revealed that a majority of them thought the quality of strategic decisions taken by their firms was sub-optimal.[65] Finally, both management studies and BTF believe that firm behaviour is heterogeneous. Management studies uses methods like the 'case study' method, to study the differences between companies, which makes some companies succeed and others fail, in contrast to economics, which treats all firms as being the same or places them in broad, generalizable categories.[66]

Firm heterogeneity is also a feature of strategic management theory, a sub-discipline of management studies. Strategic management theory asks why firms adopt different strategies, why heterogeneity persists and why competing firms perform differently.[67] Business strategy is approached differently within managerial economics and management studies. In managerial economics, strategy refers to the "general policies that managers adopt to generate profits."[68] The objective of strategic decision-making in managerial economics is to generate sustained profits.[69] Whereas in business studies, strategy refers to how firms can differentiate themselves from the competition or beat the competition. In a competitive environment it can take

[64] Examples include Universities of Columbia, Harvard, New York University and London Business School.
[65] *See* MCKINSEY QUARTERLY, 2010.
[66] *See* Oberholzer-Gee & Yao, *supra* note 1, at 1461.
[67] *See* Thomas C. Powell, Dan Lovallo & Craig R. Fox, *Behavioral Strategy*, 32 STRATEGIC MGMT. J. 1369, 1370 (2011).
[68] JAMES A. BRICKLEY, CLIFFORD W. SMITH , JR. & JEROLD L. ZIMMERMAN, MANAGERIAL ECONOMICS & ORGANIZATIONAL ARCHITECTURE 214 (4th ed., McGraw-Hill, 2007).
[69] *See* BRICKLEY et al., *id.* at 215.

significant managerial effort and talent (devoted to decisions like choosing products as well as producing and marketing them efficiently) just to earn a normal return.[70]

Traditional literature in strategic management has explained firm heterogeneity through Bainian market power, Penrose's resource based view of the firm and Schumpeter's theory of innovation.[71] Yet, as Powell, Lovallo and Fox argue, behavioural theory has much to contribute to strategic management.[72] While firms might differ due to resource scarcity, barriers to mobility, causal ambiguity and difficulty to imitate others, there may be other reasons for heterogeneity within behavioral theory such as the self-confirming beliefs of managers, over optimism, competitive blind spots, self-interested causal attributions, disordered learning processes, institutional conformity, unwillingness to imitate or perceptual filtering. Any of these conditions could help some firms to exploit available opportunities and improve their performance over others.[73] Firms' individual culture, prevailing business models and previous experiences also affect its strategic decisions.[74] All of these factors contribute to increasing the relevance of behavioural theories in understanding firm heterogeneity in strategic management.

In addition, both within management studies and BTF, certain kinds of decisions taken by firms are likely to be more rational than others. There is a distinction in management studies between operational and strategic decisions of firms. This is similar to the distinction between routine behaviour that is automatically induced by the context and problem-solving behaviour, which requires decisions by instinct or deliberation, in the literature on

[70] *See* BRICKLEY et al., *id.* at 247.
[71] *See* Powell et al., *supra* note 67, at 1370.
[72] *See* Powell et al., *id.* at 1370.
[73] Powell et al., *id.* at 1377.
[74] *See* Richard R. Nelson & Sidney G. Winter, *Evolutionary Theorizing in Economics*, 16(2) J. ECON. PERSPECTIVES 23, 34-35 (2002).

evolutionary economics, which also draws inspiration from BTF.[75] While all actions involve some elements of both routine and problem-solving decisions, some types of actions have more of a routine component and others require more problem-solving skills. The purpose of the distinction between operational and strategic decisions is that strategic decisions are more prone to biases and errors than operational decisions because they require greater deliberation and are not taken routinely. This is another area where management studies supports BTF.

4. Describing Bounded Rationality in Firms

The literature from management studies and BTF describe two different sources of bounded rationality in firms: (i) behavioural biases of managers that affect decision-making in a firm; and (ii) internal decision-making processes within firms that cause departures from rationality. The following discussion discusses these sources of bounded rationality in greater detail.

4.1 Bounded Rationality and the Behavioural Biases of Managers

Empirical observations have shown that a corporation is affected by the individual personalities within it.[76] This departs from the traditional view in economics, that individual managers do not have an impact on firm behaviour.[77] Therefore, firms that share similar market conditions are assumed to make the same choices regardless of who is managing them or how they are being

[75] *See* Richard R. Nelson, *Human Behavior and Cognition in Evolutionary Economics* 6 BIOLOGICAL THEORY 293, 297 (2011).
[76] Ross Stagner, *Corporate Decision Making: An Empirical Study*, 53(1) J. APPLIED PSYCHOL. 1, 11-12 (1969).
[77] *See* Marianne Bertrand & Antoinette Schoar, *Managing with Style: The Effect of Managers on Firm Policies,* 168(4) QUART. J. ECON. 1169, 1173 (2003).

managed.[78] BTF scholars have disputed this position by highlighting that economic agents with similar goals and facing similar constraints take different decisions.[79] The importance of individual managers to a firm's decisions is reinforced by the literature from management studies. The influence of particular individuals on the decisions taken by a corporation is also evident from markets' reactions to new CEO appointments.[80] As such, managers can have an impact on the conduct of firms.[81]

Stagner describes corporate policy as determined by persons occupying certain positions in the organisation.[82] These persons, according to Stagner, are motivated partly by their position and role within the organisation and partly by their personal motives.[83] Goldfarb & Xia use econometric techniques and game theory to show that firm behaviour (specifically, entry into new markets) is related to manager and firm characteristics in a systematic way.[84] They find that manager effects can be attributed to observable characteristics such as education and age. Generally, older firms with educated and more experienced managers have been found to take better entry decisions and are able to better assess competitor behaviour.[85] Moreover, CEOs with MBA degrees appear to be more aggressive on average –

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[78] *See id.*
[79] *See* Nelson, *supra* note 75, at 298.
[80] The share price of the technology company, Yahoo Inc. increased after it announced that it was appointing Marissa Mayer as its new CEO, despite Yahoo's uneven business performance, indicating that the market felt that the new CEO would bring value to the company. *See* Mariko Oi, *Is Yahoo Boss Marissa Mayer Responsible for Growth?* BBC News (Oct. 16, 2013), http://www.bbc.co.uk/news/business-24545737.
[81] For a recent example see, *Role of Key Officials at Corporates Violating Norms under CCI Scanner*, ECONOMIC TIMES (Oct. 24, 2013), ("the Competition Commission [of India] is looking at the role of directors and key officers at entities suspected of indulging in anti-competitive practices.")
[82] *See* Stagner, *supra* note 76, at 3.
[83] *See* Stagner, *id.*
[84] *See* Avi Goldfarb & Mo Xia, *Who Thinks About the Competition: Managerial Ability and Strategic Entry in US Local Telephone Markets*, 101(7) AM. ECON. REV. 3130 (2011).
[85] *See* Bertrand & Schoar, *supra* note 77, at 1204.

e.g. by undertaking greater capital expenditure.[86] Certain types of decisions that are effected by executives in-charge at the firm include investment, financing and strategic decisions.[87]In addition, managerial effects matter more for acquisition and diversification decisions.[88]

The reason that managers' individual attributes are not considered relevant to a firm's decisions is because in traditional economic literature all managers are viewed as rational agents taking profit-maximizing decisions on behalf of firms.[89] However, empirical and experimental evidence finds that managers may not always be motivated by profit but by social considerations such as fairness and equity as well as other considerations such as reference dependence, self-control, inattention and context effects.[90] For instance, a study shows that a new CEO's decision to allocate resources to different divisions of a firm depends on the CEO's prior connection with the division.[91] Another study found that when taking decisions, executives were influenced by differing organisational goals, their personal views, previous work experience, personal position, power and prestige.[92] Managers are bounded not only by the formal constraints of their job but also by the informal

[86]*See* Bertrand & Schoar, *id.,* at 1204.
[87]*See* Bertrand & Schoar, *id* at 1204.
[88] *See* Bertrand & Schoar, *id* at 1170.
[89]*See* Tor I, *supra* note 24, at 593.
[90]*See* Avi Goldfarb et al., *Behavioral Models of Managerial Decision-Making*, 23 MARKETING LETTERS 405 (May, 2012) (providing a review of literature applying behavioural economic models to managerial decision-making).
[91]*See* Yuhai Xuan, *Empire-Building or Bridge-Building?: Evidence from New CEO's Internal Capital Allocation Decisions*, 22(12) REV. FIN. STUD. 4919 (2009) (conducting an empirical investigation into the internal capital allocations of firms with new CEOs and finding that the divisions from which those CEOs came or with which they were associated got a larger share of internal funds, particularly where the CEO had less authority or the divisions had greater power and that this affects segment investment efficiency).
[92]*See* Stagner, *supra* note 76, at 3.

traditions and expectations implicit in their role.[93] Moreover, because information is costly, decisions are not made based on perfect information, instead managers satisfice when collecting information for taking decisions.[94] Another study finds that managers often take decisions and solve problems by relying on their intuition rather than on rationality.[95]

Managers' attitudes towards risk may be inconsistent with conceptions of risk-taking used in rational choice models.[96] Based on two survey studies of business executives, managers have been found to be relatively insensitive to estimates of probabilities of potential outcomes; they are more affected by performance targets set for them and sharply distinguish between taking risks and gambling.[97] Managers take greater risks when targets are not reached or personal positions are at stake and also when the targets set for them have been exceeded.[98] Managers associate risk more often with negative rather than positive outcomes.[99] Further, managers express the necessity to take risks but have reported that these attitudes are supported more by personal than organisational incentives.[100]

Managers have also been found to be subject to perceptual biases when processing information.[101] Managers often selectively use information when taking decisions, in some cases information is

[93] *See* James L. McKenney & Peter G.W. Keen, *How Managers' Minds Works*, HARV. BUS. REV. 79, 81 (1974).
[94] Stagner, *supra* note 76, at 2 (citing Simon (1960), Cyert, Simon & Trow (1956)).
[95] *See* McKenney & Keen*, supra* note 93, at 79-80 (other aspects of bounded rationality that McKenney & Keen consider are ambiguity and that managers may not always be able to explicitly formulate the problems with which they are faced).
[96] *See* James G. March & Zur Shapira, *Managerial Perspectives on Risk and Risk Taking*, 33(11) MGMT. SCI. 1404 (1987).
[97] *See* March & Shapira, *id.*at 1404.
[98] *See* March & Shapira, *id.*at 1409.
[99] *See* March & Shapira, *id.* at 1407.
[100] *See* March & Shapira, *id.* at 1408.
[101] Stagner, *supra* note 76, at 2.

ignored and in others it may be interpreted in a biased way.[102] Decisions and the analysis of information based on which decisions are taken are affected by 'role-induced experiences' as well as by personal experiences.[103] Biases may also arise due to cognitive limitations and the previous experiences of managers. For instance, managers estimating the likely occurrence of future events make subjective probability assessments that may be subject to biases such as overconfidence, which can affect managers' estimates of these events. Highly confident predictions are more likely to be the ones that managers will act upon and commit resources to without pausing to consider additional information.[104]

A number of studies have found managers of firms to suffer from overconfidence bias.[105] Overconfidence bias is the tendency of individuals to overstate their likelihood of success while underestimating their vulnerability to risks. Over confidence has also been described as the overestimation of probabilities for a set of events.[106] As a result, managers making strategic or tactical predictions may underestimate uncertainty. Recent studies suggest that overconfidence bias is connected to excessive merger activity.[107] Over confidence bias can also be used to explain why managers underestimate the chances of getting caught when they enter into cartels.[108]

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[102] *See* Stagner, *id*. at 2.
[103] *See* Stagner, *id.*
[104] *See* Jayashree Mahajan, *The Overconfidence Effect in Marketing Management Predictions*, 29 J. MARKETING RES. 329 (1992).
[105] *See* Goldfarb et al., *supra* note 90, for a review of some of these studies.
[106] Mahajan, *supra* note 104, at 329.
[107] *See e.g.,* Ulrike Malmendier & Geoffrey Tate, *Behavioral CEOs: The Role of Managerial Overconfidence*, 29(4) J. ECON. PERSPECTIVES 37 (Fall, 2015); *See also Riding a Wave*, ECONOMIST (April 6, 2006).
[108] Amanda P. Reeves, *Behavioral Antitrust: Unanswered Questions on the Horizon*, 9-5 ANTITRUST SRC. 3 (2010).

Research has found that optimistic biases are attenuated when people are deciding between courses of action or choosing their objectives and are exaggerated once a choice has been made and the plan has to be implemented.[109] This research suggests that optimism may provide a motivational edge rather than seriously hinder decision-making.[110] Optimistic biases, even when they are unrealistic may also lead to improvements in performance when compared to the situation where optimism is absent.[111] People who make optimistic predictions tend to achieve more than they would had they not made those predictions, though they may not achieve the initial goals they had set for themselves.[112] However, in the context of the firm this kind of over-optimism may also lead to firms pursuing loss-making activities. Once an initial decision to undertake such activities has been made, a firm may persist in these activities, even after it has been found that such activities are not providing the expected returns.

Studies have found that overconfidence is more likely in certain circumstances than others. People are more optimistically biased under conditions of greater uncertainty, i.e. when the odds for success or failure are the closest.[113] Since there is substantial uncertainty in the environment in which firms take decisions, decisions taken in such environments may be taken overoptimistically. People also tend to be more optimistically biased when the outcomes of their predictions will not be revealed for some time.[114] While this may be because of greater availability of information as the outcome nears, experiments have revealed that even when information is equally available or

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[109] *See* David A. Armor & Shelley E. Taylor, *When Predictions Fail: The Dilemma of Unrealistic Optimism*, *in* HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 334, 338 (Thomas Gilovich, Dale Griffin & Daniel Kahneman eds., Cambridge University Press, 2002).
[110] *See* Armor & Taylor, *id.* at 341.
[111] *See* Armor & Taylor, *id.* at 341.
[112] Armor & Taylor, *id.* at 341.
[113] Armor & Taylor, *id.* at 338.
[114] *See* Armor & Taylor, *id.* at 339.

not, proximal predictions (people's expectations when time for performance was close) are less optimistically biased.

4.2 Bounded Rationality and the Internal Process of Firms

Corporate decision-making involves an inter-play of factors such as objective environmental constraints, subjective constraints, internal patterns of communication, authority relations and a firm's history and traditions.[115] According to Shapira, firms take decisions in a 'longitudinal context', which makes a firm's decisions a product of its history.[116] Sometimes decision-making in a firm is part of an on-going process rather than a single activity and the commitment to the decision-making process is more important than judgmental accuracy.[117] Not only individuals, but also internal departments may have an impact on a firm's decisions as a firm is often viewed as a collection of internal departments or divisions rather than as a single entity. For instance, the stronger divisions within the company may have a greater influence on the decisions taken by the firm as a whole.[118] The goals of individual members of a firm may conflict with the goals of the firm as a whole.[119] Policy proposals by executives of different internal departments within a firm reflect the differing perceptions and motivations of these executives. For instance, individuals may concentrate on short-term gains and may not consider the long-term interests of the firm. As a result, Stagner takes the view that corporate decisions are taken by compromising between different internal positions and are

[115] *See* Zur Shapira, *Introduction and Overview, in* ORGANIZATIONAL DECISION-MAKING 1,4 (Zur Shapira ed., Cambridge University Press, 1997).
[116] Shapira, *id.* at 4-5.
[117] *See* Shapira, *id.* at 4.
[118] *See* Stagner, *supra* note 76, at 12.
[119] *See* Stagner, *id.* at 2 (citing Soelberg (1967)).

affected by the power of participants and the logic of their arguments as much as by the data.[120]

Firms are constrained by their decision-making processes, which can impact their ability to assess and respond to market competition. The literature from management studies suggests that firms may not be able to optimally respond to environmental changes due to strategic persistence, organisational structures, frames of reference, organisational routines, institutional pressures and organisational ideology.[121] BTF scholars refer to certain processes through which firms take decisions as frames of reference. Organisational frames of reference use cognitive and environmental factors to select, organise and validate information before taking decisions.[122] Further, an organisation's frame of reference depends on the domain of inquiry and manner of articulation of information. These processes may help or at times hinder the efficiency or quality of decisions taken by a firm because frames of reference can form a barrier to the firm's ability to holistically evaluate the changes to its environment. Further, with time, frames of reference can become rigid and they may constrain rather than enable rational decision-making.[123] In the context of larger organisations with prominent frames of reference such as those in the public sector, decision-making may be removed from rationality to a greater extent and influenced by biased information.[124] In addition, organisations can create

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[120] *See* Stagner, *id.*

[121] *See* Pino G. Audia, Edwin A. Locke & Ken G. Smith, *The Paradox of Success: An Archival and a Laboratory Study of Strategic Persistence Following Radical Environmental Change*, 43(5) ACAD. MGMT. J. 837, 850 (2000).

[122] Paul Shrivastava & Susan Schneider, *Organisational Frames of Reference*, 37(10) HUM. REL. 795 (1984).

[123] Paul Shrivastava, Ian I. Mitroff & Mats Alvesson, *Nonrationality in Organizational Actions*, 27(3) INT'L STUD. MGMT. & ORG., 90, 91 (1987).

[124] B. Douglas Skelley, *Radical Institutionalism and Public Administration: A Review of Nils Brunsson's Contributions to Understanding Public Sector Organizations*, 5(3) PUB. ADMIN. & MGMT.: AN INTERACTIVE J. 112, 115 (2000) (reviewing Brunsson's famous book, The Irrational Organization).

routine processes to adapt to the complexity in their environment.[125] Organisational routines help firms to take routine decisions more effectively but make it difficult for them to respond to environmental change. Organisational routines may persist because they are costly to change and to re-learn and can also prevent firms from identifying profit opportunities.

Management studies also find that firms suffer from strategic persistence and competitive inertia. Competitive inertia is the level of activity that a firm exhibits when altering its competitive stance in areas such as pricing, advertising, introducing new products or services and market scope.[126] When taking such decisions firms tend to stick to strategies that have worked in the past. This is called strategic persistence.[127] Strategic persistence may be detrimental when the environment changes because managers may fail to respond to signals indicating a need for strategic change and instead may fall into patterns of strategic persistence.[128]

Firms do not always follow rational pricing strategies.[129] Firms frequently use a budget forecast of cost and quantities for making their pricing and operating decisions, which are usually based on historical performance, technical studies or competitor performance.[130] This is because firms often operate so as to set and achieve targets rather than maximize profits.[131] Accordingly, historical performance and economic conditions may have as much of a role to play as cost in a firm's setting of target levels.

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[125] *See* MARCH & SIMON, *supra* note 52.
[126] Danny Miller & Ming Jer-Chen, *Sources and Consequences of Competitive Inertia: A Study of the U.S. Airline Industry*, 39(1) ADMIN. SCI. QUARTERLY. 1, 2 (1994).
[127] Audia et al., *supra* note 121, *at* 837.
[128] *See* Audia et al., *id. at* 837.
[129] Nabil Al-Najjar, Sandip Baliga & David Besanko, *Market Forces Meet Behavioural Biases: Cost Misallocation and Irrational Pricing*, 39(1) RAND J. ECON. 214 (2008).
[130] Al-Najjar et al., *id.* at 218.
[131] Armstrong & Huck, *supra* note 11, at 18.

Thus, prices may not always be based on a constant assessment of current market conditions and any changes in those conditions.

An incomplete view of the industry, poor design of the competitive analysis system, inaccurate managerial systems or ineffective organizational processes can cause flaws in the competitive analysis undertaken by firms.[132] These flaws are of particular relevance to competition law as they can slow a firm's response to competitors or cause firms to make mistakes in the kinds of strategic decisions that are regulated by competition law. Zahra and Charples identify six serious 'blind spots' in a company's competitive analysis. These are: misjudging industry boundaries, poor identification of competition, overemphasizing a competitor's visible competence, over-emphasizing where and not how rivals will compete, faulty assumptions about the competition and paralysis by analysis.[133] These mistakes are more evident when firms take decisions to enter and exit markets in response to changes in market conditions. An example of how firms can be slow in responding to competition is Microsoft Corporation's delayed entry into the smart cellular phone market, particularly its slow response to Apple Inc.'s very successful smart phone, the 'iphone'.[134] Microsoft's slow response may be imputed to its organisational structure and decision-making processes.[135] According to Krugman, Microsoft's delayed entry into smart phones and tablets was because its leading market position in operational systems for computers made it less alert to

[132] Shaker A. Zahra & Sherry S. Charples, *Blind Spots in Competitive Analysis*, 7(2) ACAD. MGMT. EXECUTIVE 7, 9 (1993).
[133] Zahra & Charples, *id.*
[134] *See* Paul Krugman, *The Decline of E-Empires*, NEW YORK TIMES (Aug. 2013), http://www.nytimes.com/2013/08/26/opinion/krugman-the-decline-of-e-empires.html?smid=fb-share&_r=0 (giving reasons for the rise of Microsoft vis-à-vis Apple and its failure to capitalise on its monopoly position).
[135] *See also Microsoft's Downfall: Inside the Executive E-mails and Cannibalistic Culture that Felled a Tech Giant*, VANITY FAIR (Jul. 3, 2012), http://www.vanityfair.com/online/daily/2012/07/microsoft-downfall-emails-steve-ballmer.print.

changes in the market and slower to take the necessary steps to stay abreast of those changes.[136] An alternative view is that Microsoft's inability to respond to the changing environment due to the introduction of smart phones arose from Microsoft's organisational design.[137] Its organisational divisions may have hampered Microsoft's ability to recognise the importance of changing market trends.[138] Another factor may have been its size. An organization's size affects its likelihood of taking competitive actions. Small firms are generally more likely than larger firms to launch competitive actions and to do so quickly.[139] Larger firms are generally perceived as slow and inflexible competitors.[140]

The management studies literature also finds that firms imitate the actions of other firms when introducing new products and processes, adopting managerial methods, or when determining entry and investments in new markets.[141] Firms may more particularly imitate when taking strategic decisions because these decisions are taken in situations involving uncertainty and the conduct of other firms can serve as a guide that certain strategies may work better than others.[142] Imitation also occurs because it is more costly to calculate optimal actions and thus easier to follow other firms and target relative performance. The tendency of firms to mimic is connected to a firms desire to maximize relative rather than absolute profits because firms are more interested in

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[136] *See id.*
[137] *See* Joshua Gans, *Is Microsoft of the 1990's Similar to Apple of Today?*, DIGITOPOLY (Aug. 2013), http://www.digitopoly.org/2013/08/26/is-microsoft-of-the-1990s-similar-to-apple-of-today.
[138] *See* Gans, *id.*
[139] MICHAEL A. HITT, R. DUANE IRELAND & ROBERT E. HOSKISSON, STRATEGIC MANAGEMENT CONCEPTS: COMPETITIVENESS AND GLOBALIZATION 139 (8th ed., South Western Cengage Learning, 2009).
[140] *See* HITT et al., *id.*, at 139.
[141] *See* Marvin B. Lieberman & Shigeru Asabu, *Why do Firms Imitate Each Other?*, 31(2) ACAD. MGMT. REV. 366 (2006).
[142] *See* Lieberman & Asabu, *id.* at 366.

outperforming their competitors from a relative perspective.[143] Imitative behaviour of firms is also connected to findings regarding managerial behaviour as managers are found to be more concerned about their relative rather than their absolute pay and position. Thus, firms imitate to avoid falling behind competitors and missing out on opportunities available to other firms. Empirical evidence supports theoretical findings of imitation. In a study of what influenced listed Japanese firms to adopt particular modes of entry into international markets, Lu found that transaction cost theories did not provide a full account of the motivations of these firms. Instead, institutional theories including theories of imitative behaviour had considerable explanatory power beyond that of the transaction cost approach.[144] Experience had a moderating impact on this effect.

An interesting theory for why firms imitate is the 'minimax regret' model, which postulates that if firm A is involved in a merger, the managers in competitor firm B will feel more regret for not following firm A and not merging even if the merger is unsuccessful than following firm A and merging and finding that the mergers are not successful for both firms.[145] This is because in the first situation where firm B does not merge and the merging firm A is successful, firm B suffers competitive disadvantage from not merging, whereas in the second case where firm B also merges and both firms fail in their mergers, there is no relative competitive disadvantage to firm B compared to the merging firm A. In highly competitive markets, firms may believe that the savings in costs from not undertaking a merger are not as much as the costs to the firm of the loss associated with decay in competitive position, which may never be regained. Further, the psychological hype associated with mergers can

[143] Armstrong & Huck, *supra* note 11, at 15.
[144] Lu, *supra* note 61, at 19.
[145] Gábor Péli & Hans Schenk, *Organizational Decision-Maker Bias Supports Market Wave Formation: Evidence with Logical Formalization* 3 (Antwerp Center for Evolutionary Demography Working Paper Series No. 1169-006, 2011).

increase the expectations of reaping high benefits in an unrealistic way from mergers while underestimating the difficulties associated with them. This belief may be reinforced by the view that reorganisation costs will be incurred only at the time of the merger whereas the benefits of the merger will last a longer time.[146] Consequently, in these situations firms are likely to imitate another firm and merge even though a rational assessment will indicate that merging is unwise.[147]

Scholars have also identified other types of biases in the decision-making processes of firms that build on BTF but lack empirical evidence in support of it. For instance, Gigerenzer & Goldstein identified a new set of so-called 'fast and frugal' heuristics in decision-making. These heuristics are adaptively matched to the information structure and demands of decision makers' environments.[148] However, extensions to this research have not successfully established that these heuristics are used in decision-making.[149] Other theories describing heuristics in firm decision-making include the theory of 'naturalistic decision-making'.[150]

5. Explaining Bounded Rationality Using Traditional Economic Theory

A common criticism of behavioural theories is that many of its findings are already accounted for in neoclassical economics and that, therefore, the behavioural literature does not add anything to the existing discourse within economics. Rationality proponents also argue that as long as existing theoretical models are able to

[146] Péli & Schenk, *id.* at 11.
[147] Péli & Schenk, *id.* at 3 (the authors show that this result holds using logical formalization in a wider set of scenarios).
[148] *See* G. Gigerenzer & D.G. Goldstein, *Reasoning the Fast and Frugal Way: Models of Bounded Rationality*, 103(4) PSYCHOLOGICAL REV. 650 (1996).
[149] Gerard P. Hodgkinson & Mark P. Healey, *Cognition in Organisations*, 59 ANNUAL REV. PSYCHOL. 387 (2008).
[150] *See generally* GARY KLEIN, JUDITH ORASANU & ROBERTA CALDERWOOD, DECISION MAKING IN ACTION: MODELS AND METHODS (Ablex, 1992).

accurately predict market outcomes, it is irrelevant that they are not able to explain individual firm behaviour. Moreover, neoclassical economists hold that the analytical basis of welfare economics provides an objective and sound mechanism for determining market outcomes. In their view, behavioural economics departs from this basis without providing an equally sound alternative.[151] These concerns are addressed below.

The rational choice model of a profit-maximizing firm can explain several behavioural findings, such as satisficing, imitation and the pursuit of power and prestige by career-driven managers. A well-known manifestation of bounded rationality is that economic agents do not optimize but seek only satisfactory outcomes. Tirole counters this reasoning by arguing that many actions that seem non-optimizing may actually be the outcomes of optimizing actions under certain constraints, given a well-defined objective function.[152] He points at the trade-off between the cost of time and effort needed to take complex decisions and the ex-post efficiency of these decisions.[153] If the costs of time and effort are factored into the decision-making process, it may be rational for economic agents to satisfice.

A second manifestation of bounded rationality that merits discussion is imitation. Under conditions of uncertainty, imitation may be perfectly rational. Alchian argues that uncertainty in real-life situations prevents firms from ascertaining what the optimal actions in the pursuit of profits are. Hence, firms adopt forms of 'conscious adaptive behaviour' as guides of action. One possibility is to imitate the behaviour of more successful firms and another course of action is following a 'trial and error' strategy. Firms may prefer to imitate for the following reasons:

[151] *See* Werden et al*., supra* note 43, at 136.
[152] *See* JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 48 (7th ed., MIT Press, 1994).
[153] *See* TIROLE, *id.* at 48.

the absence of identifiable decision-making criteria, a changing environment with many factors to be considered in decisions, the uncertainty attaching to these factors and to outcomes, and the need to outperform competitors.[154]

A third finding of the behavioural literature is that managers are motivated by factors that differ from the standard variables prevalent in neoclassical economic theory. These include prestige, power and ego. Mainstream economists refer to this as a principal-agent problem.[155] Connected to the principal agent problem are issues of moral hazard arising from informational asymmetries and managerial discretion. These give incentives to managers who are primarily concerned with maximizing their own utility to act contrary to the interests of the firm. Managers are also concerned with their wealth and with the costs of the effort expended by them on behalf of the principal. Managers may be more concerned for their own careers rather than with the well being of the firm. Economists use both adverse selection and moral hazard to explain these principal-agent problems.[156] Contrary to behavioural scholarship, economists take the view that managers could be disciplined through reputation effects and incentives arising from the repeated nature of the interactions between managers and their employers and the observability of managerial actions in the long-term. Managers who do not perform well may not be trusted to do well in the future; as a result they may not be promoted and may also develop a bad reputation.[157] However, this requires shareholders to monitor managers' actions, which increases costs and is not always possible to achieve.[158]

[154] *See* Alchian, *supra* note 33, at 218.
[155] Agency costs arise because a company is structured so as to separate ownership from control so managers (agents) do not have the same incentives as shareholders (principals) to maximise a company's profits.
[156] TIROLE, *supra* note 152, at 44.
[157] *See* TIROLE, *id.* at 44.
[158] *See* TIROLE, *id.* at 34.

The above discussion shows that rational choice theory can explain behavioural findings to some extent. By adjusting the definition of rationality, seemingly irrational behaviour can be incorporated into traditional economic theory. However, incorporating behavioural findings comes at a cost. Including these variables in the utility functions of managers may be able to better explain the real world but increasing the number of variables reduces the predictive power of the theory.[159] Tirole states that this is a trade-off that has proved a big challenge for economic theory to overcome. Aside from the difficulties connected with the above trade-off, it must be acknowledged that behavioural theories provide added value for a proper understanding of firm behaviour. Neoclassical explanations are based on assumptions that may not fit reality and may fall short of explaining the range of observed organisational behaviour. In the words of Nobel Prize winning economist Tirole, "neoclassical theory leaves many questions unanswered and this raises some doubts about its ability to cope with certain complex organizational phenomena."[160] For instance, rational choice theories largely employ individual incentives to analyse organisational behaviour. However, behavioural approaches demonstrate that organisational decision-making is motivated by more than the incentives of individuals and thus, a framework that is centered around the study of individual incentives may fall short of fully explaining the behaviour of firms.[161] Tirole also points to the different treatment of communication and knowledge within traditional organisational theory and

[159] *See* TIROLE, *id.* at 49.
[160] *See* TIROLE, *id.* at 48.
[161] *See* Alexander Pepper & Julie Gore, *Behavioral Agency Theory: New Foundations for Theorizing about Executive Compensation*, 41(4) J. MGMT. 1045, 1048 (May, 2015) (developing a "behavioural agency theory" that assumes bounded rationality and arguing that rather than setting incentives to align the interests of principals with agents, agents perform better when they are intrinsically and extrinsically motivated, though and motivation is not connected to monetary rewards); *see also* TIROLE, *id.* at 50.

behavioural approaches. Traditional economic theory considers information flow and knowledge within an organisation from the perspective of incentive effects.[162] Behavioural approaches, on the other hand, consider knowledge within an organisation from the perspective of organisational culture and memory, a result of a shared view of thinking, communicating, perceiving and decision-making within an organisation.[163] In such cases behavioural theories may fill the resulting explanatory gap in the understanding of firm behaviour in neoclassical economics.

The limitations of neoclassical economics are illustrated in the solution to the principal-agent problem. As a solution to the principal-agent problem, rational choice theorists suggest that the principal should set appropriate incentives for its agent in order to align the agent's interests with those of the principal.[164] However, this has not proved to be entirely successful in reality.[165] Organizational theorists have found that it is difficult to measure each functional division's and also each manager's contribution to the firm.[166] Consequently, the outcomes of managerial actions may not be easily observable within a firm and this makes it hard to monitor managers or to use reputation to discipline them. According to Mueller, the predictions of the principal-agent model are not reflected in empirical observations of corporations. In reality, managers have significant control over their employment contracts and are often able to set their own incentives.[167] Some scholars have argued that manager compensation represents rent extraction rather than optimal

[162] *See* TIROLE, *id.* at 49.
[163] *See* TIROLE, *id.* at 49.
[164] *See e.g.* Michael C. Jensen & Kevin J. Murphy, *Performance Pay and Top-Management Incentives*, 98 J. POLITICAL ECON. 225, 226 (1990).
[165] *See* Jensen & Murphy, *id.* at 227 (conducting an empirical study and finding that contrary to agency theory, the performance of top executives is not entirely connected to payment incentives and does not represent optimal contracts and offering an alternative explanation about the role of political forces in contract formation.)
[166] *See* TIROLE, supra note 152, at 45.
[167] Mueller, *supra* note 28, at 157-58.

contracting with much more favourable terms given to executives.[168] One reason for this is that company boards, which set remuneration packages, often are not entirely independent and are influenced by the managers whose remuneration they determine.[169] Further, empirical evidence suggests that the utility of stock options is also limited in aligning incentives as stock options can benefit corporate insiders to the detriment of employees and other corporate stakeholders.[170] In sum, managerial performance is not well correlated to their incentives. As a result, agency costs are not able to explain the full range of observed managerial behaviour.

6. Firms' Bounded Rationality, Learning and the Competitive Process

Even if managers in firms or certain processes within firms do exhibit bounded rationality, critics claim that, unlike with consumers, firms' internal mechanisms and market discipline work to overcome these biases at the firm level. Behavioural scholars argue on the contrary that markets and firms may both facilitate and inhibit rational behaviour in different circumstances.[171] Competitive discipline makes market behaviour more rational and yet these forces may not be uniformly

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[168] *See* LUCIAN A. BEBCHUK & JESSE M. FRIED, PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION 1-10 (Harvard University Press, 2006) (arguing that managerial incentives are not optimal or a result of arms-length transactions, are a product of managerial power though an important constraint on manager compensation is shareholder 'outrage' and that other behavioural factors also may have a role in setting manager compensation).

[169] Chris Giles, *Curbs on Covetousness: Envy can make Capitalism more Efficient and Help to Restrain Executive Pay*, FINANCIAL TIMES (Feb. 5, 2002), http://www.law.harvard.edu/faculty/bebchuk/pdfs/FT.Curbs.on.Covetousness.pdf ("CEO contracts bear little relation to the optimal contracts assumed in economic theory.").

[170] Michel Aglietta & Antoine Rebérioux, *Financialization and the Firm*, *in* HANDBOOK ON THE ECONOMICS & THEORY OF THE FIRM 308, 312 (Michael Dietrich & Jackie Krafft eds., Edward Elgar, 2012).

[171] *See* Tor I, *supra* note 24, at 580.

efficacious in different markets and may not work with equal force for different kinds of firms.[172] On the contrary, behavioural scholars argue that learning may be ineffective in the real world. Feedback is ambiguous and delayed or not always available.[173] Managers make selective use of information and cognitive biases; in particular overoptimism can distort the way in which information is processed. Also, the size of the company may have an impact on the efficacy of learning. This section evaluates these arguments in greater detail.

6.1 Does learning remove bounded rationality in firms?

Neoclassical economists believe that firms are disciplined by economic forces and benefit from feedback mechanisms due to repeated interactions in the market that individuals do not confront.[174] These mechanisms make firms more rational.

Much literature in management studies discusses why firms are not able to learn effectively. These reasons are primarily connected to biases that prevent learning including biases that cause people to focus too much on success and past performance, causing fixed mind-sets, the inability to think creatively and the fear of failure; biases to take actions too quickly and with insufficient time to reflect, biases towards conformity rather than doing things differently and depending too much on the view of experts.[175]

Management studies have also highlighted limitations in the learning processes of firms. This indicates that learning in a market environment may be less efficacious than rational models predict. As explained by March, "experience is often ambiguous

[172] *See* Tor I, *id.* at 580.
[173] *See* Tor III, *supra* note 37, at 500.
[174] Wright & Stone, *supra* note 17, at 865.
[175] *See* Francesca Gino & Bradley Staats, *Why Organizations Don't Learn*, HARV. BUS. REV. (Nov., 2015), https://hbr.org/2015/11/why-organizations-dont-learn

and the inferences to be drawn from it are unclear, and the contribution of 'experiential learning' to long term improvements in organizations is difficult to establish."[176] There are well-documented cases of business firms failing to copy the successful practices of other firms.[177] Organisational theorists have documented and studied cases where firms have failed to adapt to their environments and to imitate successes of other firms. Firms are equally unable to learn from the failure of other firms. This may be because it is hard to isolate causes of failure and apply them to the particular situation of a firm. For instance, the company Research in Motion, which produces Blackberry phones, saw a steep decline in the sales of its phones because it was unable to adapt to the technical changes in the smart phone market.[178] Arguably, Research in Motion could have learnt from the similar mistakes of many other firms such as Kodak, who was also effected by its inability to adapt to technical change. Yet, the lessons from Kodak's mistakes are difficult to extrapolate to the particularities of another company, which makes it harder to learn from them. Thus, learning processes may be imperfect because feedback is ambiguous and learning takes time.

The literature on learning at the firm level describes various types of learning. March identified two modes of learning, namely: low-intellect learning, which is built on the replication of success and high-intellect learning, which is based on understanding the causal structure of the events of experience and deriving actions from that understanding.[179] This is similar to the idea of reactive learning and experimental learning.[180] Reactive learning is based on the rewards and punishments that drive actions. In many instances this kind of learning takes place when firms are not performing well and this kind of learning dissipates when firms

[176] JAMES G. MARCH, THE AMBIGUITIES OF EXPERIENCE 15 (2010).
[177] *See Blackberry: Only Thorns*, ECONOMIST (Nov. 9, 2013).
[178] *See id.*
[179] MARCH, *supra* note 176.
[180] Miller & Jer-Chen, *supra* note 126, at 2.

are doing well. Experimental learning on the other hand is not driven by performance problems or crises but is driven by provocative information, market diversity and the desire to seize opportunities.[181] This learning is more proactive than one driven by market pressures, and is driven more by motivations that inspire than motivations that threaten. In the context of competitive inertia it has been found that while tactical adjustments are made because of poor performance, strategic actions are not very influenced by firm performance (perhaps because managerial egos are at stake) and are taken more often in a growing and positive market.[182]

Under conditions of uncertainty, considering that experiences are pooled, larger organisations that have the capacity to simultaneously pursue a variety of solutions to a problem should theoretically learn more efficaciously.[183] However, Posen et al. find that increasing organisational size may make learning less efficacious because of the unintended consequences of having too much of information within the organisation about possible alternatives.[184] Larger organisations will search for alternatives already present within their structures whereas smaller organisations will have fewer alternatives within their structures and thus are likely to conduct a greater search for external options.[185] Their empirical study shows that on average larger organisations perform better from learning than smaller organisations but they also have fewer chances of finding the best alternatives from learning.

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[181] Armstrong & Huck, *supra* note 11, at 18.

[182] Armstrong & Huck, *id.* at 17.

[183] Hart E. Posen, Dirk Martignoni & Daniel A. Levinthal, *E Pluribus Unum: Organizational Size and the Efficacy of Learning* 2 (DRUID Working Paper No. 13-09, Danish Research Unit for Industrial Dynamics 2013), http://www3.druid.dk/wp/20130009.pdf.

[184] Posen et al., *id.* at 23.

[185] Posen et al., *id.* at 23.

Managers' learning may be curtailed because they are selective processors of information.[186] Effective perceptual filtering amplifies relevant information and attenuates irrelevant information, so that the relevant information comes into the perceptual foreground and the irrelevant information recedes into the background.[187] The filtered information is less accurate but, if the filtering is effective, more understandable.[188] People filter information quite instinctively as it helps to process complex situations though it might make learning less accurate. Experiments found that managers' processing of information is influenced to some extent by their functional experience.[189] This may form a reference point on which managers anchor their learning and decision-making. People are particularly confident in areas where they have some expertise. Managers in firms operate from their own field of expertise and construct mental models of information presented to them and give added weight to data that they are more familiar with. Thus, data can be filtered unknowingly by the background and experience of managers.[190] This impacts managers' ability to learn from the information presented to them.

Further, managerial learning may be affected by hindsight bias.[191] This might affect managers' ability to evaluate past experiences, which in turn can have an impact on learning. In addition,

[186] Janice M. Beyer, Prithviraj Chattopadhyay, Elizabeth George, William H. Glick & Dulce Pugliese, *The Selective Perception of Managers Revisited*, 40 ACAD. MGMT. J. 716, 734 (1997).
[187] William H. Starbuck & Francis J. Milliken, *Executives Perceptual Filters: What They Notice and How They Make Sense*, *in* THE EXECUTIVE EFFECT: CONCEPTS AND METHODS FOR STUDYING TOP MANAGERS 35 (Donald C. Hambrick ed., JAI Press 1998), http://pages.stern.nyu.edu/~wstarbuc/Hambrick.htm.
[188] Starbuck & Milliken, *id.*
[189] Beyer et al., *supra* note 186, at 734.
[190] Anthony Howard, *The Thinking Organisation*, 31 J. MGT. DEV. 620 (2012).
[191] Ed Bukszar & Terry Connolly, *Hindsight Bias and Strategic Choice: Some Problems in Learning from Experience*, 31(3) ACADEMY MGT. J., 628 (1988) (through an experiment conducted on advanced management students the authors found that these students were subject to hindsight bias).

learning is hampered because executives lack clear feedback about the effectiveness of their perceptions and the relevance of information as there are long lags between executives' actions and the visible outcomes of those actions, and these outcomes have multiple causes.[192] Learning is difficult in the real world because feedback is ambiguous and delayed or not always available.[193]Moreover, constant changes in their environments mean that executives' knowledge grows rapidly obsolete and that they do not benefit as much from practice.[194]

Hmieleski and Baron claim that there is a connection between managerial learning and over optimism.[195] Entrepreneurs learn very differently from their experiences and the authors suggest that this may be due to difference in the optimism levels of entrepreneurs. People with positive expectations reinterpret the outcomes they receive positively, even when those outcomes may reasonably be considered to be disappointing.[196] In a correlational analysis of the determinants of entrepreneurs' satisfaction with their business ventures after three years of business ownership, it was found that their satisfaction levels were positively related to their initial expectations even after controlling for the performance of the business. Optimistic entrepreneurs are more likely to focus on positive information that confirms their previously formed beliefs. This is also known as the confirmation bias, which is the tendency of individuals to process information in a way that is consistent with their preconceived notions. Further, studies show that past failures at prediction are often not recognised and are explained away so that they are unlikely to influence relevant self-evaluations or lead to improvements in

[192] Starbuck & Milliken, *supra* note 187.
[193]*See* Tor III, *supra* note 37, at 500.
[194] Starbuck & Milliken, *supra* note 187.
[195]*See* Keith M. Hmieleski & Robert A. Baron, *Entrepreneurs' Optimism and New Venture Performance: A Social Cognitive Perspective*, 52(3) ACAD. MGT. J. 473 (2009).
[196]*See* Armor & Taylor, *supra* note 109, at 345.

future predictions.[197] Managers ignore there past failures by shifting the standard of comparison or by re-evaluating the standard they had originally set for themselves. Other research has suggested that cognition plays an important role in transforming entrepreneurial experience into knowledge that is useful for their future activities.[198] Thus, highly optimistic entrepreneurs may learn less from past experience than their moderately optimistic counterparts.[199]

The hypothesis that learning processes eliminate boundedly rational behaviour of firms has been examined in both theoretical and empirical research. In a theoretical model where firms follow naïve adaptive learning processes to adjust prices and reinforcement learning to adjust costing methods, Al-Najjar et al. show that in some markets irrational pricing is eradicated and in others there is a departure from equilibrium predictions.[200] In general, experience does not necessarily remove behavioural biases. Studies showed that professionals who are experienced in making certain decisions also exhibit behavioural biases in making those decisions. For instance, in an experiment conducted on professional traders and students in which subjects were asked to take trading decisions, the subjects who were professional traders exhibited behaviour consistent with myopic loss aversion to a greater extent than student participants.[201] Another experiment conducted on financial market analysts, who make investment decisions routinely, found that they exhibited patterns of overreaction consistent with behavioural biases.[202] Further,

[197] Armor & Taylor*, id.* at 345.
[198] Andrew C. Corbett, *Learning Asymmetries and the Discovery of Entrepreneurial Opportunities*, 22 J. BUS. VENTURING 97 (2007).
[199] Hmieleski & Baron, *supra* note 195, at 483.
[200] *See* Al-Najjar et al., *supra* note 129.
[201] Michael S. Haigh & John A. List, *Do Professional Traders Exhibit Myopic Loss Aversion? An Experimental Analysis*, 60 J. FIN. 523 (2005).
[202] Werner F. M. De Bondt & Richard H. Thaler, *Do Analysts Overreact?*, *in* HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 678, 685 (Thomas Gilovich, Dale Griffin & Daniel Kahneman eds., Cambridge University Press, 2002).

due to overconfidence, mutual fund managers were found to trade more when their past trades had been more successful.[203] This indicates that learning in a market environment may be less efficacious than rational models predict.

From the perspective of competition law, Tor is of the view that to argue that learning removes biases is to make a normative claim that profit maximizing behaviour leads to the best outcomes, when in some cases it may be more profitable for firms to deviate from such behaviour and it is not clear to what extent the neoclassical tradition seeks to make normative claims about rationality.[204]

6.2 Does competition eliminate boundedly rational firms from the market?

Another popular argument against bounded rationality in firms is that firms exhibiting behavioural biases are not able to effectively compete in markets with their more rational counterparts and are thus, naturally selected out through evolutionary processes. Rational agents, it is argued, drive irrational ones from the market by making higher profits, so with time the impact of rational agents on aggregate market outcomes increases and markets become more rational.

These arguments have been applied by economists in the construction of evolutionary models in markets where firms are not profit maximizers and there is natural selection. In these cases economists have shown that in the long run the market converges to a monopolistic equilibrium.[205] The argument, as put forth by

[203] *See* Alexander Puetz & Stefan Ruenzi, *Overconfidence Among Professional Investors: Evidence from Mutual Fund Managers*, 38 J. BUS. FIN. & ACCTG. 684 (2011).
[204] *See* Tor III, *supra* note 37, at 500.
[205] *See* Guo Ying Luo, *Natural Selection, Irrationality and Monopolistic Competition*, 53(5) EUROPEAN ECON. REV. 512 (Jul., 2009).

Enke in 1951, is that natural selection will cause only those actively competing firms in a market to survive which have optimised their position and earned the profits necessary for survival. In other words natural selection will select out firms that act 'as if' they are profit maximizers (even though they are boundedly rational) for their long run survival. However, later studies of evolutionary models testing whether natural selection favours profit maximizing firms have shown that not all surviving firms are profit maximizing;[206] that not all profit maximizing firms will survive in the long-run (only those facing most favourable market conditions and possessing the most efficient technology survive)[207] and that equilibrium models based on the profit maximizing hypothesis are not able to effectively describe the long-run behaviour of evolutionary market models.[208]

Evolutionary economists, like organisational theorists and other scholars outside economics, also predominantly view the firm as boundedly rational.[209] Evolution involves three processes: variation, retention and selection.[210] Nelson and Winter are of the view that competitive market forces between organisations induce 'selection' in the evolutionary sense.[211] However, it is not necessary that evolution will lead to optimal results. For instance, it is not necessary that the best possible variant is selected because of: cognitive and resource limitations in searching for better variations, optimal variants may change with time and changes in the environment, and sub-optimal variants may be

[206] *See* Prajit K. Dutta & Roy Radner, *Profit Maximization and the Market Selection Hypothesis*, 66(4) REV. ECON. STUD.769 (1999).
[207] *See* Luo, *supra* note 205.
[208] *See* Larry Blume & David Easley*, If You're So Smart, Why Aren't You Rich? Belief Selection in Complete and Incomplete Markets,* 74(4) ECONOMETRICA 929 (Jul., 2006).
[209] *See* Nelson & Winter, *supra* note 74, at 42.
[210] David Barron, *Evolutionary Theory*, *in* THE OXFORD HANDBOOK OF STRATEGY: A STRATEGY OVERVIEW & COMPETITIVE OVERVIEW 12 (Andrew Campbell & David O. Faulkner eds., Oxford University Press, 2006).
[211] *See* Barron, *id.* at 11.

locked in because of switching costs.[212] It can also be argued that boundedly rational firms may in some circumstances earn greater profits, perform better and be more aggressive competitors than their rational counterparts. Thus, it is not necessary that they will get 'selected out' when competing with rational firms. Consequently, it is possible to argue that competition may not always succeed in removing boundedly rational firms from the market.

Evolutionary economists argue that firms with better organisational routines make more profit in the competitive market place and increase their market share.[213] Firms are a bundle of routines, which constitute their tacit knowledge or memory. Firms carry out their core operations through these routines. Managers are satisfied with firm performance that meets some target level of performance even if it is not the best that a firm could achieve. Here Nelson and Winter further Simon's idea of satisficing behaviour. Only if firm performance falls below target levels do managers wanting to improve firm performance in the future trigger a search for new routines and only then are new routines implemented.[214] The outcome of the adoption of any routine is uncertain and firms may develop higher-level routines to guide the search for routines based on past experience. Examples of such routines are not repeating past mistakes and copying other successful firms.[215] It is widely accepted that in reality the implications of implementing innovations go beyond what is already known and thus managerial decision-making cannot be fully rational.[216]

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[212] *See* Barron, *id.* at 12.
[213] *See* Nelson & Winter, *supra* note 74.
[214] *See* Barron, *supra* note 210, at 11.
[215] *See* Barron, *id.* at 11.
[216] Barron, *id.* at 11.

7. The Relevance of Firm Bounded Rationality to Competition Law

The above discussion has shown various linkages between management studies and bounded rationality in firms. Management studies provide an important contribution to the construction of a behavioural theory of the firm and may help in understanding aspects of firm behaviour that neoclassical economics cannot provide. This section discusses the relevance of these insights to competition policy.

At the outset it can be stated that the legal interpretation of competition rules may invite arguments based on real-world business behaviour, as they are revealed by management studies. Examples include concepts such as 'objective (business) justification', 'intent'[217] and 'commercial usage'[218]. So far, these openings in competition law have not been sufficiently exploited to bring arguments from business studies, and in particular, business strategy into the analysis of competition law problems. Nevertheless, competition authorities have taken some effort to try to incorporate principles of business strategy into competition law.[219] If this interest is taken further, it may prove to be useful because considering a competition problem from the lens of a different discipline may provide a more holistic picture of its causes and consequences.

Some competition law scholars have argued that competition law can improve its accuracy by taking into account the realities of

217 *See* Waller, *supra* note 3, at 283.
218 Consolidated Version of the Treaty on the Functioning of the European Union (TFEU), § 102(d), 2008 O.J. C 115/47.
219 *See* MICHAEL E. PORTER, COMPETITIVE STRATEGY: TECHNIQUES FOR ANALYZING INDUSTRIES AND COMPETITORS 161 (The Free Press, 1980); *see also* Leary, *supra* note 38, at 17 (explaining the difficulty of importing this kind of learning into manageable legal rules).

business operations.[220] Thomas Leary, Commissioner of the FTC, has encouraged antitrust enforcers to pay more attention to the thinking of business persons.[221] In the words of Leary, "we need to better appreciate what the competitive landscape looks like to the people who do battle on it."[222] This may require a re-evaluation of the existing understanding of competitive behaviour.[223] For instance, knowledge of the manner in which competition actually takes place in the industry (in contrast to the manner in which it is theorized) provides a more realistic account of which geographical and product segments to protect and which are less vulnerable to the exercise of market power.[224]

According to Oberholzer-Gee & Yao, business strategy can contribute to competition law by predicting market behaviour and outcomes in areas where economics has difficulty in providing accurate assessments, such as assessing the impact of a merger on product quality or innovation.[225] Further, one aspect of business strategy that competition law may benefit from incorporating is the separate assessment of short-term and long-term consequences of firm conduct. Unlike lawyers, business strategists do not always fit firm's actions into neat categories so that a particular anticompetitive strategy may have efficient market outcomes in the short-term and be anticompetitive in the long-term.[226]

Using behavioural insights in competition law implies a normative use of this literature. Jumping from explaining behaviour of firms to regulating such conduct is not obvious.

[220] *See e.g.* Albert A. Foer, *The Third Leg of the Antitrust Stool: What the Business Schools Have to Offer to Antitrust*, 47 N.Y. L. SCH. L. REV. 21 (2003).
[221] *See* Leary, *supra* note 38, at 5.
[222] Leary, *id.* at 12.
[223] *See* Leary, *id.* at 7.
[224] *See* Leary, *id.* at 12.
[225] *See* Oberholzer-Gee & Yao, *supra* note 1, at 1465.
[226] *See* Leary, *supra* note 38, at 5.

There are two main reasons why insights from behavioural theories do not lend themselves easily to normative conclusions. First, firms active in the market are heterogeneous and are subject to bounded rationality in different degrees; this makes it difficult to generalize welfare outcomes. Second, behavioural biases may work in opposing directions and thus make any prediction about market outcomes illusory. Economists argue that any individual firm irrationality, even if it exists, is random and will cancel each other out at the aggregate level.[227] Behavioural literature disputes the claim that deviations from rationality are random and contends that they are systematic.[228] For instance, a study by Fehr and Tyran shows that in certain circumstances, such as with strategic complementarity, individual irrationality is magnified at the aggregate level rather than cancelled out.[229] If bounded rationality occurs in firms systematically, it may have an effect on aggregate outcomes in the market.[230] Nevertheless, even if market outcomes are affected by bounded rationality, it is necessary to understand the direction and manner of this change.

It may be extremely challenging to determine with any clarity the market effects arising from bounded rationality. The heterogeneity of firms implies that market outcomes must be predicted from the interaction of boundedly rational firms with other rational and boundedly rational firms, as well as other rational and boundedly rational consumers.[231] Also, if decision-makers are vulnerable to different biases that work in opposite directions, it may not always be possible to recognize biases *ex*

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[227]*See e.g.* Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551 (1998).
[228]*See* Ernst Fehr & Jean-Robert Tyran, *Individual Irrationality and Aggregate Outcomes*, 19(4) J. ECON.PERSPECTIVES 43 (2005).
[229]*See* Fehr & Tyran, *id.*
[230] This view has been criticized because it is argued that the experiments that form the basis of this claim do not show that such behaviour is systematic.
[231]*See* Maurice E. Stucke*, The Implications of Behavioral Antitrust* (University of Tennessee Legal Studies Research Paper No. 192, 2012), *available at* http://.com/abstract=2109713; *see also* Van den Bergh, *supra* note 41.

ante and to predict in which direction the biases may affect decisions.[232] These problems become even more complex when the interactions of multiple heterogeneous players in the market are to be determined. In short, different policy implications and welfare effects may arise by considering and altering the relative rationality of firms and consumers, and coming to any clear conclusions is extremely challenging.[233] Given these limitations, it is clear that management studies in themselves will not allow final answers regarding the legality of certain business practices. Their relevance will be more modest, but not unimportant. The potential application of behavioural insights and its normative significance to competition law are discussed below with the help of two examples.

7.1 Merger Analysis

The competitive analysis of mergers may profit from business studies in three ways: to identify cognitive biases that may have an impact on merger decisions, to analyse the likely performance of mergers inspired by innovation and to assess the size of the productive efficiencies generated by a merger. Each of these contributions is further discussed below.

The desire to take action and the belief that such action will be successful may drive decisions to merge. Managers believe that they are hired to take action.[234] Those who stay idle may be perceived more negatively than those who have 'at least tried to do something'.[235] Further, recent studies suggest that the

[232] *See* Van den Bergh, *id*.
[233] *See* Stucke, *supra* note 37, at 526 (citing MILTON FREIDMAN, ESSAYS IN POSITIVE ECONOMICS 14-16 (University of Chicago Press, 1953)).
[234] Péli & Schenk, *supra* note 145, at 6.
[235] Péli & Schenk, *id.*

overconfidence bias is connected to excessive merger activity.[236] Overconfidence is more likely to occur in decisions whose outcomes are not immediately available. Since the success of a merger is not known immediately, decisions to merge are more likely to suffer from overconfidence. Managerial overconfidence may lead to more optimistic assessments of potential synergies between merging firms and the profitability of the target company or underestimate problems such as disruptions resulting from the merger.[237] With some exceptions, a large number of studies found that the post-merger performance of acquired firms is systematically lower than expected. One study found that shareholders of acquiring firms experience an approximate wealth loss of 10 per cent over a period of five years after the merger.[238] The under-performance of firms post-merger may be due to mean-reversion as stocks of acquiring firms generally outperform the market prior to the merger.[239] However, the result that mergers systematically perform worse than expected was found to be robust to differences in time periods and to different types of merging firms. This result was obtained after adjusting for firm size and 'beta risk'.[240] In sum, overconfident, self-serving CEOs may push for mergers more frequently and to that extent any claims of efficiencies or benefits from mergers need a very careful evaluation.[241]

Nevertheless, it cannot be conclusively established that overconfidence will result in more mergers. Overconfidence in managers may have two opposing effects on merger decisions.

[236] *See e.g.,* Ulrike Malmendier & Geoffrey Tate, *Who Makes Acquisitions? CEO Overconfidence and the Market's Reaction*, 60(6) J. FINANCIAL ECON. 20 (2008); *See also Riding a Wave*, ECONOMIST (April 6, 2006).
[237] Armstrong & Huck, *supra* note 11, at 33.
[238] *See* Anup Agrawal, Jeffrey F. Jaffe & Gershon N. Mandelker, *The Post-Merger Performance of Acquiring Firms: A Re-examination of an Anomaly*, 68(4) J. FIN. 1605, 1606 (1992).
[239] *See* Agrawal et al., *id.* at 1611.
[240] Agrawal et al., *id.* at 1606.
[241] *See* Reza Dibadj, *Reconceiving the Firm*, 26 Cardozo L. Rev. 1459, 1532 (2005).

Overconfident managers may overestimate their ability to create value and thus, the returns they can generate in their own company as well as from a merger.[242] Managers' overconfidence with respect to the returns they can generate from their own company increases financing costs, as managers believe that markets undervalue their companies.[243] On the other hand, managers' overconfidence with respect to their ability to generate value from mergers creates excessive willingness to acquire.[244] These forces work in opposite directions as overconfident managers may forego value-creating mergers, which in their view are too costly to finance.[245] Thus, the net effect of overconfidence on merger frequency is ambiguous when external financing is required to finance the merger.

Another interesting insight from business strategy is the link between innovation-inspired mergers and organizational efficiency. Mergers involving even small innovations can undermine the value of existing organizational competences, because of entrenched linkages among the components of a product within a firm. Further, tacit knowledge is an important part of replicating innovations that is often left out of economic theory and may be responsible for the failure of merging firms to manage innovation capabilities.[246] This understanding of the impact of technological change on organizational structure may enable a better understanding of the market performance of mergers that are supposed to enhance innovation capabilities.

7.2 Barriers to Entry

Entry barriers are relevant for the analysis of different types of anticompetitive conduct such as abuses of dominance.

[242]Malmendier& Tate, *supra* note 236.
[243]*See* Malmendier& Tate, *id.*
[244]*See* Malmendier& Tate, *id.*
[245]*See* Malmendier& Tate, *id.*
[246]*See* Oberholzer-Gee & Yao, *supra* note 1, at 1468.

Competition law considers that dominant firms cannot exercise market power if barriers to entry in a market are low. However, based on empirical studies, behavioural findings suggest that incumbents can exercise market dominance even in markets with low entry barriers.[247] Economic commentators give a larger role to the analysis of entry barriers than is common in today's antitrust practice. Also on this point management studies provide useful information. Various behavioural factors may have an impact on entry decisions and show that entry may be more or less likely than predicted under traditional models. These biases are discussed in greater detail below.

Due to loss aversion, firms may prefer a sure gain even if it is lower than an uncertain higher gain. If the gains from entry are uncertain, firms may be discouraged from entering even when traditional barriers to entry are low. In addition, firms may irrationally persist with unprofitable entry because they myopically focus on sunk costs.[248] This may be due to anchoring effects, which makes managers believe that spending a little more money on entry is worthwhile given the large amount of money already spent on it.[249] This bias results in the 'non-rational escalation of commitment' or 'throwing good money after bad' to reaffirm the wisdom of the initial decision.[250]

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[247] *See* Nicolas Petit & Norman Neyrinck, *Behavioral Economics and Abuse of Dominance: A Fresh Look at the Article 102 TFEU Case Law*, *in* ÖSTERREICHISCHE ZEITSCHRIFT FÜR KARTELLRECHT 203 (No. 6, Dec., 2010), https://antitrustlair.files.wordpress.com/2011/02/n-petit-n-neyrinck-behavioral-economics-and-abuse-of-dominance-a-fresh-look-at-the-article-102-tfue-case-law.pdf.

[248] *See* Stephen Martin, *Sunk Cost and Entry*, 20(4) REV. IND. ORG. 291 (2002).

[249] Charles Roxburgh, *Hidden Flaws in Strategy: Can Insights From Behavioral Economics Explain Why Good Executive Back Bad Strategies*, MCKINSEY QUARTERLY (May, 2003), http://www.mckinsey.com/insights/strategy/hidden_flaws_in_strategy.

[250] MICHAEL C. JENSEN, A THEORY OF THE FIRM: GOVERNANCE, RESIDUAL CLAIMS AND ORGANIZATIONAL FORMS (Harvard University Press, 2000).

On the one hand, next to traditional entry barriers (such as economies of scale, product differentiation, advertising[251]) cognitive biases may inhibit entry. On the other hand, behavioural research suggests that firms with overoptimistic and overconfident managers may enter markets with high entry barriers.[252] This is because overconfident entrants exhibit relative insensitivity to market predictors of success.[253] Further, start-up entrants may enter markets more optimistically and not perform as well as those who enter by diversification.[254] Entry by overconfident firms may occur in spite of the fact that it is unprofitable. Even if such entry is not successful, it may discipline incumbent firms' exercise of market power.[255] In sum, behavioural factors may influence entry decisions in two opposite directions. If they are accounted for in the entry analysis, the result may point towards either limited entry or excessive entry. The relevant factor for competition law to consider is not entry *per se* but successful market penetration and likelihood of survival in the long run.[256]

Insights from business studies further add to a proper understanding of entry conditions. If organizational factors are also considered, entry might turn out to be more difficult for larger firms due to bureaucratic gridlock.[257] Business studies further point at the potential effects of over optimism on the ultimate performance of the firm. A study by Hmieleski and Baron showed that entrepreneurs' dispositional optimism had a negative effect on firm performance when entering new

[251] *See* Michael A. Spence, *Notes on Advertising, Economies of Scale and Entry Barriers*, 95 QUARTERLY J. ECON. 493 (1980).
[252] *See* Tor III, *supra* note 37, at 486.
[253] Tor III, *id*. at 486.
[254] Tor III, *id*. at 486.
[255] PETIT & NEYRINCK, *supra* note 247.
[256] Reza Dibadj, *supra* note 241, at 1532.
[257] *See* PETIT & NEYRINCK, *supra* note 247.

markets.[258] This effect arose because more optimistic individuals have more unrealistic expectations and discount negative information to a greater extent, by mentally reconstructing negative experiences to avoid contradictions.[259] These factors can interfere with the decision-making and judgment of entrepreneurs and can combine to affect the performance of firms entering new markets. By contrast moderately optimistic persons are more sensitive to negative information, less likely to gloss over discrepancies, less easily persuaded by positive information and have more realistic expectations when engaging in high-risk situations.[260] Entrepreneurs starting new ventures are said to be disproportionately overly optimistic compared to the general population, as suggested by the fact that they decide to start a venture despite the various degrees of obstacles facing them.[261] Though the study discussed above found a negative relationship between entrepreneurs' optimism and the performance of new ventures, the authors claim that this relationship is not uniformly negative. Performance of new ventures may improve initially with increases in optimism levels. However, after a certain threshold of optimism has been reached, performance may decrease with increasing optimism of entrepreneurs. The authors believe that a reason for the reversal may be that a very high level of entrepreneurial optimism has an impact on judgment and decision-making. Thus, moderately optimistic entrepreneurs who are highly experienced are likely to perform better in dynamic business environments when starting a new venture.

Further, vengeance may make entry unlikely even when barriers to entry are low. Firms can be vengeful by willingly incurring costs to punish others or to teach them a lesson. Firms may act

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[258]*See* Hmieleski & Baron, *supra* note 195, at 481 (the method of the study involved taking a sample of 1000 new enterprises in the US and sending them survey forms – 207 of the forms were returned).
[259]*See* Hmieleski & Baron, *id.* at 475.
[260]*See* Hmieleski & Baron, *id.* at 475 (citing various studies).
[261]*See* Hmieleski & Baron, *id.* at 473.

more aggressively in these situations. For instance, firms can engage in predatory pricing just to establish or maintain a reputation for aggression and fighting entry, even if it is more costly to fight entry than to allow it.[262] Thus, firms engaging in predatory pricing may be willing to incur extra costs to fight competition.[263] On the other hand, the threat of punishment from vengeance may cause fear in the mind of managers and prevent entry into markets or even defections from cartels.[264] The threat of punishment in case of defection may make cartels more stable than predicted under traditional economic theory. This suggests that due to vengeance predatory pricing and cartels may occur more frequently than currently predicted in competition law.

8. Conclusion

This chapter is inspired by the conception of the firm as boundedly rational in the literature on BTF. It draws on BTF and other empirical and experimental evidence to question the assumption in competition law that firms are rational, profit-maximizing entities. More particularly, the chapter explores the contribution of management or business studies to BTF and introduces some potential implications for competition law. The implications for competition law are examined in greater detail in subsequent chapters. This chapter has documented how departures from rationality in firms can arise from the behavioural biases of managers or from flaws in the internals processes of firms. Further, biases of managers may perpetuate at the firm level and may affect the competitive conduct of firms in the market. Firms may not be able to effectively respond to environmental changes due to strategic persistence,

[262] *See* David Kreps & Robert Wilson, *Reputation and Imperfect Information*, 27 J. ECON. THEORY, 253 (1982).
[263] Dibadj, *supra* note 241, at 1532.
[264] Dibadj, *id.*, at 1532.

organizational structure, frames of reference, organizational routines, institutional pressures and organizational ideology.

Behavioural theories and business studies thus help to provide a better and richer understanding of firm behaviour that is closer to reality than the traditional economic conception of the firm in competition law. Rational choice theory is constrained in its ability to provide a suitable framework for incorporating the different aspects of bounded rationality. Even though certain aspects of bounded rationality of firms can be included in neoclassical economic models, the insights from the inter-disciplinary nature of behavioural scholarship are too rich to neatly mold into economic theory. Moreover, this chapter shows that mitigating factors such as learning and selection through competitive pressures may not operate in the manner theorized by traditional scholars and succeed in making firms more rational. The evidence discussed in this chapter suggests that learning is a complex process and is not effective in removing all behavioural biases. Also evolutionary processes may not necessarily eliminate irrational firms from the market.

Nevertheless, behavioural literature is unable to provide a means of measuring and predicting the direction of aggregate market outcomes in cases of bounded rationality. If competition rules must take account of the effect of the potential biases of firms and consumers interacting with each other in a market, it will be extremely challenging to determine the market effects arising from bounded rationality with any clarity. Further, behavioural and business studies may suffer from indeterminacy when results from the application of biases point in opposing directions. When market outcomes cannot be predicted with certainty, the normative relevance of behavioural and business studies to the application of competition rules will be limited. This has created a gap between behavioural theories and competition law that remains unresolved. While behavioural insights may provide insufficient guidance under the welfare-based framework of competition law, their contribution can still be important under an alternative normative conception of competition law. This will be discussed in greater detail in the next chapter.

CHAPTER III

The Bounded Rationality of Firms and the Normative Foundations of Competition Law

1. Introduction

This chapter outlines the normative framework within which behavioural theories can seek to make a contribution to competition law. The discussion about the goals of competition law is so extensive that it can easily constitute the subject matter of many Ph.D. theses in itself. This chapter can thus barely do justice to the vast normative debates within competition law. The modest objective of this chapter is to briefly highlight three prominently discussed goals of US and EU competition law, viz. consumer welfare, total welfare and promoting economic freedom or the competitive process. This chapter then discusses how behavioural insights could contribute to each of these goals. The premise of this approach is that behavioural insights will be more amenable to a particular normative framework while it may be more difficult to find a place for behavioural insights in other normative frameworks.

Interestingly, despite the immense literature on this subject, there is still an absence of consensus on what should constitute a normatively appropriate framework for competition law. There is more agreement in the US compared to other jurisdictions where an efficiency-based view is the generally accepted normative standard. However, in addition to efficiency, various political and socio-economic objectives also find a place in competition law such as generating employment, ensuring a level playing field, economic development, increasing product variety and innovation. These goals play a more prominent role in jurisdictions other than the US. One reason for the absence of consensus about the goals of competition law is that some scholars find the efficiency-based view normatively limiting and others find that a broader set of objectives are harder for courts and competition authorities to administer. A common point of debate is choosing between static and dynamic views of competition. Price theory employs a static view of competition, which preferences price-effects over innovation and other benefits of competition. However, proponents of dynamic competition argue that in the long-term consumers are more benefited by innovation than by lower prices. An approach that can integrate price and non-price effects of competition may be normatively preferable but is yet to be developed.

This chapter examines some of these normative issues in competition law and how insights from behavioural and business studies can contribute to these normative debates. It also stresses on the importance of goals in shaping competition law by describing how the different views of competition in the US and EU are a result of the differing normative foundations of competition law in both jurisdictions. The rest of this chapter is organised as follows: section 2 describes the different economic, social and political goals of competition law and the historical evolution of these goals in the US and EU. Section 3 discusses consumer welfare as the most prominent goal of competition law. It highlights the two main problems with consumer welfare i.e., ambiguity in the meaning of the term consumer welfare, and its narrowly static approach, which does not take into account dynamic efficiencies. Section 4 briefly examines the strengths and shortcomings of the total welfare standard. Section 5 discusses the goal of protecting economic freedom, its historical roots and applications in competition law. This goal is a product of the Ordoliberal school of thought, which was prominent in Germany. Section 6 argues that behavioural insights support

Ordoliberal goals. Behavioural insights can be more easily incorporated into Ordoliberal goals rather than welfare-based goals. Section 7 provides a short description of current thought on the normative suitability of the different competition goals using normative individualism as a tool of analysis. Section 8 illustrates the importance of normative criteria to the outcome of competition decisions through the recent case charging Google of abuse of dominance in its comparison shopping services. This discussion also underscores the different normative traditions in US and EU competition law, a fact that is variously highlighted throughout this chapter. Section 9 concludes the discussion.

2. The Differing Goals of Competition Law

The question of the goals of competition law has generated much debate among competition law scholars. The International Competition Network (ICN), an international organisation comprised of national competition law authorities from jurisdictions across the world, has found through recently conducted surveys that the objectives of competition law vary widely across jurisdictions.[265] The goals listed by members of the ICN include: improving consumer welfare, increasing efficiency, ensuring an effective competitive process, creating a level playing field, preserving economic freedom, fostering consumer choice, achieving market integration, ensuring fairness etc.[266]

[265] For a detailed discussion of the report of the ICN see, Maurice E. Stucke, *Reconsidering Antitrust's Goals*, 53 B. C. L. REV. 551, 567 (2012) [Hereinafter Stucke I].

[266] INT'L COMPETITION NETWORK, REPORT ON THE OBJECTIVES OF THE UNILATERAL CONDUCT LAWS, ASSESSMENT OF DOMINANCE/SUBSTANTIAL MARKET POWER, AND STATE-CREATED MONOPOLIES 6-21 (2007), http://www.internationalcompetitionnetwork.org/uploads/library/doc353.pdf [hereinafter ICN Survey].

The understanding of what should be considered the proper objectives of competition law has also changed with time as legal developments in the US have paved the way for the understanding of antitrust goals globally. Much disagreement and debate about the content and scope of competition goals has arisen due to the ambiguous wording of the Sherman Act, and other US antitrust statutes.[267] Bork famously developed the prevailing efficiency-based goal of competition law by arguing that the Sherman Act was enacted in order to protect consumer welfare through maximizing allocative efficiency.[268] While Bork's view is adopted by a majority of the antitrust community in the US, some dissenting voices persist. For instance, Hovenkamp points out that the Sherman Act could not have been enacted with the objective of preserving economic efficiency because concepts of efficiency and price theory on which it is based evolved much after the enactment of the Sherman Act.[269] Another interpretation of the Sherman Act is that it was enacted to achieve justice and fairness in business behaviour.[270] Public choice theorists consider the Sherman Act a special interest legislation enacted in order to protect small businesses.[271] Yet another view is that the objective of the Sherman Act was to stop wealth transfers from consumers to monopolies. Hovenkamp states that, from the perspective of American ideology prevailing at the time of enactment of the Sherman Act, it seems most plausible that the objective with which the Sherman Act was enacted was to prevent private 'bigness' of firms so as to create a level playing field for entrepreneurs.[272] This objective is also

[267] *See* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE 49 (West, 1994).
[268] *See* Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J. L. & ECON. 7 (1966); ROBERT H. BORK, THE ANTITRUST PARADOX (Basic Books, 1978).
[269] *See* HOVENKAMP, *supra* note 267, at 49.
[270] *See* HOVENKAMP, *id.* at 49 (citing Louis B. Schwartz, *'Justice' and other Non-economic Goals of Antitrust*, 127 U. PENN. L. REV. 1076 (1979)).
[271] *See* HOVENKAMP, *id.* at 49 (citing George J. Stigler, *The Origin of the Sherman Act*, 14(1) J. LEGAL STUD. 1 (1985)).
[272] *See* HOVENKAMP, *id.* at 50.

connected to the reasons behind the enactment of other US antitrust legislations i.e., the Federal Trade Commission Act, 1914; the Clayton Act, 1914; the Robinson-Patman Act, 1936 and the Celler-Kefauver Amendments to the anti-merger provisions of the Clayton Act, 1950, which were all enacted in order to protect small businesses.[273]

Despite the various views of the legislative intent behind the enactment of the antitrust statutes in the US, the Chicago school's efficiency-based approach has dominated antitrust analysis in the US.[274] This is because consonant with its common law tradition, the US Supreme Court has played a decisive role in shaping antitrust law in the US and court decisions have greatly diverged from the language of antitrust statutes.[275] For instance, concepts such as *per se* illegality and rule of reason do not find their origin in any of the US antitrust statutes but were created in the US Supreme Court judgment of *Addyston Pipe & Steel Co. v. United States*.[276] This judgment was used as a precedent by the US Supreme Court to create a number of antitrust principles using evolving economic concepts.[277] The Sherman Act is thus considered an 'enabling legislation' because it allows courts and antitrust enforcers to change applicable standards in antitrust in consonance with changes in the economy, ideology, technology and scholarship.[278]

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[273] *See* HOVENKAMP, *id.* at 50.
[274] *See* ROGER VAN DEN BERGH & PETER D. CAMESASCA, EUROPEAN COMPETITION LAW & ECONOMICS: A COMPARATIVE PERSPECTIVE 48 (Intersentia, 2001). The central tenets of the Chicago school's approach derived from price theory are that: conduct based on profit maximization is inherently competitive, markets have self-correcting mechanisms and market power is often acquired by superior efficiency. *See* VAN DEN BERGH & CAMESASCA, *id.* at 41.
[275] *See* HOVENKAMP, *supra* note 267, at 52.
[276] 175 U.S. 211 (1899)
[277] *See* HOVENKAMP, *supra* note 267, at 55 (also noting that that the opinion of Justice Taft in Addyston Pipes was fundamental to the introduction of economics into US antitrust law).
[278] *See* HOVENKAMP, *id.* at 53.

The Chicago school's focus on efficiency as the goal of competition law has been critiqued in evolving scholarship as being too narrow.[279] The post-Chicago school, for instance, acknowledges the importance of efficiency but believes that the goal of competition law cannot be limited to efficiency and should include other 'economic' goals as well such as protecting consumer choice and preventing wealth transfers from consumers to producers, which are goals that are closer to EU competition law.[280] Different views about competition goals prevail in different jurisdictions. Efficiency is more generally accepted as the objective of competition law in the US. On the other hand, non-economic goals such as market integration play a significant role in EU competition law.[281]

The goals of competition law have evolved differently in the EU where there is only a more recent movement among competition agencies towards a more economic approach in conformity with the US. Given the diversity of competition traditions in the EU, there is no consensus, particularly in the case law, about any particular goals of competition law with the exception of market integration, which is uniformly recognised as a goal of European competition law.[282] European courts have highlighted different objectives in their interpretations of Article 101 and 102 of the

[279] *See* Wolfgang Kerber, *Should Competition Law Promote Efficiency? Some Reflections of an Economist on the Normative Foundation of Competition Law*, *in* ECONOMIC THEORY AND COMPETITION LAW 93, 118-19 (Josef Drexl, Laurence Idot & Joël Monéger eds., Edward Elgar, ASCOLA Competition Law Series, 2009); for a general discussion on the objectives of competition law see, VAN DEN BERGH & CAMESASCA, *supra* note 274, at 31-32.
[280] *See* David A. Hyman & William E. Kovacic, *Institutional Design, Agency Life Cycle and the Goals of Competition Law*, 81 FORDHAM L. REV. 2163, 2163-64 (2013).
[281] *See* VAN DEN BERGH & CAMESASCA, *supra* note 274, at 4.
[282] *See* Ioannis Lianos, *Some Reflections on the Goals of Competition Law*, *in* HANDBOOK OF EUROPEAN COMPETITION LAW: SUBSTANTIVE ASPECTS, 41 (Ioannis Lianos & Damien Geradin eds., Edward Elgar Publishing, 2013).

Treaty on the Functioning of the European Union[283] (TFEU).[284] Some of the objectives include the welfare-based objective, protecting the structure of competition[285] and protecting the interests of consumers.[286]

Historically, during the founding of the EU, competition policy was given prominence as a tool to promote economic progress and the welfare of European citizens.[287] While the main objectives of competition law today can be considered to be economic efficiency and market integration,[288] social and political considerations also influence the implementation of European competition policy and take precedence over efficiency in some situations.[289] European competition policy has also favoured small and medium sized enterprises.[290] This is because smaller firms are often hurt to a greater extent by market imperfections.[291] Along similar lines, achieving free and fair competition is also considered one of the goals of European competition law.[292] Given the diversity of objectives imputed to

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[283] Consolidated Version of the Treaty on the Functioning of the European Union (TFEU), § 101 (ex § 81, TEC) and § 102 (ex § 82, TEC), 2008 O.J. C 115/47 at 0088-0089.

[284] *See* VAN DEN BERGH & CAMESASCA, *supra* note 274, at 42.

[285] *See GlaxoSmithKline Services* v. *Commission*, in Joined Cases C-501/06 P, 513/06 P, 515/06 P and 519/06 P, § 63 ECR I-9291 (2009) (holding that one of the aims of Article 81 [101 TFEU] is to protect the structure of the market and hence, competition as such). A system of undistorted competition may also be protected by protecting equality of opportunity, *see* Motosykletistiki Omospondia Ellados NPID (MOTOE) v. Elliniko Dimosio, C-49/07, § 51 ECR I-4863 (2008).

[286] *See* Lianos, *supra* note 282, at 45-46 (citing Konkurrenverket v. TeliaSonera Sverige, §§ 21-24 ECR 527 (2011).

[287] *See* MASSIMO MOTTA, COMPETITION POLICY: THEORY & PRACTICE 14 (Cambridge University Press, 2004).

[288] *See* MOTTA, *id.*at 15.

[289] *See* MOTTA, *id.* at 16 (the Ford / Volkswagen joint venture was cleared particularly because of its substantial potential to create jobs).

[290] *See* MOTTA, *id.*at 16.

[291] *See* MOTTA, *id.* at 22 (though Motta questions whether competition policy is an appropriate instrument for promoting small and medium sized enterprises).

[292] The meaning of 'free and fair competition' remains unclear. Free could mean free entry and exit of firms, which are hindered by entry barriers and strategic actions to

EU competition law, some objectives might conflict with others, for instance, market integration may conflict with consumer welfare.[293] Reconciling these differing objectives remains a challenge.

The following discussion will throw further light on the different views about the goals of competition law and will highlight the importance of the efficiency-based approach in the existing view of competition law goals.

3. Consumer Welfare

Following Bork's influential hypothesis in his book The Antitrust Paradox, it is generally agreed that the objective of competition law is to maximize consumer welfare. Consumer welfare, in Bork's view and as is traditionally understood, is an efficiency-based view involving maximizing consumer surplus through reduced prices. However, in actuality, consumer welfare is not limited to consumer surplus, and different conceptions of consumer welfare exist.[294] As a result, the understanding of what constitutes 'consumer welfare' remains unclear.[295] Moreover, no court has ever directly examined the meaning of the term 'consumer welfare' in competition law.[296] The US Antitrust

prevent entry of competitors such as limit pricing or investing in excess capacity. Free competition could also mean the absence of restraints on buyers and sellers in a market, e.g. resale price maintenance is a vertical restraint. The meaning of fair competition is more ambiguous because fairness does not have a precise interpretation in economics. It could mean levelling the playing field between small and large firms in a market. *See* Cassey Lee, *The Objectives of Competition Law* 11 (ERIA Discussion Paper No. 2015-54, Aug., 2015).

[293] *See* Lianos, *supra* note 282, at 53-54 (citing GlaxoSmithKline Services v. Commission, *supra* note 285).

[294] *See* Stucke I, *supra* note 265, at 572.

[295] *See* Stucke I, *id.* at 551; Barak Y. Orbach & Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress*, 62 N.Y.U. L. Rev. 1020, 1020, 1032 (1987).

[296] *See id.* at 161.

Modernization Committee in a report in 2007 highlighted that the understanding of consumer welfare was still up for debate in the US Supreme Court with no clarity between whether it should mean achieving allocative efficiency,[297] or preventing wealth transfers from consumers to producers. According to Bork, the implementation of consumer welfare requires courts to distinguish between actions that increase wealth through efficiency and those that decrease it by restricting output.[298] This has largely been followed as the goal of US law, and practices that result in lower prices or increased output are rarely held to be anticompetitive. However, from an economic perspective, Bork's usage of the term consumer welfare was not correct, as the meaning he gave to the term is very different from the generally understood meaning of consumer welfare in economics.[299] Scholars and courts have also been reluctant to equate consumer welfare with consumer surplus.[300] This is because consumer welfare has been interpreted by some in a broader way to include compensating consumers for harm caused by anticompetitive practices, improving product quality, variety and innovation and preserving consumer choice.[301] These aspects of consumer welfare do not fit into the popular price theory oriented, consumer surplus understanding of consumer welfare propagated by Bork. Interestingly, Orbach states that consumer welfare has so many interpretations that the controversy over the goals of

[297] Orbach traces the origin of consumer welfare as the goal of competition law to Robert Bork and argues that by consumer welfare Bork actually referred to allocative efficiency. *See* Barack Y. Orbach, *The Antitrust Consumer Welfare Paradox*, 7(1) J. COMPT. L. & ECON. 133, 144 (2011).

[298] *See id.* at 144 (citing Robert H. Bork & Ward S. Bowman, Jr., *The Crisis in Antitrust*, FORTUNE MAGAZINE 138 (1963).

[299] *See* Orbach, *supra* note 297, at 140-41; Steven C. Salop, *Question: What is the Real and Proper Welfare Standard? Answer: The True Consumer Welfare Standard*, 22 LOY. CONSUMER L. REV. 336, 347 (2010). Orbach argues that Bork was wrong to equate efficiency with consumer welfare, as these are two different concepts in economics since savings in cost do not necessarily get passed on to consumers and could instead benefit producers. *See* Orbach, *supra* note 297, at 144.

[300] *See* Stucke I, *supra* note 265, at 575.

[301] *See* Lianos, *supra* note 282, at 20-23.

antitrust laws has merely transformed itself into a controversy over the meaning of the term "consumer welfare".[302]

Whereas US law is more narrowly concerned with maximizing consumer surplus, EU law takes a broader approach to consumer welfare. In various pronouncements the ECJ has held that the primary concern of EU competition law is to "protect the interests of consumers".[303] This is certainly a broader standard than the US approach of focusing on low prices. According to Schweitzer, the primary concern of EU competition law is with delivering the benefits of competition to consumers, though not necessarily through improved efficiency.[304] Also, the wording of provisions such as Article 101(3) TFEU, which provides that consumers should be provided a fair share of efficiency gains claimed by the producer from the anticompetitive agreement, suggests that EU law is also concerned with the distributive aspects of consumer welfare. Additionally, the Guidelines published by the Commission to assess vertical agreements under Article 101 TFEU states that only those restrictions that are likely to result in consumer harm will fall within the ambit of Article 101.[305] This is similar to the US concept of consumer welfare. Nevertheless, the ECJ has not explicitly endorsed this concept of consumer welfare.[306] The ECJ's reluctance to adopt modern economic thinking into EU competition law may be a result of its reliance on historical objectives of EU competition law.

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[302] *See* Orbach, *supra* note 297, at 163.
[303] *See* Orbach, *id.* at 171.
[304] *See* Heike Schweitzer, *Efficiency, Political Freedom and the Freedom to Compete – Comment on Maier Rigaud*, *in* THE GOALS OF COMPETITION LAW 169, 171 (Daniel Zimmer ed., Edward Elgar Publishing, ASCOLA Competition Law Series, 2012) (Further, Schweitzer argues that though efficiencies and consumer interests are relevant to EU competition law, this does not mean that the application of Articles 101 and 102 TFEU is to be based on a full-blown consumer welfare analysis).
[305] *See* Anne C. Witt, *From Airtours to RyanAir: Is the More Economic Approach to EU Merger Law Really about More Economics?*, 49 COMMON MARKET L. REV. 217, 221 (2012).
[306] *See* Lianos, *supra* note 282, at 20.

3.1 Static vs. Dynamic Efficiencies

Bork's notion of consumer welfare was predicated on a model of static or allocative efficiency, based on a narrowly static view of competition. Allocative efficiency is achieved when prices equal marginal costs so that firms produce what consumers want and are willing to pay for.[307] In addition, competition law can also maximize productive efficiencies. These are achieved when firms maximise output through the use of the most effective combination of inputs.[308] These efficiencies can be realised by exploiting economies of scale and may be hampered by X-inefficiencies because managers might pursue goals other than profit maximization.[309]

Since allocative and productive efficiencies are static, they do not take into account the effects of changing market conditions such as those arising from innovation, which is the domain of dynamic efficiency.[310] Implicitly, consumer welfare favours short-term price decreases over long-term efficiency gains.[311] The problem with focusing on achieving lower prices is that it will result in lower profits for firms, which will in turn reduce incentives to innovate and develop new products in the long-term.[312] Thus, lower prices can cause consumers harm in the long-term by reducing incentives to innovate. In addition, efficiencies that benefit consumers in the long-term are often ignored under the static view of consumer welfare. Motta states that, "at the very least one should consider the objective [of competition law] as

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[307] *See* VAN DEN BERGH & CAMESASCA, *supra* note 274, at 5.
[308] *See* VAN DEN BERGH & CAMESASCA, *id.* at 5.
[309] *See* Kerber, *supra* note 279, at 96-97.
[310] *See* Kerber, *id.* at 97.
[311] *See* Dennis W. Carlton, *Does Antitrust Need to be Modernized?*, 21(3) J. ECON. PERSP. 155, 157 (2007).
[312] *See* MOTTA, *supra* note 287, at 21.

that of maximizing consumer surplus over time (i.e., in dynamic terms), otherwise by helping consumers today one would hurt consumers tomorrow."[313] Motta thus, prefers a total welfare standard to a consumer welfare standard.[314]

Dynamic efficiencies' focus on future benefits to consumers may come at the cost of short-term price competition, a key aspect of static efficiencies.[315] Thus, typically, the trade-off between static and dynamic efficiency is between higher prices and greater innovation or lower prices and reduced innovation.[316] This translates into prioritising short-term effects on price over long-term effects on innovation.[317] Neoclassical economics does not provide a suitable framework to conduct such an analysis. Areeda and Turner have defended their disregard for long-term market outcomes on the basis that in the long run, market outcomes are indeterminate and speculative.[318] Accordingly, they argue that administrable rules cannot be formulated that will recognise long-term market positions.[319]

However, the static view may be normatively limiting in so far as a dynamic or a long-term view might provide additional insights that differ from the static view. Porter criticizes the use of consumer welfare as a goal of antitrust law on the grounds that society is more concerned with the "long-term trajectory of value, prices and costs" than on short-term effect on prices and costs.[320] Further, Porter believes that consumer welfare measured by

[313]MOTTA, *id.* at 21.
[314]*See also* Carlton, *supra* note 311, at 157.
[315]*See* Sidak & Teece, *supra* note 14, at 600.
[316]*See* Stucke I, *supra* note 265, at 577 (citing ICN Survey, *supra* note 2, *at* 45).
[317]*See* Kerber, *supra* note 279, at 100.
[318]*See* Phillip Areeda & Donald F. Turner, *Scherer on Predatory Pricing: A Reply*, 89 HARV. L. REV. 891, 897 (1976).
[319]*See* Areeda & Turner*, id.* at 897.
[320]Michael E. Porter, *Competition and Antitrust: Towards a Productivity-Based Approach to Evaluating Mergers and Joint Ventures*, 46 ANTITRUST BULLETIN 919, 923 (2001).

short-run prices does not measure product quality, features and services. According to Porter, the only way of achieving sustained productivity in the market is through innovation because innovation provides products and services of value to consumers as well as ways of producing products more efficiently.[321]

As evolutionary economists argue, dynamic processes such as innovation are better understood from a long-term perspective and play a key role in industry and firm life-cycles.[322] Sidak and Teece use literature from evolutionary economics, behavioural theory of the firm and strategic management to argue that dynamic competition should be favoured over static competition in antitrust law, particularly in the context of innovation-driven industries.[323] They further argue that static competition does not offer a suitable analytical or normative paradigm for competition law, it does not provide a good description of the economy and it does not offer a paradigm that competition law should aspire to.[324] Moreover, using static analysis in dynamic market conditions may not go far towards meeting the goal of improving consumer welfare.[325]

Adopting a standard for consumer welfare that includes dynamic efficiencies can incorporate innovations that benefit consumers into the concept of consumer welfare. However, due to the uncertainty and unpredictability inherent in the process of innovation, dynamic efficiencies are difficult to quantify and it is problematic to determine their impact on competition.[326] Further, unlike with static efficiency, there are no clear normative criteria for determining dynamic efficiency since in many cases

[321] *See* Porter, *id.* at 923.
[322] *See* Nelson, *supra* note 75, at 294.
[323] *See* Sidak & Teece, *supra* note 14, at 600.
[324] *See* Sidak & Teece, *id.* at 603.
[325] *See* Sidak & Teece, *id.* at 585.
[326] *See* Stucke I, *supra* note 265, at 584.

innovations may not be successful or research may not have desired effects.[327] From an institutional perspective, the problem with balancing static and dynamic efficiencies is that courts are not competent or well equipped to undertake trade-offs between short-term and long-term benefits to consumers.[328]

The problem of balancing static and dynamic efficiencies in the notion of consumer welfare may be resolved if the normative criterion adopted is that of satisfying consumer preferences rather than maximizing consumer surplus.[329] If consumer welfare is taken to mean the fulfilment of consumer preferences, then both lower prices and innovation contribute to increasing consumer welfare.[330] However, this needs to be further developed as a normative concept.

To summarise, while consumer welfare seems to be more widely accepted as the objective of competition law, it is by no means undisputed or considered an ideal normative basis for competition law. The larger problem according to Orbach is that the ambiguity in the term "consumer welfare" can be used to promote ideas that have questionable economic merit.[331] Many different views prevail about how the consumer welfare standard can be improved to make it distributionally just, fair, institutionally and normatively appropriate, consistent and certain.[332] The ambiguity and conceptual inconsistencies surrounding the meaning of the term 'consumer welfare' need to

[327] *See* Kerber, *supra* note 279, at 98.
[328] *See* Stucke I, *supra* note 265, at 589.
[329] *See* Kerber, *supra* note 279, at 100.
[330] *See* Kerber, *id.* at 100.
[331] *See* Orbach, *supra* note 297, at 133.
[332] For instance, Lianos suggests that the consumer welfare standard can be broadened to include not just consumer surplus but the negative effect of wealth transfers from consumers to producers. *See* Lianos, *supra* note 282, at 39-40. Kerber discusses adding to the consumer welfare standard certain rights of producers so that the normative standards of competition law are not representative of only a subset of the population from a constitutional economic perspective. *See* Kerber, *supra* note 279, at 113.

be clarified before it can form a suitable normative basis for competition law. The static perspective of consumer welfare further limits its normative suitability. Finally, a solely consumer welfare approach, it has been argued, is normatively asymmetric because in such an approach competition law is only about the protection of consumers, and the interests of firms including other firms in the market are ignored.[333] While consumer welfare gives preference to consumers over producers, the total welfare standard at least treats these groups equally.[334] The following section discusses the total welfare standard in brief.

4. Total Welfare

Under the total welfare standard, competition law steps in to penalize conduct only when the aggregate of consumer welfare and producer welfare is reduced, without regard to any wealth transfers.[335] Since this is an aggregate measure, total welfare can increase even if the welfare of one group such as consumers or producers declines. Accordingly, losses to consumers under this standard are overlooked if there are compensating gains to producers in the form of cost savings through increased efficiency.[336] In contrast, efficiencies must be passed on to consumers to count under the consumer welfare standard.[337]

Supporters of the economic approach to competition law generally consider the appropriate standard of competition law to be total welfare. The goal of total welfare is based on the more mainstream economic view that efficiency is the only proper goal of competition law and distributional concerns should be

[333] *See* Kerber, *id*. at 113.
[334] *See* Carlton, *supra* note 311, at 158.
[335] *See* Salop, *supra* note 299, at 336.
[336] *See* Salop, *id.*at 336.
[337] *See* Salop, *id.*at 337.

addressed through other mechanisms.[338] Thus, scholars who consider that wealth transfers from consumers to producers should not be actionable under competition law endorse the total welfare standard. This view is most popular in the US and finds support among members of the Chicago school.[339] In addition, some scholars argue that the total welfare standard is better than the consumer welfare standard because it can better incorporate the long-term interests of consumers.[340]

An important difference between consumer welfare and total welfare is that by definition the total welfare standard takes into account injury to competitors, which is not relevant to the consumer welfare standard unless consumers are also harmed.[341] In fact, conduct should fall afoul of the total welfare standard even when consumer welfare increases if harm to competitors is sufficiently severe, or benefit to consumers is not sufficient to outweigh competitors' welfare losses.[342] Since US law does not consider injury to competitors as equally injurious as consumer harm and follows the rule that antitrust laws should be for the protection of consumers and not competitors, Salop argues that US does not follow a total welfare standard.[343]

The total welfare standard has been questioned from a normative perspective for not considering distributional effects arising from market conduct, as long as there is a sufficient increase in

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[338]*See* Louis Kaplow & Steven Shavell, *Why the Legal System is Less Efficient than the Income Tax in Redistributing Income*, 23 J. LEGAL STUD. 667 (1994) (in this seminal article Kaplow and Shavell were the first to propose that the goal of redistribution of income could be more efficiently achieved through the tax system than by law); *see also* Elyse Dorsey & Jonathan M. Jacobson, *Exclusionary Conduct in Antitrust*, 89(1) ST. JOHN'S L. REV. 101, 108-109 (2015), http://scholarship.law.stjohns.edu/cgi/viewcontent.cgi?article=6707&context=lawreview.

[339]*See* Salop, *supra* note 299.

[340]*See* Carlton, *supra* note 311, at 157.

[341]*See* Salop, *supra* note 299, at 337-38.

[342]*See* Salop, *id.* at 343.

[343]*See* Salop, *id.* at 345-46.

producer surplus.[344] The problem with this is that ffocusing merely on surplus without attention to how that surplus is allocated may further enhance social inequalities.[345] Additionally, people's preferences are a function of a starting distribution of wealth, which may already reflect existing monopoly power and thus, the efficient outcome at a point in time may already contravene principles of social justice.[346] Thus, the normative basis for the total welfare standard has been questioned because it allows uncompensated redistributions between individuals and firms and ignores inequities in existing resource allocations.

5. Protecting Economic Freedom and the Competitive Process

Another objective of competition law with more of a socio-economic basis than efficiency-based approaches is protecting economic freedom and the competitive process. Freedom in the context of competition has been described as economic liberty and dispersal of economic power to enable unhindered participation in markets.[347] For instance, merger policy has been used as a tool for dispersing economic power by preventing concentrations.[348] The goal of economic freedom and protecting the competitive process has historically been associated with the Ordoliberal approach.

5.1 The Ordoliberal Approach

Ordoliberalism has played an important role in shaping competition jurisprudence in the EU. It was first developed by

[344] *See* Kerber, *supra* note 279, at 101-02.
[345] *See* Lianos, *supra* note 282, at 10.
[346] *See* Lianos, *id.* at 9-10.
[347] *See* Lee, *supra* note 292, at 3.
[348] *See* Lee, *id.* at 12.

German economists belonging to the 'Freiburg School' in the 1930's and later played a significant role in shaping German competition law after World War II.[349] Ordoliberal thought also found a place in the Rome Treaty, as Ordoliberal scholars were involved in founding the EU and drafting the EU constitutional treaties.[350] The economist Walter Eucken and the lawyer Franz Böhm are considered to be some of the most prominent representatives of the Ordoliberal tradition.[351]

Ordoliberal thought cannot be easily integrated into standard economic approaches to competition.[352] Ordoliberals believe that the market can have a positive impact only if the state establishes a strong institutional framework within which market processes function.[353] Consequently, competition law is necessary to protect consumers from abuses of economic power and arbitrary employment of political power in the economy.[354] Thus, the proper purpose of competition law is to act as a constraint on the exercise of private and state power in the economic sphere.[355] Ordoliberals considered market power as the main threat to a free economic order. The Ordoliberal ideal is a market without economic power where competition is on the merits (*Leistungswettbewerb*).[356] Early Ordoliberals strongly believed

[349]*See* DAVID J. GERBER, LAW AND COMPETITION IN TWENTIETH CENTURY EUROPE: PROTECTING PROMETHEUS 266-284 (Clarendon Press, 1998) (describing the historical influence of Ordoliberalism in the evolution of German competition law); ROGER J. VAN DEN BERGH & PETER D. CAMESASCA, EUROPEAN COMPETITION LAW AND ECONOMICS: A COMPARATIVE PERSPECTIVE 65 (2d, Sweet & Maxwell, 2006).
[350]*See* GERBER, *id.* at 263-264
[351] VAN DEN BERGH & CAMESASCA, *supra* note 349, at 65.
[352]*See* Kerber, *supra* note 279, at 107.
[353]*See* Massimiliano Vatiero, *Dominant Market Position and Ordoliberalism*, INT'L REV ECON.5 (2015), http://link.springer.com/article/10.1007%2Fs12232-015-0246-8#/page-1 (published online: Sept. 5, 2015).
[354]Vatiero, *id.* at 5.
[355]Vatiero, *id.* at 5 (citing Vickers II, *infra* note 813, at F246).
[356]*See* Pierre Larouche & Maarten P. Schinkel, *Continental Drift in the Treatment of Dominant Firms*, *in* THE OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS 153, 161 (Roger D. Blair & D. Daniel Sokol eds., vol. 2, Oxford University Press, 2015).

that market power had to be attacked and dissolved at its root and that merely policing abuse of dominance would be insufficient to achieve a free economic order.[357] This can be contrasted with the traditional efficiency-based approach, which considers that the state should only intervene in the market when prices are increased or output is restricted to the detriment of consumers.

Rather than seeking efficiency or maximizing some measure of welfare, Ordoliberals aim to protect individual freedoms and a free market.[358] This is because Ordoliberals believe that the efficiencies arising from competition cannot be precisely measured *ex ante* and instead should be measured by the degree of freedom available to market participants.[359] The freedom of producers and consumers to make choices in the market is the focus of the modern version of Ordoliberalism.[360] In the words of Behrens, "competition [in Ordoliberal thought] is understood as a dynamic system (process) of interaction between choice making individuals who by making their choices reveal their preferences and produce the kind of information that other individuals need to make their choices."[361] From here arises the Ordoliberal belief in maintaining the compeitive process and economic freedom.[362]

Another interesting aspect of Ordoliberal discourse is that it distinguishes performance competition from *hindrance* or *impediment* competition. Performance competition occurs when firms compete by improving their offering to consumers, for

[357]*See* Larouche & Schinkel, *id.* at 162.
[358]Vatiero, *supra* note 353, at 6.
[359]*See* Peter Behrens, *The Ordoliberal Concept of "abuse" of a Dominant Position and its Impact on Article 102 TFEU*, 22 (Working Paper Presented at 10th Annual Conference of the Annual Society of Competition Law (ASCOLA), May 2015, Japan), http://ascola-tokyo-conference-2015.meiji.jp/pdf/ConferencePapers/General%20Session%201/Peter_Behrens_The_ordoliberal_concept_of_abuse.pdf; Vatiero, *id.*at 6.
[360]*See* Behrens, *id.* at 11.
[361]*See* Behrens, *id.* at 11.
[362]*See* Behrens, *id.* at 22.

instance, by reducing prices or improving product quality and features. This is also known as competition on the merits. Impediment competition occurs when firms compete by impeding the performance of competitors. Performance competition is considered a legitimate form of competition and hindrance competition is considered abusive and detrimental.[363] The idea of competition on the merits is based on the Ordoliberal conception that only the quality of performance and not market power should determine market success. Consequently, Ordoliberals developed the 'as if' standard to encourage performance competition and discourage impediment competition.[364] The 'as if' standard required firms with market power to act as if they were subject to competition.[365] Thus, dominant firms should not take any actions that they would not have been able to take if they had no market power. However, according to Behrens, Ordoliberals have criticised and abandoned the 'as if' standard.[366] Instead, present-day Ordoliberals recognise that monopoly power should not be punished if it is a result of performance competition and market success.[367] Rather than attacking the presence of market power, present Ordoliberals believe that dominant firms should not be allowed to increase market concentration through mergers or by employing exclusionary practices because this will drive rivals out of the market by means other than competition on the merits, at the expense of consumers' choice.[368]

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[363] *See* Larouche & Schinkel, *supra* note 356, at 164; Vatiero, *supra* note 353, at 5 (citing GERBER, *supra* note 349, at 252-53).
[364] *See* Vatiero, *id.* at 6.
[365] *See* Vatiero, *id.* at 5.
[366] *See* Behrens, *supra* note 359, at 18.
[367] *See* Behrens, *id.* at 13.
[368] *See* Behrens, *id.* at 13.

5.2 Freedom to Compete as Objectives of EU and US Competition Law

Even in the US, before welfare-based approaches dominated the normative thinking in competition law, preserving economic freedom and the freedom to compete were historically considered relevant goals of US competition law.[369] The US Supreme Court had previously stated that the objective of antitrust is to preserve economic liberty through free and fair competition.[370] Other US courts have similarly held that the purpose of antitrust law is to protect the competitive process.[371] For instance in *NCAA v. Board of Regents,* the Supreme Court held that to judge the validity of a restraint under the Sherman Act, "the criteria to be used in judging the validity of a restraint on trade is its impact on competition."[372] This statement, though no longer used in antitrust analysis, is reminiscent of Ordoliberal thinking.

In addition, Farrell, a prominent US economist with the DOJ has also acknowledged that protecting the competitive process is necessary for a well-functioning economy; therefore, competition should be promoted even when it is unclear as to whether it will benefit consumers and improve efficiency.[373] As Farrell states, there should be a presumption in favour of competition *per se* rather than upholding it only when it benefits consumers.[374] Such

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[369] *See* Stucke I, *supra* note 265, at 610 (citing US *Supreme Court decision Associated Gen. Contractors* v. *Carpenters*, 459 U.S. 519, 538 (1983) and *United States* v. *Topco Assocs.*, 405 U.S. 596, 610 (1972)).
[370] *See* Stucke I, *id.* at 562 (citing *NCAA* v. *Board of Regents*, 468 U.S. 85, 104 n.27 (1984)).
[371] *See* Stucke I, *id.* at 568 (citing *Morrison* v. *Murray Biscuit Co.*, 797 F.2d 1430, 1437 (7th Circ., 1986)).
[372] *NCAA* v. *Board of Regents*, 468 U.S. 85, 104 (1984); *see also* Daniel Zimmer, *The Basic Goal of Competition Law: To Protect the Other Side of the Market*, *in* THE GOALS OF COMPETITION LAW 486, 487 (Daniel Zimmer ed., Edward Elgar Publishing, ASCOLA Competition Law Series, 2012).
[373] *See* Farrell & Shapiro Interview, *supra* note 16.
[374] Farrell & Shapiro Interview, *id*.

an approach is contrary to the strong consequentialist approach to competition goals arising from the influence of welfare economics, where only outcomes are relevant.[375] According to Farrell, the reasons for promoting competition are difficult to "pin down from a narrowly economic point of view" but are "probably important".[376] One reason being that since firms can make mistakes, more number of firms in the market can counteract any negative effects arising from the mistaken actions of individual firms.[377]

Unlike the US, aspects of Ordoliberal thought continue to be relevant to EU competition law. One of the objectives of EU competition law is to preserve a system of undistorted competition as part of the internal market.[378] Preserving undistorted competition represents the essence of present day Ordoliberal scholarship.[379] In fact, competition on the merits and equality of opportunity, both key concepts in Ordoliberal scholarship, are aspects of the system of undistorted competition.[380] Another more commonly described objective of EU competition law that is derived from Ordoliberal concepts is protecting the competitive process.[381]

Further, some of the differences between EU and US law can be traced back to the influence of Ordoliberal thought on EU competition law.[382] In particular, the normative underpinnings of EU law on abuse of dominance reflect Ordoliberal thinking because it emphasizes the opportunities of competitors to

[375] *See* Lee, *supra* note 292, at 17.
[376] Farrell & Shapiro Interview, *supra* note 16.
[377] *See* Farrell & Shapiro Interview, *id.*
[378] *See* Wouter P. J. Wils, *The Judgment of the EU General Court in Intel and the So-Called More Economic Approach to Abuse of Dominance*, 37(4) WORLD COMPETITION 405, 417 (2014).
[379] *See* Behrens, *supra* note 359, at 29.
[380] *See* Wils, *supra* note 378, at 418.
[381] *See* Wils, *id.* at 418.
[382] Larouche & Schinkel, *supra* note 356, at 159.

compete on the merits.[383] For instance, the difference in the law of predatory pricing in the EU and US has been imputed to the Ordoliberal influence on EU law.[384] Ordoliberal thought may have also inspired the special responsibility assigned to dominant firms under Article 102 TFEU.[385] This is because Ordoliberals feel dominant firms can abuse their position by engaging in 'impediment competition' and therefore should be specially monitored so as to prevent harm to competition.[386]

EU law on abuse of dominance has sought not only to protect competition on the merits but also to condemn the exercise of market power which impairs rivals' ability to succeed based on superior performance.[387] In *British Airways*,[388] the court said that practices having a detrimental impact on an effective competitive structure are contrary to Article 102 TFEU.[389] The interpretation of Article 102 TFEU as protecting the competitive process reflects the Ordoliberal belief that "competition results from the exercise of individual rights within a system of interaction the workability of which rests on the protection of all market actors against exclusion that does not result from competition on the merits."[390] Previously, the test for abuse of dominance under Article 82 EC [now Article 102 TFEU] was the protection of competition against distortions arising from significant market power.[391] This was taken to mean that competition law should engender a system in which superior business performance is the

[383] *See* Thomas Eilmansberger, *How to Distinguish Good from Bad Competition Under Article 82 EC: In Search of Clearer and More Coherent Standards for Anticompetitive Abuses*, 42 COMMON MARKET L. REV. 129, 133 (2005).
[384] *See* Behrens, *supra* note 359, at 21.
[385] *See* Larouche & Schinkel, *supra* note 356, at 164.
[386] *See* Larouche & Schinkel, *id.*at 164.
[387] *See Irish Sugar Plc*., Commission Decision No. 97/624/EC (1997); *see also* Eilmansberger, *supra* note 383, at 133.
[388] *See British Airways* v. *Commission*, Case C-95/04 P, E.C.R. I-2331, § 106 (2007).
[389] *See* Schweitzer, *supra* note 304, at 173.
[390] Behrens, *supra* note 359, at 21.
[391] *See* Eilmansberger, *supra* note 383, at 132.

primary reason behind a firm's success and the exercise of market power does not hinder competitors with better performance from succeeding.[392] Thus, both old and new versions of the EU law on abuse of dominance reflect Ordoliberal thought. As an aside, it is worth noting that Article 102 TFEU does not adopt the early Ordoliberal proscription of market power because it does not intervene directly to correct market power but instead only polices abuses of dominance.[393]

Further, EU law's concern with maintaining effective competition is not limited to provisions on abuse of dominance. For instance, the wording of Article 101(3)(b) is considered to be an influence of Ordoliberal thought on EU competition law.[394] Article 101(3)(b) TFEU makes any efficiency gains arising from an anticompetitive agreement subject to the condition that it does not allow "the possibility of eliminating competition in respect of a substantial part of the products in question."[395] In addition, mergers are also assessed based on their ability to "significantly impede effective competition in the common market or in a substantial part of it".[396] These provisions represent the Ordoliberal prescription of the competitive process.

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[392] *See* Eilmansberger, *id.* at 132.
[393] *See* Larouche & Schinkel, *supra* note 356, at 163 (noting that this is probably because the drafting of EU competition law was a result of political bargaining between competing visions both among and within member states. Further, they note that from an institutional perspective, the Ordoliberal proscription of market power may be easier to implement than the prohibition of abuse of dominance in Article 102 because the latter involves the complex task of first determining which firms can be called dominant and then defining what constitutes abuse, rather than the outright condemnation of market power.).
[394] *See* Behrens, *supra* note 359, at 22.
[395] *See also* Zimmer, *supra* note 372, at 487.
[396] Article 2(3), Council Regulation (EC) No. 139/2004 on The Control of Concentrations between Undertakings, L-024 (Jan. 2004).

6. Behavioural Studies Support Ordoliberalism and Process-oriented Goals

This section argues that behavioural insights support the normative premise of Ordoliberalism that competition law should seek to achieve economic freedom and maintain the competitive process. Early Ordoliberal thinkers emphasized the value of protecting competition as an end in itself regardless of whether any welfare-related objectives were being met.[397] According to the traditional, Ordoliberal view, firms' rights to pursue self-interest in the market are constrained by the rights of other firms to participate in the competitive process.[398] Consequently, conduct is judged by determining if it followed prescribed rules of process rather than by the market outcomes.[399] The normative legitimacy for the process-oriented view of competition is derived from the idea that the result of a just process is presumed to be just.[400]

However, later Ordoliberals modified the view that the competitive process should be maintained for its own sake and stated that the goal of protecting the competitive process is only an intermediate goal that serves to achieve final objectives such as consumer welfare.[401] Nevertheless, Ordoliberalism is not concerned with market outcomes in the same way as the welfare-based approach and is instead based on the belief that consumers

[397]*See* Oles Andriychuk, *Thinking Inside the Box: Why Competition as a Process is a Sui Generis Right: A Methodological Observation*, *in* THE GOALS OF COMPETITION LAW 95, 107-110 (Daniel Zimmer ed., Edward Elgar Publishing, ASCOLA Competition Law Series, 2012).

[398]*See* Lianos, *supra* note 282, at 36.

[399]*See* Lianos, *id.* at 37.

[400]*See* Lianos, *id.* at 36 (relying on ROBERT NOZICK, ANARCHY, STATE AND UTOPIA (1974)).

[401]*See* Zimmer, *supra* note 372, at 490. As the EU Horizontal Merger Guidelines, 2004 state, the competitive process should be maintained because it brings benefits to consumers in the form of low prices, high quality products, wider choice of goods and services and innovation

are benefited when firms are forced to take efforts to compete and competition on the merits is protected.[402] The EU's constitutional framework conceptualizes competition in a similar manner as a means to attain different objectives.[403]

The idea that markets are a process assumes that the course of a market cannot end in a position ascertainable in advance.[404] This understanding of markets is clearly distinct from the traditional idea in economics where determining outcomes is of the essence. Markets evolve in stages and the path that its evolution takes depends on various factors such as changes in technology and the state of knowledge of market participants.[405] These factors can contribute to a market's evolution in different ways.

Ordoliberal ideas are particularly interesting from a behavioural perspective because behavioural studies caution against over-emphasizing the end-results of competition and suggest that value should be placed on the competitive process.[406] The traditional welfare-based and outcome-oriented approach to competition leads proponents to place strong reliance on often-untested theoretical predictions on the basis that the methodology used is able to accurately predict market outcomes. This may not always be the case. Several scholars have critiqued the importance given to outcomes in welfare-based approaches.[407] One criticism is that

402 *See* Eilmansberger, *supra* note 383, at 135.
403 *See* Lianos, *supra* note 282, at 53.
404 *See* LUDWIG M. LACHMANN, THE MARKET AS AN ECONOMIC PROCESS 5 (BASIL BLACKWELL, 1986).
405 *See* LACHMANN, *id.* at 4.
406 *See* Maurice E. Stucke, *What is Competition?*, *in* THE GOALS OF COMPETITION LAW 27, 45 (Daniel Zimmer ed., Edward Elgar Publishing, ASCOLA Competition Law Series, 2012) ("…competition…is better viewed as a process than an end-state with a stable equilibrium…firms and consumers make mistakes, readjust and undertake new strategies.").
407 *See* Adrian Künzler, *Economic Content of Antitrust Law: the Point of Regulating Preferences*, *in* THE GOALS OF COMPETITION LAW 182, 201-02 (Daniel Zimmer ed., Edward Elgar Publishing, ASCOLA Competition Law Series, 2012). In the words of Fox, "…the outcome perspective is a crabbed perspective that was intended to and does

evolving scholarship using neoclassical economics has, at different points in time, changed its understanding of the welfare effects of particular market conduct. A prominent example is with resale price maintenance (RPM), which can be both welfare enhancing and welfare reducing, depending on the circumstances.[408] RPM is the practice where manufacturers control the prices at which their products are sold in downstream distribution channels. RPM is welfare reducing because it facilitates cartelization and it is welfare enhancing because it helps to overcome retailer's incentives to free ride and to engage in brand promotion and improved goodwill.[409] As a result, there have been many differences in opinion about the welfare effects of RPM. The US Supreme Court took a stand on RPM in *Leegin Creative Leather Products* by changing a long-standing precedent holding RPM to be *per se* illegal to making RPM subject to a rule of reason analysis.[410] However, this judgment has lead to further debate about the overall welfare effects of RPM. In their analysis of the *Leegin* judgment, Tor and Rinner conclude that theoretical arguments as well as empirical data provide support for both welfare enhancing and welfare reducing outcomes arising from RPM, without suggesting which outcomes

minimize antitrust law. I argue that limiting antitrust to condemning inefficient outcomes and embroidering the analysis with conservative Chicago School presumptions (markets are robust, antitrust enforcement normally harms the market) shrinks antitrust law to its smallest possible scope and in doing so harms efficiency in the sense of undermining rivalry and forestalling dynamic change…" Eleanor M. Fox, *The Efficiency Paradox*, *in* HOW THE CHICAGO SCHOOL OVERSHOT THE MARK: THE EFFECT OF CONSERVATIVE ECONOMIC ANALYSIS ON U.S. ANTITRUST 78, 80 (Robert Pitofsky ed., Oxford University Press, 2008).

[408] *See* Daniel M. Garrett, Michelle Burtis & Vandy Howell, *Economics of Antitrust: An Economic Analysis of Resale Price Maintenance*, GLOBAL COMPETITION REV. 3 (2008) (concluding that the welfare effects of RPM will be different depending on market conditions in specific situations); Howard P. Marvel & Stephen McCafferty, *The Welfare Effects of Resale Price Maintenance*, 28(2) J. L. & ECON. 363 (May, 1985) (showing the different welfare effects of the different uses of RPM and concluding that overall RPM is efficiency enhancing).

[409] *See* Avishalom Tor & William J. Rinner, *Behavioral Antitrust: A New Approach to the Rule of Reason After Leegin*, U. ILL. L. Rev. 805, 814-17 (2011).

[410] *See Leegin Creative Leather Products, Inc*. v. *PSKS, Inc*., 551 US 877 (2007).

are more likely to occur.[411] Furthermore, balancing welfare effects is difficult and it is not always possible to do it precisely or scientifically. Another factor is that welfare effects of market conduct cannot always be definitively ascertained, as it is difficult to empirically test theoretical predictions of positive or negative welfare effects of market conduct.[412] This is due to the fact that market environments are inherently complex and the outcomes arising from conduct in these environments are often ambiguous and unpredictable.[413]

The emphasis on clearly predicting market outcomes in the welfare-based view creates an inherent tension with the ambiguity of outcomes in the behavioural approach. This has also been a source of criticism of behavioural studies' contribution to competition law because behavioural scholarship is unable to provide a precise prediction of the direction of market outcomes.[414] This shortcoming comes into view when behavioural insights are applied to understand market outcomes within the welfare-based framework.

One of the reasons for the difficulty in empirically establishing the welfare effects of market conduct is that decisions taken in complex, market environments are often boundedly rational. As behavioural studies show, with time the most talented and efficient businesses can become complacent and unresponsive to changing consumer preferences,[415] competitive inertia may set in or firm's 'routines' or internal processes may impede optimal outcomes. Additionally, not all firms in the market are profit maximizing. Market success may be as much a factor of efficiency as of 'business acumen', which is the ability to 'cut deals', identify opportunities, understand consumer preferences

[411] *See* Tor & Rinner, *supra* note 409, at 820-21.
[412] *See* Künzler, *supra* note 407, at 203-04.
[413] *See* Künzler, *id.* at 201-03.
[414] Wright & Stone, *supra* note 17, at 865.
[415] *See* Stucke I, *supra* note 265, at 581.

and manage internal processes. These findings challenge some of the assumptions of Chicago school's welfare-based view that market power is a result of greater efficiency and that successful firms must be maximizing profits.

According to the behavioural theory of the firm, firms operate by setting targets or aspiration levels and trying to meet them.[416] Targets are not static and are often adjusted by using external standards such as the performance of rival firms or benchmark organisations.[417] Thus, more competition reduces complacency in firms by constantly forcing firms to readjust target levels and improve performance benchmarks. This finding is supported by literature from evolutionary economics showing that maintaining effective competition is beneficial because the resulting diversity within the market has a positive impact on firm performance.[418] Diversity is said to be an important contributor to innovation and long-term endurance of markets. Having a multiplicity and diversity of independently innovating firms can help to find new solutions and improve industry performance.[419] Porter also contends that vigorous competition in a supportive business environment is the only way to sustain the long-term productivity of the economy.[420]

This suggests that the application of behavioural insights strengthens the Ordoliberal, process-oriented view of competition by emphasizing the indeterminacy of outcomes and the inaccuracies in predicting outcomes, and at the same time highlighting the benefits of maintaining effective competition.

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[416] *See* Earl, *supra* note 59, at 98.
[417] *See* Earl, *id.* at 98.
[418] *See* Thomas J. Horton, *The Coming Extinction of Homo Economics and the Eclipse of the Chicago School of Antitrust: Applying Evolutionary Biology to Structural and Behavioral Antitrust Analyses*, 42 LOYOLA U. CHIC. L. J. 469 (2010-11).
[419] *See* Stucke I, *supra* note 265, at 613-14.
[420] Porter, *supra* note 320, at 923.

6.1 Dynamic Competitive Analysis Strengthens the Behavioural and Ordoliberal Perspective

Another aspect of behavioural insights that supports the Ordoliberal perspective is with respect to innovation and dynamic competition.[421] Dynamic competition, according to Sidak and Teece is an innovation-driven process, which emphasizes the introduction of new products and processes, improvements in productivity as well as the creation of new market opportunities.[422] Unlike with neoclassical economics and similar to the behavioural theory of the firm, proponents of dynamic competition believe that managers and entrepreneurs play an important role in creating dynamic efficiencies through technical innovation as well as innovations in business models and strategies.[423]

In dynamic competitive analysis, a firm's internal processes are a significant contributor to innovation.[424] Similar to the behavioural theory of the firm, proponents of dynamic competitive analysis argue that a firm's internal capabilities are a better proxy for its competitive position than its market share.[425] Moreover, market conduct of firms is said to be a result of a firm's internal organization, standard operating procedures, investment strategies and firm routines.[426] These concepts connect dynamic competitive analysis with the behavioural theory of the firm.

Diversity in the competitive process is an important component of dynamic competition. Evolutionary economics takes the view that adaptation and learning plays a role in generating diversity

[421] *See* Larouche & Schinkel, *supra* note 356, at 173.
[422] *See* Sidak & Teece, *supra* note 14, at 600.
[423] *See* Sidak & Teece, *id.* at 603.
[424] *See* Sidak & Teece, *id.* at 610.
[425] *See* Sidak & Teece, *id.* at 616.
[426] *See* Sidak & Teece, *id.* at 611.

and innovation in firms.[427] Diversity should be encouraged because radical innovation often takes place from firms outside the market and from new entrants who disrupt the market.[428] Believers in the competitive process feel that innovation occurs when a number of firms compete to innovate since better ideas are not necessarily connected to bigger firms and larger investments.[429] Accordingly, it is better to create an environment where more firms stand a chance of successfully innovating rather than incentivising a single, dominant firm to continue to innovate. Since it cannot be predicted as to which among a number of firms will successfully innovate, all firms need to be incentivised to innovate.[430] The idea of encouraging diversity in the market in dynamic competition furthers the Ordoliberal objective of protecting the competitive process and freedom of choice of market participants.

It is worth noting that while dynamic competition focuses on the importance of innovation to competition, from an evolutionary perspective this may be no different from Chicago school's single-minded focus on prices and costs. Evolutionary economists believe that systems that are highly optimised for a single criterion such as profits or costs will crash at some point.[431] Policies focusing on short-term profit maximization encourage firms to optimise only one aspect, short-term profits. This may not work to the advantage of firms in the long run. Accordingly, evolutionary economists believe in inculcating adaptability and resilience in firms to changes in the market environment and to changing consumer preferences.[432] Innovation is not always a linear, stand-alone process; it can

[427] *See* Sidak & Teece, *id.* at 608-610.
[428] *See* Sidak & Teece, *id.* at 610.
[429] *See* Larouche & Schinkel, *supra* note 356, at 173.
[430] *See* Larouche & Schinkel, *id.* at 173.
[431] *See* Peter M. Allen, *Evolution: Complexity, Uncertainty and Innovation*, 24 J. EVOLUTIONARY. ECON. 265, 287 (2014).
[432] *See* Allen, *id.*at 287.

depend on many factors such as the environment and interactions with other firms and consumers.[433] Innovation may be a part of the firm's process of adapting to change but it should not be the sole focus of the law. All these factors seem to strengthen the Ordoliberal goal of promoting choice and freedom rather than focusing on specific outcomes because diversity may be more beneficial to markets in the long-term.

6.2 Strategic Analysis may be Able to Provide a Long-Term View of Firm Behaviour

It is often the case that the static view of the firm conflicts with the dynamic view, and here it is important for competition law to consider both perspectives. The problem is that dynamic efficiencies arise in the long-term and these are particularly difficult to quantify *ex ante*. However, it may be possible to assess firm decisions in the long-term through strategic analysis, a method commonly used in business studies to assess a firm's competitive advantage. Competitive strategy studies a firm's competitive advantage and how firms differentiate themselves from the competition or find ways to beat the competition.[434] A firm develops its competitive strategy to create and sustain value for itself in the long-term.[435] Accordingly, strategic analysis views the long-term position of the firm and studies long-term decision-making within the firm.[436] In contrast to the long-term view of strategic decisions, a firm's operational decisions reflect the short-term view of the firm. Static competition provides a

[433] *See* Larouche & Schinkel, *supra* note 356, at 176.
[434] Some of the questions asked in strategic analysis are: in which industries should a firm operate? Which products and services should be provided and to which customers? In what ways should firms compete or cooperate with other firms? *See* JAMES A. BRICKLEY, CLIFFORD W. SMITH, JR. & JEROLD L. ZIMMERMAN, MANAGERIAL ECONOMICS & ORGANIZATIONAL ARCHITECTURE 214 (McGraw-Hill, 4th ed., 2007).
[435] *See* BRICKLEY et al., *id.* at 215.
[436] *See* BRICKLEY et al., *id.* at 214.

better understanding of operational decisions within a firm rather than strategic ones. The static view is particularly problematic when studying anticompetitive conduct such as predatory pricing where long-run behaviour needs to be inferred from short-run market conditions.[437] While economists have provided various dynamic models of predatory pricing, courts have not readily adopted these, probably due to their complexity. In situations where anticompetitive practices need to be understood in the long-term, competitive strategy can provide insights into the long-term decisions of firms.

Studying a firm's strategy involves studying a firm's competitive position in light of its capabilities, the market environment and competitive dynamics. To assess the likely future health of competition, Porter suggests that antitrust authorities employ his famous 'five forces' analysis commonly used by businesses to ascertain the intensity of competition when formulating competitive strategies.[438] The five forces analysis examines the extent of competition in an industry through the following five categories: threat of entry, rivalry, buyer power, seller power and threat of substitutes in all relevant markets and sub-markets.[439] Since the field of competitive strategy has been influenced by empirical observations of firm conduct, some, though not all, of the literature incorporates behavioural insights.

It may also be worth considering from a normative perspective that certain kinds of strategic positions of firms are preferable to others. For instance, a strategy of cost cutting that results in extremely low wages and harsh conditions for workers may not be a normatively preferable strategy. On the other hand, a strategy of competing by providing differentiated product or

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[437] *See* Paul L. Joskow & Alvin K. Klevorick, *A Framework for Analysing Predatory Pricing Policy*, 89(2) YALE L. J. 213, 222 (1979).
[438] *See* Porter, *supra* note 320, at 936.
[439] Porter, *id.* at 937-38.

service offerings based on higher quality may be normatively preferred.[440]

7. Normative Individualism and Ordoliberal Goals

Determining the normative basis of competition law is essentially a political rather than a legal or economic issue that is unique to each country. This chapter does not attempt to determine which competition objectives should take precedence over others as this falls within the ambit of constitutional economics. However, the discussion here outlines some of the issues that have been raised in this respect within the constitutional economics literature.

Constitutional economics provides tools for assessing normative questions. One of these tools is normative individualism - the idea that all normatively relevant values in society should be derived from the preferences of the individual members of society.[441] The goal of competition should thus be a normative decision of the citizens of a country and should derive from the preferences of the citizens.[442] One method that can help to appreciate citizen's normative preferences from a constitutional perspective is through instituting 'competition of competition laws' or regulatory competition, which will allow citizens to choose the competition regulations that they most prefer.[443]

[440]This is supported by Michael Porter, the leading strategy scholar, who advocates for using product differentiation as a competitive strategy to achieve sustained competitive advantage instead of price competition. Porter distinguished between 'good competitors' and 'bad competitors'. Good competitors are ones that "reinforce desirable industry characteristics" and bad competitors "undermine existing industry structure, seek to obtain market share through price competition, and contribute to the commodification of the industry." MICHAEL E. PORTER, THE COMPETITIVE ADVANTAGE: CREATING AND SUSTAINING SUPERIOR PERFORMANCE 208, 214, 217 (The Free Press, 1985); Waller, *supra* note 3, at 321-22.

[441]*See* Kerber, *supra* note 279, at 100.

[442]*See* Kerber, *id.* at 111.

[443] *See* Wolfgang Kerber & Oliver Budzinski, *Towards a Differentiated Analysis of Competition of Competition Laws*, 4 ZWeR – J. COMPETITION L. 411 (2003).

Assuming that different jurisdictions have different normative paradigms, if citizens are allowed to choose the jurisdiction whose competition law they prefer and if they have similar preferences, regulatory competition between jurisdictions could possibly make certain jurisdictions with a particular, more appealing normative paradigm more popular than others and cause less popular jurisdictions to 'learn' from these experiences and change their normative framework to accord with citizen's preferences.[444]

Moreover, normative individualism can be used to examine the normative basis of competition law by examining to what extent competition goals represent the preferences of individuals in society. For instance, the question of whether to give more importance to static or dynamic efficiencies can be resolved by empirically determining which one is more preferred by the citizens.[445]

Using normative individualism, citizens may reject a total welfare standard because as consumers themselves, they may want to be protected against redistributions arising from firms with market power.[446] From this perspective, citizens may have a greater preference for consumer welfare over total welfare since all citizens are ultimately also consumers. However, citizens who are owners of firms and factors of production will also want to protect their interests as producers. Thus, it is difficult to justify a competition system that only recognises the interests of consumers as the normative basis of competition law and does not recognise the rights of other market participants.[447]

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[444] *See* Roger Van den Bergh, *Towards an Institutional Legal Framework for Regulatory Competition in Europe*, 53 KYKLOS 435 (2000) (providing a detailed discussion about the benefits and drawbacks of regulatory competition for satisfying citizen's preferences).

[445] *See* Kerber, *supra* note 279, at 111-112.

[446] *See* Kerber, *id.* at 113.

[447] *See* Kerber, *id.* at 116-117.

Extending the tools of normative individualism to Ordoliberalism, if citizens prefer competition on the merits, it can also form the normative basis of competition law. Thus, normative individualism might also provide an argument for Ordoliberalism in the normative structure of competition law. To describe this idea further, the central tenets of Ordoliberalism are to protect the economic freedom of consumers and firms.[448] It can be argued that citizens may prefer to have the freedom to decide what to consume, what to produce and when to enter a market, even if interfering with these freedoms may increase consumer or total welfare.[449] Citizens also have preferences about which business practices are meritorious and which ones are unacceptable because they infringe rights of competitors, buyers or sellers. In fact citizens often have strong views about when firms rightly deserve their profits. For instance, profits earned from creating new and better or more innovative products and reducing costs through better technology are preferred to profits earned from lobbying for protective measures, or through market power or competitive strategizing.[450] Competitors should have the freedom to offer a good performance and consumers should then have the freedom to decide the relative quality of performance so that only firms with the better performance will move ahead.[451] Such considerations "might be legitimate arguments in the discussion of the goals of competition policy from a constitutional economics perspective."[452] This is in line with the Ordoliberal view that only the quality of performance or competition on the merits should determine success in the market.[453] In addition, with respect to the Ordoliberal mistrust of market power, Kerber argues that citizens also own firms or get

[448]*See* Kerber, *id.* at 107.
[449]*See* Kerber, *id.* at 114-115.
[450]*See* Kerber, *id.* at 115.
[451]*See* Kerber, *id.* at 115.
[452]Kerber, *id.* at 115.
[453]*See* Kerber, *id.* at 116.

wages from them and may view profits arising from the re-distributional effects of market power to be normatively undesirable.[454]

Thus, by employing normative individualism, a case can be made for Ordoliberal ideas to be included into the normative principles of competition law. It may also be that total welfare is normatively rejected under such an approach. However, such an analysis is still to be conducted and its results remain unconfirmed. Till then, the welfare-based approach is the dominant normative basis of competition law and no mechanism exists that allows Ordoliberal concepts to be integrated into the welfare-based approach.

8. Illustrating the Impact of Differing Goals: The Google Case

As discussed above, the normative basis of competition law is different in the US and EU. These differences can have an effect on the way in which competition law is enforced in these jurisdictions. The case on abuse of dominance against Google in the US and EU illustrates how the goals of competition laws affect the way in which competition authorities perceive competition issues and take decisions.

The US FTC first investigated the allegations that Google was taking advantage of its dominance to give unfair preference to its own content on the Google general search results page and selectively demoting the content of competitors, in violation of section 5 of the FTC Act's prohibition against unfair methods of competition and section 2 of the Sherman Act's prohibition of monopolization or attempt to monopolize. Google was also charged with manipulating its search algorithm to demote

[454] *See* Kerber, *id.* at 114.

websites that competed directly against Google's comparison shopping services.[455] While US and EU authorities have agreed on the material facts of the case, their conclusions have so far differed as the complaint has been dismissed in the US whereas in Europe a preliminary report has been issued against Google.

In its investigation, the FTC questioned "whether Google changed its search results primarily to exclude actual or potential competitors and inhibit the competitive process, or on the other hand, to improve the quality of its search product and the overall user experience."[456] The FTC found that Google's conduct was motivated by a desire to improve the quality of its search results rather than affect competitors and that adverse impact on competitors "from vigorous rivalry are a common by-product of 'competition on the merits' and the competitive process that the law encourages."[457] Further, the FTC agreed that Google's actions adversely affected Google's competitors because these websites experienced significant decline in user traffic. However, the FTC concluded that the effect on competition was not important as consumers were benefited by the improved quality of Google's search results. The FTC found that Google's evolution from a neutral information compiler to an interested party biasing search results in favour of its own products or services was pro-competitive and enhanced consumer welfare.[458] This reasoning underscores the complete orientation towards consumer welfare in US antitrust analysis.

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[455] Comparison shopping services allow users to search and compare different products sold on online shopping websites

[456] Statement of the FTC Regarding Google's Search Practices *In the Matter of Google Inc.,* FTC File No. 111-0163 (Jan. 3, 2013), https://www.ftc.gov/public-statements/2013/01/statement-commission-regarding-googles-search-practices (hereinafter FTC Statement).

[457] FTC Statement*, id.*

[458] *See* Daniel A. Crane, *After Search Neutrality: Drawing a Line Between Promotion and Demotion*, 9(3) J. L. & POL'Y FOR INFO. SOC'Y 397, 400-01 (2014).

The FTC did not address in much detail the competitive implications of Google's selectively demoting certain rival websites. The FTC's only comment on this point being that while these actions were causing significant losses to competitors, they could also be viewed as improving the over-all quality of Google's search results and was accordingly in the best interest of consumers.[459] These statements demonstrate that the impact of conduct on competition in the market is not a concern of the FTC. The FTC did not also consider whether Google could have improved the consumer experience in other, less intrusive ways. According to Crane, Google's promoting its own services and demoting the services of rivals are two sides of the same coin so if it is pro-competitive for Google to promote its own services, it cannot be anticompetitive to demote the services of rivals.[460] US antitrust authorities have also been extremely reluctant to interfere with the way that Google and other companies design their services, particularly in dynamic markets because it can chill innovation.[461] The FTC was aware that a ruling against Google would signal to other firms that they are not encouraged to innovate to the point of dominance, because returns from innovation will be constrained by the application of competition laws.[462] The reluctance to dis-incentivise innovation by dominant firms highlights the normative belief that monopolies are more likely to produce innovation. To contrast this with an Ordoliberal approach, the incentives of firms competing with Google would also be relevant under this approach so that all firms could continue to innovate and the competitive process is

[459] *See* FTC Statement, *supra* note 456.
[460] *See* Crane, *supra* note 458, at 404.
[461] *See* Crane, *id.* at 401-02.
[462] *See* Alden Abbott, *The European Commission, Google and the Limits of Antitrust*, Truth on the Market (Apr. 21, 2015), http://truthonthemarket.com/2015/04/21/the-european-commission-google-and-the-limits-of-antitrust.

maintained.[463] Ordoliberals fear that competition and consequently, innovation will be affected if competitors are not able to freely compete against dominant firms such as Google. This position is reflected in the EU's investigation of Google

In the EU, while we are still awaiting a final resolution of the case against Google, the EC's preliminary view is that Google was abusing its dominant position in search services under Article 102 TFEU by systematically favouring its own comparison shopping services in its general search results page over those of competitors; thereby causing Google's comparison shopping services to grow at the expense of rivals' services.[464] The Commission said that Google's conduct had a negative impact on consumers and innovation, as consumers do not necessarily see the most relevant shopping results and rivals' incentives to innovate are reduced because they know that irrespective of the quality of their services, they will not achieve the same prominence as Google's competing services.[465] In the words of the EU Commissioner in charge of competition policy, Margrethe Vestager, "The Commission's objective is to apply EU antitrust rules to ensure that companies…do not artificially deny European consumers as wide a choice as possible or stifle innovation."[466] The Commissioner also showed apprehension that Google was stifling competition by giving its own services an unfair advantage.[467] The Commissioner's statements about

[463]*See* Behrens, *supra* note 359, at 21 (stating that EU "jurisprudence is not concerned with the effects of below-cost pricing on consumers' welfare but on the process of competition and hence on the rivals of the dominant firm").
[464]*See* EC Fact Sheet, Commission Sends Statement of Objections to Google on Comparison Shopping Service (Apr. 15, 2015), http://europa.eu/rapid/press-release_MEMO-15-4781_en.htm (hereinafter EC Fact Sheet).
[465]EC Fact Sheet, *id*.
[466]EC Press Release, Commission sends Statement of Objections to Google on Comparison Shopping Service, Opens Separate Formal Investigation on Android (Apr. 15, 2015), http://europa.eu/rapid/press-release_IP-15-4780_en.htm (hereinafter EC Press Release).
[467]*See* EC Press Release, *id.*

consumer choice and rival's incentives to innovate have a distinctively Ordoliberal flavour since they consider protecting economic freedom and competitors chances of succeeding through competition on the merits.

The General Court employed a similar approach in rejecting Microsoft's efficiency defense in the tying case with Windows Media Player.[468] The court was concerned that Microsoft was engaging in behaviour that took choices away from consumers. Additionally, the application of Article 102 TFEU to protect competition on the merits has generally meant keeping markets open for potential innovators.[469] From a dynamic perspective, competition on the merits is the ability to present new products and services to customers and thereby encourage innovation, not only in technology but also in other aspects of business such as marketing and business methods.[470] This contrasts with the US approach where competition on the merits means that aggressive competition should not be interfered with as a natural by-product of the competitive process. These differences can also be witnessed in how the 'efficient competitor test' is applied to conduct such as predatory pricing. Thus, under traditional welfare approaches the efficient competitor test is more favourably applied to protect incumbent dominant firms. This preserves homogeneity in markets, which gives incumbent firms a strong position.[471] On the other hand, if the goal is to promote dynamic competition, agencies will look to give a chance to non-dominant firms in order to increase diversity in the market and preserve the freedom to compete.[472]

[468] *See* Larouche & Schinkel, *supra* note 356, at 175.
[469] *See* Larouche & Schinkel, *id*. at 174.
[470] *See* Larouche & Schinkel, *id.* at 174.
[471] *See* Horton, *supra* note 418.
[472] In this regard it is worth noting Wils' argument that the efficient competitor test is contrary to the goal of maintaining undistorted competition in Article 102 TFEU because it allows dominant firms to exclude others on the basis of a decision of competition authorities that these other firms are not as efficient instead of letting these

Returning to the Google case, the dynamic nature of the relevant market in this case has made assessing the welfare consequences of Google's conduct particularly difficult. In the US, where competition law is concerned with consumer welfare, the FTC based its decision on a finding that Google's display of search results was benefitting consumers in the short-term. The FTC prioritised benefits to consumers over actual or potential exclusion of competitors. In contrast, the EC was more concerned with whether firms competing against Google in the market had the freedom to compete and to innovate. The EC has not explicitly stated as to how consumer welfare will be harmed in terms of higher prices, lower output or even product variety. The EC assumed that consumers would be harmed if competitors were restricted from competing on the merits because consumer choice will be restricted. These differences of opinion illustrate the relevance of normative principles to competition agencies' decisions.

9. Conclusion

The consumer welfare/total welfare standard dominates the debate on the goals of competition law because it provides a logical basis for determining market outcomes and a clear prescription of market conduct. Yet, it falls short of providing a sufficiently satisfactory normative foundation for competition policy.[473] This may be because industrial organisation, which forms the basis of the economic analysis of competition law, is not a discipline focused on answering normative questions.[474] The efficiency-oriented perspective thus, does not meet the normative ideal. Nevertheless, other approaches also fall short of providing a

firms compete freely in the market to decide which firm is most efficient. *See* Wils, *supra* note 378, at 430.

[473] *See* Schweitzer, *supra* note 304, at 175 (citing the views of Martin Hellwig and Ernst-Joachim Mestmäcker).

[474] *See* Kerber, *supra* note 279, at 93-94.

suitable normative basis for competition law. Another problem is that it is difficult to integrate differing objectives into a single normative framework. For instance, consumer welfare only considers the short-term effects of market conduct and ignores dynamic efficiencies. This is particularly problematic because in an ideal world static and dynamic efficiencies should be balanced against each other. While competition authorities have recently taken efforts to recognise dynamic efficiencies, there is not much by way of guidance on what authorities should do in case of conflict between static and dynamic efficiencies.

In this context it is worth noting that deciding what objectives should be pursued by competition law in a jurisdiction is ultimately a decision of the people of that jurisdiction, which often depends on prevailing cultural and social values. This can mean that preferences will vary among people in different jurisdictions and thus, the objectives of competition law can diverge in different countries. The goals of competition are important because they guide competition enforcement and can in some cases dictate the outcomes of competition decisions. Accordingly, the different nature of competition enforcement in different jurisdictions can be a result of differing objectives within a country. Any discussion of competition law must be conducted within the appropriate normative framework. This chapter thus sets the stage for the discussion on predatory pricing and mergers in the following chapters by outlining the normative basis in which such a discussion will take place.

This chapter has discussed three commonly stated objectives of competition law and has found that Ordoliberal objectives are more amenable to behavioural insights. A key observation of behavioural studies is that firm behaviour is heterogeneous and cannot always be unambiguously predicted. Also, decision-making within firms is not only motivated by profits but by a number of other factors as well. On the other hand, key to the welfare-based approach is the ability to predict market outcomes by relying on certain assumptions including firm rationality. Behavioural insights cannot contribute much to this framework because they do not provide clear predictions of how market outcomes will change when the rationality assumption is relaxed. Nevertheless, as Stucke has argued, behavioural studies can more usefully contribute to the process-oriented view of competition. This chapter provides arguments for why it is easier for behavioural studies to contribute within the Ordoliberal perspective of competition.

Ordoliberal objectives also further the ideas of dynamic competition, which shares many common principles with behavioural theory. In this way behavioural theory can additionally contribute to competition law within the Ordoliberal framework by providing a better perspective of dynamic competition. One problem is that it is not easy to assess dynamic efficiencies since they occur in the long-term and thus considering the potential impact of conduct on innovation is often difficult. This chapter suggests that a tool from business studies i.e., competitive strategic analysis can be used for this purpose. Competitive strategy provides a mechanism for understanding the competitive position of a firm over time and can help to understand the likely long-term decisions of firms.

Ordoliberal thought is unique to European competition law and Ordoliberal objectives are found in EU law and not in current US law. Behavioural studies can thus more easily contribute to EU competition law than to US antitrust law. The next chapters of this book will further reflect on the dichotomy between US and EU law with respect to their openness to behavioural theories. It should be noted however, that making any definitive arguments in favour of or against any normative structure is outside the scope of this chapter. This chapter has merely highlighted the existing debates within the field and pointed to relevant literature that provides support for behavioural views within Ordoliberalism.

CHAPTER IV

The Bounded Rationality of Firms and the Role of Intent in Predatory Pricing Law

1. Introduction

Predatory pricing is a form of exclusionary conduct punishable by competition laws under the offence of abuse of dominance in EU law and under the offence of monopolisation or attempt to monopolise in US law. Predatory pricing can be described as a dominant firm's sacrifice of short-term profits in order to exclude competitors and increase market share in the long-term. The typical understanding of predatory pricing thus involves different stages: prices below cost in the first stage, the exit of competitors who can no longer make a profit in the second stage and finally, the predator's charging of monopoly prices in the third stage.[475]

This chapter asks how the insight that firms are boundedly rational can impact the law of predatory pricing? This question is relevant because the law of predation, at least in some jurisdictions is created on the assumption that firms are rational, profit-maximizers. However, as has been discussed in previous chapters a growing body of literature from across different disciplines including psychology, economics and management studies has questioned the rationality of firms and has shown that in reality firms often act in ways that are boundedly rational.[476]

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[475] *Wallace* v. *IBM*, 467 F.3d 1104, 1106 (7th Cir. 2006) (cited in DOJ Report, *infra* note 480, at 67).

[476] For a more detailed discussion of the application of behavioural theories to understanding firm conduct see Shilpi Bhattacharya & Roger Van den Bergh, *The Contribution of Management Studies to Understanding Firm Behaviour and Competition Law*, 37 WORLD COMPETITION 515 (2014).

This chapter furthers existing behavioural insights in the area of intent and recoupment in predatory pricing law.[477] Scholars such as Leslie and Tor have criticised the recoupment requirement in US predatory pricing law on the grounds that it is based on a conception of firm rationality that does not reflect the reality of firm behaviour. On the other hand, the requirement of intent makes room for a more realistic understanding of firm behaviour and can also incorporate insights from behavioural and management studies. This chapter uses case studies to show how introducing evidence of intent can assist in clarifying the outcomes of predatory pricing cases. In addition, this chapter demonstrates how literature from behavioural and business studies can be helpful to understanding the behaviour of the firms involved in predation.

The rest of this chapter is divided into the following parts. Part II discusses the law of predatory pricing in the US and the economic understanding that forms the basis for it. Part III discusses EU predatory pricing law and distinguishes it from US law. The primary point of difference between the two is that EU law does not require proof of recoupment. Part IV describes the post-Chicago scholarship on predatory pricing and highlights the evolution and change in the economic understanding of predatory pricing over time. Part V examines how the notion of the firm as boundedly rational can have an impact on the law of predatory pricing. Part VI describes the role of intent in predatory pricing law and the potential of behavioural theories to contribute to better understanding intent. The rest of the chapter conducts three case studies that highlight how firms' decisions to engage in predatory pricing can be boundedly rational. Part VII studies predatory pricing by the Cardiff Bus Co. in the UK. Part VIII discusses the US v. American Airlines case is the US. Part IX

[477] *See* Colm O'Grady, *The Role of Exclusionary Intent in the Enforcement of Article 102 TFEU*, 37(4) WORLD COMPETITION 459 (2014).

discusses the potential predatory pricing behaviour of Amazon. The Amazon case is useful to examine what kind of price cuts may be benign or have an anticompetitive intent. Part X concludes the discussion.

2. US Predatory Pricing Law

The US law of predatory pricing was laid down by the US Supreme Court's landmark decisions in *Matsushita Elec. Industrial Co. v. Zenith Radio Corp.*[478] and *Brooke Group Ltd. v. Brown &* Willi*amson Tobacco Corp.*[479] The court's two-step requirement for establishing predatory pricing continues to be followed by antitrust agencies and courts in the US today.[480] The test requires plaintiffs to establish that the predator is pricing below some measure of its cost and that the predator has a "reasonable prospect" under section 2(a) of the Clayton Act (as amended by the Robinson-Patman Act), or a "dangerous probability" under section 2 of the Sherman Act, of recouping its below-cost prices.[481]

Before the decision in *Matsushita*, the US law on predatory pricing was quite different. In *Utah Pie Co. v. Continental Baking Co.*[482] the court found declining prices along with the intention to harm competition sufficient for predatory pricing. At the time that the Clayton Act and the Robinson-Patman Act, 1936 were enacted, selective price-cutting that harmed smaller competitors was considered injurious to competition because smaller firms were thought in need of protection against larger

[478] 475 U.S. 574 (1986) (hereinafter Matsushita).
[479] 509 U.S. 209 (1993) (hereinafter Brooke Group).
[480] *See* Price Predation, *in* U.S. DEP'T OF JUSTICE, PRICE PREDATION, COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT 49, 59 (2008), *available at* http://www.justice.gov/atr/public/reports/236681.htm (hereinafter DOJ Report).
[481] *See* Brooke Group, *supra* note 479, at 223-24 (citing Matsushita, *supra* note 478, at 589).
[482] 386 U.S. 685 (1967).

firms, who had cost advantages simply because of their size.[483] However, influenced by the opinion of economists such as John McGee who argued that predatory pricing is extremely rare since rational firms will not engage in such conduct,[484] the *Matsushita* court held that "predatory pricing schemes are rarely tried, and even more rarely successful".[485] The change in the law of predation was driven by the belief that the low standards for competitive injury prevailing at the time did not further antitrust laws' concern for consumer welfare and price competition. The *Matsushita* court felt that if it were easy to establish predatory pricing, this would discourage firms from engaging in price competition and would result in antitrust law becoming a means for high market prices.[486] The *Matsushita* court did not want firms selling at low prices to be punished for succeeding in the very act that they were being encouraged to undertake.[487] Subsequently, these views were affirmed by the Supreme Court's *Brooke Group* decision, where it was stated that low prices could reflect the low cost structure of a more efficient firm.[488] These rulings have made it much harder for plaintiffs to successfully establish a claim of predatory pricing in the US. Moreover, antitrust agencies and courts are particularly skeptical of punishing above-cost price reductions in order to avoid discouraging price competition.[489]

The price-cost threshold is an important aspect of the law of predatory pricing. In this regard, US courts have adopted the

[483] *See* Dorsey & Jacobson, *supra* note 338, at 5.
[484] *See* John S. McGee, *Predatory Price Cutting: The Standard Oil (N.J.) Case*, 1 J. L & ECON. 137 (Oct., 1958) (arguing that predatory pricing is not a profitable strategy for eliminating competitors, particularly when compared to the alternative of acquiring the competitor. Further, it requires the predator to already have monopoly power and is therefore, unlikely to be employed for monopolizing a market).
[485] Matsushita, *supra* note 478, at 589.
[486] Brooke Group, *supra* note 479, at 227.
[487] *See* Dorsey & Jacobson, *supra* note 338, at 16.
[488] Brooke Group, *supra* note 479, at 225-226.
[489] *See* Dorsey & Jacobson, *supra* note 338, at 16.

Areeda-Turner test that prices below average variable costs are predatory. However, measuring costs is not easy and disagreements often occur about whether costs have been measured correctly. Further, the Areeda-Turner test has come under criticism from those who consider that average variable costs are not an appropriate threshold for predation. For instance, firms may cut prices below average variable costs more easily in markets with high fixed costs and low variable costs.[490] Others have suggested that predatory prices need not be below cost and instead it is enough to show that firms are sacrificing profits, as the sacrifice of profits suggests that there may be some strategic behaviour at play worthy of further examination for its anticompetitive effects.[491] One example of such behaviour is when a low cost monopolist uses its advantages strategically to eliminate competition without having to price below costs.[492] As a result, the price-cost test of predation has been modified over time and the DOJ has more recently stated that the appropriate measure of cost is some measure of incremental cost, such as average avoidable costs.[493] The DOJ considers that the measure of cost should reveal whether sales were unprofitable or irrational but for their exclusionary effect.[494] Interestingly, the DOJ's statement follows a logic similar to the test used to determine intent in EU law and could be taken as a testament to the inherent link between price-cost tests and intent in predatory pricing law.

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[490] *See* Kenneth G. Elzinga & David E. Mills, *Predatory Pricing*, *in* THE OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS 48 (Roger D. Blair & D. Daniel Sokol eds., Oxford University Press, 2015).
[491] *See* Aaron S. Edlin & Joseph Farrell, *The American Airlines Case: A Chance to Clarify Predation Policy*, *in* THE ANTITRUST REVOLUTION: ECONOMICS, COMPETITION, AND POLICY 502, 509 (4th ed., John Kwoka Jr. & Lawrence White eds., Oxford University Press, 2004), http://works.bepress.com/aaron_edlin/26.
[492] *See* Edlin & Farrell, *id.* at 508.
[493] DOJ Report, *supra* note 480, at 60.
[494] *See* DOJ Report, *id.* at 60.

3. EU Predatory Pricing Law

EU law of predatory pricing differs from the US law discussed above as EU law does not have a recoupment requirement but rather requires establishing the intention to eliminate competition.[495] Some commentators argue that there is no need for a separate recoupment requirement because the ability to recoup is already assumed within the conception of dominance in EU law.[496] However, this view does not find uniform support among legal scholars. EU law treats predatory pricing in the following way: (i) if a dominant firm prices below average variable cost, such practice is considered abusive in itself and no further proof of predatory pricing is required; and (ii) if a dominant firm prices below average total costs but above average variable costs, the firm will be guilty of predatory pricing if it can be established that the pricing was part of a plan for eliminating a competitor.[497] The European Commission's Guidance Paper published in 2008 retains the cost and intent format for predatory pricing but refines the cost requirement by using average avoidable costs and long-run average incremental costs instead of average variable costs and total costs, respectively. This is because in the case of prices below average avoidable costs, predatory intent is presumed, whereas, in relation to prices below long-run average incremental costs but above average avoidable costs, the existence of a plan to eliminate competition must be proved.[498]

EU law does not provide a precise approach on how costs should be calculated for predatory pricing. The general approach has

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[495] PETIT & NEYRINCK, *supra* note 247, at 203.
[496] *See* O'Grady, *supra* note 477, at 478-79.
[497] *France Télécom SA* v. *Commission of the European Communities*, T-340/03, § 8, Judgment of the Court of First Instance (Fifth Chamber, Extended Composition) (Jan. 2007) (hereinafter Wanadoo I), *available at* http://curia.europa.eu/juris/liste.jsf?language=en&jur=C,T,F&num=t-340/03&td=ALL.
[498] *See* O'Grady, *supra* note 477, at 484.

been that price-cost rules should not be applied mechanically but keeping in mind the broader framework of the law i.e., to prevent abuses by dominant firms.[499] For instance, European courts are more likely to find prices predatory when they are reduced in response to new entry.[500]

Petit and Neyrinck are of the view that EU law on abuse of dominance is more sympathetic to behavioural scholarship than US law because it does not require proof of plausible recoupment.[501] Petit and Neyrinck even go so far as to say that the EU law on abuse of dominance may have "drawn inspiration from" behavioural economics.[502] This is also because EU courts have found the motives of firms to be more relevant than their economic ability to exclude.[503] The rest of this chapter furthers the premise of Petit and Neyrinck's view that EU law is more open to behavioural insights.

4. The Post-Chicago View of Predatory Pricing

The law of predatory pricing described above was strongly influenced by prevailing economic theories propounded by economists belonging to the Chicago school. Nevertheless, post-Chicago scholarship as questioned the view that predatory pricing is unlikely to occur. It argues that rational firms will engage in welfare-reducing predatory pricing more often than was previously anticipated in the economic literature.[504] Post-Chicago scholarship uses game theory, which models strategic thinking by

[499] *See* RICHARD WHISH & DAVID BAILEY, COMPETITION LAW 830 (Oxford University Press, 7th ed., 2012).
[500] *See* WHISH & BAILEY, *id.* at 753.
[501] PETIT & NEYRINCK, *supra* note 247, at 206.
[502] PETIT & NEYRINCK, *id.* at 209.
[503] PETIT & NEYRINCK, *id.* at 206.
[504] *See* Janusz A. Ordover & Garth Saloner, *Predation, Monopolization and Antitrust*, *in* HANDBOOK OF INDUSTRIAL ORGANIZATION 537, 539 (Richard Schmalensee & R.D. Willig eds., Elsevier Publishers, vol. 1, 1989).

anticipating the decisions of rivals over single or multiple time periods (through either finite or infinitely repeated 'games').[505] By modeling decision-making over multiple time periods, game theoretic models have been able to overcome some of the limitations of the static models employed in neoclassical economics. In fact the more interesting insights from the post-Chicago scholarship have come from relaxing unrealistic assumptions such as perfect information. Introducing asymmetric information into game theoretic models has provided insights into strategic firm behavior including signaling effects, reputation building and bluffing.[506] Another interesting insight of post-Chicago scholarship is the concept of raising rivals' cost which presents the idea that dominant firms can strategically impair a smaller rival's ability to compete so that its unable to constrain the dominant firm's exercise of market power.[507] According to Dorsey and Jacobson, this framework is more useful for analyzing exclusionary conduct than the narrow framework under which predatory pricing has traditionally been examined.[508]

Game-theoretic models of predation can be divided into three broad categories: (i) models of asymmetric financial constraints: these models recognise that the incumbent firm's better access to financing to fund predatory pricing can give the incumbent firm an advantage over rivals. An incumbent firm may have superior financial reserves than a smaller rival because of its larger operational scale, or the incumbent firm can acquire greater financial reserves than a smaller entrant if it is operating in other markets in which it already enjoys an advantage due to a superior market position. For these reasons, a larger incumbent with deep pockets can finance a predatory strategy with greater ease than its

[505] *See* Ordover & Saloner, *id*. at 539.
[506] *See* John S. Dodgson & Y. Katsoulacos, *Competition, Contestability and Predation: The Economics of Predation in De-regulated Bus Markets*, 15 TRANSPORTATION, PLANNING & TECHNOLOGY 263, 267 (1991).
[507] *See* Dorsey & Jacobson, *supra* note 338, at 19.
[508] *See* Dorsey & Jacobson, *id.* at 19.

smaller rival and thus, a threat of post-entry predation is more credible in the presence of asymmetric financial constraints.[509] (ii) Reputation-based models: these models show that a rational incumbent firm can use predatory pricing as an investment to build a reputation for aggressively fighting entry by cutting prices when entry occurs so that future entry into the same market or another market is deterred because future entrants expect that entry will be met with aggression by the incumbent;[510] and (iii) signaling models: these models are based on the existence of information asymmetries between the incumbent and entrant with respect to the incumbent's costs, market demand or other prevailing market parameters. As the entrant firm does not have complete information, by cutting prices the incumbent firm can signal to the entrant that it is producing at lower costs, or that market demand is lower than it actually is and consequently discourage entry.[511]

Using this framework some members of the post-Chicago school have criticized the use of a price-cost framework in predatory pricing by arguing that the threshold level of marginal costs/average variable costs does not necessarily reflect an exclusionary level of pricing.[512] Rather, a dominant firm can threaten competitors by pricing at a level that builds a reputation for aggression or signals to the rival that it should not enter/remain in the market. That level does not need to meet a price cost threshold.[513]

In sum, the post-Chicago scholarship suggests that predatory pricing is more likely to occur than predicted by traditional models in markets where there is imperfect and asymmetric

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[509] *See* Ordover & Saloner, *supra* note 504, at 546.
[510] *See* Kreps & Wilson, *supra* note 262, at 253-54.
[511] Ordover & Saloner, *supra* note 504, at 546; *see also* Kreps & Wilson, *id.* at 253.
[512] *See* Ordover & Saloner, *id.* at 582.
[513] *See* Ordover & Saloner, *id.* at 582.

information, scale economies, inter-temporal and inter-market cost and revenue linkages and barriers to entry.[514] While some of these concepts such as reputation-effects have been incorporated into the law, much of post-Chicago literature has had little impact on the law of predation. The limitation of post-Chicago game theoretic models are that while they show that under certain specific conditions firms will engage in predation, they do not rule out possible alternative explanations including efficiency reasons for that conduct. Lao argues that intent can be used to choose between alternative outcomes offered by post-Chicago models and to find which explanation is the more likely one.[515] Thus, intent can be a tool for overcoming some of the shortcomings of the application of post-Chicago theory into the law of predatory pricing.[516]

5. The Bounded Rationality of Firms and Predation

Decisions made by firms in strategic contexts are likely to be boundedly rational because in complex market contexts firms' managers take decisions based on their anticipation of numerous variables such as changing market conditions, consumer preferences, evolving technology and the likely response of rivals. Further, cognitive limitations drive managers to rely on their previous experiences and take decisions based on intuition rather than on rational calculations of profits.[517] Strategic decisions within firms are influenced by the vision of the firm's top management such as achieving a certain level of growth within a specific time frame and can motivate predation.

[514]Ordover & Saloner, *id.* at 591.
[515]*See* Marina Lao, *Reclaiming a Role for Intent Evidence in Monopolization Analysis* 54 AM. U. L. REV. 151, 174 (2004).
[516]*See* Lao, *id.* at 174.
[517]On managers' preference to use intuition rather than the answers provided by algorithms see Berkeley J. Dietvorst, Joseph P. Simmons & Cade Massey, *Algorithm Aversion: People Erroneously Avoid Algorithms After Seeing them Err*, 144(1) J. EXPERIMENTAL PSYCHOL.: GEN. 114 (Feb. 2015).

Moreover, managers' overconfidence can cause mistakes in their perception of their ability to successfully carry out predatory pricing. All these factors can affect the rationality of firm decision-making.

Consequently, there is reason to argue that the assumption of firm rationality on which the law of predatory pricing is based may not be accurate. This was also the view in the dissenting opinion of *Matsushita,* which criticized the majority for not even considering evidence that was inconsistent with the assumption of rationality. Rather, the dissenting opinion argued that profit maximization by firms should not be assumed but should be left for the jury to decide. Scholars such as Leslie have also criticized the assumption of rationality in predatory pricing law. Leslie gives various examples of 'irrational' decision-making by firms such as firms' unprofitably maintaining excess capacity, expanding output and destroying valuable assets without using them.[518] One way in which firms have been characterized as irrational is when firms are vengeful, for instance, firms can act to reduce their profits when their competitors are harmed to a greater extent from such conduct.[519]

The behavioural literature on firm conduct can be used to throw light on predatory pricing law in two ways: (i) by applying behavioural biases observed among people to managers of firms, and (ii) by studying decision-making processes within firms in strategic contexts to understand why firms take decisions to predate.[520] With respect to the first point, there is sizeable behavioural literature illustrating how individual biases can affect predatory pricing decisions and outcomes. Gerla draws from

[518] *See* Christopher R. Leslie, *Rationality Analysis in Antitrust*, 158(2) U. PENN. L. REV. 261, 284-85 (2010).
[519] *See* Leslie, *id.* at 284-85; *see also* Dibadj, *supra* note 241, at 1459.
[520] *See* AMERICAN BAR ASSOCIATION ANTITRUST SECTION, MONOGRAPH NO. 22, PREDATORY PRICING 47 (1996) (hereinafter ABA MONOGRAPH).

Tversky and Kahneman's findings on framing effects and 'Prospect Theory' to argue that managers in firms that are loosing market share to new entrants are more likely to engage in predatory pricing because people are loss averse or less willing to take risks with respect to gains than with respect to losses.[521] People have been found to prefer an uncertain but larger loss to a definite but lower loss and conversely, prefer a smaller but definite gain to a larger but uncertain gain. When applied to predatory pricing, Gerla argues that managers in firms loosing market share to new entrants will view the decision to predate as weighing the probabilistic but potentially larger losses from predation against the definite but likely smaller loss of allowing the entrant to continue to take market share away from them. Due to loss aversion, managers will take the risks of predation in order to avoid the definite loss of market share to new entry even though it is not always a rational decision.[522] Interestingly, Gerla's arguments that managers engage in predation to avoid losses from new entry makes the likelihood of predation dependent on whether the decision is framed as a potential gain or loss in the mind of the manager.[523]

In addition, Gerla argues that managers' decisions to engage in predatory pricing may be a factor of their inability to estimate probabilities accurately.[524] Behavioural findings suggest that people tend to overestimate small probabilities and underestimate large probabilities. Managers taking decisions to engage in predation may subjectively overestimate their chances of success, even though objectively there is only a small chance of success.[525] Further, once managers decide to engage in predatory pricing, they may irrationally continue pursuing the course of

[521] *See* Harry S. Gerla, *The Psychology of Predatory Pricing: Why Predatory Pricing Pays*, 39 Sw. L. J. 755,761-763 (1985).
[522] *See* Gerla, *id.* at 761-763.
[523] *See* Gerla, *id.* at 763.
[524] *See* Gerla, *id.* at 762.
[525] *See* Gerla, *id.* at 762.

action even if it is loss making because of self-serving biases.[526] Managers may also mistakenly assess the success rates associated with a campaign of predation. For example, managers might be overconfident in their ability to drive competitors from the market, or they may incorrectly believe that their target does not have the ability to fight a protracted and aggressive price war. A predator may inaccurately estimate the length of time that the predation will have to continue in order to succeed.[527] Further, as Tor argues, a boundedly rational predator might underestimate the extent of new entry and therefore, engage in predation even when barriers to entry are low.[528] All of these factors can affect the probability of successful predation.

The other aspect in which the literature on firm's bounded rationality can be applied to predatory pricing is by using literature that highlights the "flaws" or reality of decision-making processes within firms, which causes firm's decisions to depart from rationality. Firm's decisions are often guided by overarching objectives, which are not always connected to profits. Firms may have different goals, cultures and values. For instance, growing market shares is more important to Japanese firms than profits.[529] This was a factor disregarded by the Supreme Court in *Matsushita*.[530] In his critique of the case Leslie shows that Japanese firms commonly adopt a strategy where they first seek to achieve economies of scale / dominance in their home country (Japan) and subsequently, capitalise on the profits earned at home to enter international markets by selling at low prices.[531] The reason that Japanese firms adopt this kind of

[526] Avishalom Tor, *Illustrating a Behaviorally Informed Approach to Antitrust Law: The Case of Predatory Pricing*, 18 ANTITRUST 52, 55 (2003).
[527] Leslie, *supra* note 518, at 307.
[528] *See* Tor, *supra* note 526.
[529] *See* Steven F. Benz, *Below Cost Sales and the Buying of Market Share*, 42(3) STAN. L. REV. 695, 708 (1990).
[530] *See* Matsushita, *supra* note 478, at 574.
[531] Leslie, *supra* note 518, at 292.

strategy is that (as mentioned above) unlike Western firms, Japanese firms are more preoccupied with increasing market share than with increasing returns on investments.[532] As Leslie argued, the behaviour of the allegedly predatory Japanese firms that the *Matsushita* court found to be irrational and thereby unlikely to have occurred exactly followed the description provided here of commonly adopted strategies of Japanese firms.[533] The plaintiffs in *Matsushita* argued that the predators, who were Japanese firms, had colluded to raise prices in Japan and used those profits to finance a strategy of selling below cost in the US market in order to gain market share. The court was not convinced of this line of argument because the plaintiff's theory of predatory conduct did not follow from that of a rational firm and therefore, such conduct could not have occurred at all as a matter of law.[534] Thus, the *Matsushita* court ignored evidence of below cost pricing on the grounds that predatory pricing could not have occurred since rational firms would not have prioritised growth over profits.[535] As will be discussed in greater detail below, firms often prioritise growth over profits in the real world.

Further, the *Matsushita* court also reasoned that rational firms would be unwilling to engage in predatory pricing when the success of recoupment remained uncertain. This has also been criticised by Leslie who pointed out that firms in real life often operate and take decisions in extreme uncertainty where outcomes of decisions are only clear at later points in time.[536] In the words of Leslie:

> "More importantly, the [Matsushita] Court's effort to conflate uncertainty of outcomes with implausibility of attempt betrays a fundamental misunderstanding of how businesses function. Most business ventures require an

[532]*See* Leslie, *id.*at 294.
[533]*See* Leslie, *id.*at 292.
[534]Leslie, *id.* at 268-69.
[535]*See* Leslie, *id.* at 305-06.
[536]*See* Leslie, *id.* at 305.

> upfront investment that must be made without any assurance that the outlay will be profitable. No business makes an investment in new products, new distribution methods, or other improvements knowing for certain that the investment will pay off. Business is about taking risks."[537]

Consequently, the manner in which businesses actually operate and take decisions can be quite different from the theoretical assumptions of firm decision-making on which the law of predatory pricing is based. Since predatory pricing is part of a firm's competitive strategy, understanding how businesses actually formulate their strategic positions may play a key role in understanding in what situations firms engage in anticompetitive pricing. This chapter consequently uses insights from management studies to inform predatory pricing law and in particular, the understanding of predatory intent.

5.1 Business Strategy

The field of business strategy in management studies is generally concerned with how firms achieve competitive advantage within an industry and is based on empirical observations of firm behaviour as well as the case study method of analysing specific business decisions.[538] A firm's strategic decisions are a reflection of how it intends to compete to achieve its goals based on its vision and values. Literature within business strategy shows that understanding a firm's strategic decisions is particularly complex because firms can deal with competitors in many different ways and there are no clear prescriptions about how these decisions should be made or which strategic decisions are better. This is

[537] Leslie, *id. at* 306.
[538] *See* Michael J. Lennox, *Foundations of Business Strategy* (Course at the University of Virginia Darden School of Business, 2014), https://www.coursera.org/course/strategy101.

evident from the many strategic errors made by firms in the history of business. Some of the commonly made strategic errors include decisions to expand operations too fast, not expanding operations fast enough, not keeping pace with technical advances or changing consumer preferences and strategic inertia or sticking to a strategy that has worked in the past without testing its potential in current market conditions.

Firms often formulate their competitive strategy by targeting particular competitors. Deciding which firms to target depends on the extent of a firm's awareness of its competitors. Awareness refers to the extent to which competitors recognise the degree of their market commonality and resource similarity with other firms.[539] A firm's motivation to take competitive actions against other firms is also influenced by the degree of there market commonality as there is more at stake when firms share more market commonality i.e., they compete with each other more closely and in different ways.[540] Further, the success of a competitive move targeted at another firm will depend on the difference in resources between the firms. If the target firm has a similar resource level as the attacking firm,it will be more difficult for the competitive move to succeed. This could also mean that firms will be more careful before launching a competitive move against a firm that has comparatively more or equivalent resources from its own. Internal firm capabilities are thus, an important aspect of competitive strategy. Competitive strategy is best undertaken as a firm-specific exercise and requires an analysis of markets as well as the internal resources of a firm.[541]

[539] *See* Ming-Jer Chen, *Competitor Analysis and Inter-Firm Rivalry: Towards a Theoretical Integration*, 21(1) ACAD. MGMT. REV. 100, 110 (Jan., 1996).
[540] *See* Chen, *id.* at 110-111.
[541] *See* Chen, *id.* at 103.

For the purposes of the present analysis, the competitive strategies adopted by businesses can be classified into two broad categories: firms compete by differentiating their product offerings through new and innovative products and services, or by selling the same products and services at a price lower than their competitors by being unique low-cost providers.[542] Within these broad strategic considerations firms employ certain standard competitive methods. Firms pursuing cost leadership, for instance, keep costs lower than their competitors by generally offering standardised products with broadly acceptable product features at the lowest price. Other firms keep costs low in narrow segments and during strategic periods such as entry into new markets.[543] On the other hand, firms trying to differentiate themselves generally charge a price premium from unique features that customers demand. Firms can also focus on a particular buyer group for instance, by targeting a small, often premium segment of the market where customers' willingness to pay is high.[544] Firms prefer to compete through product differentiation since it can provide sustained competitive advantage.[545] Firms can achieve product differentiation by raising barriers to entry, switching costs and mobility barriers.[546]

Understanding a firm's competitive strategy often involves comprehending the behavioural limitations involved in a firm's decision-making rather than sticking to a predetermined paradigm of firm behaviour. Firms are often guided by behavioural biases and cognitive limitations in forming and defending their strategic positions. Once a strategy works, a firm may pursue it for longer than is optimal. It may hesitate to change its competitive position due to competitive inertia. Firms may

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[542] *See* MICHAEL E. PORTER, COMPETITIVE ADVANTAGE 12-14 (1985); Waller, *supra* note 3, at 320.
[543] *See* Lennox, *supra* note 538.
[544] *See* PORTER, *supra* note 542, at 15; Waller, *supra* note 3, at 320.
[545] PORTER, *id.* at 7; Waller, *id.* at 321.
[546] PORTER, *id.* at 7; Waller, *id.* at 321.

also prefer to imitate the strategies of other firms rather than take decisions based on rational, profit-maximization. For these reasons, strategic decisions are not always taken in a rational way and the models of predatory pricing based on the assumption that firms are rational decision-makers may not adequately reflect the reality of firm behaviour.

6. Bounded Rationality and the Role of Intent in Predatory Pricing

Intent plays an important role in predatory pricing law in the EU. Some commentators have even argued that intent is the only legal criteria in EU predatory pricing law under the ruling in *AKZO* because when prices are below average variable cost, exclusionary intent is presumed to exist and when prices are above average variable costs but below average total costs, intent must be proven.[547] This argument considers the price-cost test as a proxy for anticompetitive intent. Others have argued that intent can serve as a useful supplement to the price-cost rule because costs are not always accurately measurable. Further, since pricing below full cost can occur for reasons other than predation, intent can show the presence of a predatory strategy.[548]

[547]*See* Anne-Lise Sibony, *Limits of Imports from Economics into Competition Law*, *in* THE GLOBAL LIMITS OF COMPETITION LAW 39, 49 (Ioannis Lianos & D. Daniel Sokol eds., Stanford University Press, 2012). The reasoning of the court in *AKZO* v. *Commission* as stated by the ECJ in the Wanadoo decision is that, "The Court of Justice has held, first, that prices below average variable costs must be considered prima facie abusive in as much as, in applying such prices, an undertaking in a dominant position is presumed to pursue no other economic objective save that of eliminating its competitors. Secondly, prices below average total costs but above average variable costs are to be considered abusive only where they are fixed in the context of a plan having the purpose of eliminating a competitor." *France Télécom* v. *Commission of the European Communities*, C-202/07P §109 Judgment of the First Chamber (Apr., 2009) (hereinafter Wanadoo II) (citing *AKZO* v. *Commission*, C-62/86 §70-71 Judgment of the Fifth Chamber (Jul., 1991)).

[548] Douglas F. Greer, *A Critique of Areeda and Turner's Standard for Predatory Prices*, 24 ANTITRUST BULLETIN 233, 242 (1979).

Scholars from the Chicago school have criticized the use of intent in predatory pricing because it is not objectively measurable. Another limitation of intent is that it is very difficult to distinguish between the intent to compete on the merits and the intent to exclude. In the famous words of Justice Easterbrook, "[f]irms want to grow; they love to crush their rivals; indeed, these desires are the wellsprings of rivalry and the source of enormous benefit for consumers."[549] Thus, since intent is not easy to define, an intent requirement can chill competition by punishing genuine price-cutting behaviour.[550] Another problem with the intent requirement is that it is easy to manipulate since companies with good legal advisors can easily cover their tracks by removing any paper trail that would evidence intent, whereas companies without such advisors may fall into the intent trap.[551] Nevertheless, some scholars argue that intent should be made an element of predatory pricing law in the US, as it would add clarity to existing law.[552] In fact, before the *Matsushita* opinion, intent was also used in US predatory pricing law to distinguish between exclusionary conduct and competition on the merits because it helped to know "why a dominant firm implemented an alleged exclusionary practice or what it wanted to accomplish."[553] The role generally given to intent is to use it to distinguish between healthy, competitive pricing and anticompetitive pricing.[554]

[549] Frank H. Easterbrook, *Monopolization: Past, Present and Future*, 61 ANTITRUST L. J. 99, 102-03 (1992).
[550] To the contrary, data from the enforcement of predatory pricing in the EU indicates that an intent requirement does not lead to over-enforcement of predatory pricing. *See* O'Grady, *supra* note 477, at 465.
[551] *See* Sibony, *supra* note 547, at 47.
[552] *See* Dustin Sharpes, *Reintroducing Intent into Predatory Pricing Law*, 61 EMORY L. J. 903 (2012).
[553] Lao, *supra* note 515, at 164.
[554] Christopher R. Leslie, *Predatory Pricing and Recoupment*, 113(7) COLUM. L. REV. 1695,1754 (Nov. 2013) (hereinafter Leslie II).

Intent in EU predatory pricing laws most commonly understood as the intent to eliminate a competitor. However, it is not entirely clear as to what this means. Lao defines intent as a firm's state of mind, characterized by (i) its *motive*, which is the desire or need that caused the firm to act, and (ii) the firm's *purpose*, which is what the firm hoped to accomplish.[555] In *AKZO* the ECJ noted that the absence of an objective justification for a firm's conduct indicates that the dominant firm's intent is exclusionary.[556] Accordingly, in EU predatory pricing law, intent is said to exist if the only explanation for a particular pricing practice is that it will eliminate a competitor so that the firm will benefit from the reduced competition in the market.[557] Another illustration of this is the court's reasoning in *Tetra Pak II*.[558] The Commission examined various internal documents of Tetra Pak and the scale and extent of its pricing practices and concluded that Tetra Pak was selling cartons at predatory prices as its pricing was deliberately aimed at eliminating competition. Notably, the Commission was of the view that, "…it is difficult to conceive how behaviour so opposed to the logic of economic profitability on the part of an extremely efficient multinational company can possibly be the result of a simple management error…"[559] Thus, intention tests whether the practice is capable of any other economic explanation other than that the dominant firm will profit from the exclusion of competitors.[560] This logic has also been used to argue that prices below variable costs are punished

[555] *See* Lao, *supra* note 515, at 164.
[556] EIRIK ØSTERUD, IDENTIFYING EXCLUSIONARY ABUSES BY DOMINANT UNDERTAKINGS UNDER EU COMPETITION LAW 144 (Wolters Kluwer, 2010) (citing AKZO, *supra* note 547, at § 140).
[557] ØSTERUD, *id*. at 144 (citing Wanadoo I, *supra* note 497, § 107).
[558] *Tetra Pak* v. *Commission*, ECR-II 755 Case T-83/91 (1994) (hereinafter Tetra Pak II).
[559] Tetra Pak II, *id.* at §149. A similar argument was made by the US Supreme Court in Brooke Group, *supra* note 479, at 209, where it held that predatory conduct does not make business sense unless it is part of a plan to eliminate or reduce competition, and thus permits the costs of the conduct to be recouped through the exercise of market power.
[560] ØSTERUD, *supra* note 557, at 144.

without proof of intent because it is assumed that the only objective of a dominant firm that prices at such a level is to eliminate competition.[561] Thus, evidence that a dominant firm is deliberately incurring losses or foregoing profits in order to foreclose competition will be considered predatory behaviour in the EU.[562]

In UE law intent is also identified through 'profit sacrifice', which compares a dominant firm's prices to what it would have earned 'but for' its intention to exclude. Accordingly, the sacrifice of profits by dominant firms may be predatory if it leads to revenues lower than what could have been expected from reasonable alternative conduct.[563] However, operationalizing this approach to all cases is difficult because it requires a determination of what the firm would have hypothetically earned if it was not motivated by exclusion, which is extremely difficult to determine.[564]

Some factors that are relevant in assessing intent in the EU include the scale or degree to which price charged was below cost and the duration of the pricing practice.[565] Below cost pricing over a long period of time may indicate that there could be no other motivation than the expectation of removing a competitor.[566] When prices are well below what is necessary to compete, it may indicate an exclusionary intention. Further, pricing intended to exclude competitors from the market will be

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[561] ØSTERUD, *id.* at 144 (citing Wanadoo I, *supra* note 497, § 109).
[562] *See* GUIDANCE ON THE COMMISSION'S ENFORCEMENT PRIORITIES IN APPLYING ARTICLE 82 OF THE EC TREATY TO ABUSIVE EXCLUSIONARY CONDUCT BY DOMINANT UNDERTAKINGS, C45/2 § 63 (2009) (hereinafter COMMISSION GUIDANCE).
[563] *See* COMMISSION GUIDANCE, *id.* at § 65.
[564] INTERNATIONAL COMPETITION NETWORK, UNILATERAL CONDUCT WORKBOOK: PREDATORY PRICING ANALYSIS 14 (Apr., 2012), http://www.internationalcompetitionnetwork.org/uploads/library/doc828.pdf
[565] *See* ØSTERUD, *supra* note 557, at 150.
[566] *See* ØSTERUD, *id.* at 150.

held abusive under EU law regardless of its effect.[567] The Court of First Instance in *Wanadoo* held that, "where an undertaking in a dominant position actually implements a practice whose object is to oust a competitor, the fact that the result hoped for is not achieved is not sufficient to prevent that being an abuse of a dominant position".[568] This recognizes that markets may evolve in a manner different from the expectation of the dominant firm and so even when exclusion is intended it may not always be achieved. Thus, intent and effect are separated in EU predatory pricing law.

Intent can be established through both direct and indirect evidence. The Commission has stated that intent can be established from internal documents or business plans of the dominant firm such as a plan to sacrifice profits in order to exclude a rival, prevent new entry, pre-empt the emergence of a new market and from evidence of threats of predation.[569] Sibony suggests that intent can be used to incorporate economic analysis of firm strategy into competition law.[570] Strategy and intent are similar because both refer to the firm's purpose,[571] its objectives and the means it uses to reach its objectives.[572] Since business strategy studies how firms competitively interact with each other in markets, it can be helpful in inferring the competitive intentions of firms. For instance, insights from business strategy demonstrate that not all market competition takes place in the manner suggested by Justice Easterbrook's statement that competition is a ruthless process, the essence of which is to crush one's rivals. To the contrary, the competitive strategy of many

[567] *See* ØSTERUD, *id.* at 152.
[568] Wanadoo I, *supra* note 497, at § 196.
[569] *See* INTERNATIONAL COMPETITION NETWORK, REPORT ON PREDATORY PRICING 25 (7th Annual Conference of the ICN, Kyoto, April 2008), http://www.internationalcompetitionnetwork.org/uploads/library/doc354.pdf.
[570] *See* Sibony, *supra* note 547, at 47.
[571] Refer to the discussion above on the two components of intent: motive and purpose, *see* Lao, *supra* note 515, at 164.
[572] Sibony, *supra* note 547, at 47.

firms is designed to create new market opportunities for themselves and also for other firms and to create value so as to avoid direct competition with rivals. Consequently, not all firms design their competitive strategy with the intention of excluding rivals.

Finally, the merits of requiring intent in predatory pricing is premised on the normative priorities of competition law. If the goal is to maximize consumer surplus, low prices are good regardless of how they are achieved. In this situation intention has little relevance to predatory pricing law. Intent can only be relevant if completion law is concerned about protecting competition and disruptions to the competitive process by dominant firms who drive rivals from the market through means other than competition on quality.[573] As O'Grady points out, the different objectives of competition law may play a role in the divergent attitudes towards intent in US and EU predatory pricing law.[574] Since US antitrust law is primarily concerned with short-term consumer welfare, exclusionary intent will only be relevant to it if hypothetically it can be used to prove that a firm will raise prices to recoup. Since intent is not very helpful in such an analysis it is unlikely that intent can have a role in US law. On the other hand, US law would be more concerned with intention if it wanted to correct the long-run harm to the competitive process arising from predation. This is more within the domain of EU law. This is because not all forms of price competition "can be considered as legitimate" in EU law since one of the objectives of EU law is to prevent dominant firms from strengthening their dominance through methods other than "competition on the basis of quality".[575] Thus, intent is needed to determine if competitors were eliminated through means other than competition based on quality. Moreover, EU law is premised

[573]*See* ABA MONOGRAPH, *supra* note 520, at 48.
[574]*See* O'Grady, *supra* note 477, at 466.
[575] Wanadoo II, *supra* note 547, §106 (citing AKZO, *supra* note 547, at §70).

on the belief that consumers are harmed by predation even if there is no recoupment because diminished competition by the elimination of rivals leads to fewer choices available to consumers.[576] Further, since the object of EU law is to maintain undistorted competition, the law steps in to correct abusive conduct even before there is proof that a predatory strategy will be successful through recoupment.[577] Thus, the different objectives of US and EU law lead to different roles for intent and recoupment in each jurisdiction.

6.1 Recoupment and Intention

The *Matsushita* court introduced the 'recoupment requirement' into US predatory pricing law, which changed the previous intent-based reasoning reflected in the US SC decision in *Alcoa*[578] that a firm that intentionally acquires monopoly power violates section 2 of the Sherman Act.[579]

The importance of recoupment in US law was cemented in the decision in *Brooke Group*, where despite sufficient evidence of the intention to act anti-competitively[580] and sufficient evidence of below cost pricing;[581] the court found that predatory pricing could not be established because a convincing theory of recoupment was not presented.[582] The court held that, "recoupment is the ultimate object of an unlawful predatory pricing scheme; it is the means by which a firm profits from predation."[583] Further, in *Brooke Group* the court stated that recoupment should be such that the firm obtains enough market

[576] Wanadoo I, *supra* note 497, at §112.
[577] Wanadoo I, *id.* at §226.
[578] *United States* v. *Aluminum Corp. of America*, 148 F. 2d 416 (2d. Cir. 1945).
[579] *See* Dorsey & Jacobson, *supra* note 338, at 4.
[580] Brooke Group, *supra* note 479, at 231.
[581] *See* Brooke Group, *id.* at 231.
[582] Brooke Group, *id.* at 232.
[583] *See* Brooke Group, *id.* at 224.

power to set higher than competitive prices for long enough to recover the losses earned from below-cost pricing.[584] The conditions for successful recoupment are that the predator has a large market share; its rivals are small and have limited ability to discipline the predator's prices; and high barriers to entry, which allow the predator to raise prices without fearing entry in response to the increased prices.[585] Also relevant is the extent and duration of the alleged predation because the longer the predator makes losses the more difficult it will be to recoup those losses. Interestingly, the *Brooke Group* court did not unanimously agree on the importance of recoupment as the dissent pointed out that recoupment was not essential to successful predation since section 2 of the Sherman Act does not require proof of successful predation; rather it punishes the "dangerous probability" of success.[586]

Over time there has been much debate on the role of recoupment in proving predation. One purpose of recoupment is to differentiate between price cuts that are anticompetitive and those that represent 'competition on the merits'. This was also endorsed by the DOJ, which called recoupment a "valuable screening device to identify implausible predatory pricing claims".[587] In other words, recoupment ensures that only unlawful price cuts are punished. On the contrary, Leslie argues that courts have used the recoupment requirement in predatory pricing as a "convenient filter to avoid all inquiries into intent in predatory pricing cases."[588] Interestingly, a similar role has also been given to intent as some have argued that intent is used to differentiate between pro-competitive price cuts and exclusionary ones. Yet,

[584] *See* Brooke Group, *id.* at 225.
[585] *See* Elzinga & Mills, *supra* note 490, at 48.
[586] *See* Brooke Group, *supra* note 479, at 251.
[587] DOJ Report, *supra* note 480, at 69.
[588] Leslie II, *supra* note 554, at 1711.

recoupment is more of an economic notion and does not serve the same purpose as the legal concept of intent.

The understanding of recoupment in EU law is quite different. In the decision in *Wanadoo*, the ECJ was given the opportunity to introduce recoupment into EU predatory pricing law but held that recoupment was not a "necessary precondition" to proving predation.[589] The court however stated that recoupment could be useful to assessing intent by "establishing that a plan to eliminate a competitor exists."[590] As Sibony argues, the relevance of recoupment in EU law is not connected to how predation will affect consumer welfare through higher prices (as with US law) but instead recoupment is linked in EU law to the appraisal of exclusionary intent.[591] Thus, the *Wanadoo* court found recoupment relevant to establishing predatory intent. O'Grady also argues that rather than importing recoupment into EU predatory pricing law, the use of intent to distinguish between pro-competitive and anticompetitive price cuts is the better approach.[592]

There are other criticisms of recoupment. It is more difficult to determine if recoupment will be possible in real world markets because in reality markets are much more complex than the simplified versions used in theoretical economic models. Recoupment can also increase uncertainty in the enforcement of predatory pricing law because determining the likelihood of recoupment requires prediction of future events, which is speculative.[593] The test for intent in predatory pricing differs from the test for recoupment because to test intent competition authorities are not required to predict the competitive effects of conduct *ex ante* but are required instead to investigate the reasons

[589] Wanadoo I, *supra* note 497, §110.
[590] Wanadoo I, *id.* at §111.
[591] *See* Sibony, *supra* note 547, at 49.
[592] *See* O'Grady, *supra* note 477, at 486.
[593] *See* O'Grady, *id.* at 479.

for the firm's conduct.[594] This is simpler and provides more certainty than the more complex test for recoupment that requires assessing the future welfare-reducing effects of conduct.[595] Thus, intent is beneficial as a requirement of predation because it helps competition agencies to understand the factual situation of the case and the reasons for the conduct in a better way than the more rigid enquiry envisaged by the recoupment requirement. Moreover, when the competitive effects of a dominant firm's conduct are not clear, intent can be helpful to understand why the dominant firm chose a particular strategy.[596]

The following discussion illustrates how intent can be useful to distinguish between pro-competitive and anti-competitive price cuts in certain commonly encountered market situations.

6.2 Limit Pricing and the Intention to Eliminate Competition

When firms use price as a means of creating barriers to entry and market concentration, it is called limit pricing.[597] Limit prices are prices that are set at a lower level than they otherwise would have been because the firm uses lower prices to limit rivals' sales and weaken rivals as competitors.[598] This is a monopolist's strategy of discouraging entry by making it unprofitable for rivals to enter the market and compete at the price set by the monopolist. There is some debate about whether limit pricing can be called predatory and anticompetitive. Proponents of limit pricing argue

[594] ØSTERUD, *supra* note 557, at 156.
[595] ØSTERUD, *id.* at 156-7.
[596] *See* Lao, *supra* note 515, at 200.
[597] *See* Ordover & Saloner, *supra* note 504, at 544.
[598] *See* B. Douglas Bernheim & Randal Heeb, *A Framework for the Economic Analysis of Exclusionary Conduct*, *in* THE OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS 3 (Roger D. Blair & D. Daniel Sokol eds., vol. II, Oxford University Press, 2014).

that limit pricing is the most efficient pricing for a monopolist and other argue that it can prevent efficient firms from entering a market.

In *Telex v. IBM*,[599] the US district court held that IBM's selective price cuts on certain peripheral parts (limit pricing),[600] amounted to predatory pricing. While this decision was later reversed by the Court of Appeals, it is still interesting because of the court's analysis of limit pricing and IBM's anticompetitive intent. The court found that IBM's low prices influenced competitors to stay out of the market and accordingly was anticompetitive.[601] In addition, the court found evidence which showed that IBM's pricing decisions were not taken to meet competition but with the specific intention of suppressing competition.[602] The court stated that growing competition in the market for peripheral parts caused IBM to worry that it would irreversibly lose market share to competitors and its decision to cut prices was part of a purposefully planned and formulated strategy to impede the growth and viability of its competitors.[603] Thus, the court felt that limit pricing along with evidence of anticompetitive conduct amounted to predation. One commentator criticized the finding of predation on the ground that limit pricing was a legitimate response of a monopolist to competition.[604] Also, IBM's competitors were not driven out of the market and there was no evidence that IBM would subsequently raise prices to recoup any

[599] 367 F. Supp. 258 (N.D. Oklahoma 1973), rev'd, 510 F.2d 894 (10th Cir. 1975).
[600] "Limit pricing exploits the long-run market power conferred by existing entry barriers to maximize long-run profits. It is a concession of the monopoly firm to the fact that the barriers are not high enough to allow it to price unconstrained by potential competitors." *Telex v. IBM: Monopoly Pricing under Section 2 of the Sherman Act*, 84(3) YALE L. J. 558, 579 (Jan., 1975) (student notes) (hereinafter Telex).
[601] *See* Telex, *id.* at 576.
[602] *See Telex v. IBM: Implications for the Businessman and the Computer Manufacturer*, 60(5) VA. L. REV. 884, 900 (May 1974) (student notes) (hereinafter Telex II).
[603] *See* Telex II, *id.* at 900.
[604] *See* Telex, *supra* note 600, at 574.

losses it had incurred from predation.[605] Interestingly, under EU law, this would probably still amount to predation since the evidentiary standards of intent are met and EU law does not consider it necessary for rivals to be driven out of the market or for there to be recoupment to establish predation.

6.3 Economies of scale, new entry and predatory intent

Economies of scale are an important strategic tool and are propagated in the literature on management studies because they can be a sustainable source of competitive advantage.[606] The advantages from economies of scale do not depend on absolute size but on market share.[607] As long as the smaller competitors can't match the costs of the larger firm they will not achieve the same scale of operations. The larger firm can sell at a price that is above cost and profitable for it but which will nevertheless be unprofitable for the smaller firm which does not share the cost advantages arising from economies of scale to match the larger firm, even if it is equally efficient.[608]

Economies of scale are particularly advantageous in industries with higher fixed costs and some level of customer captivity or consumer inertia.[609] Efficient rivals are excluded by this form of exclusionary pricing considering that its effect can be to leave rivals cash starved, dependent on costly sources of external financing and with limited ability to raise funds, it can affect rivals' cash flow by limiting their ability to make profitable sales and can prevent rivals from achieving necessary economies of

[605] *See* Telex, *id.* at 573.
[606] *See* BRUCE GREENWALD & JUDD KAHN, COMPETITION DEMYSTIFIED: A RADICALLY SIMPLIFIED APPROACH TO BUSINESS STRATEGY (Portfolio, 2005).
[607] *See* GREENWALD & KAHN, *id.*
[608] *See* GREENWALD & KAHN, *id.*
[609] *See* GREENWALD & KAHN, *id.*

scale and scope to enable them to compete effectively.[610] For these reasons the Court of First Instance has held that, "economies of scale and learning effects cannot therefore exempt that undertaking from liability under Article 82 EC."[611]

In summary, even prices above cost can be exclusionary when economies of scale are present and intent can be used to identify when such pricing is exclusionary. What follows are three case studies of predation.

7. The Cardiff Bus Case

This case is one of a series of predation cases brought against bus companies in the UK, starting from the 1980's, after bus services were privatized in the UK (taken together the bus cases are hereinafter called the "bus cases"). After the bus industry was privatised and competition was introduced into the market, incumbent bus operators generally responded aggressively to entry.[612] The most popular predatory strategy employed by incumbent bus companies was to unprofitably increase the frequency of bus services and lower prices, thereby making it impossible for entrants to profitably compete in the market. In some cases, this was also accompanied with incumbents operating competitive bus schedules, which would run just before the entrant's buses and take customers away from entrants, a practice called sandwiching of bus services.[613] In other cases, incumbents would match the entrants' services or bus fleet with its own and operate them along the same routes as the entrant's buses e.g. if the entrant used mini buses, the incumbent would also start plying mini buses on the same routes as the entrant.[614]

[610] ROGER D. BLAIR & D. DANIEL SOKOL (eds.), THE OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS 26 (Oxford University Press, 2015).
[611] Wanadoo I, *supra* note 497, at §217.
[612] *See* Dodgson & Katsoulacos, *supra* note 506, at 269 (quoting Balcome at al.).
[613] *See* Dodgson & Katsoulacos, *id.* at 269.
[614] *See* Dodgson & Katsoulacos, *id.* at 269.

These practices continued in different bus markets over a period of time and continued even after some incumbents were held guilty of predatory pricing.

Although in most of the bus cases brought before it, the UK Office of Fair Trading (OFT) found that the market structure was conducive to predation, some bus companies were held guilty of predation and others were not. A key factor in the divergent outcomes in the different bus cases was the different evidence of intent presented in each case. According to Everton, the bus cases substantially contributed to developing the principles of predatory intent in the UK.[615] For instance, in *Highland Scottish Omnibuses*, the OFT found that the incumbent had predatory intent because it greatly increased its services on the routes serviced by the entrant and because the incumbent was a well-established and strongly financed firm who would much better be able to carry out a price war with the entrant.[616] A finding of intention to predate was based on the extensive use and mobilization of resources for the single-handed purpose of responding to entry, particularly when the purported victim did not have the same ability to access financial resources as the predator.

The following discussion will elaborate on one of the bus cases, the Cardiff Bus case and will highlight aspects of bounded rationality in the behaviour of the predatory company and its prey.

[615] Ann Rosemarie Everton, *Discrimination and Predation in the United Kingdom: Small Grocers and Small Bus Companies – A Decade of Competition Policy*, EUROPEAN COMPETITION POLICY 6 (1993) (it should be noted that a majority of these cases were brought under the old Competition Act, 1980.).
[616] *See* MICHAEL A. UTTON, MARKET DOMINANCE AND ANTITRUST POLICY 123 (Edward Elgar Publishing, 2003).

7.1 Background of the Dispute

In November 2004, '2 Travel', a small bus company, brought a complaint to the OFT alleging that Cardiff Bus had engaged in predatory pricing. Cardiff Bus, the primary bus company in Cardiff, operated a normal 'liveried' bus service in Cardiff for many years and it had a monopoly on many of the routes. In April 2004, 2 Travel introduced a new "no frills" bus service in Cardiff. 2 Travel's no frills service operated on very few, select routes and timings. Cardiff Bus already operated its liveried service on these routes but 2 Travel's services were fewer and more infrequent than Cardiff Bus' services and ticket prices were cheaper.[617]

When 2 Travel started operating its no frills services, Cardiff Bus also introduced its own special, no-frills service called the 'white service'. The 'white service' was different from Cardiff Bus's normal liveried service, as it did not carry the usual green livery identified with the normal service.[618] In its complaint to the OFT, 2 Travel alleged that Cardiff Bus acted to exclude it from the market by introducing the 'white service' on routes where it faced competition from 2 Travel and scheduled its buses to run a few minutes before 2 Travel's services in order to minimize 2 Travel's passengers.[619] In addition, 2 Travel alleged that Cardiff Bus engaged in predatory pricing by selling tickets for its white service at prices below 2 Travel's prices.[620] Cardiff Bus withdrew the white service within a few months of 2 Travel closing its operations in Cardiff in December 2004.[621]

[617]Decision of the Office of Fair Trading, No.CA 98/01/2008 15 (Nov. 18, 2008) (hereinafter Cardiff Bus) (recall that this reasoning closely follows the arguments of the post-Chicago school on asymmetric financial constraints).
[618]Cardiff Bus, *id. at* 16.
[619]*See* Cardiff Bus, *id.* at 23.
[620]*See* Cardiff Bus, *id.* at 21.
[621]*See* Cardiff Bus, *id.* at 1.

The OFT applied the law set out in section 18(1) of the UK Competition Act, 1998, prohibiting abuse of dominance, also called the Chapter II prohibition. As per section 18(1), 2 Travel was required to prove the following: (i) that Cardiff Bus held a dominant position in the relevant market at the time of the infringement; (ii) that Cardiff Bus abused its dominant position; and (iii) that such abuse may affect trade within the UK or any part of it.[622] The chapter II prohibition is consistent with EU predatory pricing law and Article 102 of the TFEU. It is also useful to note the elements of the offence of predatory pricing under the previous UK Competition Act of 1980: (i) market structure conducive to predatory pricing; (ii) relationship between prices and costs; and (iii) evidence of anticompetitive intention.[623] The OFT used a similar structure in its analysis in the Cardiff Bus case.

7.2 Market Structure

The OFT found that Cardiff Bus was the largest operator of bus services in the relevant market[624] and the only significant provider of urban commercial bus services in Cardiff.[625] It controlled two-thirds of the network traffic. Cardiff Bus' rivals were geographically fragmented and did not have sufficient presence on any of the routes in the relevant market to individually or collectively exercise significant competitive constraint on it. The OFT concluded that Cardiff Bus had a dominant position in the relevant market as it had sufficient market power to enable it to act independently of competitors and consumers.[626]

[622] *See* Cardiff Bus, *id.* at 29.
[623] *See* Dodgson & Katsoulacos, *supra* note 506, at 268.
[624] On both a flow-by-flow and a network basis.
[625] *See* Cardiff Bus, *supra* note 617, at 2.
[626] *See* Cardiff Bus, *id.* at 3.

Further, the existence of barriers to entry made it difficult for Cardiff Bus' position to be challenged by actual or potential competition. One of the barriers to entry were the fixed and sunk costs associated with entry such as costs of hiring or renting buses, infrastructure for bus maintenance, employing drivers etc.[627] The OFT considered a significant barrier to entry to be Cardiff Bus' extensive network of bus services.[628] The numerous routes on which Cardiff Bus plied and the frequency of buses on these routes was particularly advantageous to Cardiff Bus because consumers valued the combination of frequent schedules and extensive routes.[629] Cardiff Bus' frequency and network incumbency discouraged actual or potential competition in the relevant bus routes because it made it difficult for such entry to be profitable.[630] Cardiff Bus also capitalised on its extensive network of buses by selling 'network tickets' that could only be used on its buses and not on the competitor's buses and gave users the ability to use one ticket to ride on Cardiff Bus' entire network of routes.[631] This further discouraged consumers from using other bus services and made successful entry more difficult.

Consequently, to avoid directly competing with Cardiff Bus, 2 Travel decided to differentiate it's offering and create a niche market for itself by providing a low cost, no frills bus service. It targeted a niche consumer group, i.e. senior citizens and young mothers travelling after school hours and operated infrequently on limited routes during off-peak hours to cut costs.[632] As a result, costs and prices of 2 Travel's no frills service were lower than the normal liveried service.

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[627] *See* Cardiff Bus, *id.* at 136-37.
[628] *See* Cardiff Bus, *id.* at 135.
[629] *See* Cardiff Bus, *id.* at 127.
[630] *See* Cardiff Bus, *id.* at 81.
[631] *See* Cardiff Bus, *id.* at 127.
[632] *See* Cardiff Bus, *id.* at 11.

7.3 Bounded Rationality and Intent to Eliminate Competition

An important aspect of the OFT's decision was its finding that Cardiff Bus had acted with the intention of excluding 2 Travel from the market. For the finding of intent, the OFT relied on the UK Competition Appellate Tribunal's (CAT) decision in *Aberdeen Journals* where, as with 2 Travel, predation occurred in a situation where a dominant firm faced new entry. The CAT held that any retaliatory measures against a new entrant going beyond a reasonable and proportionate response might fall under the Chapter II prohibition.[633] Applying this rule to the present case, the OFT's finding of intent was based on whether Cardiff Bus' launching the 'white services' was out of normal commercial considerations, and was a reasonable and proportionate response to competition.[634]

Cardiff Bus launched the white services, knowing it would result in its incurring losses, without any objectively justifiable reason for doing so other than the exclusion of 2 Travel.[635] In the words of the OFT:

> "For a company to choose to launch new services that are likely to result in its generating losses (i.e. making lower profits overall than it would have done had it not launched those services) would not normally be commercially rational conduct on its part."[636]

The OFT concluded that the only explanation for Cardiff Bus' behaviour was that it was motivated by the intention to exclude 2 Travel by diverting passengers away from 2 Travel and was not

[633] *See* Cardiff Bus, *id.* at 160.
[634] *See* Cardiff Bus, *id.* at 163.
[635] *See* Cardiff Bus, *id.* at 162.
[636] *See* Cardiff Bus, *id.* at 164.

thinking about making profits.[637] Cardiff Bus argued that it had introduced the 'white service' in order to test market demand for the no-frills service and that it had no intention of diverting passengers from 2 Travel's bus services.[638] It was suggested that if Cardiff Bus wanted to divert passengers away from 2 Travel it could have lowered fares on its normal services rather than start a more expensive and resource-consuming new bus service.

Nevertheless, the OFT did not find any evidence amongst Cardiff Bus' internal documents such as any office memorandums suggesting that Cardiff Bus had planned to launch the white service as a market test or that it had in any way assessed or determined the profitability or viability of the 'white service' both before its launch and during its operation.[639] Further, not only did Cardiff Bus not make any preparation prior to launching the white service and not monitor the performance of its service but instead it paid close attention to the performance of 2 Travel's no frills service and the number of passengers that 2 Travel was carrying on its bus service. In the words of the OFT:

> "The OFT would expect that, in an organisation such as Cardiff Bus, a market test that had the potential to give rise to significant losses would be preceded by considerable forethought, such as documents recording the preparation of a business case that was signed off at a senior level. The OFT would also expect a market test to generate some contemporaneous evidence of whether or not it was proving to be successful. The OFT would also expect there to be some contemporaneous evidence to explain the internal thinking and assessment underlying

[637] *See* Cardiff Bus, *id.* at 4.
[638] *See* Cardiff Bus, *id.* at 3.
[639] *See* Cardiff Bus, *id.* at 166.

the decision to end such a test."[640]

The only internal company document produced in evidence relating to the new white service was a memorandum circulated among Cardiff Bus' employees a month before 2 Travel started its no frills operations and was titled 'Competition Policy'.[641] The document was intended to provide guidance to company employees in the face of what was termed a changing competitive landscape i.e., the entry of 2 Travel. The document stated that Cardiff Bus was responding to competition by starting an experimental no-frills service of its own so that "the opposition's carryings [should be reduced to] the absolute minimum."[642] The OFT relied on this document as evidence of Cardiff Bus' anticompetitive intent. As some scholars have stated, an internal email sent by a company executive informing employees of a particular business strategy and asking employees to act on it should be considered a highly credible piece of intent evidence.[643]

Other than the 'Competition Policy' there were no other internal documents to show that Cardiff Bus was planning and preparing for a market test for a new no frills service. The absence of any preparation for launching the no frills service is particularly significant since the no frills segment was a complete departure from Cardiff Bus' normal business model and required Cardiff Bus to make substantial preparations including using a different fleet of buses.[644] A rational, profit-maximizing firm would not incur the costs of launching a new service, even if it was a market

[640] *See* Cardiff Bus, *id.* at 178.
[641] *See* Cardiff Bus, *id.* at 187.
[642] *See* Cardiff Bus, *id.* at 187.
[643] *See* Lao, *supra* note 515, at 210.
[644] The absence of internal preparation for the launch of the white service was made evident when Cardiff Bus claimed that it had to withdraw the services because of driver shortages, a fact that would have been prevented with adequate preparation and planning.

test, without first forming a reasonable expectation of its success and whether such a test was likely to be worth the cost and effort of diverting managerial and company time and resources. Moreover, as a rational firm testing a new service in the market, Cardiff Bus did not take any effort to promote its 'white service' and instead presented a negative picture of no frills services.[645] This again does not seem consistent with the actions of a rational firm.

The US law on predatory pricing is based on the assumption that as rational, profit maximizers, firms will only engage in predation if it is possible for them to make enough profits to at least cover all the losses from predation. This is a quantitative requirement, which assumes that firms would have estimated the costs involved in predation beforehand and weighed this against the potential gains achieved through recoupment. Since predation is costly for a firm, rational firms would not engage in predation without sound planning and internal discussion of the costs involved when weighed against the benefits. However, there is no evidence here that Cardiff Bus in any manner rationally determined the likely costs it would incur through the launch of the white service and whether it would be able to recoup those losses. In other words, the actions of Cardiff Bus do not seem to be consistent with those of a rational firm concerned with profit maximization.

Another important factor in the OFT's finding of intent which, also furthers the argument that Cardiff Bus' actions were not commercially reasonable, was Cardiff Bus' decision to operate on the same bus routes and times as 2 Travel, as well as the coincidence of timing in the introduction and withdrawal of 2 Travel's and Cardiff Bus' no frills services. Cardiff Bus had been planning to introduce its 'white service' for a few months but it waited for 2 Travel to start its operations before introducing the

[645] *See* Cardiff Bus, *supra* note 617, at 184.

white service.[646] In addition, Cardiff Bus withdrew its white services shortly after 2 Travel exited the market.[647] Given that Cardiff Bus could have launched its white service before 2 Travel entered the market, it did not make commercial sense for Cardiff Bus to wait for 2 Travel to start its operations before launching the white service unless its only aim was to take passengers away from 2 Travel. Under normal commercial circumstances, a firm would have started operations as soon as possible so that it could get an early mover advantage over the competing bus service and have a better chance at succeeding in the market. Further, there is no rational explanation for Cardiff Bus' operating the white service only on those routes on which 2 Travel was also operating its no frills service.[648] Given that 2 Travel was only operating on limited routes, Cardiff Bus would have a better chance of earning revenues from its white service if it operated on one of the many routes on which it did not face competition from 2 Travel. In addition, Cardiff Bus faced higher costs from operating the no frills service than 2 Travel because it was also facing the opportunity cost of cannibalizing consumers from its own, revenue generating, normal service. Many of the customers using the new white service were former users of Cardiff Bus' normal liveried service and paid more for that service. This further pointed to the commercial irrationality of Cardiff Bus' operation of the white service. The fact that the white service buses were timed to operate at or around the same time and on the same routes as 2 Travel's no frills services suggested that Cardiff Bus intended to use the white service to take passengers away from 2 Travel.[649]

The OFT concluded that Cardiff Bus incurred losses from operating the white services and that the ticket prices were below

[646] *See* Cardiff Bus, *id.* at 197.
[647] *See* Cardiff Bus, *id.* at 198.
[648] *See* Cardiff Bus, *id.* at 201.
[649] *See* Cardiff Bus, *id.* at 3-4.

its costs, calculated on the basis of average avoidable costs.[650] In fact, the revenues generated by Cardiff Bus did not even cover the costs of the salaries of the bus drivers.[651] Cardiff Bus' tickets were also higher than 2 Travel's because return tickets purchased on the white service could be used on Cardiff Bus' normal service at no extra cost.[652] Thus, by buying the cheaper ticket on the white service, passengers could access an extensive network of much better buses and routes at the lower prices of the no frills service. The inter-changeability of the tickets made it more attractive for customers to use Cardiff Bus' white service. The decision to price tickets interchangeably made no sense if Cardiff Bus was trying to test the market for no frills service since it made it even more difficult to determine how successful the no frills service was in itself.[653] All of these factors taken together established intent in the mind of the OFT. This was taken by the OFT as proof of exclusionary intent.

7.4 Recoupment

In *Brooke Group*, the US Supreme Court stated that recoupment is the ultimate object of unlawful predatory pricing. It may be possible to make the argument in this case that unlike the view in *Brooke Group*, Cardiff Bus did not engage in predatory pricing because it was motivated by recoupment. Even before 2 Travel entered the market and even after it exited, Cardiff Bus did not charge a monopolists profit-maximizing price. In the words of the OFT:

> "In any event, the fact that an undertaking cannot be shown to be charging high prices, generating high profits, or providing low quality goods or services, does not

[650] *See* Cardiff Bus, *id.* at 162.
[651] *See* Cardiff Bus, *id.* at 4.
[652] *See* Cardiff Bus, *id.* at 203.
[653] *See* Cardiff Bus, *id.* at 203.

> necessarily lead to a conclusion that the undertaking does not have market power. As noted above, the assessment of dominance is based on whether an undertaking has the ability profitably to sustain prices above competitive levels, not whether it actually prices at above those levels."[654]

It can be inferred that Cardiff Bus did not engage in predation in order to charge monopoly prices after 2 Travel's exit. One reason for this may be that because Cardiff Bus was owned by the Cardiff municipality and not by private shareholders, profit maximization was not its primary objective.[655]

The OFT stated that Cardiff Bus wanted to have the ability to raise prices in the future if it wanted to and no frills operator would constrain Cardiff Bus' ability to raise prices and exploit its dominance.[656] The OFT also used the post-Chicago literature on reputation building and information asymmetries to explain Cardiff Bus' predatory behaviour. The OFT had also made similar findings in the past that incumbent bus operators had the incentive to invest in building a reputation for toughness because entrants are uncertain about the reaction of incumbents to entry and also do not have information regarding costs faced by incumbents.[657] In the Cardiff Bus case, the OFT found from interviews carried out with some of its competitors that new entry of bus operators in Cardiff was already restricted because of Cardiff Bus' reputation of aggressively responding to entry and expansion.[658] The OFT felt that one of the reasons Cardiff Bus engaged in exclusionary conduct in this case was because it wanted to maintain its reputation for fighting new entry,

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[654] *See* Cardiff Bus, *id.* at 153.
[655] *See* Cardiff Bus, *id.* at 238.
[656] *See* Cardiff Bus, *id.* at 171.
[657] *See* UTTON, *supra* note 616, at 122.
[658] *See* Cardiff Bus, *supra* note 617, at 3.

particularly in then frills segment.[659] The OFT's view was supported by the fact that no new entry had taken place in Cardiff from since the year 2000 with the exception of 2 Travel's unsuccessful attempt.[660] Thus, Cardiff Bus' reputation could have acted as a barrier to entry into the bus market in Cardiff.

According to the OFT, Cardiff Bus engaged in predation because it was concerned that once 2 Travel's no frills service was successful, it would expand its operations to directly compete with Cardiff Bus' liveried service.[661] In fact 2 Travel entered the market in Cardiff with the intention of ultimately expanding its operations as Cardiff Bus feared. Nevertheless, Cardiff Bus' fear that 2 Travel might expand and take away its market share was not based on a rational assessment of the factual situation before it. As was known to Cardiff Bus, 2 Travel could not pose a real competitive threat to it because it was on the verge of bankruptcy. In fact, given its weak financial position, 2 Travel would likely have exited the market even if Cardiff Bus had not introduced the white service.[662] Thus, it can be argued that Cardiff Bus did not rationally estimate the competitive threat posed by the entry of 2 Travel. Cardiff Bus overestimated 2 Travel's ability to succeed in the no frills segment by not taking into account facts known to it regarding 2 Travel's weak financial position and operational mismanagement. Alternatively, Cardiff Bus might be completely risk averse and unwilling to take any chances within the small probability that 2 Travel's entry might be successful. Behavioural studies have found managers to suffer from biases, be selective processors of information and process information according to a lens of their own experience and background. This might have resulted in Cardiff Bus' management placing more emphasis on the small chance that 2 Travel would successfully establish a no

[659] *See* Cardiff Bus, *id.* at 170.
[660] *See* Cardiff Bus, *id.* at 170.
[661] *See* Cardiff Bus, *id.* at 171-73.
[662] *See* Cardiff Bus, *id.* at 240.

frills service and less emphasis on the various factors preventing 2 Travel's success. Given 2 Travel's extreme financial position, its decision to enter the market in Cardiff was not taken with a correct assessment of the market and in fact overestimated its ability to succeed. Another aspect of bounded rationality is that 2 Travel was overoptimistic about its success in Cardiff since it was the first and only company to enter the market in Cardiff in some years, where other firms feared Cardiff Bus' previously described reputation for aggression, 2 Travel either did not consider that Cardiff Bus would be aggressive towards it or thought that it would be successful despite Cardiff Bus' aggression. In either case it did not rationally evaluate the market before entering. From the discussion above it is possible to infer that firms do not always behave as rational, profit-maximizers. Some of the decisions of Cardiff Bus and 2 Travel did not follow the paradigm of rationality. This evidence would probably have been disregarded by US courts as decisions that could not have been made by rational firms under the *Matsushita* principle. Further, there would be no room for such evidence in US law under the recoupment requirement and evidence of intent is not relevant to a US predatory pricing case. Accordingly, US courts would not have held Cardiff Bus guilty of predatory pricing because they would have found recoupment to be unlikely in the market structure for bus services since barriers to entry in this market are not very high so any increase in prices could lead to new entry. US courts would unlikely have considered evidence that Cardiff Bus was building a reputation of aggression since such evidence would require courts to admit evidence of firm behaviour that was not consonant with rationality. The biggest reason for a US courts reluctance to hold Cardiff Bus guilty of predation would be that it had not raised prices after 2 Travel's exit.

This case shows that by including evidence of intent, courts and competition agencies can form a better understanding of the firm's behaviour in those specific circumstances. The OFT used evidence of commercially irrational behaviour as proof of anticompetitive intent. This is under the theory that certain behaviour of rational firms can only be explained by anticompetitive intent. Here, insights from behavioural studies can help to explain the reasons behind some of these decisions. This can serve to clarify the understanding of firm behaviour in particular circumstances when there are departures from rationality. These insights are completely omitted from the assessment of predation in US law.

The following case involving the airlines industry in the US is very similar to the *Cardiff Bus* case. In both cases the incumbents were responding to the entry of low cost providers. The line of argument adopted by the plaintiffs in both cases was also very similar with both using the theory that the incumbent was building a reputation for aggression. However, both predatory pricing cases had different outcomes. The difference in outcome may have been due to the one big difference in the facts of both cases – Cardiff Bus started a new bus service and American Airlines lowered fares on its existing service. This resulted in a different calculation of costs and prices in both cases, which turned out to be dispositive for the American Airlines case. However, what is more likely is that the different outcomes in both cases are a result of the normative differences in US and EU law of predatory pricing.

8. The American Airlines Case

In *US v. AMR Corp.*,[663] the DOJ alleged that American Airlines (hereinafter 'American') engaged in predatory pricing by cutting prices and increasing capacity in certain hub markets where it enjoyed a monopoly position, in response to the entry of 'low cost carriers' also known as 'no frills airlines'. According to the

[663] 335 F.3d 1109 (2003).

DOJ, American engaged in predatory pricing in order to create a reputation for driving out competitors and defending its monopoly position in the hub market.[664] The Court of Appeals found in favour of American.

In its case before the District Court and the Court of Appeals, the DOJ relied extensively on American's internal documents showing the company's significant concerns about the losses that it would suffer from the entry of low cost carriers.[665] American's initial response to the entry of low cost carriers was to match the entrant's fares.[666] However, according to the DOJ, subsequently American began to worry that these low cost carriers would expand their operations; even create a competing mini-hub and so American started a more aggressive campaign against low cost entrants involving reduced fares and capacity increases.[667] American's concerns were magnified because in a parallel situation Delta Airlines had recently suffered significant losses of revenue to low cost carriers in its hub market.[668] The DOJ argued that American's initial response of matching the prices of low cost carriers was the more competitive response to entry and that the more extreme fare cuts and capacity expansions were the direct result of American's intention to exclude low cost carriers.[669]

Internal company documents also revealed that American had carried out an internal determination of what it would cost to prevent the low cost carriers from establishing a presence in its

[664] A hub for an airlines is an area which is the focus of the operations of the airlines and from where the airline provides a majority of its connections.
[665] *See* Edlin & Farrell, *supra* note 491, at 503.
[666] Edlin & Farrell, *id. at* 503.
[667] *See* Edlin & Farrell, *id.* at 503.
[668] 335 F.3d 1109, 1152 (2003).
[669] *See* Edlin & Farrell, *supra* note 491, at 504.

hub market.[670] In fact American had commissioned a financial impact study, which found that any strategy to make a low cost carrier unprofitable would prove to be very expensive to its short-term profitability. Accordingly, American's Chief Executive Officer, Crandall cautioned: "If you are not going to get them [the low cost carriers] out [of the market] then [there is] no point to diminish profit" by implementing the strategy.[671] In addition American conducted other studies and set up a "DFW Strategy Task Force" to determine the actions it would take to render entry of low cost carriers at its hub unprofitable.[672] This shows that American had carried out the necessary analysis and implemented this strategy knowing the short-term costs.[673] Unlike *Cardiff Bus*, American had conducted a more thorough market analysis before taking any action. Nevertheless, the intention of both companies was to drive new entrants from the market by making it unprofitable for them to compete.

Further, the DOJ argued that Americans' strategy succeeded in preventing low cost carriers from creating a hub in the relevant market and this in turn allowed American to recoup by earning monopoly profits in its hub market. Moreover, the DOJ demonstrated that based on reasonably quantified estimates, American expected that it would be able to recover the losses arising from its predation through future sales.[674] Indeed the DOJ showed that once low cost carriers had been driven out of the market, American had reduced flights and increased ticket prices. Finally, the DOJ argued that American engaged in predation in order to establish a reputation for predation, which would deter future entry.[675] The DOJ also claimed that American did establish

[670] *USA* v. *AMR Corp*., Brief of Appellant USA in the US Court of Appeals for the Tenth Circuit, No.01-3202, pages 7-10 [hereinafter Brief of Appellant].
[671] Brief of Appellant*, id.* at 10.
[672] Brief of Appellant, *id.* at 13-14.
[673] *See* 335 F.3d 1109, 1150 (2003).
[674] Brief of Appellant, *supra* note 670.
[675] *See* Edlin & Farrell, *supra* note 491, at 517.

such a reputation, as there was not much subsequent entry into the relevant markets. However, the court did not agree with the DOJ's recoupment theories because it found that barriers to entry in the relevant markets were low and American would not be able to sustain supra-competitive prices.[676]

The Court of Appeals dismissed the DOJ's claim of predatory pricing based on a different calculation of costs from the DOJ's, which lead the court to find that American was not pricing below its cost. The court held that the DOJ was wrong to focus on the profitability of American's capacity increases since such a test would make any pricing or capacity decision that reduced a firm's profits illegal.[677] However, the court's method for quantifying costs was criticized by Edlin and Farrell because in their view, the court did not recognise that American had significant cost advantages which allowed American to profitably price at a level which entrant's found extremely difficult to match. The significance of these cost advantages meant that entrants needed to operate at the same scale as the incumbent to be able to challenge it effectively.[678] However, it is not realistic to expect entrants to be able to operate at such a large scale immediately given practical considerations of starting a new business, perfecting the business model and difficulties faced by a new firm in financing such large-scale operations.[679] This illustrates the reason why scholars disagree about the method for quantification of costs in the price-cost test of predatory pricing and the need to consider the realities of market operations when considering cost figures and pricing levels in predatory pricing claims. In such situations intent can help to determine the exclusionary nature of price cuts.

[676]*See* Edlin & Farrell, *id.* at 519.
[677]*See* 335 F.3d 1109, 1202 (2003).
[678]For a discussion of the role of scale economies in predation, see section [6.3].
[679]*See* Edlin & Farrell, *supra* note 491, at 514.

From a behavioural perspective, the analysis of American's internal documents revealed that they were fearful of loosing revenues to low cost carriers because Delta Airlines had suffered a similar fate. As was stated by the DOJ, "American was seriously worried about the effect than an LCC [low cost carrier] hub at DFW would have on its profits, observing that '[Delta] has lost $232 [million] in annual revenue. Clearly we don't want this to happen to American…'"[680] It may be possible to argue that this recent example before American's management may have caused an availability bias and amplified the threat posed by low cost carriers and the likelihood that these low cost carriers would also succeed in taking away market share just as it happened with Delta. This motivated them to take the risk of engaging in predation even when recoupment was uncertain. Another reason could be that American's management was loss averse and thus, more fearful of the losses that could be caused to them by low cost carriers, even though these losses were not certain.

Further, in behaviour similar to *Cardiff Bus*, American focused on "drying up" their rivals' business, ignored their own profits and carefully studied the effect of its actions on rivals' profitability.[681] Interestingly, the DOJ's arguments, without explicitly using the term 'intention' very much followed a similar line of reasoning i.e., showing American's exclusionary behaviour by highlighting the actions it would have taken if it was only competing to meet competition and the actions it actually took because it wanted to drive out the competition.[682] For instance, American added much more capacity to routes where it wanted to prevent its rivals from establishing a presence.[683] This illustrates that American was not competing on the merits or based on the quality of its services but was relying

[680]Brief of Appellant, *supra* note 670, at 7.
[681]*See* Brief of Appellant, *id.* at 12.
[682]*See* Brief of Appellant, *id.* at 8-9, 12-14.
[683]*See* Brief of Appellant, *id.* at 13.

on its market position to exclude competitors, a factor that would have held strongly against it in an assessment of predation under EU law. It may be possible to argue that, based on the finding of intent and the manner of American's engagement with competitors, it is likely that it would have been guilty of predation under EU law.

9. The Amazon Case

This study examines Amazon's allegedly predatory price cuts and other exclusionary practices in the sale of books and ebooks in USA from the perspective of intent and business strategy. Amazon is presently the single largest seller of books in USA.[684] In addition, Amazon has diversified its retail presence into other markets such as audio and consumer goods and more recently into new markets such as online grocery sales. Amazon has followed a strategy similar to Wal-Mart by positioning itself as a discount retailer and establishing a reputation for price leadership. Further, as with Wal-Mart, Amazon has been accused of unfairly acquiring a dominant position through predatory pricing.[685]

The first hurdle to proving predatory pricing is establishing that a dominant firm's prices are below an appropriate measure of cost. Prices and costs are hard to accurately measure, particularly in the retail industry since pricing techniques are complex, variable and often based on volumes of sales and it is difficult to establish conclusively that pricing is below cost. In this case, it is possible to make an argument that Amazon was pricing part of its books and ebooks below cost based on various media reports which use

[684] *See* Christopher Matthews, *Will Amazon Take Over the World?*, TIME MAGAZINE (Jul. 16, 2012), http://business.time.com/2012/07/16/will-amazon-take-over-the-world/.
[685] *See* Nate Hoffelder, *Amazon, Bullying and Antitrust: Part 607*, THE DIGITAL READER (Oct. 10, 2013), http://the-digital-reader.com/2013/10/10/amazon-bullying-anti-trust-part-607.

publisher's list prices and retailer's discounts to show that Amazon was buying new books at an average wholesale price of approximately $12 and selling them for approximately $9.99.[686] In fact Amazon's retail prices did not change even after publishers increased their wholesale prices for e-books. It has also been stated in the academic literature that Amazon was consistently pricing e-books at a lower price than its competitors and at least a certain percentage of its e-books were priced below cost.[687] Accordingly, if it is assumed that Amazon was pricing below cost, the second requirement of predatory pricing is to find a theory of recoupment. Given the structure of the retail market for books and ebooks with low barriers to entry, recoupment is considered unlikely. Further, Amazon's 65% market share in the ebook market and the presence of competitors such as Apple makes the ebook market competitive rather than concentrated, making predation unlikely.[688] Moreover, Amazon's low prices are seen as benefiting consumers and given the emphasis on consumer welfare in US antitrust law, US authorities are unlikely to punish Amazon for actions that are beneficial to consumers.[689] On the other hand, if Amazon were to be charged with predatory pricing in the EU, there is a greater chance of it being held guilty because as discussed in previous sections of this chapter, EU competition law requires proof of intention to eliminate competition rather than recoupment.[690] Thus, if intention is proved it may be possible to hold Amazon guilty of predation in the EU.

[686]*See* Keith Gessen, *The War of the Words*, Vanity Fair (Dec. 2014), http://www.vanityfair.com/business/2014/12/amazon-hachette-ebook-publishing#
[687]*See* Babur De los Santos & Matthijs R. Wildenbeest, *E-book Pricing and Vertical Restraints* 5 (NET Institute Working Chapter No. 14-18, Oct. 2014).
[688]Erin Fuchs, *Why the Justice Department Won't Go After Amazon Even Though Paul Krugman Thinks it's Hurting America*, BUSINESS INSIDER (Oct. 20, 2014), http://www.businessinsider.com/why-the-justice-department-probably-wont-go-after-amazon-2014-10 (citing Herbert Hovenkamp).
[689]Fuchs, *id*.
[690]Fuchs, *id*.

The purpose of this study is to further explore whether Amazon's pricing was motivated by exclusionary intent. Another objective of this study is to see how intent can be used to better understand when pricing practices can be called anticompetitive. This study uses literature from management studies and business strategy to help in the analysis of the nature of Amazon's price cuts. From a normative perspective intent is relevant because consumers are harmed when rivals are eliminated by means other than competition based on quality. Within this perspective, management studies can be particularly useful in understanding when firms intend to compete by improving quality and when they are competing using purely exclusionary tactics.

9.1 Amazon as a strategic competitor

Amazon's strategy is to sell at the lowest prices in the market. Business analysts who have studied Amazon believe that Amazon has the best-designed business strategy, even when compared to companies such as Apple, Google and Microsoft.[691] Amazon's belief in prioritizing long-term goals over short-term profits as stated in its Annual Reports is another indication of its commitment to pursuing its long-term strategies.[692] Amazon's competitive strategy has played a significant role in its growth and as business analysts believe, has facilitate edits capture of markets such as the ebook market without producing significant technological innovations.[693] According to one analyst, "Unlike the other big companies that symbolize our times — Google, Apple, Facebook and Microsoft — Amazon did not rise to power by inventing a new product or service. It came to power by

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[691] *See* Venkatesh Rao, *Why Amazon is the Best Strategic Player in Tech*, FORBES (Dec. 14, 2011), http://www.forbes.com/sites/venkateshrao/2011/12/14/the-amazon-playbook/.

[692] *See* ANNUAL REPORT OF AMAZON.COM (2013), *available at* http://www.annualreports.com/Company/1755

[693] Although Kindle is certainly a significant innovation.

systematically taking down an entire existing industry."[694] More than one commentator has described Amazon's actions in dealing with competition as a game of chess with each move planned in advance.[695] In other words, Amazon is a company guided strongly by its competitive strategy and its strategy has played a significant role in its current market position.

Further, as described by commentators, Amazon excels not just in its design of competitive strategy but also in its execution. It succeeds in executing its strategy by aligning its own capabilities to tackle the weaknesses of its competitors.[696] Amazon's systematic strategy to eliminate competition and the manner of its execution may be illustrated through Amazon's acquisition of Quidsi, a fast growing online retail company providing special products such as 'Diapers.com' and 'Soap.com'. Quidsi's growing popularity and increasing sales made it an acquisition target for Amazon as well as Wal-Mart.[697] When Quidsi's management showed reluctance to sell to Amazon, Amazon launched an aggressive price campaign to drive down the price of diapers in the market. Quidsi found it hard to match Amazon's low prices since it did not have the same financial resources and it lost market share to Amazon quickly.[698] During the acquisition negotiations with Quidsi, Amazon launched 'Amazon Mom', a package of services including a free one year subscription to two-day Amazon Prime[699] shipping and an additional thirty percent discount on diapers that were already selling at discounted prices; on the condition that customers subscribed to a service for regular

[694] *See* Rao, *supra* note 691.
[695] *See* Dan McGinn, *How Jeff Bezos Makes Decisions*, HARVARD BUSINESS REVIEW BLOG (Oct. 18, 2013), blogs.hbr.org/2013/10/how-jeff-bezos-makes-decisions/
[696] *See* Rao, *supra* note 691.
[697] *See* BRAD STONE, THE EVERYTHING STORE: JEFF BEZOS AND THE AGE OF AMAZON 295 - 298 (Random House Group, 2013).
[698] STONE, *id.* at 297.
[699] As an Amazon Prime shipping member a consumer pays an annual fee to receive unlimited free two-day shipping on purchases.

monthly deliveries of diapers from Amazon.[700] Quidsi could not compete against this package. The total 'Amazon Mom' package, according to executives of Quidsi would have incurred Amazon a loss of US $100 million in three months just on the sale of diapers.[701] The launch of 'Amazon Mom' proved to be a catalyst in Amazon's acquisition of Quidsi as Quidsi was unable to compete with Amazon Mom.[702] However, the FTC approved Amazon's acquisition of Quidsi and did not find its conduct to be anticompetitive.[703] Nevertheless, Amazon strategically eliminated Quidsi through an aggressive strategy that exploited Amazon's superior financial strength and other internal resources rather than through improved quality of performance.

In order to evaluate the intentions behind Amazon's actions it is relevant to understand the environment in which it operates. The following discussion describes the retail industry.

9.2 The structure of the retail industry

The strategic position of firms in the retail market is affected by the changing structure of the retail industry. The retail industry in the US and Europe is highly concentrated.[704] The scale of operations has increased over time as larger companies have taken away market share from independently owned smaller

[700] *See* STONE, *supra* note 697, at 297.
[701] STONE, *id.* at 298.
[702] "So the Quidsi executives stuck with Amazon largely out of fear…the money-losing Amazon Mom program was obviously introduced to dead-end Diapers.com to force a sale, and if anyone at the time had doubts about that, those doubts were quickly dispelled by Amazon's subsequent actions. A month after it announced the acquisition of Quidsi, Amazon closed the [Amazon Mom] program to new members." STONE, *id.* at 299.
[703] *See* Official Communication of the Federal Trade Commission, *available at* http://www.ftc.gov/sites/default/files/documents/closing_letters/amazon.com-inc./quidsi-inc./110323amazonthomas.pdf
[704] *See* JOACHIM ZENTES et al., STRATEGIC RETAIL MANAGEMENT, 1-2 (Gabler, 2d. ed. 2007).

retailers.[705] As a result, firms have significant market power, large turnovers, many employees and an extensive network of operations.[706] This has made retail operations increasingly significant, as manufacturers are dependent on retailers for a larger share of their turnover.[707] Retailers are also gaining control of distribution channels.[708] With retailers increasingly taking over delivery and other parts of the supply chain resulting in vertical foreclosure thereby, making it harder for new entrants to compete against established players in the retail industry.

Another important feature of the retail sector is price competition. Due to the significance of sales volumes to profitability, the pricing strategy adopted by a retail firm can significantly increase profits earned by the firm. Manufacturers typically play a limited role in setting retail prices. Certain sections of the retail market are characterised by aggressive price competition. Other retail players compete by differentiating their products and exploiting consumers' different willingness to pay.[709] Various pricing techniques such as 'loss leaders' are used to reduce prices and attract buyers. This technique has been used successfully by companies such as Wal-Mart who have gained large market share due to their low prices. The loss leader technique is an important part of the retail industry and makes price-cost tests harder to calculate and measure.[710]

The online segment of the retail market (also called e-commerce) shares many features of the retail industry highlighted above, but is also different in some respects. E-commerce is a fast-growing industry.[711] Price competition is even more aggressive in this

[705] *See* ZENTES et al., *id.* at 1.
[706] *See* ZENTES et al. *id.* at 1.
[707] *See* ZENTES et al. *id.* at 2.
[708] *See* ZENTES et al. *id.* at 2.
[709] *See* ZENTES et al. *id.* at 254-56.
[710] *See* ZENTES et al. *id.* at 254-55.
[711] *See* ZENTES et al. *id.* at 1.

market because it is easier to compare prices of products online. Prices on the Internet generally form a reference point for consumers, even when they are shopping in physical stores even though physical retailers find it difficult to match the prices of Internet retailers because of additional costs of renting store space, employees etc.[712] In this way e-commerce is advantageously positioned to exploit retail markets.

All the features of the retail industry discussed above have contributed to Amazon's growth and success. Its presence as an Internet retailer gives it cost advantages and its strategy of prioritizing market share over profits has helped to achieve the necessary volume of operations and market power that is essential for success in the retail market.

Amazon has also made important contributions in shaping the market for books. It has made books more affordable and accessible to consumers through low prices and its online retail format. It also has an online market for used books and a professional portal for competing booksellers called 'Fulfillment by Amazon' as well as 'Amazon Advantage' for other businesses. Amazon has also innovated in the ebook segment by introducing the ebook reader, Kindle. In addition, Amazon has a presence in publishing; it has a self-publishing business, which helps Amazon to develop relationships with authors directly.[713] Amazon has maintained its reputation for aggressive pricing through programmes such as a controversial 'price comparison' application it once introduced where customers were encouraged to send prices of books in competing bookshops to Amazon so that Amazon could keep prices lower than competitors. Amazon

[712] *See* ZENTES et al., *id.* at 257.
[713] *See* Jennifer Rankin, *Amazon and Hachette Feud Could Re-write the Book on Publishing*, THE GUARDIAN (Aug. 25, 2014), http://www.theguardian.com/technology/2014/aug/25/amazon-hachette-publishing-future-ebooks.

has largely acquired market share by driving out physical bookstores from the market because bookshops find it impossible to compete with Amazon's low prices.[714] An example is the exit of the large chain of bookstores; Borders in 2011 after it went bankrupt because it was unable to compete with Amazon's prices. Independent book shops have also significantly borne the brunt of Amazon's pricing and have closed down in large numbers.

9.3 Bounded Rationality, Competitive Strategy and Anticompetitive Intent

Amazon has consistently kept ebook prices below its profit maximizing level and states that it does not plan to raise prices much beyond its $9.99 price point for ebooks, even if it could profitably do so. In fact, relative to print books, Amazon discounts ebooks more deeply from the list prices than the comparative discounts in ebooks sold by its competitors.[715] This makes no commercial sense because Amazon has more market share in ebooks than in print books, which gives it more incentives and ability to raise prices and increase revenues in the sale of ebooks. In fact, Amazon was selling its ebooks at a price lower than its profit maximizing price and it could have profitably increased the price at which it was selling ebooks. Even Amazon's competitors, including companies such as Apple have publicly stated that they find Amazon's ebook prices to be unprofitable and unsustainable.

Amazon's pricing of ebooks should be considered in conjunction with its history of pursuing aggressive strategies against its competitors such as Quidsi. This is an integral aspect of Amazon's competitive strategy. Another example of Amazon's

[714] *See* Rankin, *id.*
[715] *See* De los Santos & Wildenbeest, *supra* note 687, at 27.

aggressive approach to comptetition as described by Stone in his book, 'The Everything Store' was the 'Gazelle project' – a code name for Amazon's strategy of agressively pushing small publishing companies for better terms, so called because, in the words of its CEO, Amazon "should approach these small publishers the way a Cheetah would pursue a sickly gazelle."[716]

Amazon's strategy has also been to leverage the competitive advantage from the Internet by growing quickly and acquiring a large captive customer base through low prices and schemes such as 'Amazon Prime' that offers significant discounts to locked-in customers.[717] Amazon has also built and sustained its customer base by creating relationships with its customers for instance, by introducing consumer ratings and product reviews.[718] Customer lock-in helps Amazon sustain its competitive advantage and grow further.[719] This operates as a barrier to entry for Amazon's competitors. Once engaged in the Amazon virtual community few customers switch to rival online booksellers.[720] Amazon also has more data on books, authors, reviews and prices than any other online bookseller, which Amazon uses to improve its own presence in the market as well as by leveraging it to build its other businesses.[721] This is particularly relevant as firms are increasingly using consumer buying behaviour and data to obtain competitive advantage.

Amazon has, through the strategies described above, succeeded in achieving a size of operations that puts pressure on its rivals

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[716]David Streitfeld, *A New Book Portrays Amazon as Bully*, THE NEW YORK TIMES (Oct. 22, 2013), http://bits.blogs.nytimes.com/2013/10/22/a-new-book-portrays-amazon-as-bully/?r=4.
[717]*See* COLIN COMBE, INTRODUCTION TO E-BUSINESS: MANAGEMENT & STRATEGY 357 (Elsevier, 1st ed., 2006).
[718]*See* COMBE, *id.* at 359.
[719]*See* COMBE, *id.* at 357.
[720]COMBE, *id.* at 360.
[721]COMBE, *id.* at 360.

who do not have the same size and cost advantages.[722] In the market for ebooks where competition is essentially on price, it is very difficult for new firms to compete with Amazon. In fact according to commentators in the publishing industry, "…many feel Amazon is now focused on driving its competitors out of business."[723] Amazon has a significant share of the market, a reputation for aggression and the capabilities to execute its strategy of offering the lowest prices. It may be argued that the implication here is that even though there is entry in the market, it is unlikely to significantly impact Amazon's market position because new entrants will very unlikely challenge Amazon's pricing or engage in direct competition with Amazon.

Amazon's ebook prices are consistently lower than other retailers and a certain percentage of ebooks are priced below cost as part of Amazon's strategy to acquire and retain consumers within its 'ecosystem'. Amazon has arguably a vast breadth and depth of product variety on its website and can sell other, more profitable products to its consumers after attracting them to its ebook store.[724] Amazon generally sells bestselling books below cost suggesting that Amazon is using these books as loss leaders.[725] Others argue that Amazon's permanently sub-cost prices for popular books cannot be called a loss leader strategy in the conventional sense since it is more than an introductory strategy to attract customers and deserves to be evaluated for its possible predatory intent and effect.[726] Amazon's pricing of ebooks may

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[722]*See* De los Santos & Wildenbeest, *supra* note 687, at 31.
[723]*See Much at Stake in Amazon-HBG Fight*, PUBLISHERS WEEKLY (May 12, 2014), http://www.publishersweekly.com/pw/by-topic/industry-news/publisher-news/article/62254-much-at-stake-in-amazon-hbg-fight.html.
[724]*See* De los Santos &Wildenbeest, *supra* note 687, at 5.
[725]*See* De los Santos & Wildenbeest, *id.* at 27.
[726]Albert A. Foer & Tyler Patterson, *E-books and Amazon: The Need to Hear Two Hands Clapping*, COMPETITION LAW INSIGHT 8, 9 (Jul., 2012), http://www.antitrustinstitute.org/content/e-book-case-and-amazon-need-hear-two-hands-clapping-analysis-bert-foer-and-tyler-patterson.

be part of a broader strategy to control the market for books. According to a report produced by the Codex Group,

> "competing with Amazon, even to carve out a slice of the market, is a daunting task. The company has a number of obvious advantages: scale, resources, and a diverse product line that can let the company treat books as loss leaders. The company, as has been well documented, is also focused on driving prices as low as possible. The perception of Amazon as the cheapest place to buy books, enhanced by its combining books with high ticket items with free shipping, gives the company a tremendous advantage over both online and physical bookselling competitors."[727]

Amazon's insistence on low prices and its pressuring of publishers to keep prices low could well be a self-defeating strategy. In the words of Foer & Patterson, "This may seem to be against Amazon's own interest, but there are reasons why a self-defeating strategy might be followed – for example, an excessive focus on the short run, uncertainty about the supplier's real costs or a desire to obtain an input cost advantage over other buyers."[728] Amazon's dogged pursuit of a strategy to keep prices low suggests possible behavioural biases such as competitive inertia. The literature from management studies shows us that low prices are not the only way to compete and create value for consumers.

Amazon may want the market for ebooks to grow from a long-term, strategic perspective because it has a larger share of the ebook market than the print book market and more potential to

[727] *See* Jim Milliot, *BEA 2014: Can Anyone Compete with Amazon?*, PUBLISHERS WEEKLY (May 28, 2014), http://www.publishersweekly.com/pw/by-topic/industry-news/bea/article/62520-bea-2014-can-anyone-compete-with-amazon.html
[728] *See* Foer & Patterson, *supra* note 726, at 10.

grow its market share in ebooks. Amazon also has a large share of the market for ebook readers through its Kindle device. Amazon argues that lowering the prices of ebooks will increase volumes of sales and lead to higher revenues and profits because ebooks are highly price elastic.[729] For that reason Amazon has said it wants to maintain its US$ 9.99 price point for ebooks. Amazon's pricing also reflects its desire to become vertically integrated in the publishing industry through the launch of Amazon Publishing in 2009.[730] Once ebooks become more popular, Amazon's intention may be to encourage authors to self-publish ebooks through its Amazon Publishing and Amazon Advantage programmes and this will enable its presence in the publishing business to grow.

As Amazon has a presence at different levels of the book market, from publishing, to selling, to providing book recommendations, ebook prices have an impact on all of these different Amazon businesses.[731] Some analysts have stated that Amazon's low ebook pricing is intended as a method of cannibalising the print book market. The reason for this is that a growing ebook market helps Amazon grow its allied businesses and increase its market share at the cost of traditional publishers, who rely on revenue from the sale of print books for their profits. Once a critical mass of people prefer ebooks to print books, the publishing business will become unviable and publishers will exit the industry.

9.4 The Dispute with Hachette: Control Over Ebook Pricing

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[729] *See* Russell Smith, *The War over Ebooks Sales Resonates Widely as Amazon, Hachette Battle*, THE GLOBE AND MAIL (Aug. 15, 2014), http://www.theglobeandmail.com/arts/books-and-media/the-war-over-e-book-sales-resonates-widely/article20080473/.
[730] *See* De los Santos & Wildenbeest, *supra* note 687, at 27.
[731] Keith Gessen, *The War of the Words*, VANITY FAIR (Dec. 2014), http://www.vanityfair.com/business/2014/12/amazon-hachette-ebook-publishing#

The exclusionary intent behind Amazon's pricing of ebooks was debated extensively in the media because of a much-publicized dispute with Hachette Book Group (hereinafter Hachette). The essence of this dispute is that Hachette and other publishers became extremely uncomfortable with Amazon's consistently pricing ebooks at US $9.99 (even when it bought the ebooks from publishers at a higher price) because they felt that low ebook prices threatened not only their profit margins but more seriously, the business model of the publishing industry as well as the future of print books.[732] Publishers feared that if Amazon controlled the pricing of ebooks, it would price ebooks low enough to drive publishers out of the market because people would only buy ebooks so publishers would not be able to make any profits from their primary source of revenue – the sale of hardbacks and paperbacks.[733] This is also called the "danger of percentage creep".[734] Publishers also believed that Amazon's low ebook pricing was eroding consumers' perception of the value of books, cannibalizing hardcover sales and would cause prices of books to fall.[735]

The dispute between Amazon and Hachette has its roots in the DOJ complaint against Apple alleging that Apple colluded to fix the prices of ebooks with five publishing companies: Hachette Book Group, Harper-Collins, Penguin, Simon and Schuster and Macmillan. Apple challenged the DOJ ruling arguing that Amazon's pricing of ebooks was unprofitable and Amazon was foreclosing competition by lowering the prices of ebooks. As a result, to make the pricing of ebooks profitable for retailers, Apple felt it could only enter the ebook market as a retailer if publishers adopted the 'agency model' of pricing books when

[732] *See* Rankin, *supra* note 713.
[733] Gessen, *supra* note 731.
[734] *See* Gessen, *id.*
[735] *See* De los Santos & Wildenbeest, *supra* note 687, at 2.

selling to all retailers.[736] The agency model gave control of ebook prices to publishers with retailers receiving a fixed commission on each eBook it sold. The DOJ took the view that the agency model was in essence a method of price fixing and the publishers had colluded in introducing this model. The publishers entered into a settlement with the DOJ, which gave Apple the unlimited power to discount ebooks for a time period of two-years after the settlement. However, the court and the DOJ knew that Apple would not discount the prices of ebooks, so the terms of the settlement were a tool for Amazon to use in its negotiations with the publishers over ebook pricing.[737] However, the court's order was only for a period of two years after which the contracts between Amazon and each publisher could be freely renegotiated. Amazon's dispute with Hachette started when this two-year period was nearing completion and ebook selling contracts needed to be renegotiated between the parties.

The agency model in fact required publisher's to pay higher amounts in commission to retailers and reduced the publisher's profit margins.[738] The publishers introduced the agency model into its contracts with retailers not out of concern for profits but because of other considerations such as cannibalization of print book sales by low ebook prices and concern for the long-term viability of its business model.

Amazon has significant market power and competitive advantage in ebooks through its Kindle format and it exploited these advantages in its negotiations with Hachette over ebook prices. However, Hachette was determined not to give complete control of prices to Amazon. So Amazon took advantage of its market

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[736] *See* Andrew Albanese, *Apple Loses: Judge Finds Price Fixing in ebook Case*, PUBLISHER WEEKLY (Jul. 10, 2013), http://www.publishersweekly.com/pw/by-topic/digital/content-and-e-books/article/58166-apple-loses-judge-finds-price-fixing-in-e-book-case.html.

[737] *See* Albanese, *id.*

[738] *See* De los Santos & Wildenbeest, *supra* note 687, at 4.

power in order to pressurize Hachette to agree to its terms by withdrawing many beneficial retail services from Hachette books, such as removing customers' ability to pre-order books, introducing artificial delays on the shipping times for Hachette books and removing personalised recommendations of Hachette books from its website.[739] These activities substantially reduced the sale of Hachette books. Authors of books published by Hachette were the losers from this because of fewer readership and resulting losses in royalty payments.[740] In fact some authors protested Amazon's aggressive behaviour towards Hachette by signing a petition that asked Amazon to end its predatory practices, which "unfairly threaten its competitors and the printed book".[741] In the past, Amazon has followed a similar strategy of aggressively pushing for better terms by removing essential retail services offered by it with other sellers including Walt Disney.

Amazon's market power played a large role in the style of its negotiations with Hachette. Hachette is just one of Amazon's 70,000 and growing number of suppliers so it makes comparatively little difference to Amazon if it looses Hachette's business.[742] On the other hand, according to research conducted

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[739] *See* Farhad Manjoo, *Amazon's Tactics Confirm its Critics' Worst Suspicions*, BITS: NEW YORK TIMES BLOGS (May 23, 2014), http://bits.blogs.nytimes.com/2014/05/23/amazons-tactics-confirm-its-critics-worst suspicions/; *see also* Carolyn Kellogg, *Amazon and Hachette: The Dispute in 13 Easy Steps*, LOS ANGELES TIMES (Jun, 3, 2014), http://www.latimes.com/books/jacketcopy/la-et-jc-amazon-and-hachette-explained-20140602-story.html.

[740] As a result 900 authors including famous authors such as Stephan King and John Grisham have reacted strongly including issuing a two page advertisement in the New York Times asking Amazon to stop its tactics of keeping books hostage in its attempt to win a battle against Hachette. Another 1,200 German-language authors have signed a similar petition criticising Amazon's tactics against the publisher, Bonnier. On the other hand some 8,500 authors including many famous self-published authors have written in support of Amazon. *See* Rankin, *supra* note 713.

[741] *See* David Streitfeld, *Amazon Angles to Attract Hachette's Authors to Its Side*, NEW YORK TIMES BLOGS (Jul. 8, 2014), http://bits.blogs.nytimes.com/2014/07/08/amazon-tries-to-woo-authors-in-hachette-dispute/.

[742] *See* Kellogg, *supra* note 739.

by the Codex Group in 2014, Hachette is much more dependent on Amazon for its sales and revenues since Amazon is the largest book and ebook seller in USA and sells the majority of Hachette's books and ebooks.[743] Further, Hachette does not have the same capabilities and is thus, more strongly reliant on Amazon.[744]

The result of the Amazon-Hachette dispute was that after many months of negotiations Amazon finally reached an agreement with Hachette whose terms were not made public but according to media reports the agreement retained the agency model and gave Hachette control over ebook prices but also gave Amazon incentives to keep ebook prices low.[745] The dispute with Hachette shows that Amazon aggressively sought control over ebook pricing even though it did not intend to increase prices after achieving such control but intended to use this as a tool for competitive advantage. The discomfort of other publishers as well as retailers who found it impossible to match Amazon's prices also shows that Amazon's pricing was motivated either by anticompetitive intent or by an over-optimistic understanding of the market in the future. Even if Amazon's loss-making prices was motivated by the overconfident or hope that it would be able to recover its losses at a future date, which cannot be certain, this would mean that Amazon is aiming to drive out competitors from the market, which would be called exclusionary behaviour.

[743] Amazon had a market share of 41% of all new book sales in the USA. *See* Jim Milliot, *BEA 2014: Can Anyone Compete with Amazon?*, PUBLISHERS WEEKLY (May 28, 2014), http://www.publishersweekly.com/pw/by-topic/industry-news/bea/article/62520-bea-2014-can-anyone-compete-with-amazon.html.
[744] *See* Rankin, *supra* note 713.
[745] Mark Coker, *The Amazon Hachette Dispute Comes to a Pyrrhic End*, THE HUFFINGTON POST (Nov. 18, 2014), http://www.huffingtonpost.com/mark-coker/theamazon-hachette-disput_b_6167162.html?ir=India.

9.5 Amazon's Conduct and the Normative Paradigm of Predation

The neoclassical paradigm of predatory pricing believes that rational firms will not price below cost unless they know they can recoup the losses incurred from predatory pricing by raising prices once competitors are driven out. However, the study of Amazon reveals that Amazon has kept prices of ebooks below cost for a sustained period of time without any intention of raising them to recoup losses. This study describes various reasons for why Amazon has engaged in below cost pricing. Using tools from business strategy can help to understand why firms engage in below cost pricing in situations where recoupment is unlikely. However, these explanations work because firms are not assumed to act rationally. This is in contrast to neoclassical theory, which takes the view that since firms are rational, where recoupment is unlikely, predation has either not occurred or is irrelevant even if it has.

According to Benz, firms may engage in predatory pricing in order to drive down their costs or as a strategic attempt to gain market share/dominance in the long-term.[746] One of the situations Benz addresses is where firm's finance predatory pricing with profits earned in other markets.[747] Benz argues that in such situations even though recoupment is uncertain, the welfare implications of predation may not be very different from situations where recoupment is likely.[748] Here, even though the alleged predator does not plan to recoup its losses in the target market, it takes market share away from competitors and strategically maintains its competitiveness through below cost pricing. The result is that consumers in the 'more profitable'

[746]Steven F. Benz, *Below Cost Sales and the Buying of Market Share*, 42(3) STAN. L. REV. 695, 704 (1990).
[747]*See* Benz, *id.* at 705.
[748]*See* Benz, *id.* at 716-17.

markets from where the predation is financed pay higher prices (and essentially finance the buying of market share in the other market) while at the same time entry in the market where predation is occurring is inhibited due to lower prices even when potential entrants may be equally efficient.[749] Inhibited entry can reduce the pace of innovation. Further, this kind of predation can help firms acquire dominant positions in a market where they are not the more efficient competitor and may in fact take market share away from the more efficient firms, inducing efficiency impairing reallocations.[750] Predation can thus, weaken competitors and even prevent their expansion into other markets, which can reduce competition in multiple markets.[751] This shows that predation can have welfare reducing implications even where the predator does not recoup its losses because predation can inhibit entry and innovation or cause price increases in other markets.

In the context of pricing, Amazon's deeply discounted prices of books and ebooks have driven many competing bookshops out of the market and are continuing to do so as another in a long line of bookshops i.e., Barnes and Noble is also currently facing severe financial pressure.[752] The gradual disappearance of bookstores means fewer choices to customers and less likelihood of innovation. Moreover, consumers value the services provided by physical bookstores, such as the ability to browse books before buying them. In fact a survey conducted by the Codex Group found that a substantial percentage of book buyers at Amazon had already decided which book they wanted to buy before

[749] Benz, *id.* at 718.
[750] Benz, *id.* at 720.
[751] Benz, *id.* at 740.
[752] *See e.g.* Jeffrey A. Trachtenberg, *Barnes & Noble to Split Retail Stores, Nook Digital Business*, WALL STREET JOURNAL (Jun. 2014), http://www.wsj.com/articles/barnes-noble-to-split-into-two-companies-1403699838.

logging-on to Amazon to buy the book.[753] Some of these consumers said they went to the local bookshop to find which book to buy and then bought the book on Amazon because it was cheaper. Bookshops allow you to browse the entire book (while Amazon only gives a selected preview) and to get more authentic and personalized recommendations by interacting with people at the bookshop. Bookshops are also valued as a place to meet, interact and have conversations with a variety of people.[754] Finally, bookshops provide an added benefit of inculcating a literary culture within their community, for instance by organising book readings and other literary events. Many authors have expressed concern about the dwindling numbers of bookstores and have encouraged book lovers to buy books from bookstores rather than online.[755] Thus, physical bookshops certainly provide consumers with added value that is lost when they no longer exist. This is one welfare implication of Amazon's pricing strategy that competition authorities should consider seriously.

Another matter of concern is Amazon's use of its buyer power to make demands from and pressurize its suppliers, in this case the publishers.[756] Amazon's buyer power can lead to publishers profits being squeezed, which can in turn reduce their incentives to innovate or may lead to limited or volume-based profits, which

[753] *See* Suw Charman-Anderson, *Half of Amazon Book Sales are Planned Purchases*, FORBES (Feb. 20, 2013), http://www.forbes.com/sites/suwcharmananderson/2013/02/20/half-of-amazon-book-sales-are-planned-purchases/.

[754] David Rosenberg, *Why Independent Bookstores are More than Just a Place to Buy Books*, SLATE (Nov. 14, 2014), http://www.slate.com/blogs/behold/2014/11/19/bryan_david_griffith_the_last_bookstores_america_s_resurgent_independents.html

[755] *See* Alison Flood, *David Nicholls: Browsing Bookshops then Buying Online is a 'Genteel Form of Shoplifting'*, THE GUARDIAN (Apr., 14, 2015), http://www.theguardian.com/books/2015/apr/14/david-nicholls-decline-indie-bookshops-london-book-fair.

[756] *See* Foer & Patterson, *supra* note 726, at 10.

can make the production of specialised books that cater to a smaller audience unviable. In other words, Amazon's buyer power can be used to coerce publishers to sell at prices, which will result in reduced production of new book content.[757] This may also ultimately drive publishers out of the market and help to cement Amazon's dominance in the book industry.

Finally, the question of whether Amazon's price cuts can be called predatory will be guided by the objectives promoted by the law of predatory pricing. In the US where predatory pricing is punished very rarely and only when there is recoupment because consumers are benefited when prices are low; Amazon's pricing is not predatory. On the other hand, in the EU where the law does not require recoupment because consumer interest is served when effective competition is maintained; Amazon is more likely to be held guilty of predation. This study has shown that though it is unlikely that Amazon will be able to recoup by raising prices, it could recoup to some extent through greater operational scale and it could be financing predation through profits in other markets. The reason for its predation is strategic in nature. Under US predatory pricing law, there is no scope to explore these reasons for predation since intent is not a relevant element of the law. However, EU law requires proof of intent, which allows plaintiffs to explore the reasons behind Amazon's pricing. Here insights from business strategy have assisted in the analysis conducted in this study. The analysis has shown that Amazon is not competing based on quality but is competing by preventing the growth of competitors. Thus, if EU law intends to solely encourage competition based on quality and discourage competition that hinders other firms' growth and evolution, then Amazon's conduct will be held to be exclusionary.

[757] *See* Foer & Patterson, *id.* at 10.

10. Conclusion

The *Matsushita* court held that firm conduct that could not be explained within the paradigm of rationality could not have occurred at all as a matter of law. Thus, firms are presumed by the law to act rationally. Accordingly, unless recoupment is possible, rational firms would not engage in predation. However, as the three case studies in this chapter show, firm conduct often deviates from this understanding of rationality. Firms can engage in exclusionary pricing even when there is no chance of recoupment. This may be because they are following a long-term strategic vision or because they have taken an impulsive decision. Firms may also suffer from behavioural biases and fear the entry of new firms in the market. It may also be because they want to establish a reputation for aggression and are willing to pay a high price to build that reputation. Many different factors could motivate a decision to predate. The complexities of the strategic environments in which firms operate such as the entry of new firms and decisions involving maintaining the competitive position in the market, make the decisions taken in such environments more conducive to behavioural biases. In any event, these case studies show that firms do not always engage in a rational analysis of the costs and benefits of predation as believed by scholars propounding the recoupment requirement. EU law makes room for these considerations by requiring evidence of intent in predatory pricing.

Accordingly, firm behaviour as understood through the lens of behavioural studies suggests that the recoupment requirement constrains the assessment of firm conduct. A more comprehensive understanding of firm behaviour is more likely to be achieved when the motivations behind firm behaviour are clarified. This is possible when the law requires proof of intent. Thus, behavioural studies encourage employing the use of intent in predatory pricing to better understand firm behaviour.

Nevertheless, incorporating such requirements into predatory pricing law also depends on the normative concerns of the law. If the law is narrowly concerned with low prices then the intention behind firm conduct will be of little relevance. Thus, importing behavioural insights into predatory pricing law will depend upon the objectives that the law seeks to achieve.

CHAPTER V

THE BOUNDED RATIONALITY OF FIRMS AND MERGER LAW

1. Introduction

Companies engage in mergers and acquisitions ("M&A")[758] in order to exploit growth opportunities and efficiencies, expand into new markets, diversify, access a different customer base, as a reaction to changes in the environment or as defensive moves to competitors.[759] M&A activity has been steadily increasing globally over time both in terms of volume and size. In some industries, one merger can trigger a wave of other mergers between competitors resulting in increased concentration in an industry. One example is the US airline industry where a spurt of mergers has reportedly reduced the number of major airlines in the US by half.[760] The increase in concentration in the US airline industry has reduced consumer choice and arguably may have detrimentally impacted consumer welfare.[761] M&A could thus potentially have a significant anticompetitive impact on a market.[762]

[758]In this chapter the terms: mergers, acquisitions, mergers and acquisitions and M&A are used interchangeably.

[759] *See* Gunther Tichy, *What do we Know about the Success and Failure of Mergers*, 1(4) J. INDUSTRY, COMPETITION & TRADE 347, 368 (Dec., 2001).

[760]*See Airlines in America: No Choice*, THE ECONOMIST (July 14, 2015), http://www.economist.com/blogs/gulliver/2015/07/airlines-america

[761]*See id.*

[762]*See* Tichy, *supra* note 759, at 379-381 (arguing that there is mixed evidence of mergers increasing concentration but also finding that increased concentration is likely to reduce consumer welfare and accordingly advocating for a more careful scrutiny of mergers in competition law).

Further, there is substantial evidence that mergers often fail to achieve their objectives.[763] Various studies have reported a high rate of M&A failure with one study placing the failure rate at 50% or more of all M&A transactions.[764] An empirical study also reveals that only one quarter of mergers lead to improvements in consumer welfare.[765] In approximately two-thirds of all acquisitions, the acquiring firm's stock price falls immediately after the acquisition is announced.[766] This indicates that shareholders are skeptical about the likelihood that the acquirer will be able to achieve the required efficiencies to justify the transaction.[767] It is not difficult to find examples of unsuccessful mergers in the history of business.[768] Popular examples include AOL and Time Warner, Daimler-Benz and Chrysler, Kmart and Sears, eBay and Skype.[769] Nevertheless, it is interesting that mergers are still very popular among businesses and the volume of mergers and acquisitions is actually increasing with time.[770]

This chapter examines what motivates M&A activity despite the high chances of failure. For instance, one study finds that gaining

[763] *See* Yaako Weber, Shloma Tarba & Christina Öberg, *The M&A Paradox: Factors of Success and Failure in Mergers and Acquisitions*, *in* A COMPREHENSIVE GUIDE TO MERGERS & ACQUISITIONS: MANAGING THE CRITICAL SUCCESS FACTORS ACROSS EVERY STAGE OF THE M&A PROCESS (Yaako Weber, Shloma Tarba & Christina Öberg eds., Financial Times Press, 2013), http://www.ftpress.com/articles/article.aspx?p=2164982; *see also* Clayton M. Christensen, Richard Alton, Curtis Rising & Andrew Waldeck, *The Big Idea: The New M&A Playbook*, HARVARD BUSINESS REVIEW (Mar. 2011), https://hbr.org/2011/03/the-big-idea-the-new-ma-playbook/ar/1 (stating that "Yet study after study puts the failure rate of mergers and acquisitions somewhere between 70% and 90%").
[764] *See* Weber et al., *id.*; Tichy, *supra* note 759, at 385.
[765] Tichy, *supra* note 759, at 385.
[766] *See* HITT et al., *supra* note 139, at 183.
[767] *See* HITT et al., *id.* at 183.
[768] "Mergers are more likely to fail than marriages." *See Nine Mergers that Epically Failed*, THE HUFFINGTON POST (Feb. 23, 2013), http://www.huffingtonpost.com/2013/02/23/worst-mergers-of-all-time_n_2720121.html
[769] *See id.*
[770] *See* Weber et al., *supra* note 763.

market dominance is a prominent factor motivating mergers that should be of concern to competition law.[771] Another factor behind merger decisions is the interest of managers.[772] Managerial ambitions can cause biases in decisions to merge and in estimating the potential efficiencies of mergers. As the CEO of Daimler stated about its failed acquisition of Chrysler, "Obviously we overestimated the potential for synergies."[773] Even one of the analysts who had initially praised the merger of Daimler-Benz and Chrysler for its potential efficiencies later noted that, "what once seemed like a perfect fit now just seems like a mistaken vision."[774] In addition, cultural differences between companies can also play an important role in the failure of the Daimler-Chrysler merger.[775]

At the same time, competition agencies conduct merger review on the basis that firms are rational, profit-maximizers. Based on evolving economic thought, even mergers in highly concentrated markets are no longer challenged unless anticompetitive effects can be proven and barriers to entry are high enough to impede the exercise of market power by the post-merger firm.[776] This effects based approach requires predictions about how a proposed merger will effect competition in the market. These predictions are inherently difficult to make and subject to considerable uncertainty because of the complex nature of markets.[777] Agencies predict the effects of a merger by employing

[771] *See* Tichy, *supra* note 759, at 384
[772] *See* Tichy, *id.* at 368
[773] *Divorce Puts Paid to Car-making Dream*, FINANCIAL TIMES (May 14, 2007), http://www.ft.com/intl/cms/s/0/86510ab2-0254-11dc-ac32-000b5df10621.html#axzz3bYwA90zp.
[774] *Id.*
[775] *See id.*
[776] *See* Reeves & Stucke, *supra* note 37, at 1553.
[777] *See* Jonathan B. Baker & Carl Shapiro, *Reinvigorating Horizontal Merger Enforcement*, *in* HOW THE CHICAGO SCHOOL OVERSHOT THE MARK: THE EFFECT OF CONSERVATIVE ECONOMIC ANALYSIS ON U.S. ANTITRUST 235, 257 (Robert Pitofsky ed., Oxford University Press, 2009).

sophisticated economic techniques that simulate mergers. These tools now play a vital role in determining the harm from a merger.[778] However, the methodology used in these simulations has been criticised for being too restrictive and in some cases inaccurate due to data limitations.[779] Further, the predictions of simulation models are highly dependent on the assumptions on which the models are based.[780] The assumptions of simulation models may not be in accordance with actual consumer and firm behaviour in markets.[781] Since these models are simplified versions of the complex reality of real world markets, they don't replicate the situation of an actual merger and the predictions derived from them may be equally affected.[782]

This approach to merger analysis has been criticised by behavioural economists. For instance, with respect to entry, it is argued that neoclassical economic models, can underestimate the likelihood of entry, or in some cases magnify the pro-competitive effects of entry in overcoming the exercise of market power.[783] Other behavioural antitrust scholars have critically examined the existence of merger efficiencies in merger assessments.[784]

One of the insights of behavioural studies is that firm behaviour is heterogeneous. The concept of firm heterogeneity is particularly relevant to merger analysis and competition authorities recognise this by reviewing each merger within its own particular factual context. One way to study the behaviour of

[778] *See* Werden et al., *supra* note 43, at 126.
[779] *See* Avishalom Tor, *Boundedly Rational Consumers: Three Challenges for Competition Law*, 17 (The 55th Annual Meeting of the Italian Economic Association, Trento, Italy, 2014), http://www.siecon.org/online/wp-content/uploads/2014/10/Tor-140.pdf (last visited: Aug. 28, 2015) (hereinafter Tor IV).
[780] *See* Louis Kaplow & Carl Shapiro, *Antitrust*, *in* HANDBOOK OF LAW AND ECONOMICS 1073, 1139 (Mitchell A. Polinsky & Steven Shavell eds., vol. 2, Elsevier, 2007).
[781] *See* Tor I, *supra* note 24, at 658.
[782] *See* Kaplow & Shapiro, *supra* note 780, at 1139.
[783] *See* Tor I, *supra* note 24, at 603-05.
[784] *See* Tor I, *id.* at 602.

firms while respecting the idea of firm heterogeneity is through case studies. Accordingly, this chapter uses case studies to examine specific mergers in detail. The purpose of the case studies is to use firms' bounded rationality to better understand the motivations behind these mergers and to critique agencies' determinations of the competitive effects of mergers or to suggest the possible effect of the merger on competition. As the four merger case studies conducted in this chapter show, decisions to merge can be motivated by many factors such as managerial biases and by fear of competitors that can show that the intention behind a merger was to gain market power or to eliminate a significant rival with an ultimately harmful effect on competition. Literature from business studies can help in understanding the role played by the merging parties in the market; to what extent firms exert a competitive influence on each other; and how the merger may affect market dynamics. The European Commission (the Commission) is increasingly applying some of these insights from business studies to merger analysis, for instance in using the similarity of the business models of the merging firms to determining the closeness of competition between the merging parties.[785] In this way behavioural and management insights can help to bring merger analysis closer to reality but without necessitating stricter or more intrusive merger enforcement.

The rest of this chapter is divided as follows. Section 2 describes merger law in the US and EU and highlights the specific aspects of merger law where behavioural and business studies can make a contribution. Section 3 uses the perspectives from behavioural and business studies to understand what motivates decisions to merge and how it may be possible for this literature to contribute to merger review. The rest of this chapter consists of four case

[785] *See* Paul McGeown & Aude Barthélemy, *Recent Developments in EU Merger Control 2014*, 6(6) J. EUROPEAN COMPETITION L. & PRACTICE 440, 448 (June, 2015) (the Commission feels that parties with different business models are less likely to constrain each other even if they sell the same product).

studies that demonstrate the potential application of behavioural insights to actual merger cases. These cases broadly compare the US and EU approach to merger analysis. In particular, the cases studies in sections 6 and 7 provide a comparison between the EU and US approaches to mergers in innovation markets. Section 4 is a case study of the US Supreme Court's decision in *US v. Falstaff Brewing Corp*. Section 5 studies Vodafone's takeover of Mannesmann and the corresponding decision of the European Commission allowing the acquisition with commitments. Section 6 is a case study of the European Commission's decision allowing Facebook's acquisition of Whatsapp. Section 7 is a brief study of the US FTC's decision allowing Genzyme's acquisition of Novazyme. Section 8 concludes the discussion.

2. The Law of Merger Review

Merger review follows a similar path in the EU and US. Prior to undertaking a merger or acquisition that is above a certain threshold amount, firms are required to notify the merger to the relevant competition agencies in each jurisdiction.[786] Following the notification, competition law agencies carry out a preliminary review of the transaction to determine if a more detailed investigation of the transaction is required. A majority of mergers are allowed to proceed based on a preliminary review.[787] In a minority of cases however, competition agencies may carry out a more detailed investigation involving the gathering of more information in order to determine the competitive effects of the transaction. Subsequently, agencies may take one of the following decisions: (i) the transaction could be allowed to proceed; (ii) the enforcement agencies may enter into a

[786] *See* DANIEL GORE, STEPHEN LEWIS, ANDREA LOFARO & FRANCES DETHMERS, THE ECONOMIC ASSESSMENT OF MERGERS UNDER EUROPEAN COMPETITION LAW, 8-9 (Cambridge University Press, 2013).
[787] *See* GORE et al., *id*. at 8-9.

settlement with the companies; (iii) they may block the transaction from proceeding; or (iv) they may require that the transaction only be allowed to proceed subject to the fulfillment of certain conditions.[788]

Competition agencies in the EU and US conduct merger review based on detailed merger guidelines. These guidelines are not mandatory but are meant to make merger enforcement more consistent and predictable. Competition agencies generally use two theories of harm to assess the competitive effects of horizontal mergers and acquisitions: coordinated interaction and unilateral effects.[789] The theory behind harm from coordinated interaction is that an increase in the concentration of firms in the post-merger market will facilitate collusion.[790] Competition agencies determine the likelihood of coordinated interaction in a post-merger market based on market structure and the concentration of firms in the relevant market. Market tests such as the Herfindahl Hirschman Index (HHI) are used to measure market concentration. If competition agencies find that market concentration will increase significantly post-merger, they will then study market characteristics such as entry barriers and transparency of pricing practices to determine if there are any redeeming reasons for why these markets may not be vulnerable to collusion. For instance, if entry barriers are low, it may not be possible for colluding firms to raise prices post-merger.

The theory behind harm from unilateral effects is that the merged firm would gain enough market power post-merger to be able to single-handedly increase prices or reduce output or decrease quality.[791] Agencies test the possibility of unilateral effects

[788] In the EU, conditions are referred to as 'commitments'. *Id.* at 9.
[789] *See* Daniel A. Crane, *Rethinking Merger Efficiencies*, 110 MICH. L. REV. 347, 353 (2011-12).
[790] *See* Crane, *id.* at 353.
[791] *See* Crane, *id.* at 354.

analysis by determining for instance, if it is possible for other firms to counteract the exercise of power by the merged firm.[792]

2.1 Horizontal Merger Control in the US

In the 1970s, US merger policy was aimed at maintaining low levels of market concentration.[793] At that time the government successfully challenged many mergers.[794] However, influenced by economists such as Bork, who argued that only mergers to monopoly or those that created a dominant position in the market would reduce consumer welfare, merger policy in the US has gradually become much more permissive.[795] Accordingly, in conformity with the consumer welfare standard, only mergers that are considered to increase prices for consumers are seriously reviewed by US antitrust agencies.[796] Bork also believed that mergers create efficiencies such as by the transfer of assets to more capable management.[797] Bork was of the view that most horizontal mergers do not harm consumers because they allow successful firms to expand by better utilizing the assets of rivals.[798] The idea that horizontal mergers in oligopolistic markets are unlikely to create harm and are efficiency enhancing has been the basis of the US merger policy.[799]

The Hart-Scott-Rodino Antitrust Improvements Act, 1976, requires companies carrying out mergers or acquisitions above certain monetary thresholds to notify the transaction to the

[792] *See* Crane, *id.* at 354.
[793] Orley Ashenfelter, Daniel Hosken & Matthew Weinberg, *Did Robert Bork Understate the Competitive Impact of Mergers? Evidence from Consummated Mergers*, 57 J. L & ECON. S67 (Aug. 2014).
[794] *See* Ashenfelter et al., *id.* at S68.
[795] *See* Ashenfelter et al., *id.* at S72.
[796] *See* Ashenfelter et al., *id.* at S74.
[797] *See* Ashenfelter et al., *id.* at S72.
[798] *See* Ashenfelter et al., *id.* at S95.
[799] *See* Ashenfelter et al., *id.* at S75.

Federal Trade Commission (FTC) and the Department of Justice (DoJ).[800] The FTC and the DoJ are the competition law agencies responsible for reviewing mergers in the US. Prior to the introduction of the Hart-Scott-Rodino Act, firms were not obliged to inform antitrust authorities of their intent to merge.[801] Consequently, antitrust authorities would often start reviewing mergers after the merger was completed. This created many problems in constructing remedies for the merged entity if a merger was successfully challenged.[802] The introduction of the Hart-Scott-Rodino Act helped to standardise the merger review process in the US with the help of the methodological guidance provided by the merger guidelines.[803]

Section 7 of the Clayton Act, 1914 provides the substantive basis for merger review in the US. This section prohibits mergers or acquisitions whose effect "may be substantially to lessen competition, or to tend to create a monopoly."[804] In addition, Section 5 of the Federal Trade Commission Act, 1914 prohibits "[un]fair methods of competition…and unfair or deceptive acts or practices."[805] The FTC and the DoJ can thus block mergers whose effect may be to substantially lessen competition.

The statutory provisions governing merger review set out the broad goals of merger analysis. The factors that agencies more particularly consider in reviewing horizontal mergers are set out in the DoJ and FTC's Horizontal Merger Guidelines, 2010 (the "US Merger Guidelines").[806] The Guidelines state that in

[800] *See* Crane, *supra* note 789, at 353.
[801] *See* Ashenfelter et al., *supra* note 793, at S75.
[802] *See* Ashenfelter et al., *id.* at S75.
[803] *See* Ashenfelter et al., *id.* at S76.
[804] 15 U.S.C. § 18 (1914).
[805] 15 U.S.C. § 45 (1914).
[806] "The Guidelines describe the principal analytical techniques and the main types of evidence on which the agencies usually rely to predict whether a horizontal merger will substantially lessen competition" *see* U.S. Dep't of Justice & Fed. Trade Comm'n,

evaluating how a merger is likely to change a firm's behaviour, the focus is "primarily on how the merger affects conduct that would be most profitable for the firm".[807] In other words, the FTC and DoJ conduct merger review on the basis that firms are profit-maximizers. The Merger Guidelines recognise that since reviewing mergers is a predictive exercise, it is unlikely that agencies will be certain about anticompetitive effects. Certainty is not required to find a merger unlawful. Further, the Guidelines clarify that merger review does not involve the uniform application of a single methodology; it is described as a fact-specific process.

The agencies evaluate mergers based on their impact on prices, but they also consider whether a merger is likely to affect product quality and innovation.[808] The Merger Guidelines recognise that mergers can have non-price effects in terms of reduced product quality, variety, service or diminished innovation. The Merger Guidelines discuss the importance of competition to innovation – a merger may reduce the pace of innovation by reducing innovation efforts below the level that would have prevailed in the absence of the merger. This could either reduce incentives to continue innovations of existing products or reduce incentives to initiate new product development.[809] The Guidelines also state that the agencies will consider whether a merger combines two of a small number of firms with the capabilities to innovate in a particular direction. Further, the extent to which successful innovation by one of the merging firms is likely to adversely affect the other firm is also considered relevant. The goals of

Horizontal Merger Guidelines (2010) [hereinafter US Merger Guidelines], *available at* http://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf.
[807] §1, US Merger Guidelines, *id*.
[808] *See* US Dep't of Justice & Fed. Trade Comm'n, Commentary on the Horizontal Merger Guidelines (Mar., 2006), *available at* http://www.justice.gov/atr/public/guidelines/215247.htm#5.
[809] *See* § 6.4, US Merger Guidelines, *supra* note 806.

merger review are discussed further in subsequent sections of this chapter.

2.2 Horizontal Merger Control in the EU

The European Community Merger Regulation (ECMR) provides the primary substantive basis for regulating the anticompetitive effects of mergers and acquisitions in the EU.[810] The Regulation governs mergers that significantly impede effective competition (SIEC), in particular through the creation or strengthening of a dominant position.[811] Previously, the test was whether a merger would create or strengthen dominance as a result of which there was likely to be a significant impediment to effective competition.[812] The approach to merger review has thus, changed from whether a merger meets a threshold of dominance to whether a merger impedes competition.[813] The new test for merger review is accordingly broader than the previous test based on dominance. This is in line with the change in US merger law from the structural approach to the effects based approach under the 'substantial lessening of competition' test.[814] Further, the substantive basis of merger review in the EU is also clarified in Article 2(1)(a) of the ECMR, that merger review should take into account, "the need to maintain and develop effective competition" by considering factors such as actual or potential

[810]Council Regulation (EC) No. 139/2004 of 20 January 2004 on the Control of Concentrations between Undertakings, OJ L24/1 (Jan. 29, 2004) [Hereinafter, EC Merger Regulation].
[811]§ 15, EC Merger Regulation, *id*.
[812]*See* Lars-Hendrik Röller & Miguel de la Mano, *The Impact of the New Substantive Test in European Merger Control*, 2(1) EUROPEAN COMPETITION JOURNAL 9, 10-11 (Apr., 2006).
[813]*See* John Vickers, *Merger Policy in Europe: Retrospect and Prospect*, 25(7) EUROPEAN COMPETITION L. REV. 455, 460 (July, 2004) [hereinafter Vickers I]; John Vickers, *Abuse of Market Power*, 115 ECON. J. F244 (June, 2005) [hereinafter Vickers II].
[814]*See* Vickers II, *id.* at F245.

competition. This suggests that the EU also gives importance to potential competition.

Mergers are reviewed in the EU by the Commissioner of Competition and the Director General for Competition (DG Comp), although certain decisions are taken by the full College of Commissioners.[815] Similar to the US, in the EU the Commission is guided by the EC Horizontal Merger Guidelines, 2004 (the "EC Merger Guidelines").[816] Similar to the spirit of the US Merger Guidelines, the elements of merger review set out in the EC Horizontal Merger Guidelines are not "a 'checklist' to be mechanically applied in each and every case."[817] Thus, the Commission does not need to strictly adhere to the EC Merger Guidelines and may consider other factors in conducting merger review.

Despite the flexibility in the wording of the EC Merger Guidelines, practically the Commission conducts merger review through a fairly standardised process. First, market shares are considered, then closeness of competition and market structure. Cases with high market shares are approved if the increase in market share from the merger is not significant.[818] Mergers of companies with high market shares are also cleared when market shares are found to be declining over the years or there are other viable competitors.[819] Mergers leading to high market sharesare also approved by the EC where there is countervailing buyer

[815] *See* WHISH & BAILEY, *supra* note 499, at 830.
[816] Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings, Council Regulation (EC) No. 139/2004, 2004/C 31/03 (Feb., 2004), *available at* http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/ [hereinafter EC Merger Guidelines].
[817] § 13, EC Merger Guidelines, *id*.
[818] *See* Paul McGeown & Barthélemy, *supra* note 785, at 445.
[819] *See* McGeown & Barthélemy, *id.* at 445.

power to undermine the exercise of market power by the merged entity.[820]

The following discussion sets out some aspects of the merger guidelines in the US and EU that are of interest from a behavioural perspective or which may provide an opening for behavioural analysis to be brought into merger review.

2.3 Merger Review and the Goals of Competition Law

The goals sought to be achieved by merger review are important because for instance, if competition law is only concerned with consumer welfare it will only be concerned with efficiencies that result in lower prices for consumers whereas if maximizing total welfare is the goal, mergers that create efficiencies will be allowed even if these cost savings are not passed-on to consumers.

US antitrust statutes do not provide clear guidance on the objectives of merger review.[821] The ambiguity is in the wording of section 7 of the Clayton Act, which states that mergers that substantially lessen competition or tend to create a monopoly are prohibited. This has been interpreted quite differently over time so that different objectives have been attributed to merger review. Previously, merger reviews were concerned with preventing market concentration. In *United States v. Aluminium Corp.* the US Supreme Court held that, "It is the basic premise [of section 7, Clayton Act] that competition will be most vital 'when there are many sellers, none of which has any significant market share'."[822] The Supreme Court again took a similar view in the case of *Brown Shoe Co.* where the court used section 7, Clayton

[820] *See* McGeown & Barthélemy, *id.* at 446.
[821] *See* Kaplow & Shapiro, *supra* note 780, at 1166.
[822] *United States v. Aluminum Co. of America*, 377 U.S. 271, 280 (1964).

Act to fulfill the objectives of maintaining rivalry in the market and protecting the competitive process.[823]

Subsequently, as the Chicago view gained prominence, the importance of structural factors in merger enforcement declined and now section 7 of the Clayton Act is interpreted as supporting an 'effects based' approach.[824] The impact of this change in position means that even mergers to monopoly can be approved if they increase consumer welfare.[825] However, the problem with the effects based approach is that it is not easy to predict what will be the impact of a merger on consumer welfare. Kaplow and Shapiro argue that there is no clear empirical evidence of the effect of mergers on prices or on consumers, merging parties or rivals.[826] Further, there is a significant amount of literature suggesting that US merger review is not achieving its objectives. Some empirical studies find that US merger policy has not increased consumer welfare.[827] In another study, Mueller and Yartoglu find that for every merger that increases social welfare there are two mergers that reduce social welfare. Increasing social welfare is defined as increasing efficiency and/or increasing profits or sales.[828] They conclude that given the ambiguous welfare implications from mergers competition law should be based on a presumption against allowing mergers.

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[823] *See* Kaplow & Shapiro, *supra* note 780, at 1165.
[824] *See* Baker & Shapiro, *supra* note 777, at 238.
[825] *See* Kaplow & Shapiro, *supra* note 780, at 1167.
[826] *See* Kaplow & Shapiro, *id.* at 1153 (this is because in many cases requisite data is not available and even if it is available, it is difficult to show that price changes were caused by the merger rather than for other reasons such as changes in industry conditions).
[827] *See* Ashenfelter et al., *supra* note 793, at S67; Robert W. Crandall & Clifford Winston, *Does Antitrust Policy Improve Consumer Welfare? Assessing the Evidence*, 17(4) J. ECON. PERSPECTIVES 3 (2003).
[828] *See* Dennis C. Mueller & B. Burcin Yartoglu, *Efficiency vs. Market Power through Mergers*, in THE INTERNATIONAL HANDBOOK OF COMPETITION 57, 81 (Manfred Neumann & Jürgen Weigand eds., 2d ed., Edward Elgar Publishing Limited, 2013)

Merger simulations have become central to the effects based approach to merger review. Simulation models have come under criticism because they require strong assumptions on the nature of competition, shape of demand and marginal cost functions, and statistical assumptions for consistently estimating demand, which can make these models unrealistic.[829] In fact, some studies have found that these simulations do not accurately predict actual post-merger prices.[830] For instance, Weinberg found that the simulations in Proctor & Gamble's acquisition of Tambrands substantially under-predicted the price effects of the acquisition.[831] In addition, behavioural scholars argue that the bounded rationality of consumers can impact demand estimation in merger simulations.[832] Boundedly rational consumers can over or under react to post-merger price changes.[833] While merger simulations rely on actual consumer choices and therefore, may already account for consumer biases, this depends on the availability of sufficient data about consumer choices and so, as Tor argues, the bounded rationality of consumers suggests caution in relying on the predictions of merger simulations.[834] In addition, merger simulations do not incorporate factors such as consumer's preferences for fairness, which can impact estimation of price elasticity of demand. To illustrate, consumers with a preference for fairness can discipline the exercise of market

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[829]*See* Mathew C. Weinberg, *More Evidence on the Performance of Merger Simulations*, 101(3) AM. ECON. REV.: PAPERS & PROCEEDINGS 51, 51 (2011), https://www.aeaweb.org/articles.php?doi=10.1257/aer.101.3.51.
[830]*See* Weinberg, *id.* at 51; Craig Peters, *Evaluating the Performance of Merger Simulation: Evidence from the US Airline Industry*, 49(2) J. L. & ECON. 627 (Oct. 2006).
[831]*See* Weinberg, *id.* at 51.
[832]*See* Tor IV, *supra* note 779, at 16-17.
[833]*See* Tor IV, *id.* at 17.
[834]*See* Tor IV, *id.* at 17 (citing various sources including Alison Oldale, Behavioral Economics and Merger Analysis, 6 COMPETITION POL'Y INT'L 139 (Spring 2010), Oliver Budzinski & Isabel Ruhmer, *Merger Simulation in Competition Policy: A Survey*, 6 J. COMPETITION L. & ECON. 277 (2009); Elizabeth M. Bailey, *Behavioral Economics: Implications for Antitrust Practitioners*, ANTITRUST SOURCE (June 2010) [Hereinafter Bailey I]).

power by the post-merger firm, by refusing to buy the product or service of the post-merger firm if they consider that it is unfair for the firm to exercise such market power, even if purely self-interested consumers would buy that product.[835] Conversely, consumers may be willing to pay high amounts for a product if they believe that it is fair for the combined company to raise prices. Other studies suggest other reasons for problems in the predictions made from merger simulations, such as the differences between actual and assumed models of firm conduct.[836] Firm conduct may thus need to be better understood to be able to better predict the effects of mergers. Finally, simulation models also fall short by not taking into account objectives other than profit maximization in firms' pursuit of M&A.[837]

Simulation models do not consider important non-price effects of mergers such as product quality, customer service and innovation.[838] An important objective of merger review is to encourage innovation. Mergers can have different effects on innovation.[839] On one hand, mergers can improve innovation by saving costs or through combining assets between firms more efficiently. On the other hand, mergers can increase firm size and market concentration and reduce incentives to innovate. If more competition can exert pressure on firms to continue to improve and innovate, considerations of dynamic efficiency in merger review may favour the view taken by the US Supreme Court in *Brown Shoe* that preserving competition in the market is valuable.

[835] *See* Bailey, *supra* note 10, at 360.
[836] *See* Peters, *supra* note 830, at 647.
[837] *See* Bailey I, *supra* note 834, at 8.
[838] *See* Kaplow & Shapiro, *supra* note 780, at 1153.
[839] *See* Andreas Heinemann, *The Impact of Innovation: Comments on Uwe Cantner & Wolfgang Kerber*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 202, 203 (Josef Drexl, Wolfgang Kerber & Rupprecht Podszun eds., Edward Elgar Publishing, 2011).

The US Merger Guidelines recognise the importance of innovation to merger analysis. Mergers that diminish incentives to innovate and reduce consumer choice or quality may be prohibited under US law. The EC Merger Guidelines also state that the objective of merger review is to prevent mergers that would lead to increased prices, reduced output, choice or quality, diminished innovation or otherwise 'influence parameters of competition'.[840] However, while agencies have developed sophisticated techniques to examine the effect of a merger on prices, it is much more complicated for economic models to predict the impact on innovation. Antitrust agencies in the US have used the 'innovation market analysis' to assess the impact of a merger on 'innovation markets'.[841] However, innovation market analysis has not received universal approval and is now used rather infrequently in US merger analysis.

Nevertheless, it is important for agencies to recognise and examine the impact of a merger on innovation. Innovations are a key source of competitive advantage and growth in dynamic markets. In these markets competitive advantages are not sustainable over long periods and time is of the essence for achieving a competitive advantage.[842] The pace of competition in dynamic markets has been described as 'frenzied', prices fall very quickly and companies need to make profits rapidly from their innovations.[843] Competitive dynamics in fast-cycle markets

[840] *See* § 8, EC Merger Guidelines, *supra* note 816. In addition, Article 2(1)(b) of the ECMR states that the Commission should consider, "the development of technical and economic progress provided that it is to the consumers' advantage and does not form an obstacle to competition."

[841] *See* Elena Cefis, Mark Grondsma, Anna Sabidussi & Hans Schenk, *The Role of Innovation in Merger Policy: Europe's Efficiency Defence versus America's Innovation Market Approach* (Tjalling C. Koopmans Research Institute Discussion Paper Series No. 07-21, Utrecht University, 2007).

[842] *See* HITT et al., *supra* note 139, at 144-145.

[843] *See* HITT et al., *id.* at 145.

often result in rapid product upgrades and innovations.[844] Consequently, managers are under pressure to make strategic decisions swiftly and effectively. While in markets where technological change is not constant and rapid, managers focus on protecting, maintaining and extending competitive advantages, in dynamic, innovation-driven markets, managers need to continuously and rapidly develop new and superior sources of competitive advantage.[845] Thus, in dynamic markets firms often use acquisitions as a tool to gain access to new products or technologies and as a way of keeping-up with market trends and consumer preferences. Some of these acquisitions may come at the expense of innovation because firms replace internal innovation efforts with innovation already carried out by another firm.

The discussion above suggests that while merger law uses an effects-based approach, it is difficult to predict welfare effects of mergers and the result is that merger review does not always fulfill its objectives. Using behavioural insights to understand the motives behind mergers can help to assess the impact of a merger on innovation and the likelihood of achieving efficiencies. Further, it can also help in determining to what extent the merged firms exerted a competitive influence on one another.

2.4 Evidence Collected by Competition Agencies

The outcome of a merger investigation can depend on the type of evidence that is collected by competition agencies and how agencies evaluate this evidence.[846] In fact the US Merger Guidelines outline the kinds of evidence collected in merger investigations. Agencies in the US and EU use similar types of evidence in merger assessments. Competition agencies collect

[844] *See* HITT et al., *id*. at 145.
[845] *See* HITT et al., *id*. at 145.
[846] *See* Tor I, *supra* note 24, at 654.

evidence from merging parties as well as from other industry participants and consumers in order to determine the likely competitive effects of a merger. Documents collected from the merging parties such as strategic plans and customer lists reflect actual business conduct and decisions. The US Merger Guidelines state that these documents can be informative in understanding the operation of the market, industry conditions and competitive dynamics. These documents also help agencies to understand the business rationale for the transaction.[847] Customer and competitor surveys are also an important aspect of the evidence collected by agencies and the views of customers can be particularly important to the investigation. For instance, customer surveys were used in the EU to inform the competitive effects of the merger in the Siemens/VA Tech, Lufthansa/SN Airholding and Ryanair/Aer Lingus mergers.[848]

Further, the agencies consider the financial terms of the M&A as evidence of the anticompetitive intent behind the transaction. For instance, when a firm is acquired at a premium, agencies note that it could either be an indication of efficiencies or of anticompetitive intentions.[849] In fact agencies do look at documents reflecting the intentions and incentives of the parties as evidence when assessing the effects of mergers.[850] Insights from strategic management can be helpful in interpreting this evidence and to better understand the likely effects of a merger.

The process of collecting and interpreting evidence in mergers is based on the assumption that firms are rational, profit-maximizers. As Tor has argued, this process can be better

[847] Laura Wilkinson, *Guidance on Applying the 2010 Horizontal Merger Guidelines*, INSIDE COUNSEL (Apr. 24, 2014), http://www.insidecounsel.com/2014/04/24/guidance-on-applying-the-2010-horizontal-merger-gu?slreturn=1450296240.
[848] *See* GORE et al., *supra* note 786, at 182.
[849] *See* § 2, US Merger Guidelines, *supra* note 806.
[850] *See* Reeves & Stucke, *supra* note 37, at 1578.

informed with the help of insights from behavioural sciences.[851] Reeves & Stucke are of the view that behavioural theory can be used to explain evidence collected in close cases where neoclassical theory predicts that mergers are pro-competitive or competitively neutral but where evidence of how firms behave is not consistent with theory.[852] Agencies' consideration of practical aspects of firms' conduct makes rooms for introducing behavioural insights to explain past and present firm behaviour.

2.5 The Role of 'Maverick Firms'

Competition agencies describe a 'maverick firm' as one that plays a disruptive role in the market to the benefit of consumers. A maverick firm could threaten to disrupt market conditions with new technology or a different business model. The EC Merger Guidelines state that maverick firms may refuse to cooperate with industry norms, or may play a role in disciplining prices by rapidly expanding production and refusing to follow a concerted practice.[853] Maverick firms may have characteristics that give them an incentive to favour different strategic choices from their competitors.[854]

Both the US and EC Merger Guidelines state that the acquisition of such a firm may threaten competition and reduce consumer welfare. According to the EC Merger Guidelines, mergers that remove a 'maverick' firm create competitive concerns even when they do not increase market concentration significantly because they make coordination between the remaining firms easier.[855] A firm that behaves aggressively in the market may also be called a maverick. An interesting feature of the Commission's recent

[851] *See* Tor I, *supra* note 24, at 654.
[852] *See* Reeves & Stucke, *supra* note 37, at 1581.
[853] § 2, US Merger Guidelines, *supra* note 806.
[854] § 20, EC Merger Guidelines, *supra* note 816.
[855] § 42, EC Merger Guidelines, *id.*

jurisprudence has been its increasing use of the idea of a firm as an "aggressive competitor" to assess the degree of competition that is likely to prevail or be removed by the merger.[856]

Insights from behavioural and business studies may be applied to better understand maverick firms and the role played by them in the market. Often firms that act as mavericks consciously adopt strategies to keep prices low. Business strategy suggests that rather than different cost structures dictating a firm's behaviour as a 'maverick', strategic positions consciously adopted by firms to achieve competitive advantage can be the reason for a firm behaving like a 'maverick'. This can provide a different perspective to the role of firms characterised as 'mavericks' in a market. Further, insights from business studies can help in characterizing a firm as "aggressive".

2.6 Mergers with Potential Competitors

Mergers may be challenged in the US and EU on a theory that it eliminates a 'potential competitor' from the market. A potential competitor is one who is intending to enter the market in the future or is on the 'fringes' of the market and exerting a competitive influence on firms in the relevant market merely by its presence on the fringes of the market. In such cases, the EC Merger Guidelines require that the potential competitor should exert a "significant constraining influence" or there should be a "significant likelihood" of the entities succeeding in exerting a competitive influence. The EC Merger Guidelines state that, "evidence that a potential competitor has plans to enter a market in a significant way could help the Commission to reach such a conclusion."[857] Competition agencies accordingly consider a firm's actual behaviour and internal documentation to determine

[856] *See* McGeown & Barthélemy, *supra* note 785, at 449.
[857] § 60, EC Merger Guidelines, *supra* note 816.

if it is a potential competitor. In addition, the US Supreme Court has recognised that potential entrants can exert a pro-competitive influence on competitors and acquisitions that eliminate them can have a negative effect on the market.[858] Behavioural insights could be used to determine whether a firm is positioned as a potential competitor. This will be discussed in greater detail later on in this chapter.

2.7 Firm's Incentives

At various places the US Merger Guidelines refer to the incentives of merging firms to behave anti-competitively. For instance, in discussing the implementation of the Hypothetical Monopolist Test, the US Merger Guidelines express concern only when the merged firm has the incentives to raise prices. Further, the EC Merger Guidelines state that smaller competitors may counteract the anti-competitive effects of mergers of firms with high market shares, if they have the ability and incentive to increase output in the market.[859] Competition agencies consider profit maximization as the best guide to assessing firms' incentives and the best predictor of the competitive effects of mergers.[860]

The US Merger Guidelines use documents of the merging firms or data used by them to take business decisions to determine their incentives.[861] Yet empirical evidence suggests that firms do not always respond to economic incentives in the manner predicted by traditional economic models. Findings from behavioural and business studies indicate that firms should not be assumed to always strictly respond to economic incentives in the manner

[858] *See FTC v. Proctor & Gamble Co.,* 386 U.S. 568 (1967); *United States v. Falstaff Brewing Corp*., 410 U.S. 526 (1973).
[859] § 17, EC Merger Guidelines, *supra* note 816.
[860] Farrell & Shapiro Interview, *supra* note 16.
[861] § 4.1.3, US Merger Guidelines, *supra* note 806.

envisaged by the Guidelines. Accurately predicting firm behaviour may require more observation of actual firm conduct to understand how firms respond to incentives.

2.8 Merger Efficiencies

An important aspect of merger review is balancing efficiencies with anticompetitive effects. Greater efficiencies are said to counterbalance potential anticompetitive effects from mergers. Mergers can generate efficiencies through economies of scale and scope and the sharing and redeployment of resources and capabilities. However, empirical evidence shows that merger parties' claims of efficiencies are not always realised.[862] One reason is that problems in the process of integrating two companies following a merger or acquisition can make the realisation of potential efficiencies difficult. Mergers create larger firms and managing larger firms is more complex and can make decision-making within a firm more bureaucratic, which could in turn make firms more rigid and less amenable to innovation.[863] The realisation of efficiencies from acquisitions is thus dependant on how managers manage the M&A process.[864]

Further, Farrell and Shapiro find that many of the efficiencies claimed by parties are not merger specific.[865] A problem with determining whether efficiencies are merger-specific is that while parties often claim that the efficiencies can only be realised from the merger, it may actually be possible to achieve these efficiencies through other contractual arrangements without necessitating a merger.[866] It is also difficult for competition

[862] *See* Baker & Shapiro, *supra* note 777, at 256.
[863] *See* HITT et al., *supra* note 139, at 196.
[864] *See* PHILIPPE C. HASPESLAGH & DAVID B. JEMISON, MANAGING ACQUISITIONS: CREATING VALUE THROUGH CORPORATE RENEWAL (The Free Press, 1991).
[865] *See* Joseph & Carl Shapiro, *Scale Economies and Synergies in Horizontal Merger Analysis*, 68 ANTITRUST L. J. 685 (2001).
[866] *See* Kaplow & Shapiro, *supra* note 780, at 1164.

agencies or courts to gauge whether claimed efficiencies would actually materialise.[867] Baker and Shapiro argue that merger parties' claims that efficiencies will enhance ability and incentives to compete, resulting in lower prices, higher quality or new products should only be accepted after careful analysis and not solely based on their plausibility.[868] They suggest that examining efficiencies in mergers should go beyond whether they are verifiable and merger-specific and should examine how efficiencies would lead to lower prices given the way market participants are thought to behave.[869]

The US Merger Guidelines are skeptical of merger efficiencies. Reasons for this include: the fact that the merging parties themselves provide the information used in assessing merger efficiencies; efficiencies claimed by merging parties may not be realised and efficiencies may not be merger specific.[870] The US Merger Guidelines are particularly skeptical of efficiencies generated outside the 'business planning' process. The EC Merger Guidelines are also skeptical of merger efficiencies. The Guidelines state that "it is highly unlikely" that efficiencies can counteract the anticompetitive effects of a merger leading to a position of dominance or market power.[871] Merger specific efficiencies are not only difficult to substantiate but may also fail to materialise.[872]

Kaplow and Shapiro have an interesting theory that although most mergers tend to raise prices slightly, yet mergers are only challenged when anticompetitive effects are demonstrated to be

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[867] *See* Kaplow & Shapiro, *id.* at 1165.
[868] *See* Baker & Shapiro, *supra* note 777, at 256.
[869] *See* Baker & Shapiro, *id.* at 263.
[870] § 10, US Merger Guidelines, *supra* note 806.
[871] § 84, EC Merger Guidelines, *supra* note 816.
[872] Avishalom Tor, *The Market, The Firm and Behavioral Antitrust*, *in* THE OXFORD HANDBOOK OF BEHAVIORAL ECONOMICS AND THE LAW 539 (Eyal Zamir & Doron Teichman eds., Oxford University Press, 2014).

significant, because all mergers typically generate some efficiencies.[873] Accordingly, as Kaplow and Shapiro explain, the cautious approach of agencies and courts to accepting the efficiency defense to otherwise anticompetitive mergers is that in such cases efficiencies have to be not only substantial but also large enough to exceed the threshold level of efficiencies presumed to exist in mergers.[874]

According to Crane, the EU and American competition law systems require disproportionately greater proof of potential efficiencies arising from mergers than they do of potential harms because they recognise and incorporate behavioural insights about efficiencies.[875] In other words, in both the US and EU it is easier to establish harm to competition from mergers than to establish an efficiencies defense. Some of the reasons offered by Crane for competition authorities' skeptical treatment of merger efficiencies include: the general view that mergers are more often due to a desire for empire building than creating shareholder value and that merger decisions are taken by managers who are often subject to overconfidence bias.[876] Thus, merger law may already incorporate behavioural insights because it gives less weight to merger efficiencies than it would have if it had purely adopted a traditional economic approach to efficiencies.

3. Applying Behavioural Insights to Merger Review

Merger review requires an assessment of market structure and anticompetitive effects. There seems to be little room for behavioural insights in such an exercise. Nevertheless, EU merger law gives some hope because it describes market shares and concentration levels as providing "useful first indications" of

[873] *See* Kaplow & Shapiro, *supra* note 780, at 1163.
[874] *See* Kaplow & Shapiro, *id.* at 1163.
[875] *See* Crane, *supra* note 27, at 347.
[876] *See* Crane, *id.* at 350.

market structure and the competitive importance of the merging parties[877] but as not determinative of the outcome of a case.[878] Further, as competition agencies in the US and EU recognise, merger review is an inherently predictive exercise and the outcomes in each case may differ based on the factual context of the case. This makes merger review particularly conducive to incorporating behavioural insights.[879]

An important aspect of merger investigations is examining the conditions in the industry where the merger is taking place.[880] Each industry has its own special context that affects the agencies' prediction of anticompetitive effects from mergers. Literature from industrial organisation argues that industry characteristics such as economies of scale, barriers to entry, diversification, product differentiation and the degree of concentration of firms are the primary indicators of firm strategy and performance.[881] Other factors such as the role of advertising and reputation, network effects, switching costs, technological change and intellectual property rights may also be relevant.[882]

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[877] § 14, EC Merger Guidelines, *supra* note 816.
[878] *See* WHISH & BAILEY, *supra* note 499, at 868.
[879] *See* Reeves & Stucke, *supra* note 37, at 1581.
[880] To illustrate the kinds of questions that competition authorities may ask when examining mergers, the following questions were considered relevant for the proposed merger of US Airways and Delta Airlines: on which routes did the two airlines compete directly? Would competition from rivals prevent the merged entity from profitably increasing prices? Given the variety of fares charged by airlines, would the merger have different effects on different classes of fares such as for business vs. leisure passengers? How do frequent flier programmes affect this analysis? Could the potential efficiencies generated from a merger be possible through other means such as airline alliances that are less intrusive to competition? If merger efficiencies reduce fares on some routes but reduced competition raises fares on other routes, how should these effects be balanced? How will the changing nature of the airline sector such as the growth of regional airlines and low cost carriers affect the way these predictions are made? How strongly would Delta Airlines be able to compete if the merger did not take place, given its impending bankruptcy? *See* Kaplow & Shapiro, *supra* note 780, at 1169.
[881] *See* HITT et al., *supra* note 139, at 13.
[882] *See* Kaplow & Shapiro, *supra* note 780, at 1178.

The emphasis on industry-specific rather than firm-specific factors in merger review is due to the influence of industrial organisation literature on competition law.[883] Nevertheless, empirical evidence and behavioural insights suggest that not only the external environment but also internal firm characteristics play a role in a firm's decisions and performance.[884] The following discussion will illustrate why examining firm-specific factors can help in merger analysis.

3.1 Acquisition Decisions are often Boundedly Rational

Acquisition decisions are complex. Firms need to decide firstly, about whether or not to undertake a merger or acquisition at all, next which of all possible companies is the most appropriate to acquire, how to structure and value the transaction and how much to pay for targets.[885] Managers consider numerous possibilities and process vast amounts of information to make these decisions. To simplify the processing of all the variables and data involved in an acquisition decision, managers may use perceptual processes/heuristics. Thus, acquisition decisions can be subject to managerial biases.[886] Jemison and Sitkin argue that M&A decisions are not outcomes of rational choices but negotiated results of decision-making processes.[887] Formal and informal processes, organisational routines, political interests and managers' former experiences affect decision-making within

[883] *See* HITT et al., *supra* note 139, at 13.
[884] *See* HITT et al., *id.* at 15.
[885] Irene M. Duhaime & Charles R. Schwenk, *Conjectures on Cognitive Simplification in Acquisition and Divestment Decision-Making*, 10(2) ACADEMY MGMT. REV. 287 (Apr., 1985).
[886] *See* Duhaime & Schwenk, *id.* at 288.
[887] *See* David B. Jemison & Sim B. Sitkin, *Corporate Acquisitions: A Process Perspective*, 11(1) ACADEMY MGMT. REV.145 (Jan., 1986).

firms.[888] Accordingly, the outcome and likely success of an acquisition can depend on the process through which the acquisition was conducted.[889]

The behavioral theory of the firm views the firm as a collection of sub-units with different and conflicting goals, resources and time horizons. Firm decision-making is viewed as requiring coalition building, bargaining and conflict resolution.[890] This can create some of the following problems with acquisition decisions: (i) decisions to merge may divide a firm with some teams supporting and some opposing a merger, (ii) once the process of the acquisition starts, the momentum of completing the transaction can be quite strong and groups favouring the transaction can be more forceful in achieving outcomes than those against it even when it may be more prudent in the long-term to abandon the transaction rather than complete it, (iii) negotiators may not pay sufficient attention to deeper issues associated with the acquisition, agreeing to disagree on differences of opinion because both sides want to complete the negotiation, (iv) each party may have different justifications for the acquisition, which may cause problems once the acquisition is complete, and (v) different groups within a firm might have conflicting interests with respect to a merger or acquisition.[891]

3.2 Managerial Biases Can Affect Acquisition Decisions

One of the reasons that mergers do not work out as planned is that the managers who take the decisions to merge are subject to

[888] *See* THOMAS STRAUB, REASONS FOR FREQUENT FAILURE IN MERGERS AND ACQUISITIONS: A COMPREHENSIVE ANALYSIS 50-51 (Ph.D. Dissertation, Deutscher Universitätsverlag, Gabler Edition Wissenschaft, Jul. 2007).
[889] *See* Jemison & Sitkin, *supra* note 125.
[890] *See* Thomas C. Powell, Dan Lovallo & Craig R. Fox, *Behavioral Strategy*, 32 STRATEGIC MGMT. J. 1369, 1375 (2011).
[891] *See* HASPESLAGH & JEMISON, *supra* note 102.

managerial biases such as overconfidence bias and hubris and one of the consequences of this is that managers underestimate problems associated with mergers.[892] Overconfident CEOs are more likely to undertake value-destroying mergers.[893] In addition to overconfidence, CEO dominance also contributes to excessive merger activity as dominance increases the likelihood that a CEO can impose her overconfident views on the company.[894] An empirical examination of mergers measuring the distribution of gains and losses across the acquiring and acquired firms found that there was little empirical evidence to support the hypothesis that mergers are carried out to achieve efficiencies and more empirical evidence to show that mergers are carried out because of managerial discretion and hubris.[895]

Roll is considered to be the first to associate managerial hubris with M&A transactions.[896] Since Roll's seminal article on hubris, a rich literature has evolved including numerous empirical studies on managerial hubris in M&A transactions. This literature finds that even though managers are aware that mergers are risky and on average cause losses to the acquiring firm, they still go ahead with mergers because hubris leads them to believe that they are better than other managers at identifying and operationalising mergers. Managers who suffer from hubris believe that statistics don't apply to them. Firms with strong current performance are more likely to have managers with hubris since hubris is said to arise from power and prestige and may lead managers to

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[892] *See* Baker & Shapiro, *supra* note 777, at 256.
[893] *See* Malmendier & Tate, *supra* note 236, at 20.
[894] *See* Rayna Brown & Neal Sarma, *CEO Overconfidence, CEO Dominance and Corporate Acquisitions*, 59 J. ECON. & BUSINESS 358 (2007).
[895] *See* Dennis C. Mueller & Mark L. Sirower, *The Causes of Mergers: Tests Based on the Gains to Acquiring Firms' Shareholders and the Size of Premia*, 24 MANAGERIAL DECISION ECON. 373 (2003).
[896] *See* Richard Roll, *The Hubris Hypothesis of Corporate Takeovers*, 59(2) J. BUSINESS 197 (Apr., 1986).

undertake riskier and less successful acquisitions.[897] Hubris may also result in managers paying too much for an acquisition because managers with hubris are likely to overestimate their ability to positively integrate and extract value from a merger or acquisition.[898]

Acquisitions and the legacy attached to them, whether a success or failure, can have a weighty impact on a manager's career. Managers' decisions to acquire may be motivated by empire building, which can also explain why managers acquire companies despite past failures and predicted difficulties in undertaking M&A transactions.[899] The empire building theory of mergers suggests that managers want to create a huge organisation, an empire.[900] According to Marris, "managements are likely to see the growth of their own organization as one of the best methods for satisfying personal needs and ambitions, an attitude which is reinforced by psychological tendencies to identify the ego with the organization."[901] For instance, the former CEO of Daimler-Benz used M&A as a tool for his ambition to make the company into a global car manufacturer.[902] Another example of managerial egos being responsible for mergers is in the merger of Holcim and Lafarge, the two largest

[897] *See* Mario Schijven & Michael A. Hitt, *The Vicarious Wisdom of Crowds: Towards a Behavioral Perspective on Investor Reactions to Acquisition Announcements*, 33 STRATEGIC MGMT. J. 1247, 1254 (2012).
[898] STRAUB, *supra* note126, at 48.
[899] STRAUB, *id.* at 48.
[900] *See* Friedrich Trautwein, *Merger Theories and Merger Prescriptions*, 11(4) STRATEGIC MGMT. J. 283, 287-88 (May, 1990) (providing a critical overview of the different theories of mergers and the empirical and theoretical evidence motivating them); *see also* Dennis Mueller, *A Theory of Conglomerate Mergers*, 83(4) QUART'LY J. ECON. 643 (1969) (putting forth a theory of mergers based on managerial growth maximization).
[901] Robin Marris, *A Model of the "Managerial" Enterprise*, 77(2) QUART'LY J. ECON.185, 187 (May, 1963).
[902] *See Divorce Puts Paid to Car-making Dream*, FINANCIAL TIMES (May 14, 2007), http://www.ft.com/intl/cms/s/0/86510ab2-0254-11dc-ac32-000b5df10621.html#axzz3bYwA90zp.

cement manufacturers in the world, as the chairman of Holcim was about to retire and "wanted to end [his career] on a high" with a successful merger.[903] Yet, though the merger of Holcim and Lafarge was to be a merger of equals, personality and ego clashes between the top management of both companies ruffled feathers to such an extent that the success of the merger itself was threatened.[904]

Some managers can become addicted to M&As leading to the making of too many acquisitions. This may be because of the thrill or prestige of M&As or because it signals managerial ambition. Managers can also become overly involved in making acquisitions. Empirical evidence shows that over-involvement in acquisitions can divert managerial attention from other market opportunities and can be harmful to the firm.[905]

Another theory of managerial bias is that managers can have an illusion of control, which means they over-estimate the extent to which they can control the outcome of an acquisition.[906] This results in managers not thoroughly evaluating acquisition candidates before deciding to acquire them. Many times acquisitions are made when the acquirer does not have expertise to manage the target or managers don't realise that shared customers, markets or technical relationships are insufficient to ensure that the acquisition is a success, because factors that may make it more difficult for the acquisition to be a success are not considered. Illusion of control may cause managers to acquire companies that operate in markets in which they do not have expertise and then unsuccessfully attempt to manage them.[907] For

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[903] *See* Sarah Gordon and Arash Massoudi, *Holcim & Lafarge: A Merger of Egos*, FINANCIAL TIMES (Mar. 23, 2015), http://www.ft.com/intl/cms/s/0/41d317c8-d14e-11e4-98a4-00144feab7de.html#axzz3h6OZj8AB

[904] *See* Gordon, *id.*

[905] *See* HITT et al., *supra* note 139, at 195.

[906] *See* Duhaime & Schwenk, *supra* note 123, at 289.

[907] *See* Duhaime & Schwenk, *id.*at 293.

example, Clorox made a series of acquisitions after it was no longer a part of Proctor &Gamble (P&G) in an effort to diversify Clorox's business. Many of these acquisitions were later divested because they were far from Clorox's strengths and Clorox was not able to successfully manage these acquisitions. Clorox's managers were trained at P&G and their previous experience at P&G was a successful one, which gave them an illusion of control.[908]

Yet another managerial bias that can affect M&A decisions is called 'escalation of commitment' – managers may continue an M&A transaction even if it is not in the firm's best interest to continue with it because they feel they have already invested significant time and resources on the M&A.[909] In these cases managers are reluctant to back out once they have publicly committed to an M&A out of a sense of responsibility.

Managerial biases are also reflected in the premiums paid for acquisitions. Acquisition premiums can represent the acquiring firm's view of the potential for efficiencies from the transaction. Higher premiums would signal greater efficiencies from the acquisition.[910] However, if acquisitions are financed with stocks rather than with cash, it can signal that managers are not confident about realising efficiencies from the acquisition because payments using stocks share the risk of the acquisition with investors and shareholders and it also indicates that management believe their firm to be overvalued.[911] Further, there is empirical evidence that managers consistently overpay for acquisitions for reasons such as managerial hubris, escalation of

[908] *See* Duhaime & Schwenk, *id.*at 290.
[909] *See* Schijven & Hitt, *supra* note 897, at 1251.
[910] *See* Schijven & Hitt, *id.* at 1251.
[911] *See* Schijven & Hitt, *id.* at 1253.

commitment, cognitive biases, or for reasons of self-interest such as empire building.[912]

One method used by managers to simplify decision-making is to use analogies.[913] Reasoning by analogy involves the application of simple analogies and images to guide problem definition.[914] Analogies can mislead managers into an overly simplistic view of the situation and may lead to an acquisition designed to solve the wrong problem.[915] For instance, a firm considering acquisition of a business tangential to its own may view the target as analogous to its existing business – failing to recognise the more complex and technical nature of the acquisition candidate.[916]

In conclusion, different managerial motives can play a significant role in M&A transactions. Nevertheless, they cannot explain all mergers and acquisitions.[917]

3.3 Strategic Reasons for M&A

Haspeslagh and Jemison highlight that acquisitions are made to further a firm's strategic objectives.[918] Some reasons for executing M&As are to achieve size, growth and profitability. Another reason for M&A is to achieve greater market power.[919] Acquisitions may be a response to an emerging competitive threat, a means to enter a new market and exploit market opportunities or to spread risks across industries.[920] Firms may engage in acquisitions to shift their operations from their core

[912] *See* Schijven & Hitt, *id.* at 1252.
[913] Duhaime & Schwenk, *supra* note 123, at 293.
[914] Duhaime & Schwenk, *id.*at 288.
[915] Duhaime & Schwenk, *id.*at 293.
[916] *See* Duhaime & Schwenk, *id.*at 289.
[917] STRAUB, *supra* note126,at 49.
[918] *See* HASPESLAGH & JEMISON, *supra* note 102.
[919] *See* HITT et al., *supra* note 139, at 184.
[920] *See* HITT et al., *id.* at 183.

business into different markets. Further, acquisitions are sometimes used as strategies when there is uncertainty in the competitive landscape.[921] In industries with intense competitive rivalry, firms may engage in acquisitions to lessen their dependence on one or more products or markets.[922] Some acquisitions are made to gain capabilities that the firm does not possess.[923] Acquiring firms with different skills and capabilities helps the acquiring firm to access new knowledge and remain competitively relevant.

A company seeking to enter a new market and facing barriers to entry may find entry more effective by acquiring an established competitor than by entering the market on its own. Thus, high entry barriers make acquisitions attractive by offering immediate market access.[924] Further, in dynamic markets, acquisitions may be less costly, faster and less risky than developing innovations internally.

A firm has a competitive advantage when it implements a strategy which competitors are unable to duplicate or find it too costly to imitate.[925] However, no competitive advantage is permanent, the question is of how long a competitive advantage will last.[926] Thus, firms constantly search for opportunities to obtain a sustainable competitive advantage and M&A is one such tool in the hands of managers to obtain an advantage over competitors. This perspective of M&A activity as a way of obtaining advantage over competitors can be useful to competition law by contributing to the understanding of the

[921] *See* HITT et al., *id.* at 183.
[922] *See* HITT et al., *id.* at 190.
[923] *See* Philip M. Rosenzweig, *Managing Acquisitions: Creating Value through Corporate Renewal*, 18(2) ACADEMY MGMT. REV. 370, 371 (Apr. 1993) (book review).
[924] *See* HITT et al., *supra* note 139, at 187.
[925] *See* HITT et al., *id.* at 5.
[926] *See* HITT et al., *id.* at 5.

motivations and impact of M&A in the short-term and the long-term.

3.4 Strategic Management and Head-to-head Competition

An important aspect of merger analysis is to determine whether the firms being merged or acquired could be called competitors. As §2.1.4 of the US Horizontal Merger Guidelines state, a relevant consideration for assessing a merger is whether the merging firms would have been head-to-head competitors absent the merger. The nature of rivalry is an important consideration in the analysis of horizontal mergers particularly under the theory of unilateral effects where the merger removes a firm that affected an important competitive constraint to the market. Competitor analysis within management studies provides tools to assess the degree of rivalry or competition between firms in the market.[927] Here, insights from management studies can prove useful to the understanding of mergers in competition law.

Not all firms in an industry compete to the same degree with each other. Some firms within an industry share more markets with each other than with other firms in the same industry. Competitor analysis in business strategy considers the extent to which two firms share markets and the importance of the market for each firm.[928] This can affect the assessment of whether two merging firms are 'close competitors'. Competitor analysis of firms involves two factors: market commonality and resource similarity.[929] Market commonality in business strategy represents the number of markets in which firms and their competitors compete, the degree of strategic importance of the individual markets to each firm as well as the competitor's strength in these

[927] Chen, *supra* note 539, at 100.
[928] *See* Chen, *supra* note 539, at 101.
[929] *See* Chen, *id.*at 105.

markets.[930] Competitor analysis considers the extent to which two firms share markets and the importance of the market for each firm. Further, competitive positions between firms are often not symmetric and firms do not pose an equally grave threat to each other.[931] It may be necessary to move beyond economic factors to consider why particular markets may be more important to a particular firm.

Next, resource similarly has its basis in the resource-based theory of the firm – it assumes that each firm is a collection of unique resources and capabilities[932] and a firm's competitive advantage is defined by its unique resource bundle.[933] Resource similarity is the extent to which two firms possess resource endowments comparable in both type and amount.[934] Core competencies are resources and capabilities that may be a source of competitive advantage for the firm over its rivals. Firms need to continuously improve, innovate and upgrade their competencies to succeed over time. Firms with similar resource bundles are said to have similar strategic capabilities and competitive vulnerability in the market.[935] According to the resource-based theory, firms that share a larger resource similarity, have fewer competitive advantages over each other and are likely to be closer competitors within a market. Consequently, not only the external market but also factors internal to each firm can determine to what extent two firms consider each other to be close competitors.

[930] *See* Chen, *id.* at 106.
[931] *See* Chen, *id.* at 101.
[932] Individual resources of a firm are formed into a capability. A capability is the ability of resources to perform a task or an activity in an integrated manner. *See* HITT et al., *supra* note 139, at 16-17.
[933] *See* Chen, *supra* note 539, at 107.
[934] *See* Chen, *id.* at 107.
[935] *See* Chen, *id.* at 107.

4. The Falstaff Case

The government challenged the acquisition by Falstaff, the fourth largest beer producer in the US, of Narragansett, the largest beer seller in the New England area of the US on the theory that Falstaff was a potential entrant into the New England market and the acquisition eliminated competition that would have existed had Falstaff entered the market *de novo*.[936] This lead to the US Supreme Court's judgment in *US v. Falstaff Brewing Corp* discussed below.[937]

The district court dismissed the government's allegations that the acquisition was anticompetitive by reasoning that Falstaff would never have entered the market in the New England area *de novo*, and since the only way that Falstaff would have entered the market was by acquisition, the transaction did not substantially lessen competition. However, the Supreme Court reversed the district court's opinion on the issue of potential competition. The Supreme Court held that the District Court incorrectly assumed that because Falstaff did not intend to enter the market *de novo* it was not a potential competitor, as it exerted significant competitive influence in the New England market due to its position on the fringes of the market.

The Falstaff decision was branded as an instance of "zealous" merger enforcement aimed at protecting smaller firms and halting the trend towards concentration since there was no reason to stop a merger that did not increase concentration in the relevant market.[938] The following discussion illuminates Falstaff's

[936] *See United States v. Falstaff Brewing Corp.*, 410 U.S. 526, 530 (1973) [hereinafter Falstaff].
[937] *See* Falstaff, *id.* at 526.
[938] *See* Kenneth G. Elzinga & Anthony W. Swisher, *The Supreme Court & Beer Mergers: From Pabst/Blatz to the DOJ-FTC Merger Guidelines*, 26(3) REV. INDUSTRIAL ORG. 245, 250, 261 (May, 2005).

decision to acquire and whether it would have entered the market *de novo*.

4.1 Bounded Rationality and Falstaff's Decision to Acquire

Falstaff wanted to enter the New England market because it wanted to position itself as a national player in the beer selling industry in order to more effectively compete against national brewing companies. The position as a national player held certain competitive advantages in terms of greater prestige, improved ability to advertise and less exposure to local problems.[939]

Prior to taking a decision about the acquisition, Falstaff had commissioned a study to test the feasibility of entering the New England market called the 'Little Report'. This study recommended that it would be more profitable for Falstaff to enter the New England market *de novo* by constructing a new plant to serve this region rather than enter by acquiring an existing firm.[940] Falstaff's management did not agree and also introduced substantial evidence during the trial before the court to show that entry by acquisition would be more profitable.[941] Falstaff's management argued that they had learned through experience that a strong pre-existing network of distributors was essential for successful entry.[942] Narragansett provided them with such a network of distributors in the New England market. As stated in its Annual Report:

> "The long-range principle benefits of this acquisition are many, principally the acquisition of a large, modern plant and a strong marketing and distributor organization which can provide a springboard for the introduction of Falstaff

[939] *See* Falstaff, *supra* note 173, at 529.
[940] *See* Falstaff, *id.* at 553.
[941] *See* Falstaff, *id.* at 554, 571.
[942] *See* Falstaff, *id.* at 571.

> beer into New England as a companion brand to the Narragansett products in that area."[943]

Falstaff had in fact been attempting an acquisition in the New England market for the past few years but had not found a suitable candidate. As it turned out, entry by acquisition of Narragansett was not profitable for Falstaff and their market share in all markets fell substantially in the years following the case.

While the complexity of markets makes it difficult to point to exact reasons, insights from business studies can help to understand why Falstaff took this decision to acquire Narragansett and why it did not work out as planned. This acquisition was a strategic decision for Falstaff rather than one taken to maximize profit opportunities - managers were thinking of the long-term growth and importance of Falstaff. Falstaff also used this acquisition to enter prestigious markets like New York in which it had no previous presence.

In the 1950s Falstaff had engaged in an aggressive campaign of growth through numerous acquisitions. Falstaff's annual reports show that its managers were confident of the success of the various acquisitions as they expected these to follow the path of previously undertaken successful acquisitions.[944] However, in fact Falstaff's tremendous growth through acquisitions peaked with the acquisition that was at issue in the present case, after which its market position and sales declined dramatically.[945] The result of Falstaff's strategy of growth through acquisitions was that there were significant costs on its books and managerial time was spent managing and restructuring these acquisitions rather than developing the firm's internal capabilities to deal with the

[943] FALSTAFF BREWING CORP., ANNUAL REPORT TO SHAREHOLDERS (1965).
[944] *See id.*
[945] *See id.*

rapidly evolving market for beer and changing consumer preferences in this market.

Barkema and Schijven argue that M&A activity gradually increases the need for organisational restructuring.[946] Organisational restructuring helps to fully realise the potential of the acquisition to the acquirer.[947] However, firms are slow to undertake such restructuring because of inertia and generally will only begin restructuring when organisational challenges have become sufficiently severe to break inertia and to change the organisation's belief in its existing organisational structure.[948] Further, Barkema and Schijven argue that an acquisition's contribution to the acquirer's performance depends on the position of the acquisition within a sequence of acquisitions.[949] Their hypothesis is that if a firm has undertaken many acquisitions within a relatively short period of time without adequately integrating these acquisitions within the firm's organisational structure, later acquisitions are likely to under-perform. Other studies show that firms are likely to perform better in the long-term if they grow organically than if they grow by making acquisitions. Moatti et al. argue that when firms grow through M&As, they tend to collect assets that may not easily generate scale economies when combined.[950] The juxtaposition of existing assets with acquired ones may often be sub-optimal within a firm when compared to if the same growth was achieved organically because assets are acquired progressively through organic growth, which allows for more learning to occur over

[946] *See* Harry G. Barkema & Mario Schijven, *Toward Unlocking the Full Potential of Acquisitions: The Role of Organizational Restructuring*, 51(4) ACADEMY OF MGMT. REV. 696, 702 (Aug., 2008).
[947] *See* Barkema & Schijven, *id.* at 702.
[948] *See* Barkema & Schijven, *id.* at 702.
[949] *See* Barkema & Schijven, *id.* at 702.
[950] *See* Valerie Moatti, Charlotte R. Ren, Jaideep Anand & Pierre Dussauge, *Disentangling the Performance Effects of Efficiency and Bargaining Power in Horizontal Growth Strategies: An Empirical Investigation in the Global Retail Industry*, 36 STRATEGIC MGMT. J. 745, 747 (2015).

time.[951] Further, problems associated with integrating two companies can increase the costs and reduce efficiencies from acquisitions when compared to organic growth.

These sentiments were echoed by the US Supreme Court in its decision in *Philadelphia National Bank* where it stated that, "surely one premise of an anti-merger statute such as § 7 [Clayton Act] is that corporate growth by internal expansion is socially preferable to growth by acquisition."[952]

Elzinga and Swisher find that beer companies that engaged in extensive M&A did not perform very well over time and eventually failed.[953] On the contrary companies that grew organically were much more successful, e.g. the largest American beer company, Anheuser-Busch was prevented from carrying out M&A by a Supreme Court decision and grew by organic growth.[954] This further supports the above hypothesis that growth through internal expansion may be preferable to growth by M&A. In the present case, the failure of Falstaff's acquisition of Narragensett may have been because its managers were overconfident of the success of its acquisitions and did not take enough effort to adequately integrate these acquisitions into its organisational structure.

4.2 Bounded Rationality and Falstaff's Status as an Actual Potential Competitor

[951] *See* Moatti et al., *id.* at 747.
[952] *United States v. Philadelphia National Bank,* 374 U. S. 321 (1963).
[953] *See* Elzinga & Swisher, *supra* note 938, at 250.
[954] *See* Elzinga & Swisher, *id.* at 265.

In the present case the issue before the court was whether Falstaff could be considered a potential entrant in the New England market.[955] In the words of Justice Marshall, the problem was that,

> "…in a case where the objective evidence strongly favors entry *de novo,* a firm which asks us to believe that it does not intend to enter *de novo* by implication asks us to believe that it does not intend to act in its own economic self-interest. But corporations are, after all, profit-making institutions, and, absent special circumstances, they can be expected to follow courses of action most likely to maximize profits."[956]

Falstaff could not be called an actual potential competitor in the relevant market if it would never have entered the market *de novo*. This is important from a competition perspective because if a perceived potential competitor enters a market by acquisition, it simply replaces the acquired firm's competitive presence in the market with its own. Whereas if it enters *de novo* competition is increased because there are more firms competing in the market. Entry *de novo* of an actual potential competitor is thus, favorable to entry by acquisition. The court here was thus faced with a conundrum. On the one hand there was 'objective evidence' suggesting that Falstaff had both the capability and the incentive to enter the New England market *de novo*. On the other hand, there was sufficient evidence to believe that Falstaff itself was of the opinion that entry by acquisition would be more profitable for

[955]Elzinga & Swisher note that the court ignored other more important issues in assessing the merger and if these issues had been examined the merger would have been allowed because the court would have found that it did not raise any concerns for competition. For instance, agencies would have used scanner data from retail sales to construct simulation models and measure the intensity of competition between Falstaff and Narragansett and would have found that the two companies were not selling products that were close substitutes of each other. *See* Elzinga & Swisher, *id.* at 263 n.92.

[956]*See* Falstaff, *supra* note 173,at 568.

it than entry *de novo*.[957] Should the court then take Falstaff's word for what it said it intended to do or rely on objective evidence of Falstaff's motives and ability to enter?

The majority opinion of the Supreme Court steered clear of any discussion about the internal decisions made by Falstaff to enter the market and focused on whether, given objective factors such as the financial condition of Falstaff and the characteristics of the New England market, it would be reasonable to consider Falstaff a potential entrant into that market.[958] The Supreme Court criticised the district court's decision because it felt that the district court was wrong to disregard objective evidence indicating entry *de novo* in favour of the subjective statements made by Falstaff's management.[959] It held that the testimony of Falstaff's management about the actual intentions of the company, while not irrelevant, was not "necessarily the last word" in arriving at conclusions about the status of Falstaff as a potential entrant into the market.[960] Justice Marshall took a slightly different view from the majority decision in his concurring opinion in this case. Justice Marshall stated that courts should presume that firm conduct is governed by objectively measurable market forces rather than by subjective factors.[961] This is based on the presumption that firms are rational, profit-maximizing entities that only take decisions based on objectively measurable factors rather than based on the subjective preferences of managers.[962] In this case the objective evidence indicated that it was in Falstaff's best interest to enter *de novo* because it had the incentives and the capability to do so*l*ing the words of Justice Marshall,

[957] *See* Falstaff, *id.* at 571.
[958] *See* Falstaff, *id.*at 533.
[959] *See* Falstaff, *id.* at 572.
[960] *See* Falstaff, *id.* at 535-537.
[961] *See* Falstaff, *id.* at 548.
[962] *See* Falstaff, *id.* at 566.

> "But where a powerful firm is engaging in a related line of commerce at the fringe of the relevant market, where it has a strong incentive to enter the market de novo, and where it has the financial capabilities to do so, we have not hesitated to ascribe to it the role of an actual potential entrant. In such cases, we have held that § 7[Clayton Act] prohibits an entry by acquisition, since such an entry eliminates the possibility of future actual competition which would occur if there were an entry de novo."

Justice Marshall is clear that the subjective statements of managers should not be given any credence when it contradicts objective economic evidence. From a neoclassical economic perspective, manager's subjective statements should not be taken at face value because manager's opinions can change with time and management can give self-serving testimony. Further, if managers act contrary to the interest of firms, shareholders will ultimately replace them for more competent managers. While Justice Marshall concedes that managers can make mistakes in their assessment of objective market forces, he also states that the possibility of such errors reduces with the strength of objective evidence, the stronger the evidence the less likely it is that such errors will be made.

Interestingly, Justice Marshall notes that economic predictions are difficult and different people might reach different conclusions from the same objective data but does not address the issue in any depth.[963] In fact, in the present case objective economic evidence regarding the profitability of entry by acquisition into a market was interpreted quite differently by the management of Falstaff, the agency commissioned by Falstaff to study the market and ultimately by the government and the courts with no consensus between them about whether entry by

[963] *See* Falstaff, *id.* at 19 note 3.

acquisition or entry *de novo* was more profitable. As the literature from business studies shows, it is almost impossible for firms to know and consequently to take profit-maximizing decisions within market contexts. This is borne out in this case, otherwise, there should have been no discrepancy between the views of the parties about the most profitable course of action for Falstaff to take based on the shoring up of 'objective' evidence. Moreover, if objective evidence indicated that Falstaff should enter *de novo*, then why did Falstaff, if it was indeed taking rational decisions, decide to enter by acquisition? The majority opinion of the Supreme Court steered clear of this problem by simply not acknowledging it and sticking to the objective evidence on the record. However, in his concurring opinion, Justice Marshall tried to resolve this problem by indirectly suggesting that it was not always necessary for a firm's decisions to be profit maximizing,

> "Falstaff introduced a great deal of evidence tending to show that entry de novo would have been less profitable for it than entry by acquisition. I have no doubt that this is true. Indeed, if it can be assumed that Falstaff is a rational, profit-maximizing corporation, its own decision offers strong proof that entry by acquisition was the preferable alternative. But the test in §7 cases is not whether anticompetitive conduct is profit-maximizing. The very purpose of §7 is to direct the profit incentive into channels which are pro-competitive. Thus, the proper test is whether Falstaff would have entered the market de novo if the preferable alternative of entry by acquisition had been denied it. The objective evidence strongly suggests that such an entry would have occurred."[964]

Justice Marshall brushes under the carpet the issue of the difficulty of arriving at one correct answer to a commercial and

[964] Falstaff, *id.* at 572.

business issue. As the literature discussed in this chapter has shown, in reality acquisition decisions are a product of many factors and objective economic evidence forms only part of the reasoning behind an acquisition decision.

In fact empirical evidence of firm behavior confirms that managers can take very different decisions when faced with similar kinds of 'objective evidence' about market conditions. The dissenting opinion in this case took just such a view by dismissing the distinction between subjective and objective economic evidence and pointing out that economic decisions are largely subjective.[965] In the words of Justice Rehnquist,

> "The simple fact is that any economic decision is largely subjective. In the instant case, Falstaff sought to prove why it was not in the 'economic self-interest' of that firm to enter a new geographic market without an established distribution system. Its explanation is as 'objective' as any of the evidence offered by the Government to show why a hypothetical Falstaff should enter the market. The question of who is an 'actual potential competitor' is entirely factual."[966]

Thus, according to the dissent, it is not possible to objectively determine what is in a firm's economic self-interest and the reasoning of Falstaff's management was as relevant in determining actual potential competition as the economic evidence put forward by the government.[967] The idea that economic decisions are subjective takes into account firm heterogeneity and allows for the application of behavioural theories.

[965] *See* Falstaff, *id.* at 575.
[966] Falstaff, *id.* at 575-76.
[967] *See* Falstaff, *id.* at 576.

5. Vodafone's Takeover of Mannesmann

Vodafone, a UK based multinational telecommunications company, acquired Mannesmann, the largest telecommunications company in Germany for $183 billion in February 2000 in what was at that time the largest M&A transaction and one of the most expensive ever to have taken place in history.[968] The takeover created the largest telecommunications provider in the world. In England, the combined company had more than twice the market share of its closest competitor.[969] The merger also created the first single Europe-wide mobile communications network. The scale of the takeover was such that it had the potential to substantially increase concentration in the telecommunications industry in Europe by pushing other firms to similarly consolidate to match Vodafone's network.[970] The Commission cleared the acquisition on the condition that Vodafone divest Orange, a company that was previously acquired by Mannesmann. The Commission also required that Vodafone give competing firms access to its telecommunications network.[971] The Commission believed that these undertakings would prevent the acquisition from creating a dominant position in the market. The Commission also believed that the acquisition would benefit consumers. The EU Competition Commissioner stated that, "our fundamental view is that this operation can bring clear benefits to consumers, but we should avoid creating a dominant position in

[968] *See Vodafone Seals Mannesmann Deal,* BBC News (Feb. 11, 2000), http://news.bbc.co.uk/2/hi/business/630293.stm.
[969] *See Vodafone Airtouch / Mannesmann*, Commission of the European Communities Decision No. M.1795, § 30 (Apr.12, 2000),http://ec.europa.eu/competition/mergers/cases/decisions/m1795_en.pdf [hereinafter Vodafone / Mannesmann].
[970] *See* Philip Shishkin & William Boston, *European Commission Approves Vodafone-Mannesmann Merger*, WALL STREET J. (Apr. 13, 2000), http://www.wsj.com/articles/SB955545917864176294.
[971] *See* Vodafone / Mannesmann, *supra* note 206.

these markets."[972] Yet, analysts felt that despite these undertakings, Vodafone's size would still give it market dominance, which would give the company substantial advantages against its competitors.[973] Further, the benefits to consumers from this transaction were not apparent and considered with the benefit of hindsight, did not materialise. As the following discussion shows, this acquisition was not motivated by efficiencies or any consumer benefits but was intended to achieve size and greater market power.

5.1 Managerial Biases and the Acquisition Decision

A few months before acquiring Mannesmann, Vodafone, acquired Airtouch and became the world's second largest telecommunications company measured by subscribers and revenue. Other than the United States, Vodafone's primary presence was in the UK and it had minority interests in other European countries. On the other hand, Mannesmann had a substantial presence in many European countries.[974] A month before Vodafone made its first bid for it, Mannesmann acquired Orange; a UK based mobile phone company. This extended Mannesmann's presence to the UK in addition to continental Europe.

Both companies were valued highly but the bases of their financial valuations were very different. Mannesmann had higher sales and employment than Vodafone but Vodafone was more profitable because it was focused on the more profitable mobile phone segment of the industry.[975] In contrast to Vodafone's

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[972] *See* Shishkin & Boston, *supra* note 207.
[973] *See EU Approves Vodafone Mannesmann Deal*, BBC News (Apr. 12, 2000) *at* http://news.bbc.co.uk/2/hi/business/710441.stm
[974] *See* Martin Höpner & Gregory Jackson, *Revisiting the Mannesmann Takeover: How Markets for Corporate Control Emerge*, 3 EUR. MGMT. REV. 142, 146 (2006).
[975] *See* Höpner & Jackson, *id.* at 147.

focused approach, Mannesmann had a diversified presence and provided wireless and fixed-line services and was involved with Internet telephony as well. [976]

The chief executives of both companies also had very different views about the possible benefits of a combination. Vodafone's chief executive; Chris Gent felt that both companies were "natural partners" and "belong[ed] together"[977] whereas Mannesmann's chief executive, Klaus Esser believed that his company was superior to Vodafone.[978] Esser thought that Mannesmann's superior presence in Europe and Europe's position as the world's most advanced telecom technology region gave it a strategic advantage over Vodafone.[979] Many analysts have stated that Vodafone's lack of majority interests in its European assets was holding it back from achieving its full potential in Europe. Further, Esser believed that Mannesmann's ownership of both fixed-line and wireless telephony and access to Orange's brand and mobile competencies also gave it strategic advantages over Vodafone.[980] Vodafone was slow to develop Internet capabilities, while Mannesmann was much further advanced in the provision of Internet capabilities as Europe's third-largest Internet service provider.[981] Accordingly, Esser felt that Mannesmann and Vodafone had a very different vision of the industry, were not like-minded and Mannesmann had little to

[976] *See* Höpner & Jackson, *id.* at 147 (Manesmann also had other businesses held through subsidiary companies unconnected with Telecommunications).
[977] Vodafone Airtouch News Release, *Proposal to Create Europe's Global Telecommunications Leader* (Dec. 16, 1999), http://www.vodafone.com/content/index/media/vodafone-group-releases/1999/press_release16_11.html
[978] *See* Marcus Walker, *Vodafone and Mannesmann: The Bid that Couldn't* Fail, EUROMONEY (Mar., 2000), http://www.euromoney.com/Article/1007961/Vodafone-andMannesmann-The-bid-that-couldnt-fail.html.
[979] *See Vodafone and Mannesmann: Endgame*, THE ECONOMIST (Jan. 13, 2000), http://www.economist.com/node/328276 [hereinafter Endgame].
[980] *See* Walker*, supra* note 215.
[981] *See* Endgame*, supra* note 216.

gain from an alliance with Vodafone.[982] Thus, the executives at both companies did not share the view that an alliance between Vodafone and Mannesmann would be beneficial.

Interestingly, Gent described Esser's behaviour in resisting the acquisition by Vodafone as "defensive and personal and not related to economics".[983] Reportedly, Esser was very much opposed to a takeover by Vodafone. Perhaps part of Esser's negative reaction to a hostile takeover by Vodafone was for the reason that at that time hostile takeovers were looked-down upon and viewed as immoral in Germany.[984] In November, 1999, Mannesmann rejected the unsolicited offer for a takeover by Vodafone at a value of £75 billion. Esser called the valuation "wholly inadequate" and stated that it did not find an alliance with Vodafone to be "strategically attractive".[985]

The process for the takeover of Mannesmann was acrimonious. An analyst described the process as, "quite a spectacle, with three months of punch, counter-punch and even the occasional insult."[986] Over a few months Vodafone repeatedly increased its offer for Mannesmann and ultimately paid what is considered to be a premium of almost 70% for the company.[987] One media report described the amount paid as "astronomical".[988] One reason for Vodafone's pursuit of Mannesmann and the premium paid by it may have been motivated by managerial hubris and

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[982] *See* Walker*, supra* note 215.
[983] *Mr. Boring Goes Shopping*, THE ECONOMIST (Nov. 25, 1999), http://www.economist.com/node/326858.
[984] *See* Höpner & Jackson, *supra* note 211.
[985] *See Mannesmann Rejects Vodafone Bid*, BBC NEWS (Nov. 14, 1999), http://news.bbc.co.uk/2/hi/business/519813.stm.
[986] *Bidding for the Future*,The Economist (Feb. 10, 2000), http://www.economist.com/node/281682.
[987] *See* Thras Moraitis & Han Smit, *Pitfalls in a Serial Acquisition Strategy*, CRITICAL EYE (2011), http://www.criticaleye.net/insights-servfile.cfm?id=2817.
[988] *See Vodafone: Written Down but not Out*, THE ECONOMIST (May 30, 2002), http://www.economist.com/node/1159480.

escalating commitment from Vodafone's desire to win a 'contest' with Mannesmann.[989] Vodafone's managers' may have gained hubris from their previous success in acquiring Airtouch. Hubris resulted in Vodafone's managers believing that the high amount paid for Mannesmann was justified because Mannesmann would perform better when managed by Vodafone. Another reason for the increase in price for Mannesmann may have been Esser's arguably emotional and overconfident belief in the superiority of his company and his rejection of the initial offers from Vodafone at lower prices. As reported in the business press, the effect of the high price paid for the acquisition was that the expenses from it resulted in losses for Vodafone for the next decade of its operations.[990] It has been stated that Vodafone is still carrying the "burden" of substantially overpaying for Mannesmann.[991] The amount paid for the acquisition may also signal anticompetitive intent as some can argue that absent anticompetitive intent to remove a competitor from the market it made no commercial sense for Vodafone to pay such a large amount for Mannesmann.

It may be argued that another motive behind Vodafone's pursuit of Mannesmann was Gent's desire for empire building. Apart from Mannesmann, Gent also undertook other large acquisitions within a short time that greatly increased Vodafone's size and made it into one of the largest wireless companies globally. As a result of its many acquisitions, one analyst described Vodafone as, a "company that has gained an empire but not yet found a

[989] *See id.*
[990] *See* Ville Heiskanen & Adam Ewing, *Vodafone Testing History with Second $100 Billion-Plus Deal*, BLOOMBERG BUSINESS (Aug. 30, 2013), http://www.bloomberg.com/news/articles/2013-08-29/vodafone-testing-m-a-history-with-second-100-billion-plus-deal.
[991] *See* Martin Vander Weyer, *What Vodafone Should do with its Huge Windfall: Invest in the Next Vodafone*, THE SPECTATOR (Sept. 7, 2013), http://www.spectator.co.uk/columnists/any-other-business/9011991/its-time-for-vodafone-to-bet-on-the-future-again; *Verizon and Vodafone,* FINANCIAL TIMES (Jun. 19, 2011).

role".[992] This was echoed by the former chief executive of Vodafone who took over as chief executive after Gent and stated that, "I inherited a company that was created out of a lot of M&A. There was no organising principle to the company."[993]

In addition, the acquisition process roused some emotions in the people involved. One example is the acrimony between Vodafone and Mannesmann in agreeing to the terms of the acquisition. In the words of one of Mannesmann's advisors, "it got very ugly, very aggressive. They [Vodafone's advisors] should treat people better."[994] On the other hand, Vodafone's advisors called Mannesmann's advisors "very emotional".[995] Mannesmann felt that Vodafone was not treating its senior management with enough consideration and Vodafone felt that since they had paid such a substantial amount of money, they could take the decisions that they wanted to with respect to Mannesmann.[996] Emotions may have hampered rationality in the decision-making of the parties.

Vodafone's publicly stated reasons for acquiring Mannesmann included establishing a pan-European mobile network, getting discounts from equipment manufacturers through increased buyer power and creating a globally known brand in mobile communications.[997] On the other hand, some analysts believe that the real reason for Vodafone's acquisition of Mannesmann was because it was competitively threatened by Mannesmann's

[992] *See Vodafone's Empire*, FINANCIAL TIMES (Feb. 7, 2010), http://www.ft.com/intl/cms/s/0/5a4e0bda-140e-11df-8847-00144feab49a.html#axzz3jNaucBin.
[993] Andrew Parker & Andrew Edgecliffe-Johnson, *Vodafone's Survivor*, FINANCIAL TIMES (Nov. 18, 2007) (Interview with Arun Sarin).
[994] *See* Walker, *supra* note 215.
[995] *See* Walker, *id*.
[996] *See* Walker, *id*.
[997] *See Vodafone-Mannesmann: What Next?*, THE ECONOMIST (Feb. 10, 2000), http://www.economist.com/node/329330.

acquisition of Orange.[998] Orange was one of Vodafone's significant competitors in the UK with a superior brand and technical and innovation capabilities. It also had a fast-growing customer base and it was gaining customers faster than Vodafone.[999] When Mannesmann acquired Orange, Vodafone was reportedly upset that Mannesmann had chosen an alliance with Orange over one with itself in the UK market.[1000] Gent was quoted in the press as saying that by acquiring Orange, Mannesmann had broken a "gentleman's agreement" between the companies not to compete with each other in home markets.[1001] Mergers and acquisitions are said to be motivated as much by fear as by opportunity.[1002] They are also sometimes taken as a reflexive reaction to competitors' acquisitions.[1003] In this case, Vodafone may have felt cornered because Mannesmann and Orange's combined technical capabilities and superior geographic presence in many European markets would create a company that Vodafone would have difficulty competing with.[1004] Vodafone believed that the only way forward for it was to acquire Mannesmann.[1005] Thus, it may be possible to make an argument (based on facts collected from reports in the business media) that Vodafone acquired Mannesmann to eliminate the competitive threat posed by Mannesmann and as a reaction to

[998] *See* Walker, *supra* note 215 (quoting Dan Dickinson, advisor to Mannesmann and head of European Mergers & Acquisitions at Merrill Lynch, "Mannesmann buying Orange really put Vodafone in a corner because it exposed Vodafone as having only a series of minority stakes. Their window of opportunity was to act right away.")
[999] *See* Endgame, *supra* note 216.
[1000] *See* Walker, *supra* note 215.
[1001] Roland Gribben & Christopher Williams, *How Vodafone's Rise to a £59bn Giant Started with a New Year's Eve Phone Call*, THE TELEGRAPH (Jan. 1, 2015), http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/telecoms/11319237/How-Vodafones-rise-to-a-59bn-giant-started-with-a-New-Years-Eve-phone-call.html
[1002] *Bidding for the Future*, *supra* note 223.
[1003] *See* Tichy, *supra* note 759, at 373; Thomas Keil & Tomi Laamanen, *When Rivals Merge, Think Before you Follow Suit*, 89(12) HARV. BUS. REV. 25 (Dec., 2011).
[1004] *See Bidding for the Future*, *id*.
[1005] *See* Walker, *supra* note 215.

Mannesmann's entry into the UK market through its acquisition of Orange. This is also supported by other evidence that few benefits were promised to users from the transaction.[1006] It is also worth noting that when investigating the acquisition the Commission did not discuss the potential efficiencies from this acquisition in any detail. This is an aspect of the transaction that should have been examined in greater detail.

All of the discussion above suggests that decision-making within both Vodafone and Mannesmann was motivated by managerial biases and people were acting at least in part out of emotion and ego. In such cases where ego and emotions rather than rationality are motivating decisions, the potential benefits and efficiencies from a merger should perhaps be examined in greater detail. This is particularly so because when parties behave acrimoniously, there is a good chance that personality clashes will prevent the parties from realising the full stated potential of the merger. In the present case, the acquisition may have arguably been motivated by the desire to remove Mannesmanna as a rival.

5.2 The Effect of the Acquisition

Acquiring Mannesmann did not just give Vodafone scale; it made Vodafone the largest telecommunications provider in the world. It also eliminated its most significant rival in Europe and the increased competition provided by the combined presence of Mannesmann and Orange in the UK. Prior to the acquisition, Vodafone and Mannesmann were rivals in Europe. The short-term effect of the acquisition was to give Vodafone market power. In the long-term Vodafone's performance suffered after the acquisition and it was not able take advantage of its increased

[1006] *See* Antony Savvas, *Vodafone Merger Slammed Over Lack of User Benefits*, COMPUTER WEEKLY 6 (Feb., 2000) (stating that telecom user organisations criticised Vodafone for not promising any benefits to users from the acquisition).

size and market power or deliver many benefits to consumers from the transaction. There can be many reasons for the decline in Vodafone's performance including its many other acquisitions as well as the historic bursting of the 'dot com bubble' and the consequent stock market crash that occurred shortly after its acquisition of Mannesmann was completed. Yet, the sheer size of this acquisition ensured that it was a significant contributor to Vodafone's future performance.

Further, analysts expressed skepticism that Vodafone's managers with no previous experience of managing such a large acquisition and integrating a company with such a different corporate culture from its own would be able to realise any efficiencies from the acquisition.[1007] Literature from business studies is also useful here because the manner in which the transaction is structured in terms of the degree of restructuring and integration required between the acquiror and acquiree can impact the realisation of efficiencies from the transaciton. There can be three categories of acquisitions based on the degree of integration required: (i) absorption acquisitions – here one company is absorbed into another and there is more interdependance and less organisational autonomy; (ii) preservation acquisitions – here the acquired company is allowed to operate more independantly and there is greater organisational autonomy; and (iii) symbiotic acquisitions – here both companies are benefited by the other and there is high degree of interdependance and organisational autonomy between the two.[1008] Each type of acquisition exemplifies different challenges for managers and different implications. Generally, the concerns with absorption acquisitions are the blending of two different firms with different cultures and resources.[1009] In preservation acquisitions the challenge is for the acquiror to

[1007] *See Mr. Boring Goes Shopping*, *supra* note 210; *Vodafone-Mannesmann: What Next?*, *supra* note 234.
[1008] *See* Rosenzweig, *supra* note 159, at 371.
[1009] *See* Rosenzweig, *id.*at 372.

respect the boundaries between itself and the acquired firm and at the same time develope new organisational capabilities without sacrificing existing sources of strength.[1010] Symbiotic acquisitions are the most complicated from an integration perspective because the acquirer needs to achieve strategic interdependance while maintaining the autonomy of the acquired firm.[1011]

In this case, one of the reasons for Vodafone's poor post-merger performance could be that the effort needed to integrate Vodafone and Mannesmann's operations slowed Vodafone's ability to respond to changing market conditions and consumer preferences in an industry where change was critical to success.[1012] The speed of innovations occurring in the telecommunications industry at the time, particularly from the growth of wireless services and the tremendous potential of the Internet resulted in a highly uncertain environment. Firms would need to be able to quickly respond to changes occurring in the environment.[1013] The acquisition made it more difficult for Vodafone to quickly respond to the changes in its environment and altering consumer preferences because the company was now much larger. Consequently, the acquisition made it more difficult for Vodafone to meet consumer needs.

In its decision conditionally allowing the acquisition, the Commission stated that, "the merged entity would be the only mobile operator able to capture future growth through new customers, because new customers would be attracted by the services offered by Vodafone Airtouch/Mannesmann on its own network."[1014] With the benefit of hindsight, it can be argued that

[1010] *See* Rosenzweig, *id.*at 372.
[1011] *See* Rosenzweig, *id.*at 372.
[1012] *See Vodafone-Mannesmann: What Next?*, *supra* note 234.
[1013] *See Vodafone-Mannesmann: What Next?*, *id*.
[1014] *See* Vodafone / Mannesmann, *supra* note 206, at § 5.

the Commission did not assess the merged entities future performance very well. Nonetheless, the Commission was correct in its emphasis on the importance of a "seamless pan-European mobile telecommunications services".[1015] However, the Commission did not consider other aspects of competition in the market that might also be affected by the acquisition, such as innovation. With respect to innovation, the Commission acknowledged that many services would be provided to mobile users in the future through access to the Internet. These include services that we now take for granted but which were at the forefront of technology in the year 2000 such as access to emails from mobile phones, video telephony and mobile ecommerce.[1016] The Commission only considered how having an integrated network would make it easier for companies to provide these services. However, other than through access to an extensive network, the Commission did not address in any detail how competition for the provision of these services and for innovation in the industry would be affected by the acquisition. Further, assessing the internal factors required for the smooth functioning of the post-merger firm may have given the Commission a better insight into predicting the likely contribution and relevance of the post-merger firm to the market.

The primary condition imposed by the Commission for approving the acquisition was for Vodafone to divest Orange. Orange was then bought by France Telecom to create the second largest telecommunications company in Europe in another large and expensive acquisition that further increased concentration in the industry. The divestiture of Orange did not, in all likelihood, restore competition in the market. Simply requiring the divestiture of Orange did not address the competitive gaps arising from the acquisition. Perhaps the Commission should also have take into consideration the competition that would have been

[1015] *See* Vodafone / Mannesmann, *id*. at § 42.
[1016] *See* Vodafone / Mannesmann, *id.* at §§ 15-17.

provided by Mannesmann as an independent entity after it combined with Orange and how this might have pushed Vodafone to improve its performance. Mannesmann and France Telecom's different strategic vision and perspectives of the future made each company value the assets it acquired through Orange in a different way. The Commission only really considered Orange's role in the acquisition when assessing how competition would be affected in the UK geographic market. However, it should have considered the possibly more significant future role that the combined presence of Mannesmann and Orange would have provided in other geographic markets and how this could have been beneficial to competition throughout Europe had it not combined with Vodafone.

Interestingly, the Commission carried out a more detailed analysis with respect to the provision of an integrated pan-European telecom network. The Commission found that it would be difficult for third parties to replicate the merged entity's network in the near future.[1017] The Commission considered whether competitors would be able to compete by achieving a similar pan-European scale through strategic alliances or through mergers and acquisitions.[1018] The Commission found that this would take at least three to five years and would not happen immediately. Recognizing that it would be hard for competitors to replicate the "giant global footprint" of Vodafone-Mannesmann in the short term, the Commission mandated the combined company to open its international network to competitors for three years. Further, the Commission pointed out discrepancies between what Vodafone's statements were in communications with the Commission and what it had stated to shareholders in its offer document for the takeover of Mannesmann. For instance, the Commission noted that Vodafone had stated to it that it did not believe that a single interconnected

[1017] *See* Vodafone / Mannesmann, *id.* at § 40.
[1018] *See* Vodafone / Mannesmann, *id.* at § 41.

pan- European network would develop imminently while stating in its own offer document of December 23, 1999 that the merged entity "would be able to provide a global platform by mid-2000 that will provide messaging services, location-based content and mobile e-commerce in a uniform manner on a global basis."[1019] Here, the Commission's deeper investigation into the conduct of Vodafone suggests that it could have followed a similar style and questioned the companies' statements in other aspects of the investigation as well, such as the claims of efficiencies arising from the transaction.

To conclude, Vodafone's acquisition of Mannesmann, one of the largest in history, was not a success. It limited Vodafone's ability to please consumers; it increased concentration and accelerated consolidation in the industry. On balance any benefits to consumers from the transaction are unclear while the reduced competition could be detrimental to consumers.

6. Facebook's Acquisition of Whatsapp

> *"Gavin Belson [CEO of fictional Google-type company Hooli]: Let me acquire you.*
>
> *Richard Hendricks [CEO of fictional start-up company Pied Piper]: What? No way.*
>
> *Gavin Belson:...It's the perfect fit. You get my infrastructure, I get your speed, and I get it today rather than in a month or two. What's the downside?*

[1019] *See* Vodafone / Mannesmann, *id.* at § 37.

> *Richard Hendricks: The downside is that everything I'm building becomes the property of your giant, soulless corporation.*
>
> *Gavin Belson: And what exactly do you think you're building? You're out there trying to get funding so you can hire people, scale up, roll out a product, IPO, and eventually become a publicly-traded what? Corporation.*
>
> *Richard Hendricks: We would be different.*
>
> *Gavin Belson: I see. I suppose once Pied Piper is a billion-dollar company, you'll seek out your competitors and help them. Please…you think you're building something different? No."*[1020]

This dialogue takes place in the TV sitcom 'Silicon Valley' which follows the path of a young entrepreneur, Hendricks as he tries to establish a disruptive technology start-up company. This dialogue between Belson, the chief executive of a large conglomerate and Hendricks provides an interesting perspective on the acquisition of Whatsapp by Facebook. In this fictional setting the large company tries to imitate the disruptive product of the small start-up company but fails to do so. It then tries to acquire the smaller company. As the CEO of the large company tells the CEO of the small company, the small company can give the bigger one faster access to its innovative technology and the bigger company can give the smaller one access to better infrastructure. These were some of the reasons for the acquisition by Facebook of Whatsapp, a company with a better product in messaging that Facebook found difficult to replicate in the short-

[1020] *Silicon Valley: Runaway Devaluation* (HBO Entertainment, Apr. 19, 2015).

term. Interestingly, in the fictional setting in the TV show the offer of the acquisition is rejected because the young and idealistic chief executive believes he wants to build a company that would be "different" from a "giant soulless corporation". The older and more experienced chief executive effectively calls this belief that he will be different, the hubris of the younger man.

In October, 2014, Facebook, an online social networking service, completed its acquisition of Whatsapp, a mobile communications service, for a landmark amount of US $19 billion in a transaction that was famously formed after Whatsapp's founder Jan Koum was invited to spend a few days at the home of Facebook's CEO Mark Zuckerburg and was sealed with a bottle of 'Jonnie Walker' scotch, highlighting the informal nature of the negotiations and the important role that the personalities heading these companies played in this acquisition decision.[1021]

This acquisition raised competitive concerns, at least in the EU because market data collected by the Commission suggested that the parties had a high combined market share of 30% to 40% in messaging services in iOS and Android smart phones while competitors in this market had a much smaller share of the market.[1022] In addition, the Commission noted that the market shares of Facebook and Whatsapp were calculated based on the data given by the parties and may have underestimated their actual market positions but the Commission did not have sufficient data to independantly measure the competitive importance of the parties to the acquisition.[1023] However, the

[1021] *See* Parmy Olson, *Facebook Closes $19 Billion Whatsapp Deal,* FORBES (Oct. 6, 2014), http://www.forbes.com/sites/parmyolson/2014/10/06/facebook-closes-19-billion-whatsapp-deal/.
[1022] *See Facebook / Whatsapp*, Commission of the European Communities Decision No.M.7217 (Oct. 3, 2014), http://ec.europa.eu/competition/mergers/cases/decisions/m7217_20141003_20310_3962132_EN.pdf [hereinafter Facebook / Whatsapp].
[1023] *See* Facebook / Whatsapp, *id.*at § 97.

Commission felt that large market shares may not be sustainable for a long period of time in the fast-growing and dynamic market for communication apps and were not an indication of market power and thus, may not cause a lasting damage to competition.[1024] However, in other Internet-related sectors such as travel websites, a trend towards consolidation has been found to increase concentration in the market as it matures and so the Commission should not have so readily assumed that because markets are dynamic, it is not possible to achieve market power through acquisitions.[1025]

The critical issue in Facebook's acquisition of Whatsapp was whether Facebook and Whatsapp were 'close competitors' in the relevant market. In fact McGeown & Barthélemy describe the Commission's decision in this case as providing "interesting insights into its thinking on closeness of competition".[1026] In order to understand the degree and extent of the competition between the two it is relevant to understand why Facebook acquired Whatsapp and why it paid such a significant amount for the acquisition. Another related issue of concern to competition from this acquisition was the impact of the acquisition on innovation. Further, a matter of concern was that given the potential for reduced competition and innovation from the merger, the Commission did not discuss the possible efficiencies from the transaction at any length. In fact it is not clear as to what the possible efficiencies arising from this acquisition are and this makes it even more crucial to understand why the acquisition was made.

[1024] *See* Facebook / Whatsapp, *id.* at § 99.
[1025] *See Eat or Be Eaten*, THE ECONOMIST (May 9, 2015), http://www.economist.com/news/business/21650559-wave-consolidation-prospect-americas-big-internet-firms-look-set-divide.
[1026] *See* McGeown & Barthélemy, *supra* note 785, at 448.

It is also important to note that the Commission and US antitrust authorities both cleared the merger after an investigation and while agencies in both jurisdictions were concerned about the acquisition; they concluded that competition would not be affected and consumer welfare would not reduce from the merger.

6.1 Why did Facebook Acquire Whatsapp?

High-technology companies have a history of acquiring high growth, start-up companies, such as Google's acquisition of YouTube in 2006 and Facebook's acquisition of Instagram in 2012.[1027] Often these acquisitions are criticised for being extravagant as a lot of money is paid for a company with an unproven product. Some of these acquisitions have proven to be very successful and this has encouraged more acquisitions to be made. Ultimately, many of these acquisitions are made when the market is still nascent and reflect manager's intuition and beliefs about the future direction of growth in a market rather than on facts and figures.

Some companies engage in M&A to stop their competitors from acquiring the target.[1028] For instance one of the reasons Google is said to have acquired Waze, a community based traffic and navigation application, is because Facebook was interested in buying Waze, and it did not want Facebook to acquire Waze. Some analysts feel that the acquisition of Whatsapp was motivated by Facebook's desire to keep Whatsapp away from Facebook's competitors.[1029] Google was one such key competitor

[1027] *See* David Gelles, *For Facebook, It's Users First and Profits Later*, THE NEW YORK TIMES (Feb. 20, 2014), http://dealbook.nytimes.com/2014/02/20/for-facebook-its-users-first-and-profits-later/.
[1028] *See* Peter Curwen, *WhatsUpp*, 16(3) INFO (2014), http://www.emeraldinsight.com/doi/abs/10.1108/info-02-2014-0011.
[1029] *See also* Gelles, *supra* note 1027.

that had reportedly offered US $10 billion for Whatsapp but the offer was rejected by Whatsapp's management.[1030] One analyst argued in the context of Facebook's acquisition of Whatsapp that one reason to buy start-ups is to keep competitors at bay because it is impossible to know which new technological innovation will attract consumers in a large scale.[1031] The literature from business studies suggests that bidding wars in acquisitions occur more frequently in innovation-driven markets because managers perceive acquisitions to be less uncertain compared to the risks involved in developing innovations internally within the firm, since the performance of the acquired firm's product or service can be assessed prior to the acquisition.[1032]

Accordingly, the reasons for Facebook's acquisition of Whatsapp have to be seen in the context of an industry that is characterised by frequent and disruptive innovation. The Commission also acknowledged in its review of the acquisition that the market for consumer communications is a new and fast-growing market, characterised by short innovation cycles and frequent market entry.[1033] The pace of competitive change has increased so significantly in this market that it is difficult to predict how the structure of the market will be in a few months. As business scholars state, the only way to survive in such a competitive environment is to accept and adapt to disruptions.[1034] In such an environment, Facebok has effectively removed a firm from the market that could have changed the way the communications market evolved. Consequently, it may be possible to argue that Facebook acquired Whatsapp in order to extend its domination

[1030] *See* Gelles, *id.*
[1031] Curwen, *supra* note 1028.
[1032] *See* HITT et al., *supra* note 139, at 188.
[1033] *See* Facebook / Whatsapp, *supra* note 1022, at § 99.
[1034] Adam Hartung, *Disrupt to Thrive in 2011: Model Facebook, Groupon, Twitter* (Jan. 10, 2011), http://adamhartung.com/disrupt-to-thrive-in-2011-model-facebook-groupon-twitter/.

over the market for communication services by removing a potential competitor of significance from the market.[1035]

Some analysts have described Facebook's acquisition of Instagram and of Whatsapp as acquiring a more popular product/service within its niché than Facebook's own competitive offering of the same product/service. Hartung argues that Whatsapp with its different organisation and understanding of trends will help Facebook to grow in markets where it would have likely lost out to Whatsapp before.[1036] Further, Facebook recognised the changing market trends making these products popular and decided to make these 'disruptive' companies such as Instagram and Whatsapp a part of its own organisation so that it would not have to compete with these companies.[1037] In this way Whatsapp is likely to be most profitable and useful to Facebook through its ability to create disruptions in the market.

Considered from a strategic perspective, achieving growth in mobile users is said to be an important objective for Facebook and one reason provided for the acquisition is that Facebook was attracted to Whatsapp's much faster growth in mobile users.[1038] In fact Whatsapp stands out in the industry in terms of its number of users, growth of new users and intensity of use on mobile phones.[1039] Further, there is speculation that Facebook was concerned that the changing market for communication services and growing consumer preferences for mobiles such as for sharing photographs and for chatting may erode the value of Facebook's flagship platform in the future. One scholar has stated that Facebook's declining user numbers made it necessary to

[1035] *See* Hartung, *id.*
[1036] *See* Hartung, *id.*
[1037] *See* Hartung, *id.*
[1038] *See* Matt Swider, *Why did Facebook Buy Whatsapp?*, TECH RADAR (Feb. 20, 2014), http://www.techradar.com/news/internet/web/what-s-up-with-facebook-buying-whatsapp-it-s-about-the-developing-world-1226429.
[1039] *See* Swider, *id.*

acquire new users and the easiest way to do so was via an acquisition.[1040] One commentator went as far as to state that Facebook is effectively buying its way out of competing in a dynamic market.[1041] Consequently, it may be argued that Facebook acquired Whatsapp in order to prevent its own product offering from becoming irrelevant through the growth of innovative services offered by Whatsapp and to defend its position in the market for consumer communications and social networks.[1042] From the perspective of improving consumer welfare, it may be possible to contend that Facebook would have taken more efforts to innovate in response to the increased competition provided by Whatsapp if it had not acquired Whatsapp. On the other hand, Hartung argues that those companies that try to defend their market positions against the challenges of new entry and market shifts by trying to improve their own product offering are often unsuccesful and new entrants with a disruptive and innovative product offering win these battles.[1043] Therefore, Facebook's strategy of defending its market position by making an acquisition may be a smarter and more succesful strategy.[1044]

Nevertheless, from the perspective of rationality it is worth questioning why Facebook paid such a significant amount i.e., US $19 billion for Whatsapp when Whatsapp generated only US $10.2 million in revenues and in fact it made a loss of US $138.1 million in the period before the acquisition i.e., 2012-13.[1045] Moreover, the rationality of Facebook's decision to pay such a large amount should also be questioned given that the market has

[1040] Curwen, *supra* note 1028.
[1041] *See* Gelles, *supra* note 1027.
[1042] *See* Hartung, *supra* note 1034.
[1043] *See* Hartung, *id.*
[1044] *See* Hartung, *id.*
[1045] *See* Sarah Frier, *Facebook's $22 Billion Whatsapp Deal Buys $10 Billion in Sales*, BLOOMBERG BUSINESS (Oct. 29, 2014), http://www.bloomberg.com/news/articles/2014-10-28/facebook-s-22-billion-whatsapp-deal-buys-10-million-in-sales.

low barriers to entry and fast-chaging consumer preferences.[1046] Rational firms would only pay such a high amount for an acquisition when they are certain of achieving fairly high potential efficiencies. However, other than access to Whatsapp's large user-base, Facebook has not made clear as to what are the potential efficiencies from this transaction. Further, as this transaction was financed substantially through stocks rather than through cash, it may also reflect Facebook's overconfidence in the value of its stock rather than any claimed efficiencies from the acquisition. A similar reasoning was used by the dissenting opinion in the FTC's decision in the Novazyme case, discussed in the next section.

Another interesting facet of Facebook's acquisition of Whatsapp that business analysts are wondering about is how Facebook intends to make profits from this acquisition since at present Whatsapp is loss-making since it is provided free of charge in many jurisdictions and is free from advertising and will continue to be free from advertising in the near future.[1047] Interviews with the CEO of Facebook suggest that the acquisition of Whatsapp is not about making profits, at least in the present, but instead is about gaining users.[1048] Facebook has said it wants to encourage Whatsapp to reach the milestone of a billion users and only then will it monetise its investment in Whatsapp. However, this is a risky strategy because the dynamic nature of the market makes it possible that by the time Whatsapp reaches its target of one billion users, the market would have changed and Whatsapp may not be popular anymore.

The discussion in this section shows that the nature of this acquisition may be characterized as strategic rather than profit-

[1046] Curwen, *supra* note 1028.
[1047] *See Eat or Be Eaten*, *supra* note 1025.
[1048] *See* Curwen, *supra* note 1028 (arguing that valuing the acquisition at such a high amount based on current or future user numbers is dangerous as it is a reminder of what occurred in the previous Internet bubble).

maximizing. A rational firm intending to maximize profits would likely not have paid so much for a firm that has not even produced profits as yet. Accordingly, insights from business strategy could be helpful to understand the reasons behind Facebook's acquisition of Whatsapp. Whatsapp posed a threat to Facebook due to its fast-growing users in the sphere of social messaging and photo sharing in smartphones through its increasingly popular messaging service and given the changing nature of the market Facebook may have believed that Whatsapp would prove to be an increasingly significant competitor in the future.

6.2 Are Facebook and Whatsapp Close Competitors?

The Commission found that Whatsapp and Facebook compete in two different markets i.e., the market for consumer communications services and the market for social networking services. However, Facebook and Whatsapp operate the two most popular messaging services being used in the market right now. Despite this fact, the Commission did not find Facebook and Whatsapp to be close competitors in both markets. The Commission stated that the main drivers of competition in the market for consumer communications were: (i) the functionalities offered, and (ii) the extent of the network.[1049] On this basis, Facebook and Whatsapp were found to differ in the following ways: (i) in the way the services are accessed and contacts are formed (Facebook via membership on the Facebook social network and Whatsapp via phone numbers and phonebook contacts), and (ii) by offering different user experiences (Facebook's messenger is integrated with its other services, which is different from Whatsapp's phone based messenger).[1050] The Commission also found that Whatsapp competed more

[1049] *See* Facebook / Whatsapp, *supra* note 1022, at § 86.
[1050] *See* HITT et al., *supra* note 139, at 8.

closely with Viber while Facebook's messenger services competed more closely with Google's 'Hangouts' service and with Twitter.[1051] The Commission observed that consumers generally install and use several communication apps on their smartphones simultaneously, and in particular, many consumers install and use Facebook and Whatsapp at the same time.[1052] Further, there are no unique features offered by Facebook or Whatsapp that are not also offered by the many other players in the market.[1053] Thus, the Commission concluded that Facebook and Whatsapp do not compete directly with each other but offer complimentary services to users.

The Commission further noted that competition between providers of communication apps is to offer the best "communication experience" which means offering better functionalities such as by improving reliability and offering more privacy.[1054] However, considered from a business perspective, this is a rather limited view of competition in this market. For instance, it has been noted that first-movers may have significant advantages in innovation markets because they can attain above-average returns until competitors are able to respond.[1055] Competition in technology and innovation-driven markets is thus, to create more innovative products and to be the first to do so. The competition is to create products that can disrupt the market and make the products of competitors irrelevant. Hence, it can be argued that the competition is not only to create a better "communication experience" but to change the very nature of the communication experience being offered by competitors. In the process, consumers can experience better and more innovative products.

[1051] *See* Facebook / Whatsapp, *supra* note 1022, at § 106.
[1052] *See* Facebook / Whatsapp, *id.* at § 87.
[1053] *See* Facebook / Whatsapp, *id.* at § 104.
[1054] *See* Facebook / Whatsapp, *id.* at § 87.
[1055] *See* HITT et al., *supra* note 139, at 138.

With respect to the market for social networking services, the Commission examined whether Whatsapp was a potential entrant in the market for social networking services. The EC Merger Guidelines state that mergers with a potential competitor are anticompetitive only if the potential competitor already exerts a significant constraining influence or there is a significant likelihood that it will grow into an effective competitive force.[1056] This is a rather ambiguous and difficult standard where the potential competition is in dynamic markets. Further, in this case the Commission did not really examine whether or what kind of influence Whatsapp exerted on Facebook. This is reflected in the following discussion.

Several third party respondents to questionnaires sent by the Commission were of the view that absent the acquisition Whatsapp would have competed with Facebook in the provision of social networking services; others were of the view that Whatsapp was already competing with Facebook in the market for social networking services.[1057] The Commission however, ignored these responses and did not consider Whatsapp to be a potential competitor to Facebook in the market for social networking services because it said there was no indication that Whatsapp would enter the market and compete with Facebook in the provision of social networking services.[1058] The Commission concluded that Facebook and Whatsapp served different markets and fulfilled different consumer needs.[1059] Here the Commission was wrong to not further explore the third party responses, which suggested that in a way Whatsapp had already entered the market for social networking services by gradually providing more of the services that Facebook was providing on its platform, such as the sharing of content between groups of people. These features are

[1056] *See* § 60, EC Merger Guidelines, *supra* note 816.
[1057] *See* Facebook / Whatsapp, *supra* note 1022, at § 144.
[1058] *See* Facebook / Whatsapp, *id.* at § 145.
[1059] *See* Facebook / Whatsapp, *id.* at § 157-158.

gradually allowing consumers to use Whatsapp instead of Facebook for some kinds of social networking activities. Whatsapp may have continued to develop such services in competition to Facebook in the future. The Commission could have further explored the trends in the use of Facebook and Whatsapp over time and whether consumers were inreasingly using Whatsapp for activities that they usually performed using Facebook. The acquisition could then curtail Whatsapp's developing many of these features in competition with Facebook. It is also worth noting that ultimately the Commission did not make a definite statement about whether Whatsapp was a competitor in social networking services. The Commission felt that including Whatsapp in this market would also introduce many other players into this market and therefore, the acquisition would not significantly increase concentration in this market. Here of course it is worth noting that the size of these other competitors was much smaller than Facebook and Whatsapp.

This view of competition in the market in which Facebook and Whatsapp compete, when considered along with an analysis of why Facebook acquired Whatsapp suggests that Whatsapp posed a competitive threat to Facebook and was a close competitor in this market. The acquisition therefore may have had an impact on innovation as Whatsapp's presence as an independent entity may have given Facebook more incentives to innovate and improve its product. The Commission should have assessed the reasons for the acquisition in greater detail including why Facebook paid so much for Whatsapp and the potential efficiencies from the acquisition.

7. Genzyme's Acquisition of Novazyme

This case presents an interesting example of a merger in an innovation market where the FTC recognised that firms can take decisions that are not profit maximizing. Genzyme's acquisition of Novazyme occurred in a highly specialised segment of the pharmaceuticals industry.[1060] This was a merger to monopoly in the market for the research and development (R&D) of a cure for a rare and fatal medical condition in infants and children called Pompe disease.[1061] The two companies were the only ones developing enzyme replacement therapies for Pompe disease and the merger could have reduced the pace of R&D efforts to develop these therapies as well as potentially stopped the development of a second therapy for Pompe disease.[1062] Competition between Genzyme and Novazyme was important because the race to be the first to reach the market with a therapy for Pompe disease increased the pace of research to find a cure for the disease.[1063] The first company to develop a therapy would be given legal protection and seven years of market exclusivity.[1064] The law governing therapies for rare diseases however, allows this period of market exclusivity to be broken if the second therapy is superior to the first therapy.[1065] However, after the acquisition, Genzyme had the ability and arguably, the incentive to terminate either its own or Novazyme's research programme in Pompe disease and to prevent a second and better therapy for Pompe disease to be developed.[1066] As such the merger raised serious concerns about anti-competitive effects

[1060] *See* Bailey, *supra* note 10, at 363.
[1061] *See* Federal Trade Commission Press Release, *FTC Closes its Acquisition of Genzyme Corporation's 2001 Acquisition of Novazyme Pharmaceuticals, Inc.* (Jan. 13, 2004), https://www.ftc.gov/news-events/press-releases/2004/01/ftc-closes-its-investigation-genzyme-corporations-2001.
[1062] *See Genzyme Corporation's Acquisition of Novazyme Pharmaceuticals, Inc.*, File No. 021-0026, 4 (Jan. 13, 2004) (Commissioner Mozelle W. Thompson, dissenting), https://www.ftc.gov/system/files/attachments/press-releases/ftc-closes-its-investigation-genzyme-corporations-2001-acquisition-novazyme-pharmaceuticals-inc./thompsongenzymestmt.pdf [hereinafter Thompson Dissent].
[1063] *See* Thompson Dissent, *id.* at 4.
[1064] *See Genzyme Corporation's Acquisition of Novazyme Pharmaceuticals, Inc.*, 11 (Jan. 13, 2004) (majority statement of Chairman Timothy J. Muris), https://www.ftc.gov/system/files/attachments/press-releases/ftc-closes-its-investigation-genzyme-corporations-2001-acquisition-novazyme-pharmaceuticals-inc./murisgenzymestmt.pdf.
[1065] *See* Thompson Dissent, *supra* note 1062, at 7.
[1066] *See* Thompson Dissent, *id*. at 4-5.

because it eliminated incentives to be the first to find a cure for Pompe disease as well as incentives to create a better therapy than the competitor.

Nevertheless, in its statement allowing the merger FTC's Chairman Muris argued that despite incentives to act anti-competitively, the combined company would continue to engage in R&D efforts to develop therapies for Pompe disease at the same pace as before because of the personal interests of the executive managing the combined company's Pompe disease programme. This manager was from Novazyme and had two children suffering from Pompe disease who would have died if a therapy was not developed in time and so he had compelling reasons to expedite the finding of a therapy even if it was not a profit maximizing strategy for the firm. This was one of the factors in the FTC's decision allowing the merger. In this case the FTC recognised that in certain cases it is appropriate to depart from the economic model of rationality in favour of fact-specific, behavioural considerations.[1067] Interestingly, the dissent pointed out that this executive in charge of the Pompe program whose powerful personal incentives could play a part in overcoming the anticompetitive effects of the merger, "could not exercise such influence over Genzyme's operation and left the company only a year after the merger."[1068] This aspect of the dissenting opinion was not addressed in the majority decision.

The FTC was thus, divided in its opinion about the anticompetitive effects of the merger with two separate dissenting opinions expressing their concerns about the impact of this merger on innovation in the market for Pompe therapies. The dissent was particularly concerned that the majority opinion did not place enough importance on the need to encourage innovation in the market in the long-term and that the precedent set by this

[1067] *See* Bailey, *supra* note 10, at 364.
[1068] Thompson Dissent, *supra* note 1062, at 10.

decision would allow mergers which dampened potentially beneficial innovation efforts. Another aspect of the dissenting opinion that is worth noting is that the dissent felt that Genzyme had demonstrated an intention to anticompetitively monopolise the market for the development of Pompe therapies by acquiring all competing efforts to develop therapies for Pompe disease over a period of time.[1069] Moreover, the dissent felt that the large amount paid by Genzyme for acquiring a small company without a proven product such as Novazyme along with the merged company's announcement that it would delay the launch date for Novazyme's therapy by four years suggested that the true motives of the merger and its effect was anticompetitive.[1070] Finally, the dissent felt that there were no demonstrable benefits from the merger such as any efficiency that could not be achieved by the parties in the absence of the acquisition.

From a legal perspective, the core of the disagreement between the majority and dissent in this case may have been due to different interpretations of the US Merger Guidelines. Specifically, they disagreed about whether the US Merger Guidelines created a presumption against a merger to monopoly with the majority arguing that no such presumption was warranted under the Guidelines and the dissent arguing to the contrary. The majority accordingly felt that even if it was a merger to monopoly, anticompetitive effects needed to be proven and in this case there were reasons to believe that despite the incentives to act anticompetitively, the acquisition would not have an anticompetitive effect.

8. Conclusion

More than in other aspects of competition law, merger analysis highlights how firms take decisions that depart from the strict

[1069] *See* Thompson Dissent, *id.* at 4.
[1070] *See* Thompson Dissent, *id.* at 6.

assumptions of rationality. This chapter has shown how decisions to merge can often be suboptimal and motivated by managerial biases such as overconfidence bias or hubris. One motivation for M&A activity is to remove rivals from the market. Further, in dynamic markets bigger firms engage in M&A to remove a disruptive product from the market. These mergers may not be undertaken to realise efficiencies. Another factor in the competitive assessment of acquisitions is the premium paid by the acquirer for the target. The substantial premiums paid for the acquisitions studied in this chapter are a cause to question the rationality of the acquisition decision. Conducting merger review on the basis that firms only take profit maximizing decisions can thus lead to inaccuracies in understanding the effects of mergers.

Current approaches to merger analysis rely on simulation models to predict the effects of a merger. These models do not always make accurate predictions because they do not adequately represent the complex reality of merger situations. Further, simulation models do not consider the effect of a merger on innovation or on product quality and choice. Focusing only on price effects in merger analysis does not provide a complete picture of the effect of a merger as mergers can affect markets and competition in different ways. Behavioural and business studies can help to understand the reasons for a merger, which can in turn help agencies to determine the likely impact of a merger on competition and on innovation. Further, when firms are competing in different markets, these tools can help to outline the markets in which the merger is more likely to be problematic. The Commission is already using tools of analysis that are adapted from business studies to determine the closeness of competition between merging parties.[1071] In this way perhaps the

[1071] In *Crown Holdings*, the Commission examined the competitive advantages of the merging parties vis-à-vis competitors in the market to see if the merging parties were close competitors. This analysis is very similar to the kind carried out in business strategy. *See* McGeown & Barthélemy, *supra* note 785, at 448-49 (analysing *Crown Holdings / Mivisa*, Commission of the European Communities Decision No. M.7104

EU is more open to incorporating tools from behavioural and business studies to merger review. However, the EU has a narrower approach to mergers in innovation markets than the US. With innovation mergers, it could be argued that the US is more open to including behavioural considerations than the EU. The case studies conducted in this chapter show that there is a value to examining the business and behavioural aspects of a merger to have a deeper understanding of the competitive implications of a merger. This work is of a descriptive nature and it is premature at this stage to draw any further conclusions from it. The tools used in this chapter do not provide any definite predictions of how a merger will perform in the future but provide good indications about the possible impact of a merger. Further work needs to be done to determine to what extent these insights can be incorporated into the existing framework of merger analysis.

(Mar. 14, 2014), http://ec.europa.eu/competition/mergers/cases/decisions/m7104_20140314_20212_3612433_EN.pdf).

CHAPTER VI

CONCLUSIONS

Firms often take decisions that depart from rationality. The case studies presented in this book strengthen this conclusion in the context of competition law by highlighting how firms take decisions that do not follow the paradigm of rational, profit-maximization. Moreover, literature from different disciplines shows that bounded rationality in firms is systematic rather than random and firms often knowingly take boundedly rational decisions. One reason for bounded rationality is the behavioural biases of managers. The discussion in this book has described some of the behavioural biases of managers and how these biases are perpetuated in the decision-making of firms. One bias that is particularly prevalent in managerial decisions is overconfidence bias. This can more particularly effect decisions to merge or enter new markets.

The other reason for the bounded rationality of firms described in this book is due to flaws in the internal decision-making processes of firms. This can cause problems such as competitive inertia and strategic persistence that slow a firm's response to changing market conditions and make its decision-making structures rigid. Firms may also have different objectives, such as increasing market share that cause departures from profit maximization. Further, bounded rationality can subsist in firms because market forces that are traditionally considered to correct departures from rationality such as learning and selection through competitive pressures do not always operate in the manner theorized. Learning is difficult because the complexity of markets causes feedback from actions to be ambiguous. Also, managerial biases can curtail effective evaluation of market situations by managers. In addition, competitive pressures do not always weed out boundedly rational firms from the market.

For the purposes of this book, management studies and the behavioural theory of the firm are the two principle disciplines from which evidence of bounded rationality has been used. The empirical findings of management studies serve to supplement the behavioural theory of the firm. The various linkages that can be drawn between these disciplines have been discussed in chapter two of this book. Both disciplines relate a firm's internal processes to its competitive position in the market. Further, both disciplines emphasize the cognitive limitations of managers and the effect of organizational structures on firm behaviour. This understanding of firm behaviour is of relevance to competition law as it helps to bring the understanding of firm decision-making studied in competition law closer to reality.

Since behavioural insights do not provide a clear way to measure and predict how market outcomes will change when firms are boundedly rational, the literature on bounded rationality cannot normatively contribute to competition law under a total welfare or consumer welfare standard. This has lead scholars to question the normative relevance of bounded rationality to competition law. For bounded rationality to fit within a normative framework of competition law, an alternative to the welfare-based approach must be considered. Chapter three of this book provides a possible path forward. Three principal normative approaches were highlighted in this book. These are consumer welfare, total welfare and protecting economic freedom. Despite the large number of discussions on the goals of competition law, there is still no consensus about what competition law's objectives should be. In the US, there is some consensus that the goal of competition law is to maximize consumer welfare. However, the meaning of consumer welfare remains unclear. It has been interpreted to mean different things such as lower prices, greater choice, innovation and preventing wealth transfers from consumers to producers. Consumer welfare has also been criticised for its focus on short-term goals at the cost of important long-term objectives such as innovation.

On the other hand, the goals of competition in the EU reflect its more complex history of political, economic and social objectives. Accordingly, EU competition goals are not limited to consumer welfare though consumer welfare has gained broad acceptance among EU competition law scholars.[1072] Protecting economic freedom and the competitive process is an example of a competition goal that has a European heritage in the Ordoliberal school of thought and still finds a place in EU competition law. As the discussion in Chapter three suggests, behavioural insights could make a contribution to competition law if the normative basis for competition law was the Ordoliberal goal of protecting the competitive process. Ordoliberals argue that the objective of competition law should be to ensure a free market where freedoms of market participants are protected. This is based on the idea that consumers are benefited when firms are forced to compete with each other. Further, the process-oriented view of markets is formed on the understanding that market outcomes cannot be ascertained in advance.[1073] This is because markets evolve over time and outcomes can change depending on how various factors interact with each other and with the evolution of technology in the market. Consequently, the goal of protecting the competitive process does not require a prediction of market

[1072] According to the Guidelines for Vertical Restraints published by the Commission, Article 101 TFEU is meant to catch only those restrictions that are likely to result in consumer harm. Moreover, the Guidelines on the Commission's Enforcement Priorities under Article 102 TFEU also state that the Commission will no longer pursue cases that do not result in consumer harm. *See* Anne C. Witt, *From Airtours to RyanAir: Is the More Economic Approach to EU Merger Law Really about More Economics?*, 49 COMMON MARKET LAW REV. 217, 220 (2012).

[1073] *See* LACHMANN, *supra* note 404, at 2.

outcomes and for this reason it is particularly suited to behavioural insights. The argument about ordoliberalism in this book is that behavioural insights can be inserted better in a normative view that protects the competitive process as such than in a neoclassical instrumental view focusing on welfare maximization. For the sake of clarity it is noted that this work in no way argues that existing normative frameworks in competition law should be replaced with the Ordoliberal goal of protecting the competitive process.

Chapter three also highlights other advantages of the process-oriented goal such as its ability to incorporate a dynamic view of competition, whereas consumer welfare focuses on static competition and short-term prices. Further, some of the differences in EU and US competition law highlighted in this book can be attributed to the influence of Ordoliberal thought in the EU. One finding of chapter three is that since Ordoliberal thought has influenced EU competition law, behavioural insights can be more easily incorporated into the framework of EU competition law compared to US antitrust law. Finally, an insight of chapter three is that competitive strategic analysis undertaken in business studies can be a useful tool for assessing the impact of firm conduct on the competitive process in the market in the long-term.

1. Predatory Pricing

The aspect of predatory pricing to which chapter four draws attention is the role of intention and recoupment. Traditional neoclassical literature from the Chicago School has dismissed intent evidence as of “no value” and a “fruitless enquiry”.[1074] As Justice Easterbrook stated in the *Rose Acre Farms* case, the reason for this is that all firms “intend” to cut prices in pursuit of

[1074] Waller, *supra* note 3, at 315.

business so punishing vigorous and aggressive price cuts will punish the forces that motivate beneficial competition.[1075] As business strategy shows, this is not entirely true. All firms do not engage in price competition. Some firms also compete by improving the quality of their offerings or through innovation. In fact lower prices in the market in the short-term can come at the cost of long-term innovation. Another insight from business strategy is that firms' decisions to predate will depend on the extent to which they share important markets with other firms and how likely they think they are to succeed in predation.

In the context of bounded rationality, intention can be relevant because firms may cut prices with the intention of eliminating competitors even when there is little or no chance of recouping through higher prices. On the other hand, US law on predatory pricing does not even consider evidence of firm behaviour if it is inconsistent with rationality. Both intent and recoupment are used to identify which price cuts should be punished as unlawful. However, US law uses recoupment and EU law uses intent to make this distinction. The choice of intent or recoupment in predatory pricing law depends on the objectives of competition law highlighted above. EU predatory pricing law's intent requirement is probably a result of its concern with protecting competition and the influence of Ordoliberal thought whereas US law requires recoupment because it wants to encourage low prices.

Intent requires understanding how business decisions are taken and thus, provides an opening for insights from management and behavioural studies to be introduced into predatory pricing law.[1076] The Commission examines the business rationale of price cuts to assess intent in the EU. If there is no rational business justification behind particular conduct other than its adverse

[1075] *See A.A. Poultry Farms, Inc*. v. *Rose Acre Farms*, 881 F.2d 1396, 1401-02 (1989).
[1076] *See* Waller, *supra* note 3, at 315.

effect on competitors, such conduct is inferred to be exclusionary.[1077] Business strategy can help to clarify the purpose and effect of business decisions from the perspective of intent.[1078] Accordingly, due to its intent requirement, EU predatory pricing law is more open to behavioural insights than US law. The following discussion summarizes the insights from the case studies conducted in this chapter.

The first case study relating to predation by Cardiff Bus illustrates how firms can enter into a campaign of predation without intending to recoup the losses arising from the campaign. This is because excluding competitors from the market can be an important motivator for a firm. Cardiff Bus' behaviour showed that it disregarded its own profits in order to ensure that the entrant was not able to establish a presence in the market. Cardiff Bus took commercially irrational decisions because it wanted to exclude a competitor without intending that once exclusion was achieved it would recoup its losses. Interestingly, while Cardiff Bus was held guilty of predation by the OFT, it would not have been found guilty of predation if the case was brought under US law because recoupment was unlikely.

The second case study discusses the alleged predation by American Airlines. This case study elucidates how decisions to engage in predation can also arise from behavioural biases such as availability bias and loss aversion. In this case internal company documents showed that American Airlines was worried because it had recently observed that Delta airlines had suffered large losses due to a similar type of competitive entry into its hub market and American Airlines felt that it would suffer the same losses if it allowed low cost providers to establish a presence in its hub market.

[1077] *See* Waller, *id.* at 334.
[1078] *See* Waller, *id.* at 334-35.

The final case study on predation is connected to Amazon's sale of books and ebooks. It contends that recoupment is not essential for predation because even when there is no recoupment a firm can price below cost with the intention of excluding competitors. This study uses business strategy to investigate Amazon's intent to exclude. This involves understanding the nature of competition in the retail sector, the reasons for Amazon's focus on low prices and market share and Amazon's past aggressive conduct towards publishers and other competitors. Amazon's behaviour can be explained as exclusionary when seen from the perspective of Amazon's long-term interests in the book and ebook market as a whole and its desire to eliminate both booksellers and publishers and acquire dominance as a vertically integrated company in this sector. While Amazon would not be guilty of predatory pricing under US law because of the absence of recoupment, it could be possible to argue that Amazon acted with exclusionary intent to meet the requirements of EU predatory pricing law.

2. Mergers

Chapter five finds that decisions to merge are complex and involve the interplay of various factors. Empirical studies show that a majority of mergers are not carried out for efficiency reasons. Mergers are often a result of managerial biases such as hubris and overconfidence, or a product of strategic considerations such as a response to entry by competitors. Moreover, many merger decisions do not work out as planned. Merger analysis is particularly suited to behavioural insights because it requires predicting market outcomes in the long-term, which affords certain challenges under traditional, welfare-based approaches. While simulations are used to predict merger outcomes, various limitations to these models constrain their ability to provide accurate predictions that reflect market realities. The case studies conducted in chapter five show that insights from management studies pertaining to bounded rationality could be useful to understanding the motives behind mergers, particularly when these decisions are taken to eliminate close or potential competitors. For instance, competitor analysis is a tool in management studies that can be used to determine if merging firms are actual or potential competitors and exhibit rivalry. This chapter also compares US and EU merger laws and concludes that within the constraints of this research project, US merger law in innovation markets is more open to bounded rationality than EU merger law. The insights from each of the case studies conducted in this chapter are summarised below.

In the Falstaff case, this study finds that the decision to acquire was taken for strategic rather than for efficiency reasons. The acquisition most likely failed because managers' bounded rationality prevented a proper assessment of the costs involved in the internal reorganisation of the company post-merger. The issue in this case was whether Falstaff would have entered the market *de novo* if it had not been allowed to enter by acquisition. The US Supreme Court's decision was that objective evidence of economic conditions was more relevant than the company's managerial statements in determining whether the firm would have entered *de novo*. Yet, this study shows that different people can interpret 'objective evidence' differently. In complex market environments there are often no correct answers and even evidence that is characterised as objective acquires an element of subjectivity due to differing interpretations of the data. Accordingly, to predict Falstaff's behaviour based purely on objective evidence while ignoring managerial factors could provide an inaccurate understanding of whether Falstaff would have entered the market *de novo*.

The Vodafone case study is another example of an acquisition that failed probably because it was not motivated by efficiencies. As with Falstaff, Vodafone's decision to acquire was not taken with a proper assessment of the internal organisational factors involved in its successful execution. The reasons for the acquisition in all likelihood had more to do with managerial ego and hubris than potential efficiencies. One reason for Vodafone's decision to acquire Mannesmann was that Mannesmann posed a competitive threat to Vodafone due to its superior presence in continental Europe and its plans of expanding its presence into other geographical areas where it would compete directly with Vodafone. Further, the large amount paid for the acquisition also suggests that the intention behind the acquisition was anticompetitive because such a large amount of money could not be justified by potential efficiencies from the acquisition. Considered from the perspective of intent, rational firms would not pay such large amounts of money to acquire a company absent anticompetitive intent. European authorities did not examine these aspects of the acquisition in any detail in their analysis of the merger.

Similarly, the third case study argues that Facebook's acquisition of Whatsapp may be characterised as the acquisition of a potential competitor, when observed through the tools of competitor analysis in business strategy. This study examined the likely future rivalry between both Facebook and Whatsapp given the extremely dynamic nature of the industry and the manner in which the market would evolve. This examination showed that Facebook's long-term interests could have been threatened by Whatsapp's activities. Accordingly, the acquisition could have reduced competition and innovation in the market. This view was strengthened by the fact that Facebook does not intend to monetise its interest in Whatsapp in the short-term. Absent anticompetitive intent, it does not make sense to make such a large acquisition without seeking to make profits from it. However, the European Commission's analysis did not fully contemplate these factors and how these markets would evolve in the future. The Commission found that Whatsapp was not a potential competitor of Facebook because there was no indication that Whatsapp would compete with Facebook in the future. Nevertheless, if the Commission had considered Facebook's motivations for acquiring Whatsapp, it may have reached a different conclusion.

The final case study on Genzyme shows how the US FTC considered firms' bounded rationality relevant when examining an acquisition in an innovation market. The FTC used bounded rationality to argue that despite incentives for the post-merger firm to act anti-competitively, it was unlikely to do so. This case took a broader perspective to mergers in a dynamic market, when compared to the European Commission's more narrow approach in the previous case study.

3. Future Research

There is still much to be done to understand the role of behavioural insights in competition law. An important area of further empirical research is with respect to determining whether and to what extent behavioural studies can provide a clear understanding and prediction of welfare consequences for markets. This is necessary so that it is possible to clarify the potential scope of the contribution that behavioural economics can make within the existing normative framework of competition law. This requires further empirical research, not only to investigate how firms are likely to behave in certain situations but also whether such behaviour is consistent and predictable. Until further work is done it will remain unresolved as to whether it is possible at all for behavioural insights to provide a theoretical framework of firm behavioural that is comparable to rational choice theory. This thesis has served as an introduction into the relevance of firm bounded rationality to competition law and much research needs to be done to refine this work to understand how definite policy conclusions can be drawn from it.

Another avenue for future research is to explore to what extent competition laws in other jurisdictions are open to behavioural insights. This thesis has examined the applicability of behavioural insights to US and EU competition laws. It will be interesting to see to what extent competition laws in other jurisdictions are amenable to behavioural insights. Connected to this, another interesting aspect will be to compare the similarities and differences in various jurisdictions with respect to their receptivity to behavioural insights.

A further avenue of future research is to apply behavioural insights to other aspects of anticompetitive conduct such as vertical restraints or price fixing. While some research has been done on this before, further work needs to be done to identify specific cases of anticompetitive conduct where firms have clearly taken decisions that depart from rationality. It would also be interesting to see what kinds of firm conduct is more likely to be boundedly rational.

Finally, this thesis has only looked at the potential contribution of business strategy to competition law. A vast amount of literature within other fields of management studies such as marketing could be tapped into to further explore the potential contribution of management studies to competition law.

To conclude, as Tor states, "the behavioural approach already offers valuable antitrust lessons but cannot and should not replace traditional competition law and economics."[1079] This statement nicely summarizes the conclusions of this thesis.

[1079] Tor I, *supra* note 23, at 581.

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SUMMARY

Firm rationality plays a role in several aspects of competition law. Yet, the conception of the firm as a rational, profit maximizing entity has been disputed in different disciplines such as the behavioural theory of the firm, and in management studies. This literature shows that the neoclassical assumptions on which competition law is based can fall short of explaining the full range of observed firm behaviour. Accordingly, an alternative conception of the firm as boundedly rational can impact the understanding of firm conduct in competition law.

Behavioural literature describes two different sources of bounded rationality in firms. Firstly, behavioural biases of managers, such as overconfidence bias can affect decision-making in a firm, particularly in areas such as mergers. Secondly, firms are constrained by their decision-making processes, which can cause departures from rationality. For instance, factors such as strategic persistence, organisational structures and frames of reference can impact a firm's ability to assess and respond to market competition.

Behavioural insights can be more relevant to competition law within the Ordoliberal view of competition, which considers the goal of competition law to be maintaining economic freedom and the competitive process. This is because the Ordoliberal view is not based on an *ex ante* determination of market outcomes, which fits well with behavioural insights since this literature does not provide clear predictions of market outcomes. As the Ordoliberal view continues to find a place in EU competition law, EU law is arguably more open to behavioural insights than US antitrust law.

This work examines the application of behavioural insights to two aspects of competition law - predatory pricing and mergers. It uses the case study method to individually examine firm

behaviour in these situations. This thesis finds that, if firms are taken to be boundedly rational, intention can be relevant to predatory pricing because firms may cut prices with the intention of eliminating competitors even when there is little or no chance of recouping through higher prices. This is in contrast to the understanding of predatory pricing in US law, where firms are said to engage in predatory pricing only when recoupment is possible. Intent requires understanding how business decisions are taken and thus, provides an opening for behavioural insights to be introduced into predatory pricing law. Accordingly, due to its intent requirement, EU predatory pricing law is more open to behavioural insights than US law.

Merger analysis is particularly suited to behavioural insights as mergers are often either a result of managerial biases or a product of strategic considerations such as a response to entry by competitors. Moreover, merger analysis affords challenges under welfare-based approaches because it is difficult to accurately predict the long-term welfare consequences of a merger. This thesis finds that insights from management studies could be useful to understanding possible anticompetitive motives behind mergers, particularly when these decisions are taken to eliminate close or potential competitors. In these situations agencies should examine potential efficiencies more critically.

SAMENVATTING

Bedrijfsrationaliteit speelt bij verschillende aspecten van mededingingsrecht een rol. Toch is en wordt de voorstelling van de onderneming als een rationele, winst maximaliserende entiteit bestreden in verschillende disciplines, bijvoorbeeld in de gedragstheorie van de onderneming en in managementonderzoek. Uit deze literatuur blijkt dat de neoklassieke vooronderstellingen waarop het mededingingsrecht is gebaseerd, tekort kunnen schieten als het gaat om een volledige beschrijving van het waargenomen ondernemingsgedrag. Dientengevolge kan een alternatieve voorstelling van de onderneming als beperkt rationeel het begrip van ondernemingsgedrag in het mededingingsrecht beïnvloeden.

De gedragsliteratuur beschrijft twee verschillende bronnen van beperkte rationaliteit in ondernemingen. Ten eerste zijn er verschillende soorten gedragsbias van managers, zoals *overconfidence bias*, die de besluitvorming in een bedrijf kunnen beïnvloeden, met name rond zaken als concentraties. Ten tweede worden ondernemingen beperkt in hun besluitvormingsprocessen door factoren als strategische volharding en organisatiestructuren en –kaders. Daardoor wijken ze af van rationaliteit en kan hun vermogen om concurrentie in de markt te beoordelen en erop te reageren worden geraakt.

Binnen de Ordoliberale visie op concurrentie, die stelt dat mededingingsrecht bedoeld is om economische vrijheid en het concurrentieproces te handhaven, kunnen gedragsinzichten relevanter zijn voor mededingingsrecht. Dat komt doordat de Ordoliberale visie niet is gebaseerd op *ex ante* bepaling van marktuitkomsten, wat goed aansluit bij gedragsinzichten, aangezien die literatuur geen heldere voorspellingen biedt voor marktuitkomsten. Doordat er binnen het Europese mededingingsrecht plaats blijft voor de Ordoliberale visie kan worden gesteld dat de Europese wetgeving ontvankelijker is voor gedragsinzichten dan Amerikaanse antitrustwetgeving.

Dit werk onderzoekt de toepassing van gedragsinzichten op twee aspecten van mededingingsrecht: prijsdumping en concentraties. Met behulp van de casestudiemethode wordt individueel ondernemingsgedrag in die situaties bestudeerd. Dit proefschrift concludeert dat als wordt aangenomen dat ondernemingen beperkt rationeel zijn, intentie relevant kan zijn voor prijsdumping, omdat ondernemingen prijzen kunnen verlagen met de bedoeling concurrenten te elimineren, zelfs als er geen of weinig kans is op terugverdienen via hogere prijzen. Dat staat haaks op de opvatting over prijsdumping in Amerikaans recht, waar wordt gesteld dat ondernemingen alleen tot prijsdumping overgaan als terugverdienen mogelijk is. Intentie vereist begrip van de wijze waarop zakelijke beslissingen worden genomen en biedt daarmee een opening om gedragsinzichten te introduceren in wetgeving tegen prijsdumping. Daarmee is Europese wetgeving tegen prijsdumping, vanwege het intentievereiste, ontvankelijker voor gedragsinzichten dan Amerikaanse wetgeving.

Concentratieonderzoek is bij uitstek geschikt voor gedragsinzichten, omdat concentraties vaak het resultaat zijn van managementbias dan wel van product- of strategische overwegingen, zoals de reactie op toetreding van concurrenten. Daarnaast maakt concentratieonderzoek betwisting op grond van *welfare-based approaches* mogelijk, omdat het moeilijk is precies te voorspellen wat de welvaartsgevolgen van een fusie op lange termijn zijn. Dit proefschrift concludeert dat inzichten uit managementonderzoek nuttig kunnen zijn om mogelijke concurrentiebeperkende motieven achter
fusies te begrijpen, met name wanneer die besluiten zijn genomen om directe of potentiële concurrenten uit te schakelen. In die situaties zouden autoriteiten potentiële efficiëntiewinsten kritischer moeten onderzoeken.

European Doctorate in Law & Economics

Curriculum vitae

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Short bio	
Shilpi Bhattacharya holds a Masters degree in Law from the University of Virginia, USA. She is qualified to practice in New York and has worked as a securities lawyer at the law firm, Linklaters LLP in Singapore. She has also worked as an Assistant Professor of Law at the O.P. Jindal Global University in India. Shilpi is currently pursuing a Ph.D. as part of the European Doctoral in Law & Economics (EDLE). Her thesis topic is 'Competition Law and the Bounded Rationality of Firms'. Her research interests are in law and economics, competition law, behavioural law and economics and contract law.	
Education	
Ph.D. Candidate, The European Doctorate in Law and Economics, at The Erasmus University Rotterdam, Netherlands	2012-2015
LL.M., The University of Virginia School of Law, USA	2007
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Prizes and awards	
Awarded the Olin Graduate Fellowship in Law and Economics	2006
Awarded Best Team and Best Memorial (written brief), Henry Dunant Memorial Moot Court, India.	2001
Publications	
Bhattacharya, S. & Van den Bergh, R., The Contribution of Management Studies to Understanding Firm Behaviour and Competition Law, *World Competition*, vol. 37, 515.	2014
Bhattacharya, S., The Desire for Whiteness: Can Law and Economics Explain It?, *The Columbia Journal of Race and Law*, vol. 2, 117.	2011
Bhattacharya, S., Utility Models: Protection for Small Innovations, *The Journal of the Indian Law Institute*, vol. 46(2).	2004
Bhattacharya, S., Rights of the State vis-à-vis the Community to Water, *Indian Juridical Review*, vol. 1.	2004
Bhattacharya, S., Transfer Pricing: Evolution of the Law, *Taxmann*, vol. 141(1).	2004
Lakshmikumaran, M. & Bhattacharya, S., The Dimminaco Case: A	2003

Landmark Judgment on the Patentability of Micro-organisms, *National Intellectual Property Organization Souvenir*.	
Bhattacharya, S., The Importance of Article 51A in Constitutional Jurisprudence, *Indian Bar Review*, vol. 29(2).	2002
Others	
Editor-in-Chief, Jindal Global Law Review.	2011
Enrolled as an attorney with the New York State Bar, USA.	2008

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PhD training	
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Introduction to the Italian legal system	2012
Game theory and the law	2012
Economic Analysis of Law	2012
Behavioral L&E I - Game Theory	2012
Behavioral L&E II - Enforcement Mechanisms	2012
Experimental L&E - Topics	2012
European Securities and Company Law	2012
European competition law and intellectual property rights	2012
Introduction to Statistics	2012
Experimental L&E – Methods	2012
Specific courses	***year***
Academic Writing Skills for PhD students (Rotterdam)	2013
Seminar on Empirical Legal Studies	2014
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Bologna November seminar (attendance)	2014
BACT seminar series (attendance)	2013-2015
Rotterdam Fall seminar series (peer feedback)	2013
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Presentations	***year***
Bologna March seminar	2013
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Joint Seminar ‘The Future of Law and Economics’ in Paris	2015
Attendance (international) conferences	***year***
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Presented on “Uncertainty and Firm Rationality in Antitrust Law” at Yale Law School’s Doctoral Scholarship Conference, USA.	2013
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