The Political Economy of Competition Policy: Varieties of competition policy approaches?

A thesis submitted by

Moritz Wassum

For the degree of

Doctor of Philosophy (Ph.D.)

School of Government and Public Policy

University of Strathclyde

June 2023

Declaration of Authenticity and Author's Rights

'This thesis is the result of the author's original research. It has been composed by the author and has not been previously submitted for examination which has led to the award of a degree.'

'The copyright of this thesis belongs to the author under the terms of the United Kingdom Copyright Acts as qualified by University of Strathclyde Regulation 3.50. Due acknowledgement must always be made of the use of any material contained in, or derived from, this thesis.'

Abstract

This thesis investigates and analyses the economic, political, and institutional factors driving the development and enforcement of competition policy. According to the 'convergence thesis', most competition policies converge towards the economic-based assessment of anti-competitive practices and the separation of competition policy enforcement from broader political and social objectives. Generally, there is broad agreement that cartels and monopolistic practices intended to increase prices and limit market access are detrimental to the public interest and should be prohibited. Furthermore, the delegation of enforcement powers to independent competition authorities and supranational authorities such as the European Commission contributes to the further professionalisation and harmonisation of competition policies across countries. However, this convergence or globalisation view bears the risk of ignoring important cross-country differences that continue to play an important role and, therefore, put limits on the future convergence of competition policies. By making use of the Competition Law Index, which provides annual data on the strictness and scope of formal competition laws for up to 197 countries from 1890 to 2010, and an original data collection effort of the enforcement activities of the British and German competition authorities over the post-war period, this thesis explains temporal and cross-country variations in competition policy. For that purpose, different time series cross-sectional regression models are employed. The thesis finds that the existence of varieties of competition policies may be explained by levels of privatisation, democracy, the political ideology of the government, legal origin, and types of capitalism. Therefore, common functional pressures for the adoption and expansion of formal competition laws are shaped by domestic-institutional and political factors. Furthermore, on the level of enforcement activities, besides a functional welfare-enhancing role of competition policy, the thesis finds supporting evidence for the Stigler-Peltzman model of regulation and a continued responsiveness of competition authorities to political factors and business cycles.

Contents

List of Figures vi
List of Tables vii
List of Abbreviations ix
1 Introduction 1
1.1 Contribution to the Literature 3
1.2 The Argument 8
1.3 Methodological Approach 13
1.4 Outline of the Thesis 15
2 Competition Policy in Context: The Historical Development of Competition Policy 19
2.1 Introduction 19
2.2 What is Competition Policy? 20
2.3 The US Antitrust Model 23
2.3.1 The Origins of US Antitrust Policy (1880-1914) 24
2.3.2 US Antitrust Policy in the Inter-War Period and after 1945 33
2.4 The European Competition Policy Model 41
2.4.1 The Emergence of the European Competition Policy Tradition 41
2.4.2 The (Re-)Constitution of Competition Policy in Europe after 1945 54
2.5 Conclusion 69
3 Theoretical Framework: How to Explain Variation in Competition Policy? 71
3.1 Introduction 71
3.2 Politics and Ideas in the Making of Competition Policy 73
3.2.1 The Public Interest Theory of Competition Policy 73
3.2.2 The Public Choice Theory of Competition Policy 80
3.3 Domestic-Institutional Factors and Competition Policy 92
3.3.1 Competition Policy and Legal Origins Theory 93
3.3.2 Competition Policy and Varieties of Capitalism 100
3.4 Principal-Agent Theory and the Study of Competition Authorities 110
3.5 Conclusion: A unified theoretical framework 119
4 Data and Methodology 125
4.1 Introduction 125
4.2 The Dependent Variable: Measuring Competition Policy 127
4.2.1 Conceptual Discussion 128
4.2.2 Measures of Formal Competition Laws 132
4.2.3 Measuring Enforcement Activity 140

4.3 The Independent Variables: Market Structure, Politics, Ideology, and Institutions ... 146
4.3.1 Market Structure ... 147
4.3.2 Business Cycles ... 149
4.3.3 The Political Ideology of the Government ... 149
4.3.4 Legal Origin and Varieties of Capitalism ... 150
4.4 The Control Variables ... 151
4.5 Method and Descriptive Statistics ... 156
4.6 Conclusion ... 159
5 Explaining Cross-Country and Temporal Variation in Formal Competition Policy: Functional, Political, and Institutional Determinants ... 161
5.1 Introduction ... 161
5.2 General Trends in the Development of Competition Laws ... 163
5.3 Empirical Results ... 168
5.4 Discussion of Results ... 178
5.5 Causal Mechanisms ... 182
5.6 Conclusion ... 191
6 Case Studies: Explaining Variation in the Enforcement of Competition Policy in Germany and the United Kingdom ... 193
6.1 Introduction ... 193
6.2 Case Selection ... 196
6.3 Historical Reform Process ... 201
6.3.1 The Reform Process in the UK ... 202
6.3.2 The Reform Process in Germany ... 205
6.4 The Competition Policy Institutions ... 209
6.4.1 The Competition Policy Institutions of Germany ... 210
6.4.2 The Competition Policy Institutions of the UK ... 213
6.5 The Enforcement Approaches ... 216
6.6 Explaining Variation in Enforcement Activity ... 230
6.6.1 Explaining Variation in Enforcement Activity in Germany ... 231
6.6.2 Explaining Variation in Enforcement Activity in the UK ... 243
6.7 Conclusion ... 256
7 Conclusion ... 258
Appendix ... 266
References ... 279

List of Figures

Figure 3.1: The welfare loss model of monopoly 74
Figure 3.2: Legal origin: Welfare loss minimisation 97
Figure 3.3: Optimal level of competition policy intervention in common law and civil law countries..................... 98
Figure 3.4: A unified theoretical framework: Factors shaping the development and enforcement of competition policy..................... 120
Figure 5.1: The average CLI score across countries..................... 164
Figure 5.2: The adoption of competition laws as captured by the CLI..................... 166
Figure 5.3: The average CLI score across OECD member and non-member countries 168
Figure 5.4: Relationship between the strictness of competition laws and levels of privatisation (1890-2010)..................... 178
Figure 5.5: Effect of privatisation conditional upon legal origin..................... 181
Figure 5.6: Effect of privatisation conditional upon type of capitalism 182
Figure 5.7: The adoption of competition laws in Western countries 183
Figure 5.8: The adoption of competition laws in CEEC countries 186
Figure 5.9: The adoption of competition laws in the BRICS countries..................... 188
Figure 5.10: The adoption of competition laws in some selected developing countries 190
Figure 6.1: Relationship between Hall and Gingerich's (2004) coordination index and the Competition Law Index (CLI) in 2010..................... 198
Figure 6.2: The institutional structure of Germany's competition policy regime 210
Figure 6.3: The institutional structure of the UK's competition policy regime 214
Figure 6.4: Cartel decisions by the FCO (1979-2016)..................... 232
Figure 6.5: Abuse of dominance decisions by the FCO (1979-2016)..................... 236
Figure 6.6: Merger prohibition decisions by the FCO (1973-2016)..................... 241
Figure 6.7: Second-stage merger decision outcomes by the MMC/CC (1990-2013)..................... 244
Figure 6.8: UK mergers and the OFT's screening activity..................... 252

List of Tables

Table 4.1: Indexes of competition policy ... 134
Table 4.2: Operationalisations of enforcement activity of competition authorities ... 141
Table 4.3: Descriptive statistics for explaining variation in formal competition laws ... 158
Table 4.4: Descriptive statistics for explaining variation in enforcement activity in Germany ... 159
Table 4.5: Descriptive statistics for explaining variation in enforcement activity in the UK ... 159
Table 5.1: Pooled OLS regression with country- and year fixed-effects: Explaining variation in competition laws ... 169
Table 5.2: Pooled OLS regression with country- and year fixed-effects: Disentangling the control of the abuse of a dominant position (monopoly) and the prohibition against anti-competitive agreements ... 176
Table 6.1: Comparison of competition policy enforcement approaches ... 228
Table 6.2: Explaining cartel enforcement by the FCO (1980-2016) ... 233
Table 6.3: Explaining abuse of dominance enforcement by the FCO (1980-2016) ... 237
Table 6.4: Explaining merger enforcement by the FCO (1973-2016) ... 241
Table 6.5: Merger prohibition decisions under different governments ... 246
Table 6.6: Explaining merger enforcement by the MMC/CC (1990-2013) ... 247
Table 6.7: Correlation matrix: UK merger control ... 249
Table 6.8: Explaining merger screening activity by the OFT (1986-2013) ... 253

Table A. 1: Pooled OLS regression with country- and year fixed-effects: Testing for the party composition of governments ... 266
Table A. 2: Pooled OLS regression with country- and year fixed-effects: Testing for the party composition of governments in the control of monopoly and anti-competitive agreements ... 267

Table A. 3: Pooled OLS regression with country- and year fixed-effects: Testing for legal origins 268
Table A. 4: Pooled OLS regression with country- and year fixed-effects: Testing for Varieties of Capitalism 269
Table A. 5: Pooled OLS regression with country- and year fixed-effects: Testing for membership in international organisations 269
Table A. 6: Random effects panel data model: Explaining variation in competition laws 270
Table A. 7: Robustness check for Varieties of Capitalism 1 271
Table A. 8: Robustness check for Varieties of Capitalism 2 272
Table A. 9: Robustness check for the role of government ideology in competition policy enforcement in Germany 273
Table A. 10: Presidents of the Federal Cartel Office (FCO) 274
Table A. 11: Testing for Presidents of the FCO in the enforcement of competition policy in Germany 275
Table A. 12: Chairmen of the Competition Commission (CC) and its predecessor organisations 275
Table A. 13: Director Generals and Chairmen of the Office of Fair Trading (OFT) 276
Table A. 14: Chairmen and Chief Executive Officers of the Competition and Markets Authority (CMA) 277
Table A. 15: Testing for heads of agencies of the MMC/CC and the OFT in competition policy enforcement in the UK 277

List of Abbreviations

BDI	Association of German Industries (dt. *Bund der Deutschen Industrie*)
BEIS	Department for Business, Energy & Industrial Strategy
BRICS	Brazil, Russia, India, China, and South Africa
CAT	Competition Appeal Tribunal
CC	Competition Commission
CDU	Christian Democratic Union
CEEC	Central and Eastern European Countries
CLI	Competition Law Index
CLP	Competition Law and Policies indicators
CMA	Competition and Markets Authority
CME	Coordinated Market Economy
CPDS	Comparative Political Data Set
DG Comp	Directorate-General for Competition
DGFT	Director General of Fair Trading
ECJ	European Court of Justice
ECN	European Competition Network
ECSC	European Coal and Steel Community
EEC	European Economic Community
EMR	European Merger Regulation
EU	European Union
FCO	Federal Cartel Office
FTC	Federal Trade Commission
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GE	General Electric
GWB	Law Against Restraints of Competition (dt. *Gesetz gegen Wettbewerbsbeschränkungen*)
ILO	International Labour Organisation
IMF	International Monetary Fund
IPF	Institutional Possibility Frontier

IPU	Inter-Parliamentary Union
LDCs	Least Developed Countries
LME	Liberal Market Economy
MMC	Monopolies and Mergers Commission
MME	Mixed Market Economy
NCA	National Competition Authority
NIRA	National Industry Recovery Act
OECD	Organisation for Economic Co-operation and Development
OFT	Office of Fair Trading
ParlGov	Parliaments and Governments database
RPC	Restrictive Practices Court
SCP	Structure-Conduct-Performance approach
SDP	Social Democratic Party
SLC	Substantial Lessening of Competition approach
SMEs	Small and Medium-sized Enterprises
TFEU	Treaty on the Functioning of the European Union
UK	United Kingdom
UKCN	UK Competition Network
US	United States
V-Dem	Varieties of Democracy
VoC	Varieties of Capitalism
WDI	World Development Indicators
WTO	World Trade Organization

1 Introduction

The privatisation of the economy is accompanied by pro-competitive re-regulation with competition policy taking a central role in new modes of economic governance (OECD 1992; Vogel 1998; 2018). After a narrow focus on privatisation and liberalisation, it is increasingly recognised that these measures need to be accompanied by competition policy to facilitate market entry, ensure a competitive market structure, and control for the abuse of market power by dominant firms. Although countries converged in several stages in their commitment to pro-competitive market regulation by means of competition policy, important differences remain in the formal design and scope of competition policies, regulatory institutions, and enforcement approaches (Cseres 2010; Guidi 2014; 2016). The European Union's administrative control of abuse system, for example, is often contrasted with the judicial enforcement approach of the United States (US) (Gerber 1998; 2010; Crane 2011).

In addition, also within the European Union (EU), the competition policies of member states are more heterogenous than is usually acknowledged. In the EU's system of multi-level governance, competition policies are enforced jointly by the European Commission and the national competition authorities (NCAs) of EU member states (Harker 2007; Cengiz 2010). In the enforcement of competition policies, NCAs make use of both national provisions and European competition law. The enforcement of competition policy can have important redistributive consequences and possibly improve market performance by lowering prices and stimulating productivity and innovation (Nickell 1996; UNCTAD 1998; Krakowski 2005; Kee and Hoekman 2007; Voigt 2009). However, despite the increasing importance of competition policy in the regulation of economic activity surprisingly little is known about the reasons for variation across countries and over time and the way competition policy enforcement decisions are reached.

Why are some mergers and business practices prohibited while others are allowed and why do competition authorities sometimes reach different conclusions? In 2001, for example, the European Commission prohibited the merger between General Electric

(GE) and Honeywell, two US companies with considerable market turnover in Europe, that was allowed by US antitrust authorities (Burnley 2005; 2007). The different decisions reached by the European Commission and the US Department of Justice revealed some fundamental differences between the two competition policy regimes leading some observers to speak of an *Atlantic Divide* in competition policy (Gifford and Kudrle 2015; Czapracka 2017). The European Commission was accused of 'protecting competitors rather than competition' and to engage in protectionism, that is, to promote European industries at the expense of their US competitors (Wilke 2001; Davis and Raghavan 2001).

Furthermore, the decision to prohibit the merger was criticised for being based on outdated economic analysis (Patterson and Shapiro 2001; E. Morgan and McGuire 2004; Vallindas 2006, 645) but the two jurisdictions may be also said to employ different enforcement approaches and economic models that are equally legitimate and effective (Briggs and Rosenblatt 2001; Budzinski 2008; Ergen and Kohl 2019). Generally, a more prohibitive approach as pursuit by the European Commission in the GE-Honeywell case can be expected to improve market performance by promoting competition. However, it remains open whether the European Commission would have pursued a similar strict approach against two European companies. A key theme throughout this thesis will be that the different decision outcomes are, at least partly, related to the different legal traditions and types of capitalism predominant in the US and continental Europe.

This PhD thesis aims at contributing to a better understanding of the differences in competition policy across countries and over time and the factors that drive enforcement intensity. How can we explain variations, that is, cross-country differences and time series trends, in competition policy and their enforcement? For that purpose, the thesis conducts multivariate time series cross-section panel data analysis of formal competition laws for a sample of up to 197 countries covering the period from 1890 to 2010 and, in a second part, in-depth statistical analysis of variations in enforcement intensity in two selected country-cases, Germany and the United Kingdom (UK). The enforcement of competition policy can have important

redistributive consequences and possibly improve market performance by lowering prices and stimulating productivity and innovation. Moreover, competition policy may positively contribute to the functioning of democratic political systems by controlling private concentrations of economic power (Crouch 2010; Petersen 2013). Therefore, it is important to improve our understanding of the different instruments and approaches used across countries for the conduct of competition policy, that is, to regulate market power, and the reasons for why they developed. Furthermore, with the steady increase in international trade and investment a global competition policy regime may be more important than ever. The thesis also critically reflects upon the feasibility of the convergence of competition policies toward a 'one size fits it all' global competition policy model.

1.1 Contribution to the Literature

The thesis contributes to the literatures on competition policy, regulatory governance, legal origin, and Varieties of Capitalism (VoC). The field of competition policy has long been described as a rather under-researched area of public policy, at least, from a political science perspective, and it probably still is (Karagiannis 2010; McGowan 2010, 2; Guidi 2016, 2). Most studies of European competition policy pursue a rather qualitative approach analysing European treaty negotiations and reform processes from the perspective of European integration theories (Schwartz 1993; Bulmer 1994; McGowan 2007; Büthe 2007; Büthe and Swank 2007; Karagiannis 2013; Warlouzet 2016). Furthermore, most studies focus on the European level, that is, the European Commission's enforcement practices and European treaty provisions, while ignoring, or at least, downplaying, the role of national competition laws and agencies in the EU's system of multi-level governance (e.g., Gerber 1998; 2010; McGowan and Wilks 1995; McGowan 2005; Wilks and McGowan 1995; 1996; Wilks 2005; Gerbrandy 2019).

The allocation of competencies between the European Commission and the NCAs of EU member states is, however, a politically sensitive issue and subject to much bargaining and 'turf battles' (Budzinski and Christiansen 2005). Guidi's (2016) more recent work is a notable exception in this regard who uses statistical analysis to explain

the origins and consequences of the political independence of the NCAs of EU member states. But also Guidi does not go into detail as regarding variations in competition laws and enforcement among EU member states below the level of formal independence. Those studies that describe differences in competition policies across countries usually explain those differences rather loosely by reference to some kind of idiographic country-specific historical process in which the interaction of political and ideational factors produce what is described as the US-, British-, or German approach to competition policy without any attempt to test for and develop more generalisable theory (e.g., Doern and Wilks 1996; Wilks 1999; Eyre and Lodge 2000; Dowdle, Gillespie, and Maher 2013).

This thesis contributes to the literature on competition policy by providing a more systematic investigation of the reasons for variations in the formal strictness and scope of competition policies and their enforcement across a relatively large sample of countries. For that purpose, the thesis makes use of a data set on formal competition laws, the Competition Law Index (CLI) by Bradford and Chilton (2018), which has just been released in September 2019. The group of studies most closely related are large-N studies that explain the adoption of competition policies (Palim 1998; Kronthaler and Stephan 2007; Forslid, Häckner, and Muren 2011; Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016). But these studies operationalise the dependent variable, the presence or absence of competition policies, as a binary variable.

However, among those countries having a competition policy in place formal provisions vary considerable across countries and within the same country over time. Some competition laws only prohibit horizontal price fixing agreements while others extend the prohibition to a vast range of horizontal and vertical agreements. The same applies to the control of dominant firms and mergers. By making use of the CLI, this PhD thesis is the first attempt to explain variation in competition policies using a continuous measure for the scope and strictness of competition policies for a sample of up to 197 countries over the period from 1890 to 2010. Furthermore, the thesis

provides for a more explicit discussion of the interaction between supranational and national competition policies in the EU's system of multi-level governance.

The enforcement activities of competition authorities, that is, the concrete number of investigations and prohibition orders issued per year, is a relative blind spot in the competition policy literature as well as in the literature on regulatory governance. Due to the high degrees of discretion inherent in competition law decisions (McGowan and Cini 1999; McGowan 2000), for example, in defining relevant markets or weighting pro- against anti-competitive effects of mergers and business practices, the enforcement activities take a central role, however. The seminal study on enforcement activities of competition authorities is Posner's article of 1970. In this article, Posner (1970) collected data on the annual number of cases investigated by the Antitrust Division of the US Department of Justice, the Federal Trade Commission (FTC), and private plaintiffs and proposed some hypotheses for explaining variation in the number of cases filed over time.

Based on Posner's study several authors have investigated the economic and political determinants of variations in enforcement activity of US antitrust authorities and extended the time period covered by the data (Long, Schramm, and Tollison 1973; Asch 1975; Siegfried 1975; Lewis-Beck 1979; Cartwright and Kamerschen 1985; Gallo et al. 2000). Furthermore, the study of enforcement activity became a commonly accepted methodology in the US literature on the political control of the bureaucracy (Weingast and Moran 1983; Eisner and Meier 1990; Eisner 1993; Wood and Waterman 1991; Wood and Anderson 1993; Coate 2002). However, there is not much research having collected and analysed enforcement data for competition authorities outside the US.

Several studies have collected systematic data on the enforcement activities of the European Commission (Lindsay, Lecchi, and Williams 2003; Martinez Fernández, Hashi, and Jegers 2008; Carree, Günster, and Schinkel 2010; Bradford, Jackson, Jr., and Zytnick 2018), some of which draw explicit comparisons with the US FTC (Bergman et al. 2010; 2019; Szücs 2012). But there are only a very few selected studies

that investigate the enforcement activities of the competition authorities of other countries. Those that have done so cover the competition authorities of Canada (Khemani and Shapiro 1993), France (Janin and Menoni 2007), Germany (Lauk 2003), Mexico (Avalos and De Hoyos 2008), New Zealand (Strong, Bollard, and Pickford 2000), and the UK (Weir 1992; 1993; Davies, Driffield, and Clarke 1999). These studies, however, only include very selected time periods and information and tend to be less interested in causal explanation. The authors test for the role of some factors such as market structure, head of agency or nationality of a firm in influencing the enforcement activities of competition authorities but are generally less concerned with the political and institutional determinants of enforcement intensity.

In the European political science literature, it developed a completely different approach for the study of agency independence. Whereas the US literature on the political control of the bureaucracy mainly uses enforcement data to investigate possible influences of changes in the composition of Congress or presidential administrations, in Europe, authors started to develop indexes for the formal and *de facto* independence of competition authorities and other regulatory agencies (Gilardi 2005; 2002; 2008; Maggetti 2012; Gilardi and Maggetti 2011; Guidi 2014; 2015; 2016; Guardiancich and Guidi 2016; Koop and Hanretty 2018). These indexes are usually based on statutory readings of formal competition laws or surveys of competition officials. Based on statutory provisions and *de facto* practices the authors then derive indexes capturing the degree to which competition authorities are independent from the government and the industries they regulate.

This thesis contributes to the literatures on the political control of the bureaucracy and regulatory governance by providing new data and analysis on the enforcement activities of the British and German competition authorities. The aim is not only to explain variation in enforcement activity over time but also to contribute to the discussion about the independence of competition authorities by proposing to complement the study of formal and *de facto* independence with an investigation of the enforcement activities. More specific, the study of enforcement activities may be

a useful tool to shed further light on the *de facto* independence of competition authorities.

The literatures on VoC (Hall and Soskice 2001; Hancké 2010) and legal origins (La Porta, Lopez-de-Silanes, and Shleifer 2008; Reitz 2009) are two of the most prominent and promising frameworks for explaining cross-country differences in the political economy. With a few exceptions (Buxbaum 2005; Wigger and Nölke 2007; Guidi 2016), however, these theories have not yet been applied to the study of competition policy. The literature on legal origin mainly focuses on cross-country patterns in the control and regulation of the economy. In this regard, scholars have particularly investigated the relationship between legal traditions and levels of regulation in the protection of shareholders and creditors (La Porta et al. 1998; 2002), market entry (Djankov et al. 2002), judicial procedures in courts (Djankov, La Porta, et al. 2003), labour markets (Botero et al. 2004), and privatisation (Bortolotti, Fantini, and Siniscalco 2003), but also, more recently, in innovative fields such as state-church relationships (Patrikios and De Francesco 2018). Perhaps due to its ambivalent nature in terms of regulation only a very few studies have studied competition policy from a legal origins perspective. Most notably, Peritz (1990; 1996) has theorised about the role of common law norms in US antitrust policies whose work has been applied by Giocoli (2009) to the EU.

The VoC framework traditionally focuses on areas such as labour relations and corporate governance. More recent studies are especially concerned with accommodating changes in these core areas in advanced economies into the explanatory framework (Streeck and Thelen 2005; G. Morgan, Whitley, and Moen 2005; Hancké, Rhodes, and Thatcher 2007a; Hall and Thelen 2009) and to extend the study to other regions in Latin America (Schneider 2009), Central and Eastern Europe (King 2007; Nölke and Vliegenthart 2009; Ademmer 2018), and the so-called BRICS (Brazil, Russia, India, China, and South Africa) countries (Nattrass 2014; Nölke 2012; Nölke et al. 2020). The VoC framework, however, also provides a powerful lens through which we can study 'varieties of regulatory capitalism' and hypothesise about

the existence of institutional complementarities in the regulatory domain (Levi-Faur 2006; Guidi, Guardiancich, and Levi-Faur 2020).

While not having theorised much about the role of competition policy (notable exceptions being Wigger and Nölke 2007 and Guidi 2016), VoC scholars have investigated the extent to which different types of capitalism develop also complementary sets of institutions in the area of monetary and fiscal policy (Soskice 2007; Hancké and Herrmann 2007) and in the design of regulatory institutions (Guardiancich and Guidi 2016; Wassum and De Francesco 2020). The relative neglect of competition policy is surprising given the policies' important role as ultimate horizontal regulatory framework. This thesis contributes to the literatures on VoC and legal origin by investigating the extent to which competition policy constitutes another area of institutional complementarity. Furthermore, the thesis contributes to discussions about the relationship between legal rules, types of capitalism, and political factors in determining macro-economic patterns in the political economy (Roe 2000; Pistor 2005).

1.2 The Argument

The main objective of this PhD thesis is to improve our understanding of the development of competition policies over time and to explain cross-country differences and enforcement trends. The thesis investigates the functional, political, and institutional factors driving the formal design and enforcement of competition policies. In the first empirical part of the thesis, the main argument is that competition policies are a functional regulatory response to privatisation. This functional pressure, however, is mediated by domestic-institutional factors, most notably, the legal tradition and type of capitalism of a country, resulting in different competition policy models adopted across countries.

More specific, the thesis argues that common law legal origin countries and liberal market economies (LMEs) develop stricter competition law provisions than civil law countries and coordinated market economies (CMEs) in response to increasing private market activity to compensate for otherwise missing regulatory capacity and to align

regulatory reforms with the existing legal system. This argument is based on the findings of Chapter 5. Previous research has focused largely on explaining the adoption of competition laws by using a binary dependent variable that distinguishes between whether a country has a competition law in place or not (Palim 1998; Kronthaler and Stephan 2007; Forslid, Häckner, and Muren 2011; Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016). Therefore, in these studies not many conclusions can be drawn regarding differences across existing competition laws. Those qualitative case studies that describe and explain cross-country differences in competition policy mainly relate them to variations in political economy factors such as the transition from a state controlled economy to an economy based on private competition, domestic interest group politics between economic sectors (e.g., manufacturing sector vs. agrarian interests or big business vs. small and medium-sized enterprises), and ideational factors such as the prevalence of ordo-liberal economic ideas in the case of the EU to explain differences to the US antitrust model (Gerber 1982; 1987; 1992; 1994; 1998; Rousseva 2005; Vatiero 2010; Felice and Vatiero 2015).

This thesis argues that increased private market activity triggers a functional requirement for competition policy to control abusive practices and private concentrations of economic power over time. (Competitive) markets do not develop naturally but may be seen as a public good that has to be created and maintained by a functioning regulatory framework (Polanyi 1944; Heritier 1997; Egan 2001). The more private markets develop the more firms are able to acquire dominant or quasi-monopolistic positions by increasing their market shares which they may easily abuse to further supress market entry and competition. In addition, firms may always secretly collude to fix prices and product quantities or to share markets. Competition policies are adopted in response to those practices to control abuses of private concentrations of economic power. The recent development of the technology industry market and the regulatory actions taken against some tech giants such as Microsoft and Google are primary examples of this process, both in terms of the creation of a new market and the acquisition of dominant positions on this market by successful firms as well as

the regulatory actions against abusive practices that followed. But the history of competition policy provides a rich number of further examples.

In that process, however, the legal tradition and type of capitalism of a country, mediate these functional pressures for the control of market power by means of competition policy leading to a stricter approach in LMEs and common law legal origin countries. Specifically, LMEs and common law countries show a stricter approach towards the prohibition of anti-competitive agreements while CMEs and civil law legal countries pursue a slightly stricter approach against the abuse of a dominant position. In this regard, the thesis argues that existing cross-country differences are not primary related to state-led modes of market competition vs. the endorsement of private market competition principles and the prevalence of ordo-liberal ideas but rather rooted in rational institutional factors related to legal systems, different types of capitalism, and the primary mode of coordinating economic activity.

The transition from a state controlled economy to an economy based on private competition certainly leads to the implementation of stronger competition policy principles due to the expansion of private economic activity. But this process takes a different form dependent on the legal tradition and type of capitalism especially among the group of economically advanced economies such as the member states of the Organisation for Economic Co-operation and Development (OECD). In CMEs, for example, the provisions against anti-competitive agreements are less strict to provide an enabling institutional environment for firms to engage in cooperative relationships while ensuring that these relationships are not abused by firms with market power (e.g., Streeck 1991). In terms of the literatures on VoC and legal origin, the thesis also contributes to the development of a more dynamic explanatory framework by investigating and describing the interaction between the domestic institutional framework and changing regulatory policies in the form of expanded competition policy regulation in response to rising private market activity over time.

Furthermore, the ‘economisation’ and ‘independent’ enforcement of competition policies is not as far-reaching and completed as some studies and official policy

discourses seem to suggest. Based on the investigation of the enforcement practices and activities of the British and German competition authorities in Chapter 6, the thesis argues that the competition authorities of both countries continue to use different approaches in the enforcement of competition policy and make use of other so-called non-economic objectives. These non-economic objectives, that is, objectives other than those based on pure economic reasoning about the promotion of competition and market inefficiencies resulting from market power, include changing political preferences of the government and considerations to promote domestic industries and employment as well as, albeit outside the scope of this study, may include objectives such as environmental sustainability.[1]

Many studies and official policy discourses identify a convergence in the enforcement of competition policies towards rather 'independent' technical decision-making based on economic theory and guidelines (Dumez and Jeunemaitre 1996; Drahos 2002; Van Waarden and Drahos 2002; Gerber 2013). The enforcement of competition policy is generally delegated to independent competition authorities (Guidi 2016; Koop and Hanretty 2018; Koop and Kessler 2021). Moreover, as part of a process of the professionalisation and modernisation of competition policies most economically advanced 'Western' countries are argued to have abandoned the inclusion of 'old-fashioned' industrial policy-making and other social and environmental objectives in competition policy enforcement decision-making. The enforcement of competition policy focuses on the achievement of economic competition and efficiencies while other objectives are pursued by other policies. Accordingly, the only differences remaining are those between market-conform Western economies and developing countries from the Global South which continue to rely on more state-led modes of capitalism and industrial policy-making (Gerber 2013).

This economisation of competition policy is praised by some and criticised by others, for example, critical Marxist scholars (e.g., Buch-Hansen and Wigger 2010; 2011; Wigger and Buch-Hansen 2014), but generally not questioned. However, this thesis

[1] For an excellent recent study that argues in a similar direction and that uses content analyses to identify the various non-economic objectives in the enforcement of competition policy see, for example, Brook (2019).

argues and provides evidence that also within the group of OECD economies enforcement approaches are more heterogenous than is usually acknowledged and that the British and German competition authorities continue to make use of other non-economic objectives in the enforcement of competition policy. More specific, the competition authorities show responsiveness to factors such as political majorities, the promotion of domestic industries and employment, and business cycles. Although the enforcement of competition policy became more professionalised and sophisticated there remain controversial issues between purely economic decision-making and objectives such as the promotion of small and medium-sized enterprises (SMEs) and industrial policy-making. For good reason, *ad-hoc* political influence in specific cases is very uncommon, that is, the enforcement of competition policy is conducted relatively independent by competition authorities and courts. However, instruments such as failing firm defenses, the promotion of the export industry, and more lenient enforcement against SMEs and during economic downturns remain very common.

In addition, the thesis finds evidence for strategic priority setting by governments over longer periods of time. For the case of Germany, for example, the findings suggest that the Federal Cartel Office (FCO) pursues a stricter enforcement against anti-competitive agreements during years of conservative government but a higher enforcement intensity against monopolists and the abuse of a dominant position during years of left-leaning governments. In the UK, conservative governments are associated with a higher merger screening activity by the Office of Fair Trading (OFT). Although elected governments may legitimately set strategic priorities and longer-term directions these findings also point to the responsiveness of competition authorities to their political principals and qualify their degree of insulation and independence. Moreover, the findings suggest that political influence may take place less noisy than in other countries where, occasionally, the replacement of the head of agency receives high attention and media coverage.

The thesis also agues that the competition authorities of Germany and the UK continue to use different enforcement approaches. Specifically, the UK competition authorities use a ‘substantial lessening of competition’ (SLC) approach whereas Germany’s FCO

relies on a ‘market dominance’ test to assess anti-competitive conduct and market structure (see, for example, Table 6.1). This finding sheds further support on the remaining relevance of different competition policy models on the level of enforcement approaches. Different legal systems and types of capitalism not only develop different formal rules but also enforcement approaches. Rather than converging, these enforcement approaches are maintained and become more pronounced over time.

1.3 Methodological Approach

For investigating variations in competition policies across countries and over time the thesis combines qualitative and quantitative methodologies. The thesis combines cross-country with within-case statistical analysis and makes use of ‘classical’ mixed methods research strategies for the case selection (Lieberman 2005; Gerring 2007; Seawright and Gerring 2008). Specifically, the thesis combines the explanation of variation in formal competition laws across a sample of up to 197 countries over the 1890 to 2010 period with the in-depth statistical investigation of variation in the enforcement activities of competition authorities in two selected country-cases. Furthermore, the case studies also serve the investigation of enforcement practices below the level of formal competition law provisions.

The first empirical part of the thesis (Chapter 5) mainly relies on time series cross-section panel data analysis to explain variations in the formal scope and strictness of competition laws across countries and over time (Beck 2008; Wooldridge 2010; Stock and Watson 2020, 361–91; Troeger 2020). In this part, the dependent variable, the formal scope and strictness of competition laws, is measured by the CLI (Bradford and Chilton 2018). The CLI provides annual data on the overall strictness of formal competition laws for 197 countries over the period from 1890 to 2010 as well as disaggregated data on the three main sub-areas: the control of a dominant position/monopoly, anti-competitive agreements, and merger control. By making use of the CLI which has just been released in September 2019 the thesis provides new quantitative evidence to the study of cross-country and temporal variation in competition policies. The independent and control variables are operationalised by

data coming from sources such as the Varieties of Democracy (V-Dem) project (Coppedge et al. 2017), the Parliaments and Governments database (ParlGov) (Döring and Manow 2018), and the World Bank. The findings are backed with some selective anecdotal evidence from smaller case studies, that is, a brief discussion of the experiences and developments in some representative country-cases.

The second empirical part of the thesis (Chapter 6) conducts two case studies of the development and enforcement of competition policy in Germany and the UK. The intention is to investigate whether differences in formal laws also manifest themselves on the level of the enforcement activities of competition authorities and to study within-country variation in enforcement activity over time. Furthermore, the two case studies serve the qualitative in-depth investigation of the competition policy approaches and enforcement practices of the two countries. The case studies are based on primary (annual reports and information leaflets of the competition authorities) and secondary sources (academic literature on the historical development and conduct of competition policy in the two countries). The case selection is based on the rationale to select typical cases based on the regression analysis but also on the more qualitative typologies of legal origins and VoC (Lieberman 2005; Gerring 2007; Seawright and Gerring 2008).

Instead of strictly selecting cases with the smallest quantitative residuals the typologies are used to select representative examples of a CME based on a civil law legal system and a LME based on a common law legal tradition among those cases with relatively small residuals, that is, close to the regression line. Furthermore, the selection of the UK and Germany is based on the rationale of a controlled comparison of two EU member states to hold external factors relatively constant. Both countries are rather similar in terms of economic and political development but represent different types of capitalism and legal tradition. The UK is a crucial case insofar as it is an LME which is an EU member state (at least from 1973 until January 2021). The EU, as a major forum for policy transfer and learning (Radaelli 2000), can be expected to put additional pressure on the convergence of member states' competition policies. Therefore, the study of the differences of two EU member states is more intrusive as

remaining differences can be expected to be linked to core institutional complementarities of the economy.

1.4 Outline of the Thesis

The thesis proceeds as follows. Chapter 2 provides a historical introduction into the development of competition policy. The chapter shows how competition policy developed from a rather minor area of public policy to a norm of global governance. The first modern competition laws were adopted in North America towards the end of the nineteenth century. Since then, competition laws became adopted by an ever-increasing number of countries and endorsed by most major international organisations. In this process, however, different competition policy models developed. Specifically, the chapter focuses on the causal factors that are commonly argued to have shaped the adoption and enforcement of competition policies and outlines and contrasts the development of two competing competition policy models: the US antitrust model and the European competition policy model. Although most comparative studies contrast the US with the EU model the chapter also shows that a large diversity has been maintained in the conduct of competition policy within the EU's system of multi-level governance.

Chapter 3 develops the theoretical framework. The chapter, first, discusses the economic, political, and institutional factors that can be hypothesised to influence the design and enforcement of competition policy. The example on the proposed merger between GE and Honeywell mentioned above just exemplifies the controversy which still exists today about the extent to which competition authorities neutrally enforce the law based on economic analysis or continue to include political objectives, such as the protection of domestic industries from foreign competition, in their decision-making. Furthermore, the chapter lays down the theoretical framework for the study of competition policy from a legal origin- and VoC perspective. Second, the chapter conceptualises the study of competition authorities in terms of the principal-agent framework. In this sense, a unique contribution of this chapter (and the empirical part of the thesis) can be said to consist of the attempt to combine structural (theories of competition policy) with actor-centred (principal-agent theories of competition

authorities) accounts of competition policy as well as trying to provide a unified theoretical framework for explaining variation in formal laws and their enforcement in later stages of the policy-making process.

Chapter 4 discusses the data and methodological approach used throughout the thesis in more detail. The chapter discusses and reviews the different measures that have been developed to quantify key characteristics of formal competition laws and competition authorities to elaborate and justify the measures used to operationalise the dependent variables. The thesis makes use of multivariate time series cross-section panel data analysis on different levels of analysis. While the first empirical part of the thesis uses formal competition law provisions as captured by the CLI as dependent variable the second part explains variations in the enforcement activities of the German and British competition authorities. For that purpose, several measures, such as the annual number of investigations started, prohibition orders issues, and cases completed, are used to investigate enforcement intensity. This enables to investigate the explanatory role of the key causal factors on two levels of analysis, the level of formal laws and the level of enforcement activities. Furthermore, the chapter discusses the different measures used to operationalise the independent and control variables.

Chapter 5 provides for the empirical study of cross-country and temporal variation in formal competition laws. The aim of the chapter is to explain variation in the design of competition policies across countries and over time. While there is a general time series trend towards stricter competition laws, there remains considerable variation across countries. Generally, the privatisation of the economy and the adoption of democratic political institutions are found to result in the adoption of competition laws and an increase in the strictness and scope of formal provisions over time. Therefore, the findings support notions of competition policy as expression of 'democratic capitalism' which is adopted and expanded in response to changes towards capitalist modes of production and democratic political institutions. These common functional and political pressures for the adoption of competition laws are, however, shaped by domestic-institutional factors, most notably, the legal tradition and type of capitalism of a country. Furthermore, the strictness of competition laws is also positively affected

by factors such as economic development, country-size, and membership in international organisations.

The development and enforcement of competition policy in Germany and the UK is discussed and analysed in more detail in Chapter 6. The two countries serve as representative examples of competition policy in an LME based on a common law legal system and a CME having a civil law legal tradition. The chapter maps the competition policy regimes of the two countries and explains variation in enforcement activity over time. The investigation of enforcement activity allows to investigate attributes of the *de facto* independence of the competition authorities. Furthermore, the case studies enable to pinpoint key characteristics of the competition policy approaches of the two countries beyond the level of formal laws, that is, aspects that are difficult to quantify and that are not captured by the CLI. Overall, the case studies suggest that while, despite stricter formal laws, enforcement intensity decreases over time, the two countries are characterised by different enforcement approaches corresponding to the statistical findings of Chapter 5. Furthermore, in their enforcement activities, the competition authorities of both countries show some responsiveness to political majorities and macro-economic trends such as business cycles which is, however, diminishing over time.

Finally, the thesis ends with some concluding remarks in Chapter 7. The conclusion briefly summarises the key findings of the thesis and reflects upon possible implications and avenues for future research. The further collection and analysis of enforcement data as well as the refinement of formal competition law indexes may considerably improve our understanding of the factors that shape and, possibly, improve the governance of markets by means of competition policy. Although the thesis focuses on explaining variation in formal competition laws and enforcement activities the data can be also used to investigate their effects on economic outcomes such as economic growth, productivity, innovation, and inflation. As for the study of the independence of competition authorities, the thesis proposes to complement existing indexes on the formal and *de facto* independence with an investigation of variation in enforcement activities over time. Besides enabling to engage in causal

explanation the collection of enforcement data may considerably improve our understanding of regulatory governance and activity. For most jurisdictions, it is hardly possible to find reliable data on, for example, the number of mergers and cartels prohibited by competition authorities over longer periods of time. Moreover, the role of domestic-institutional factors bears important implications for the future convergence of competition policies and attempts to establish a global regulatory framework within fora such as the World Trade Organization (WTO). These attempts should take into account the need for aligning regulatory frameworks with existing institutional complementarities in the economy.

2 Competition Policy in Context: The Historical Development of Competition Policy

This chapter discusses the development of competition policy in historical context. Most contemporary studies compare the US antitrust model with the competition policy model of the EU. The origins of these two competition policy models can be traced back to the nineteenth century. Specifically, the turn of the nineteenth century experienced highly volatile market conditions and a proliferation of cartels and other anti-competitive practices. In response to these economic developments, governments increasingly considered the need for some sort of policy and law to remedy the possible welfare losses due to anti-competitive practices. Therefore, first, in the US and Canada, and later also in several European countries, the first competition laws were adopted. After providing a definition of competition policy, the chapter discusses and compares the origins, later developments, and key features of the competition policy models of the US and the EU.

2.1 Introduction

This chapter discusses the historical development of competition policy with a focus on the US and Europe. After providing a definition of competition policy, the chapter discusses and compares the origins, later developments, and key features of the competition policy models of the US and the EU. The chapter shows how a reconsideration of the effects of monopoly and other anti-competitive practices such as cartel agreements on economic wealth led to the incremental prohibition and control of such practices. In that process, however, different competition policy models were adopted in the US and the EU. Furthermore, the policy is constantly under reconsideration and the range of practices and business behaviour that is deemed anti-competitive subject to change.

Most contemporary studies compare the US antitrust model with the competition policy model of the EU (Gerber 1998; 2010; Crane 2011; Gifford and Kudrle 2015). These two regions may be considered the sources of origin of modern competition

laws and the main competing reference points for the development of a global competition policy regime (Böheim and Friesenbichler 2016; Bradford, Chilton, Linos, et al. 2019; Maisenbacher and Wigger 2019). The origins of these two competition policy models can be traced back to the nineteenth century. During the turn of the nineteenth century both regions experienced an expansion of markets and economic growth. Furthermore, the period was characterised by volatile market conditions and recurring economic crises as well as an increase in market concentration levels and anti-competitive practices. Especially in the US, the result was the emergence of an anti-monopoly movement.

Furthermore, in both, the US and European countries market participants increasingly started to criticise and complain about the anti-competitive and unfair practices of more dominant firms. In response to these developments, governments, first in the US and Canada, and later also in several European countries, adopted the first competition laws (Freyer 1992; 2006; McGowan 2010; Harding and Joshua 2010). The adoption of the first competition laws required a fundamental reconsideration of the economic benefits of specific business practices and market structures. In an incremental process, governments and societies more broadly, increasingly perceived monopolistic market positions and cartel agreements as detrimental to the public interest. However, embedded in their socio-economic and political-economic institutional environment, the US and European countries developed different approaches to solve problems of market power (Quack and Djelic 2005; Leucht and Marquis 2013).

The chapter traces the development and key characteristics of the competition policy models of the US and the EU. The next section provides for a definition of competition policy. Afterwards, section 2.3 lays down and discusses the development of the US antitrust model. Section 2.4 discusses the historical development of competition policy in the EU. Finally, the chapter ends with some concluding remarks in section 2.5.

2.2 What is Competition Policy?

The definition of competition policy is complicated by the continuous evolution and change of competition laws (McGowan 2010, 5–8; Ezrachi 2017). The first modern

competition- or antitrust laws, as they are called in the US, were adopted in North America at the end of the nineteenth century in response to the development of powerful 'trusts' (Motta 2004, 1). By now, however, an increasing number of countries, developed and developing, large and small, as well as many regional organisations have adopted competition laws (Whish and Bailey 2018, 1). Competition policies can be understood from a rather narrow, purely, economic perspective or, more broadly, as defining the relative power position of the private vis-à-vis the public sector (Wilks 2010, 733–34; Bradford, Chilton, Linos, et al. 2019, 731). Competition policies can be conceived of broadly as all the laws and policies adopted across policy and market sectors that impact upon competition in the market or, more narrowly, as the set of policies directly involved in the governance of competition.

A competition policy, essentially, 'strives to secure the creation and maintenance of genuinely competitive markets' but can also involve other, more political, objectives such as the democratic control of economic power, the promotion of small and medium-sized enterprises, competitiveness, or the furthering of economic and political integration as in the context of the EU single market (McGowan 2010, 5–8). According to Motta (2004, 30), competition policies are 'the set of policies and laws which ensure that competition in the marketplace is not restricted in a way that is detrimental to society'. In this regard, competition policies are primarily concerned with market power (Guidi 2016, 14), that is, a firm's (monopoly) or group of firm's (oligopoly) 'ability to reduce output or capacity, to raise prices, to reduce the quality of products, to limit the choice available to customers or to suppress innovation without fear of a damaging competitive response by other firms' (Whish and Bailey 2018, 2).[2]

A firm may have acquired market power from a 'natural' process of superior performance by offering the best goods and services at the lowest prices, but firms can also be in a position of market power through governmental-licensing, coordination

[2] The economic definition of market power focuses on a firm's ability to set prices independent of other market actors. Defined more narrowly in economic terms, market power is 'the ability of a firm (or a group of firms, acting jointly) to raise price above the competitive level without losing so many sales so rapidly that the price increase is unprofitable' or, put briefly, 'the ability to set price above marginal cost' (Landes and Posner 1981, 937 and 939).

with other firms (e.g., through cartel agreements) or the acquisition of competitors through mergers. Furthermore, once in a position of market power, firms can engage in abusive practices to maintain and expand that position. Following standard economic theory, in a market where there is (quasi) perfect competition the attempt by a single firm to raise prices or reduce output and quality would be always offset by other firms' responses, thereby, re-establishing efficient equilibrium prices and output. Put simply, in a competitive market, a firm that charges too high prices or provides products of bad quality would lose all its customers and drop out of the market. If a firm (or group of firms) has market power, however, equilibrium prices and output can be distorted in the long-run, thereby, resulting in a welfare loss paid, usually, in form of higher prices and/or lower quantity and quality of products and services (Hindriks and Myles 2006, 218 and 346–49).

Following common practice in the literature (e.g., Motta 2004, 30; Guidi 2016, 14; 2022, 114), this thesis pursues a narrow definition of competition policy and law. Accordingly, competition policies are the set of policies and laws in place to remedy and control the negative welfare implications of imperfect markets characterised by market power. More specific, competition policy includes the control and regulation of three areas of business conduct: anti-competitive agreements (cartels), monopolistic or oligopolistic practices, and merger control. The specific conduct which is prohibited in these three areas changes over time and across jurisdictions but most commonly includes practices such as agreements to fix prices (the classical price cartel), product quantities, sales areas or customer groups, quasi-monopolistic market actors that engage in practices to restrict market access or push competitors out of the market (e.g., price dumping, boycott of another company, discriminatory treatments, predatory techniques or tying arrangements), and mergers between companies with high market shares that would lead to dominant positions.

Ultimately, competition policy is concerned with market power because all of these business practices only pose a problem to wealth creation and the functioning of the economy if they involve actors with market power. Taking an extreme example, even a classical price cartel does not pose a real threat to the economy as long as only some

minor firms in a specific market fix the price for a certain product or service and consumers and customers may easily buy from another company.[3] In regulatory practice, these prohibitions often also only apply to market actors with market power or competition authorities focus their enforcement on those actors. Empirically, most countries and jurisdictions (such as regional organisations) have enacted specific competition laws that focus on these three areas of business conduct (anti-competitive agreements, monopoly or the abuse of a dominant position, and merger control).

However, some competition laws also include additional provisions such as rules on state aid in the case of the EU or public procurement in the case of Germany that are not part of competition policy strictly speaking, that is, defined narrowly. At the same time, sectoral legislations may include competition policy provisions, for example, if they lay down sector-specific rules for the abuse of a dominant position or merger control in a specific sector such as telecommunications. Competition policies and laws can also be distinguished from rules against unfair competition (e.g., misleading advertising) that are usually formulated in separated legislations. A competition policy regime, in turn, is the whole set of actors, procedures, and laws in place for the governance of competition policies.

2.3 The US Antitrust Model

The US antitrust model is probably the most carefully studied in the literature. The US, together with Canada, were the first countries to adopt a modern competition law towards the end of the nineteenth century. Furthermore, the US, as a dominant actor in international politics, is very much engaged in proliferating its antitrust norms and principles around the world. Albeit the legal antitrust provisions have been weakened during the second half of the twentieth century the US system shows some of the strongest prohibitions against anti-competitive agreements and, generally, was the first country to pursue a strict prohibitive approach against domestic and international cartels. The US antitrust model is characterised by an SLC approach for the assessment of anti-competitive conduct and market structure. In the US, two federal-level

[3] The term 'customer' refers to a company buying from another company.

agencies, the FTC and the Department of Justice, together with state-level attorney generals share responsibility for the enforcement of competition policy. Moreover, private parties are granted an important role in the enforcement of competition policies in a rather adversarial nature. The courts exhibit relatively high levels of judiciary discretion, and the use of economic theory is an important factor in changing the interpretation of antitrust norms over time.

2.3.1 The Origins of US Antitrust Policy (1880-1914)

The origins of the US antitrust model can be traced back to the formative period from 1880 to 1914. In this period, the US adopted its first federal antitrust legislations, the Sherman Act of 1890 and the Clayton Act of 1914, that provide for the basic legal provisions in the control of anti-competitive agreements, monopoly, and mergers. The Clayton Act also stipulates the SLC approach which became the main substantive decision-making criterion for the assessment of anti-competitive conduct in the US. Furthermore, the FTC and the Department of Justice were designated the principal actors to enforce the federal antitrust statutes. From the beginning, however, these federal provisions co-existed with state-level legislations and the courts played an important role in the application and interpretation of the antitrust norms and principles.

The Sherman Act of 1890 declared illegal 'every contract, combination in the form of trust or otherwise, and conspiracy in restraint of trade or commerce' (Peters 1996, 43). The Act also subjected to fines and injunction monopolisation and attempts to monopolise (Scherer 1997, 7). The Sherman Act was, therefore, the first modern competition law that outlawed contracts and conspiracies in restraint of trade, that is, anti-competitive agreements such as cartels, and attempts to monopolise.[4] The use of the language 'contracts in restraint of trade' refers to a body of English common law on restraints of trade. Some of the drafters of the Sherman Act thought they were simply codifying previous common law case law decisions but the Sherman Act, by strictly outlawing and prohibiting these practices, constitutes a clear break and legal

[4] In Canada, the Act for the Prevention and Suppression of Combinations Formed in Restraint of Trade was adopted just one year before the Sherman Act in 1889. However, most commentators agree that the law was not strongly enforced (e.g., OECD 2002, 8).

innovation from previous common law as applied in England and the US (W. L. Letwin 1954; Dewey 1955; Baxter 1982).

While there is a body of legal cases related to agreements to fix prices, product quantities, sales areas or other working conditions dating as far back as to the fourteenth century, before the Sherman Act the courts, in the absence of any legal rules and principles prohibiting those practices, often decided in favour of those practices. However, in some way, the Sherman Act constitutes the culmination of processes and an anti-monopoly movement that started already earlier in the 1860s. Before the adoption of the Sherman Act, some 13 to 17 US states had passed similar legislations and others followed suit thereafter (Gordon 1963, 160; Stigler 1985, 6). The reasons for the adoption of the Sherman Act are manifold but broadly two types of explanations may be distinguished: structural trends and more immediate factors such as pressures by specific interest groups.

The end of the nineteenth century was a time of social and political unrest. The period witnessed what has been referred to as the second Industrial Revolution, a dramatic expansion of markets, the development of powerful 'trusts', and several merger waves (Freyer 1992; 2006; Scherer 1997, 6; Motta 2004, 2). The origins of the Sherman Act of 1890 are commonly related to the ideational and political configurations of the so-called Progressive Era and the widely perceived need to control for and establish public accountability upon big business (Freyer 1992; 2006; McGowan 2010, 54–56). The Progressive Era in the US was characterised by an increased willingness of large parts of the US public and so-called progressive liberals to remedy the negative effects of capitalism and 'pure' *laissez-faire* economics which melted, however, with republican values about the role of the state in the economy, individual entrepreneurship, and the welfare gains that big business brought about to the economy. Many authors portray the formative period of US antitrust policy as a conflict and compromise between critiques and defenders of big business (Freyer 1992; 2006; MacLean 2007; Murphey 2013).

The political developments of the time can probably not be understood without noting the excessive and, in parts, aggressive business strategies pursued by some major US trusts such as Standard Oil leading to popular notions of taming the 'robbery barons' (Bridges 1958).[5] At that time, it was not uncommon for many companies to engage in price-fixing, aggressively take over or push competitors out of the market and labour was just about to start the process of achieving some basic concessions in the form of labour rights. The extent to which big companies engaged in practices which should be condemned or whether these practices constituted legitimate business behaviour is contested. However, the popular resentment against major trusts across the political spectrum and the market consolidation through the merging of companies and the formation of trusts is well documented (Gordon 1963; MacLean 2007; Murphey 2013).

Furthermore, several structural changes were underlying the developments. The dramatic improvements in transportation and communication technologies, new managerial techniques and corporate laws that facilitated the development of large companies, and increased exposure to competition, both within and across countries, are commonly identified as structural conditions having led to the adoption of the first antitrust statutes in the US (Scherer 1997, 6; Motta 2004, 2). The railways, telegraph lines, and telephone services developed rapidly increasingly covering the whole US territory. These developments had fostered the formation of a single market in the US in which firms had to compete with more distant rivals. At the same time, the formation of more advanced capital markets, liberalisations of corporate law, and new managerial methods created the possibility for the expansion of the size of firms (Chandler 1990; Freyer 1992; 2006). Moreover, the US economy was almost constantly in a state of crisis and suffered from declining prices. The intensified competition and state of economic crisis led to low and unstable prices (Motta 2004, 2).

According to Freyer (1992, 21), between 1865 and the early 1890s the wholesale price index for all commodities declined from 185 to around 80. The development of large

[5] See, for example, Murphey (2013) for a discussion of popular unrest and legal action taken against the 'Beef Trust', Standard Oil, U.S. Steel, and International Harvester trusts in turn-of-the-century America.

economic entities enabled these firms to exploit economies of scale and scope, thereby, putting additional downward pressure on prices.[6] While declining prices are generally positive for consumers, they also put constant pressure on producers and distributors to lower costs and to pursuit a more efficient way of production. At least in the short term, this can lead to highly volatile market conditions in terms of market entry and exit, low salaries, and increasing unemployment. In response to these volatile market conditions, firms often tried to avoid price wars and market instability by forming trusts or by way of price agreements (Freyer 1992, 21–23; Motta 2004, 3).[7] Business historians (Chandler 1990; Schröter 1996; Freyer 1992; 2006) have identified monopolisation and cartelisation as two alternative strategies that were used by companies to cope with times of economic crisis.

However, the higher price stability resulting from trusts and price agreements disadvantaged consumer and producer groups such as farmers and small industrial firms that used products of cartelised sectors as input factors (Motta 2004, 3). Furthermore, large companies and trusts were alleged of engaging in unfair business practices to push smaller competitors out of the market. Therefore, agrarian interests, labour, and small business groups are argued to have exerted political pressure for the adoption of some sort of protection from these unfair business practices by their larger rivals (DiLorenzo 1985; Freyer 1992, 15 and 95). The more immediate factors having led to the adoption of the Sherman Act in 1890 have been, thus, public outrage against the business practices of big trusts such as Standard Oil and political pressure by a coalition of agrarians, labour, and small business groups (W. L. Letwin 1956; Gordon 1963; DiLorenzo 1985; Stigler 1985; Freyer 1992, 15 and 95; MacLean 2007; Murphey 2013).[8]

---

[6] According to Motta (2004, 2), there are economies of scale ‘when unit costs of production fall with the total quantity produced’ and economies of scope ‘when unit costs fall because two or more goods are produced jointly.’

[7] The ‘trust’ was a specific form of business organisation or management device by which several corporations engaged in the same line of business unified their management without formal consolidation or merger (Motta 2004, 1–2). The organisational form of the trust was rather unique to the US economy. In other countries such as Germany business did not form trusts.

[8] However, also some very idiographic elements such as Senator Sherman’s personal rivalry with Russel Alger, then head of the Diamond Match Company, may have played a role in the timing of the legislation (Bradley 1990).

Furthermore, at least on a rhetorical level, the Sherman Act was not only targeted against the unfair and aggressive business strategies of big business but also linked to the very functioning of democracy. The diffusion of political power on which democracy is based, it was argued, is not compatible with excessive concentrations of economic power. The public outrage against trusts is, for example, visible in a statement of the Illinois Attorney General who is reported to have protested in 1894: 'We may talk of democracy and equal rights all we please, but this country is today in danger from an evil . . . the evil of raising up a privileged class to prosper and grow rich at the unfair expense of the masses'. Similar, another observer of the time noted: 'anarchy thrives when rich and powerful combines violate the laws and defy state authority with impunity, and when they rob and oppress the people despite restraining laws' (both cited in Freyer 1992, 86).

However, while the Sherman Act received broad societal and cross-party support the language of the law remained rather ambivalent. In American society, there was broad consensus that concentrations of economic power required some sort of governmental control but it was way less clear and controversial how this control should take place and which business practices should be prohibited. The law prohibits agreements in restraint of competition and attempts to monopolise but most agreements can be argued to somehow restrict competition and apart from clear instances of full monopoly it can be difficult to identify the borderline between legitimate business conduct and practices that should be prohibited because they unduly restrict competition. The meaning and interpretation of these rather broad principles and prohibitions were clarified in the following years through cases triggered by the US government and private actors, case law decisions by US courts, and further legislations such as the Clayton Act of 1914. The courts were deliberately granted an important role in specifying the meaning of the Sherman Act. In view of the difficulty to develop universal applicable rules for the types of business practices to be prohibited many politicians thought it would be preferable to let the courts and subsequent case law decisions decide the specific application and scope of the prohibitions.

It took about seven years until the Sherman Act was enforced for the first time. In 1897, the Supreme Court decided against the fares fixed for the transport of goods by a trust of 18 railways (*Trans-Missouri Freight Association*) and established that price agreements are illegal (Motta 2004, 4). In this case and in the *Addyston Pipe and Steel* case, the judges rejected arguments 'aimed at justifying price-fixing on the grounds that the rates charged were 'reasonable' and that price-fixing was a way to prevent 'unhealthy competition'. The Supreme Court took the view that, with the Sherman Act, the Congress intended to outlaw all price agreements, and that it was not up to judges to decide which agreements are reasonable and which ones are not' (Motta 2004, 4). In the *Dr. Miles v. Park & Sons* case of 1911 the Supreme Court extended the Sherman Act's prohibition of price restrictions to vertical relationships, a prohibition that has never been reversed since then, according to Motta (2004, 4).

In the *Dr. Miles v. Park & Sons* case the Court established that a resale price maintenance clause, whereby the manufacturer obliges retailers to sell above a minimum price that it sets, is *per se* illegal (Motta 2004, 4). These cases established the US antitrust system as forerunner in the prohibition of anti-competitive agreements. At a time when most other countries did not even have a competition law in place the US prohibited not only horizontal price-fixing agreements between competitors but, crucially influenced by the Supreme Court's decisions, extended the *per se* prohibition to vertical agreements such as resale price maintenance clauses. The enforcement record against some of the major trusts that were the subject of much public outrage was more mixed, however (Motta 2004, 4–5; Murphey 2013). The Department of Justice and the Supreme Court took a relatively strict position against the Standard Oil Company and the American Tobacco Company (Motta 2004, 4). The Standard Oil Company, which had engaged in a series of monopolisation practices such as predatory pricing and the acquisition of smaller competitors, was split into 34 separate companies in 1911. Similarly, the practices of the American Tobacco Company which engaged 'in a campaign of purchasing minor competitors, controlling stock interest in other corporations, and starting price wars to increase its power and drive other manufacturers out of business' were condemned and the trust dismantled (Motta 2004, 5).

The actions taken against other trusts such as U.S. Steel and the International Harvester Company were more modest, however. The combination of 115 companies, including mining, transportation, production, and construction interests, on 25 April 1901, created the giant, vertically integrated, U.S. Steel which controlled 66 per cent of the steel market (Murphey 2013, 97). The combination of five major harvester companies into International Harvester in 1902 resulted in the centralisation of 85 per cent of the production and sale of mechanical harvester (Murphey 2013, 97). Based on congressional resolutions the Burau of Corporations, the predecessor of the FTC, started investigations against both trusts in 1905 and 1906. However, despite these high market concentration levels, both cases were closed without formal decisions and in 1907 U.S. Steel was even assured that the Justice Department would not block its acquisition of the Tennessee Coal and Iron Company (Murphey 2013, 100).[9]

While this different attitude towards different trusts seems contradictory, according to Murphey (2013), U.S. Steel and International Harvester officials were much more cooperative with the Bureau of Corporation than their counterparts in the Standard Oil Company, exchanging, for example, sensitive company information.[10] Furthermore, largely positive about the more cooperative government-business approach in the U.S. Steel and International Harvester cases Murphey (2013, 101) also emphasises the voluntary concessions made by the two trusts to abandon monopolistic practices such as price-fixing and rail rebating in exchange for guarantees not to initiate legal proceedings. Ironically, however, while a major imperative of the Sherman Act was to control and combat the monopolisation of the economy in the form of 'trusts' the actual enforcement and interpretation of the law by the Department of Justice and the Supreme Court in the following years rather focused on the prosecution of anti-competitive agreements among smaller businesses (Freyer 1992, 119; MacLean 2007, 258).

[9] This acquisition took place in the context of the autumn stock market panic of 1907 (Murphey 2013, 100).
[10] The more cooperative position by U.S. Steel is also visible in a profit-sharing agreement of 1903 to pacify labour unrest (Murphey 2013, 101).

After 1900, state and federal courts forbade most vertical and virtually all horizontal price-fixing agreements (Freyer 1992, 26).[11] According to Freyer (1992, 119), from 1890 to 1914, 'six out of seven of the government's prosecutions were of cartel agreements among comparatively small enterprises in the furniture, lumber, and apparel, wholesale, and retail trades' because it was easier to obtain testimony from customers and competitors to proof unlawful conduct. Although the Sherman Act is often argued to have been pressured for by a coalition of agrarians, labour, and small business groups the enforcement of the law was more turned against small business and, occasionally, also against organised labour (Freyer 1992, 166; Ezrachi 2017, 54). The directions that should be pursued by the antitrust laws were controversially discussed in the American public.

Advocates of strong antitrust laws and critiques of big business advocated the dismantling of major trusts. However, others emphasised the advantages and efficiency gains of large-scale corporations, for example, in the form of economies of scale and scope. Furthermore, historians often exemplify existing antitrust controversies by a discussion of the positions of Louis Brandeis (e.g., Freyer 1992; MacLean 2007). Louis Brandeis, the Peoples' Lawyer, was a Boston attorney who specialised in representing smaller businessmen before the courts. In that capacity he advocated to take a strict position and rigorous enforcement against major trusts but a more lenient position towards smaller businesses that used anti-competitive agreements as a means to stay competitive. According to Freyer (1992, 24), Brandeis noted, for example, 'by denying [small business] the ability to enforce legally their [loose, cartel - like] contracts, American law encouraged large, managerially centralized corporations.' In this regard, Brandeis not only advocated to exempt smaller businesses from the application of the anti-cartel statutes but even to allow them to enforce such agreements in the courts.

The position by Brandeis exemplifies the complexity in the issues involved and that, arguably, different strategies towards smaller and larger companies in the control of

[11] A horizontal agreement is an agreement between undertakings at the same level of the market. A vertical agreement is an agreement between undertakings at different levels of the market (Whish and Bailey 2018, 122).

anti-competitive agreements and monopolistic positions may be appropriate and effective for achieving better economic performance. The strong enforcement of anti-cartel laws against small business may even result in the further concentration of the economy. According to Freyer (1992, 26), during the 1900s, small business groups lobbied Congress unsuccessfully for a law enabling the enforcement of vertical and horizontal price-fixing agreements in the courts. Although Brandeis was not able to shape governmental policies into his direction the argument that more lenient positions towards smaller market actors may be effective in balancing the economic power of dominant firms and, thereby, increase economic efficiency, should continue to remain part of the competition policy discourse. Another controversy arose over the treatment of organised labour. As a result of the use of the Sherman Act against the Pullman strikers in 1894, organised labour, for example, soon aimed at a revision of antitrust policies to confine its operation to business (Freyer 1992, 15 and 112).

The formative period of US antitrust policy was completed with the passing of the Clayton Act and the Federal Trade Commission Act, both in 1914. The Clayton Act of 1914 sought to correct for some weaknesses of the Sherman Act and to specify the types of activities that would be illegal, that is, anti-competitive, restraints on trade (Peters 1996, 44; McGowan 2010, 55). Specifically, the Clayton Act outlawed discriminatory pricing between different purchasers, holding companies, exclusive dealing agreements, and interlocking boards of directors among different corporations as anti-competitive practices and, thereby, provided some clarity in the meaning of the law. Furthermore, the Clayton Act extended the reach of antitrust policy to cover also mergers, the extent to which they were covered by the Sherman Act was unclear (Motta 2004, 5). The scope of these prohibitions, however, was limited to instances were the result was 'to substantially lessen competition or tend to create monopoly' (Freyer 1992, 119). The Clayton Act, therefore, introduced the SLC approach. While the Clayton Act excluded labour unions as a 'combination in restraint of trade' (Peters 1996, 44) it still left some ambiguity as to the extent to which actions by organised labour constitute an unorderly distortion of competition (Freyer 1992, 119). Although the Clayton Act established that labour unions and their lawful conduct are to be exempted from antitrust policies lower federal tribunals and the Supreme Court

construed the Act narrowly against unions in later years (Freyer 1992, 166). The Federal Trade Commission Act established a bureaucratic agency, the FTC, tasked, together with the Department of Justice, with the enforcement of antitrust policies.

2.3.2 US Antitrust Policy in the Inter-War Period and after 1945

The formative period of US antitrust policy from 1880 to 1914 witnessed the development and consolidation of the US antitrust system. Since the formative period US antitrust policy experienced several changes but the basic institutional structure and legal provisions have been maintained. However, several legislations and economic and legal doctrines changed the meaning and application of antitrust policy. The challenge of defining the scope of competition policy and delineating the borderline between legitimate and illegitimate business conduct and merger activity remained the same. Some key moments in the development of US antitrust policy have been the inter-war period between the two world wars, the time after 1945, and the period from the 1970s onwards.

In these periods, new market developments and legal and economic doctrines have influenced the scope, interpretation, and application of US antitrust principles. Generally, new legislations together with legal and economic theories and case law decisions by courts have influenced the formal institutional rules and practices of competition policy enforcement in the US. The formative period was characterised by a steady increase in the number of cases investigated and resources dedicated to the FTC and the Department of Justice. Important case law decisions established and extended the prohibition against anti-competitive agreements. During the inter-war period, however, antitrust enforcement was relaxed. In the context of war and the Great Depression economic growth and stability was given priority over antitrust enforcement. From 1937 onwards, antitrust enforcement was slowly resumed and received an international dimension in form of the combat against international cartels.

After continued increase in the commitment to strict antitrust enforcement during the formative period antitrust policies were relaxed during the First World War (Freyer 1992, 159–95). The period of relaxation of antitrust enforcement lasted broadly for the

inter-war period (Motta 2004, 6). During the war, the focus was placed on the full mobilisation of resources for war-time industry and, generally, antitrust enforcement was relaxed to enable inter-firm and business-government cooperation and planning. The Webb-Pomerene Export Trade Act of 1918, for example, exempted certain types of export cartels from the antitrust provisions. The Capper-Volstead Act of 1922 formalised exemptions for certain loose cooperative organisations of farmers on the federal level that were already permitted by some US states (Freyer 1992, 166). In the US, the 1920s and early 1930s were the era of the so-called associationalist vision of business-government relations (Giocoli 2009, 753). The view that competition is rather a wasteful method of resource allocation gained in prominence and antitrust policies were relaxed in favour of inter-firm cooperation and government intervention and planning. Especially under the effects of the Great Depression of 1929 American business leaders urged the government to take a softer approach towards cartels in order to prevent ruinous price competition (Freyer 1992, 201).

This process culminated in the adoption of the National Industry Recovery Act (NIRA) of 1933 that implicitly authorised price-fixing agreements and other forms of anti-competitive conduct if they were deemed necessary for national economic recovery (Giocoli 2009, 753). Furthermore, some important case law decisions by US courts exemplify the relaxation of competition policy enforcement in the aftermath of the Great Depression. The Supreme Court's decision in the *Appalachian Coals vs. US* case of 1933 is often invoked as an example. In that case, the Supreme Court granted an exception to the *per se* prohibition of price-fixing agreements to 137 producers located in the Appalachian Mountain region that formed a company which sought to coordinate prices and to allocate outputs among its members, something which bears similarities to a joint sales agency.

According to the Supreme Court, this was to be considered a reasonable response to protect the market from destructive practices. According to Motta (2004, 7), the Supreme Court's decision in the *Appalachian Coals vs. US* case can only be understood in the political and economic context of the Great Depression. The NIRA, however, was declared unconstitutional by the Supreme Court in 1935 and is generally

considered as not having had the intended positive effects on increasing production (Freyer 1992, 202; Giocoli 2009, 755). After the failure of the NIRA the US relatively soon resumed its pre-war commitment to antitrust enforcement. Especially in the years from 1937 to 1945 antitrust policies were revitalised (Freyer 2006, 8–59). In the *Socony-Vacuum Oil* case of 1940, for example, the Supreme Court re-established the principle of the *per se* prohibition of price-fixing agreements (Motta 2004, 7).

In addition to the domestic revitalisation of antitrust policy the policy received an international dimension in form of the issue of international cartels that were increasingly perceived as a problem by US officials. Historians often portray the 1930s as the heydays of the international cartel movement. Freyer (2006, 69) reports that, in 1939, British and German firms were party to 133 restrictive trade agreements. According to McGowan (2010, 56 and 65), it has been estimated that around 40 per cent of world trade has been controlled and managed by international cartels in the period from 1929 to 1937. Many domestic cartels and cooperation agreements that were established among American, British or German firms at the turn of the nineteenth century had developed into international cartels by the 1930s (Fear 2006, 12).

The objectives of these cartels were not always to simply raise profits and unduly restrict competition by, for example, preventing market entry. In some cases, firms aimed at fixing prices and production and divide markets in South American countries. However, in other cases, cartels also provided a forum to possibly mediate between conflicting national economic interests and to solve trans-border issues that later became addressed more successfully by other forms of cooperation (Fear 2006, 14). The international steel cartel, for example, that developed out of an agreement between French and German companies in 1926, included among its members the core signatories to what later became the European Coal and Steel Community (Fear 2006, 14; McGowan 2010, 65–66). The principal aim of the international steel cartel was to stabilise the coal and steel market by controlling production and prices. Cartels not only enabled its members to earn supernormal monopolistic profits but also, for example, to coordinate a reduction in production in response to an economic shock,

such as a sudden drop in demand, proportionally among its members and to allocate resources across countries based on demand and industry needs.

However, based on the domestically evolving norm of declaring cartels illegal restrictions to competition and the country’s war efforts, the US was increasingly committed to the breaking-up of existing international cartels. The Department of Justice’s Antitrust Division and the FTC were equipped with more personnel and resources, rhetorically backed by the US President, and antitrust policies were incorporated into the national defence policies during the Second World War (Freyer 2006, 27). Unlike during the First World War antitrust policies were not suspended to support the nation’s war efforts but rather seen and framed as contributing to the fight against Nazi Germany. Influential bureaucrats such as Heinrich Kronstein, a specialist in European cartel practices who flew the Nazi regime in 1935 and subsequently worked in the US Antitrust Division, argued that Germany’s cartel system had facilitated the rise of Hitler (Freyer 2006, 28 and 67).

In order to push for a more activist antitrust policy and to mobilise resources US President Roosevelt and his bureaucratic advisors frequently resorted to a rhetoric contrasting the American liberal democratic model with a collectivist-fascist international cartel movement associated with Nazi Germany (Freyer 2006, 28–34). After the end of the Second World War the US plans envisaged far reaching de-concentration and de-cartelisation measures for Germany and the breaking-up of *zaibatsu* controlled economic conglomerates in Japan (McGowan 2010, 69–73). The Potsdam Agreement of August 1945, signed after Germany’s surrender between the US, the UK, and the Soviet Union, for example, stated: ‘At the earliest practicable date, the German economy shall be decentralized for the purpose of eliminating the present excessive concentration of economic power as exemplified in particular by cartels, syndicates, trusts, and other monopolistic arrangements.’

According to Freyer (2006, 56), for Japan, the US also intended to break-up the ties between *zaibatsu* family holding companies ‘whose alliance with Japanese militarists, many experts believed, had fostered war with America’. Generally, however, the US

commitment to a strict de-concentration of the German and Japanese economies was relatively soon relaxed to enable post-war economic recovery and development. Furthermore, the US efforts against international cartels were not only directed against Germany or Japan but also against US and British firms that participated in international cartels. In bilateral trade negotiations on post-war American aid the US pressured Britain to adopt a competition policy and to show a higher commitment for the combat against cartels by, for example, introducing a *per se* prohibition for anti-competitive agreements.

The international cartel issue and domestic measures against monopoly and restrictive practices have been part of the political discussions between the US and Britain about the Master Lend-Lease Agreement on post-war American aid to Britain agreed in 1942 and the talks during the Bretton Woods conference in 1944 (Freyer 1992, 228–29). The US pressure for the adoption of competition policy was welcomed in these countries by certain pro-competition policy advocacy coalitions such as the ordo-liberals in Germany or similar groupings in the UK and Japan. Although European countries did not radically break with existing practices the end of the Second World War provided a momentum for the proliferation of competition policy and a reconsideration of the economic benefits and costs of cartels and other forms of economic power such as monopolies.

The period from the Second World War until 1970 was a period of very active antitrust enforcement in the US (Freyer 2006, 112). During this period, the US competition policy discourse and enforcement was dominated by theories of 'workable competition' (Clark 1940) and the so-called structure-conduct-performance (SCP) paradigm. In a common interpretation of US antitrust policy, the SCP approach, which is argued to have been developed in a seminar at the University of Harvard by Edward Mason, dominated US antitrust policy and enforcement from the late 1930s to the early 1970s (Giocoli 2009, 755).[12] The SCP approach predicts anti-competitive outcomes as inevitable consequence of non-perfectly competitive market structures and shifts the

[12] According to Giocoli (2009, 756) the Celler-Kefauver Act of 1950 that amended Section 7 of the Clayton Act is the most visible formal epitomisation of the influence of the SCP approach in US antitrust policy.

focus from conduct to structural market characteristics such as market shares and concentration ratios (Giocoli 2009, 755–56).

In other words, from this perspective, conduct follows market structure, and the more concentrated a market the higher the likelihood for anti-competitive conduct. Overall, the SCP approach is associated with a more activist antitrust enforcement or, at least in the US, the prominence of this approach coincided with a period of very active enforcement. By shifting the focus on structural market characteristic there is a relatively high probability that, for example, a merger is prohibited due to its alleged anti-competitive effects on increasing market concentration ratios. The turning-point of US antitrust enforcement is commonly identified with the *GTE-Sylvania* case of 1977 in which the Supreme Court decided 'that non-price vertical restraints should be subject to a rule of reason' (Motta 2004, 8).

This comes close to a relaxation of antitrust enforcement for non-price vertical restraints. By applying a rule of reason instead of a *per se* prohibition some non-price vertical restraints can be allowed due to their alleged positive effects on economic efficiency. In the *GTE-Sylvania* case, the Supreme Court applied the rule of reason to allow a territorial vertical restraint on the basis of economic efficiency (Freyer 2006, 146). The reasons for this change in US antitrust enforcement are contested, however. Broadly, most studies emphasise either the role of *politics* (Weingast and Moran 1983; Coate, Higgins, and McChesney 1990; Wood and Anderson 1993; McChesney and Shughart 1995; Coate 2002) or the influence of *economic ideas* (Bickel 1983; Baker and Blumenthal 1986; Eisner and Meier 1990; Eisner 1991; 1993; Mueller 1996; Kovacic and Shapiro 2000; Kovacic 2007) as underlying the change in enforcement practices.

The role of economic ideas is supported by the increasing influence of so-called Chicago school economic efficiency theories. From the early 1970s onwards, Chicago school arguments and analysis became increasingly influential in US court decisions about antitrust cases (Freyer 1992, 278; Giocoli 2009, 757). According to most accounts, Chicago school analysis eased competition enforcement by abandoning the

per se prohibitions of the earlier SCP approach in favour of the rule of reason case-by-case approach and for taking into account efficiency and total welfare considerations (Giocoli 2009, 757). Generally, Chicago school proponents emphasised the economic efficiency rationales of free market forces and argued for more limited public intervention through antitrust policies. The only exceptions which were perceived as legitimate antitrust policy intervention were the prohibition of certain types of horizontal agreements, that is, cartels, horizontal mergers resulting in fewer than three competitors, and extreme forms of predatory behaviour intended to prevent market entry (e.g., Bork 1978).

Generally, Chicago school proponents argued for a reliance on the self-regulating properties of private markets, emphasised the efficiency gains inherent in economies of scale, and advocated to focus antitrust policy on the maximisation of consumer welfare. According to Robert Bork (1978), an early advocate of this view, for example: '[I]t is the essential mechanism of competition and its prime virtue is that more efficient firms take business away from the less efficient' (as cited in Freyer 2006, 122). While first having been developed by a rather minor group of economists and lawyers at the University of Chicago during the 1960s to challenge the dominant doctrines and to criticise judicial decision-making in the area of antitrust these ideas are shown to have travelled and subsequently influenced the work of the US Department of Justice and the FTC as well as the Supreme Court (Bickel 1983; Baker and Blumenthal 1986; Eisner and Meier 1990; Eisner 1991; 1993; Mueller 1996; Kovacic and Shapiro 2000; Kovacic 2007).

The influence of Chicago school economic ideas is also referred to in comparative studies, for example, on the US and Germany. The Harvard school's SCP approach with its more positive view on the role of governments and antitrust authorities in controlling private market power shares some similarities with classical ordo-liberal perspectives and is argued by some (e.g., Lauk 2003) to still influence the work of the German FCO. Ergen and Kohl (2019) explain the different trajectories of US antitrust policies (more relaxed since the 1970s) and the competition policies in Germany (continued commitment to enforcement) since the 1970s with reference to the

increasing influence of Chicago school analysts among US bureaucratic and professional elites.

Most crucially, however, the change in economic theories towards Chicago school type of antitrust analysis and the start of the Reagan administration (1981-88) as well as the declining international competitiveness of US firms which was increasingly perceived as a problem in the US public discourse coincided somewhat. In this regard, it is difficult to ascribe the change towards relaxed antitrust enforcement to either of the three factors. For example, while having gained influence since the 1970s, it was especially during the Reagan administration that Chicago school efficiency theories started to dominate antitrust enforcement. According to Freyer (2006, 139), under Reagan, the number of merger investigations declined to the lowest point in eight decades and, despite some prominent cases such as the breaking-up of AT&T on the ground that it was considered a monopoly, most mergers were allowed. At the same time, the prosecution of price-fixing agreements in the domestic market was dramatically increased but less concern displayed about international cartels involving US multinationals (Freyer 2006, 139).

Freyer (2006, 148) identifies the most profound impact of Chicago school theories with the promotion of corporate mergers and acquisitions. Furthermore, other legislations generally supported a relaxation of antitrust enforcement. The Export Trading Company Act of 1982, for example, 'established procedures permitting the Commerce and Justice departments to certify export agreements which provided protection from private suits by imposing single rather than treble damages' and the National Cooperative Research Act of 1984 held transnational research and development joint ventures to a standard of reasonableness (Freyer 2006, 148–49). Motta (2004, 8) ascribes the change in US antitrust enforcement from the mid-1970s onwards to the influence of Chicago School critiques *and* the attempt of the government to improve the relative international competitiveness of US firms.

2.4 The European Competition Policy Model

Similar as the US, also European countries experienced a dramatic increase in anti-competitive practices among private business at the turn of the nineteenth century. Especially cartels proliferated widely. Furthermore, also in Europe, governments and academics incrementally changed their attitudes and increasingly considered the need for some type of policy and legislation to regulate and control certain types of cartels and monopolistic market positions that may have negative effects on economic wealth. In Europe, however, an indigenous competition policy discourse developed. The changes in policy were not as radical as in the US during the formative period and a distinct competition policy model developed. Most countries favoured an administrative control of abuse rather than a prohibitive approach. The origins of the European control of abuse approach can be traced back to the first legislations that were adopted during the first half of the twentieth century.

2.4.1 The Emergence of the European Competition Policy Tradition

Also in Europe, the spread of anti-competitive practices, mainly in the form of cartels, and recurring economic crises and shortages increased pressure on the governments and parliaments to engage with the issue despite resistance by large economic associations. The turn of the nineteenth century led to the establishment of many cartels. Although most European countries may be said to have had a more positive attitude towards cartels than the US the increasing cartelisation of the economy led to a rising number of complaints and critical voices about existing practices. In response, governments enacted the first competition laws. In Europe, however, it developed a relatively indigenous European competition policy discourse within fora such as the *Verein für Socialpolitik* and the Inter-Parliamentary Union (IPU). The result was a specific European approach to competition policy based on the administrative control of the abuse of economic powerful positions. Contrary to the US, where most cartels were strictly prohibited, in Europe many countries favoured to control rather than prohibit or even encourage the cartelisation of the economy.

The turn of the nineteenth century (roughly from 1870 to 1914) is commonly identified as the period of origin of modern-day cartels in Europe (Ortwein 1998, 23; Harding

and Joshua 2010, 68; McGowan 2010, 47). While several cartel-like arrangements existed already earlier it was especially in the period from the 1870s onwards, reaching its peak in the inter-war years between the two world wars, that cartels spread widely and increasingly dominated large parts of the economy.[13] In a qualitative cross-country study of attitudes towards cartels during the inter-war period Schröter (1996, 141–42) distinguishes between four groups of countries: those with overwhelmingly positive attitudes towards cartels (Austria, Belgium, Czechoslovakia, Finland, France, Germany, the Netherlands, Norway, Sweden, and Switzerland), those with an ambivalent position towards state intervention (Hungary, Italy, Japan, Poland, and Spain), those with an ambivalent perception of cartelisation (Bulgaria, Canada, Denmark, South Africa, and the UK), and those with outright negative attitudes towards cartels who developed a prohibitive approach (Argentina, Australia, New Zealand, United States, and Yugoslavia).

Accordingly, most continental European countries took a rather positive view on cartels or even encouraged the cartelisation of the economy. Especially in the German-speaking countries of Central Europe cartels became an endemic aspect of business life. Germany is usually referred to as the prime example of a cartelised economy during that period. For Germany, it is estimated that the number of cartels increased from a modest 4 in 1865 to 210 in 1890 and passing the 300 mark by the end of the 1890s (McGowan 2010, 47).[14] Cartels were also established in other European countries such as France, Spain and the UK but they did not reach comparable high numbers.

The reasons for the cartelisation of European economies, particularly Germany, during the turn of the nineteenth century are manifold (Harding and Joshua 2010, 65–85; McGowan 2010, 48–54). According to Harding and Joshua (2010, 66), the process of

[13] Some commentators have sketched the formation of the first cartel-like arrangements as far back as to Ancient Egypt and the existence of anti-competitive practices as well as public measures against them, that is, the first examples of competition law-alike instruments, during the Roman Republic are relatively well documented (McGowan 2010, 23–26).

[14] For nineteenth century Germany, some early examples of cartel arrangements include 'the Neckar Salt Union, established in 1828 in Württemberg and Baden, the Prussian alum purchasing syndicate (1836-44), and the Oberlahnstein Association set up in the 1840s to control the sale of pig-iron in Nassau' (Harding and Joshua 2010, 68).

cartelisation can be understood in terms of four key variables: broader economic trends (including industrialisation, the economic downturn of the 1870s, and overproduction), the type of market in question, the political context (including nation-building, national ambition, and protectionism), and business and regulatory culture. Similar as the US, European countries experienced a time of rapid industrialisation, an expansion of markets and rising economic growth which was followed, however, by economic turmoil and declining prices.

Several developments such as the establishment of the customs union of 1833 (*Zollverein* in German) had liberalised barriers to trade and commerce and led to an expansion of economic activity. At the same time, however, the liberalised markets proved vulnerable to economic crises. The Vienna stock market crash of 1873 and the following economic depression from 1873 to 1895 led to the establishment of many cartels and the formulation of the so-called 'recession thesis' (Freedeman 1988, 462; Ortwein 1998, 23). In view of the recession thesis, cartels are established in response to economic downturns to stabilise production, prices, employment, and wages. Furthermore, the turn of the nineteenth century was an age of 'competitive imperialism' and recurring protectionism (McGowan 2010, 46).

The three main European powers of that time (France, the newly unified Germany, and the UK) had rapidly industrialised and found themselves in a competitive struggle over foreign resources and markets. Therefore, many governments tolerated and, at times, encouraged cartelisation to gain an advantage over foreign competitors or to protect their domestic industries from foreign competition. The toleration and promotion of cartels was generally in accordance with strategies of national economic development and expansion. In addition, cartels generally received broad domestic support. According to Harding and Joshua (2010, 73), Wilhelmine Germany (1888-1918) was characterised by a formidable community of pro-cartel interests and actors consisting of heavy industry, big agriculture, the government, and many economists.

Cartels not only seemed to support the economic interests of its members and the national economic ambitions of expansionist governments but also corresponded to

the corporatist ethos of newly unified Germany and important norms such as the freedom of association and contract. However, especially the support by many economists appears puzzling from today's perspective. The reason for the positive inclination towards cartels of many economists is that especially European economists at the turn of the nineteenth century did not necessarily associate cartels with a 'conspiracy to raise prices' nor as something detrimental to the public interest. For the economists of the time cartels provided a useful instrument to stabilise the economy and to ensure ordered production processes.

Furthermore, cartels were in accordance with other important liberal norms and legal principles such as the freedom of contract and association. The notion of cartels as *Kinder the Not* (children of distress) coined by Friedrich Kleinwächter (1883) in his first more systematic treatment of the role of cartels in the organisation of the economy became prominently employed to denote this positive stabilising function of cartels.[15] A similar positive view on cartels and monopolies was taken by Robert Liefmann, another leading German economist of that time. Liefmann (1915; 1920; 1932) stresses the positive role of cartels in reducing risk and keeping prices in times of economic crisis.[16] A cartel in its positive form, for example, allows a group of firms in times of a sudden drop in demand to coordinate a reduction in output proportionally across the industry instead of engaging in what contemporaries negatively discredited as cutthroat or ruinous competition. Instead of competing up until the point to which only a few of the most competitive firms are able to stay in the market the cartel can ensure the survival of other less competitive firms and those that are less able to compensate the effects of the crisis.

Historically, cartels served a variety of objectives, some more benign others more detrimental to the broader public and economic development (Fear 2006). A cartel is

[15] The notion of cartels as *Kinder der Not* became so prominent in the public discourse that it still, albeit in a critical fashion, was used by Andreas Mundt, the current President of Germany's Federal Cartel Office, in an interview in 2010 (Mundt 2010).

[16] The works of Friedrich Kleinwächter and Robert Liefmann are usually argued to represent the more positive view on cartels and monopolies prevalent among economists in German-speaking Europe during the turn of the nineteenth century (e.g., Scherer 1997, 6–7; Schröter 1996, 129; Bouwens and Dankers 2010, 761).

a relative flexible form of institutionalised inter-firm cooperation and coordination. The cartel members can agree on prices and production so as to safeguard the interests of its members by ensuring a reasonable profit and a fair price paid by customers and consumers and, possibly, also allow the survival of otherwise less competitive smaller firms and allow new firms to enter the market. But the cartel members can also exploit their information advantage and economic power to reap monopolistic profits and restrict market access to the detriment of the broader public.[17]

There is some evidence supporting a more benign function maintained by some of the leading cartels at the turn of the nineteenth century. According to some accounts, for example, the prices for coal, iron and steel in Germany actually fell relative to the British market after the formation of cartels (Fear 2006, 4). Furthermore, in a situation of rapidly declining prices a major success of cartels was seen in what is perceived today as their most disastrous outcome, that is, the re-adjustment of prices on a higher pre-crisis level. According to McGowan (2010, 49–50), after the Vienna stock market crash, it took the Rhenish Westphalian Coal Cartel, which was established in 1893, twenty years to re-adjust prices on their higher 1873 levels. Furthermore, other cartels have been established by an alliance of smaller firms to defend their interests and competitiveness against more powerful market leaders (McGowan 2010, 49). However, according to McGowan (2010, 49), while certainly the recession thesis fits well to some of the cartels established during the economic depression, later on, cartel members may have realised the benefits of such collusive agreements which, therefore, have been maintained and proliferated even in times of economic prosperity.

As a result of the increasing degree of cartelisation also some critical voices started to develop and, occasionally, the issue of cartels featured in daily newspapers (McGowan 2010, 51–53). Complaints about existing cartel practices were especially raised by disadvantaged cartel members that wanted to opt out from the agreement or parts of the processing industry which, for example, used cartelised products as input factors.

[17] According to some studies, the 'survival rate' or success of cartel agreements depends on the flexible nature of the agreement, that is, the degree to which the cartel is able to flexibly accommodate changing interests of its members to avoid that anyone deflects by revealing the existence of the cartel agreement.

In the Germany of that time, many industries had organised themselves around the principle of obligatory cartel membership. If a firm wanted to enter a market and engage in trade and commerce it was, at least informally, obliged to enter the respective cartel agreement so as to avoid any retaliatory measures by the other members.

But similar practices were also prevalent in other countries such as the UK where business and trade associations strongly controlled market access and other trading conditions such as prices. The so-called Wood Pulp decision by the German *Reichsgericht* (the Supreme Court) of 1897 is usually identified as a hallmark decision of that time (Wise 2005, 12; Ortwein 1998, 31–35; Harding and Joshua 2010, 72–73; McGowan 2010, 52). The case concerned a wood producers' cartel located in the German region of Saxony which had established a joint sales agency in order to prevent 'ruinous competition with one another and to obtain an agreed price for the producers' (McGowan 2010, 52). The case was triggered by one of the cartel members who wanted to opt out from the agreement.

The German Supreme Court, however, in the absence of any legislation prohibiting cartels, upheld the agreement giving the freedom of contract precedence over the freedom of competition. The Wood Pulp decision is often interpreted as having paved the way for the further cartelisation of the German economy, but already before, cartels were very much widespread, and the decision constitutes one of the first cost-benefit analyses of a cartel agreement in the European context (Ortwein 1998, 31–35; Harding and Joshua 2010, 72–73). The Supreme Court did not simply uphold the agreement but analysed its costs and benefits in view of existing Civil and Commercial Codes and public policy objectives.

In the following years some of the cartel practices continued to raise criticism by firms and politicians. From 1879 to 1900, complaints about the price policy of the Rhenish-Westphalian Coal Cartel and a coal shortage between 1899 and 1900, led to three general debates on the issue of cartels and monopolisation in the German parliament, several draft bills to combat cartels, and the establishment of a government enquiry

group (*Enquête-Kommission*) from 1902 to 1905 to investigate into the extent of the cartel problem (Ortwein 1998, 23–27; McGowan 2010, 53). The government enquiry group identified some 385 cartels in place in Germany in 1905 and led to the consideration of some instruments such as the possible use of a cartel-register. Although the draft bills were withdrawn and no specific instruments implemented the stage was set for more serious engagement with the issue of cartels and monopolies and the development of a regulatory framework for controlling anti-competitive practices.

During the parliamentary debates, it was formulated for the first time the call for a governmental supervision of cartels and syndicates. Furthermore, also the adoption of the Law against Unfair Competition (*Gesetz gegen Unlauteren Wettbewerb*, UWB) in 1896 which was revised in 1909 shows the increased willingness on parts of the public and the government to do something against illegitimate business practices (McGowan 2010, 53). The UWB did not aim at establishing genuine competition in the market but mainly outlawed certain practices, of which some are part of the modern competition law-toolkit, such as customer misinformation, price wars or selling below costs, and the unauthorised use of another trademark. Also among social scientists and economists several proposals to, for example, improve the transparency of the decision-making process of cartels were discussed.

For the German-speaking community of academics and policy-makers, the *Verein für Socialpolitik*, which engaged with the question of cartels and monopolies in a series of meetings at the turn of the nineteenth century, constituted an important forum for discussion and deliberation (Ortwein 1998, 36–43). While generally having been rather positive about the role of cartels in ordering production processes (e.g., by adjusting output to demand) and ensuring economic stability several economists and public administration scholars made proposals towards increasing the transparency of cartels. Acknowledging the profit motive of firms, Liefmann, for example, also recognised the need for some sort of control of the price and production policies of cartels. In this regard, Liefmann (1932) proposes the participation of representatives of workers and consumers in cartel deliberations. Similarly, Gustav Schmoller, a

leading public administration scholar of that time, proposed to expand the supervisory board of cartels from capital interests to also include representatives of the government and, later, also labour. During a meeting of the *Verein für Socialpolitik* in Vienna in 1894, the idea of a cartel office, where cartels must be registered to be legal, was formulated (Ortwein 1998, 38).

The main impetus for the further engagement with the issue of cartels and the development of a regulatory framework came, however, in the course of the economic problems of the 1920s (McGowan 2010, 58). In the context of hyper-inflation, it was felt that price agreements and economically powerful enterprises may further contribute to the escalation of prices (Gerber 1987, 63; Motta 2004, 10; Freyer 2006, 63). In 1923, the German parliament adopted the Regulation Against the Abuse of Economic Power Positions which for the first time established a regulatory framework for the governmental supervision of cartels in Germany.[18] The Regulation, however, did not introduce a *per se* prohibition of cartels and was generally not strongly enforced. A cartel register was also not established.

The Regulation of 1923 introduced the requirement that cartels must be based on a formal written contract, thereby, declaring informal cartels illegal. Cartels were not declared illegal *per se*, but they required a written contract from then onwards. Furthermore, a formal cartel agreement that was deemed to be against the public interest by the Minister of Economics would be referred to the newly established cartel court which could prohibit the agreement or allow the members to leave the cartel on a voluntary basis. The Regulation specified the public interest to be particularly affected in cases of the restriction of production and artificially high prices or when economic freedom is violated through discriminatory pricing and trading conditions. Most crucially, the Regulation of 1923 'was constructed around the 'abuse principle' (*Mißbrauchsprinzip*) and provided legal protection for most cartels, but simultaneously established special legal norms and conditions beyond which cartels were not permissible' (McGowan 2010, 59). As regarding the German abuse of

[18] *Verordnung gegen Mißbrauch wirtschaftlicher Machtstellungen* of 2. November 1923 (RGBl. I S. 1067).

dominance tradition and the concept of relative power (cf. Gerber 1982) it is interesting to note that, besides the possibility to prohibit a cartel agreement in its entirety or specific practices thereunder, the Regulation of 1923 puts emphasis on allowing individual cartel members to leave the cartel on a voluntary basis and provides protection against possible retaliatory measures by other members.

However, by establishing the formalisation requirement for cartel agreements and leaving the prohibition of the most detrimental cases to the Minister of Economics and the cartel court, the Regulation of 1923 also implicitly made legal and, thus, enforceable in court, the vast majority of agreements that were not prohibited. The enforcement system under the Regulation of 1923 is largely perceived of as having been ineffective, though, it led to the termination of some agreements (McGowan 2010, 58–60). Overall, the Regulation could not prevent the process towards greater concentration and cartelisation. During the 1920s, some of the most spectacular mergers occurred including, for example, the creation of IG Farben, Vereinigte Stahlwerke, and Daimler-Benz (McGowan 2010, 60). Furthermore, from 1905 to 1925 the number of cartels in Germany increased from 385 to 2,500 (Ortwein 1998, 34–35; Motta 2004, 10).

Already contemporaries perceived the importance given to the Minister of Economics, accused of being more amenable to business interests, as misconstruction and advocated the establishment of an independent cartel office. According to Ortwein (1998, 56), by 1926, there was a solid parliamentarian majority, including labour unions, in favour of establishing an independent cartel office to reduce the role of the Economics Minister in the enforcement process. The government, however, was reluctant to initiate any reforms. For Freyer (2006, 64), the German Regulation of 1923 essentially constituted a compromise between 'liberals opposed to both cartels and strong government, the proletarian parties of socialists and communists who resisted cartels but favored strong state control, and the Federation of German Industries advocating cartelized business self-regulation'. According to McGowan (2010, 52 and 58), while cartels and competition law did not feature high on the agenda of political parties in turn of the nineteenth century Germany the Regulation of 1923, which was

adopted under social democratic chancellor Gustav Stresemann, partly resulted from a growing degree of unease about cartel activity among sections of the wider public and parts of the social democratic party (SPD).

Ortwein (1998, 28–30) provides a more detailed analysis of the political positions at the turn of the nineteenth century in Germany. The *Deutsche Fortschrittspartei* (usually considered the forerunner to the German liberals, FDP) and, later, also parts of the *Zentrum* party (forerunner to the Christian Democratic Union, CDU) advocated some form of action against cartels (Ortwein 1998, 30). Within the *Zentrum* party, however, opposition arose mainly against extreme forms of monopolistic positions and high prices. Generally, cartels, trusts, and syndicates were in accordance with the *Zentrum* party's principle of a 'corporative organisation of the economy' by contributing to a more ordered production process and mitigating the negative effects of laissez-faire, or anarchic, markets. Within the SDP, while critical of large conglomerates of economic power, the view that cartels and trusts are a natural evolutionary step towards socialism was prominent at that time, thus, not immediately requiring any action by the government (Ortwein 1998, 30).

As already mentioned, some smaller companies and businessmen did complain about existing cartel practices and wanted to opt-out from these agreements. Other powerful business interests, most notably, the Federation of German Industries (*Centralverband deutscher Industrieller*), defended cartel practices and tried to undermine any efforts targeted at controlling or abolishing them (Ortwein 1998, 28). Some other European countries such as Sweden and Norway did adopt similar legislations during the 1920s (Gerber 1987, 63; McGowan 2010, 61–63). Most notably, the Norwegian approach constituted the first juridical competition policy regime in Europe pre-1945 where an independent cartel office was established to control cartel activity and a senior judge headed a Control Office.

According to Scherer (1997, 7), Austria pursued an essentially similar policy to that of Germany although without explicit judicial mechanism to enforce cartel agreements. However, despite having adopted competition laws on the domestic level Germany

and Norway, together with the UK, for example, opposed the proposal by France to adopt an international regulatory framework for international cartels during the League of Nation's World Economic Conference in Geneva in 1927 (McGowan 2010, 63–64). However, France cannot be said to have been more committed to the adoption of a competition law. France and the UK were rather reluctant to adopt any form of legal control before 1945 (McGowan 2010, 62). In France, although Article 419 of the Penal Code of 1810 prohibited price-fixing cartels, similar to the Sherman Act, the government and courts hesitated to enforce the article strictly and cartels became widespread (Freedeman 1988).[19]

The UK did not adopt a competition law before the Monopolies and Restrictive Practices (Inquiry and Control) Act of 1948 (Utton 2000). In Britain, generally, although some sort of policy to supervise and control monopolies and cartels was considered during the inter-war period it prevailed the consensus favouring industry self-regulation and limited public intervention into anti-competitive practices (Freyer 2006, 68–75). While historians have traced back legal scandals and common law decisions on monopoly back to 1298 (Wilks 1999, 11), generally, cartels were seen as a form of industrial self-regulation based on the principle of 'contractual freedom' and government officials hesitated to use public power to interfere into the economy. In contrast to the US were courts adopted the principle of a *per se* prohibition British courts increasingly facilitated the stability of anti-competitive agreements by not only permitting but in some cases even enforcing them (Freyer 1992, 24 and 121–58). In an important decision of 1889 the British Court of Appeals ruled that 'cartel agreements would not be enjoined except in cases of manifold abuse, but that the courts would also not intervene […] to enforce such agreements' (Scherer 1997, 8), thus, taking a rather neutral position.

After the First World War the British government established a temporary Standing Committee on Trusts to inquire into pricing and business practices and considered the

[19] In France, the first competition law was adopted in 1953 with the establishment of the *Commission technique des cartels*. However, because decision-making remained part of the ministerial bureaucracy, that is, the Commission was not independent, and a main concern was the control of inflation rather than the promotion of competition many observers date the adoption of the first genuine modern competition law in France to 1986 (Guidi 2016, 37–38).

proposal of a Trade and Monopolies Bill. However, the proposal was withdrawn and the UK continued its pre-war pattern of reliance on self-regulation with limited governmental supervision (Freyer 1992, 178–85). For Scherer (1997, 7), the British approach during the inter-war period can be located in between the American (cartel-breaking) and German (cartel-enforcing) extremes. According to Freyer (2006, 68), during the inter-war period, the Federation of British Industries and the Tory Party supported business self-regulation in the form of cartel agreements and rationalisation sustained by *ad hoc* government intervention. Despite opposition from smaller durable consumer goods and food and drink industries and some Labour Party groups this 'industrial self-government' approach prevailed. Similar as German social democrats, British socialists, although not very influential at that time, saw major trusts and combinations as a natural step towards socialism (Freyer 1992, 94).

Furthermore, Freyer (1992) relates the absence of formal competition policies in Britain before 1948 to the relative success of accommodating the interests of smaller, family-owned, businesses. In that interpretation, in Britain, contrary to other European countries and the US, larger companies, due to a mix of self-restraint and informal pressure by the government, were willing to include family-owned businesses in their production chains on fair terms which, therefore, were able to maintain their independence and did not exert comparable pressure on the government. In other countries such as Germany and Norway, pressure by SMEs did constitute an impetus for some sort of governmental policy which was, however, translated by the prevalent opinion among academics and bureaucrats and pressure by large business associations into enhanced transparency and the control of the most abusive instances while generally allowing cartels. Furthermore, in comparison to the US, it may be noted that some structural conditions in Europe were very different from the US. In Europe, for example, the rail system which involved many 'trust' scandals in the US was in state ownership or subject to direct economic regulation as in Britain (Ortwein 1998, 48). Similarly, most European markets were rather consolidated in contrast to the rapid unification of the US single market and, thereby, less exposed to a rapid 'explosion' of firms to (cutthroat) competition which may partly explain the more radical policy changes in the US.

Although the processes and dynamics in European countries showed some unique features it increasingly developed what may be termed a European approach to competition policy. European policy-makers and academics exchanged opinion and deliberated within fora such as the *Verein für Socialpolitik* and the IPU. The dominant European approach to cartels and monopolies of the inter-war period may be appropriately summarised by a resolution of the IPU of 1930 in which the participants unanimously approved:

> 'Cartels, trusts and other analogous combines are natural phenomena of economic life towards which it is impossible to adopt an entirely negative attitude. Seeing, however, that those combines may have a harmful effect both as regards public interests and those of the State, it is necessary that they should be controlled. This Control should not take the form of an interference in economic life likely to affect its normal development. It should simply seek to establish a supervision over possible abuses and to prevent those abuses.' (as cited in Scherer 1997, 8; see also McGowan 2010, 64)

The IPU resolution of 1930 and the debates preceding it contrast the European control of abuse approach with the US prohibitive approach (McGowan 2010, 64). Whereas in the US cartels were declared illegal and prohibited in Europe it rather developed a consensus generally allowing and tolerating cartels but controlling possible abuses of cartel activity that may harm the public interest. The European approach is commonly associated with the administrative control and supervision of the abuse of dominant market positions, that is, an abuse control (*Missbrauchsaufsicht*) (Gerber 1987, 62–66). European legislations did not introduce a *per se* prohibition of cartels, comparable to the US, but intended to control only abusive behaviour that arises from a dominant market position or evaluated agreements based on a rule of reasonableness as was for a long time the case in the UK. Underlying the abuse control approach is the view that cartels and monopolistic market positions are not *per se* detrimental to the public interest but that only abusive behaviour under such practices needs to be prohibited.

2.4.2 The (Re-)Constitution of Competition Policy in Europe after 1945

The post-war period is generally recognised as a time of increased convergence and commitment to pro-competitive market governance especially between the US and Europe (Freyer 1992; 2006; Dumez and Jeunemaitre 1996; Scherer 1997; Djelic 1998; 2002; Van Waarden and Drahos 2002; Harding and Joshua 2010, 86–118; McGowan 2010, 69–149). Generally, after the Second World War, European bureaucrats, politicians, and academics advocated the establishment of a (social) market economy to end with the totalitarian past and recognised the need for some sort of pro-competitive policy to control the most detrimental cases of cartel and monopolistic practices. Most notably, Germany, previously labelled derogatively the 'land of cartels', introduced a relatively far-reaching competition policy legislation in 1958. Similarly, Britain adopted its first formal competition law already in 1948 and the European treaties include competition policy provisions since the founding of the European Coal and Steel Community (ECSC) in 1951.

Competition policy has been referred to as the first supranational policy of the EU because already the ECSC treaty of 1951 included competition policy provisions in articles 65 to 67 (McGowan and Wilks 1995). Although having been restricted to the coal and steel sectors the treaty contained provisions on the control of anti-competitive agreements, the abuse of a dominant position, mergers, and governmentally induced distortions of competition. After the end of the Second World War, the US pressured for the adoption of competition laws in Germany and Japan but also in allied countries such as the UK and on the EU level (Murach-Brand 2004; Freyer 2006, 245–314; Leucht 2008; Leucht and Marquis 2013). During the ECSC treaty negotiations, US officials, for example, expressed concerns that the ECSC itself could develop into a major international cartel, a concern which could be mitigated by the inclusion of competition law provisions (e.g., Giocoli 2009, 765). Furthermore, France was an ardent supporter of including competition law in the ECSC treaty not necessarily to implement genuine competition in the European economies but mainly driven by an interest and expectation to control competition from Germany's previously highly cartelised coal and steel industries (Bulmer 1994, 427; Karagiannis 2013; Warlouzet 2016, 730).

However, the ECSC treaty's competition law provisions were restricted to the coal and steel sectors and never really enforced in practice. Therefore, the Treaty establishing the European Economic Community (EEC) of 1957 is usually argued to have introduced and laid the foundation for modern competition law on the European level (e.g., Schwartz 1993, 610). Since the EEC treaty, the competition policy provisions are not anymore confined to the coal and steel sectors but potentially applicable to all industries. The basic provisions and formulations on the control of anti-competitive agreements, the abuse of a dominant position, and state aid as formulated in 1957 and enshrined in articles 101 to 109 since the Treaty on the Functioning of the European Union (TFEU) of 2007 are maintained until today.[20] In view of the rather positive inclination towards cartels and monopolies prevalent in most European countries before the Second World War the inclusion of competition law provisions in the European treaties is a remarkable development. Already the EEC treaty of 1957 prohibited anti-competitive agreements, thus, effectively prohibiting cartels, the abuse of a dominant position, and distortions of competition resulting from state aid.

Besides US pressure, Germany became strongly supportive of European level competition law provisions during the 1950s. While Germany opposed the inclusion of competition policy in the 1951 treaty the country fully reversed its position during the 1950s and became one of the strongest advocates for the inclusion of competition policy principles in the EEC treaty. The reasons are usually identified with the goal of the German government to counteract the French focus on industrial policy-making and the development of a domestic competition law in Germany. The EEC treaty outcome is often portrayed as a compromise between French dirigisme in the form of industrial policy-making and German ordo-liberal positions favouring strong competition policy (Warlouzet 2019). In 1957, after ten years of negotiations, Germany passed its first modern competition policy legislation, the Law Against Restraints of Competition (*Gesetz gegen Wettbewerbsbeschränkungen*, GWB), which became effective as of 1 January 1958.

[20] The TFEU became effective as of 1 December 2009.

The GWB prohibited anti-competitive agreements and the abuse of a dominant position. Furthermore, an independent competition authority, the FCO, was established to enforce the competition law. With the adoption of a domestic competition law the German government, first, had an idea how European provisions could be formulated and, second, also an interest to implement similar provisions on the European level. The German government wanted to create a fair level playing field so as to avoid that firms in other member states may have a competitive advantage by the use of anti-competitive practices such as cartels or the receiving of substantial state aid. However, the German GWB and the competition policy provisions of the EEC treaty of 1957 are not simply emulations of US antitrust law but consolidated and enshrined a specific European approach to competition policy. Both laws resort to the abuse of dominance approach (*Missbrauchsaufsicht*) for monopolistic market positions which was developed in Europe in the 1920s and which has been related to the influence of ordo-liberal economic ideas (Gerber 1982; 1987; 1992; 1994; 1998; Rousseva 2005; Vatiero 2010; Felice and Vatiero 2015).

Ordo-liberalism is a line of liberal economic thought that gained in prominence during the 1930s, and, after the war in the 1950s, but whose origins can be traced back to intellectual developments in Austria at the end of the nineteenth century (Gerber 1992; Rieter and Schmolz 1993). The ordo-liberal tradition is primarily associated with prominent figures such as economist Walter Eucken and jurist Franz Böhm who, together with other intellectuals, met regularly in the city of Freiburg for which reason they are also referred to as the so-called Freiburg School. Influenced by the economic crises of the 1920s and 1930s this group of scholars developed economic concepts that, in comparison to neoclassical economics, envisaged a more important and positive role for the state in setting the institutional parameters for competition and controlling private market power (Bonefeld 2012, 634; Young 2015, 10). For ordo-liberals, the concentration of private economic power in the form of monopoly and anti-competitive practices such as cartels were one of the main causes for Germany's economic and political disintegration during the Weimar Republic (Giocoli 2009, 769). Therefore, the state, acting as 'guardian of the competitive order' (Vanberg 2015, 30), has to sustain economic freedom by controlling private economic power.

After the end of the Second World War, leading ordo-liberals pro-actively advocated the establishment of strong competition policy principles in Germany and throughout Europe and directly shaped post-war economic policy-making. The possible influence of ordo-liberal ideas and the way in which these ideas may have travelled throughout Europe can be nicely shown by the involvement of some key proponents in the drafting of German and European competition laws. Franz Böhm, for example, a leading ordo-liberal, worked in the unit of the Ministry of Economics responsible for cartels during the Weimar Republic. Later on, he was a member of the Josten-Committee that developed the first draft of the GWB and a member of the German parliament for the CDU (Ortwein 1998, 64; Felice and Vatiero 2015, 148). According to Giocoli (2009, 775), more than 50 per cent of the members of Germany's Academic Advisory Council that was formed in 1947 were ordo-liberals.

Alfred Müller-Armack, the Secretary of State under (West) Germany's first economic minister Ludwig Erhard, is generally considered the originator of the concept of the 'social market economy' and an exponent of ordo-liberalism (Sally 1996, 248). Furthermore, Walter Hallstein, the first President of the European Commission, and Hans von der Groeben, who first headed the German delegation on matters of economic policy in the ECSC treaty negotiations and later became the first European Competition Commissioner, were closely associated with ordo-liberal ideas (Giocoli 2009, 776; McGowan 2010, 105). Importantly, ordo-liberals are not only argued to have favoured strong competition policy principles but also to have endorsed a competition policy model that differs from the US model. Many economic policy experts in post-war Europe, while generally advocating the establishment of strong competition policy principles, rejected the private adversarial nature of the US system with its reliance on court proceedings between private parties and favoured an administrative solution (Freyer 2006, 248). Therefore, in Europe, public administrative agencies, that is, competition authorities, were primarily tasked with the enforcement of the competition laws.

Still today, private enforcement remains less important than in the US. Furthermore, the specific European approach is especially manifested in the interpretation and application of the prohibition to abuse a dominant market position. In comparison to the US system, where especially since the 1970s the consumer welfare standard takes a key role in the assessment of anti-competitive conduct, European competition law places as much importance on consumer choice as on consumer welfare. The more firms compete in the same market the higher the possible choice for consumers between different providers and the higher the possible long-term potential for innovation. Therefore, the market structure and market concentration levels are key criteria for European competition authorities that also place more importance on protecting smaller firms from abusive practices by undertakings with a dominant market position than US antitrust laws. European competition law identifies an abuse of a dominant position in cases of direct harm to consumers *and* when consumers are harmed indirectly by reducing their choice through the exclusion of competitors (Rousseva 2005, 591).[21]

The development and consolidation of the abuse of dominance approach and its interpretation and application by EU competition authorities and courts can be related to ordo-liberal economic ideas (Gerber 1982; 1987; 1992; 1994; 1998; Rousseva 2005; Vatiero 2010; Felice and Vatiero 2015). However, the development of this approach may be also related to some more interest-driven factors which, together with processes of historical path dependencies and unintended consequences, may have considerable affected the development of the European approach. The treaty negotiations for the competition policy provisions of the GWB and the EEC of 1957 as well as later European treaties are as much influenced by ideational and intellectual traditions as by interest-driven bargains (Robert 1976; Baake and Perschau 1996, 131–34; Ortwein 1998, 71–81; Eyre and Lodge 2000, 66; Cho 2003; Quack and Djelic 2005).

---

[21] According to Rousseva (2005, 591) the interpretation of Article 102 TFEU (then, Article 82) to protect consumers *and* competitors became especially visible in the European Court of Justice's (ECJ) decision in *Continental Can v. Commission* (1973) and in *Hoffman-La Roche & Co AG v. Commission* (1979).

In Germany, for example, during the drafting of the GWB of 1957, the Association of German Industries (*Bund der Deutschen Industrie*, BDI) favoured an abuse of dominance instead of a prohibitive approach because the BDI expected a more lenient enforcement regime through the abuse of dominance approach (Ortwein 1998, 73). In the 1957 version of the GWB the BDI was successful in also subjecting vertical agreements to an abuse of dominance test but not for horizontal agreements. Generally, from an interest group perspective, it could be expected that an abuse of dominance approach instead of a simple prohibition leaves more flexibility for certain practices that can be continued. However, while this expectation of the BDI did not necessarily proof true as quite far-reaching prohibition clauses and practices developed under the legal doctrine of the abuse of dominance approach, the role of interest group pressures and inter-state bargains between the member states in the development of EU competition law is undeniable (e.g., Schwartz 1993; Bulmer 1994; Budzinski and Christiansen 2005).[22]

Furthermore, the 'antitrust revolution' (McGowan 2010) in Europe was not as far-reaching and as revolutionary as first may appear by the comparison of the encouragement of cartels pre-1945 with the prohibition of cartels from the 1950s onwards. The European competition policy system could not start to operate before the adoption of the implementing Council Regulation 17/62 in February 1962 and, then again, enforcement started rather slowly.[23] After the formulation of the rules it had to be specified how and by whom the rules are enforced. Regulation 17/62 established the institutional framework for the enforcement of the European competition policy provisions (Guidi 2016, 25). The Regulation dedicated the European Commission as supranational enforcement authority and clarified the scope of its enforcement powers.[24] Besides empowering the European Commission to issue

[22] For critiques to the role of ordo-liberal ideas on post-war economic policy making and the interpretation that the European competition policy approach is based on ordo-liberal intellectual traditions see, for example, Akman and Kassim (2010), Karagiannis (2013), Akman (2014), Talbot (2016), and Wigger (2017).
[23] Council Regulation (EEC) No 17/62 of 1962: First Regulation implementing Articles 85 and 86 of the Treaty. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31962R0017.
[24] From 1951 to 1967 the European Commission was named High Authority for Coal and Steel. In 1967, Article 9 of the Merger Treaty (Brussels Treaty) replaced the High Authority with the European

prohibition orders and fines, to conduct market studies and to enter and search the premises of companies, Regulation 17/62 also established the negative clearance and notification procedure.

In order to be granted an exemption from the cartel prohibition firms had to notify their agreement to the Commission. Furthermore, Regulation 17/62 also established the Advisory Committee on Restrictive Practices and Monopolies composed of representatives of EU member states. The Committee, which still exists today, must be consulted by the European Commission before a final decision is taken in any particular case.[25] While not having the power to overrule Commission decisions the Advisory Committee, however, allows member states to be constantly informed about ongoing investigations and may be a forum for political bargains. Although the Advisory Committee is not necessarily composed of officials with anti-competitive attitudes only rarely the European Commission has acted against the majority advice of the Committee (Ortwein 1998, 232–42).

According to Guidi (2016, 26), the Advisory Committee may work as a 'fire alarm oversight' (cf., McCubbins and Schwartz 1984) for member states to intervene when deemed necessary but also allows the European Commission to familiarise and socialise member states with the Commission's view on competition policy. From the beginning, the enforcement of competition policy in the EU is characterised by a system of parallel enforcement where EU competition rules co-exist with national competition laws and national governments and competition authorities are keen to maintain competencies (Budzinski and Christiansen 2005). Although competition policy was one of the first supranational policies of the EU the European Commission never had exclusive competencies for the enforcement of competition policy. Especially in its early years the Directorate-General for Competition (DG Comp), the EU competition authority, was generally understaffed and equipped with little resources and when the European Commission tried to enforce competition rules in

---

Commission. For reasons of simplicity, it is referred to the European Commission throughout this text.

[25] The Committee, however, is not consulted as regarding whether a case is opened in the first place. The current name is Advisory Committee on Restrictive Practices and Dominant Positions.

critical cases it was often faced with political opposition by the governments of affected member states (Büthe and Swank 2007, 23).[26]

The first time the European Commission enforced the EEC's competition policy provisions was in 1964 (Carree, Günster, and Schinkel 2010, 101; McGowan 2010, 128). During the first decade of EU competition policy the number of cartels unearthed and penalised rarely surpassed more than three per year (McGowan 2010, 124). By 1972, the European Commission has concluded only 51 formal decisions which is around five per year (Holley 1992, 346). Some of the cases established important precedents and clarified the meaning and scope of the provisions but nevertheless the overall number of cases is rather low. According to Wilks and McGowan (1996, 232), it took about twenty years until the potential for the enforcement of competition policy by the European Commission through Regulation 17/62 became fully realised. While the competition rules were adopted in 1957 the first decision was taken only in 1964 and it was not before the early 1980s that the EU competition policy regime really started to operate.

The more the European Commission enforced the competition rules the more the governments of EU member states were keen to clarify the scope and meaning of the provisions and to formulate exemptions for sensitive areas. The European law and the German GWB are construed around the *per se* prohibition of anti-competitive agreements, similar as US antitrust law, but clearly formulate and specify various types of agreements that are exempted from that prohibition. The GWB as finally adopted in 1957 was not anymore based on the tenets of structural neo-liberalism oriented towards the model of perfect competition as some draft proposals envisaged but reframed in terms of the social market economy and focused on the promotion of economic productivity (Baake and Perschau 1996, 132).

In accordance with the principles of structural neo-liberalism, competition was considered the best instrument to achieve economic growth. However, anti-competitive practices and market structures were to be tolerated where they

[26] In 1999, DG IV became DG Comp.

contributed to economic productivity and several sectoral exemptions were included. The GWB included a series of cartel exemptions, that is, anti-competitive agreements that could be exempted from the prohibition if they contributed to economic productivity and rationalisation, which are unknown to the US system, and still allows for rationalisation cartels among SMEs (Kronstein 1958; Marburg 1964; Hölzler and Braun 1982; Audretsch 1989; Haucap, Heimeshoff, and Schultz 2010).[27] Similarly, the European treaties include what is referred to as the 'European exemption clause'. Accordingly, anti-competitive agreements which contribute 'to improving the production or distribution of goods [and services] or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit' are exempted from the cartel prohibition.[28]

Over time, the meaning and coverage of this exemption clause has been specified and explained in several notices and guidelines issued by the European Commission (European Commission 1978; 2004a; 2004d; 2010; 2011). Furthermore, the European Commission has, upon having been mandated by the Council of the EU, issued block exemption regulations on specific types of agreements. Already in 1965, the Council of the EU issued the first block exemption regulation (McGowan 2010, 129). Specifically, the block exemptions currently in force cover vertical-, specialisation- (including joint production), research and development-, and technology transfer agreements.[29] Apart from hard-core restrictions such as simple price-fixing agreements, the block exemptions establish safe harbours for agreements between

[27] More specific, the GWB of 1957 allowed for seven types of cartel exemptions: export-, import-, cooperation-, specialisation-, crisis-, rationalisation-, and ministerial authorisation cartels.
[28] The European exemption clause is included since the EEC treaty of 1957 but is laid down in its current version in Article 101(3) TFEU. Two further conditions that must be fulfilled for an agreement to be exempted are that the agreement does not (a) 'impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives; [and] (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.'
[29] The block exemption regulations currently in force are: Commission Regulation (EU) No 330/2010 of 20 April 2010 on the application of Article 101(3) of the TFEU to categories of vertical agreements and concerted practices; Commission Regulation (EU) No 461/2010 of 27 May 2010 on the application of Article 101(3) of the TFEU to categories of vertical agreements and concerted practices in the motor vehicle sector; Commission Regulation (EU) No 1217/2010 of 14 December 2010 on the application of Article 101(3) of the TFEU to certain categories of research and development agreements; Commission Regulation (EU) No 1218/2010 of 14 December 2010 on the application of Article 101(3) of the TFEU to certain categories of specialisation agreements; and Commission Regulation (EU) No 316/2014 of 21 March 2014 on the application of Article 101(3) of the TFEU to categories of technology transfer agreements.

market actors whose combined market shares do not exceed thresholds of around 20 to 30 per cent. Generally, the guidelines and the corresponding block exemptions specify that more lenient enforcement standards are applied to these types of agreement and that considerable pro-competitive effects may outweigh their anti-competitive effects. This is especially the case for agreements between SMEs, that is, those firms with lower market shares. Therefore, an effect commonly ascribed to the block exemptions is the promotion of SMEs (McGowan 2010, 129).

Also the EU provisions on state aid do prohibit state subsidies that distort competition in the common market but allow for several exemptions such as in cases of social purposes, natural disaster, an external shock or for the purpose of regional development. Especially in the early years, the EU competition law and the corresponding laws of EU member states also included special regulatory regimes for specific economic sectors. By the EEC treaty of 1957 the competition rules became applicable to the whole economy except those economic sectors which were exempted from the provisions. On the European level, special regulatory regimes applied, for example, for the coal and steel sectors until 2002 and continue to apply for the transport and agriculture sectors. [30] On the member state level, sectors to which special competition rules apply usually include the media and newspaper, public transport and infrastructure (including telecommunication and energy), and banking and finance sectors. Although some of these sectoral exemptions have been successively repealed, usually, these sectors continue to be treated separately somehow and some sectoral exemptions remain in place. The existence of special regulatory regimes does not mean that competition is not a concern in these sectors. In the media and newspaper sector, for example, stricter rules apply due to the importance of this sector for the formation of public opinion and to safeguard media plurality. However, usually, it means that higher levels of market concentration and other anti-competitive practices are tolerated because these sectors are argued to constitute critical infrastructure.

[30] The transport sector was exempted from the application of Council Regulation 17/62 by Council Regulation 141 of November 1962. While this general exemption was repealed by Council Regulation 1/2003 with effect as of May 2004 the special status of the transport sector continues to be visible in, for example, Council Regulations 1017/68, 2988/74, 4056/86, 3975/87, and 3976/87 that deal with the application of competition rules in the transport sectors.

Further exemptions and allocations of competencies between the European Commission and EU member states are specified by the 'effects of trade' concept and the exemption for agreements of minor importance. By the EEC treaty of 1957 and Regulation 17/62, the European Commission has been only granted competencies to enforce the prohibition against anti-competitive agreements and the abuse of a dominant position for cases affecting trade between at least two member states, that is, cases having a Community-wide dimension.[31] Accordingly, cases that do not affect trade within the EU fall in the competencies of the NCAs of EU member states. Furthermore, the effect on trade must be appreciably, that is, cases involving market actors with low market shares (around five per cent) are also outside the responsibility of the Commission. The exemption for anti-competitive agreements of minor importance specifies that, generally, for agreements other than hard-core restrictions (e.g., cross-border price-fixing cartels), the European Commission does not initiate proceedings if the aggregate market share of the firms involved does not exceed 10 to 15 per cent (European Commission 2014). Thus, effectively, the 'de minimis' exemption, again, lays down a more lenient treatment of SMEs. Similar minor market exemptions are usually also included in the national competition laws of EU member states.

The next major development of EU competition policy came with the inclusion of merger control. As a result of opposition by the then six EU member states the EEC treaty of 1957 did not contain any provisions on the control of mergers. From the 1970s onwards, however, the European Commission tried to test the applicability of existing provisions to the control of mergers. In its 1974 *Continental Can* judgement the European Court of Justice (ECJ) generally upheld the principle that the European

[31] The effect on trade between member states concept has been specified in subsequent decisions by the European Court of Justice (ECJ) and European Commission notices (European Commission 2004b). Accordingly, trade covers all cross-border economic activities and captures both direct or indirect and actual or potential influences on the pattern of trade between member states. Furthermore, however, the agreement or practice must have an *appreciable effect* on trade between member states, i.e., must be of a certain dimension, in order to fall within the competencies of the European Commission and EU competition law. An appreciable effect on trade is commonly negated if the aggregated market share of the parties concerned in the relevant market does not exceed 5 per cent *and* the aggregate annual Community turnover does not exceed EUR 40 million (negative presumption) but seen as given in cases of agreements relating to imports and exports, agreements covering a number of member states or hardcore cartel agreements (positive presumption) (see also FCO 2007, 8–11).

Commission could regulate mergers through the provision on the control of a dominant position (Bulmer 1994, 429; Schwartz 1993, 618). The European Commission, however, has never successfully employed an abuse control to prohibit a merger and only a few times used the threat of such a proceeding to achieve some structural changes to proposed mergers (Schwartz 1993, 622). Rather, a new impetus for the development of EU merger control came with a complaint by two tobacco companies that sought to specify ECJ ruling in a merger case involving their competitors. In the 1987 *Philip Morris* case the ECJ established that mergers could potentially be regulated under the provisions on the control of anti-competitive agreements if the merger results from an agreement. By 1988 the European Commission is reported to have made 25 formal decisions on mergers and to have given 36 written clearances despite the absence of any formal provisions to regulate mergers (Bulmer 1994, 431).

The uncertainty created by the evolving practice of regulating mergers through the provisions on anti-competitive agreements and the abuse of a dominant position without a clear set of rules and guidelines and the strategic use of this uncertainty by the European Commission is often argued to have been major factors in changing the preferences of business and governments within the EU in favour of a European merger control regime (Bulmer 1994; Büthe and Swank 2007; Warlouzet 2016). The introduction of merger control on the European level may have also been perceived by member state governments as an instrument to dismantle barriers to mergers and acquisitions in other European countries (Schwartz 1993). Furthermore, Ortwein (1998, 232–42), for example, suggests for the case of Germany that domestic business associations and the government, by the end of the 1980s, may have seen a European merger regime as an opportunity to escape the relatively strict merger control enforcement on the domestic level by the FCO and to re-gain political influence over the process.

After lengthy negotiations, the European Merger Regulation (EMR) was adopted in December 1989.[32] Some key issues in the negotiations were the turnover threshold

[32] Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31989R4064&%20=1. A corrected version appeared in the

above which the European Commission should take responsibility for merger control and the relationship between competition- and industrial policy objectives in European merger control. Whereas the European Commission proposed to set the turnover threshold above which the European regime applies at ECU 1 billion some key member states, particularly Germany and the UK, preferred to keep domestic responsibility for all mergers below an annual combined turnover of ECU 10 billion and to focus merger control on competition criteria (Schwartz 1993, 643–50; Ortwein 1998, 232–42). In Germany and the UK, for example, domestic competition authorities, the FCO and the OFT, worried about the risk of political influence and the inclusion of industrial policy objectives in merger control when delegated to the European Commission and, thus, aimed at keeping the final say in merger decision-making. France preferred to leave scope for industrial policy objectives in merger control and smaller member states, including the Netherlands, Belgium, Ireland, and Spain, favoured lower turnover thresholds (Schwartz 1993, 648–50).

The final compromise set the threshold at ECU 5 billion subject to a review in 1993 (Bulmer 1994, 435; Büthe and Swank 2007, 28). The European Commission was granted exclusive competence for the control of mergers having a 'Community dimension'. The EMR specifies that a 'Community dimension' is deemed to exist if the combined aggregate worldwide turnover of the merging parties exceeds ECU 5 billion and each of at least two of the merging parties achieve an aggregate Community-wide turnover of more than ECU 250 million. However, if the merging parties each have achieved more than two-thirds of their aggregate Community-wide turnover in one and the same member state the case is examined by the competition authority of the territory in which more than two-thirds of the Community-wide turnover was achieved (so-called two-thirds rule). The turnover threshold of ECU 5 billion was suggested to be reviewed for a potential reduction, which would increase the number of mergers falling within the competencies of the European Commission, until the end of 1993. The EMR also introduced a pre-merger notification requirement for mergers having a 'Community dimension'.

Official Journal of the European Communities on the 21 September 1990, the day the EMR took effect. The corrected version is available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31989R4064R(04)&from=EN.

Similar as in the areas of anti-competitive agreements and the abuse of a dominant position the EMR established an 'Advisory Committee on concentrations' composed of representatives of EU member states. The Advisory Committee must be consulted by the European Commission before a final decision is taken in stage-two investigations, that is, before a merger is prohibited.[33] Since the adoption of the EMR in 1989 the European merger control regime was reformed in 1997 and 2004. In 1997 the turnover threshold for a merger to fall under the European control regime was effectively lowered as sought for by smaller EU member states and the European Commission (Büthe and Swank 2007, 30).[34] In 2004, the EMR of 1989 and Regulation 1310/97 of 1997 were repealed and consolidated in a new European Merger Regulation as part of the EU's 'modernisation' reform process in competition policy.[35] The consolidated version of the EMR of 2004, besides providing a more accurate account of merger control taking into account jurisprudence by the ECJ that developed since 1989, mainly specifies in more detail the cooperation and information exchange between the European Commission and the NCAs of EU member states and the procedures for the transfer of cases between authorities. The enforcement powers, turnover thresholds, and range of competencies of the European Commission remain largely the same.

The EU's modernisation reform process also affected the areas of anti-competitive agreements and the abuse of a dominant position and led to the establishment of the European Competition Network (ECN). In December 2002 it was adopted Regulation 1/2003 which became effective in May 2004 and replaced the first implementing

[33] The Advisory Committee on concentrations must be consulted by DG Comp in stage-two investigations but not as regarding whether a stage-two investigation is opened in the first place and regarding mergers that are cleared by the European Commission already in preliminary phase-one investigations.
[34] Council Regulation (EC) No 1310/97 of 30 June 1997 amending Regulation (EEC) No 4064/89 on the control of concentrations between undertakings. Available at: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A31997R1310. It could also be said that even when the turnover thresholds remain the same there is a slight but constant decrease in thresholds, that is, expansion in the European Commission's competencies, due to inflation.
[35] Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings (the EC Merger Regulation). Available at: https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32004R0139.

Regulation of 1962.[36] Regulation 1/2003 strengthened the system of parallel enforcement in the areas of anti-competitive agreements and the abuse of a dominant position by empowering NCAs and national courts to apply the full set of EU competition rules. Most crucially, Regulation 1/2003 empowers member state authorities to apply not only the prohibitions of anti-competitive agreements and the abuse of a dominant position but also to grant exemptions for anti-competitive agreements under the European exemption clause.[37]

By empowering NCAs and national courts to apply the full set of EU level competition rules in the areas of anti-competitive agreements and the abuse of a dominant position Regulation 1/2003 can be said to have re-delegated enforcement powers from the European Commission back to the national level.[38] NCAs have been empowered to apply the sensitive issue of granting exemptions for anti-competitive agreements which previously has been the sole prerogative of the European Commission. At the same time, however, the European Commission has not necessarily lost any competencies. The principle aim of the modernisation reform was to reduce the workload of the European Commission while ensuring that NCAs apply European competition rules in a uniform manner.

The extent to which this can be realised or whether the concurrent application of EU competition rules by NCAs may also affect the interpretation and application on the European level remains to be seen. Furthermore, the Regulation also abolished the system of notification and negative clearance for agreements that may be exempted. The ECN, as an informal forum for cooperation and information exchange between DG Comp and NCAs, was stipulated by Regulation 1/2003 and created in 2004 by the European Commission's Notice on cooperation within the Network of Competition

[36] Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003R0001&rid=1.
[37] Although the competition authorities of EU member states could technically apply Articles 81(1) and 82 since Regulation 17/62 they only rarely did so in practice but instead investigated domestic cases under national competition laws.
[38] The second implementing Regulation 1/2003 of 2002 and the EMR of 2004 explicitly mention the subsidiarity principle and shift enforcement back to the national level as well as strengthen cooperation mechanisms between the European Commission and NCAs.

Authorities (European Commission 2004c). This Notice together with the Joint Statement of the Council and the Commission on the Functioning of the Network of Competition Authorities lays down the basic procedural rules and functioning of the ECN. [39] While DG Comp and NCAs have always cooperated and exchanged information the ECN provides for a more formal institutionalisation of this cooperation.

2.5 Conclusion

This chapter discussed the historical development of competition policy with a focus on the US and Europe. The history of competition policy provides a rich account of how the interaction of functional pressures, ideational changes, and interest group pressures leads to the successive genesis and development of a new regulatory policy that finally becomes consolidated and adopted by an ever-increasing number of countries and even a norm of global governance. At least partly building-up on older English common law legal cases, the first modern competition laws were adopted in the US and Canada during the end of the nineteenth century (Dewey 1955; W. L. Letwin 1954; Baxter 1982). Then, especially after the end of the Second World War, and in a second wave during the 1990s, modern competition laws proliferated widely and were adopted by many countries around the world (Palim 1998; Kronthaler and Stephan 2007; Forslid, Häckner, and Muren 2011; Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016; Bradford and Chilton 2018). While modern competition policies are sometimes simplified associated with the US and market-endorsing (neo-)liberal policies the chapter emphasises the different competition policy models that have been developed in the US and Europe.

In Europe, after the end of the Second World War, it was consolidated a specific European competition policy model (Gerber 1982; 1987; 1992; 1994; 1998; Rousseva 2005; Vatiero 2010; Felice and Vatiero 2015). In many European countries, the genesis of ideas and policy proposals to regulate and control cartels and monopoly power can be traced way into the nineteenth century or even longer back in history. In both

[39] The Joint Statement is available at: https://ec.europa.eu/competition/ecn/joint_statement_en.pdf.

regions, the US and Europe, the spread of anti-competitive practices to the possible detriment of consumers, other firms, and the broader public successively led to a rising number of complaints about existing practices and a re-consideration of their costs and benefits (Freyer 1992; 2006; Ortwein 1998; McGowan 2010; Harding and Joshua 2010). In response to these complaints, governments considered and enacted the first competition laws. Although many studies focus on the supranational competition policy of the European Commission, EU competition policy has always been characterised by a system of parallel enforcement where national competition laws and competition authorities continue to co-exist with European institutions. The turnover thresholds, exemptions, and other concepts (e.g., two-thirds rule and effects of trade concept) delineating the exact scope of the European Commission's competencies have been subject to harsh political bargains and 'turf battles' and member states have been generally keen to maintain national competencies and autonomy for the enforcement of competition policy (Schwartz 1993; Bulmer 1994; Budzinski and Christiansen 2005).

3 Theoretical Framework: How to Explain Variation in Competition Policy?

This chapter discusses the theoretical factors that may be hypothesised to influence the formal design and enforcement of competition policy. The chapter combines structural theories of competition policy with actor-centred accounts of competition authorities. For that purpose, the chapter is structured around four main parts. The first section discusses the role of political and ideational factors in the development and enforcement of competition policy. The second section focuses on the relationship between domestic-institutional factors, most notably, legal origin and varieties of capitalism, and competition policy. The third section conceptualises the study of competition authorities in terms of the principal-agent framework. Finally, the chapter ends with the attempt to formulate a unified theoretical framework for explaining variation in the formal design and enforcement of competition policy.

3.1 Introduction

This chapter lays down the theoretical framework applied in the thesis. The thesis combines structural theories of competition policies with actor-centred accounts of competition authorities to study the economic, political, and institutional factors that explain variation in formal competition laws and enforcement activities. According to the main theoretical framework and based on the historical account of its emergence and evolution, competition policy is a functional regulatory response to increasing market activity and the accumulation of market power as stipulated by public interest theory. In that process, however, countries respond differently to similar challenges to cope with problems of market power and develop different competition policy models dependent on their legal system and type of capitalism. Furthermore, once in place, competition authorities are subject to political and business pressures that try to influence regulatory outcomes as expected by public choice theory.

From the perspective of public interest theory, competition policy serves to improve general economic welfare (Long, Schramm, and Tollison 1973; Parakkal and Bartz-

Marvez 2013). Specifically, competition policy improves allocative efficiency and consumer welfare by controlling market power and promoting competition. However, the degree of intervention that competition authorities should pursue and the set of business practices that should be prohibited remain contested. In practice, it is often unclear how best to improve the efficient working of markets by means of competition policy. Furthermore, competition policy operates at an uneasy intersection of different norms where the promotion of competition and market efficiency rationales conflict with norms of 'fair' business conduct and with other public policy objectives such as industrial policy-making, economic stability, social solidarity, environmental sustainability, media plurality or national security.

Historically, competition policy developed often due to more specific economic and political pressures such as complaints from smaller businesses about the unfair business practices of more powerful companies. From a 'regulatory capture' and public choice perspective (Shughart and Tollison 1985; Baumol and Ordover 1985; Shughart 1995; Shughart and McChesney 2010; McChesney, Shughart, and Reksulak 2014), competition policy not only serves to improve general economic welfare but is also used, or, at least, constantly at the risk of being used strategically, by firms and industries to avoid rather than promote economic competition. Furthermore, different 'varieties of competition policy' can be related to broader domestic institutional features of the political economy and the legal system (cf. Hall and Soskice 2001; La Porta, Lopez-de-Silanes, and Shleifer 2008; Reitz 2009). In this regard, arguably, different competition policy features tend to be complementary to, and have resulted from, other institutional configurations of the legal system and the political economy.

The chapter is divided into four sections. The next section discusses the role of ideas and political factors in the making of competition policy. In this part, the view that competition policy furthers the public interest in the form of undistorted competition and its basic critique, the public choice view of competition policy, are discussed in more detail. Section 3.3 focuses on the relationship between domestic-institutional factors, notably, the legal system and type of capitalism, and competition policy. The third section conceptualises the study of competition authorities in terms of the

principal-agent framework. Finally, the chapter ends with the attempt to formulate a unified theoretical framework on the factors that shape the design and enforcement of competition policy.

3.2 Politics and Ideas in the Making of Competition Policy

The public interest- and public choice theory are the two main perspectives on competition policy in the economics literature. Furthermore, most studies in political science and related fields either implicitly or explicitly assume a benevolent or an interest-driven role of competition policy. From the perspective of public interest theory, competition policy is adopted and enforced by benevolent politicians and bureaucrats to improve social wealth by correcting for market failure that arises from the existence of market power. The development of public interest theory and the discovery of competition policy as a possible solution to economic problems required a fundamental rethinking on an ideational level. From the perspective of public choice theory, however, competition policy results from and is subjected to economic and political interests that try to influence the policy to their advantage similar as other types of regulation. Ideational factors constantly (re-)define the scope of competition policy and the range of practices that should be deemed anti-competitive.

3.2.1 The Public Interest Theory of Competition Policy

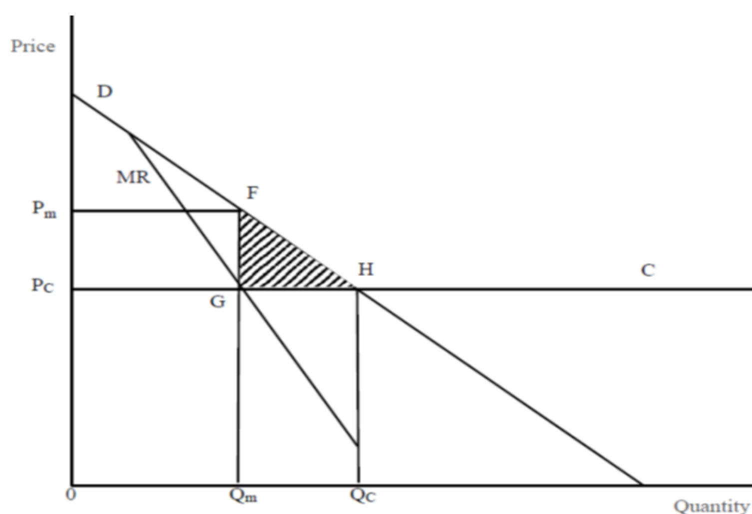
From the perspective of public interest theory, competition policy serves to promote the public interest in the form of undistorted competition and efficient markets. In this view, a functioning and competitive market can be seen as public good which governments have to create and maintain. (Competitive) markets do not develop naturally but have to be created and maintained by a functioning regulatory framework (Polanyi 1944; Heritier 1997; Egan 2001). Therefore, the development of capitalist modes of production and privatised economic market relationships can be expected to be accompanied by expanded competition policy regulation (Palim 1998; Kronthaler and Stephan 2007; Parakkal and Bartz-Marvez 2013).

Although neoclassical economists are traditionally sceptical of the ability of governmental regulation to improve market outcomes the economic rationale for the

public interest motive of competition policy is relatively strong, probably stronger as for other types of regulation. The profit motive of firms, while being the main driver of innovation and efficiency, also creates dysfunctionalities in the form of asymmetric markets. The success of individual firms naturally leads to a situation where one or a few firms acquire positions of market dominance that may be easily (ab)used to further suppress competition. Furthermore, firms may secretly collude to fix prices and produced quantities and engage in other anti-competitive practices such as the sharing of markets.

The economic benefits of competition policy can be shown by a simple welfare analysis of market power. Figure 3.1 below plots the basic welfare loss model of monopoly (Long, Schramm, and Tollison 1973, 352–53).[40] D is the long-run demand curve for a given product. C is the long-run average and marginal cost curve which is assumed constant and equal for all firms. MR are the marginal revenues of the monopolist. In the long-run competitive equilibrium firms would produce at point H. In a competitive market, firms would choose to produce quantity Q_C at the intersection of the marginal cost curve with the demand curve to maximise profits. The result is the competitive market price P_C.

Figure 3.1: The welfare loss model of monopoly



[40] For a more recent textbook discussion of the welfare effects of monopoly power see, for example, Mankiw (2004, 353) or Pindyck and Rubinfeld (2005, 474).

However, when a firm is in a position of market power, defined as the ability to influence total market prices by unilateral production decisions, firms can increase their profits by reducing the quantity produced. More specific, in the case of market power, firms maximise their profits by producing at the point where the marginal revenue curve intersects with the marginal cost curve. The result is production of the monopolistic quantity Q_m sold at the higher market price of P_m. The welfare effect of monopoly power is a net welfare loss (deadweight loss) of the magnitude of the shaded triangle FHG and a transfer of wealth from consumers to producers.[41] In a market with two or more firms that have some level of monopoly power (oligopolistic market) the analysis becomes more complex, but the basic result remains the same. The existence of market power leads to a net welfare loss and a transfer of wealth from consumers to producers.

The welfare loss model of monopoly is a very simplified representation of reality. In practice, competition authorities are not only concerned about the quantities produced and the market prices but also about other factors such as market access, product diversity, -quality, and -safety or research and development potential (e.g., European Commission 2011). In practice, firms possess market power to varying degrees and may exercise them not only through the price and the quantity they produce but also by more subtle means such as boycotts, price and access discrimination or market sharing agreements. However, the model demonstrates the potential for competition policy regulation to improve market outcomes and total economic wealth. Moreover, the price remains a key factor for assessing the efficient working of markets and a politically highly salient issue.

From a public interest perspective, every competition policy intervention that moves the production point closer to point H and efficient market quantity Q_C and price P_C

[41] The gains in producer rents, or excess profits, due to monopoly power are given by the rectangle P_mFGP_C. Consumer rents are reduced by excess profits plus the net welfare loss. Therefore, the rectangle FHG is a net welfare loss. This area is lost by consumers and not compensated for by any gain for producers. The net welfare loss constitutes goods (or services) that could have been produced and sold at competitive market equilibrium but are simply lost for the economy as a result of monopoly power.

furthers the public interest. Furthermore, the model shows the distributional conflict between consumer and producer interests inherent in any competition policy decision. The enforcement of competition policy not only furthers the public interest by maximising economic wealth but also affects the distribution of wealth between producers and consumers. Therefore, competition policy is generally a pro-consumer policy. However, despite its prominence in economic theory, it is not a trivial task to test the public interest theory empirically. Broadly, to support the public interest theory, competition policy should be a functional response to market power and the range of anti-competitive practices prevalent in the economy. The market structure is the key factor in this regard. The more the market structure is characterised by market power and abusive practices the higher the functional need for competition policy intervention.

When the economy works efficient and is not distorted by market power or cartel agreements there is no potential for competition policy to improve market outcomes. However, because market power and concentration levels are difficult to measure on the country-level for several years market indicators such as privatisation and barriers to entry are good proxies. From a public interest perspective, it can be expected that a privatised economy leads to the acquisition of market power by private actors over time which, in turn, increases the probability for the (ab)use of such a market power and the development of anti-competitive practices. The more market power private actors acquire, and the more firms abuse the market power to maximise their profits and distort the efficient working of markets, the more governments can be expected to respond by expanding the scope and strictness of competition policies and intensify their enforcement to recalibrate market outcomes for maximising economic wealth. In the case of merger control, the key rationale is to control the development of market power in the first place and to ensure that the market structure remains competitive.

Hypothesis 1: The more privatised the economy and the higher barriers to market entry the higher the strictness of formal competition laws and the enforcement activity of competition authorities

For both, the US and Europe, the two major sources of modern competition laws, there is some historical qualitative evidence supporting the notion that competition policy is a functional regulatory response to privatisation. In the US, the first antitrust laws were adopted in response to what has been termed the second Industrial Revolution and a dramatic expansion of markets towards the end of the nineteenth century (Freyer 1992; 2006; Scherer 1997, 6; Motta 2004, 2). Furthermore, several studies find that the legislator was generally concerned with improving consumer interests and social wealth and no evidence for the presence of narrow particularistic economic interests during the formative era in the US (W. L. Letwin 1956; Stigler 1985; Bork 1966; Grady 1992). Similar, also in many European countries the adoption of the first competition laws during the first half of the twentieth century was a clear response to recurring economic crises and escalating prices (Gerber 1987, 63; Motta 2004, 10; Freyer 2006, 63; McGowan 2010, 58).

In both regions, a period of privatisation, liberalisation, free trade, and economic growth was followed by economic turmoil and recurring crises. In response to these volatile economic conditions and times of crises market concentration levels increased and business developed anti-competitive practices until such a point that governments responded with the first competition laws. The positive relationship between the development of capitalism and competition policy is also confirmed in some large-N quantitative studies. Palim (1998) and Kronthaler and Stephan (2007) find for slightly different samples of up to 176 countries over the years 1980 to 2004 that economic freedom is positively associated with the adoption of competition laws. The more countries privatise and liberalise their economies the higher the likelihood for the adoption of competition laws.

The co-development of capitalist modes of production with democratic political institutions and the pro-consumer orientation of competition policy leads Parakkal and Bartz-Marvez (2013) to formulate the hypothesis that it is the joint influence of these two factors, what they term 'democratic capitalism', that leads to the adoption of competition laws. In the US, for example, the adoption of the Sherman Act in 1890 took place in the context of popular unrest against big business which is difficult to

imagine having similar effects without the presence of democratic institutions. They find statistical support for this notion, that is, a statistically significant effect of an interaction term between capitalism and democracy on the adoption of competition laws, for a sample of 72 developing countries over the period from 2000 to 2008. The more countries move towards a capitalist free-market economy and democratic political institutions the higher the likelihood for the adoption of competition laws.

Furthermore, several studies have tested and find empirical support for the public interest theory on the level of the enforcement activities of competition authorities. Long et al. (1973) try to estimate the net welfare losses and excess profits for 20 manufacturing sectors over 1945 to 1970 in the US and investigate the extent to which the enforcement activities of the Antitrust Division of the US Department of Justice focus on those sectors with the highest welfare losses. Although industry sales seem to be the most important determinant of intervention, they find empirical support for the notion that the Antitrust Division focuses on those sectors with the highest welfare losses and where, accordingly, public intervention ensures the highest welfare gains. Dependent on the measure employed, around 13 to 50 per cent of variation in the number of cases brought by the Antitrust Division across manufacturing sectors can be explained by economic variables such as welfare losses, excess profits or market concentration levels (for a discussion of this study see also Asch 1975 and Siegfried 1975).

Similarly, also a series of studies by Coate (1995b; 2002; 2005), Coate et al. (1990), and Coate and McChesney (1992) find that the merger enforcement activity of the US FTC over the period from 1982 to 2003 largely follows economic criteria as laid down in the US merger guidelines. The higher the market shares, barriers to entry, and the likelihood of collusion or other anti-competitive effects arising from a merger the higher the probability that the FTC decides against a merger. Conversely, the existence of likely efficiencies generated through the merger reduces the likelihood for a negative decision. Coate (1995a) and Coate and Ulrick (2009) report similar findings for US federal courts which seem to enforce the merger guidelines in a largely consistent manner over the period from 1982 to 2004. These studies do not assess

merger activity against external economic data but circumvent the difficulty of calculating the real market shares or barriers to entry in a relevant market by relying on the data as provided in the case files of the competition authorities. In this sense, these studies may be said to assess primarily the consistency in the argumentation of the competition authorities which, however, does seem to support the view that decisions are public interest oriented and follow economic factors to remedy welfare losses due to market power. Furthermore, the data provided by the competition authorities certainly capture some real market characteristics.

While the majority of studies focuses on US antitrust authorities similar findings are also reported for other countries and the European Commission. Khemani and Shapiro (1993) find that Canada's Bureau of Competition Policy, in its assessment of horizontal mergers from 1986 to 1989, largely applied Canada's merger provisions in a consistent manner. The main criteria that seem to have guided the decision-making outcomes of the Bureau of Competition Policy are economic factors such as market shares, the existence of import competition, and barriers to entry. In a study of merger enforcement decisions by New Zealand's Commerce Commission from 1991 to 1996 Strong et al. (2000) find high post-merger market shares and barriers to entry to be jointly necessary conditions for the prohibition of a merger. Davies et al. (1999) analyse the enforcement of the monopoly provisions by the UK's Monopolies and Mergers Commission (MMC) from 1973 to 1995 and Lauk (2003) investigates the enforcement activities of Germany's FCO in the areas of the abuse of a dominant position and cartels over the 1985-2000 period and both studies find enforcement decisions to be largely driven by factors such as market shares and concentration levels.

Lindsay et al. (2003) focus on a randomly selected set of 245 merger decisions by the European Commission between 2000 and 2002 and find that the probability for a merger challenge increases with post-merger market shares and barriers to entry. Bergman et al. (2005) analyse merger decision-making by the European Commission from 1989 to 2002 and find that the probability for the initiation of a phase-2 investigation and the prohibition of a merger increases with the market share of the

merging parties, the existence of high entry barriers and the Commission's expectation that the merger may ease collusion. Martinez Fernández et al. (2008) include 50 phase I merger investigations by the European Commission covering the years 2005 and 2006 in their sample and find that an increase in market shares due to the merger and the existence of barriers to entry increase the probability of non-clearance. In a comparative study of second-stage merger decisions by the US FTC and the European Commission, Bergman et al. (2010; 2019) find the probability that a merger is challenged to increase with market shares and barriers to entry (for a similar study see also Szücs 2012). Bradford et al. (2018) identify the transaction value and market concentration levels as key variables explaining whether the European Commission challenges a merger.

In conclusion, several studies find supporting evidence for the public interest theory of competition policy. From a public interest perspective, competition policy should be a functional response to the range of anti-competitive practices prevalent in the economy. The more private actors distort the efficient working of markets by the abuse of market power and other anti-competitive practices the more governments can be expected to respond by expanding the scope and strictness of competition policies and intensify their enforcement. Broadly, privatisation and barriers to market entry may be assumed to be reasonably proxies for market structure as a privatised economy and high entry barriers increase the probability for anti-competitive practices. Furthermore, the public interest-oriented regulator should neutrally enforce the law as stated in the official guidelines based on economic criteria to remedy the welfare losses due to market power and maximise economic wealth.

3.2.2 The Public Choice Theory of Competition Policy

The main criticism to the public interest theory of competition policy has been raised by public choice scholars. The public choice theory emphasises the political and (re-)distributional dimension of competition policy. From this perspective, competition policy, similar as other types of regulation, always bears the risk of being used by economic interests and politicians for rent-seeking and to circumvent rather than promote competition. Even in the case of a public interest-oriented legislator that

seeks to promote economic wealth the policy is likely to become subject to political and economic pressures that pursue narrow interests in subsequent stages of the policy and enforcement process. The avenues for political influence are manifold. Insiders to an oligopolistic-organised market may oppose competition policy legislation to secure monopolistic rents. Furthermore, firms may seek political influence to use competition policy for protection from more competitive domestic and foreign firms and to increase their comparative advantage by ensuring exemptions for otherwise anti-competitive practices.

The public choice theory emphasises the distributional politics and interest-driven dimension of competition policy (Shughart and Tollison 1985; Baumol and Ordover 1985; Shughart 1995; Shughart and McChesney 2010; McChesney, Shughart, and Reksulak 2014). According to public choice scholars, rather than being adopted and enforced by neutral politicians and bureaucrats that intend to maximise social and consumer welfare competition policy is subject to special interest rent-seeking and rational political calculations similar as other policy areas. For industries, competition policy provides an opportunity to increase their comparative advantage against other, possibly, more competitive firms and to extract monopolistic rents from a market. For politicians, there are strong incentives to further economic interests in order to ensure (re-)election.

During both, the legislative process and in later stages of the enforcement process, there are various opportunities for business and politicians to influence competition policy. The historical record provides abundant anecdotal evidence for business lobbying either targeted against or in favour of the adoption of competition policy in general and the weakening of specific provisions (DiLorenzo 1985; Hazlett 1992; Sturm 1996; Ortwein 1998, 59–82). Furthermore, sometimes politicians and business also try to influence specific enforcement decisions such as whether to prohibit a merger or an anti-competitive practice (Mariani and Pieri 2014; Ezrachi 2017, 69). From this perspective, the development of competition policy is less understood as a functional response to welfare losses due to market power but more as resulting from

the influence of different domestic interest groups that compete to win legislative support.

The Stigler-Peltzman model of regulation is a specific version of public choice theory. According to Stigler (1971, 3), 'as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit.' For Stigler, firms may capture regulatory policies not only through means such as direct subsidies but especially also policies that fix prices or enable to control market access. A specific contribution of Stigler may be found exactly in his description of more subtle means by which firms can restrict market access such as through weight regulation of trucks or occupational licensing. Stigler, however, goes beyond simply equating regulations with economic interests but also includes a discussion of the incentives for politicians, the supply side of regulation. Peltzman (1976) provides for a more formalised version of Stigler's arguments.

The Stigler-Peltzman model of regulation focuses on the politics of regulatory policy-making, that is, the distributional dimension of competition policy.[42] The political process is modelled as a function of the demand for legislation by economic interests and the supply of legislation by politicians. Both sides to the regulatory process, the industries and the politicians, engage in a rational cost-benefit calculation. For industries, for example, the costs of lobbying are weighted against the likely benefits of favourable regulation. For politicians, the task is primarily to select an appropriate size and structure of benefits and costs between domestic interests to ensure re-election, that is, to maximise political support and minimise political opposition. The rational politician is hypothesised to favour small well-organised over broad and diffuse interest coalitions.

For small groups, the gains achieved through favourable legislations are clearly traceable and, therefore, likely to translate into political support whereas large groups have difficulties in organising political opposition against some costs incurred upon

[42] In technical terms, the model is based on the assumption of regulation as zero-sum game, that is, the overall economic pie is fixed, and, therefore, primarily describes the distributional dynamics inherent in regulatory politics.

them. The example of competition policy seems intrusive. A politician or political party that allows some level of monopolistic profits in any industry may receive considerable political support from the firms (and labour) concerned whereas strong political opposition arising from a rather unorganised group of affected consumers that suffer slightly higher prices for a specific product is rather unlikely. The gains are concentrated on a few firms whereas the costs are dispersed more widely among a large group of consumers. Furthermore, even if political opposition is mobilising it may be difficult to clearly identify the political responsibility for the price-level in that particular economic sector. Therefore, the Stigler-Peltzman model generally expects a pro-producer bias in regulation.

Importantly, however, according to the model the political process is never captured by one single interest. The outcome of the political process constitutes the equilibrium between profit maximising economic interests and vote maximising politicians with diminishing rates of return on both sides. The rational politician is modelled as trying to represent the interests of different domestic interest groups to maximise political support. As consumer policies affect the whole electorate some medium level of pro-consumer policy can be expected. Furthermore, from the Stigler-Peltzman model of regulation, it can be derived the expectation that the enforcement of competition policy is responsive to business cycles (cf. Amacher et al. 1985, 8–10; Ghosal and Gallo 2001, 29–32). Specifically, the model predicts pro-cyclical enforcement patterns which increase in times of economic growth to limit monopolistic profits and to ensure some gains for consumers and decrease when the economy is in decline to disperse the adjustment costs more equally among producers and consumers.

The relaxation of competition policy enforcement in times of declining growth allows business to stabilise the economy, for example, through mergers or inter-firm agreements but is likely to put some additional costs on consumers in the form of higher prices or lower innovation, at least, in the long-run. Peltzman (1976, 227) himself mentions the example of the relaxation of US competition policy in the context of the Great Depression in the 1930s. Similarly, during the economic downturn of the 1970s and 1980s, the European Commission temporarily relaxed competition policy

enforcement and adopted a light handed approach by tolerating state aid and also allowing and encouraging the formation of structural crisis cartels for crisis-ridden sectors and industries (McGowan 2010, 136). The financial and economic crisis of 2008 or the current Covid-19 pandemic provide more recent examples for the enormous pressure competition authorities are faced with to relax enforcement in times of economic crisis (e.g., Mateus 2009; Vickers 2010, 20–28).

Hypothesis 2: The enforcement activity of competition authorities is positively associated with business cycles to disperse the adjustment costs of declining growth more equally among producers and consumers

A number of studies have investigated the relationship between business cycles and the enforcement activities of US competition authorities. Posner (1970, 368) finds some co-variation between economic activity and the number of cases launched by the Antitrust Division of the US Department of Justice from 1890 up until 1940 but not thereafter. Amacher et al. (1985) find support for the Stigler-Peltzman model in a study of the enforcement of the Robinson-Patman Act by the FTC from 1915 to 1981. Similarly, Cartwright and Kamerschen (1985) conclude that their finding of a positive significant relationship between economic activity and the case bringing activity of the US Department of Justice and private plaintiffs over the 1890-1982 period and their non-finding of any positive effect of monopoly power is support for private interest theories of regulation.[43]

Eisner and Meier (1990, 282–83), while bringing forward a bureaucratic-power explanation, they find the percentage of monopoly case investigations by the US Department of Justice from 1959 to 1984 to be positively affected by the inflation and unemployment rates and the percentage of merger investigations inversely related to the unemployment level. However, focusing on the level of sanctions (fines and prison sentences) imposed by the Department of Justice between 1955 and 1979, Gallo et al. (1986) find that neither business cycles nor monopoly power (as would be expected

[43] They do not find any significant effect between economic activity and the case bringing activity of the US FTC.

by the public interest theory) can explain variation in enforcement activity. Lewis-Beck (1979) does not find any effect for gross national product (GNP) growth rates and unemployment levels on the number of cased filed by the Antitrust Division of the US Department of Justice from 1890 to 1974.

Ghosal and Gallo (2001) argue that enforcement patterns that contradict the predictions of the Stigler-Peltzman model are supportive evidence for the absence of special interest rent-seeking. They interpret the countercyclical (negative relationship with economic growth) enforcement activity of the Antitrust Division of the US Department of Justice over the 1955-1994 period as evidence for the 'neutral' law-enforcement behaviour by the Department of Justice. Similarly, Feinberg and Reynolds (2010) interpret the positive relationship between unemployment levels and the number of cases filed by US state attorney generals from 1992 to 2006 as evidence for countercyclical enforcement activities.

The regulation of markets by means of competition policy, however, may not only concern producer and consumer interests but also, for example, the export and import industry or different interests within the same product market. Duso et al. (2007) lay down how merger enforcement decisions can have different distributional effects on the merging companies, their competitors as well as shareholders. Already the public announcement by a competition authority that a merger may raise competition concerns and an investigation is started can have strong effects on the market value of the merging companies and their competitors on the stock market. For Weymouth (2016) the different interests in competition policy mainly manifest along the lines of insiders and outsiders to a monopolistic or oligopolistic organised market. Specifically, insiders, including firms and labour unions, that benefit from monopolistic rents can be expected to oppose competition policy legislation and their enforcement while coalitions of outsiders (including new potential market entrants) are favourably inclined to competition policy. These coalitions of insiders and outsiders can change dependent on the market, product, and country concerned.

The argument to promote national champions is well known in the literature. Accordingly, countries can have an interest in facilitating the development of large domestic companies to increase their international competitiveness and, thereby, promote domestic employment and economic growth. Zhang and Chen (2002) and Clougherty (2005) show through economic modelling that the application of more lenient competition policy standards in export-oriented sectors can have positive effects on national welfare. The reason is that in export-oriented sectors the losses in consumer rents due to monopolistic profits mainly fall on foreign consumers while the gains in producer rents benefit the domestic economy. For import-oriented sectors, or countries more broadly, the reverse applies. When considering national welfare as decision standard and including international trade into the economic welfare analysis import-oriented sectors may be subjected to stricter competition policy standards as the losses in consumer rents mainly fall on domestic consumers.

Independent of whether a different treatment of export and import industries improves national welfare it can be hypothesised that these industries lobby for favourably treatment and, thereby, influence the legislative framework and enforcement activities of competition authorities. The competition laws of many countries include exemptions or more lenient provisions for export- and import-buying cartels. More broadly, competition policy may be used to gain a comparative advantage in international trade, for example, by promoting exports, protecting domestic firms from foreign hostile takeovers or by enforcing the provisions against dominant positions, mergers, and cartels less strict against domestic companies than against foreign companies.

Hypothesis 3: The higher exports and the trade balance the lower the enforcement activity of competition authorities

Several studies do not find any evidence that the US FTC or the European Commission discriminate foreign firms (Coate 1995b, 403; Lindsay, Lecchi, and Williams 2003; Bergman, Jakobsson, and Razo 2005, 732; Martinez Fernández, Hashi, and Jegers 2008; Carree, Günster, and Schinkel 2010, 128; Bradford, Jackson, Jr., and Zytnick

2018). Baumol and Ordover (1985, 258), however, argue that US firms use competition policy as protection against foreign hostile takeovers. Similarly, Weir (1992, 29) finds in a study of the merger decision-making by the UK's MMC from 1974 to 1990 that the presence of a hostile takeover and a likely reduction in the balance of payments and employment due to the merger increase the probability that the merger is prohibited. Thatcher (2014) argues that the European Commission's merger control, despite its economisation, did allow for the creation of European champions specifically in the banking, energy, and telecommunications sectors (only two mergers have been prohibited in these three sectors despite their high concentration levels in the period from 1990 to 2009). Bergman et al. (2010) and Szücs (2012) find the probability of a merger challenge by the FTC to be lower when the merger involves US firms. Similarly, Bradford et al. (2018), while not finding any evidence that merger control is systematically used for protectionist purposes by the European Commission, they do find that a merger challenge is more likely in cases of hostile takeovers.

In the Stigler-Peltzman framework, the supply side of regulation is given by political parties and governments. Political parties and governments, however, not simply transfer economic interests into policy but also pursue their own agendas and positions. The political parties seek to maximise political support (e.g., in the form of votes and campaign contributions) and minimise political opposition by appealing not only to the economic interests but also to the normative values of their core electorate and, possibly, the median voter. Specifically, political parties and governments may show different ideological commitment to the regulation of markets by means of competition policy. Kalt and Zupan (1984) provide for a more explicit inclusion of ideology into the Stigler-Peltzman model.

For Kalt and Zupan (1984) politicians may not only further the economic interests but also the ideological values, such as a general commitment to the promotion of free markets or the regulation of monopoly, of their constituencies. Besides a general conviction about certain values, ideology provides an important decision device for voters as well as politicians and a shortcut for similar economic interests. Instead of

having to be constantly informed about the policy programme of the political parties and the economic effects of specific proposals, voters can simply vote for an ideologically close party (e.g., liberal, conservative, socialist or environmentalist) in the expectation that the programme furthers their interests.

Generally, centre-left political parties, with their higher inclination towards state interventionism and the regulation of markets, may be expected to pursue stricter positions on competition policy and higher enforcement intensity. Competition policy does especially fit the programme of moderate leftist political parties by promising to ensure a more equal society, the promotion of consumer interests, and lower prices through the regulation of private concentrations of economic power. In the US, for example, the adoption of the Sherman and Clayton Antitrust Acts, although the former was adopted under a Republican administration, were part of a general movement and popular unrest against big business and towards increasing governmental control over unregulated capitalism. In several European countries such as Germany in 1923 or the UK in 1948 the first competition laws were adopted under social democratic and labour leadership.

Parakkal (2011) finds for a sample of 183 countries over the period from 1990 to 2008 that left-leaning governments are more likely to adopt competition laws. Weymouth (2016) reports a positive but not statistically significant association between centre- and left-oriented governments and the adoption of competition laws for up to 135 developing countries covering the years from 1975 to 2007. Weingast and Moran (1982; 1983) explain the shift away from antitrust activism in consumer protection by the FTC towards the end of the 1970s with a shift in the political composition of congressional committees with oversight responsibilities for the FTC. When the Senate subcommittee on Consumer Affairs and Commerce became dominated by Republican politicians the FTC radically reduced its workload on consumer protection. Amacher et al. (1985) find some evidence that the FTC pursues more vigorous enforcement when its board is dominated by Democratic Commissioners.

Similarly, a number of studies find that the FTC and the Antitrust Division of the US Department of Justice pursue stricter enforcement of merger control under Democratic presidencies or when the Congress and relevant subcommittees are dominated by Democratic politicians (Coate 1995b; 2002; Vachris 1996; Szücs 2012). Specifically, the Clinton administration is associated with higher and the Reagan administration with lower enforcement activity. Wood and Waterman (1991, 811) find a statistically significant decrease in FTC enforcement activity after the nomination of James Miller III (a conservative economist) as commission chair by President Reagan in 1981 and Wood and Anderson (1993) find a sharp decline in the Antitrust Division's resources and case load during the Reagan administration. Similar results are also obtained on the state-level. Feinberg and Reynolds (2010) find Republican state attorney generals to pursue fewer antitrust cases than their Democratic counterparts.

Hypothesis 4.1: Centre-left governments are associated with stricter formal competition law provisions and higher enforcement activity by competition authorities

However, the direction of political ideology on the commitment to competition policy is not entirely clear. To some extent politicians may engage in clientelism and allow some monopolistic profits for their electorate independent of the political party, that is, across the political spectrum. Faith et al. (1982) find that firms with ties to members of congressional committees with oversight responsibility for the FTC are treated more favourably and systematically benefit from a withdrawal of the case against them. In other words, politicians represent and defend the economic interests of their electoral district in congressional committees independent of their political party affiliation. Similarly, Coate et al. (1990), Coate and McChesney (1992), and Coate (1995b; 2002) find that the probability that the FTC challenges a merger increases with external political pressures, that is, the level of politicisation of the case, as captured by the total merger value bid, Wall Street citations, and congressional hearings before a merger-decision is taken.

Also for centre-left political parties there are strong incentives to weaken or, at least, temporarily suspend competition policy enforcement to increase political support

whereas conservative politicians may seize the opportunity for an intervention against a monopolist or abusive practice that receives popular support. Furthermore, competition policy, as market-conform way of regulation, does not fully fit socialist ideology and also finds support among liberal and conservative voters and political parties. Guidi and Karagiannis (2016) argue that SDPs have closer ties to labour unions and that the support of SDPs to competition policy negatively co-varies with the organisational strength of labour unions. For organised labour, higher levels of economic concentration and large-scale companies provide the advantage of monopolistic-wages and lower transaction costs for engaging in corporatist wage bargaining and other aspects of working life (e.g., working conditions etc.). Therefore, labour unions that benefit from concentrated markets, that is, insiders, are likely to favour weaker competition policy.

The higher the organisational strength and influence of labour unions on SDPs the weaker the position of SDPs on competition policy as suggested by 16 European party manifestos over the 2002 to 2013 period. According to Guidi and Karagiannis (2016), when formulating their positions on competition policy, SDPs face a trade-off between supporting the interests of labour unions, their core electorate, that may benefit from monopolistic profits and the pursuit of consumer interests in ideologically neighbouring constituencies that represent a broader electoral base. The stricter the position on competition policy the broader the electoral group that may be won (consumers) but at the risk of alienating the core electorate (labour unions and their members).

For the US, there is some evidence that political actors influence enforcement activities but that it is under Republican influence when enforcement activity increases. Stewart and Cromartie (1982) find that the FTC issues more deceptive practices complaints under Republican US Presidents. Moe (1982) also finds that political factors matter and that the US President influences antitrust enforcement but contrary to the expectation. He finds over the 1945 to 1977 period that the FTC issues more complaints and the Antitrust Division initiates more cases under Republican US

Presidents. Likely, also individual presidencies and their economic programme matter as these studies, for example, do not cover the Reagan administration.

However, because competition policy is a pro-market way of regulation whose main objective is to increase (private) competition in the market, amongst others, by privatising state-controlled sectors or controlling state-induced distortions of competition, it is also possible that centre-right governments are associated with a higher commitment to competition policy. It is the sponge-like character of competition policy (cf. Ezrachi 2017) that makes it adjustable to different interests and ideologies and for changes in priority settings over time.

Hypothesis 4.2: Centre-right governments are associated with stricter formal competition law provisions and higher enforcement activity by competition authorities

Furthermore, it may be helpful to disentangle the different areas of competition policy (monopoly, anti-competitive agreements, mergers) as these may be related to different economic interests and find different ideological support among the political spectrum. For example, while left-leaning political parties may be very favourably inclined towards regulating big private monopolists that engage in exploitive practices or price-fixing agreements other practices may be received with less hostility. The so-called Brandeisian view in the US political discourse exemplifies the positive view on many anti-competitive agreements that can help SMEs to defend their position against market leaders.

Similarly, left governments may be more receptive to industrial policy arguments and, therefore, together with the employment consideration of labour unions, allow for more exemptions in the control of mergers. Specifically, it can be hypothesised that centre-left political parties favour stricter competition policy against private (quasi) monopolists and big business, especially those that are not organised through labour unions, but more lenient positions on inter-firm cooperation through anti-competitive agreements, especially among weaker market actors, and merger control.

Hypothesis 4.3: Centre-left governments are associated with stricter provisions and enforcement against monopolists but more lenient approaches towards anti-competitive agreements and mergers

In summary, from the perspective of the Stigler-Peltzman model of regulation the legislative framework and enforcement of competition policy is determined by the demand for regulation in the form of economic interests (e.g., producer vs. consumer interests, export- vs. import industry, insiders vs. outsiders) and the supply-side as represented by political parties and governments and their incentive structure to ensure (re-)election. More specific, it can be expected that competition policy shows pro-cyclical enforcement patterns with business cycles to disperse the adjustment costs of declining growth more equally among producers and consumers and that more lenient enforcement standards are applied in export industries to facilitate the development of national champions.

For the ideological orientation of political parties and governments the direction on the commitment to competition policy is less determined *a priori*. Most studies assume centre-left governments to be more inclined towards the regulation of markets by means of competition policy. However, as competition policy is regulation *for* competition there are also reasons to expect centre-right governments to favour stricter competition policy. Moreover, the economic interests and ideological commitment may be different across the three areas of competition policy (monopoly, anti-competitive agreements, and merger control).

3.3 Domestic-Institutional Factors and Competition Policy

The common functional pressures for the adoption of competition policy as captured by the public interest theory and the distributional conflicts surrounding the policy as emphasised by public choice scholars can be, however, hypothesised to be shaped and mediated by domestic-institutional factors. Most notably, different legal systems and types of capitalism may stipulate different functional requirements for effective competition policy. Hence, these factors may lead to the adoption of different competition policy models and, thereby, affect the strictness and scope of formal

provisions and their enforcement. Specifically, domestic-institutional factors can crucially affect the problem- and solution perception and the aggregation of domestic interests and, therefore, shape policy outcomes.

3.3.1 Competition Policy and Legal Origins Theory

According to legal origins theory, legal systems exert an influence on broader patterns in the regulatory control of business. A shared legal tradition can be expected to provide an important reference point which stipulates functional requirements in other policy areas and leads to stronger harmonisation of policies within the same legal family. Generally, English common law countries are associated with more market-conform regulation across diverse policy fields. In competition policy, legal systems may stipulate the development of different competition policy models. Specifically, it may be hypothesised that common law countries tend to use a 'substantial lessening of competition' approach whereas civil law countries rely on a 'market dominance' test to assess anti-competitive conduct and market structure. Moreover, however, different legal traditions may be associated with more or less far-reaching prohibitions and competition policy regulations.

The legal origins literature distinguishes between English common law and civil law countries (La Porta, Lopez-de-Silanes, and Shleifer 2008; Reitz 2009). Among civil law countries, it can be further distinguished between French, German, Scandinavian, and Socialist legal origin countries. According to legal origins theory, these legal systems have certain properties that make them unique and which, furthermore, have consequences on broader patterns in the governance of markets and societies. The common law tradition originated in England during the twelfth and thirteenth century and mainly spread around the world through the former British colonial system (E. Glaeser and Shleifer 2002). In the relatively more peaceful England, trials by independent juries were established to adjudicate specific disputes. In England, the law primarily developed to protect the propriety and contract rights of landed aristocrats and merchants so as to limit the crown's ability to interfere into markets (La Porta, Lopez-de-Silanes, and Shleifer 2008, 288).

The common law is primarily formed by appellate judges who establish precedents by solving specific legal disputes. Thus, court decision-making and the accumulated case law play a more important role than in civil law countries. Dispute resolution in common law countries tends to be conducted in an adversarial manner between private parties rather than being performed by the central state authority (see also Kagan 2003). Furthermore, judicial independence from both the executive and legislative are given central importance. The higher tendency of common law countries for ensuring political independence may not only concern judiciary institutions but also the general propensity for moving towards the regulatory state and granting independence to regulatory agencies across policy fields (E. L. Glaeser and Shleifer 2003; Wassum and De Francesco 2020).

The civil law tradition has its origin in the re-discovering of Roman law in medieval Europe (La Porta, Lopez-de-Silanes, and Shleifer 2008, 289). The civil law is more structured, hierarchical, and formalised. In civil law countries, there is more clearly a hierarchical relationship between the laws and the legislator tries to specify legal provisions and procedural rules as clearly as possible to leave a minimum degree of discretion to courts (La Porta et al. 1998, 1118; Botero et al. 2004, 1345; La Porta, Lopez-de-Silanes, and Shleifer 2008, 289). Not seldomly, courts call up the legislator to specify the meaning of specific legal texts.

The civil law tradition uses statutes and comprehensive codes as primary means for ordering legal material and relies heavily on legal scholarship for the formulation and interpretation of its rules. Dispute resolution tends to be inquisitorial rather than adversarial. The legal system in civil law countries is based on the premise that 'neutral' state-employed judges adjudicate conflicts between private parties. The civil law tradition mainly spread around the world through France and its former colonies. The German legal system was voluntarily adopted by Switzerland, Austro-Hungary, and later by Japan which, in turn, further influenced the legal systems of Korea and Taiwan. The former member and satellite states of the Soviet Union are usually categorised as Socialist legal systems.

The adoption and proliferation of modern competition policy is often associated with the US which triggered interest into the common law origins of the policy (W. L. Letwin 1954; Dewey 1955; Baxter 1982; Peritz 1990; 1996). English common law norms on 'restraints of trade' were an important reference point in the development of the Sherman Act in 1890. However, during the first half of the twentieth century the interpretation by US courts diverged from their British counterparts by strictly enforcing the prohibition of anti-competitive agreements (Freyer 1992, 121–58). In Britain, in contrast, anti-competitive agreements were not seriously banned and prosecuted until the passing of the Restrictive Trade Practices Act of 1976. There is, therefore, some flexibility and heterodoxy in the application of common law norms.

The study of the influence of English common law norms on US antitrust policy shows how legal norms and principles influence more easily the legal systems of similar legal origin countries while not necessarily leading to full harmonisation. When faced with new economic and legal problems it is efficient to borrow from countries with similar legal systems. The same legal origin provides a shared system of how to understand and solve specific problems in the most effective way. The studies by Drahos (2002) and Van Waarden and Drahos (2002) emphasise the extent of competition policy convergence between Germany, Austria, and the Netherlands, all of which are civil law legal origin countries and CMEs.

Rodger and Lucey (2018) find considerable degrees of convergence between the UK and Ireland, both common law countries and LMEs. Japan is often argued to borrow and draw policy lessons from the competition policy experience in Germany (Haley 2001; Freyer 2006), both (German) civil law legal origin countries with a tradition of coordinating economic activity. Buxbaum (2005) explains Germany's resistance to the use of private litigation in competition policy proceedings with reference to the country's legal and economic tradition. These studies suggest that under the surface of broader trends towards an Americanisation or Europeanisation of competition policy there is more exchange of ideas and policy learning between countries with similar legal and economic traditions.

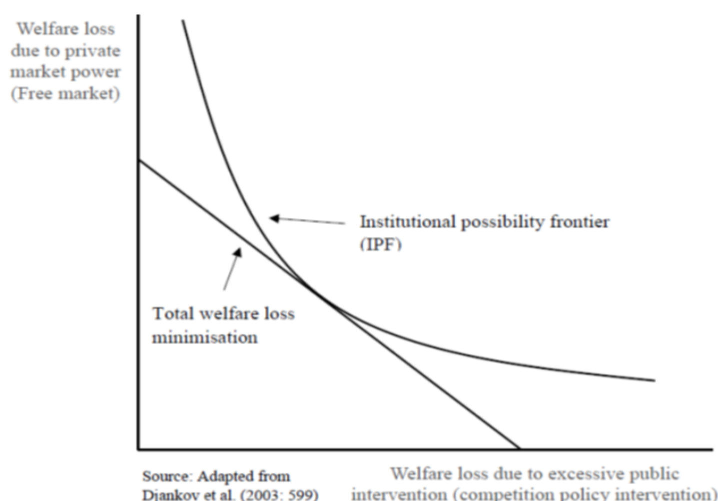
Besides these more qualitative studies, however, only a few studies systematically investigate possible patterns between legal origin and competition policy. Lee (2004; 2005) finds that countries with a German civil law tradition have a higher propensity towards using a pre-merger notification requirement than common law countries, which fits with higher levels of regulatory control in civil law systems, but finds no systematic patterns as regarding the adoption of competition laws, the length of appointment of heads of competition agencies or the performance of competition law enforcement. Bradford et al. (2021) find some slight but, according to the authors, negligible effect, that countries of the same legal origin develop more similar formal competition laws.

According to legal origins theory, legal systems exert an influence on broader cross-country patterns in the institutional framework of the political economy and the social control of business and society (Djankov, Glaeser, et al. 2003). La Porta et al. (2008, 326) define legal origins broadly as 'highly persistent systems of social control of economic life'. The argument stipulates that the legal system of a country influences the range of market intervention, or set of political-economic institutions, that can be established most effectively across policy fields. Generally, higher levels of judiciary discretion and the importance of private enforcement in common law countries fit with a private conception of market economy. The underlying philosophy is that individual decisions based on rational self-interest are best suited to enforce the law and to determine market outcomes.

Specifically, common law countries are found to be characterised by lower levels of regulation and state ownership than civil law countries, particularly, lower levels than French and Socialist legal origin countries. This pattern is confirmed in a number of studies on the regulation of shareholders and creditors (La Porta et al. 1998; 2002), market entry (Djankov et al. 2002), labour markets (Botero et al. 2004), privatisation (Bortolotti, Fantini, and Siniscalco 2003), and even social domains such as religion (Patrikios and De Francesco 2018).

From the perspective of legal origins theory, the state-market dichotomy can be conceptualised as a continuum ranging from fully free markets (or anarchy) to complete state control (or dictatorship). Both, the state and the market, provide possibilities for welfare losses. An economic sector or product controlled and produced by the state, for example, may suffer from corruption or the inefficient allocation of resources due to centrally controlled decision-making. Also privately organised markets, however, may suffer from corruption and the diverse sources of market failure described in the economics literature (e.g., asymmetric information, negative externalities, market power). In this sense, legal origins theory innovatively combines the insights on market failure as emphasised by the public interest theory of regulation and the possibility for political failure as emphasised by public choice scholars. The efficiency and wealth-seeking government tries to balance and minimise both sources of possible welfare losses. For competition policy, this trade-off can be modelled in terms of minimising welfare losses due to private market power and welfare losses due to excessive public intervention (see Figure 3.2 below).

Figure 3.2: Legal origin: Welfare loss minimisation



The institutional possibility frontier (IPF) can be imagined of as the set of institutions that can be established in a country along the state-market continuum. At the complete state control end of the IPF, that is, the lower-right corner, the country may be thought of as establishing a dense web of control over economic activity and a highly activist approach on competition policy enforcement to pursue the ideal of 'perfect

competition'. This very interventionist approach bears a high risk of welfare loss due to, for example, the prohibition of mergers and other practices that would improve welfare, but a low risk of welfare losses due to market power. At the other end of the IPF, the upper-left corner, one may think of the state as almost completely abstaining from competition policy intervention. Here, there is a low risk of too much intervention but a high possibility for welfare losses due to market power. The optimal institutional solution is to minimise both sources of welfare losses and to intervene close to the point where the IPF tangents the welfare loss minimisation curve.

Figure 3.3: Optimal level of competition policy intervention in common law and civil law countries

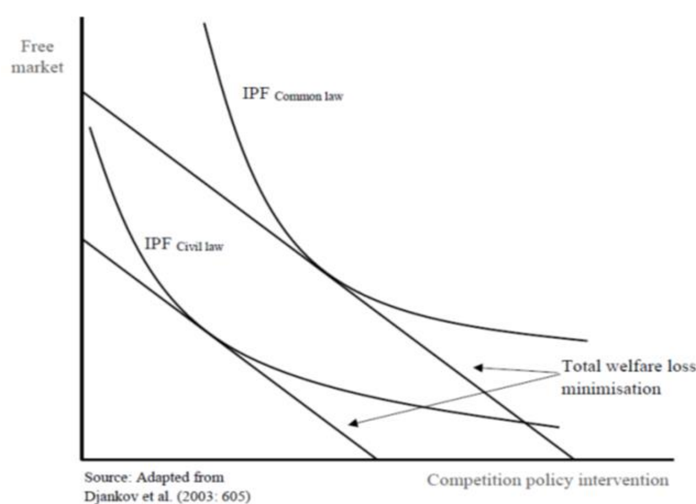


Figure 3.3 above plots the IPF's for different legal systems. Importantly, according to legal origins theory, the location of the IPF is different in common law and civil law legal origin countries. Because common law countries are generally characterised by lower levels of state ownership and regulation and higher levels of privatisation (Bortolotti, Fantini, and Siniscalco 2003; La Porta, Lopez-de-Silanes, and Shleifer 2008), that is, more pro-market governance and regulatory institutions, the IPF of common law countries can be thought of as being shifted upfront compared to the IPF of civil law countries. Note that the locations of the IPF's are reversed from the original legal origins theory which attempts to explain the level of state ownership of the economy.

At the optimal institutional solution, there is a higher requirement for competition policy intervention in common law countries than in civil law countries due to the higher risk for welfare losses resulting from market power. Although common law countries generally pursue lower levels of regulation and tend to favour market solutions the higher levels of private market orientation across the economy stipulate a higher functional requirement for competition policy. Therefore, common law countries can be expected to pursue stricter and more far-reaching competition policies.

Hypothesis 5.1: English common law countries are associated with higher levels in the strictness and scope of competition policies

Furthermore, the lower levels of regulation and state ownership in common law countries can be expected to trigger a stronger regulatory response in terms of expanded competition policy regulation in the process of the privatisation of the economy. From the perspective of the public interest theory of regulation, the privatisation of the economy is associated with an increase in the strictness and scope of competition laws to control for developing market power. However, this process can be expected to be particularly pronounced in common law countries which are characterised by otherwise lower levels of regulation and, therefore, face a higher risk of welfare losses due to private market power than civil law countries.

Hypothesis 5.2: The privatisation of the economy leads to a stronger regulatory response by expanding the strictness and scope of competition laws in common law than in civil law legal origin countries

From the perspective of legal origins theory, legal systems not only shape procedural issues before the courts but also exert an effect on the broader political-economic institutional framework of countries. Generally, common law countries are found to pursue more pro-market approaches, that is, lower levels of regulation and state ownership, across diverse policy fields than civil law countries. The more market-oriented approach of common law countries, however, can be hypothesised to lead to

higher levels in the strictness and scope of competition policy to minimise the possibility for welfare losses resulting from market power. Specifically, the privatisation of the economy can be expected to lead to a stronger regulatory response in terms of expanded competition policy regulation in common law than in civil law countries. Moreover, the 'substantial lessening of competition' approach usually associated with the US and the 'market dominance' approach commonly ascribed to the EU may be expected to be related to legal origins and, therefore, not primarily describe the Trans-Atlantic divide but also divide common law and civil law countries within the EU.

3.3.2 Competition Policy and Varieties of Capitalism

The VoC approach describes and explains diversity among capitalist economies. Accordingly, there is more than one way to organise capitalism and successfully provide the institutional framework for a private market economy. Specifically, the VoC approach distinguishes between LMEs and CMEs. These two (ideal-)types of capitalism are argued to be characterised by different institutional set-ups in some core areas of the organisation of capitalist market economies such as corporate governance/financial markets, industrial relations, and vocational training which re-enforce themselves by the existence of institutional complementarities.

Furthermore, different types of capitalism can be expected to develop also complementary sets of institutions in regulatory policies (Levi-Faur 2006; Guidi 2014; Guardiancich and Guidi 2016; Guidi, Guardiancich, and Levi-Faur 2020). Broadly, existing varieties of capitalism can be hypothesised to put different requirements on effective competition policy to strengthen rather than distort existing institutional complementarities in the economy. The VoC approach was developed at the beginning of the 2000s (Hall and Soskice 2001; Hancké 2010; Nölke 2019). VoC is essentially a theory of the origins and functioning of advanced capitalism and, therefore, only applicable to countries in which the capitalist organisation of the economy has already progressed to some degree such as, for example, within the group of OECD economies. From a VoC perspective, among those advanced capitalist economies, two groups of countries can be distinguished: LMEs (e.g., UK, Ireland, US, Canada, New Zealand,

Australia) and CMEs (mainly most continental European countries and Japan). While LMEs can be intuitively associated with more liberal, that is, individualistic and private market-oriented policies, the label CMEs refers to a more coordinated and networked set of relationships between private market actors and the government. In CMEs, the market mechanism is complemented by more strategic forms of coordination in the allocation of resources (including labour).

Furthermore, some authors propose to further distinguish mixed market economies (MMEs) (mainly Southern European countries) within the group of CMEs to account for countries that show mixed characteristics of these two ideal-typical models of LMEs and CMEs (Molina and Rhodes 2007; Schmidt 2002; 2008; 2009). The notion of ideal-types refers to the possible difference between the theoretical concept of a perfectly liberal or coordinated economy and the institutional reality that may diverge from that.[44] For example, the US and the UK come close to the ideal-type of an LME and Germany and Sweden are usually argued to approach the ideal-typical CME. However, empirically, these countries also differ in varying degrees from the concept of a perfectly liberal or coordinated economy and experience some change in the institutional framework over time (Hall 2007; Hall and Thelen 2009). Recent reforms that aimed at liberalising the labour- and financial markets (including mergers and acquisitions) in CMEs are well addressed in the literature and can be understood as partially implementing or transplanting institutions from LMEs (Vitols 2004; Streeck and Thelen 2005; Hancké, Rhodes, and Thatcher 2007b; Jackson and Deeg 2012; Mager and Meyer-Fackler 2017).

The origins of these different types of capitalism can be traced back to the nineteenth century (Martin and Swank 2008; Iversen and Soskice 2010). The underlying theoretical argument is that these different types of capitalism developed because firms used different strategies to solve specific coordination problems (such as how to access capital and technology, ensure innovation, and provide the labour force needed to run the economy) in five key spheres of the economy: corporate governance (financial

[44] Importantly, also the concepts of common law and civil law countries as endorsed in the legal origins literature may be best understood as referring to ideal-types.

system), internal structure of firms, industrial relations system, education and training, and inter-company relations. In LMEs, firms access capital mainly from the stock market. Thus, short-term profitability and a positive evaluation by shareholders are key factors that influence the success of firms to access capital.

The structure of the firm is concentrated on unilateral control of top-management that has relatively far-reaching competencies to decide over the direction of the firm. The industrial relations system, traineeships, and inter-company relations are less comprehensively organised. In LMEs the core allocative mechanism is based on individualised competition between firms and between employees. Therefore, firms and employees have less incentives to invest in specialised skills or long-term relationships that may only pay-off over longer periods. Rather, the economy is based on fluid labour markets with qualified personnel that holds general skills and which, accordingly, can be applied with very different companies. In such an economy, technology transfer mainly takes place through the poaching of high skilled workers and firms offer traineeships to fit their specific current needs instead of pursuing any longer-term strategies.

In CMEs firms are better able to access ‘patient capital’ which is provided by investors that are interested in the long-term success of the company. Besides a dense web of institutional investors that include major private banks as well as smaller quasi-public banks the shareholder ownership structure of companies in CMEs tends to be more concentrated on a few stable private investors that may include family holdings. These investors are interested in longer term relationships and willing to accept monetary losses due to short-term market fluctuations. Generally, firms in CMEs are less exposed to and dependent on international capital markets to access capital. Therefore, firms in CMEs are able to pay less attention to current profitability and shareholder value but more on longer-term payoffs. The ties between companies and investors are further re-enforced by practices such as cross-shareholdings and interlocking directorates.

Furthermore, the internal organisation of the firm, the industrial relations system, and the education and training system of the labour force are characterised by close business-labour relations. Generally, firms and labour unions are organised through a comprehensive and hierarchical network of peak-level associations through which they ensure political representation. These associations structure the education and training system in close cooperation to ensure a fit between vocational training and industry demands and also negotiate wages and other working conditions. The control over firms by the top-management is rather limited through practices such as co-determination and the influence of labour unions and work councils as well as key investors whose consent is usually needed for major reforms.

The system is 'coordinated' because a few major employer and employee organisations negotiate industry-level target wages and working conditions and other, smaller unions and economic sectors, voluntary follow suit, thereby, coordinating economy-wide wages and salaries (Kenworthy 2003, 15). The coordinative capacity of CMEs does not stem from a central state authority but rather from the comprehensive organisation of corporatist arrangements and the effects of some central collective wage-bargaining agreements between peak-level associations of organised labour and business on economy-wide wages. The state can uphold and guarantee the rights of labour unions and the legally binding nature of such agreements (Streeck 1991, 41–42). In some CMEs such as France or Japan the state is usually also argued to take a more important role by substituting for the missing organisational strength or more adversarial and confrontational nature of private parties (Schmidt 2002; 2008; 2009).

However, the central argument in the VoC literature is that the coordinative capacity of CMEs is mainly rooted in the capacity of private actors to engage in a structured process of negotiating economy-wide wages and working conditions. Furthermore, the organisation of the training and education system and social welfare provisions in CMEs give workers incentives to invest their time and resources in the acquisition of highly specialised skills through vocational training (Estevez-Abe, Iversen, and Soskice 2001). The system ensures a high probability for a well-paid employment and

relatively generous welfare provisions constitute an insurance for workers that invested in specific skills during times of unemployment. More general, in CMEs, networked and strategically coordinated relationships between firms and between business and labour complement the market mechanism in the allocation of resources (including labour). For example, centralised wage-bargaining coordinates economy-wide wages and working conditions and firms often cooperate in close networks for the provision of intermediate goods and research and development activities.

From a VoC perspective, both business associations and labour unions share an interest in the corporatist organisation of the economy and the training and education system (Hassel 2007; Iversen and Soskice 2010). According to VoC, the institutional equilibrium in CMEs is based on cross-class coalitions. While the increase in the power of organised labour, which in most Western capitalist economies took place at the turn of the nineteenth century, is recognised, VoC scholars argue that in CMEs employer associations relatively fast realised the advantages of more cooperative relationships with labour unions. For employers the system ensures pacified labour relations and the constant supply of highly qualified personnel with specialised skills. Furthermore, collective labour agreements put a limit on downward competition in wages and ensure that competition mainly takes place on the merit and quality of products. For labour unions, the advantages are relatively high wages and employment opportunities. The VoC approach is, thus, firm-centric and functionalistic because the starting point of analysis are business strategies and the distributional conflict between capital and labour is rather downplayed (Hall and Soskice 2001, 6; Hancké, Rhodes, and Thatcher 2007b; Hancké 2010, 125–33).

From a VoC perspective, when approaching the ideal-type of a LME or CME, the institutional provisions in these five spheres of economic activity re-enforce each other and disproportionally increase the economic gains achieved through them by the existence of institutional complementarities (cf., Milgrom and Roberts 1995; Crouch 2005; Deeg 2005; G. Morgan 2005). The concept of institutional complementarity refers to a situation where ‘one set of institutional practices […] raises the returns available from the other’ (Hall and Gingerich 2004, 22). In other words, the economic

gains achieved through collective wage bargaining agreements are higher when combined with a collectively organised education and training system and firms' ability to access 'patient capital' than in isolation.

More specific, the VoC literature argues that these different organisations of the economy provide LMEs and CMEs with different comparative institutional advantages. Whereas LMEs enjoy a comparative advantage in radical innovation CMEs perform better in incremental innovation and the production of diversified quality products (Streeck 1991; Börsch 2007; Hancké and Herrmann 2007). Diversified quality production refers to 'the mass production (or high-volume production) of customised quality goods' (Streeck 1991, 26). For example, the limit on downward competition in wages through centralised collective wage agreements sets incentives for firms in CMEs to increase their productivity and to compete on the quality of products rather than on the production costs.

Furthermore, especially the protection of firms from short-term stock market evaluations and the availability of a specialised labour force with firm- and industry-specific skills are argued to be key factors in the production of diversified quality products. However, these different patterns of business strategies, again, may be best conceived of as ideal-typical or dominant strategies rather than as the only strategies pursued (Vitols 2004). Also in CMEs some firms try to pursue more radical innovation strategies or compete in the low-cost segment rather than on the quality of products. Similarly, also some firms in LMEs engage in diversified quality production.

More recently, VoC scholars are increasingly interested in the extent to which different types of capitalism also develop complementary sets of institutions in the regulatory domain (Levi-Faur 2006; Guidi 2014; Guardiancich and Guidi 2016; Guidi, Guardiancich, and Levi-Faur 2020) or in other public policy areas (Nölke 2021). The conduct of competition policy, as ultimate horizontal regulatory framework spanning across all policy areas, is likely to reflect also different varieties of capitalism. However, surprisingly few studies have investigated more systematically the relationship between types of capitalism and competition policy. Wigger and Nölke

(2007) focus on the role of private vis-à-vis public enforcement and other aspects such as whether competition regulation is conducted *ex ante* as in the EU or also enables the *ex post* imposition of structural disinvestments as in the US. Generally, private enforcement takes a more important role in LMEs than in CMEs.

Guidi (2014; 2016) finds in a large-N study of EU competition authorities that MMEs are characterised by lower levels of political independence granted to competition regulators. However, the link between varieties of capitalism and competition policy may be much broader and essentially related to the development of different competition policy models to strengthen rather than distort existing institutional complementarities in the economy. Due to their different institutional practices to access capital, negotiate wages, achieve innovation, and enable technology transfer LMEs and CMEs are likely to require different competition policy approaches to strengthen their respective comparative advantages while controlling welfare reducing effects of market power, that is, to maximise economic wealth.

Although competition policy is not the primary concern of VoC scholars already Hall and Soskice (2001), in their seminal contribution introducing the VoC approach, make some remarks related to competition policy. On page 24, for example, the authors mention that tax provisions, securities regulations and cross-shareholdings long discouraged hostile mergers and acquisitions in CMEs. Contrary, the authors expect regulatory regimes in LMEs to be more tolerant of mergers, acquisitions, and hostile takeovers due to their positive effects on current profitability and shareholder value. Furthermore, on page 31 the authors mention that antitrust regulations in LMEs are heavily reluctant to institutionalised inter-company relations. Hall and Soskice do not explicitly theorise about the existence of institutional complementarities in competition policy or prevalent business strategies in other than the five spheres which are the focus of VoC but, however, suggest the possible existence of systematic patterns in the control of mergers and anti-competitive agreements.

Specifically, the authors provide an explanation for the relative absence of hostile takeovers in CMEs and suggest that LMEs may pursue a stricter approach against anti-

competitive agreements which are the main form to institutionalise long-term relationships between independent firms. Similarly, some other VoC authors suggest a possible relationship between types of capitalism and competition policy. For Streeck (1991), an enabling institutional environment is one of the key preconditions for firms to engage in diversified quality production strategies. A competition policy that facilitates and encourages inter-firm cooperation, for example, through strategic alliances and joint ventures, and that protects SMEs can contribute to such an enabling environment. According to Hancké (2010, 134), antitrust regulations that prohibited trusts and collusion were one of the factors that prevented the development of strong business networks in LMEs.

From a VoC perspective, the expansion of markets, the volatile economic conditions, and the rise in welfare reducing business practices due to market power at the turn of the nineteenth century can be seen as exogenous shock (Hancké, Rhodes, and Thatcher 2007b; Iversen 2007). In that process, however, governments in LMEs and CMEs responded differently to the changing economic conditions, or in other words, domestic-institutional factors mediated the solutions governments invoked. Whereas the US more clearly moved towards the adoption of antitrust laws the continental European CMEs, while also experimenting with the first control of abuse regulations, rather tried to improve the situation and control market power within existing corporatist relationships.

For example, in European countries leading policy experts of the time proposed to strengthen the voice of labour unions and increase the transparency of the decision-making process to improve the economic outcomes of cartels (Ortwein 1998, 36–43). In European countries, this period led to the invention of the ‘control of abuse’ approach and the strengthening of the role of labour unions in cartel deliberations together with more generous welfare provisions were able to pacify social relations (Freyer 1992; 2006; Scherer 1997; Dowdle 2013b, 313–19). Since then, and especially in the period after 1945, the globalisation of economic relationships and of the competition policy discourse led European competition policy regimes to converge and develop close exchange of ideas with US antitrust policies. The professionalisation

of competition policy in Europe led to the development of a sophisticated policy area which is relatively detached from other public policies. However, from a VoC perspective, certain core elements of distinct competition policy approaches in LMEs and CMEs are likely to have been maintained.

Generally, competition policy, as ultimate horizontal regulatory framework, affects all five spheres of coordination that underline the VoC classification of LMEs and CMEs: corporate governance, internal structure of the firm, industrial relation system, skill formation, and inter-company relations. A competition policy that would strictly prohibit anti-competitive agreements in CMEs would, for example, distort important coordinative capacity by impeding firms' ability to access long-term patient capital, match training and education efforts to firm-specific high-skill needs, and distort technology transfer by impeding institutionalised inter-firm relations. The maintenance of cooperative relationships and strategic alliances between smaller and large firms for the production of intermediate products and research and development activities are crucial institutional preconditions for firms in CMEs to engage in diversified quality production strategies.

In LMEs, in contrast, the strict enforcement of competition policy principles may foster rather than hamper comparative institutional advantages based on individualised competition. In LMEs, firms rather rely on radical innovation driven by short-term shareholder interests in a system in which technology transfer takes mainly place through the transfer and poaching of key personnel in highly fluid labour markets. In such a system, the strict prohibition of anti-competitive agreements may foster rather than hamper institutional complementarities by encouraging competition. The main expectation, therefore, is that LMEs are associated with higher levels in the strictness and scope of competition policy.

Hypothesis 6.1: LMEs are associated with higher levels in the strictness and scope of competition policy

Furthermore, the type of capitalism can be expected to mediate functional pressures for the adoption of competition laws caused by the privatisation of the economy. Specifically, LMEs may be expected to show a stronger regulatory response to privatisation by implementing more far-reaching competition law provisions to compensate for otherwise missing coordinative capacity. In CMEs, more dense relationships between firms and between business, labour, and the government provide some mechanisms through which the excesses of market power may be controlled and channelled to some degree. While also requiring competition laws to control for market power reciprocal relationships ensure that individual firms cannot excessively abuse their market power and, for example, that labour benefits from high profit margins.

Hypothesis 6.2: LMEs can be expected to show a stronger regulatory response in terms of competition policy regulation to processes of privatisation to compensate for otherwise missing coordinative capacity

In addition, different associations may be expected for the sub-areas of the control of a dominant position and anti-competitive agreements. Whereas CMEs can be expected to pursue a more lenient approach in the control of anti-competitive agreements to encourage practices such as strategic alliances and joint ventures, specifically between SMEs, they may be expected to have more far-reaching provisions in place for the control of a dominant position. In CMEs, while encouraging and not unduly restricting the capacity of firms to engage in long-term cooperative relationship there is a higher requirement for competition policy to control dominant market positions to ensure that these cooperative relationships are not abused by actors with market power.

For example, practices such as interlocking directorates, cross-shareholding, and specific types of inter-firm cooperation agreements should not be prohibited outright but, in turn, the allowance of these practices places a higher requirement on competition authorities to control and monitor that they are not abused to the detriment of consumers and the broader public. In LMEs, in contrast, competition laws can focus

more strictly on the enforcement of individualised competition and the strengthening of the market mechanism.

Hypothesis 6.3: CMEs are associated with less strict prohibitions of anti-competitive agreements but more far-reaching provisions in the control of a dominant position and, generally, with a 'control of abuse' approach rather than a 'prohibitive' approach

From a VoC perspective, different types of capitalism can be expected to develop also complementary sets of institutions in regulatory policies. Specifically, an appropriate regulatory framework in competition policy may be hypothesised to considerably strengthen the respective comparative institutional advantages of LMEs and CMEs. A competition policy that would outright interfere with and prohibit the networked relationships between firms and between business and labour would distort and reduce the coordinative capacity of the economy in CMEs which is the key source of their comparative advantage. At the same time, however, CMEs are faced with a similar functional need to control abusive business practices that reduce economic wealth. Therefore, CMEs can be expected to be associated with lower levels in the scope and strictness of competition policies, specifically, in the control of anti-competitive agreements, but more far-reaching provisions on the control of dominant positions. In LMEs, in turn, competition policies can be generally expected to focus more clearly on the enforcement of individualised competition and the strengthening of the market mechanism.

3.4 Principal-Agent Theory and the Study of Competition Authorities

The independence of competition authorities potentially poses a challenge to public choice theories as well as to the role of legal origins and VoC in competition policy enforcement. At least in theory, the fully independent competition authority neutrally enforces the law to further the public interest as laid down in its statute and mandate. Especially since the 1980s, there is increasingly the attempt to ensure the independence of competition authorities from both undue political influences and business interests

to improve the regulatory quality of competition policy enforcement (Jenny 2012; Guidi 2016; Koop and Hanretty 2018). The independent design of competition authorities and other regulatory agencies is recommended by international organisations such as the OECD and proliferated widely across countries (OECD 2016; Jordana, Levi-Faur, and Fernández i Marin 2011; Jordana, Fernández-i-Marin, and Bianculli 2018).

While the extent to which competition authorities operate *de facto* independently is controversially discussed in the literature this transformation of public administration is a noticeable development and requires a brief discussion. Furthermore, competition authorities are the key enforcement agencies and, therefore, the starting point for any analysis of competition policy enforcement practices. Most crucially, the establishment of independent competition authorities empowers a specific actor, the bureaucracy, in relation to elected politicians by equipping bureaucrats with higher levels of autonomy and decision-making authority. In the public administration and economics literature there is a long tradition of discussing the role of the bureaucracy in political- and regulatory decision-making that includes such classical works as those by Max Weber (1922) and William Niskanen (1971; 1975). Broadly, the accounts vary from a more positive role of a rational and professionalised bureaucracy that may provide legitimacy and independent technical expertise to the political system to more critical perspectives that emphasise the additional interests that may be created by self-promotion, resources-, and competence-seeking officials that, moreover, are unelected and, therefore, lack legitimacy and democratic accountability.

Although the establishment of independent competition authorities became a norm of global governance and a best-practice model endorsed by organisations such as the OECD it is not easy to determine exactly what makes for an independent agency (Verhoest et al. 2004; Maggetti and Verhoest 2014; Selin 2015). According to Maggetti (2012, 38–39), the political independence of competition authorities may be defined as the extent to which competition authorities can self-determine their preferences and, throughout the regulatory process, translate their preferences into regulatory actions, without interference by other political actors. More specific,

independence may be defined as the extent to which competition authorities can neutrally and consistently enforce the competition laws that are externally given by the legislator without interference by other political and economic actors. This includes both, political independence and independence from private economic interests. Accordingly, politicians can legitimately set the regulatory framework, legislation, and strategic priorities for the conduct of competition policy but should not interfere into the daily enforcement to ensure a uniform application of the law. Politicians may change specific rules over time, but the competition authorities decide freely which cases to investigate, prosecutions to pursue, and remedies to impose for competition law infringements. Moreover, the market participants are treated equally by the competition authority, that is, the absence of any favourable treatment of specific firms or economic sectors is an important component of independence.

The establishment of independent competition authorities, and the granting of higher levels of independence to parts of the bureaucracy more broadly, poses several puzzles. Why, for example, should governments voluntarily give-up some of their decision-making authority to independent agencies? Principal-agent theory became a commonly employed analytical framework to understand the reasons for the establishment of independent competition authorities and their relationship with government and parliament (Maggetti and Papadopoulos 2016). From the perspective of principal-agent theory, the rational and informed principal, in this case, the government and parliament, delegate parts of their decision-making authority to an agent, the competition authority, in the expectation that, by doing so, specific objectives can be achieved more effectively and the benefits outweigh the costs of delegation. The main intention for the establishment of independent competition authorities is, for example, to insulate competition policy enforcement from short-term electoral pressures and interest group demands in the expectation that this leads to higher quality and more consistency in regulatory decision-making.

By delegating competition policy enforcement decision-making authority to independent competition authorities, politicians reduce the extent to which they may influence decision outcomes, for example, to do favours to their political

constituencies and electoral districts or to follow their conviction about which decision would be in the public interest, but at the same time also tie the hands of other politicians and subsequent governments that may favour another decision. Furthermore, due to the expectation that delegation to independent competition authorities leads to improved quality in regulatory decision-making the outcome should be better economic performance. More specific, in more recent treatments, authors emphasise five main explanations for the establishment of independent competition authorities and reasons for why politicians delegate enforcement powers to competition officials: 1) the credible commitment argument, 2) the advantage of having a single- instead of multiple-goal oriented competition authority, 3) the technical expertise argument, 4) to lock-in preferred policy choices, and 5) the blame shifting argument.

According to the credible commitment argument, the delegation of enforcement powers to independent competition authorities serves to ensure investors and market participants of a stable regulatory environment and to solve the time inconsistency problem of sometimes short-term minded and re-election seeking politicians (Kydland and Prescott 1977; Barro and Gordon 1983; Rogoff 1985; Majone 1996). Similar as in other policy fields such as monetary policy, politicians may have incentives to respond to electoral cycles or interest group pressures and, therefore, treat specific companies and economic sectors more favourably, for example, when elections are close or the company is an important factor in the electoral district of the politician (Faith, Leavens, and Tollison 1982).

In order to avoid such favourable and biased treatment the enforcement of competition policy is delegated to specialised administrative competition authorities that are to some extent insulated from direct political control. Whereas in the area of monetary policy the establishment of independent central banks enables governments to credibly commit to the goal of price stability the declaration of competition policy to an 'economic constitution' and the delegation of enforcement powers to independent competition authorities ensures market participants of regulatory stability and that the government is committed to ensuring a fair level playing field. Furthermore,

politicians may be driven by broader public interest concerns and multiple goals such as to ensure competition and a fair level playing field but also economic stability and the promotion of domestic industries, regional development, and employment.

The delegation of enforcement powers to independent competition authorities is based on the premise that it is preferable to have a single-goal oriented actor, a competition authority committed to enforce competition laws, and to leave other considerations to politicians, not least, because public interest concerns may be abused by economic actors to further their narrow particularistic interests (Vickers 2010, 14–16; Jenny 2012, 159). The delegation of enforcement powers to independent competition authorities is also argued to facilitate the accumulation of technical expertise within the agency (Bawn 1995; Gailmard and Patty 2007). According to this argument, the granting of higher levels of independence sets incentives for bureaucrats working in competition authorities to invest in the development of more specialised technical expertise.

Furthermore, however, the establishment of competition authorities may be also a means employed by politicians to lock-in their preferred policy choices (Moe 1990; 1995; Yesilkagit and Christensen 2010, 55; Wonka and Rittberger 2010, 737). From the perspective of this 'policy conflict' or 'political uncertainty' hypothesis, regulatory institutions such as competition authorities are not only established for cooperative purposes to improve economic performance but also reflect specific political preferences and compromises. For example, once a competition authority is established and equipped with a specific legislative mandate and statute, it becomes more difficult and costly for the next government to change the policy. The competition authority becomes a new actor in the political arena that can be expected to represent and defend its position and act as a general 'voice' for competition in the market or specific approaches in the treatment of dominant firms and anti-competitive agreements. The establishment of an independent competition authority to enforce the competition law empowers the goal of 'promoting competition' in the hierarchy of public policy objectives similar as central banks strengthen the goal of 'price stability' vis-à-vis 'economic growth'. Finally, the establishment of independent competition

authorities provides the possibility for politicians to shift the blame, for example, for a prohibited merger, on the competition authority (Fiorina 1982). Instead of having to argue publicly over the advantages and disadvantages to allow a specific merger or business practice politicians can refer to their inability to influence the decision of the independently operating competition authority.

The conceptualisation of competition authorities from the perspective of principal-agent theory certainly, however, puts severe limits on their independence. The competition authority may act independently during the post-delegation stage and ensure the uniform application of the laws but always remains tied and responsive to the preferences of the government. In other words, the competition authority's ability to perform 'true' agency in the form of developing its own preferences and deviating from the original mandate is severely limited if not impossible. Such a case would constitute an instance of 'agency drift' and could be corrected for by the legislative oversight mechanisms. The independence of competition authorities remains constraint by governmental and legislative control mechanisms to balance between independent enforcement and democratic accountability (Majone 1999). The political control mechanisms include, for example, the budget allocation process, the appointment process, the issuing of strategic guidelines and political directives, and reporting requirements. While these control mechanisms are necessary to avoid agency drift and to maintain democratic accountability, they also continue to allow for the possibility of political intervention that may undermine the competition authority's independence.

Furthermore, the competition authorities remain embedded in their social, political, and economic environment. If politicians and news media, for example, trigger debates about abusive behaviour or monopolistic pricing practices in a certain sector or by a specific company, competition authorities cannot only be expected to be influenced by those debates but usually even have a mandatory obligation to investigate whether the raised accusations are valid. Similarly, competition authorities can be expected to be influenced by broader public discourses about the international competitiveness of domestic firms and the possible relaxation of enforcement in times of economic crisis.

The financial and economic crisis of 2008 and the recent economic downturn resulting from the Covid-19 pandemic just illustrate very clearly the enormous pressure competition authorities can face to take a less strict position against state aid or struggling firms in times of economic hardship (e.g., Mateus 2009; Vickers 2010, 20–28). While there may be good reasons for this responsiveness, they also constitute avenues for regulatory capture.

From the perspective of public choice theory, the empowerment of competition officials by the establishment of independent competition authorities may be just another source of regulatory capture due to information asymmetries between competition officials and the supervising politicians (Laffont and Tirole 1991). While politicians may undermine effective and uniform competition policy enforcement due to incentives for short-term vote maximisation, competition officials may be driven by rationales for personal career advancement or, for example, to ensure later employment in the industries they regulate. Furthermore, according to Bernstein's (1955) 'life cycle theory', regulatory agencies may pursue a more business-friendly approach over time as more close relationships with the regulated industries develop (see also Martimort 1999). The more bureaucrats working in competition authorities are socialised in their environment and establish more regular relationships with their supervising ministries and industries the more empathetic they may become for the motivations and perspectives of politicians as well as the private sector and, thus, may become prone to regulatory capture.

Therefore, the independence of competition authorities may be best captured as reducing, or dampen, the role of business pressure, political factors and broader public interest concerns in the enforcement of competition policy but not to completely eliminate them. Institutional practices to ensure the independence of competition authorities such as structural separation from the supervising ministries, legal protection, and longer terms of offices increase the costs of political influence but do not completely insulate competition authorities from their environment. Although providing avenues for regulatory capture some level of responsiveness may be even desirable. Perfectly, competition authorities remain responsive to their political

principals and their economic environment to maintain democratic accountability, that is, fulfil their mandate as envisaged by the legislator, and ensure effective enforcement but maintain their independence in daily decision-making to neutrally enforce the law and avoid capture by specific interests.

However, the delegation of enforcement powers and the granting of higher levels of independence to competition authorities can be expected to lead to a more consistent and uniform application and enforcement of competition laws. The realisation of more consistent and better enforcement is the very reasoning for the establishment of independent competition authorities as envisaged by the credible commitment hypothesis and the technical expertise argument. This is very similar to the public interest reasoning on competition policy as formulated in Hypothesis 1. However, from the perspective of the credible commitment- and technical expertise arguments, and certainly taking a positive view on the bureaucracy working in competition authorities, the granting of independence should increase the public-interest oriented outlook of competition policy enforcement.

Hypothesis 7: The establishment of more independent competition authorities leads to a more consistent and uniform enforcement of competition policy

Importantly, from this perspective, the enforcement of competition policy should uniformly apply existing competition law provisions without being affected by other external factors such as business cycles or sudden changes in the preferences of the political principals. The political principals may engage in a deliberate and transparent process of changing specific competition law provisions though the adoption of new legislations which, over time, may lead to changing enforcement patterns but existing competition laws should be enforced consistently. Most crucially, in view of Hypothesis 1 and 7, competition policy enforcement is very much a function of externally given anti-competitive conduct and market structure prevalent in the economy which is uniformly and consistently investigated and prosecuted by the competition authorities. This positive effect is increased by the granting of higher

levels of independence which leads to improved quality of regulatory decision-making.

Contrary, the next three hypotheses emphasise factors that may influence the enforcement activities of competition authorities that are relatively unrelated to existing anti-competitive conduct and market structure prevalent in the economy. The establishment of independent competition authorities may be, for example, also a means to lock-in preferred policy choices. Similarly, changes to the institutional structure of competition authorities may be used politically for changing the strategic orientation of enforcement. In this sense, sudden changes in enforcement activities that follow a change in the institutional structure may be evidence for the use of institutional changes as an instrument to lock-in preferred policy choices.

Hypothesis 8: The establishment of independent competition authorities and institutional changes in the governance structure are instruments to lock-in preferred policy choices

From the perspective of public choice theory, the expected results from establishing more independent competition authorities are rather negative or, at least, neutral. According to Bernstein's (1955) life cycle theory, the establishment of independent competition authorities may first lead to higher levels of professionalisation and active enforcement but later become subject to regulatory capture as more regular interactions between competition officials, politicians, and the regulated industries develop. Therefore, it may be expected that the enforcement activities of competition authorities reduce over time with the development of a more business-friendly approach.

Hypothesis 9: The enforcement activity of competition authorities reduces over time due to the development of a more business-friendly approach

Finally, according to organisational survival theory, bureaucrats and competition officials do not continuously seek to expand their resources and competencies but

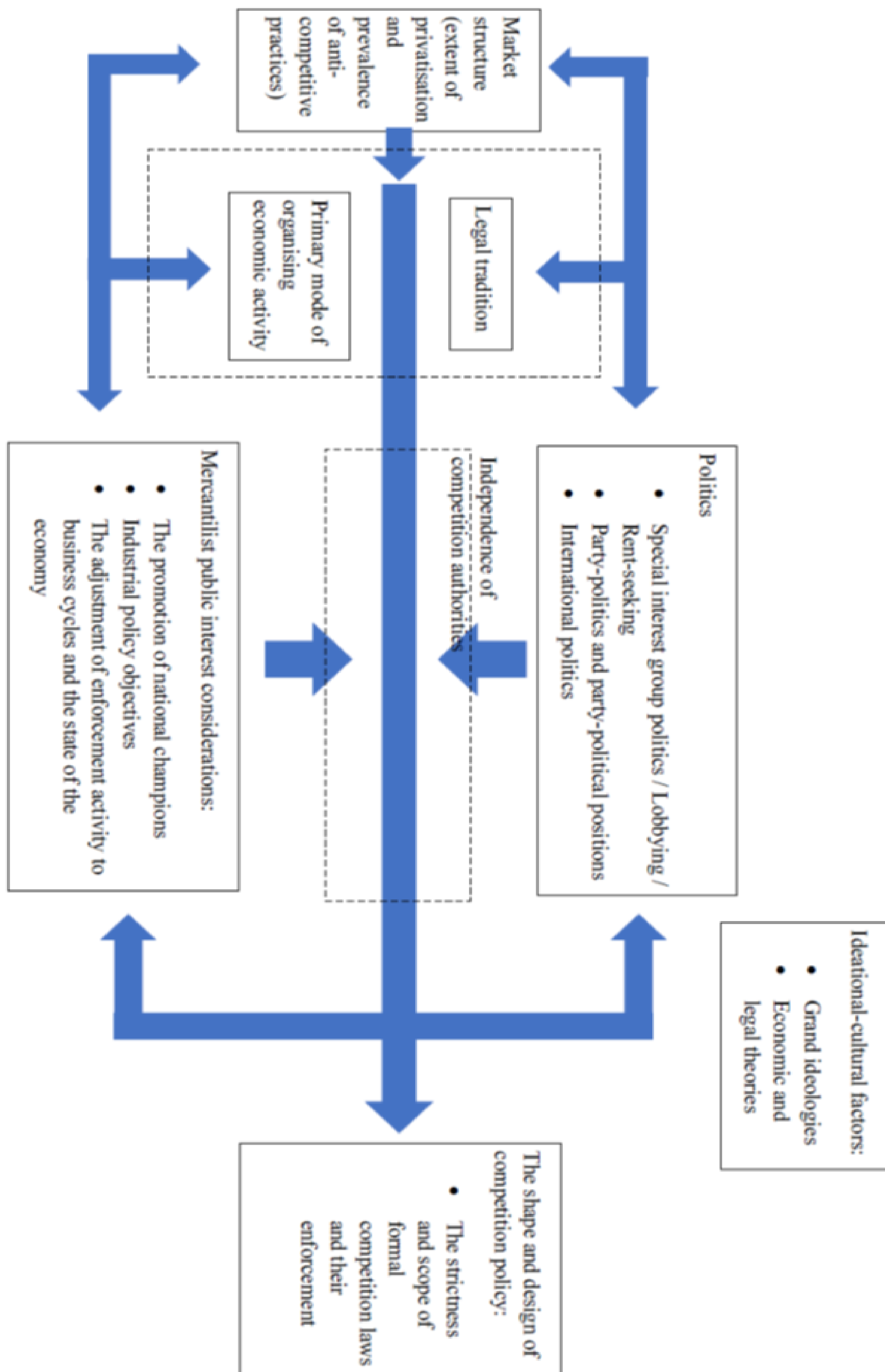
mainly try to ensure the survival of their organisation. From this perspective, competition officials operate often between different preferences of their political principals ranging between those that advocate a highly activist position on competition policy intervention and those that favour a more passive approach in order to let market forces operate more freely. Generally, a competition authority that engages in a very limited number of investigations and prosecutions may face criticism as regarding their performance and whether the use of public budget is justified, that is, whether the high budget of the competition authority justifies the relatively low outcome. However, a competition authority that pursues a very activist approach by trying to prosecute a high number of cases may face serious criticisms and pressures by negatively affected politicians and firms. Therefore, it may be expected that competition authorities just try to launch as many investigations and prohibitions so as to ensure their organisational survival and please as many principals and stakeholders as possible.

Hypothesis 10: Competition authorities just prohibit enough mergers and business practices to justify their existence but hesitate to intervene too much into the economy

3.5 Conclusion: A unified theoretical framework

This chapter laid down the theoretical framework of the thesis. Accordingly, the development of capitalism and the expansion of private markets affects the market structure and leads to the accumulation of market power over time. This places a functional requirement on governments to adopt and increase the scope and strictness of competition laws to reduce market distorting business activity and increase economic wealth. In that process, however, domestic-institutional factors, most notably, the legal system and type of capitalism, shape and mediate the functional pressure which leads to the adoption of different competition policy models in common law countries/LMEs and civil law countries/CMEs. Furthermore, during the enforcement process, competition policy is subject to distributional conflicts and economic and political pressures. The establishment of independent competition authorities reduces the likelihood for regulatory capture but does not completely

Figure 3.4: A unified theoretical framework: Factors shaping the development and enforcement of competition policy



insulate competition authorities from their social, political, and economic environment. The theoretical framework is summarised in Figure 3.4.

Market structure

From the perspective of public interest theory, the market structure is the key factor that influences the adoption and development of competition policy. Broadly, in this view, competition policy is a functional regulatory response to market power and the range of anti-competitive practices prevalent in the economy (Long, Schramm, and Tollison 1973). (Competitive) markets do not develop naturally but have to be created and maintained by a functioning regulatory framework (Polanyi 1944; Heritier 1997; Egan 2001). When the economy works efficient and is not distorted by market power or cartel agreements there is no potential for competition policy to improve market outcomes. Therefore, it can be expected that the development of capitalist modes of production and a free-market economy are factors that drive the expansion of competition policy regulation (Palim 1998; Kronthaler and Stephan 2007; Parakkal and Bartz-Marvez 2013).

Specifically, the privatisation of the economy may be assumed to lead to the acquisition of market power by private actors over time which, in turn, increases the probability for the (ab)use of such a market power and the development of anti-competitive practices. The more market power private actors acquire, and the more firms abuse the market power to maximise their profits and distort the efficient working of markets, the more governments can be expected to respond by expanding the scope and strictness of competition policies and intensify their enforcement to adjust market outcomes for the maximisation of economic wealth.

Domestic-Institutional factors and Competition Policy

The common functional pressure for the adoption of competition policy as stipulated by changing market structures can be, however, hypothesised to be mediated and translated by domestic-institutional factors. Most notably, the legal system (La Porta,

Lopez-de-Silanes, and Shleifer 2008; Reitz 2009) and type of capitalism (Hall and Soskice 2001) of a country may crucially affect the problem- and solution perception and the aggregation of domestic interests and, therefore, shape policy outcomes. The legal system and type of capitalism of a country affect the way domestic actors perceive to remedy problems of market power most effectively and may also put different requirements on effective competition policy to align with existing institutional complementarities (Peritz 1990; 1996; Giocoli 2009; Lee 2004; 2005; Buxbaum 2005; Wigger and Nölke 2007; Guidi 2014; 2016).

Due to a combination of both, functional requirements and different domestic interest group dynamics, the result is the adoption of different competition policy models in common law countries/LMEs and civil law countries/CMEs. In common law countries and LMEs competition laws can be hypothesised to focus more clearly on the strengthening of the market mechanism through individualised competition. Furthermore, higher levels of judiciary discretion and the use of the 'substantial lessening of competition' approach for the assessment of anti-competitive conduct are characteristic of the competition policy model of common law countries. In civil law countries and CMEs, the system is more formalised and rule-based and, accordingly, a 'market structure' approach is employed for the assessment of anti-competitive conduct and market structure. Furthermore, LMEs and CMEs can be expected to develop competition laws that strengthen rather than distort existing institutional complementarities in the economy. Specifically, CMEs are likely to pursue more lenient provisions against anti-competitive agreements to strengthen their coordinative capacity.

Politics and Competition Policy

Furthermore, the development and enforcement of competition policy is subject to distributional conflicts and political and economic interests (Baumol and Ordover 1985; Shughart and Tollison 1985; Shughart 1995; Shughart and McChesney 2010; McChesney, Shughart, and Reksulak 2014). While all stages of the policy-making process may be subject to lobbying (e.g., also including agenda setting, formulation of

the policy etc.) the role of political and economic pressures may be especially observable during the enforcement process. Specifically, the Stigler-Peltzman model (Stigler 1971; Peltzman 1976) predicts pro-cyclical enforcement patterns to disperse the adjustment costs of declining economic growth among producers and consumers. The distributional conflict may also manifest itself by competing interests between the export- and import industry and through the political ideology of the government, the supply side of regulation. There is some controversy in the literature about the extent to which certain political and economic influences other than the 'pure' economic-based enforcement of the law further the public interest or are simply the result of rent-seeking lobbying activity.

For example, the adjustment of enforcement to business cycles, the pursuit of industrial policy objectives and the promotion of national champions can be argued to further (national) economic wealth or simply seen as promoting producer and other private interests (e.g., Zhang and Chen 2002; Clougherty 2005; Thatcher 2014). Therefore, Figure 3.4 distinguishes these two basic factors under the headings 'mercantilist' and 'politics' respectively. The independence of competition authorities (denoted with the dashed line in Figure 3.4) is conceptualised as reducing or dampen the role of political factors rather than as completely eliminating them. The independence of competition authorities does also not crucially affect the role of legal origins and varieties of capitalism. Rather, the establishment of institutionally separated actors in the form of independent competition authorities locks-in and reproduces the different competition policy models. This becomes sometimes visible in international fora and deliberations where competition authorities tend to defend their respective model for the conduct and enforcement of competition policy (e.g., OECD 2005).

Interdependent Relationships

The relationship between these factors can be complex. The factors can exert an independent effect on the strictness and scope of competition laws and their enforcement (the dependent variables) but also interdependently influence each other which is intended to be indicated by the two-sided arrows in Figure 3.4. This

interdependent relationship may be especially relevant for understanding broader incremental changes over longer periods of time. For example, the political ideology of the government and domestic interest group politics can incrementally influence the market structure or the type of capitalism (primary mode of coordinating economic activity) but, at the same time, certain domestic-institutional factors such as the electoral system also structure the party system (Streeck and Thelen 2005; Hancké, Rhodes, and Thatcher 2007b; Iversen and Soskice 2006; 2010).

Ideational factors such as grand ideologies (e.g., Marxism, Liberalism, Keynesianism) or more specific economic and legal theories for the conduct of competition policy (e.g., contestable markets theory) can constitute an independent factor that influences the scope and strictness of competition policy (Eisner and Meier 1990; Eisner 1993; McGowan 2010, 13 and 137). However, theories can be also employed strategically by actors to influence broader policy guidelines or win the argument about the anti-competitive nature of business practices in specific cases (Kalt and Zupan 1984). The rise of Chicago school antitrust analysis, for example, constitutes a genuine theoretical development but can also be employed strategically by actors that want to achieve a softening of competition policy enforcement or win the argument in a specific legal case.

4 Data and Methodology

This chapter discusses the data and methodology used in the thesis. The first section discusses the conceptualisation and operationalisation of the dependent variables. The focus of the conceptual discussion is on two key concepts that have inspired most quantitative measures of competition policy, the political independence of competition authorities and the strictness of competition laws. In the following, the section describes and critically reflects upon the CLI, the index used to measure formal competition laws, and the data used to measure the enforcement activities of competition authorities, the two sorts of dependent variables. Afterwards the chapter provides for a discussion of the operationalisation of the independent and control variables. Finally, the chapter ends with an overview of the descriptive statistics and the cross-sectional time series regression methods applied in the thesis.

4.1 Introduction

This chapter discusses the data and methodology used in the thesis. The thesis combines data on formal competition law provisions with data on the enforcement activities of competition authorities to study the economic, political, and institutional factors that shape competition policies. Most studies acknowledge the need to complement the study of formal provisions with an investigation of enforcement activities. Especially in the field of competition policy, where the law grants considerable degrees of discretion to competition authorities in deciding which cases to investigate and prosecute, it is important to study enforcement activities. Apart from clear instances such as conspirator price-fixing it is often unclear where to draw the borderline between legitimate and anti-competitive conduct. The thesis responds to such calls by collecting data on and studying the enforcement activities of the British and German competition authorities, two economically developed Western democracies that represent different types of legal origin and capitalism.

The next section provides an overview of the conceptualisation and measurement of the dependent variables. The two sorts of dependent variables used in the thesis are 1)

the strictness and scope of competition laws as measured by the CLI (Bradford and Chilton 2018; Bradford, Chilton, Megaw, et al. 2019) and 2) the enforcement activities of competition authorities. The CLI is currently the most comprehensive measure of formal competition laws (Kholodilin and Pfeiffer 2021, 10). By covering 197 countries from 1890 to 2010 the CLI not only captures the year of adoption of a competition law but also the strictness and scope of formal provisions, that is, the range of business practices prohibited and controlled, and the number of sectors subjected to competition law provisions. This enables the most comprehensive investigation into the factors explaining cross-country and temporal variation in formal competition laws to date. As will be discussed, the CLI is, however, not without pitfalls. The missing consideration of enforcement activities is one such shortcoming. Therefore, the thesis makes use of an original data collection effort of the enforcement activities of the British and German competition authorities which complements the study of formal provisions. The section also discusses in more detail the enforcement data that have been collected based on the annual reports of the competition authorities.

Section 4.3 discusses the operationalisation of the main independent variables. The thesis focuses on three sets of independent variables that cover the role of economic- (market structure), political- (business cycles and the political ideology of the government), and institutional factors (legal origin and varieties of capitalism) in explaining variation in formal competition laws and their enforcement. The market structure, which corresponds to public interest theories of competition policy, is measured by variables such as the degree of privatisation of the economy with data coming from the Varieties of Democracy (V-Dem) project (Coppedge et al. 2019) and data on economy-wide barriers to entry from the World Bank's World Development Indicator (WDI) series. A possible significant effect of business cycles and the political ideology of the government can (e.g., Faith, Leavens, and Tollison 1982; Weingast and Moran 1983; Amacher et al. 1985; Ghosal and Gallo 2001; Coate 2002) but not necessarily has to be interpreted as supporting evidence for the public choice perspective on competition policy. Business cycles are measured with data such as on unemployment and gross domestic product from the WDI series. The political ideology of the government is measured with data from the parliaments and

governments (ParlGov) database (Döring and Manow 2018). Finally, legal origin and varieties of capitalism are measured by dummy variables.

Afterwards, section 4.4 lays down the operationalisation of the control variables and their hypothesised effect on formal competition laws and their enforcement. Specifically, the thesis controls for the level of economic development, country-size, democracy, and membership in international organisations. These are all factors that are commonly found to positively affect the adoption of and commitment to competition policy (Palim 1998; Kronthaler and Stephan 2007; Forslid, Häckner, and Muren 2011; Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016). For measuring these factors, the thesis uses continuous data from the Maddison project (Bolt and Van Zanden 2020) (economic development and country-size) and Polity 5 (Marshall and Gurr 2020) (democracy) as well as dummy variables for membership in the WTO, the OECD, and the EU.

The descriptive statistics of the variables and the cross-sectional time series regression models applied in the thesis are discussed in section 4.5. For explaining variation in formal competition laws and their enforcement the thesis uses pooled ordinary least squares (OLS) regression models (Chapter 5) and linear OLS regression models (Chapter 6). The choice of the different regression models was guided by common practice in the literature and regression diagnostics. The use of time invariant dummy variables in Chapter 5, for example, very much necessitates the use of pooled OLS and random effects models (instead of fixed effects models). Finally, the chapter ends with some concluding remarks in section 4.6.

4.2 The Dependent Variable: Measuring Competition Policy

The measurement of competition policy is complicated by the continuous evolution of the policy. During its lifetime, the policy has experienced considerable development and change, not only in terms of its goals and formal provisions but also in terms of the institutional actors responsible for the enforcement of competition policy. The result is a relatively diverse competition policy landscape across countries and over time within individual jurisdictions. However, several authors and organisations such

as the OECD have contributed to the consolidation and improvement of key concepts and methodologies to quantify competition policy regimes. Broadly, it may be distinguished between measures that codify and aggregate formal competition laws into indexes, to measure concepts such as the political independence of competition authorities or the strictness of competition laws, and studies that measure the enforcement activities of competition authorities.

4.2.1 Conceptual Discussion

For the measurement and comparison of competition policy regimes across jurisdictions, broadly three dimensions may be distinguished: the goals pursuit by competition policy, the institutional governance structure, and the substantive content of competition laws (cf. Doern 1995; 1996). The goals of competition policy may focus narrowly on economic criteria such as the promotion and maintenance of a competitive market structure, efficiency and consumer welfare but may also include the achievement of broader public interest objectives, or non-economic goals (Bradford, Chilton, Megaw, et al. 2019, 418).[45] These broader public interest goals may include the promotion of employment- and industrial policy objectives, media plurality, national security, financial stability as well as, possibly, environmental sustainability and even equality.

The pursuit of public interest or non-economic criteria means that certain anti-competitive practices such as cartels or mergers, that would be prohibited on pure economic-based reasoning, are allowed due to their expected positive effects on employment, environmental sustainability or long-term economic development. Conversely, public interest concerns are sometimes invoked to prohibit a merger by a foreign company, for example, due to national security concerns, that would not pose competitive problems from a purely economic perspective. Generally, there is a trend and convergence towards a focus on economic criteria, that is, an economisation of competition policy, although most countries maintain some clearly specified public

[45] This resembles studies on central banks which are usually compared according to whether they focus narrowly on price stability or also include other objectives such as the promotion of employment.

interest objectives.[46] The UK, for example, moved from a public interest- to an economic-based test with the issuing of the Tebbit Guidelines in 1984. Furthermore, also among economic criteria competition policy regimes may differ based on whether they place primary importance on efficiency, consumer welfare, total welfare or a competitive market structure.

The second dimension according to which competition policy regimes can be distinguished is the institutional governance structure. This dimension refers to the actors tasked with the formulation and enforcement of competition policy and their specific institutional design. The institutional design of federal-level competition authorities has received most attention in the literature.[47] Of special concern is the relationship between the overseeing ministries and parliaments and the competition authorities, that is, the political independence of competition authorities. Broadly, the concept of political independence refers to the extent to which competition authorities can self-determine their preferences and, throughout the regulatory process, translate their preferences into regulatory actions, without interference by other political actors (cf. Verhoest et al. 2004; Gilardi and Maggetti 2011, 201; Maggetti 2012, 38–39; Maggetti and Verhoest 2014; Wassum and De Francesco 2020, 43–45).

For the independence of competition authorities several sub-dimensions can be identified ranging from legal- and structural autonomy over to managerial-, financial- and policy autonomy and finally also including aspects of operational autonomy or the autonomy in applying granted competencies. Furthermore, authors have proposed to distinguish between formal and *de facto* independence to denote the extent to which 1) formal statutory provisions of competition authorities safeguard their independent status and 2) the independence is confirmed or undermined in day-to-day activities. In practice, competition authorities are of course not completely independent- or autonomous actors but derive their basic mandate and preferences (such as the pursuit

[46] For example, media plurality and national security are public interest objectives most countries include.
[47] Competition policy regimes differ also regarding, for example, the number of ministries responsible for political oversight, the existence of specialised competition tribunals or whether the competition authority is designed as single issue or multi-sectoral authority, but existing research has found no systematic patterns in these dimensions.

of competitive markets) and authority (e.g., the issuing of prohibition orders) from statutory legislations and directives. More specific, also the thresholds and market activities to be prohibited are externally given by the legislator.

However, within this general framework competition policy regimes vary considerable regarding the extent to which politicians may interfere *ad hoc* into regulatory decision-making by influencing outcomes in specific cases or for a certain period of time. There is an emerging consensus in the literature that the independence of competition authorities refers especially to the extent to which, given the legislative framework, competition authorities can freely decide and apply the legislation without interference by other actors (this view comes close to concepts of operational or *de facto* independence). For example, in extreme cases governments may exert direct and indirect pressure to influence or even overrule a specific decision by the competition authority. Furthermore, governments may replace activist heads of agencies with more conservative candidates or cut the agency's budget if they wish to soften competition policy enforcement and undermine the competition authority's independence.

In the literature, two research strategies have been developed to address the political independence of competition authorities. First, in the US literature on the political control of the bureaucracy authors have collected data on the enforcement activities of competition authorities and investigated the relationship with changes in the composition of Congress and presidential administrations (Weingast and Moran 1983; Eisner and Meier 1990; Eisner 1993; Wood and Waterman 1991; Wood and Anderson 1993; Coate 2002). From this perspective, and when conceptualising independence from the other side, that is, from the range of political control exerted over competition authorities, political responsiveness can be defined as 'the extent to which outputs from a bureaucracy change with application of an external political stimulus' (Wood and Waterman 1991, 825). The higher the political responsiveness the lower the operational independence. Second, another group of authors have devised indexes which are based on statutory provisions or surveys of competition officials (Guidi 2014; 2015; 2016; Koop and Hanretty 2018). These indexes are based on certain assumptions, such as that fixed- and longer terms of office of heads of agencies and

more personnel and financial resources, increase the political independence of competition authorities, and allow for cross-country comparisons of statutory provisions.

The third key dimension for the comparison of competition policies is the substantial content of competition laws. Competition laws can vary dramatically in the range of business practices prohibited and the instruments and powers available to competition authorities and courts to combat anti-competitive practices. This is especially visible over time as in the early years of, for example, US or EU competition law, only a few practices were prohibited, and the law accumulated over the years but also in comparison of mature competition policy regimes with those that are just newly established. In the US, for example, while competition law was introduced on the federal level by the Sherman Act of 1890 the control of mergers was added only in 1914 by the Clayton Act. Furthermore, the Clayton Act added price discrimination, exclusive dealing, tying contracts, and interlocking directorates as specific business practices to be prohibited and, thereby, strengthened US competition law (Wood and Anderson 1993, 2). Similarly, on the European level, the control of mergers was only added in 1989 to the instruments available to the European Commission.

Competition laws do not only differ regarding the set of business practices prohibited but also regarding their scope over the economy, that is, the number of sectors covered by their application. Generally, competition laws, as horizontal regulatory framework, are applicable to the whole economy, but usually certain sectors are exempted or subjected to special regulatory provisions. The sectors most often subject to exemptions or special provisions are the media- and newspaper-, agriculture-, banking and finance-, insurance-, and public utility (e.g., telecommunication, energy, and transportation) sectors. This may be ascribed to the political power exerted by representatives of these sectors but also to the believe that exemptions and special regulatory regimes are better suited to address the peculiarities of the respective sectors (for example, due to the existence of natural monopolies). Furthermore, some countries include special provisions for export- and import cartels. The competition laws can also differ in the extent to which they weight pro- and anti-competitive effects in their

assessment. Specifically, the most commonly invoked defenses, that may outweigh anti-competitive effects from a business practice or merger, are efficiency defenses, failing firm defenses, and other types of public interest defenses (e.g., national security or economic development).

The key concept for the measurement and comparison of competition laws is the strictness and scope of competition laws. The 'stringency of competition laws' can be defined as the degree to which jurisdictions condemn and prohibit anti-competitive practices and business activities (cf. Nicholson 2004; 2008; Hylton and Deng 2007; Alemani et al. 2013; Bradford and Chilton 2018; Bradford et al. 2019). The more business activities are prohibited due to their perceived anti-competitive nature, and the more sectors of the economy are subjected to those prohibitions, the higher the stringency and scope of competition laws. Contrary, the existence of sectoral exemptions or defenses reduces the strictness of competition laws. This definition takes a value-neutral position as to whether a specific practice or agreement is anti-competitive and, therefore, should be prohibited, but simply suggests that the more practices are prohibited the higher the stringency and coverage of competition laws. It is also neutral as to whether higher stringency is good or bad, for example, in terms of economic performance, which would require a specifically target empirical analysis.

4.2.2 Measures of Formal Competition Laws

Since the beginning of the 2000s several authors and organisations such as the OECD have developed indexes that try to quantify competition policy regimes. Broadly, it can be distinguished between quantitative measures of competition laws and measures of institutional characteristics of federal-level competition authorities. The aim is usually to benchmark competition policy regimes against some kind of pre-defined best practice model (Alemani et al. 2013), to measure the strictness and scope of competition laws (Nicholson 2004; 2008; Hylton and Deng 2007; Bradford and Chilton 2018) or to measure the formal and *de facto* independence, accountability and regulatory powers of competition authorities (Gilardi 2002; 2005; 2008; Maggetti 2007; 2012; Guidi 2014; 2015; 2016; Koop and Hanretty 2018).

The measurement of the formal political independence of regulatory agencies and competition authorities has been crucially advanced by Gilardi (2002; 2005; 2008). Gilardi has developed an index of the formal political independence of regulatory agencies and competition authorities. The index is based on the coding of statutory provisions in five dimensions (status of the agency head, status of the members of the management board, relationship with government and parliament, financial and organisational autonomy, and regulatory competencies). The resulting index is a continuous scale ranging between 0 and 1 with higher values indicating higher formal political independence. Gilardi's final data set covers 106 regulators in 17 European countries (EU-15 plus Switzerland and Norway) and seven regulatory domains (telecommunications, electricity, financial markets, competition, pharmaceuticals, food safety, and environment).

Based on the methodology developed by Gilardi and taking into account some corrections as suggested by Hanretty and Koop (2012), Guidi (2014; 2015; 2016) and Koop and Hanretty (2018), have extended the time period and number of countries covered but focusing solely on competition authorities. Guidi (2014; 2015; 2016) constructed a survey-based index of the formal political independence of competition authorities covering 27 EU member states from 1993 to 2009. The index ranges between 0 and 1 with higher values indicating higher formal political independence. Based on the manual coding of statutory provisions Koop and Hanretty (2018) have constructed indexes of the formal political independence, accountability, and regulatory powers of competition authorities covering 30 member states of the OECD over the period 2005 to 2014. For assessing the scalability of items, and in order to turn the ordinal measurements on several items into a single measure, the authors used a latent trait model based on item response theory. The final indexes range between 0 and 1 with higher values indicating higher formal political independence, accountability, and set of regulatory powers respectively. Maggetti (2007; 2012) developed measures for the *de facto* independence of regulatory agencies and competition authorities from political actors and the regulated industries.

The second key concept for which indexes have been developed is the formal strictness and scope of competition laws (Nicholson 2004; 2008; Hylton and Deng 2007; Alemani et al. 2013; Bradford and Chilton 2018; Bradford et al. 2019). In these indexes, sometimes, institutional characteristics of competition authorities, such as their political independence and regulatory powers, feed-in the overall index. For example, arguably, a competition law enforced by a highly independent competition authority equipped with far-reaching regulatory powers, is stricter in scope. However, other indexes more clearly separate these different dimensions of competition policy regimes. The OECD's competition law and policies (CLP) indicator set measures the strength and scope of competition policy regimes in 49 jurisdictions (Alemani et al. 2013). The CLP indicators are based on surveys send to competition authorities and capture formal *de jure* as well as *de facto* information about competition regimes as of January 2013. The data are aggregated into several indicators providing information on the scope of action, policy on anti-competitive behaviours, probity of investigation, and advocacy amongst others. The CLP indicators range between 0 and 6 from the most to the least effective competition policy regime.

The CLI (Bradford and Chilton 2018; Bradford, Chilton, Megaw, et al. 2019) is the most comprehensive data set on competition laws to date (Kholodilin and Pfeiffer 2021, 10).[48] Building-up on the methodology of previous efforts by Nicholson (2004; 2008) and Hylton and Deng (2007) the CLI is based on the manual coding of formal competition laws covering 197 countries from the year of introduction of the first competition law up until 2010. Generally, the data set starts in 1890 or the year of independence of the respective country. As of 2010, 125 of those 197 countries have a competition law in place. Table 4.1 below summarises and compares the key features of the different competition policy indexes.

Table 4.1: Indexes of competition policy

Name of index	Author(s)	Concept measured	Range of index	Sample size	Year(s)

[48] The CLI can be accessed at: http://comparativecompetitionlaw.org/.

Indexes of competition laws	Antitrust Law Index (ALI)	Nicholson (2004; 2008)	The formal scope of competition laws		52 countries	2003
	Scope Index	Hylton and Deng (2007)	The formal scope of competition laws	0-30	102 countries	2001-2004
	Indicators for Competition Law and Policies (CLP)	OECD (Alemani et al. 2013)	*De jure* and *de facto* effectiveness, strength and scope of competition regimes	0-6	49 jurisdictions	2013
	Competition Law Index (CLI)	Bradford and Chilton (2018)	The formal scope and strictness of competition laws	0-1	197 countries	1888-2010
Indexes of competition authorities		Gilardi (2002; 2005; 2008)	The formal political independence of regulatory agencies and competition authorities	0-1	106 regulators in 17 European countries	
		Maggetti (2007; 2012)	The *de facto* independence of regulatory agencies and competition authorities from politics and the regulated industries			
		Guidi (2014; 2015; 2016)	The formal political independence of competition authorities	0-1	27 EU member states	1993-2009
		Koop and Hanretty (2018)	The formal political independence, accountability and regulatory powers of competition authorities	0-1	30 OECD member states	2005-2014

The CLI is used as dependent variable because it is the most comprehensive measure of formal competition laws, not only in terms of countries and years covered but also because the CLI provides some methodological advantages.[49] Compared to the OECD data (Alemani et al. 2013) the CLI has the advantage that it does not attempt to measure competition laws against a pre-defined best practice model but more coherently attempts to measure the concept of strictness.[50] On an operational level, this difference becomes visible, for example, in the coding of the existence of efficiency defenses. While in the OECD data the existence of efficiency defenses is coded as indicating more effective and stronger competition laws, that is, conformity with best practices, the CLI codes efficiency defenses as reducing the strictness of competition laws. The OECD's CLP index also includes measures for the independence of competition authorities whereas the CLI focuses on the stringency of competition laws. As regarding previous efforts to measure formal competition laws by Nicholson (2004; 2008) and Hylton and Deng (2007) the CLI constitutes an improvement by refining the methodological template and extending the number of countries and years covered.

The CLI measures the formal strictness and scope of competition laws. Specifically, the CLI identifies the key set of competition law provisions common in the areas of merger control (e.g., pre-merger notification requirement, mandatory notification), anti-competitive agreements (e.g., the prohibition of price fixing, market sharing, output limitation, bid rigging, tying, exclusive dealing, resale price maintenance, elimination of competitors), and the abuse of a dominant position (e.g., general prohibition, market access, tying, discounts, discriminatory-, unfair-, and predatory pricing). If the competition law contains one of these provisions it receives a score of 0.25, 1 or 2 points, depending on the weighting of the specific provision (Bradford and Chilton 2018, 402).

---

[49] The original CLI includes five regional organisations, Czechoslovakia, and Yugoslavia. Due to data unavailability for the independent variables and potential overlap with successor- and member countries these jurisdictions are dropped from the analysis. For Germany, the data for West Germany and unified Germany are used and compiled together as a single country. The data for East Germany are dropped from the analysis.

[50] Although the CLI constitutes methodologically an improvement to previous efforts it still may be criticised for being empirically driven. Rather than deriving the empirical template from a conceptual discussion of 'strictness' the CLI is oriented on the competition law provisions that can be found empirically.

Furthermore, the CLI includes possible remedies (e.g., the availability to impose fines, imprisonment, divestitures, and damages) whose existence each increases the received scores by 1 and exemptions (e.g., the exemption of export cartels, state-owned enterprises or specific sectors) and possible defenses (e.g., public interest-, efficiency-, and failing firm defenses) that reduce the strictness of competition laws and, therefore, result in the subtraction of -0.5 points. The overall index aggregates these scores. The more types of behaviour the law prohibits, and the more remedies are available to sanction anti-competitive behaviour, the stricter the competition laws. Contrary, the more exemptions and defenses the law contains the weaker the competition laws. The final CLI has been normalised to range in between 0 and 1 with higher values indicating a higher strictness and scope of competition laws (Bradford and Chilton 2018, 409).

The CLI is based on formal competition law statutes but also includes secondary legislations with implications for competition policy.[51] In addition to the overall CLI scores the data set includes disaggregated information for the sub-dimensions of *Authority* (capturing mainly the range of remedies but also the availability of private enforcement) and *Substance* (substantive content of competition laws), and, within the latter category, the three substantive areas of merger control, the abuse of a dominant position, and anti-competitive agreements. In the weighting scheme of the total CLI score the Authority and Substance sub-categories are given equal weight. Thus, the Authority scores are doubled in their weighting and each substantive sub-category, that is, merger control, abuse of dominance, and anti-competitive agreements contributes 1/6 to the total CLI score (Bradford and Chilton 2018, 408). The unit of observation is the country-year. If a country has a competition law in place in any given year, it is assigned an index-score between 0 and 1. If a country has no competition law in place in any given country-year it is assigned the value of 0.

[51] The only exceptions are Benin, Ivory Coast, Mali, and Senegal for which countries the authors could not identify all secondary laws with implications for competition policy (Bradford, Chilton, Megaw, et al. 2019, 419).

The only exceptions are Djibouti, the Faroe Islands, and Iran for which countries the authors note that, due to language barriers, it was not possible to code existing competition laws (Bradford, Chilton, Megaw, et al. 2019, 419). Therefore, these three countries are assigned a value of 0 until the last year of observation in 2010. However, because these countries only adopted a competition law in 2007 (Faroe Islands and Iran) and 2008 (Djibouti) and considering the overall number of observations this is not likely to strongly affect the empirical results. In total, 122 countries are assigned scores between 0 and 1 from the year of adoption of a competition law onwards. The remaining 75 countries are assigned the value of 0 until 2010. Overall, the CLI captures well the key competition law provisions that have developed over time and according to which competition laws can be distinguished.

However, similar as other measures (including the OECD data), the CLI focuses on those features that are common to most competition laws and, thereby, may be criticised for downplaying variation in the data (cf. Alemani et al. 2013, 6). In other words, competition law provisions that are unique to any specific country are not included in the CLI. By using as point of reference the competition laws of the US and the EU the CLI may be also said to be biased towards 'Western' countries or to have a tendency of measuring closeness with US competition law rather than purely focusing on the concept of strictness.[52] This aspect may be most clearly visible in the inclusion of 'private right of action' and 'damages' as factors indicating stricter competition laws. The eligibility of private actors to enforce competition laws and to claim compensation for antitrust violations, provisions that are very unique to the US, however, does not necessarily mean that competition laws are stricter which, crucially, depends on the formal provisions that private actors can enforce. In other countries, the absence of a private right of action may be compensated for by more active monitoring and stricter decision-making of administrative agencies.

[52] More specific, the CLI may be criticised for measuring closeness with some 'idealised' version of US antitrust law which, in itself, has been weakened over time for which reason the US does not score highest on the CLI. In 2010, the lowest CLI score is received by Benin and the highest by Japan and Saudi Arabia (Bradford and Chilton 2018, 409).

The CLI is not a perfect measure of the strictness of competition laws.[53] The CLI, by using binary coding techniques, does not capture monetary values or any degree of remedial actions available. For example, a critique may contend that the strictness of merger control is rather manifested by the specific turnover thresholds, expressed in monetary terms, above which mergers fall under the merger control regime and the strictness of substantive decision criteria against which mergers are assessed by competition authorities. Both aspects are not captured by the CLI. The CLI does also not include the amount of the maximum fine or length of prison sentences that can be imposed for competition law infringements but only whether these sanctions are available or not.

Finally, the CLI does not measure the enforcement of competition laws. Although this is explicitly not the aim of the CLI (Bradford and Chilton 2018, 397) and it is advantageous to analytically separate formal provisions from enforcement activities the strictness of any provision depends crucially on its enforcement. For example, the competition law of a country may only contain a few provisions which are, however, heavily enforced by a high number of investigations and prosecutions. Contrary, a country may have far-reaching prohibitions and sanctions available but only spends little resources for their enforcement and, generally, does not issue many investigations and prohibition orders.

The existence of fines and prison sentences does not necessarily imply that these are frequently imposed for competition law infringements. More broadly, also the meaning and interpretation of specific provisions such as price fixing or bid rigging may considerably differ over time and between countries and, thereby, affect the reach, scope, and strictness of competition laws. The possible ways to address some of these

[53] A general point which can always be subjected to critical discussion for indexes of this kind is the set of items selected for construction of the index and their weighting. For example, how to weight a sectoral exemption against an exemption of state-owned enterprises, whose effects considerable depend on the importance of the specific sector or state-owned enterprises for the economy (Bradford and Chilton 2018, 417), or a general ban of price fixing against some rather minor provision against unfair pricing by a dominant firm. For the weighting scheme of the CLI see Bradford and Chilton (2018, 402).

shortcomings by the measurement of enforcement activities are addressed in the next section.

4.2.3 Measuring Enforcement Activity

The measurement of enforcement activity is a useful and necessary complement to the study of formal competition laws. The study of enforcement activity not only enables to investigate the extent to which stricter (weaker) formal provisions translate into higher (weaker) enforcement intensity but also to analyse the explanatory power of key variables on the level of enforcement activity. However, there are remarkably few studies that invest the resources and systematically collect enforcement data outside the US and there is no agreed consensus on what constitutes a perfect enforcement measure. Most studies use as enforcement measure either the annual number of cases filed or, when focusing on merger control, binary variables that distinguish between the clearance and prohibition of a merger. However, the field of research is diverse, and scholars have used innovative measures such as percentage- and dismissal ratios of specific sub-populations of enforcement decisions or monthly data amongst others.

The seminal study on the enforcement activities of US antitrust authorities is Posner's article of 1970. In this article, Posner (1970) collected annual data of the number of cases filed by the Antitrust Division of the US Department of Justice, the FTC, and private plaintiffs from 1890 until 1969. Based on Posner's study, several authors have then used the data to investigate in more detail the economic and political factors driving variation in antitrust enforcement activity by the Department of Justice and the FTC and extended the time period covered by the data (Long, Schramm, and Tollison 1973; Asch 1975; Siegfried 1975; Lewis-Beck 1979).

Most recently, for example, Gallo et al. (2000), by largely maintaining Posner's original methodology, extended the coverage of the data for the Department of Justice's enforcement activities up until 1997. In addition, several authors have collected their own data for specific sub-periods, most of the time, either for the FTC or the Department of Justice (Stewart and Cromartie 1982; Moe 1982; Amacher et al. 1985; Cartwright and Kamerschen 1985; Wood and Anderson 1993; Vachris 1996;

Ghosal and Gallo 2001). In the only study to date that focuses on the antitrust enforcement efforts of US states, Feinberg and Reynolds (2010) have collected data on the annual number of cases filed by US state attorney generals in 50 states from 1992 to 2006. The annual number of cases filed is, however, not the only possible measure to capture enforcement activity. Table 4.2 below summarises the different operationalisations of enforcement activity that are commonly used in the literature.

Table 4.2: Operationalisations of enforcement activity of competition authorities

Type of data	Dependent variables	Studies
Open-ended count data	Annual number of cases filed	Posner (1970); Long et al. (1973); Asch (1975); Siegfried (1975); Lewis-Beck (1979); Stewart and Cromartie (1982); Moe (1982); Amacher et al. (1985); Cartwright and Kamerschen (1985); Wood and Anderson (1993); Vachris (1996); Gallo et al. (2000); Ghosal and Gallo (2001); Clougherty and Zhang (2005); Feinberg and Reynolds (2010)
	The percentage of total annual cases in the areas of horizontal and vertical restraints, monopoly, and mergers	Eisner and Meier (1990); Eisner (1993)
	The annual ratios of dismissals (cases withdrawn by the FTC) to 1) the total number of cases brought and 2) the total number of complaints (dismissals and cease and desist orders) by the FTC	Faith et al. (1982)
	Monthly data on the sum of all 1) consent decrees obtained, 2) final administrative orders issued, and 3) concluding agreements reached by the FTC	Wood and Waterman (1991)
	Sanctions (fines and prison sentences) imposed in antitrust proceedings	Gallo et al. (1986)

Binary or categorical variables	Binary variable distinguishing between the challenge of a merger (subjected to conditions or prohibition, sometimes also voluntary withdrawal) and the unconditional clearance of the merger	Coate et al. (1990); Coate and McChesney (1992); Weir (1992); Coate (1995b; 1995a; 2002; 2005); Strong et al. (2000); Lindsay et al. (2003); Martinez Fernández et al. (2008); Bergman et al. (2010; 2019); Szücs (2012); Bradford et al. (2018)
	Binary variable indicating whether a court enjoins a transaction or the FTC enters into a structural settlement or not	Coate and Ulrick (2009)
	Binary variable capturing whether any monopoly investigation by the UK's MMC concluded with an adverse finding or not	Davies et al. (1999)
	A categorical variable with four outcome values ranging from 1 (unconditional clearance of the merger) to 4 (prohibition of the merger)	Khemani and Shapiro (1993)
	Categorical variables capturing the statute under which a given case decided falls (distinguishing between three types of statutes)	Weingast and Moran (1983)

As can be seen, the second most commonly used enforcement measure is a binary variable that distinguishes between the clearance and prohibition of a merger. Importantly, these two measures capture a somewhat different total population of cases. The second group of studies, that uses binary dependent variables, is usually restricted to second-stage merger investigations, that is, those mergers that, after an initial screening, are likely to raise competitive concerns. This technique enables to discriminate between the challenge or clearance of a merger at the margin.

Furthermore, this type of study, which is usually limited to a rather short period of time (about ten years on average), has the advantage that more detailed information about the case decision-making criteria published in the case files (such as market concentration ratios and barriers to entry) can be used for the empirical analysis. However, it does not capture overall merger control activity over longer periods of

time. It is also difficult to create binary variables for the two other key areas of competition policy enforcement, the abuse of a dominant position and the control of anti-competitive agreements. Clougherty and Zhang (2005) propose to use the annual number of second-stage merger investigations or the annual number of second-stage merger investigations as a percentage of the total number of notified mergers as enforcement measures. These two measures can possibly complement binary variables by providing a broader picture of merger control enforcement activity.

The use of the annual number of cases filed to measure enforcement activity allows to capture a broader total population by not only focusing on those cases that are likely to raise concerns but also including the initial screening and notification activity. This provides for a better measure of overall control of economic activity, that is, the total number of business activities scrutinised by competition authorities. Furthermore, data on annual investigations are relatively easy to obtain over longer periods of time and capture a good degree of the efforts of competition authorities to detect anti-competitive practices. Especially when competition authorities are not legally required to investigate a given case (such as in cases of pre-merger notification requirements) but need to pro-actively detect anti-competitive conduct in the economy the annual number of initiated cases may give a good indication of enforcement activity and intensity.

However, the annual number of cases bears the risk of overestimating the real degree of enforcement activity because many cases are withdrawn or not concluded with a successful prosecution. While more cases and investigations can be expected to lead to more prosecutions many cases are withdrawn because either the parties concerned voluntary abandon their conduct or the case is not expected to hold before court. During the investigation the competition authority may simply realise that the allegation was incorrect, the anti-competitive effect is not to such an extent to require any action or that there is not enough evidence for a successful prosecution. In order to account for such discrepancies Faith et al. (1982), for example, use the annual ratios of cases withdrawn to the total number of cases brought by the FTC. This provides for

a percentage measure of what may be termed ‘un-successful’ or ‘in-effective’ enforcement relative to the overall number of cases.

In the extreme, any competition authority may launch a high number of cases each year but only a very few investigations result in successful prosecution because either the law is very weak on paper or only insufficiently enforced in practice. Wood and Waterman (1991) use monthly data on the sum of all 1) consent decrees obtained, 2) final administrative orders issued, and 3) concluding agreements reached by the FTC. This tackles the same issue from the other way around. Instead of using the annual (or monthly) number of investigations as enforcement measure Wood and Waterman only use the cases of ‘successful’ enforcement, that is, those investigations that concluded with a consent decree, an administrative order or a concluding agreement and, therefore, shaped business conduct. Similarly, Gallo et al. (1986) use the fines and prison sentences imposed by the Department of Justice from 1955 to 1979 as enforcement measure. This last aspect captures either instances of serious criminal misconduct or cases that could not be solved by mutual agreement or voluntary withdrawal by the private parties.

Generally, for analysing enforcement activities, it would be preferable to have the full amount of information available including initial case load as well as final outcome measures. However, when collecting the data, the researcher is seriously limited by the information available or that can be reasonably obtained. In the case of merger control, perfectly, some combination of the total- and percentage number of annually notified and screened mergers, first- and second-stage investigations and finally prohibited mergers, could be used for empirical analysis. Similar in the two other areas of anti-competitive agreements and the abuse of a dominant position it would be advantageous to have data on the annual number of cases broken down into those that are investigated in more detail or withdrawn, litigated before the court, prosecuted, and finally prohibited or subjected to fines and prison sentences (including the amount of fines and length of prison sentences imposed). However, not all countries have a pre-merger notification requirement in place and the publicly available information

contained in the annual reports of competition authorities differ strongly between and even within countries over subsequent years.

For capturing the enforcement activities of the German and British competition authorities the thesis relies on publicly available information contained in the annual reports. For Germany, the thesis uses the total number of prohibited mergers in any given year as enforcement measure for the area of merger control. For the enforcement of the provisions against anti-competitive agreements and the abuse of a dominant position two similar measures have been calculated. The two measures are named 'cartel enforcement' and 'abuse of dominance enforcement' respectively and simply add-up the number of (i) fine orders- and (ii) prohibition orders issued by the FCO and (iii) the cases that conclude with the voluntary abandoning of the conduct in question by the private parties concerned in any given year. The issuing of fine orders and prohibition orders are the most important 'hard powers' the FCO may employ to enforce the competition law. Furthermore, the inclusion of the cases that conclude with the voluntary abandoning of the conduct in question allows to also capture the cases where the FCO enforced the competition law and shaped business conduct by the use of investigations and the threat of possible sanctions but where the private parties concerned voluntarily adjusted their conduct. The sources are the FCO's annual reports from 1974 to 2017 (FCO 1974-2017).

$$cartel\ enforcement_{\,t} = fine\ orders_{\,t} + prohibition\ orders_{\,t} + voluntary\ abandoning_{\,t}$$

$$\begin{matrix} abuse\ of\ dominance \\ enforcement \end{matrix}_{\,t} = fine\ orders_{\,t} + prohibition\ orders_{\,t} + voluntary\ abandoning_{\,t}$$

For the UK it is more difficult to collect enforcement data that are comparable across years. The key reason is that the institutional identity of the competition authority changed several times over the post-war period and, correspondingly, also the statistical information contained in the annual reports. Furthermore, over several periods two or three competition authorities simultaneously enforced different areas

of competition policy.[54] The two key enforcement data used are (i) the total number of mergers prohibited by the MMC and its successor, the Competition Commission (CC), from 1990 to 2013, and (ii) the number of mergers examined by the OFT from 1986 to 2013. These information are contained in the annual reports from the Director General of Fair Trading (DGFT) from 1991 to 2002 (DGFT 1991-2002) and the OFT's annual reports from 2003 to 2014 (OFT 2003-2014). During this period, the OFT was responsible for the first-stage merger investigation, that is, the pre-screening activity of mergers that possibly may raise competitive concerns. In a second step, the OFT then referred those mergers likely to raise competitive concerns to the MMC (later the CC) for the second-stage merger investigation and the possible prohibition of a merger.

4.3 The Independent Variables: Market Structure, Politics, Ideology, and Institutions

For explaining cross-country and temporal variation in competition laws and their enforcement the thesis focuses on several key independent and control variables. The key independent variables are: market structure, the political ideology of the government, and domestic-institutional factors, notably, the legal tradition and type of capitalism of a country. Furthermore, business cycles take a key role in the analysis of temporal variation in enforcement activities. Most variables may affect and are, thus, included in both, the analysis of formal competition laws and their enforcement. However, others do only appear in one of the empirical settings either for technical or theoretical reasons. In the analysis of variation in enforcement activities in single countries, for example, it is not useful to include variables that attempt to explain cross-country variations in the political economy such as legal origin and types of capitalism. Similarly, business cycles take a key role as explanatory factor in the study of enforcement activities but are unlikely to exert any effect on formal competition laws which are rather sticky and do not respond sensitively to yearly effects such as changes in economic growth or unemployment.

[54] A Freedom of Information request was denied by the Competition and Markets Authority (CMA) because the requested information were too extensive and because the CMA is only obliged to provide information about its own activities and not those of its predecessor organisations.

4.3.1 Market Structure

For measuring market structure, it is used the variable 'State ownership of economy' (v2clstown) from the Varieties of Democracy (V-Dem) data version 9 (Coppedge et al. 2019) and the variable 'Time required to start a business (days)' from the World Bank's WDI series. The first variable is based on expert-surveys and captures the degree to which the state owns or directly controls capital (including land) in the industrial, agricultural, and service sectors. The original ordinal ratings by experts have been transformed into continuous interval measures by the V-Dem project team. The original variable potentially ranges from -5 to +5 with higher values indicating less capital is owned or directly controlled by the state, that is, more parts of the economy are controlled by private actors. In other words, the higher the score of the *v2clstown* variable the more privatised the economy (to avoid confusion the variable is therefore termed 'privatisation' in the following). The variable has been normalised to range in between 0 and 1 to facilitate the interpretation of the regression coefficients. The variable is available for 120 countries from the start of measurement of the dependent variable in 1890 (or the year of independence of each country) until 2010 (the last year of measurement of the dependent variable).

Studies on the adoption of competition laws that investigate the role of market-orientation or capitalism have used data on economic freedom by the Fraser Institute or private think tanks (Palim 1998; Kronthaler and Stephan 2007; Parakkal and Bartz-Marvez 2013). The advantage of using the *v2clstown* variable from the V-Dem project is that this variable is available for more country-years than the Fraser Institute's economic freedom index. Furthermore, instead of measuring the broader concept of 'economic freedom' this variable narrowly focuses on privatisation which facilitates the interpretation of the regression results. However, some precautionary notes may be appropriate. Data based on expert-ratings bears the risk of re-producing subjective belief patterns. For example, a country may have so much a reputation of controlling large parts of the economy (or of pursuing a private market economy) that even country-experts over- or underestimate the real degree of state ownership. Especially for historical data some cautious may be appropriate as regarding the assigned country-scores.

At the same time, however, the advantage of using subjective measures based on expert-ratings is that they enable also to take into account *de facto* patterns of state control and a vast range of different information which the country-expert may possess. A country, for example, may show varying degrees to which formal control is exerted over time which can be taken into consideration by the country-experts. In this particular case, the development of an index based on factual data (instead of expert-ratings) would probably have been seriously impeded by the unavailability of comparable cross-country data spanning a similar sample of countries and years. Furthermore, generally, the V-Dem project implements some methodological safeguards to mitigate the problems of subjective expert-ratings such as the use of five different experts for each country-year and Bayesian item response theory for cross-coder aggregation.

The second variable from the WDI series captures the days required to start a business and serves as proxy for *de facto* barriers to effective competition and market entry. The variable measures 'the [average] number of calendar days needed to complete the procedures to legally operate a business' based on a simple business case in the largest city of an economy to ensure comparability across countries and over time. The data are also based on expert-surveys administered by the World Bank. For Germany and the UK, the variable is available annually from 2003 onwards. Economic factors such as market shares and barriers to entry are commonly employed to test whether competition authorities neutrally enforce the law to improve economic wealth (e.g., Coate, Higgins, and McChesney 1990; Coate and McChesney 1992; Weir 1992; Coate 1995b; 2002; 2005; Davies, Driffield, and Clarke 1999; Lauk 2003). Most studies, however, focus on a sub-sample of decisions and use more detailed information on these economic factors, sometimes broken down by industry- and sector-level, from the case files and annual reports from the competition authorities. The advantage of using the World Bank's data is that they provide an independent external source which was not designed in view of examining and justifying competition policy enforcement decisions.

4.3.2 Business Cycles

Business cycles are measured by data on the growth rate of the gross domestic product (GDP) and on the level of unemployment from the WDI series as well. The first variable is ‘GDP growth (annual %)’ which is available for Germany from 1971 onwards and for the UK from 1969 onwards. The second variable is ‘Unemployment, total (% of total labor force) (modeled ILO estimate)’ and captures the level of unemployment as percentage of the total labour force. The variable is retrieved from the WDI but is based on estimates by the International Labour Organisation (ILO). The GDP growth rate and unemployment levels are commonly employed variables to measure business cycles in comparable studies on the enforcement activities of competition authorities (e.g., Posner 1970; Lewis-Beck 1979; Amacher et al. 1985; Cartwright and Kamerschen 1985; Eisner and Meier 1990; Ghosal and Gallo 2001; Feinberg and Reynolds 2010).

4.3.3 The Political Ideology of the Government

The political ideology of the government is measured based on data provided by the ParlGov database (Döring and Manow 2018). Specifically, the variable ‘left-right’ which codes the ideology of political parties on a left-right dimension has been transformed into annual data by taking the simple average for those political parties that are part of the government in any given year. The variable ranges from 0 to 10 with higher values indicating a more right-orientation of the government. The variable is based on expert-surveys and provides time-invariant average scorings for each political party.

In other words, the variable does not include possible changes in the left-right orientation of a political party such as when a social democratic or labour party may have become more market-oriented over time but uses the average score for each political party over the full sample of years. A second variable has been created by weighting the left-right score of each political party forming part of the government by parliamentary seat shares and then taking the simple average. Both variables cover 37 economically developed ‘Western’ democracies from 1945 (or the year of the first free elections) until 2010 (the last year of measurement of the dependent variable).

The original ParlGov data are provided on the cabinet-level, that is, political parties and their corresponding left-right scores are given based on the duration of a stable government not on an annual basis. In order to transform these data into annual data a decision had to be made as regarding the cut-off date for which year to code a given political party as part of the government because often cabinets take power in the middle of a year. As cut-off date it is used the 01 of July, that is, if a government took office on or after the 01 of July the year is fully coded as having been governed by the preceding government. The new government is coded for the following year. This is reasonable in so far as it takes some time until governments can implement their preferred policy choices. Furthermore, in case of conflict between two or more cabinets having formed the government in any given year the cabinet which lasted longer was coded.

Most studies that investigate the role of government ideology on competition policy use categorical variables (Parakkal 2011; Weymouth 2016; Kholodilin and Pfeiffer 2021). Parakkal (2011) uses a three-point scale variable ranging from 1 (right) to 3 (left) and Weymouth (2016) and Kholodilin and Pfeiffer (2021) use dummy variables for left and centre governments. The advantage of using the continuous measures based on the ParlGov data is that they may be said to provide a more fine-grained measurement of the ideological orientation of the government and also account for the coalitional- or parliamentary strength of the main governing party. Instead of coding the political orientation of the head of government the ParlGov data allow to consider the strength of the main governing party and the ideological orientation of possible coalition partners. Further robustness tests are conducted using data on the party composition of government from the Comparative Political Data Set (CPDS) (Armingeon et al. 2019). These data are available for 36 OECD and/or EU democracies from 1960 (or the year of the first free elections) until 2010.

4.3.4 Legal Origin and Varieties of Capitalism

The legal origin and type of capitalism are measured by dummy variables. The legal origin of a country is measured by a dummy variable coded 1 for English common law

countries and 0 for civil law countries. The classification of countries' legal systems is based on La Porta et al. (1999; 2008). This follows common practice in the quantitative literature on legal origin. Information is available on the type of legal system for 186 countries (which splits into 59 English common law- and 127 civil law legal origin countries). The type of capitalism is measured by a dummy variable coded 1 for LMEs and 0 for CMEs based on the classification by Hall and Soskice (2001) including so-called MMES under the group of CMEs. The result is an overall sample of 22 countries (which splits into 6 LMEs and 16 CMEs).

For both, the origin of a country's legal system and the type of capitalism, the categorisation of countries is, however, not without controversy (Jackson and Deeg 2006; Bradford et al. 2021, 222). As with other typologies, the question of categorisation is crucially about determining at which point the differences between and commonalities within a group of countries are to such an extent as to justify the introduction of a new sub-group. In the comparative capitalism literature, almost each contribution proposes a slightly different categorisation of countries (for an overview see Jackson and Deeg 2006).

Therefore, further robustness tests are conducted using different operationalisations of legal systems and types of capitalism. For legal origin, detailed tests are reported introducing dummy variables for Socialist- (34 countries), French- (81 countries), German- (7 countries), and Scandinavian (5 countries) legal origin countries to further distinguish between different legal systems within the group of civil law countries. For Varieties of Capitalism, additional tests are reported using dummy variables for CMEs, MMEs, and the continuous coordination indices on overall economic coordination as well as coordination within the sub-areas of corporate governance and labour relations developed by Hall and Gingerich (2004; 2009).

4.4 The Control Variables

The thesis also includes a number of economic and political control variables that may be hypothesised to influence the strictness and enforcement of competition policies. It is controlled for the level of economic development and country-size by including

measures for real GDP per capita in 2011 US dollars and population (in thousands) with data coming from the Maddison Project Database (Bolt and Van Zanden 2020). Compared to other data such as those from the World Bank's WDI series the Maddison Project's data are used because of their advantage of providing also historical data enabling to cover more country-years.

The level of economic development is one of the few variables (together with country-size) constantly found to positively affect the adoption of and commitment to competition policies (Palim 1998; Kronthaler and Stephan 2007; Forslid, Häckner, and Muren 2011; Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016). The more economically developed a country, the more complexity markets develop, which can be expected to result in increased functional requirements for regulatory instruments such as those provided by competition policy. In some way, GDP per capita as common measure for economic development, is also a good proxy for the marketisation of society (in proportion to its population) and, therefore, complementary to the privatisation measure. However, by adding economic development as distinct control variable the individual effect of privatisation (which, although likely, not necessarily has to translate into higher GDP per capita) can be expected to be singled out better. Furthermore, richer countries, that is, those with higher GDP per capita, may also simply have more resources available to implement sophisticated regulatory instruments such as competition policy. Therefore, economic development can be expected to be associated with stricter and more far-reaching competition laws.

The relationship between country-size (usually approximated by population) and competition laws has received some attention in the literature. Already a brief review of the literature indicates that, empirically, larger countries such as the US, Germany or the UK generally have adopted competition laws much earlier than smaller countries such as Belgium, the Netherlands or Switzerland. Based on the assumption that competition law improves consumer welfare several authors hypothesise that the larger the country the more the benefits from improved consumer welfare due to competition laws outweigh the benefits in producer rents from economies of scale (and

scope) arising from anti-competitive practices (Palim 1998; Kronthaler and Stephan 2007; Parakkal 2011; Forslid, Häckner, and Muren 2011). In smaller countries, with fewer consumers, the gains from competition policy are smaller than in larger countries.

However, this does not necessarily mean that for smaller countries the optimal degree of competition law enforcement is generally lower than in larger countries. Gal (2001; 2003), for example, in her work, emphasises the special economic conditions and needs for competition policy in smaller economies, where few companies can faster, and perhaps should be allowed to, acquire positions of dominance and monopoly. According to Gal, these specific circumstances require more lenient and case-by-case evaluations regarding horizontal mergers and efficiency-generating agreements but stricter scrutiny in other areas such as post-merger and monopolistic behavioural conduct. Nevertheless, empirically, it can be expected that the larger the country the more anti-competitive practices and monopolistic positions distort the efficient working of markets and reduce consumer welfare and are, therefore, conceived of as a problem by governments. In smaller countries also the political influence of some few important firms and the perceived need to enable those firms to successfully compete in international markets may be higher than in larger countries. Therefore, larger countries can be expected to be associated with stricter and more far-reaching competition laws.

Another control variable is the level of democracy. Palim (1998) in a first study did not find any significant effect of democracy on the adoption of competition laws but later studies did (Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016). Specifically, according to Parakkal and Bartz-Marvez (2013), it can be hypothesised that democracy expands the electorate and increases the proportion of the population required for (re-)election (winning coalition). Similar as for the difference between small and large countries democracy strengthens the role and political influence of consumers. Therefore, democratic countries can be expected to be more supportive of pro-consumer policies such as competition policy (a rather broad and diffuse interest) and systematically pursue stricter competition laws than non- or less-democratic

countries. Following common practice in the literature it is used the Polity 5 (Marshall and Gurr 2020) continuous democracy measure that ranges from -10 (non-democratic) to +10 (democratic).[55]

It is also controlled for membership in international organisations. Specifically, the regressions include tests for dummy variables for membership in the EU, the OECD, and the GATT/WTO, the three main international organisations that are relevant in the field of competition policy. Instead of simply coding membership in the WTO, which was established in 1995, membership is extended to include also its predecessor, the General Agreement on Tariffs and Trade (GATT). The variables are always coded 1 for years of membership and 0 for years of non-membership. Due to the situation that several countries have joint membership in all three organisations the main regressions only include one of them but separated tests are shown in the Appendix.

Membership in international organisations or regional trade agreements has been found to be significantly associated with the adoption of competition laws in several studies (Palim 1998; Kronthaler and Stephan 2007; Parakkal 2011). Membership in international organisations may not only be formally tied to the adoption of competition laws but also provide fora for the deliberation and diffusion of ideas about the benefits of such a policy. Furthermore, within the politics of the GATT/WTO, developed countries pressure developing countries to adopt and modernise domestic competition laws in the expectation that these facilitate market access to largely state-controlled and monopolistic organised economies. Therefore, countries preparing to join international organisations can be expected to adopt a competition policy and subsequently increase the strictness and scope of that policy.

Furthermore, the regressions include control variables for the trade balance as percentage of GDP and trade as a percentage of GDP. For both, the sources are the World Bank's WDIs (specifically, the variables 'External balance on goods and services (% of GDP)' and 'Trade (% of GDP)'). Export-orientation or a positive trade

---

[55] More specific, it is used the variable 'polity 2' that has been devised by the Polity team to facilitate time series statistical analysis. For France, the years 1940-1943 are erroneously coded with -66 by Polity and, therefore, these four years are set to missing value.

balance can be expected to be associated with less strict competition policy and lower enforcement activity. For export-oriented countries lax competition policy can be perceived of as a means to provide domestic firms with a comparative advantage in international trade. Furthermore, some economic models and empirical studies provide evidence that, under certain conditions such as the existence of post-merger synergies, export-oriented countries can achieve welfare gains from less strict competition policy (Zhang and Chen 2002; Clougherty and Zhang 2005; Clougherty 2005). The reason is that in export-oriented sectors the welfare losses due to restrictions to competition resulting from more lenient competition policy mainly accrue to foreign consumers while the gains in producer rents benefit the domestic economy (similar to the 'national champion' argument). In addition, a strong export sector may exert political influence on the government to implement and enforce less strict competition policy principles against the export industry and to re-enforce export-orientation.

Import-oriented countries (negative trade balance), in contrast, can be associated with stricter competition policies. For import-oriented countries the opposite holds. For import-oriented countries the losses in consumer rents due to increased market concentration or collusion mainly fall on domestic consumers while the gains in producer rent only benefit foreign companies. For competition authorities mainly concerned with national welfare (as opposed to global welfare) this should then lead to stricter enforcement of competition policy in import-oriented countries. Furthermore, for import-oriented countries, imports may work, or at least, being perceived of as working, as a substitute for competition policy (Levinsohn 1993; Palim 1998; Kronthaler and Stephan 2007). This may be especially the case in small open economies. For import-oriented countries and those highly exposed to international trade, foreign competitors can discipline domestic companies and, thereby, reduce the need for competition policy. In other words, higher levels of exposure to international competition may compensate for lower levels of existing domestic competition.

Although the validity of the 'trade as substitute for competition policy' argument is certainly questioned by some (Palim 1998, 137; Gal 2001; 2003) it still may inform governmental policy-making and regulatory practice and, thereby, lead to less strict

competition policy and enforcement activities in import- and trade-oriented countries. However, at the same time as foreign competition may reduce the need to control domestic processes of market concentration and anti-competitive practices, involvement in international trade also exposes countries to foreign norms and pressures. Countries more engaged in international trade, for example, may be pressured by their trading partners to adopt and enforce stricter competition policies on the domestic level or simply become convinced of the benefits of such a policy. This may be especially the case for trading partners having strict competition policies themselves. Therefore, in principle, also the opposite direction may be possible, that is, the more open a country is in terms of international trade the stricter the competition policy.

4.5 Method and Descriptive Statistics

Broadly, the thesis combines the cross-country statistical study of the adoption and strictness of formal competition laws with the within-country statistical study of the enforcement of formal laws by the competition authorities of Germany and the UK. In other words, the case studies of Germany and the UK are 'nested' within a broader study of cross-country differences in competition laws (Lieberman 2005; Gerring 2007; Seawright and Gerring 2008). This enables to complement the study of formal laws with an investigation of enforcement activities. Furthermore, the two case studies allow for a more fine-grained description of the historical development and reform process of competition policies and to provide a qualitative account of the enforcement approaches prevalent in the two countries. The rationale for the selection of Germany and the UK is described in more detail in section 6.2.

For explaining variation in the strictness of formal competition laws (Chapter 5) and the enforcement activities of the German and British competition authorities (Chapter 6) the thesis employs different cross-sectional time series regression methods (Beck 2008; Wooldridge 2010; Stock and Watson 2020, 361–91; Troeger 2020). Specifically, the thesis uses a pooled OLS panel data model for explaining variation in the strictness and scope of competition laws and a simple linear OLS model for explaining variation in enforcement activities. The regression analyses are performed

with the R statistical software (Kleiber and Zeileis 2008; J. Fox and Weisberg 2019). The formal specification of the pooled OLS panel data model, which includes country- and year fixed-effects and a time trend control variable, is as follows:

$$y_{it} = \beta_0 + \beta_1 x1_{it} + \beta_2 x2_{it} + \cdots + \beta_k xk_{it} + \beta_k u_i + \beta_k v_t + \beta_k t_{it} + \varepsilon_{it}$$

where y_{it} is the CLI in country i in year *t*; β_0 is the intercept; $x1_{it}$ and $x2_{it}$ are explanatory variables; u_i and v_t are the country- and year fixed-effects; t_{it} is the time trend; and ε_{it} is the error term. The unit of observation is the country-year. The country- and year fixed-effects are included by the introduction of dummy variables for each country and each year in each of the model specifications (of which one is always dropped automatically). The time trend is simply measured by a variable capturing the year of each observation. With the exception of the variables for legal origin and LMEs, which are constant over time, the independent variables are always lagged for one year to account for possible endogeneity and reversed causality. For GDP per capita and population, it is taken the log because of likely decreasing marginal effects, that is, an initial increase in GDP per capita and population is assumed to exert a larger effect than later increases.

In Chapter 6, the thesis uses five different dependent variables that capture the enforcement of competition policies in Germany and the UK. For Germany, the dependent variables include the measures of 1) cartel- and 2) abuse of dominance enforcement discussed above and 3) the annual number of prohibited mergers. For the UK, the dependent variables are 4) the annual number of mergers prohibited by the MMC/CC and 5) the annual number of mergers examined by the OFT. The unit of observation is always the within-country year, first, in Germany and, second, in the UK. The general linear OLS model for explaining variation in enforcement activities can be denoted as follows:

$$y_t = \beta_0 + \beta_1 x_1 + \beta_2 x_2 \ldots + \beta_k x_k + \varepsilon_t$$

where y_t is the enforcement measure in year t; β_0 is the intercept; x_1 and x_2 are explanatory variables; and ε_t is the error term. Similarly, the explanatory variables are always lagged for one year to account for possible endogeneity and reversed causality. The independent variables used to explain variation in enforcement activity are: privatisation, trade as percentage of GDP, the days required to start a business, government ideology, the GDP growth rate, the unemployment level as percentage of the labour force, and the external trade balance as percentage of GDP. In the analysis of merger control, an additional independent variable is the number of domestic mergers in the economy. For Germany, the number of domestic mergers is retrieved from the FCO's annual reports whereas for the UK the source of the data is the Office for National Statistics.[56] The descriptive statistics for explaining variation in formal competition laws (Chapter 5) are summarised in Table 4.3 below. Tables 4.4 and 4.5 provide summaries of the descriptive statistics for explaining variation in enforcement activities in Germany and the UK (Chapter 6).[57]

Table 4.3: Descriptive statistics for explaining variation in formal competition laws

Statistic	N	Mean	St. Dev.	Min	Max
Competition Law Index (CLI)	12,639	0.16	0.26	0.00	1.00
Privatisation (v2clstown)	11,726	0.58	0.18	0.00	1.00
Government ideology	1,714	5.48	1.37	1.05	8.66
Government ideology (weighted by seat share)	1,714	5.48	1.42	1.05	8.66
English legal origin	12,377	0.27	0.44	0	1
LMEs	2,564	0.25	0.44	0	1
GDP per capita	10,284	8,078.63	10,008.04	373.00	134,802.80
Population (in thousands)	10,553	31,205.30	103,655.60	61.00	1,331,357.00
Democracy (Polity 5)	11,018	0.46	7.17	-10	10
GATT/WTO	12,644	0.43	0.50	0	1
OECD	12,644	0.10	0.30	0	1
EU	12,644	0.05	0.22	0	1

[56] More specific, the variable 'M&A: Domestic: Number of companies acquired' which is part of the data set 'Mergers and acquisitions involving UK companies' which is available at: https://www.ons.gov.uk/businessindustryandtrade/changestobusiness/mergersandacquisitions/datasets/mergersandacquisitionsuk.
[57] The descriptive statistics- and regression tables used in this thesis have been created by the use of Marek Hlavac's (2022) stargazer package in the R statistical software.

Table 4.4: Descriptive statistics for explaining variation in enforcement activity in Germany

Statistic	N	Mean	St. Dev.	Min	Max
Cartel enforcement	38	24.84	20.63	3.00	89.00
Abuse of dominance enforcement	38	15.42	8.89	0.00	40.00
Number of prohibited mergers	44	4.14	3.15	0.00	12.00
Number of mergers notified to the FCO	44	1,107.82	480.64	34.00	2,242.00
Privatisation (v2clstown)	53	1.78	0.41	1.49	2.52
Trade (% of GDP)	41	49.49	14.33	30.73	81.52
Days to start business	16	18.38	11.27	8.00	45.00
Government ideology	53	5.29	1.02	3.29	6.83
GDP growth rate	47	2.00	1.96	-5.62	5.26
Unemployment (% of labour force)	28	7.42	2.20	3.42	11.17
External balance (% of GDP)	49	1.36	3.65	-4.65	8.01

Table 4.5: Descriptive statistics for explaining variation in enforcement activity in the UK

Statistic	N	Mean	St. Dev.	Min	Max
Number of mergers prohibited by the MMC/CC	24	2.88	2.40	0.00	10.00
Number of mergers examined by the OFT	28	295.46	153.09	65.00	533.00
Number of domestic mergers in the UK	50	617.36	310.63	189	1,528
Privatisation (v2clstown)	42	1.28	0.82	-0.06	1.88
Days to start business	16	9.38	3.29	4.50	13.00
Trade (% of GDP)	41	51.02	4.18	41.36	58.61
Government ideology	42	6.00	1.53	4.36	7.43
GDP growth rate	50	2.32	2.12	-4.25	6.51
Unemployment (% of labour force)	28	6.55	1.84	3.95	10.35
External balance (% of GDP)	50	-0.93	1.57	-4.74	2.77

4.6 Conclusion

This chapter discussed the data and methodology applied in the thesis. Specifically, the chapter laid down the conceptualisation and measurement of the dependent variables, the strictness and scope of formal competition laws as measured by the CLI

and the enforcement activities of the British and German competition authorities. The discussion is embedded in the broader context of existing measures of formal competition laws and enforcement activities. Furthermore, it is provided an overview of the operationalisation of the independent and control variables as well as the descriptive statistics of the variables employed and a discussion of the cross-sectional time series regression models applied in the next chapters.

The unique approach of the thesis is to combine data on formal competition laws with data on the enforcement activities of competition authorities to investigate the economic, political, and institutional factors that drive the development and enforcement of competition policies. Methodologically, this approach enables to complement the large-N statistical study of cross-country and temporal variation in formal competition laws with a small-N in-depth statistical investigation of within-country variation in enforcement activity over time. This combination not only allows to investigate the consistency of formal provisions with enforcement activities but also to analyse the explanatory power of key variables on both levels. Especially in a field such as competition policy, where the law stipulates rather broad principles and competition authorities possess high levels of discretion, it is important to complement the study of formal provisions with an investigation of enforcement activities. The study of enforcement activities, the thesis argues, is also a useful complement to indexes of the formal and *de facto* independence of competition authorities.

5 Explaining Cross-Country and Temporal Variation in Formal Competition Policy: Functional, Political, and Institutional Determinants

This chapter provides for the empirical analysis of time series cross-country differences in competition policy. Specifically, it is employed a pooled OLS panel data model for explaining variation in the strictness and scope of competition laws covering up to 186 countries from 1890 to 2010. This allows to capture the adoption of competition laws and, beyond that, further reforms that increase the strictness and scope of competition law provisions. Most crucially, the findings reveal a mediating effect of domestic-institutional factors, that is, legal origin and types of capitalism, in the functional process of re-regulating the economy by means of competition policy. The capitalist organisation of the economy and increased private market activity lead to a stronger regulatory response in the form of expanded competition policy regulation in LMEs than in CMEs to compensate for otherwise missing regulatory and coordinative capacity. Furthermore, factors such as democracy, economic development, country-size, and membership in international organisations are positively associated with stricter competition laws.

5.1 Introduction

This chapter investigates the economic, political, and institutional factors that explain variation in the formal scope and strictness of competition laws. Since the first competition laws were adopted in North America and Europe at the turn of the nineteenth century the policy proliferated widely across the world. By 2010, around 125 countries, including all 34 then-OECD member states, have a competition law in place (Bradford and Chilton 2018, 393). Competition policies are not only adopted by developed market economies but increasingly also by many developing economies. Especially during the 1990s, competition policies became what may be termed a ‘best practice’ model and a ‘norm of global governance’ which is endorsed by international

organisations such as the OECD, the World Bank, and the WTO (e.g., OECD 1992). Furthermore, the US and the EU increasingly compete to export their respective competition policy model around the world (Böheim and Friesenbichler 2016; Bradford, Chilton, Linos, et al. 2019; Maisenbacher and Wigger 2019).

However, the reasons for the adoption of competition laws and cross-country differences in their formal scope and strictness are generally not well studied. Previous research has focused on explaining the adoption of competition laws by using a binary dependent variable that only distinguishes between whether a country has a competition law in place or not (Palim 1998; Kronthaler and Stephan 2007; Forslid, Häckner, and Muren 2011; Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016). But these studies do not include the range of formal provisions, that is, they do not investigate the reasons for variation in the strictness across existing competition laws. By making use of the CLI (Bradford and Chilton 2018; Bradford, Chilton, Megaw, et al. 2019), which provides annual data on the strictness and scope of formal competition laws for 197 countries from 1890 to 2010, this thesis is the first study to systematically enquire into the factors that drive temporal and cross-country variation in the range of formal competition law provisions. While most countries and experts agree on the need to prohibit so-called hard-core cartels (agreements that fix prices, product quantities, the allocation of sales areas or customer groups) and the most serious instances of monopolistic practices as well as mergers between market leaders there remains a large variety in formal provisions across countries.

The statistical results reveal that competition policy is a functional regulatory response to privatisation and increased private market activity. The more countries privatise their economies the more competition law provisions are expanded to regulate markets. Furthermore, however, domestic-institutional factors, notably, the legal origin (La Porta, Lopez-de-Silanes, and Shleifer 2008; Reitz 2009) and type of capitalism (Hall and Soskice 2001) of a country, seem to mediate common functional pressures for the expansion of competition policies. Among economically advanced economies, countries based on a common law legal tradition and LMEs are systematically associated with stricter and more far-reaching competition law

provisions, specifically, in the prohibition of anti-competitive agreements. Therefore, importantly, different approaches towards competition policy seem to manifest not only between market-conform 'Western' countries and state-driven economies such as those of some Asian countries (e.g., Dowdle 2013a) and between the US and EU competition policy model but also within the group of economically developed OECD economies along the lines of legal origin and types of capitalism. In addition, the thesis confirms the positive influence of factors such as democracy, economic development, country-size, and membership in international organisations on the expansion of competition policy regulation.

The chapter is structured as follows. The next section introduces to general time series trends in the dependent variable, the CLI, and, correspondingly, in the adoption and strictness of competition laws over time. Section 5.3 presents the main empirical results using pooled OLS panel data models. Afterwards, sections 5.4 and 5.5 provide for a more detailed discussion of the empirical results and the causal mechanisms linking the independent with the dependent variables. Whereas for most Western countries the legislative process of the adoption and reform of competition laws was mainly rooted within domestic politics for many developing countries external factors and politics within the international trading system became more important drivers. Finally, section 5.6 summarises the chapter with some concluding remarks.

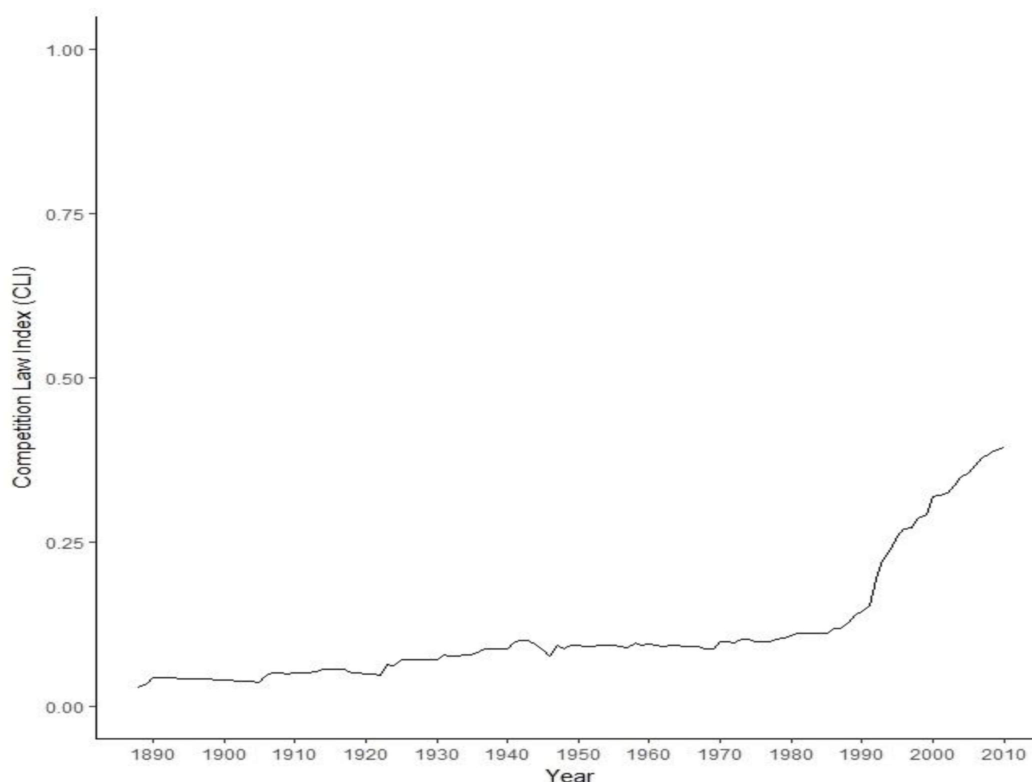
5.2 General Trends in the Development of Competition Laws

The historical development of competition policy has been discussed more extensively in Chapter 2. Historically, especially during the turn of the nineteenth century the first countries in North America and Europe started to develop more formal rules against excessive pricing practices and activities that restricted market access that were increasingly perceived as being contrary to the public interest. Over time, the policy became more formalised and professionalised by the specification of situations and conduct that should trigger intervention by competition authorities. The competition authorities were also increasingly equipped with better enforcement powers and insulated from direct political control. By now, competition policy is a norm of global governance which is endorsed by international organisations such as the OECD and

the WTO in line with liberalisation and privatisation efforts and which is adopted by a steadily increasing number of countries.

Figure 5.1 below plots the average CLI score, the dependent variable, across countries from 1890 to 2010. There is a steady increase in the CLI over time because more countries adopt a competition law and for those countries that have a competition law in place the law successively becomes stricter and broader in scope. Overall, the average CLI score increases from 0.03 in 1888 to 0.39 in 2010. Importantly, the CLI score increases despite an increase in the number of countries included in the sample because more countries gain their political independence, which would lower the average score all-else equal. Especially from the beginning of the 1990s onwards, the average CLI score increases considerably.

Figure 5.1: The average CLI score across countries

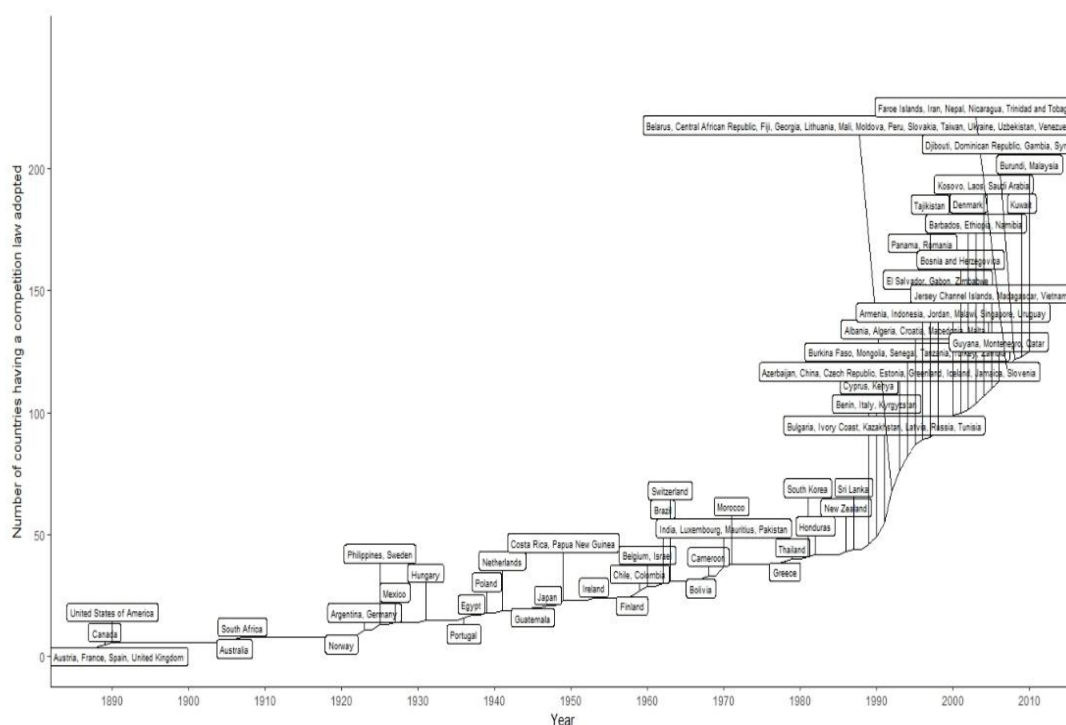


The wave in the increase of the CLI score from the 1990s onwards is mainly due to two developments. First, among economically developed countries that already had a competition law in place, the law became stricter by adding new prohibitions and

removing sectoral exemptions. In Europe, for example, many EU member states modernised their competition laws by aligning it with European provisions, thus, leading to higher CLI scores. Furthermore, many countries removed exemptions for sectors such as the energy-, telecommunications-, and postal sectors but also for industries such as banking and insurance in the course of the (partial) privatisation of these sectors and the general recognition that private competition may work effectively in these sectors despite their critical status for the economy (or special characteristics such as the existence of natural monopolies). Second, the 1990s experienced a wave in the adoption of competition laws because many former autocratic and state-run economies transitioned to a democratic market economy and adopted competition laws simultaneously with other liberal democratic institutions.

The adoption of competition laws as captured by the CLI is displayed in Figure 5.2 below. Accordingly, as of 2010, 125 countries have a competition law in place. For most countries, the timing of the adoption of competition laws is relatively uncontroversial. For example, Canada adopted its first competition law in 1889 with the Act for the Prevention and Suppression of Combinations Formed in Restraint of Trade and the US just followed suit thereafter with the Sherman Antitrust Act of 1890. Similarly, the coding of countries such as Japan in 1947 (Act on Prohibition of Private Monopolization and Maintenance of Fair Trade), India in 1970 (Monopolies and Restrictive Trade Practices Act), New Zealand in 1986 (Commerce Act), and Italy in 1990 (Competition and Fair Trading Act) is relatively uncontroversial.

Figure 5.2: The adoption of competition laws as captured by the CLI



However, for other countries it is more difficult to determine the exact timing of adoption. Generally, the CLI captures the first formal competition laws, or court decisions in some common law countries, that may, however, only stipulate an abuse control or the possibility to prohibit the most serious cartels (often by ministerial order) without introducing general prohibition clauses. Therefore, countries such as Austria, France, Spain, the UK, Australia, Germany, and Norway are not only coded with the adoption of their modern post-war competition policy legislations but already much earlier. In the case of France, the CLI codes the prohibition of price-fixing cartels as stipulated by Article 419 of the Penal Code of 1810 although most observers agree that this prohibition has not been effectively enforced in practice (e.g., Freedeman 1988). Germany is coded as having adopted a competition law in 1923 with the Regulation Against the Abuse of Economic Power Positions, which is discussed in more detail in section 2.4.1., instead of coding the adoption of the GWB in 1958.

The same applies to other countries such as Ireland and Belgium (including Canada) where the first competition laws are usually described as having been ineffective. This contradicts common coding strategies of other authors that usually focus on the

adoption of modern-day competition laws (Palim 1998; Kronthaler and Stephan 2007; Forslid, Häckner, and Muren 2011; Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016). Nevertheless, these early legislations constitute an important step towards the control and prohibition of cartel- and other abusive practices and their impact on the overall CLI score is also very limited. For Austria and Germany, for example, the CLI score is at around 0.2 to 0.4 during most of the first half of the twentieth century and only reaches values at around 0.7 towards the end of the second half. For most countries, the CLI reaches values around 0.6 to 0.7 with the adoption of what may be termed modern competition laws, that is, the introduction of general prohibition clauses that are enforced by an independent competition authority with effective enforcement powers.

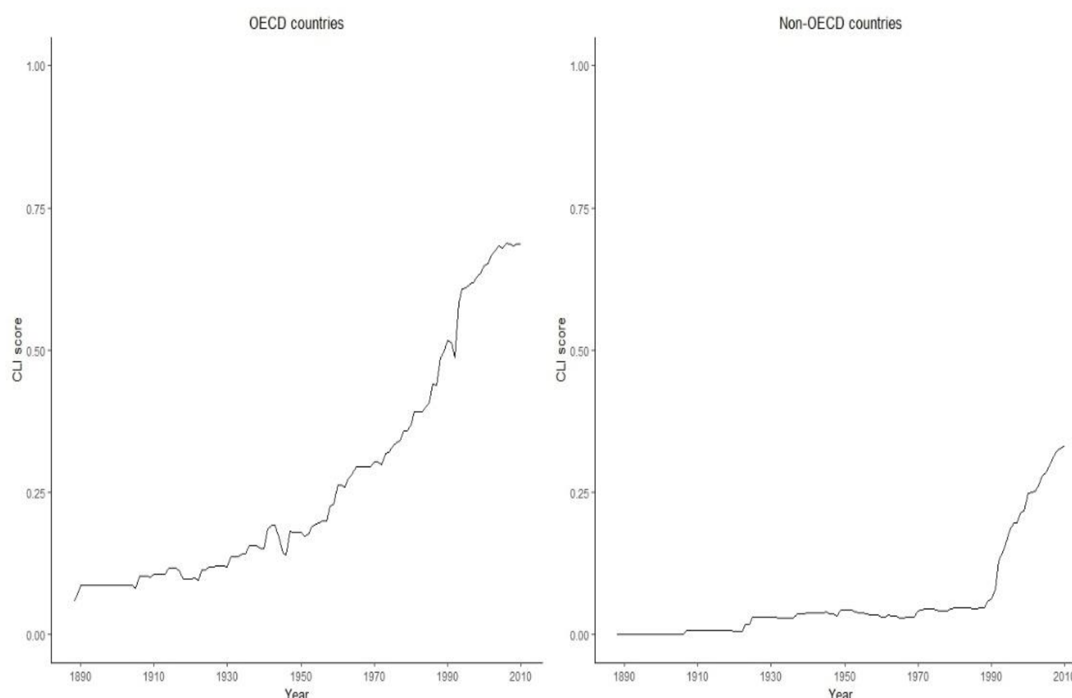
When looking at the adoption of competition laws it is also noticeable that some unexpected countries are among the group of early- and late adopters. For example, besides the group of economically developed Western democracies that are relatively well discussed in the literature (e.g., the US, Canada, and European countries) also some countries from the Global South that are not necessarily associated as forerunners in market-conform regulation and governance such as South Africa (1907), Argentina (1923), the Philippines (1925), and Mexico (1927) appear within the group of early adopters. In Europe, Italy and Denmark have adopted competition laws surprisingly late only in 1990 and 2002 respectively. Similarly, New Zealand adopted its first competition law not before 1986.

Although the average CLI score of 0.39 in 2010 appears low there is considerable disparity between countries. As is visible in Figure 5.3 below, the average score is much higher for OECD member countries as compared to non-member countries. In 2010, the average CLI score is 0.69 for OECD countries and 0.33 for non-OECD countries.[58] These countries are not members of the OECD for all of the time period (the OECD was founded in 1960) but they capture the more advanced market economies and also include many of those countries that adopted competition laws early. Figure 5.3 also shows that the wave in the increase of the strictness of

[58] The calculation is based on the 34 countries that are members of the OECD as of 2010.

competition laws from the 1990s onwards is not as pronounced for OECD- than for non-OECD countries. For OECD countries, the CLI rather steadily increases over the whole period.

Figure 5.3: The average CLI score across OECD member and non-member countries



5.3 Empirical Results

This section reports the results for the time series panel data analysis of formal competition laws. The focus is on explaining variation in the strictness and scope of formal competition law provisions across countries and over time and to test the hypotheses as formulated in Chapter 3. For analysing variation in formal competition laws, the following pooled OLS panel data model with country- and year fixed-effects and a time trend control variable is used:

$$y_{it} = \beta_0 + \beta_1 x1_{it} + \beta_2 x2_{it} + \cdots + \beta_k xk_{it} + \beta_k u_i + \beta_k v_t + \beta_k t_{it} + \varepsilon_{it}$$

where y_{it} is the CLI in country i in year t; β_0 is the intercept; $x1_{it}$ and $x2_{it}$ are explanatory variables; u_i and v_t are the country- and year fixed-effects; t_{it} is the time

trend; and ε_{it} is the error term.[59] The country- and year fixed-effects are included by the introduction of dummy variables for each country and each year in each of the model specifications (of which one is always dropped automatically). The time trend is simply measured by a variable capturing the year of each observation. With the exception of the variables for legal origin and LMEs, which are constant over time, the independent variables are always lagged for one year to account for possible endogeneity and reversed causality. For GDP per capita and population, it is taken the log because of likely decreasing marginal effects, that is, an initial increase in GDP per capita and population is assumed to exert a larger effect than later increases. The main regression results are summarised in Table 5.1 below.

Table 5.1: Pooled OLS regression with country- and year fixed-effects: Explaining variation in competition laws

	Dependent variable:					
	Competition Law Index (CLI) $_t$					
Theory	Public Interest	Public Choice	Domestic-institutional factors		Main models	
	(1)	(2)	(3)	(4)	(5)	(6)
Privatisation $_{t-1}$	0.282***				0.321***	0.318***
	(0.013)				(0.017)	(0.055)
Government ideology $_{t-1}$		0.001				
		(0.003)				
English legal origin			0.113***		0.096**	
			(0.024)		(0.040)	
LMEs				0.460***		0.666***
				(0.020)		(0.081)
Privatisation x English legal origin $_{t-1}$					0.124***	
					(0.041)	
Privatisation x LMEs $_{t-1}$						-0.509***
						(0.098)
Democracy (Polity5) $_{t-1}$					0.001**	0.0002
					(0.0004)	(0.001)
GATT/WTO $_{t-1}$					0.019***	-0.058***
					(0.006)	(0.020)
GDP per capita (log) $_{t-1}$					0.070***	0.079***

[59] The regression analyses are performed with the 'plm package' in the R statistical software (see, for example, Kleiber and Zeileis 2008, 84–89).

					(0.005)	(0.017)
Population (log) $_{t-1}$					-0.068***	-0.021
					(0.007)	(0.019)
Time trend	0.004***	0.008***	0.004***	0.005***	0.004***	0.004***
	(0.0002)	(0.001)	(0.0002)	(0.0004)	(0.0003)	(0.001)
Constant	-8.473***	-15.671***	-8.249***	-9.491***	-8.166***	-8.324***
	(0.444)	(1.339)	(0.438)	(0.782)	(0.641)	(0.989)
Countries	173	37	186	22	153	22
Years	4-122	10-65	14-123	89-123	17-122	87-122
Observations	11,540	1,677	12,372	2,559	9,447	2,456
R^2	0.710	0.801	0.688	0.753	0.746	0.766
Adjusted R^2	0.702	0.788	0.680	0.739	0.739	0.751
Note:						*p<0.1; **p<0.05; ***p<0.01
						Standard errors in parentheses.

The time trend is always positively significant confirming the steady increase in the CLI score over time. Furthermore, the results reveal strong country- and year fixed-effects. Adding country fixed-effects alone, that is, a dummy variable for each country without any further explanatory variable, accounts for about 43 percent of variation in the data. The additional adding of year fixed-effects increases the adjusted R square to 0.68. In other words, country- and year fixed-effects alone account for about 68 percent of variation in the data. There are strong country-specific patterns in the level of competition law strictness and some years experience a push in the CLI score across countries (e.g., as discussed for the 1990s). The underlying reasons are manifold but may include unique country-characteristics such as a higher ideational endorsement of competition policy principles, country-specific business-government relations, and the country's position in the world economy.

As is shown in Model 1, Hypothesis 1 is confirmed by the finding of a statistically significant positive association between the level of privatisation of the economy and the strictness and scope of competition laws. The more the economy is privatised, within or across countries, the higher the CLI score in the following year. More specific, a one-unit increase in privatisation, that is, moving from full state ownership to full private ownership of the economy (as the variable was normalised to range in between 0 and 1) is associated with a 0.282 increase in the CLI score. This confirms

the importance of competition policy as functional regulatory response to changing market structures. The effect may sometimes take several years to lead to an increase in the strictness of competition laws or the competition laws may be adjusted already preventively before the economy is further privatised but the results are largely the same when using different time lags for the privatisation variable.[60] The positive finding for the privatisation of the economy is very consistent across the different model specifications and also confirmed in the main models 5 and 6.

Model 2 does not reveal any statistically significant relationship between the market ideology of the government and the strictness of competition laws. Therefore, Hypotheses 4.1, 4.2, and 4.3 on the political supply side of regulation cannot be confirmed.[61] More technically, the null hypothesis that there is no systematic relationship between government ideology and the strictness of competition laws cannot be rejected. In Model 2, centre-right governments seem to be associated with slightly higher competition law strictness but not on a statistically significant level. However, Table A.1 in the Appendix provides for a more detailed test of the politics hypotheses using different operationalisations of the party composition of governments.

As can be seen in models 3 and 4 of Table A.1, centre-right governments are associated with stricter and centre governments with weaker competition law provisions when using the CPDS data on cabinet composition. Therefore, the CPDS data provide supporting evidence for Hypothesis 4.2 on competition policy as market-conform regulation *for* competition. Contrary to studies that find left governments to show a higher likelihood for the adoption of competition laws (Parakkal 2011; Weymouth 2016) these findings suggest that centre-right governments are associated with slightly stricter competition law provisions. Table A.2 in the Appendix also tests for Hypothesis 4.3 by looking separately at the control of monopoly and the prohibition against anti-competitive agreements but does not find any statistically significant

[60] For most variables the effects of different time lags ranging from one to ten years have been investigated without, however, producing any substantively different results.
[61] Hypotheses 2 and 3 are not tested here but in Chapter 6 on explaining variation in enforcement activity.

difference for government ideology between these two sub-areas of competition policy.

Models 3 and 4 in Table 5.1 test for the role of domestic-institutional factors in the development of competition policies. For both, legal origin and VoC, there is supporting evidence for hypotheses 5.1 and 6.1 on higher levels of competition law strictness in English common law legal systems and LMEs and hypotheses 5.2 and 6.2 on a mediating role of domestic-institutional factors. Model 3 tests for legal origin and finds English common law countries positively associated with stricter competition law provisions. Model 4 does the same for VoC and, correspondingly, finds LMEs to be associated with higher competition law strictness. English common law countries and LMEs are statistically significant associated with stricter and more far-reaching competition law provisions. It may be worth mentioning that all the LMEs in Model 4 are also English common law countries for which reason, due to perfect collinearity, legal origin and VoC cannot be tested together in the same regression.

Table A.3 in the Appendix provides more detailed tests for legal origin. Socialist legal origin countries are associated with less strict competition laws but not on a statistically significant level. French legal origin countries are associated with significantly lower competition law strictness whereas German and Scandinavian countries are associated with stricter competition laws. Therefore, German and Scandinavian legal origin countries stand-out within the group of civil law countries with relatively far-reaching competition laws. This is generally as could be expected from the more state interventionist French legal tradition and the prominence of ordo-liberal economic thought advocating strong competition law principles that diffused especially among German-speaking countries. For Scandinavian countries, however, the positive sign is rather surprising given the countries' legacy of state-led modes of market competition. For both, German- and Scandinavian legal origin, the number of countries in the sample is also relatively low and most countries (except Iceland, Norway, Japan, South Korea, Lichtenstein, Switzerland, and Taiwan) are EU member states which makes them part of EU-level modernisation processes in competition policy that may have led to stricter competition laws.

For VoC, further robustness tests are provided in Table A.4 in the Appendix. Although not always statistically significant the results are largely consistent with the main findings of Table 5.1. Using dummy variables, CMEs and MMEs are associated with significantly lower competition law provisions than LMEs. Similarly, when measuring the type of capitalism by the use of the coordination indexes developed by Hall and Gingerich (2004; 2009) higher coordination of economic activity is associated with less strict competition laws but not on a level of statistical significance. The variables used to measure the type of capitalism are certainly imperfect and, for example, do not allow to capture changing levels of economic coordination in individual countries over time.[62] However, they seem to be the best proxies available and, generally, capture the different types of capitalism as elaborated in the VoC literature.[63] Furthermore, even if it is acknowledged that most countries were more or less coordinated at the turn of the nineteenth century than today, which certainly they were, it is remarkable that the findings reveal stable cross-country patterns clustering around LMEs and CMEs over the whole time period. In other words, there seem to be stable patterns in the level of competition law strictness within the group of LMEs and within the group of CMEs although these countries experienced changes in the degree to which they approach the ideal-typical properties of different types of capitalism as well as in their commitment to competition policy over time.

Models 5 and 6 of Table 5.1 display the main models. Most crucially, they also include interaction terms between privatisation and legal origin respectively types of capitalism as formulated in hypotheses 5.2 and 6.2 and the set of relevant control variables. For both, legal origin and VoC, the interaction terms are significant as expected. In English common law countries and LMEs, the privatisation of the economy leads to a stronger regulatory response in form of expanded competition policy legislation to align with the existing legal and regulatory framework and to

---

[62] Also for models 4-6 in Table A.4 using Hall and Gingerich's continuous coordination indexes it is used the same coordination value for each country over the whole time period.
[63] The best time-dynamic measure of types of capitalism would be possibly to calculate Hall and Gingerich's coordination indexes for each country and year, thereby, allowing to capture changing levels of coordination over time. However, due to missing data availability this is currently not possible.

compensate for otherwise missing coordinative capacity. Therefore, the legal tradition and type of capitalism of a country seem to mediate functional pressures for the regulation of markets by means of competition policy to control for market power. Whereas most of the competition policy literature contrasts the US- with the EU's competition policy model these findings indicate that differences may rather manifest themselves around domestic-institutional factors such as legal origin and VoC than political-geographic structures such as the EU. At least, domestic-institutional factors may be an important additional layer which should be considered in discussions about the reasons for different competition policy approaches.

The control variables generally work as expected. For example, considering Model 5, the level of democracy, membership in the GATT/WTO, and GDP per capita are all positive significant as expected. The size of countries as captured by population is negative. However, it is the logarithm that turns this variable from positive to negative, thus, possibly indicating that the relationship is linear rather than characterised by marginal returns. The level of democracy seems to expand the winning coalition needed for re-election and, therefore, leads to more pro-consumer policies such as competition policy (Parakkal and Bartz-Marvez 2013). Similarly, an expansion in the size of countries in terms of population, and correspondingly an expansion in the number of domestic consumers, increases the political and economic salience of pro-consumer policies (Forslid, Häckner, and Muren 2011). Furthermore, the more economically developed a country in terms of GDP per capita the higher the functional need to control more complex markets by means of competition policy and the higher the resources available to implement such sophisticated regulatory frameworks.

The positive relationship between membership in international organisations and the strictness of competition laws not only applies to the GATT/WTO but also to the member countries of the OECD and the EU, the two other main organisations that are relevant in the field of competition policy (see Table A.5 in the Appendix). All three organisations, sometimes more formal sometimes rather informal, not only tie membership to the adoption of competition laws but also provide fora and networks for the discussion of competition policy related policy issues. Furthermore, within the

politics of the international trading system developed countries pressure for the adoption of competition laws in developing countries in the expectation that these facilitate market access to their economies and reduce some of the issues associated with so-called non-tariff barriers to trade. The temporal succession and mechanisms through which membership in these organisations leads to stricter competition laws are not necessarily uniform, however. Some countries have adopted competition laws long before joining one of these organisations. For other countries, however, the joining of, for example, the WTO is likely to have been a crucial factor in influencing the timing of the adoption and design of competition laws (see also the discussion in section 5.5).

As further robustness test it is provided an overview for the main regression models of Table 5.1 but using random effects models rather than pooled OLS regressions in Table A.6 in the Appendix.[64] As can be seen, the main results are largely consistent. The only substantive difference of using random effects instead of pooled OLS regression is that English legal origin first turns out to be negative significant (Model 3 of Table A.6) and only becomes positive significant if the sample is restricted to those 34 countries that are members of the OECD as of 2010 (Model 4 of Table A.6).[65] The reason is that many smaller developing countries (e.g., Antigua and Barbuda, Belize, Barbados, Papua New Guinea or Sri Lanka) having transplanted a common law legal system have adopted a competition law relatively late, if at all, and if so, only have adopted some core legal principles leading to low scores on the CLI. When testing VoC, the sample is automatically restricted to 22 countries that have been OECD members as of 2010. More specifically, therefore, the positive association between English legal origin (and LMEs) and stricter competition laws mainly applies to economically developed OECD countries. In the pooled OLS regressions this is corrected for by the inclusion of country fixed-effects.

[64] Technically, when running the two main models, models 5 and 6 in Table 5.1, as pooled OLS regressions the Breusch-Pagan Lagrange Multiplier test for random effects is significant, thus, indicating that a random effects model provides more efficient estimates. However, due to the inability to include country- and year fixed-effects in a random effects model it is preferred to present the main results using pooled OLS regressions.

[65] English legal origin is also positive significant if the sample is restricted to country-years equal or above 24,000 GDP per capita, that is, more economically developed countries, or country-years in which a competition law is in place.

The CLI also provides a more detailed breakdown for the three main sub-areas of competition policies (anti-competitive agreements, dominance/monopoly, and merger control). As discussed in section 3.3.2 and Hypothesis 6.3, especially from a VoC perspective, different expectations can be formulated for the different competition policy sub-areas. More broadly, many European countries are, on the one hand, historically associated with the tolerance and encouragement of cartels and other anti-competitive agreements while, on the other hand, have been influenced by ordo-liberal ideas advocating the strict control of market power. Specifically, CMEs can be expected to pursue a strict approach against private monopolists but show more leniency towards anti-competitive agreements to strengthen coordinative relationships. Table 5.2 below breaks down models 5 and 6 of Table 5.1 for the abuse of a dominant position (monopoly) and the prohibition against anti-competitive agreements.

Table 5.2: Pooled OLS regression with country- and year fixed-effects: Disentangling the control of the abuse of a dominant position (monopoly) and the prohibition against anti-competitive agreements

	Dependent variable:			
	Control of the abuse of a dominant position (monopoly) $_t$		Prohibition against anti-competitive agreements $_t$	
	(1)	(2)	(3)	(4)
Privatisation $_{t-1}$	0.302***	0.494***	0.233***	0.101*
	(0.022)	(0.074)	(0.020)	(0.058)
English legal origin	-0.044		0.013	
	(0.052)		(0.046)	
Privatisation x English legal origin $_{t-1}$	0.173***		0.221***	
	(0.053)		(0.047)	
LMEs		**-0.034**		**0.521*****
		(0.108)		(0.084)
Privatisation x LMEs $_{t-1}$		-0.259**		-0.448***
		(0.132)		(0.103)
Democracy (Polity5) $_{t-1}$	0.004***	0.004***	0.002***	0.0004
	(0.001)	(0.001)	(0.0005)	(0.001)
GATT/WTO $_{t-1}$	-0.012	-0.025	0.039***	-0.092***
	(0.008)	(0.027)	(0.007)	(0.021)
GDP per capita (log) $_{t-1}$	0.113***	0.327***	0.057***	0.125***

	(0.007)	(0.023)	(0.006)	(0.018)
Population (log) $_{t-1}$	-0.062***	-0.048*	0.019**	0.068***
	(0.009)	(0.026)	(0.008)	(0.020)
Time trend	0.004***	-0.001	0.003***	0.002***
	(0.0004)	(0.001)	(0.0004)	(0.001)
Constant	-7.302***	-0.683	-5.994***	-4.854***
	(0.822)	(1.323)	(0.733)	(1.036)
Countries	153	22	153	22
Years	17-122	87-122	17-122	87-122
Observations	9,447	2,456	9,447	2,456
R^2	0.685	0.687	0.693	0.732
Adjusted R^2	0.676	0.667	0.684	0.714
Note:				*p<0.1; **p<0.05; ***p<0.01 Standard errors in parentheses.

As can be seen in Table 5.2, the positive association between LMEs and stricter competition laws applies especially for the control of anti-competitive agreements (Model 4). When disentangling the control of dominance and the prohibition against anti-competitive agreements the dummy variable for LMEs is negative and insignificant for the provisions against monopolists (implying that CMEs pursue a slightly stricter approach) and highly positively significant for the prohibition against anti-competitive agreements. The findings, thus, confirm Hypothesis 6.3 and suggest that the weaker association of CMEs with competition law strictness is especially rooted in the control and prohibition of anti-competitive agreements where CMEs pursue a more lenient approach than LMEs. Tables A.7 and A.8 in the Appendix provide further robustness checks to confirm the consistency of the results across different operationalisations of the independent (economic coordination) and dependent variable (competition law strictness against anti-competitive agreements).

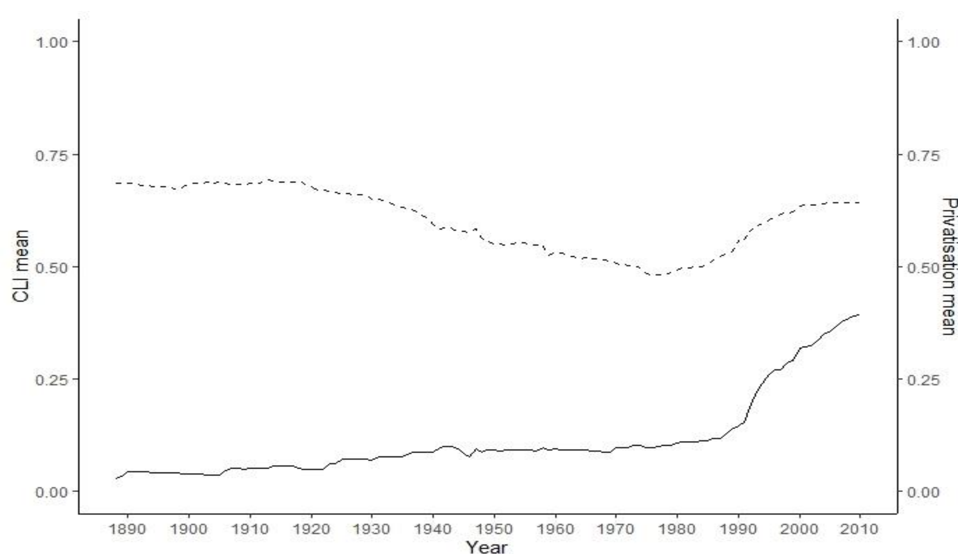
In Table A.7 the CLI's sub-index on competition law strictness against anti-competitive agreements for the year 2010 is regressed on different commonly used measures for the degree of economic coordination and dummy variables for LMEs, CMEs, and MMEs. In Table A.8 the same regressions are conducted with another dependent variable, an index on Restrictive Trade Practices (that is, competition law strictness against anti-competitive agreements), which is a sub-level index of the Scope Index, developed by Hylton and Deng (2007). The Scope Index by Hylton and Deng

is the only other available cross-country quantitative index of competition laws that breaks down the three main sub-areas of competition laws (in addition to the CLI). Across the different model specifications, more coordinated market economies are associated with a more lenient approach towards anti-competitive agreements.

5.4 Discussion of Results

The finding of a positive significant relationship between the privatisation of the economy and competition law strictness is consistently supported in the different model specifications. The more the economy is privatised, within and across countries, the higher the strictness and scope of competition laws. Figure 5.4 below plots the average CLI and privatisation (dashed line) values for all countries included in the sample over time.

Figure 5.4: Relationship between the strictness of competition laws and levels of privatisation (1890-2010)



The average CLI score is essentially the same as in Figure 5.1 and, again, steadily increases with an upward trend observable from the 1990s onwards. For privatisation, it may first appear surprising that the average score is relatively high towards the turn of the nineteenth century and, then, starts to decrease while resuming back to slightly higher levels during the 1980s. However, many economic historians agree that Western economies were relatively unregulated and experienced an endorsement of

free trade policies from about the 1840s to the 1890s (e.g., Bairoch 1989; W. Letwin 1989; Winham 2011). At a time when many modern states were still in the process of creation, state capacity had also first to be build-up before taking ownership over economic activity. After that, it started a period of recurring protectionism and increasing state control which lasted for the inter-war years.

Furthermore, at the beginning, the sample of countries excludes many countries that gained their political independence lately, but which would have displayed lower privatisation values. For example, many former British and French colonies are not included in the sample before gaining their political independence but would have been probably assigned low privatisation values during the first half of the twentieth century which would have lowered the average score. Apart from that, the privatisation values decrease from after the First World War and during the period of so-called 'embedded liberalism' (cf. Ruggie 1982) up until the end of the 1970s and increase thereafter with the resuming of more (neo-)liberal economic policies in many countries.

When looking at the average scores as displayed in Figure 5.4 the positive association between privatisation and competition law strictness is especially observable from the 1980s onwards. However, the pattern is stronger when looking at individual countries for which some examples will be provided in the next section. Furthermore, while some countries have a privatised economy but no competition law in place in the whole sample there is no country that has adopted a competition law without some level of a privatised economy. Therefore, somehow stronger than the regression coefficient of 0.282 reported in Table 5.1 suggests, privatisation appears to constitute a necessary but not sufficient condition for the adoption of a competition law. However, generally, the data reveal and support also the notion that the adoption and later expansion of competition laws to deal with problems of market power caused by the privatisation of the economy required a fundamental reconsideration on an ideational level.

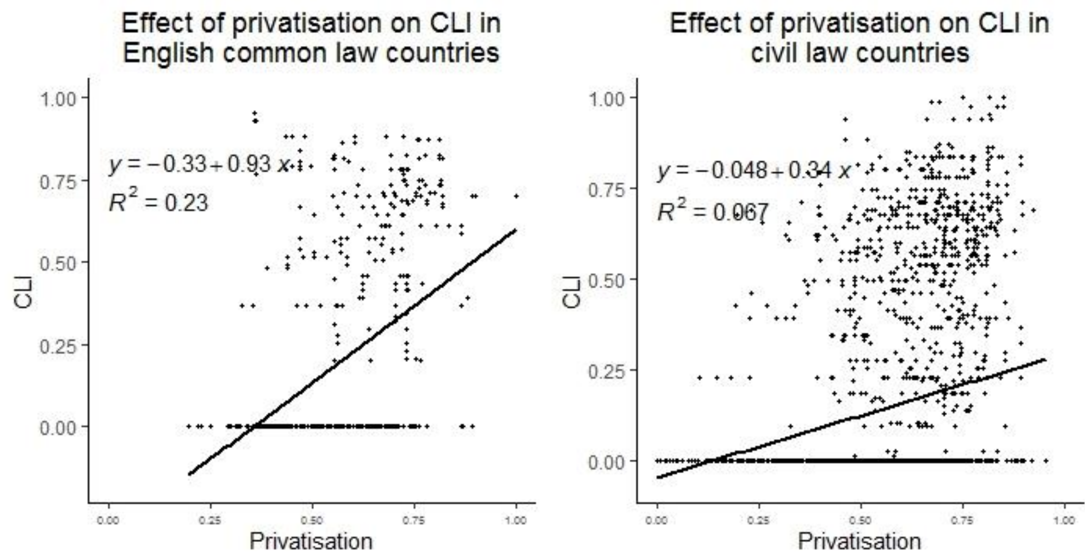
The privatisation of the economy was not naturally accompanied by the adoption of competition laws but, crucially triggered by the experiences of some of the negative consequences of increased private economic activity during the turn of the nineteenth

century, competition policy had to be invented and discovered to successfully deal with problems of market power. In both, the US and Europe, the first competition laws were adopted in response to a period of liberalisation, free trade, and an expansion of economic activity that led to a period of high economic growth but which was also followed, however, by economic turmoil and more volatile market conditions. In addition to the adoption of free trade policies by the lowering of tariffs, the development of the steam engine and the building of railroads dramatically reduced sea- and land transportation costs and, therefore, led to intensified competition.

In the US, the first antitrust laws were adopted in response to what has been termed the second Industrial Revolution and a dramatic expansion of markets towards the end of the nineteenth century (Freyer 1992; 2006; Scherer 1997, 6; Motta 2004, 2). The period was accompanied by an increase in market concentration through the forming of trusts and volatile and declining price levels. Similar, albeit qualitatively different, also in many European countries the adoption of the first competition laws during the first half of the twentieth century was a clear response to recurring economic crises and escalating prices (Gerber 1987, 63; Motta 2004, 10; Freyer 2006, 63; McGowan 2010, 58). In Europe, many cartels were formed in response to the economic depression of the 1870s to the 1890s which, together with the period of 'hyperinflation' in the 1920s, set in motions for the adoption of the first competition laws. More broadly, the findings support similar studies that report a positive association between economic freedom and the adoption of competition laws (Palim 1998; Kronthaler and Stephan 2007; Parakkal and Bartz-Marvez 2013).

The functional pressure for the adoption and expansion of competition laws caused by the privatisation of the economy appears to have been mediated, however, by domestic-institutional factors. The legal origin and type of capitalism of a country mediate the functional pressures leading to different competition policy models adopted, and a stronger regulatory response in terms of expanded competition policy regulation, in common law legal systems and LMEs. By using the core data for the whole sample of country-years, Figure 5.5 below plots the different effects of privatisation on the strictness of competition laws dependent on the legal system.

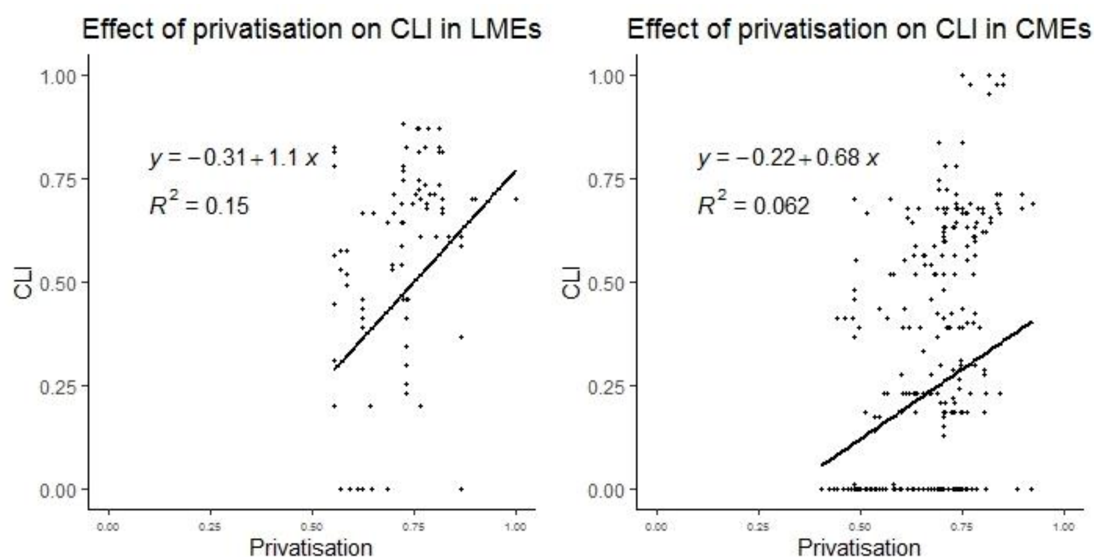
Figure 5.5: Effect of privatisation conditional upon legal origin



In common law and civil law countries there is a strong positive association between privatisation and the CLI, that is, competition law strictness. However, the effect is stronger in common law countries. Specifically, as indicated by the slope, in common law countries a one-unit increase in privatisation is associated with a 0.93 increase in the CLI score. Contrary, in civil law countries, while also positive, a one-unit increase in privatisation is only associated with an increase in the CLI score by 0.34 units.

The pattern is similar when looking at the effects of privatisation dependent on the type of capitalism. Again, using the core data, Figure 5.6 below plots the relationship between privatisation and the CLI for LMEs and CMEs. For both types of capitalism, the privatisation of the economy is positively associated with an increase in the strictness of competition laws. But here, again, the effect is stronger within the group of LMEs. In LMEs, a one-unit increase in privatisation is associated with a 1.1 unit increase in the CLI score whereas for CMEs the same increase in privatisation only leads to an increase in the CLI score by 0.68 units.

Figure 5.6: Effect of privatisation conditional upon type of capitalism



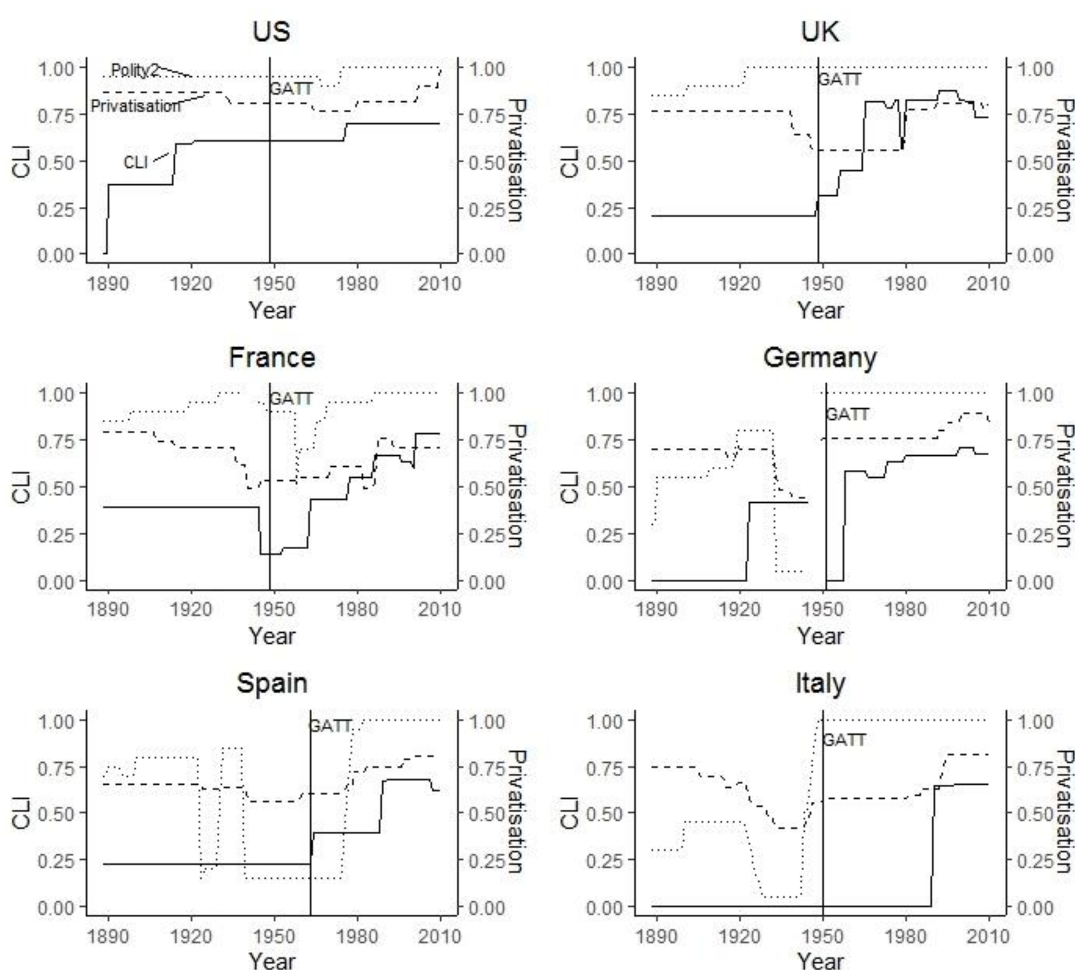
5.5 Causal Mechanisms

Furthermore, the process and timing through which the different factors influence the adoption and strictness of competition laws is very different across countries. Specifically, it is possible to identify different groups of countries that share similar contextual features and positions in the world economy within which they adopted and reformed their competition laws. Whereas for most 'Western' countries the legislative process for the development of competition laws was mainly rooted within domestic politics for many developing countries international factors became more important external drivers. Generally, after the Second World War, the US and the EU increasingly started to proliferate their respective competition policy models around the world and politics within the international trading system became more important factors.

In the following, the different processes are discussed by the use of some selected countries that may be said to represent different groups of countries. Unfortunately, due to space constraints, it is not possible to discuss all the countries that have adopted or not adopted a competition law as of 2010. By 2010, of the 197 countries included in the sample 125 countries have adopted a competition law and 72 countries did not

yet adopt a competition law. Therefore, the discussion focuses on countries that represent different groups of countries in terms of contextual features, geographical coverage, and their position in the world economy such as length of their political independence, economic development, and variation on the independent and dependent variables. Figure 5.7 below displays the development of the CLI, privatisation (dashed line), and the Polity2 democracy score (dotted line) for some selected key European countries and the US. The vertical line always indicates the date of membership in the GATT or, since 1995, the WTO.

Figure 5.7: The adoption of competition laws in Western countries



The US appears as forerunner in the commitment to competition policy principles but also the UK, France, and Spain, though not in genuine competition law legislations, show some early legal codifications and common law decisions on matters of

competition policy. Generally, the country-cases confirm the co-variance of the different factors and that, usually, an increase in privatisation and democracy precede an increase in the strictness of competition laws. This relationship may be best visible in France and Spain where a steady co-movement of the factors may be observed. In Germany, the adoption of the first competition law in 1923 took place in the context of a rise in democracy during the Weimar Republic which was also characterised by relatively high levels of a privatised economy and the accumulation of private market power in the form of cartels and monopolistic positions (Ortwein 1998; McGowan 2010; Harding and Joshua 2010).

The establishment of the post-war economic order by the signing of the GATT (in addition to the establishment of the World Bank and the International Monetary Fund) also appears as a strong factor. For the UK, France, and Spain there is a marked and steady rise in competition law strictness during the years after the joining of the GATT. In Germany, the change was more abrupt after the end of the Second World War with the establishment of democratic political institutions, the endorsement of a social market economy, and the adoption of a, for that time, very modern competition law. Italy stands out in so far that it is a relatively large European country that has adopted a competition law only lately, long after moving to a democracy, endorsing a private market economy, and becoming member of the GATT. This is a pattern which is more common for other smaller countries. Italy only adopted its first competition law in the course of the privatisation efforts during the 1980s. This is, again, a pattern which can be observed in all the six countries where the (partial-)privatisation of economic sectors such as public utilities during the 1980s and 1990s is accompanied by further increases in the strictness and scope of competition laws.

The post-war period also experienced the consolidation and proliferation of two different competition policy models. The US antitrust model, which, in itself, especially at its beginnings, draw lessons from English case-law decisions, was key in influencing the competition laws of other common law and LMEs such as Australia's which, in turn, crucially served as a model for the competition law of New Zealand (Bertram 2020). Among continental European countries, however, it was consolidated

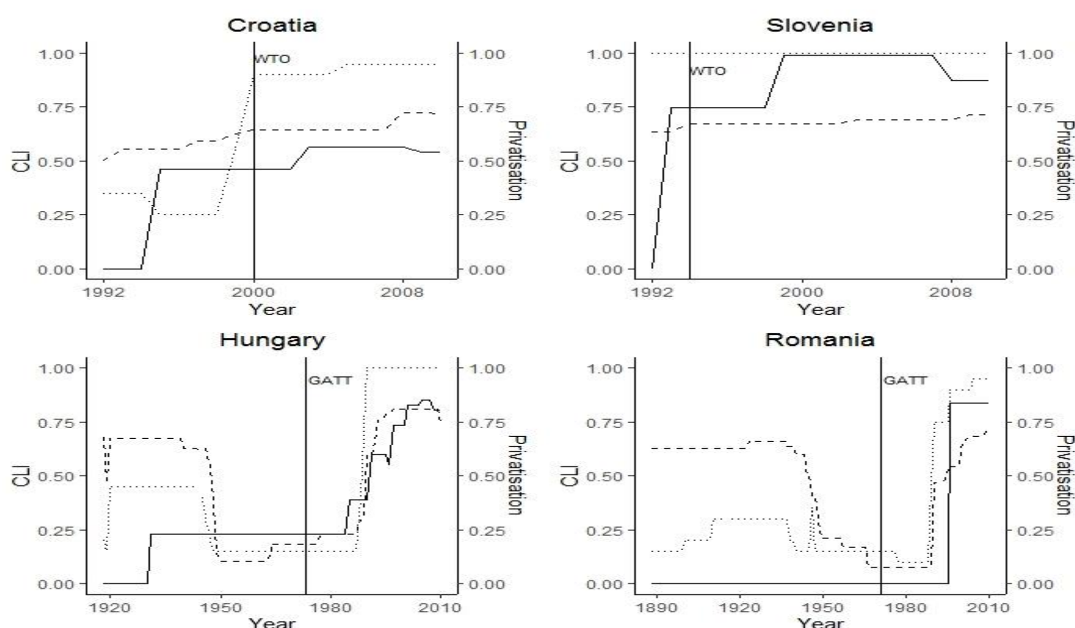
and proliferated an abuse of dominance control system. The abuse control approach was developed in countries such as Germany, Sweden, Norway, and Austria during the 1920s and, later, crucially, influenced the EU competition policy model and was adopted by other countries such as Belgium in 1960 (Marmol and Fontaine 1961; Gerber 1992; 1998; 2010; Rousseva 2005). A common language and a similar legal system are important mechanisms for the diffusion of the competition policy model. When faced with new economic problems it is efficient to borrow from countries with similar legal and economic systems. Furthermore, domestic interest group politics are a key factor in the development and consolidation of the two different competition policy models. In most CMEs, the political and organisational strength of business associations, including SMEs, and labour unions ensured the representation of their interests and the adoption of an abuse control towards monopolists and more lenient provisions against some types of cartels.

Since the consolidation of the two different models, the US and the EU increasingly try to export their respective models to other, mainly developing, countries (Bradford, Chilton, Linos, et al. 2019). The more countries adopt the same competition policy rules the lower the transaction costs for firms to engage in foreign markets. Therefore, in other countries, the process and context in which the adoption and reform of competition laws took place is very different. In many Central and Eastern European Countries (CEEC), for example, the end of the Cold War, the dismantling of the Soviet Union, and the disintegration of state entities such as Yugoslavia constituted the general context in which these countries transitioned to a democratic market economy and adopted competition laws from the beginning of the 1990s onwards (Varady 1999).

Figure 5.8 below shows the basic features of the process for some of the CEECs. Croatia and Slovenia are representative for countries that gained their political independence in the 1990s. In these countries the EU accession process and, therefore, more external coercive factors, also played an important role (Dutz and Vagliasindi 2000; Hölscher and Stephan 2004). Relatively soon after gaining their political independence, countries such as Croatia and Slovenia, but similarly also the Czech

Republic, Slovakia, and the Baltic states (Estonia, Latvia, and Lithuania), prepared for their integration into the world trading system and the EU accession process. The so-called *acquis communautaire* prescribed as pre-conditions for joining the EU, amongst others, the strengthening of democratic political institutions, the endorsement of a private market economy, and the adoption of competition laws. The joining of the EU also stipulated the adoption of the EU competition policy model rather than the US model in these countries.

Figure 5.8: The adoption of competition laws in CEEC countries



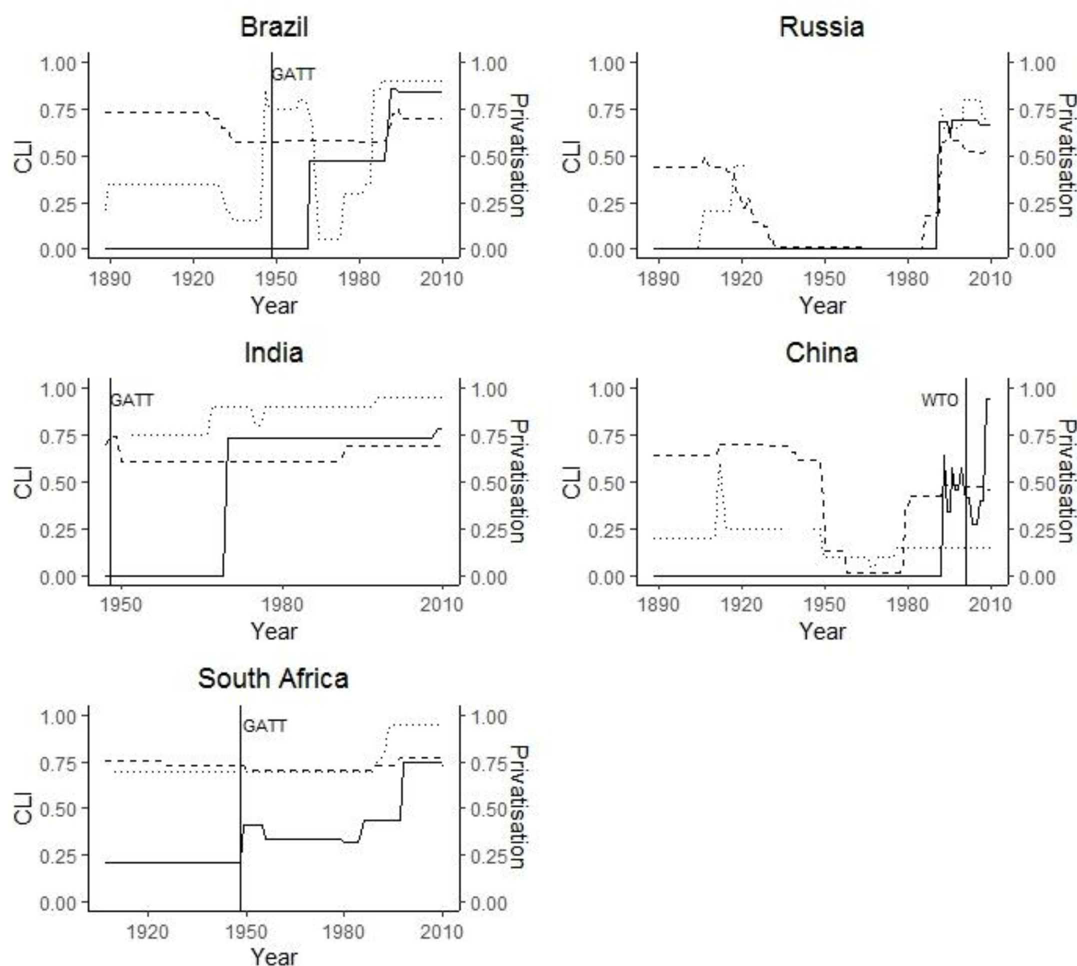
Hungary and Romania are examples for CEECs that gained their political independence much earlier and maintained some level of autonomy during the Soviet Union. Also in these two countries the EU accession process played a role but it is striking to note that, for example, in Hungary the expansion in the strictness of competition laws followed the democratisation of the country and the endorsement of a private market economy already much earlier.[66] In Hungary, the first competition law was adopted already in 1931 in the context of a period of relative democracy and the existence of a private market economy (Varga 2019; 2022). The regulation of 1931

[66] Similarly, also Poland and Yugoslavia adopted the first cartel legislations already during the 1930s (Varady 1999, 232).

aimed at protecting the country's general economic interests and consumers from some of the negative consequences of cartels such as high prices, exclusionary arrangements or market sharing agreements. Most notably, the competition law was then subsequently expanded and modernised in several waves from the mid of the 1980s onwards. Importantly, also in some of these former socialist countries such as Hungary, developments towards the endorsement of private market competition during the 1970s and 1980s were accompanied by the adoption of competition law principles long before the country officially transitioned to a market economy.

It is also interesting to look at the process in some of the key so-called emerging market economies such as the BRICS countries. These countries represent a more state-driven and developmental mode of market capitalism and may have the ability to withstand global pressures for the alignment of their political and economic institutions with those of Western countries. However, also in the BRICS countries, competition laws appear as regulatory response to privatisation, stipulating consumer interests through democratic political institutions, and the countries' integration into the world trading system by the signing of the GATT/WTO (see Figure 5.9 below). In Brazil, for example, the first competition law was adopted in 1962 with the creation of the Administrative Council for Economic Defense (CADE) (De Paula and Romanielo 2017). However, during the military regime from 1964 to 1984 the government rather fostered economic concentration in the form of state-owned enterprises and the competition law was not strongly enforced. Where deemed necessary, the state could directly set prices and control business conduct. Afterwards, the law was successively expanded by two major reforms in 1991 and 1994 in line with further privatisation and liberalisation efforts and the turning back to a democratic political regime during the 1980s and 1990s. With the privatisation of previously state controlled sectors of the economy an effective competition policy became necessary to ensure competition in the market and to control private concentrations of economic power.

Figure 5.9: The adoption of competition laws in the BRICS countries



China adopted the Anti-Unfair Competition Law in 1993 which, afterwards, was several times changed and clarified throughout the 1990s and 2000s (Zheng 2013). Most notably, the last modernisation reforms occurred in 2008, 2017, and 2019. According to Williams (2005, 74), the adoption of a competition law was not a requirement for WTO accession. But certainly, the US, EU, OECD, and WTO advocated and recommended the adoption of a competition law in China. It is interesting to note though, that even in such a state-controlled economy as that of China, independent from international factors and long before joining the WTO, local governments, at times, used competition law provisions to protect consumers from practices such as tying by a local monopolistic state-owned enterprise (Williams 2005, 140).

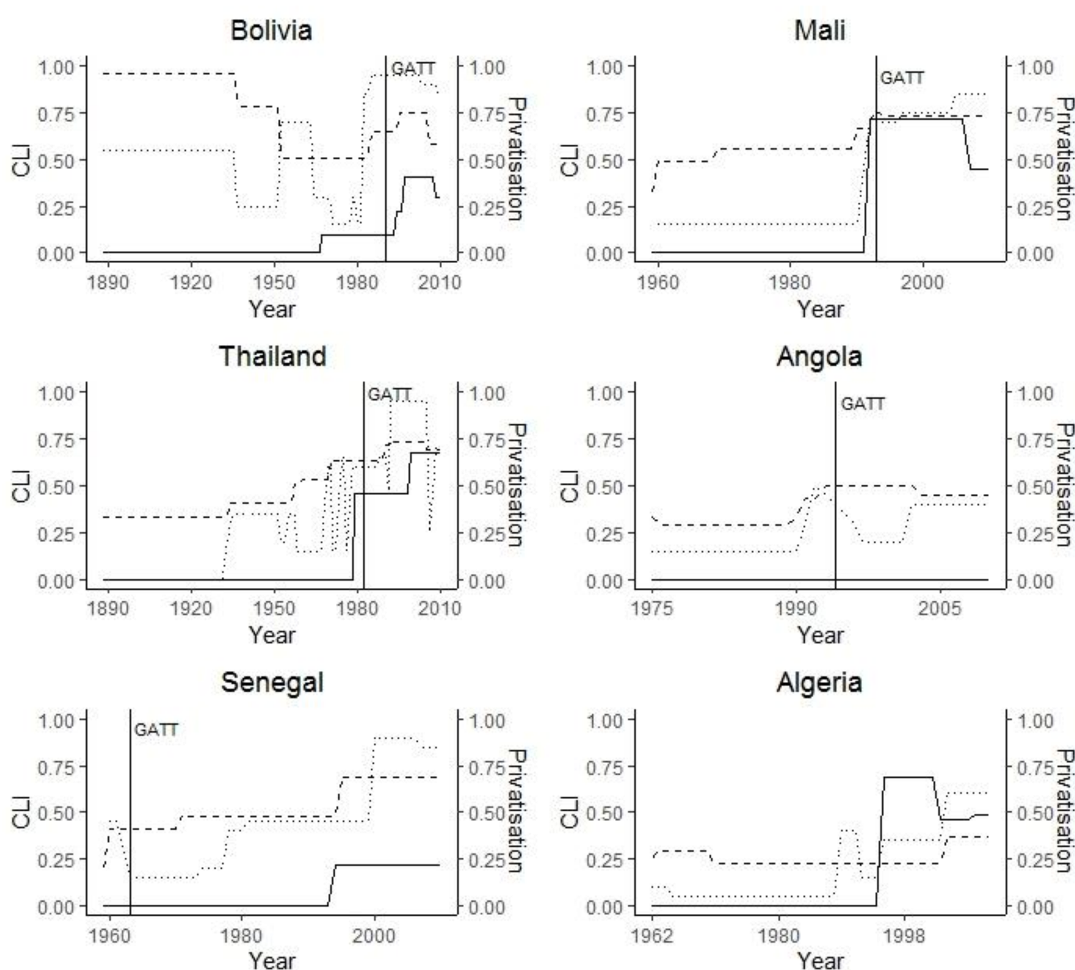
However, considering the low levels of private economic ownership and democracy in China, the role played by competition policy and the objectives the government tries to pursue with the policy leave some room for speculation (Huang 2008). Generally, the government selectively opens-up its markets for foreign competition and tries to benefit from market processes while maintaining its socialist political system. For example, besides improving consumer welfare and choice by controlling private market power and the implementation of more competitive market structures between state-owned enterprises the government may also use the policy more generally as an additional means to exert governmental control over the economy. For China, the adoption of a competition law may be seen as strengthening regulatory control over privatised market segments and foreign investors and companies, a goal that is fully in line with the general state-led development strategy, while at the same time appealing to global governance norms of market-conform regulation.

As is visible in Figure 5.10 below, the external political pressure for the adoption and modernisation of competition laws becomes especially visible in some poorer developing countries. Indonesia, for example, was required to adopt a competition law as part of conditionalities by a rescue package of the International Monetary Fund (IMF) signed in 1998 after the Asian financial crisis of 1997 (Williams 2005, 74). In Singapore (certainly not a poor country), the adoption of a competition law was part of a bilateral free trade commitment signed with the US and in Vietnam a WTO accession commitment (Nikomborirak 2006, 599). Similarly, in Bolivia, Mali, and Thailand, competition laws were adopted and expanded very much simultaneously with the signing of the GATT and the endorsement of a more private market economy during the 1980s and the 1990s.

Thailand adopted a competition law, the Price Control and Antimonopoly Act, in 1979, three years before joining the GATT. In 1999, the law received a major revision by the passage of the Trade Competition Act (Nikomborirak 2006). There is some evidence that Thailand experienced considerable pressure by developed countries and its trading partners to adopt a competition law although the 1999 reform was not part of IMF conditionalities (Ravago, Roumasset, and Balisacan 2022). Thailand voluntarily

adopted a competition law but the adoption three years before joining the GATT and the modernisation in 1999 leading to stricter provisions and higher independence of the competition authority, two years after the Asian financial crisis, may also be related to external pressure. Bolivia is an interesting country because it is governed by a more leftist, or socialist government, and it is noticeable that also in this country an expansion in the strictness of competition laws very much follows an increase in democracy and private economic ownership during the 1980s.

Figure 5.10: The adoption of competition laws in some selected developing countries



Despite higher levels of external pressure for adoption, possibly, amongst others, to open markets for foreign companies, competition laws, however, can also play a positive role for economic growth and consumer welfare in developing countries. Fox and Bakhoum (2019), for example, show that competition laws can play a positive role

in inclusive development strategies in African developing countries and may contribute to the control of market power of multinational companies as well as achieve benefits in terms of reducing corruption and lower prices for essential goods for the poorest parts of the population. Furthermore, competition laws may strengthen SMEs in relation to market leaders also in developing countries.

In addition, there are more lenient provisions in place for some of the least developed countries (LDCs). Angola, for example, became member of the GATT in 1994 and has some medium level of democracy and privatisation but did not yet adopt a competition law. Similarly, Senegal signed the GATT already in 1963 but did not adopt a competition law before 1994 when the GATT was turned into the WTO and the country also further privatised the economy. Generally, most of the countries that have not yet adopted a competition law are among the LDCs or relatively poor and small developing countries although some LDCs have adopted a competition law (e.g., Mali). When negotiating accession to the WTO, the members put more pressure on emerging market economies to align their regulatory framework than on some of the LDCs. Algeria is an interesting example because the country adopted a competition law in 1995 without joining the WTO. But these and other steps such as privatisation may have also been undertaken in preparation for joining the international trading system.

5.6 Conclusion

This chapter investigated the factors that explain temporal and cross-country variation in the strictness and scope of formal competition laws. The statistical results suggest that 'varieties of competition policy' can be explained with levels of privatisation, democracy, economic development, and country-size, both, within and across countries. The more economically developed, larger, and democratic market economies are statistically significant associated with stricter and more far-reaching competition policy regulation. Furthermore, on a country-level, the legal origin and type of capitalism seem to affect the competition policy model that is adopted. These latter domestic-institutional factors are especially relevant for explaining variation within the group of economically developed OECD market economies where common

law countries and LMEs systematically pursue stricter approaches, most notably, regarding the prohibition of anti-competitive agreements.

These findings have several important implications. First, expanded competition policy regulation seems to accompany the privatisation and capitalist organisation of economies for good reason to re-regulate market activity and to control concentrations of market power. The regulation of markets by means of competition policy provides the public good of competitively organised markets. Although the mechanisms differ as, for example, developing countries face more external pressure for the adoption and convergence of their competition policies since around the 1990s, competition policies can provide the regulatory framework for new market economies to produce more efficient market outcomes. Second, however, the role of legal origins and varieties of capitalism highlights the importance of embedding the regulatory framework in the form of competition policy in the historical economic and legal tradition and practices of a country. Specifically, competition policy can be expected to produce the most efficient market outcomes if the regulatory framework is aligned to existing institutional complementarities in the economy. The findings also suggest that the Atlantic Divide, at its core, is about different legal traditions and types of capitalism, and that, therefore, different competition policy models are likely to remain in place.

6 Case Studies: Explaining Variation in the Enforcement of Competition Policy in Germany and the United Kingdom

This chapter provides for the two case studies of the enforcement of competition policy in Germany and the UK. The case studies allow to map the competition policy regimes of the two countries in more detail and to investigate the enforcement practices and activities of the British and German competition authorities. Most crucially, the chapter finds that the UK more clearly adopted the SLC enforcement approach of the US whereas German competition authorities continue to rely largely on a 'market dominance' approach. Furthermore, the findings of the case studies suggest that the competition authorities of both countries show some responsiveness to political majorities and the general macro-economic situation of their country. These findings are discussed and interpreted in view of their implications for the conduct of competition policy.

6.1 Introduction

This chapter provides for the two case studies of the conduct of competition policy in Germany and the UK. The case studies mainly serve two purposes. First, the aim is to identify the enforcement practices of the competition authorities of the two countries. Second, the case studies serve the explanation of variation in enforcement activities over time. Although both countries are EU member states for most of the period studied, they show different enforcement practices in the conduct of competition policy. The UK competition authorities use an SLC approach whereas German authorities largely rely on a 'market dominance' test. Furthermore, besides a functional and economic welfare-enhancing role of competition policy, the chapter finds some supporting evidence for the Stigler-Peltzman model of regulation as political factors and business cycles seem to influence the enforcement activities of both countries.

The notion of enforcement practices refers to the application of formal rules in specific situations. It is through practice that the meaning and understanding given by individual actors to formal institutions becomes translated into specific actions and the material is linked with the discursive. The study of practices has been applied to diverse research areas ranging from the study of international organisations and diplomacy (Pouliot 2008; Adler and Pouliot 2011; Best 2014) to some of the neo-institutional literature in comparative capitalism (Jackson 2005). In the field of competition policy, controversy arose as to the extent to which the EU and its competition authorities converged towards the 'more economics' approach of the US (Vallindas 2006; Budzinski 2008; Bartalevich 2016; Gerbrandy 2019; Ergen and Kohl 2019). This chapter finds that, although EU competition authorities moved towards a more economics approach, there continue to be competing enforcement practices prevalent in Germany and the UK. Specifically, the UK more clearly adopted the SLC approach of the US whereas Germany and other continental European countries make use of a 'market dominance' test in the enforcement of competition policy.

The study of enforcement activities is a useful complement to formal competition law provisions (e.g., Cseres 2007). Most crucially, countries may have strong rules on the books which are, however, only insufficiently enforced in practice. Furthermore, the study of enforcement activities allows to investigate the explanatory power of key variables on the level of the concrete number of investigations and prohibition orders issued by competition authorities. Whereas formal rules are rather sticky and do not change frequently the enforcement activities of competition authorities show much more flexible variation and may be subject to changing political guidance and discretion exercised in the interpretation and application of formal rules by competition authorities and politicians. Most studies that have collected data on and analysed enforcement activity have focused on US competition authorities and the European Commission (e.g., Posner 1970; Weingast and Moran 1983; Coate, Higgins, and McChesney 1990; Gallo et al. 2000; Ghosal and Gallo 2001; Carree, Günster, and Schinkel 2010; Bergman et al. 2010; 2019; Szücs 2012; Bradford, Jackson, Jr., and Zytnick 2018). Only a very few studies have analysed the enforcement activities of the

British and German competition authorities (Weir 1992; Davies, Driffield, and Clarke 1999; Lauk 2003).

This chapter provides new data on the enforcement activities of the British and German competition authorities over the post-war period and explains variation therein. The study of enforcement activities also complements existing indexes on the formal and *de facto* independence of competition authorities (Gilardi 2005; 2002; 2008; Maggetti 2012; Gilardi and Maggetti 2011; Guidi 2014; 2015; 2016; Guardiancich and Guidi 2016; Koop and Hanretty 2018). The extent to which competition authorities neutrally enforce the law based on economic analysis and official guidelines or respond to political and economic interests such as to protect domestic industries or secure monopolistic rents remains controversial. The study of enforcement activities allows to investigate whether enforcement activities systematically respond to other, non-economic factors, such as changing governments and political directives. Mainly, the findings suggest that, despite an economisation and professionalisation of competition policy enforcement, the competition authorities of both countries show some responsiveness to political factors and business cycles.

The chapter is structured as follows. The next section discusses the case selection of the UK and Germany in more detail. The two countries serve as representative examples of an LME based on a common law legal tradition and a CME with a civil law legal system. Section 6.3 briefly discusses the reform process over the post-war period and section 6.4 maps the institutional structure of the competition policy regimes of the two countries. Afterwards, section 6.5 lays down the enforcement approaches of the British and German competition authorities and the economic rationale guiding the enforcement of competition policy in the two countries. Section 6.6 provides for the empirical results in explaining variation in enforcement activities in Germany and the UK over the post-war period. Finally, section 6.7 summarises the chapter with some concluding remarks.

6.2 Case Selection

The country-cases selected for in-depth investigation of competition policy enforcement practices and activities are Germany and the UK. The investigation of enforcement practices and the collection of longitudinal time-series data on enforcement activities is very time intensive and, therefore, only two cases could be reasonably selected.[67] Most crucially, the case studies are based on the qualitative and statistical information contained in the annual reports and secondary enforcement guidelines and information leaflets issued by the competition authorities of the two countries.

Furthermore, the marginal productivity of selecting two countries is relatively high and could only be noticeable improved by studying considerably more countries. For example, in comparison to studying only one country the selection of two countries allows to draw causal inferences about comparative differences. This is especially the case if it is deliberately controlled for some possible external and internal confounding factors, that is, if it is pursued a comparative research design and a deliberate case selection strategy. While there is a certain risk that these differences may still be unique to the countries studied one further case would only add little certainty about the external validity of the causal inferences drawn which could only be considerably improved by extending the study to five, ten or even more country-cases.

The selection of Germany and the UK provides several advantages that have guided the rationale for the case selection.[68] The case selection is based on the rationale to select a CME based on a civil law legal system (Germany) and an LME characterised by a common law legal tradition (UK). In this sense, the two countries are representative- or typical cases for different legal systems and types of capitalism

[67] The time required for each case study can be estimated to about six months. The case studies, first, required the reading of secondary literature on the conduct of competition policy in the two countries. Second, the annual reports and information leaflets had to be identified, downloaded, and screened. Third, the statistical information contained in the reports had to be collected and analysed and the leaflets and reports subjected to more careful qualitative reading.
[68] The case selection was also affected by the author’s language abilities. Because most competition authorities publish their annual reports only in the country’s official language the ability to understand the country’s language was a necessary requirement for conducting the case studies.

which have been found in Chapter 5 to influence the strictness and scope of formal competition laws. The 'typicality' of a case derives from theory or an empirically found relationship. The two countries are typical cases for the empirically found relationship that CMEs pursue a more lenient approach towards anti-competitive practices than LMEs and show different values (with a tendency towards extreme values) on both the independent and dependent variable.

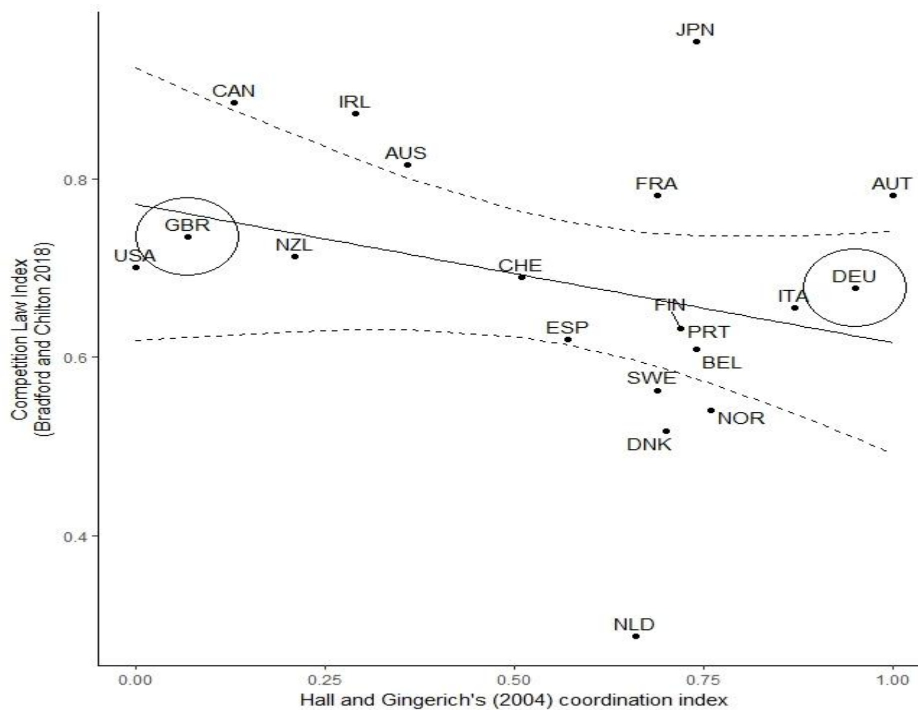
The study of a typical case that exemplifies a stable cross-case relationship can be said to be particularly well suited for the exploration of underlying causal mechanisms (Seawright and Gerring 2008). By constituting a representative example for a cross-case relationship, a typical case enables the researcher to more clearly investigate the mechanisms and processes through which the independent and dependent variables are causally linked to each other. In the present case of this thesis, besides the ability to engage in causal process tracing and an identification of causal mechanisms, the selection of two typical cases enables to explore in more depth the extent to which the found cross-country relationship based on formal competition law provisions manifests itself also on the level of enforcement practices and activities as well as the broader set-up of possibly different competition policy models in LMEs and CMEs. The aim is to investigate in more detail the institutional complementarities provided by competition policy in the context of the broader institutional structure and enforcement practices of different competition policy regimes.

The selection of representative- or typical cases can be based on typologies such as those provided by the VoC framework and legal origins theory (Elman 2005; Gerring 2007). Another way is to derive the case selection from statistical results. Figure 6.1 below plots the relationship between Hall and Gingerich's (2004) coordination index, used as a proxy for the coordination of economic activity, and the strictness of competition laws as captured by the CLI for the year 2010.[69] As can be seen the countries are rather typical examples for a highly coordinated economy pursuing a less

[69] Hall and Gingerich's (2004) coordination index, together with two similar indexes developed by the same authors that distinguish between coordination in the spheres of corporate governance and labour relations (Hall and Gingerich 2009), and data on employer density are the four most commonly employed measures to proxy the concept of economic coordination as promulgated in the VoC literature.

strict approach towards competition policy (Germany) and a LME that pursues a stricter approach against anti-competitive practices (UK).

Figure 6.1: Relationship between Hall and Gingerich's (2004) coordination index and the Competition Law Index (CLI) in 2010



The coordination of economic activity as proxied by Hall and Gingerich's coordination index is negative significant at the 0.1 level once Japan is dropped from the sample. As can be seen in Figure 6.1, Japan (perhaps together with the Netherlands) is an extreme outlier and one of the countries with the strictest formal competition law provisions in the sample. However, most qualitative studies agree that in Japan the relatively far-reaching formal competition laws are not strictly enforced in practice (e.g., Schaede 2000; Haley 2001; Freyer 2006). Therefore, and because the CLI's focus on formal provisions arguably exaggerates the strictness of Japanese competition law, it is reasonable to drop Japan from the sample.

In statistical terms, Germany and the UK are not the most typical countries in the sample. For example, Switzerland and Italy show lower residuals, that is, do fit the regression line more closely, and could therefore have been selected as typical cases

as well. However, Germany and the UK were selected due to their almost ideal-typical character as representative examples of a CME based on a civil law legal system and an LME characterised by a common law legal tradition. Smaller countries such as Switzerland may be more likely prone to other external influences and also free-ride to a certain extent on competition policy enforcement by the European Commission and larger countries surrounding them. The UK and Germany are usually considered the two European countries with the longest competition policy tradition.

The selection of Germany and the UK somehow balances between the rationales of selecting typical and extreme cases. For extreme cases, the key properties of interest are more pronounced and, therefore, easier to identify in case studies. If the research goal is to identify possible ideal-typical properties of different competition policy models in CMEs/civil law- and LMEs/common law legal systems, then, it is helpful to select countries representing more extreme values on both the independent and dependent variable. Referring again to the example of Switzerland and Italy, while the two countries fit the regression line more closely the differences in the coordination of economic activity and the countries' position towards competition policy are much less pronounced than for the UK and Germany.

At the same time, however, it certainly has to be acknowledged that the case selection biases the research to some extent. The case selection, for example, is obviously not suited to investigate possible reasons for differences (and commonalities) within the group of LMEs or CMEs. It would have been similar interesting to investigate why, compared to the Netherlands, Austria pursues a very strict approach towards competition policy, although both countries are highly coordinated civil law legal systems. Each case selection strategy bears certain advantages and disadvantages and is more or less conducive for different research goals. In view of the present research, it seems more promising to identify, first, the key properties of different competition policy models in different types of capitalism and legal systems, that is, to establish a stable and theoretically based empirical relationship after which, second, outlier cases may be investigated in future research.

The selection of the UK and Germany can be also seen as most-likely crucial case studies and, therefore, suited to test theories (Eckstein 1975). Due to the membership of both countries in the EU (at least, from 1973 until January 2021) there is a high likelihood that the UK's and Germany's competition policy regimes converged towards the European model within the European integration process but if domestic-institutional factors such as the legal tradition and type of capitalism play a role in the design and conduct of competition policy these differences should be visible in the comparison of the two countries. In other words, if the legal system and type of capitalism matter, the UK should stand out in the European context and more clearly show, at least in some regards, similarities with, for example, countries such as the US and Ireland, than with other continental European countries, most notably, Germany.

This most-likely crucial case attribute is the main advantage of selecting the UK instead of, for example, conducting comparative case studies of the US and Germany. Germany is an interesting case in so far as it is one of the European countries having the longest history of competition policy and because the country is commonly argued to have crucially shaped the European competition policy model (e.g., Gerber 1998; 2010b; McGowan 2010). By selecting the UK and Germany the case studies can be said to provide a crucial test for whether the main cleavages concern an Atlantic Divide between the US and Europe as commonly argued in the competition policy literature or whether existing differences mainly follow the lines of legal and economic systems and are, therefore, also to be found within the EU.

Furthermore, the selection of Germany and the UK enables to hold several contextual and potentially confounding factors constant. Both countries are rather rich economically developed Western democracies that have a long-established history of engaging with competition policy. The level of democratisation, economic development, and country-size are factors that are commonly found to influence the adoption of and commitment to competition policies (Palim 1998; Kronthaler and Stephan 2007; Forslid, Häckner, and Muren 2011; Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016). The advantage of this most similar systems design is that this further helps in synthesising out the role of domestic-institutional factors in

the conduct of competition policy by selecting two countries that show variation on the key independent and dependent variable while holding other possibly relevant factors constant. If, for example, Austria or Belgium would have been selected instead of Germany and the case studies would have revealed certain differences or less intense enforcement practices in comparison to the UK there would be the possibility that these differences are related to country-size rather than domestic-institutional factors.

But here, again, some precautionary notes may be appropriate. The case selection does not enable to investigate other possibly interesting factors and mechanisms such as the role of EU or WTO membership (as both countries are member states for most of the period studied) and the level of economic development or privatisation. In other words, the case selection biases the case studies towards identifying domestic-institutional influences while possibly downplaying other relevant factors and mechanisms that shape the development and enforcement of competition policy. These pitfalls come to the advantage of enabling the identification of ideal-typical properties of different competition policy models in different types of capitalism and legal systems. Furthermore, while the two countries are rather similar in terms of the level of privatisation, democratisation, and economic development they provide within-country variation in privatisation, membership in international organisations, and changing governments.

6.3 Historical Reform Process

The EU legislative framework as well as the domestic competition laws of Germany and the UK have been reformed several times over the post-war period. Mainly, the reforms extended the scope and application of formal provisions and aimed at the harmonisation of competition laws within the EU. The reforms constitute functional improvements to the law but also political changes. Despite processes of harmonisation both countries maintained some unique approaches for the conduct of competition policy. In the immediate post-war period both countries were more positively inclined to broader industrial-policy objectives. This may be an expression of the period of embedded liberalism. However, especially since around the 1980s and

1990s these objectives have been successively removed in favour of more neo-classical inspired economic analysis. Furthermore, in Germany, a special focus has been placed on the promotion and protection of SMEs.

6.3.1 The Reform Process in the UK

Although there are some earlier historical case law decisions related to monopolistic and cartel-like practices the UK adopted its first formal competition law with the Monopolies and Restrictive Practices (Inquiry and Control) Act of 1948 (W. L. Letwin 1954; Jewkes 1958; Utton 2000). With the passing of this law the UK was somehow a forerunner among European countries. The Monopolies Act of 1948 established an administrative body, the Monopolies and Restrictive Practices Commission, for the investigation and assessment of anti-competitive practices. [70] However, the UK approach taken in 1948 was based on informal case-by-case investigations and negotiations without effective sanctions available to enforce the competition law (Sharpe 1985, 90; Wilks 1996). The law did not contain any general prohibitions but rather stipulated to assess anti-competitive conduct in view of broadly defined public interest concerns such as the maintenance of competition but also the promotion of domestic growth and employment, regional development, and exports.

The Restrictive Trade Practices Act of 1956 introduced a more formal and stricter approach against anti-competitive agreements and created a new body, the Restrictive Practices Court (RPC), for their assessment. Furthermore, the Monopolies and Mergers Act of 1965 added merger control to the UK's competition policy regime (Utton 2000, 270; Gribbin 1975, 382). However, despite providing for a stricter approach against anti-competitive agreements and introducing merger control to the UK's competition policy these laws did not provide for major changes in the substantive law and decision-making procedure. According to Wilks (1996, 144), by the end of the 1960s, the British 'twin' system of a more judicial and formal approach in the field of restrictive agreements and a rather administrative and informal system regarding the control of private monopoly and mergers was in place. Broadly, this

[70] The Commission was subsequently renamed Monopolies Commission, Monopolies and Mergers Commission, and Competition Commission which, finally, was abolished in March 2014.

system remained in place until the end of the 1990s. In 1998 the RPC was abolished, and its functions transferred to the Competition Commission (CC), the successor of the Monopolies Commission created in 1948.

The major changes in UK competition policy occurred in the 1970s and by the end of the 1990s. Some observers ascribe the 'silent revolution' in British competition policy (O'Brien 1982) to the Fair Trading Act of 1973 which created the position of a Director General of Fair Trading (DGFT) who headed a non-ministerial department staffed with civil servants, the Office of Fair Trading (OFT). This is generally considered the year of creation of an independent competition authority in the UK which enforces the competition law independent from direct ministerial control.[71] However, also the Fair Trading Act of 1973 formulates a public interest- rather than a purely competition-oriented test for the assessment of anti-competitive conduct and leaves important decision-making authority to the Secretary of State for Trade and Industry. Furthermore, for the most part, the OFT did not have any final decision-making authority but mainly screened economic activity and conducted preliminary phase 1 investigations to decide which cases to submit to the Monopolies Commission, and later to the RPC, for the final assessment of the case.

The next major legislative changes occurred by the Competition Act of 1998 and the Enterprise Act of 2002 which also provide the current legislative framework for competition policy. Based on the European template of articles 101 and 102 TFEU the Competition Act of 1998 introduces general prohibitions for anti-competitive agreements (Chapter 1 prohibition) and the abuse of a dominant position (Chapter 2 prohibition) and then specifies exemptions to these general prohibitions. The Enterprise Act of 2002, which lays down the UK's rules for the control of mergers, most crucially, fully removes ministerial decision-making in ordinary merger cases. Since 2002, the UK more clearly confirms to best practices by delegating the economic-based enforcement of competition policy to a (politically) independent

[71] Others consider the Monopolies and Mergers Commission to have been a particularly independent competition authority which was created in 1975 and was tasked with second-stage monopoly and merger investigations transferred to it by the OFT and the Secretary of State for Trade and Industry.

competition authority and separately specifying clear instances where ministers may intervene from the outside for broader public interest concerns.

Section 58 of the Enterprise Act of 2002 specifies national security, media plurality, the stability of the UK financial system, and public health emergencies as public interest concerns that legitimately justify outside political intervention. Specifically, the reforms also stipulate the economic-based enforcement of competition laws. The Enterprise Act of 2002 substitutes the previous 'public interest test' of section 84 of the Fair Trading Act of 1973 with a 'competition test'. The 'public interest test' included industrial policy objectives such as the promotion of regional development and exports among the criteria for the assessment of whether a merger should be prohibited. Similarly, section 10 of the Restrictive Trade Practices Act of 1976, which specifies the public interest test by which the RPC assesses agreements, lays down that those anti-competitive agreements that reduce unemployment or promote exports may be deemed in the public interest and, therefore, allowed. According to the new 'competition test', the only criterion for the assessment of anti-competitive practices is their expected effect on maintaining and promoting effective competition.

Although most observers agree that, in practice, the competition criterion already gained in prominence with the issuing of the so-called 'Tebbit guidelines' in 1984, the formal transition to the competition test only took place in 2002.[72] In either way, the example is intrusive for the gradual change towards the economic-based assessment of anti-competitive practices and mergers within the EU and, specifically, the UK, as well as the interplay between formal institutions and practices. The consideration of broader industrial policy objectives is subsequently narrowed down to the purely (neo-classical) economic-based assessment and enforcement of competition policy. The last reform of UK competition policy was provided by the Enterprise and Regulatory Reform Act of 2014 which mainly affected the institutional structure by merging the roles and functions of the OFT and the CC within a single independent competition authority, the Competition and Markets Authority (CMA).

[72] The 'Tebbit guidelines' were issued under then-Secretary of State for Trade and Industry Norman Tebbit (Conservatives) and specified that the competition criterion will take primacy in the assessment of mergers.

When considering the development of UK competition policy and the country's status as key liberal economy, it is remarkable that important reforms that move the UK closer to generally accepted best practices such as the use of general prohibition clauses and the delegation of enforcement powers to an independent competition authority which decides based on economic criteria took place relatively late towards the end of the 1990s. The RPC, the OFT, and the Monopolies and Mergers Commission (MMC), the three key institutions that enforced competition policy in the UK roughly from the 1970s until the end of the 1990s (the court was created already in 1956), were all well regarded institutions with good reputation. Nevertheless, the government kept important political discretion by deciding which cases are transferred to the RPC and the MMC and in many cases maintained the final decision-making authority over the imposition of remedial measures and sanctions for competition law infringements found by the RPC and the MMC.

6.3.2 The Reform Process in Germany

In Germany's civil law legal system, the legislative framework for competition policy is not provided by multiple laws but by a single legislation, the Act against Restraints of Competition (*Gesetz gegen Wettbewerbsbeschränkungen*, GWB), which is amended over time.[73] The GWB was passed in 1957 and entered into force in January 1958. Since then, the GWB was amended ten times, the last time in July 2021. In 1958, the GWB introduced a general prohibition for (horizontal) anti-competitive agreements but resorted to Germany's abuse control approach, which can be traced back to the Regulation of 1923, for the control of dominant market actors, that is, monopoly, and vertical agreements.

Furthermore, the law included several cartel exemptions and economic sectors that were exempted from the application of the competition law. Over time, most of these sectoral exemptions were removed and loopholes that were identified to hamper the effective enforcement of competition laws closed. In Germany, a special focus was placed on the promotion and protection of SMEs. For example, the provisions against

[73] The GWB can be accessed at: https://www.gesetze-im-internet.de/englisch_gwb/.

anti-competitive agreements were softened several times for SMEs to promote their competitiveness and counterbalance the market power of existing market leaders. The special focus of the GWB to protect and promote SMEs becomes also visible in Article 3 which allows rationalisation cartels involving SMEs and Article 20 which goes beyond the corresponding European provisions on the control of the abuse of dominant positions in Article 102 TFEU.

According to Baake and Perschau (1996, 135), the first amendment of 1965 expanded the law by introducing the notion of countervailing power and was designed to foster cooperation among SMEs. The anti-cartel provisions against SMEs were softened by allowing for specialisation cartels and providing procedural shortcuts for their authorisation as well as for other types of rationalisation cartels. Furthermore, the supervision of dominant market actors was strengthened (see also Ortwein 1998, 95–97). The second amendment to the GWB in 1973, most crucially, added merger control to Germany's competition law and the competencies of the FCO. Similar as the anti-cartel provisions and the supervision of dominant undertakings merger control is enforced independent from political considerations by the FCO.

However, the Social Democratic-Liberal coalition government under chancellor Brandt was able to put through the possibility for a ministerial merger authorisation under Article 24 (now Article 42) against the resistance of the FCO and parts of the CDU (Baake and Perschau 1996, 136–37). The article allows the Minister of Economics to overrule a merger prohibition decision by the FCO in cases of public interest concerns. In addition, an independent expert commission, the Monopolies Commission, was established to comment upon the competitive situation in individual sectors and the use of Article 42 ministerial merger authorisations. The CDU dropped their general resistance to the introduction of merger control after their electoral defeat in 1973 and were in favour of the establishment of the Monopolies Commission.

As for the substantive merger assessment the reform prohibits mergers that lead to the creation or strengthening of a dominant market position, thereby, extending Germany's 'market dominance' approach for the supervision of dominant

undertakings to merger control. The reform of 1973, again, also included provisions for facilitating cooperation among SMEs and strengthened the negative supervision of dominant businesses. For example, in addition to market shares, the reform added aspects such as financial strength and legal and *de facto* barriers to market entry to the criteria determining market dominance and, thereby, strengthened the abuse control supervision (Ortwein 1998, 99–100). The reform also tried to better protect export cartels against foreign sanctions by ending the practice of publishing them in the official records (Haucap, Heimeshoff, and Schultz 2010, 7). In order to strengthen the enforcement of the anti-cartel provisions vertical price-fixing for brand-named goods was prohibited while non-binding price recommendations continue to be allowed until today. The reform also introduced a prohibition of tacit collusion which constituted a harmonisation with European competition law.

The third amendment of 1976 mainly strengthened merger control in the press and newspaper sectors by specifying lower thresholds for those mergers to fall under the merger control system (Ortwein 1998, 101). The reason is to guarantee media plurality and freedom of information. The fourth amendment of 1980 further strengthened merger control, in particular, where large firms were to penetrate markets dominated by SMEs, and the supervision of dominant market actors by tightening the formulations for abusive behaviour (Baake and Perschau 1996, 137; Ortwein 1998, 103). The fifth amendment of 1990 was targeted especially against concentration processes in the commerce sector. The amendment again strengthened merger control and the control of market behaviour. Furthermore, the reform exempted purchasing agreements and co-operations between SMEs from the cartel prohibition as long as they were designed to promote parity with larger competitors (Baake and Perschau 1996, 137; Ortwein 1998, 104).

The fifth amendment of 1990 and the sixth amendment of 1998, amongst others, dealt with public infrastructure network sectors (transport, energy, telecommunication, and postal services). In the context of the (partial) privatisation of these sectors in Germany in the 1990s these sectors were, first, removed as exemptions from the competition law, that is, subjected to competition law and, second, special regulatory provisions

were included to promote and facilitate the development of competitive market structures in these sectors. The regulatory reform process in these sectors is exemplary for the strengthening and expansion of competition laws following the privatisation of the economy. The reform of the GWB of 1990, for example, removed the exemption from competition law for most of these sectors where previously the state heavily regulated prices and conditions and the amendment of 1998 removed the exemption of the energy sector and introduced the 'essential facilities doctrine' into German competition law (Baake and Perschau 1996, 147; Eberlein 2001, 371; FCO 2011b, 38).

The 'essential facilities doctrine', which is usually deemed appropriate in privatised sectors characterised by natural monopolies, pressures dominant network providers to allow third parties and smaller competitors to use their network infrastructure. More specific, it establishes that the refusal by a monopolist to provide essential infrastructure to a third party constitutes the abuse of a dominant position (Article 19(2.4) GWB). It was realised that the simple privatisation of these sectors is not sufficient but that additional regulatory instruments such as the essential facilities doctrine are required to create competitive privately organised markets and to promote market entry. A further effort to improve the functioning of the energy sector was undertaken by the eight amendment of 2007 which introduced a new Article 29 GWB to combat abusively excessive pricing in the energy sector (FCO 2011b, 8).

The seventh amendment of 2005 mainly harmonised Germany's provisions on anti-competitive agreements with European competition law (Wurmnest 2005; Klees 2006). The legal cartel exemptions were exchanged for the European exemption clause based on Article 101(3) TFEU. The reform also abolished the more formal and transparent notification and authorisation process by which firms had to notify their agreements for exemption to the FCO which authorised, and in most cases, published the exempted cartel agreements. Since 2005 this process takes place based on self-assessment by the companies involved and the FCO intervenes if it identifies a competition law infringement. As a unique feature of German competition law, the exemption for rationalisation cartels involving SMEs has been maintained (Article 3 GWB). The German approach on the control of dominance and mergers was

unaffected by this reform, however. Furthermore, the reform of 2005 also increased the level of fines that can be imposed for competition law infringements in line with European practices, empowered the FCO to conduct sector inquiries, and removed the sectoral exemptions for the credit and insurance industry, the sports sector, and copyright collecting societies (FCO 2011b, 36–38).

The eighth and nineth amendment of 2007 and 2017, besides tightening price control in the energy and food sectors, also tried to close the loophole of making legal successors of firms liable for competition law infringements. For that purpose, the concept of group liability was introduced in line with European practices. Furthermore, in accordance with EU Directive 2014/104/EU, the rights of injured private parties to claim damages were strengthened (FCO 2016). The development of large market leaders and complaints about abusive practices increasingly shifts the focus of regulators around the world on the digital economy. Already the reform of 2017 but especially also the tenth and last amendment to the GWB of 2021 were focused on the digital economy and specified and strengthened the abuse of dominance control in this sector.

The law explicitly included data and networks among the essential facilities subjected to abuse control and specified the possible abuses of digital monopolists (articles 18, 19, and 19a GWB). The original reason for the reform of 2021 was the transposition of the EU's ECN+ Directive into national law. However, for the most part, German competition law was already in conformity with the directive and the reform mainly introduced far-reaching instruments against digital monopolists. Furthermore, also the general market share thresholds for mergers to fall under the merger control regime and the minor market exemption thresholds were increased to allow the FCO to focus on the most critical mergers and to reveal SMEs from notification obligations as well as to give them more leeway to consolidate.

6.4 The Competition Policy Institutions

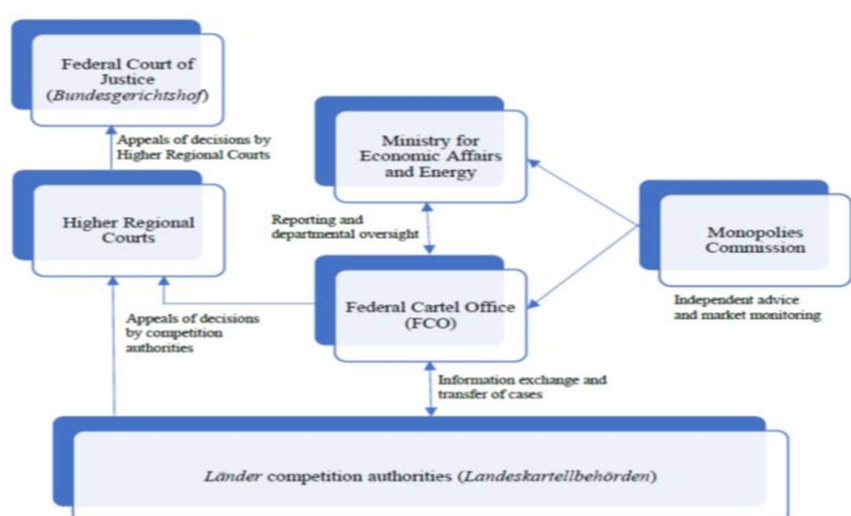
In Germany and the UK, a diverse set of actors are responsible for the formulation and enforcement of competition policy. Broadly, three types of actors can be distinguished:

ministries, specialised competition authorities, and courts. Whereas ministries engage in the formulation of the legislative framework and the setting of strategic policy priorities the enforcement of competition policy has been delegated to independent competition authorities whose decisions can be appealed before the courts. However, in both countries, the competition authorities are not completely insulated from political control. In Germany as well as the UK ministries and parliaments can exert influence on the competition authorities through several mechanisms such as the appointment of key personnel and the issuing of guidelines. Furthermore, in Germany, a large proportion of enforcement decisions are taken by regional competition authorities that remain part of the regional ministerial bureaucracy.

6.4.1 The Competition Policy Institutions of Germany

The current competition policy regime of Germany is composed of six key institutions. The GWB mentions three types of competition authorities that are responsible for the enforcement of competition policy in Germany. The competition authorities are the FCO, the Federal Ministry for Economic Affairs, and the supreme *Land* authorities (*Landeskartellbehörden*) that are competent according to the laws of the respective *Land* (Article 48(1) GWB). Furthermore, the Monopolies Commission, which is an independent expert committee, and the courts take a key role in the functioning and application of competition policy in Germany (see Figure 6.2 below).

Figure 6.2: The institutional structure of Germany's competition policy regime



Source: Author

The FCO, however, may well be described as the key competition authority. The FCO is an independent higher federal authority (*selbständige Bundesoberbehörde*) which is assigned to the Federal Ministry for Economic Affairs (Van Aaken 2004, 79). As such, it is relatively independent from the ministry and assumes primary responsibility for the enforcement of competition policy in Germany. In tendency, the ministry is responsible for the development and formulation of the law and policy while the FCO is responsible for the administrative enforcement of the law. The FCO's independence is especially rooted in its case work (Fiebig 1993). The FCO decides independently from the government which cases to investigate and the Economics Ministry generally does not interfere into the FCO's decision outcomes in specific cases.

The non-interference of the Minister of Economics in specific cases is, however, a practice that had to be established and which is not necessarily guaranteed. For example, the merger between Karstadt and Neckermann in 1976, the first and third biggest department stores in the German market of that time, is one of the few instances for which evidence exists that then liberal Minister Friderichs (FDP) exerted strong pressure on the President of the FCO and the responsible decision-making unit to allow the merger despite an already prepared prohibition order (Ortwein 1998, 127–29). The supposed reason was to save 20,000 jobs as Neckermann was considered a failing firm.

Similar as in other countries such as the US and the UK, an important way to mitigate such intervention is the public criticism to which the minister is exposed to when revealed by the existence of an independent community of competition policy experts or institutions such as the Monopolies Commission in Germany. Nevertheless, the Minister of Economics can issue general instructions to the FCO, a right which is, however, rarely employed in practice (FCO 2011b, 12). Since 1958 up until 1995 five general instructions were issued to the FCO (Ortwein 1998, 85). The FCO is also held accountable *ex post* by the government and the parliament in the form of annual reports (since 1979 the FCO publishes bi-annual reports). Furthermore, one of the most important ways through which the minister can interfere into competition policy

enforcement is his authority to overrule, upon application by the private parties concerned, a merger prohibition by the FCO according to Article 42 of the GWB.

The relationship between the FCO and the *Länder* competition authorities is specified in Articles 48 and 49 of the GWB. If a case extends beyond the territory of a region it falls within the competencies of the FCO (Article 48(2) GWB). For merger control, however, the FCO enjoys exclusive competencies. The regional competition authorities are usually departmental units of the Ministry of Economics of the respective regional government. Sometimes there is a second specialized unit for competition policy enforcement in a specific sector such as energy. As of October 2020, there are 24 regional competition authorities. Because the *Länder* usually don't have regional specific competition policy legislations the offices enforce the GWB as well. The relationship between the FCO and the regional competition authorities is horizontal, i.e., neither has authority over the other. However, as a federal agency the competencies of the FCO are broader in scope and if a case falls into the responsibilities of both the FCO can request the transfer of the case.

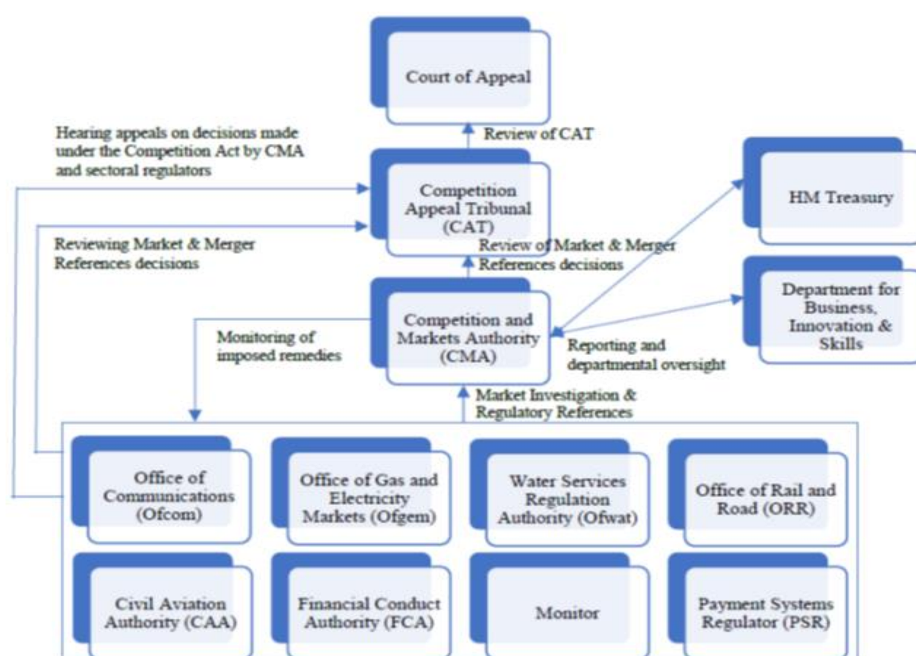
The Monopolies Commission is an independent expert committee that was established by the second amendment to the GWB in 1973 (Wise 2005, 38). Its role and competencies are set out in articles 44-47 of the GWB and some sector specific legislations. The primary purpose of the Monopolies Commission is to advice the government and the FCO on matters of competition policy and the competitive situation in individual sectors. The Commission prepares bi-annual reports on market concentration as well as special reports on request by the government or at its own discretion. By doing so, the Commission can draw the attention of the ministry and the FCO to specific reform proposals or the investigation of particular economic sectors. The Commission has no formal powers. However, by commenting upon industry structure and the enforcement of competition policy the Commission also exerts some independent expert control function. The opinion of the Monopolies Commission has also to be taken into account by the government in cases of a ministerial merger authorisation under Article 42 of the GWB.

The courts take an important role in the appeals procedure in German competition policy. The appeals procedure is laid down in Chapter 1 of Part 3 of the GWB. Decisions by competition authorities can be appealed before the Higher Regional Court (*Oberlandesgericht*) for the district in which the competition authority has its seat (Article 63(4) GWB). Due to the majority of decisions being taken by the FCO which is located in the city of Bonn most appeals are heard before the Düsseldorf Higher Regional Court. This is generally appreciated as ensuring a uniform interpretation of the law and excluding forum-shopping (Van Aaken 2004, 83). Appeals on points of law against decisions by the Higher Regional Courts can be lodged with the Federal Court of Justice (*Bundesgerichtshof*) in Karlsruhe (Article 74 GWB). The legislator deliberately decided to place competition policy cases before a civil instead of an administrative court. The location of competition policy cases within the civil court system is intended to signal the independence of the process from administrative decision-making by the state (Sturm 1996, 201).

6.4.2 The Competition Policy Institutions of the UK

In the UK's competition policy regime there are four types of key institutions. Among governmental departments, HM Treasury and the Department for Business, Energy & Industrial Strategy (BEIS), the UK's Ministry of Economics, provide funding to the UK's competition authority and have responsibility for setting the overall policy and legal framework for competition policy. The UK's competition authority, the CMA, is a non-ministerial department which has primary responsibility for the enforcement of competition policy. Furthermore, eight sector regulators have concurrency powers with the CMA to enforce competition law provisions in their areas of responsibility. Finally, decisions by the CMA and sector regulators can be appealed before the courts. The Competition Appeal Tribunal (CAT) is a dedicated body to hear competition policy cases.

Figure 6.3: The institutional structure of the UK's competition policy regime



Source: Adapted from NAO (2010: 9) and Seely (2016: 13)

Note: In Northern Ireland, the Utility Regulator responsible for regulating the gas, electricity and water sectors has concurrency powers

The CMA is the UK's key competition authority. The CMA was established by the Enterprise and Regulatory Reform Act 2013 and became operational in April 2014. With the establishment of the CMA most of the roles and functions of the OFT and CC have been merged within the CMA. While BEIS has primary responsibility for policy formulation and the setting of the overall legal framework the CMA has primary responsibility for the enforcement of competition policies. The CMA is a non-ministerial department funded by HM Treasury and subject to departmental oversight by BEIS (NAO 2016, 5). The CMA's statutory objective is 'to promote competition, both within and outside the United Kingdom, for the benefit of consumers' (section 25(3) of the Enterprise and Regulatory Reform Act 2013).

The CMA is generally considered an independent competition authority which decides free from governmental influence which cases to investigate and remedies to impose for competition law infringements. However, the CMA is not completely insulated from governmental control. Besides instruments such as the appointment procedure, the setting of the legislative framework, and the control through annual reports, the

UK Ministry of Economics, for example, sets the strategic and policy priorities of the CMA by the issuing of bi-annual non-binding ministerial statements, so-called strategic steers, comparable to the issuing of general instructions in Germany. The UK version of an Article 42 ministerial merger authorisation in Germany is the issuing of an 'intervention notice' by which the Secretary of State can trigger and assume decision-making authority over a merger investigation in the case of pre-defined public interest concerns (section 42 of the Enterprise Act 2002). The minister may not only allow a merger that the CMA would propose to prohibit but also prohibit a merger that would not raise any competition concerns from the CMA's point of view.

The public interest concerns currently defined are national security, media plurality, and the stability of the UK financial system (section 58 of the Enterprise Act 2002). With the approval of both Houses of Parliament the Secretary of State can modify the list of public interest concerns by order. Furthermore, the Secretary of State can issue a 'special intervention notice' in cases of mergers involving government contractors or subcontractors that are in the possession of classified information and in the case of newspaper or broadcasting mergers involving companies having a market share of at least one-quarter (25 per cent) in the UK (section 59 of the Enterprise Act 2002). A 'European intervention notice' can be issued by the Secretary of State to protect 'legitimate interests' to assume responsibility for mergers that would otherwise fall under the competencies of the European Commission (sections 67 and 68 of the Enterprise Act 2002).

A special feature of the UK's competition policy regime is that eight sector regulators have concurrency powers with the CMA to enforce competition law provisions (NAO 2016, 16). In their areas of responsibility, these eight sector regulators can use both, their regulatory powers under sectoral legislations and enforcement powers under the Competition Act 1998 (Smith 2004).[74] The concurrency powers are granted in section

[74] The sector regulators only have concurrency powers for agreements in restraint of competition and the control of abuse of a dominant position under the Competition Act 1998. In the area of merger control, the Enterprise Act 2002 does not grant concurrency powers to sector regulators. Because the sector regulators have the status of designated NCAs they are also empowered to apply and enforce Articles 101 and 102 of the TFEU within their respective sectors. In addition, sector regulators can make a market reference under the market investigation provisions of the Enterprise Act 2002.

54 and Schedule 10 of the Competition Act 1998 and have been slightly modified in sections 51-53 of the Enterprise and Regulatory Reform Act 2013. Most notably, the 2013 modification establishes that the CMA may decide the transfer of a case from a sector regulator and empowers the Secretary of State to remove concurrency powers from any sector regulator if deemed appropriate for the purpose of promoting competition for the benefit of consumers. Both modifications aim at setting incentives for sector regulators to make more frequent use of their concurrency powers (Dunne 2014). The CMA and sector regulators coordinate their competition-related activities within the UK Competition Network (UKCN).

The appeals procedure is laid down in sections 46-49 and Schedule 8 of the Competition Act 1998 and sections 114 and 120, Part 2 and Schedule 2 and 4 of the Enterprise Act 2002. Decisions by the CMA and sector regulators on the Chapter I and Chapter II prohibitions or penalties imposed under the merger control procedure can be appealed before the CAT (NAO 2018, 24). The CAT was established by the Enterprise Act 2002. Similar as its predecessor, the Competition Commission Appeals Tribunal, the CAT is headed by a President. The CAT sits in three-person panels which are headed by the President or a legally-qualified chairman (section 14 of the Enterprise Act 2002). The President and the chairmen are appointed by the Lord Chancellor. The other members of the tribunal as well as its Registrar are appointed by the Secretary of State (section 12 of the Enterprise Act 2002). Decisions by the CAT on a point of law or the amount of a penalty can be further appealed before the Court of Appeal and, ultimately, the Supreme Court (NAO 2018, 24).[75]

6.5 The Enforcement Approaches

The enforcement approaches describe the more specific factors and methods used to assess business practices and, correspondingly, enforce the competition laws. Most competition authorities spend much effort in explaining their decisions and laying down the factors used to assess the specific conduct in question by the issuing of enforcement guidelines and explanatory statements. Generally, for both countries,

[75] In Scotland and Northern Ireland, the appellate courts are the Court of Session and the Court of Appeal in Northern Ireland respectively.

Germany and the UK, the enforcement approaches became focused on (neoclassical) economic factors and -theories and their enforcement delegated to independent competition authorities. Furthermore, however, Germany maintains its ‘market dominance’ approach while the UK more clearly moved towards the SLC approach of the US.

In Germany, the provisions against anti-competitive agreements are laid down in Chapter 1 of the GWB (articles 1-3). Article 1 prohibits agreements ‘between undertakings, decisions by associations of undertakings and concerted practices which have as their object or effect the prevention, restriction or distortion of competition’. The wording of this prohibition is the same as the corresponding European provision in Article 101 TFEU and the UK’s so-called Chapter I prohibition of the Competition Act of 1998. The seven amendment to the GWB in 2005 largely re-formulated the provisions on anti-competitive agreements and harmonised them with European law (Wurmnest 2005; Klees 2006). Since then, the general prohibition clause of Article 1 GWB applies to both horizontal and vertical agreements. Previously, vertical agreements were subject to an abuse control system. However, vertical agreements continue to be treated more lenient than horizontal agreements on the European level as well as under the competition law in Germany and the UK. Furthermore, the German system of legal cartel exemptions and the use of a cartel register has been abolished and replaced by the general exemption clause as stated in Article 101(3) of the TFEU.

Importantly, a unique feature of German competition law, the exemption clause for rationalization cartels among SMEs has been maintained. Article 3 of the GWB enables SMEs to conclude rationalization cartels under the conditions that the agreements do not significantly affect competition on the market and serve to improve the competitiveness of SMEs. It is striking that Germany maintained Article 3 despite the adoption of the European exemption clause and various European block exemptions for certain types of agreements such as specialisation- and technology transfer agreements. The FCO’s practical application of Article 3 is explained in more detail in an information leaflet issued in 2007 (FCO 2007b). The provisions of Article

3 only apply for agreements that do not affect trade between EU member states in a sense of the meaning and practices of EU competition law. Contrary to the European Commission, the FCO defines SMEs not in absolute terms (e.g., annual turnover, number of employees) but in relative terms in relation to the relevant market concerned. Thus, a large company may be treated as a small- or medium sized enterprise in a market in which the company has not much turnover. This means that, in tendency, more companies can be considered as SMEs under the meaning and practices of German competition law than under European provisions.

Furthermore, large firms, that is, firms that exceed the SMEs thresholds in the relevant market, may participate in an agreement under Article 3 in individual cases provided that the agreement and the involvement of the larger firm benefits the competitiveness of the participating SMEs. The primarily aim of the agreement must be the rationalisation of economic activity which is understood in terms of improving the input-output ratio for participating SMEs. The FCO uses three main criteria for the assessment of the condition that the agreement does not significantly affect competition on the relevant market: the market positions and market shares of the companies concerned, the nature of the inter-company cooperation, and any existing cooperation in the relevant market. Particularly, the threshold for a significant effect on competition may be reached where the cartelised market share amounts to 10 to 15 per cent in the relevant market.

The FCO frequently emphasises that the enforcement of the Article 1 prohibition is especially targeted against so-called hard-core (horizontal) cartels (FCO 2016, 5). Hard-core cartels are commonly defined as those types of (mainly horizontal) agreements between competitors that try to fix prices, product quantities, the allocation of sales areas or customer groups (OECD 2000, 6; FCO 2016, 5). As is common among most competition policy regimes, agreements of minor importance are exempted from the application of the Article 1 prohibition. The FCO's (2007c) 'Notice on the Non-Prosecution of Cooperation Agreements of Minor Importance' specifies that, excluding hard-core cartels, the FCO does, as a rule, not initiate proceedings in cases of agreements between companies where the combined market share of the parties

involved does not exceed ten per cent in any of the affected markets in the case of horizontal agreements and the market share of each of the involved parties does not exceed 15 per cent in any of the affected markets for non-horizontal agreements. While vertical price-fixing measures are prohibited non-binding so-called recommended resale prices continue to be allowed (FCO 2016, 5).

The UK's prohibition of anti-competitive agreements is laid down in Section 2 of the Competition Act of 1998 (Chapter I prohibition). With the adoption of the Competition Act the UK harmonised its provisions on anti-competitive agreements with European provisions. The Chapter I prohibition is, therefore, essentially based on Article 101 TFEU and the same as Article 1 of the German GWB. However, the UK law does not include an exemption for SMEs and also includes the list of prohibited agreements in the exact wording as European law (which is not included in the German GWB). According to sub-section 2 the prohibition applies in particular to agreements, decisions and concerted practices which:

> (a) 'directly or indirectly fix purchase or selling prices or any other trading conditions;
> (b) limit or control production, markets, technical development or investment;
> (c) share markets or sources of supply;
> (d) apply dissimilar conditions to equivalent transactions with other trading partners, thereby placing them at a competitive disadvantage; [and which] make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.' (Section 2(2) of the Competition Act 1998)

The UK's provisions against anti-competitive agreements are therefore more far-reaching than German competition law. However, the UK does also include some exemptions. The Competition Act specifies a number of types of domestic agreements that are excluded in schedules 1-4 and grants the Secretary of State the power to add or remove exclusions by order (section 3 of the Competition Act 1998). The Secretary of State may, for example, acting on the CMA's recommendation, issue domestic block exemptions that exempt certain categories of agreements from the Chapter I prohibition.[76] Furthermore, among the excluded agreements are, for example, mergers (to enable them to be scrutinised under the merger control regime), planning

[76] Domestic block exemptions do not affect whether an agreement is prohibited by Article 101 TFEU.

obligations, land agreements to the extent to which they are covered by the Competition Act 1998 (Land Agreements Exclusion and Revocation) Order of 2004[77], agreements of companies that provide services of general economic interest or having the character of a revenue-producing monopoly, certain types of agreements related to agricultural products, a list of explicitly mentioned professional rules, and agreements related to the transfer of a newspaper or newspaper assets. The application and enforcement of these exemption clauses are explained in more detail in individual information leaflets issued by the OFT (2004f; 2004g; 2011c; 2011b; 2011a) that have been confirmed by the CMA.

The UK law also includes an exemption for agreements of minor importance (or minor market exemption) in the form that an agreement must have an *appreciable* effect on competition to be prohibited (OFT 2004b, 8) and more lenient provisions for vertical agreements (OFT 2004h). However, importantly, while having regard to the relevant European guidelines and notices the CMA uses its own approach on market power and the definition of the relevant market for the assessment of agreements (OFT 2004c; 2004d). Specifically, the CMA is less guided by market shares but uses what is referred to as hypothetical monopolist test for the definition of the relevant market and captures market power essentially as the ability to profitably sustain prices above competitive levels.

Germany's approach towards the supervisions of dominant market actors, that is, monopoly or quasi-monopolists, is formulated in articles 18-21 GWB. The prohibition of the abuse of a dominant position is laid down in Article 19. The article also specifies five examples of abusive behaviour. According to Article 19(2), an abuse exists in particular 'if a dominant undertaking […]:

1. directly or indirectly impedes another undertaking in an unfair manner or directly or indirectly treats another undertaking differently from other undertakings without any objective justification;

[77] This Order superseded the Competition Act 1998 (Land and Vertical Agreements Exclusion) Order of 2000 from 1 May 2005 onwards.

2. demands payment or other business terms which differ from those which would very likely arise if effective competition existed; in this context, particularly the conduct of undertakings in comparable markets where effective competition exists shall be taken into account;
3. demands less favourable payment or other business terms than the dominant undertaking demands from similar purchasers in comparable markets, unless there is an objective justification for such differentiation;
4. refuses to supply another undertaking with such a good or commercial service for adequate consideration, in particular to grant it access to data, networks or other infrastructure facilities, and if the supply or the granting of access is objectively necessary in order to operate on an upstream or downstream market and the refusal threatens to eliminate effective competition on that market, unless there is an objective justification for the refusal;
5. requests other undertakings to grant it advantages without objective justification; in this regard, account shall be taken in particular of whether the other undertaking has been given plausible reasons for the request and whether the advantage requested is proportionate to the grounds for the request.'

The list is non-exhaustive but, however, can be seen as providing the key focus of the FCO in the enforcement of the Article 19 prohibition. While the FCO can also investigate other instances of abusive behaviour by a dominant company in these cases the FCO has a clear mandate to enforce Article 19. Most of these examples, although less clearly formulated, can be found in similar wording already in the 1958 version of the GWB (examples 1-3 and 5). Others are more recent innovations. For example, the add-on 'in this context, particularly the conduct of undertakings in *comparable markets* where effective competition exists shall be taken into account' (emphasis added) in example 2 (similar also example 3) points to the use of the comparable markets theory and was added to the GWB in 1980.

Example 4 specifies the essential facilities doctrine and was added to the GWB by the 1998 reform in the context of the (partial) privatisation of public utility markets, particularly, the energy sector (Eberlein 2001, 371). The provision of *data* was added to essential facilities by the last reform of the GWB in 2021 to better control digital monopolists. The reform of 2021 also introduced a new Article 19a which specifies the concept of paramount market power across markets and which is also mainly intended to improve the supervision of market power in the digital economy.

Articles 20 and 21 are again more unique features of Germany's competition law. Article 20 provides an additional emphasise on the protection of SMEs against the abuse of a dominant position by undertakings with relative or superior market power and Article 21 prohibits the boycott of companies. In practice, these articles especially lower the thresholds for companies to be considered dominant and protect SMEs against retaliatory measures by dominant companies. Furthermore, Article 20 puts special emphasise on the prohibition of a dominant company to regularly offer goods and services, especially in the food sector, below cost prices. The concept of relative market power as enshrined in Article 20 is contrasted with the US approach on monopoly since the origin of modern German competition policy in 1958 (e.g., Schapiro 1962; Gerber 1982).

The prohibitions, however, do not apply to all companies but only to those that have a dominant position on the relevant product and geographic market. This includes two important concepts: the relevant market and market dominance. The focus on the *relevant* product and geographic market instead of, for example, the market *per se* is an important concept that diffused among countries during the post-war period as part of the professionalisation of competition policy enforcement. Nowadays, the assessment of monopoly or a dominant position is taken in view of the *relevant market* in most countries but not without critiques (e.g., Kaplow 2010). The definition of the relevant market in a particular case, which is largely in the discretion of the responsible competition authority, can have large implications on the conclusion of whether a company is considered to be in a position of market dominance or not. For the FCO (2011b, 25), an important concept used for the definition of the relevant market is the demand-side oriented market concept (*Bedarfsmarktkonzept*). According to this concept, such products or services belong to the same market which the informed consumer considers equally suitable to satisfy a certain requirement.

The relevant market in a particular case cannot be defined arbitrary but nevertheless leaves some scope for a more narrow or broader definition. In practice, it is often difficult to decide whether, for example, the market for busses is regional, national, European or global in scope or whether a certain newspaper belongs to a narrower

newspaper market or is part of a broader market for media, to mention only two examples. In tendency, the narrower, that is, smaller, the relevant market is defined the higher the likelihood that a specific company can be considered dominant on that market. The definition of the relevant market must not but can have important implications for the outcome of an enforcement decision. In Germany, for example, the proposed merger between Metro and the Kaufhof AG in 1983 was first prohibited by the FCO based on the assessment that the Cash-&-Carry-wholesale markets and the delivery wholesale markets constitute two different markets, that is, based on a narrower definition of the relevant market. Following a judgement by the Federal Court of Justice, which suggested that the two markets compete on the same level, the FCO had to revise its position and the merger was allowed (Ortwein 1998, 178–81).

The concept of market dominance is specified in Article 18. Accordingly, a company (or group of companies) is considered to be in a position of market dominance if the company 1) has no competitors, 2) is not exposed to any substantial competition, or 3) has a paramount market position in relation to its competitors, on the relevant product and geographic market. The first instance rarely matters in practice as it refers to the situation of full monopoly. In order to clarify the amount of competition a company is exposed to on the relevant market Article 18 specifies a number of factors that shall be taken into account among which the company's market share, financial strength, access to supply or sales markets or links with other undertakings. Furthermore, the article mentions more indirect factors, in line with theoretical developments in the field of competition policy, such as legal or factual barriers to market entry and potential competition, including, potential competition from foreign companies.

The consideration of more indirect factors such as barriers to market entry and potential competition enables to take into account a fuller account of the market concerned. For example, a market may be characterised by only a few companies but nevertheless shows fierce competition resulting in low prices and the existence of product innovations, eventually, because existing companies are concerned about the (potential) easy entrance of other companies. The markets for supermarkets and discounters are usually invoked as examples of relatively strong competition in an

oligopolistic market. However, at the same time, these indirect market characteristics are difficult to capture in an objective manner. The assessment of the degree of potential competition in a market is very sensitive to the economic model or empirical analysis employed. The GWB continues to place special emphasis on more direct factors, specifically, market shares. In this regard, especially articles 18(4) and 18(6) are worth mentioning that specify that single firm dominance is deemed to exist if an undertaking has a market share of at least 40 per cent and that oligopolistic dominance is identified in cases where three or fewer undertakings reach a combined market share of 50 per cent or five or fewer undertakings reach a combined market share of two thirds.[78]

The FCO's approach to merger control is strongly related to its approach on the supervision of firms with market power. The rules regarding the control of mergers are laid down in Chapter 7 of the GWB. Furthermore, the FCO has issued an information leaflet on merger control which is, however, currently under revision and, thus, may be up-dated soon (FCO 2005b). The principles for the appraisal of mergers are specified in Article 36 of the GWB. The FCO prohibits a merger that would significantly impede effective competition, in particular by creating or strengthening a dominant position, unless the merging parties can prove that the improvements of the conditions of competition due to the merger outweigh the impediment to competition (Article 36(1) GWB).

The key criterion for the substantive merger assessment is whether the merger can be expected to lead to the creation or strengthening of a dominant position (FCO 2011b, 25). For assessing the creation or strengthening of a dominant position the FCO uses the same criteria as in the procedure for the control of the abuse of a dominant position (e.g., Article 18 GWB). While more indirect factors are considered the market shares of the merging entities are the key criterion. This approach is also referred to as employing a 'market dominance test' for the substantive merger assessment (Klees 2006, 417).

[78] In the case of oligopolistic market dominance these presumptions can be refuted if the concerned companies prove that despite the market concentration substantial competition can be expected or that they have no paramount market position in relation to the remaining competitors (Article 18(7)).

In the UK, similar as in Germany, the so-called Chapter II prohibition of the Competition Act prohibits 'any conduct on the part of one or more undertakings which amounts to the abuse of a dominant position in a market […] if it may affect trade within the United Kingdom' (section 18(1) of the Competition Act 1998). The notion of conduct by 'one or more undertakings' includes individual as well as collective dominance. The section goes on to specify a non-exhaustive list of conduct that is prohibited. The prohibition applies in particular to conduct which consists of:

(a) 'directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
(b) limiting production, markets or technical development to the prejudice of consumers;
(c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
(d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of the contracts.' (section 18(2) of the Competition Act 1998)

The wording of sections 18(1) and 18(2) is again almost identical with the corresponding European provisions in Article 102 TFEU except with a different geographical focus on the UK market and the European common market respectively. The German provisions are lengthier and more detailed, however. Similar as for agreements, the Competition Act also specifies several exemptions that are excluded from the Chapter II prohibition in schedules 1 and 3 (section 19 of the Competition Act 1998). Most notably, the Chapter II prohibition does not apply to companies entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly to the extent to which the prohibition would obstruct the performance of the companies (section 4 of Schedule 3 of the Competition Act 1998). Furthermore, the Secretary of State is given the authority to amend at any time by order Schedule 1 and paragraph 8 of Schedule 3 and to provide that the Chapter II prohibition is not to apply in particular circumstances.

Further guidance on the CMA's application of the Chapter II prohibition is provided in two publications by the OFT that have been confirmed by the CMA (OFT 2004a; 2004c). In its assessment of whether any conduct constitutes a violation of the Chapter

II prohibition the CMA investigates (i) whether an undertaking is dominant on the relevant market and (ii) whether it is abusing that dominant position (OFT 2004a, 11). Here, the CMA uses the same methodology as for assessing whether any agreement constitutes an appreciable effect on competition. The CMA captures dominance essentially as the possession of substantial market power in the relevant market where market power is defined as the ability 'profitably to sustain prices above competitive levels or restrict output or quality below competitive levels' (OFT 2004c, 9).

Therefore, in a first step the relevant market needs to be defined. In order to delineate the relevant market the CMA usually employs the hypothetical monopolist test according to which the boundaries of the market are such that a hypothetical monopolist could profitably sustain to set prices above (usually 5 to 10 per cent) competitive levels (OFT 2004d, 4–6). In general, the aim of the hypothetical monopolist test is to delineate those types of products or services that consumers perceive as close substitutes and which, thereby, constitute competitive constrains on the product in question. In effect, the relevant market is usually the focal product or service and its closest substitutes.[79]

In assessing whether a company is in a dominant position, that is, in a position of substantial market power, in the relevant market, the CMA focuses on the extent to which that company faces constraints on its ability to behave independently (OFT 2004a, 14). In analysing the extent of market power, the CMA focuses on the competitive constraints faced by a company or group of companies in cases of collective dominance. Competitive constraints include factors such as existing competition, market shares (without pre-defined thresholds), and potential competition (including entry barriers) but also eventually the existence of countervailing buyer power or economic regulation by the government. Generally, the CMA considers it unlikely that an individual company will be in a dominant position if its market share is below 40 per cent although, occasionally, dominance may be found also below that figure.

[79] The CMA considers demand side as well as supply side substitution. Furthermore, in the definition of the relevant market the CMA distinguishes between the product and geographical market dimension and, if relevant, markets may be defined according to consumer group or temporal factors.

A similar approach is taken for the control of mergers. The UK legislative framework for merger control is provided by the Enterprise Act of 2002. The principles for the appraisal of mergers are formulated in section 22. For deciding whether to prohibit a merger the CMA uses a so-called SLC test. The essential criterion is whether the merger has resulted or may be expected to result 'in a substantial lessening of competition within any market or markets in the United Kingdom for goods and services' (section 22 of the Enterprise Act 2002). The CMA's analytical approach and methodology in conducting the SLC test is explained in more detail in the OFT's Merger Assessment Guidelines (OFT 2010a) that have been confirmed by the CMA Board.

The British competition authorities capture competition as a process of rivalry between firms seeking to win customers' favour. Therefore, mergers are assessed in terms of their effect on rivalry in the relevant market. More specific, the CMA usually compares the pre-merger level or nature of rivalry (the counterfactual) with the expected level of rivalry in the post-merger scenario. However, sometimes other factors, such as when a company is likely to exit the market due to financial difficulties even without the merger, are considered in the analysis. Within the SLC test the CMA takes into account a number of relevant factors depending on the case-specific circumstances such as measures of concentration, unilateral and coordinated effects, efficiencies, the likelihood of market entry (potential competition), and countervailing buyer power.

To sum up, for the UK and Germany, the enforcement approaches became focused on (neo-classical) economic factors and -theories appealing to standard economic theory combined with some insights from industrial organization economics. Previous industrial policy objectives such as the promotion of employment and exports are increasingly replaced by purely economic factors. Therefore, similar as for US antitrust authorities and DG Comp on the European level, key factors for the assessment of anti-competitive practices are market shares and market concentration levels, barriers to market entry, comparable markets theory, and potential competition. Furthermore, factors such as the creation of efficiencies (e.g., in the form of scale and

scope synergies), countervailing buyer power and, occasionally, failing firm defenses may off-set and justify otherwise higher concentration levels and restrictions to competition. However, despite a shared understanding of these key economic factors that impact upon the competitive performance of markets, the UK and Germany can be contrasted as pursuing different enforcement approaches (see Table 6.1 below).

Table 6.1: Comparison of competition policy enforcement approaches

	Competition and Markets Authority (CMA)	**Directorate General for Competition (DG Comp)**	**Federal Cartel Office (FCO)**
Definition of the relevant market	Hypothetical monopolist test (OFT 2004d)		Demand-side oriented market concept (FCO 2011b, 25)
Substantive focus	Stricter and more detailed rules against anti-competitive agreements		Stricter and more detailed rules against the abuse of a dominant position (monopolists)
Substantive test	Substantial Lessening of Competition (SLC) test (OFT 2010a)	Significant Impediment to Effective Competition (SIEC) test (Röller and De la Mano 2006)	Market dominance test (FCO 2005b), possibly, complemented by a SIEC test since 2007 (FCO 2018, 28)
Theoretical background	British version of Chicago school antitrust analysis (for example, referring to Adam Smith’s notion of competition as a process of rivalry and focusing less on consumer welfare but also including other public interest objectives such as product innovation and -quality in the analysis)		Ordo-liberalism and structure-conduct-performance (SCP) paradigm

Key criteria	Effect of merger and business practice on ability to profitably sustain prices above or restrict output or quality below competitive levels	Effect of merger and business practice on market share / concentration (only practices by companies with high market shares require scrutiny)

The UK more clearly adopted the US SLC approach whereas Germany maintains its market dominance approach. Most crucially, the competition authorities of the two countries use different approaches and methodologies for the assessment and operationalisation of key concepts such as market power and the definition of the relevant market. For the German FCO, market shares and market concentration levels are the key factors for assessing market power. Furthermore, the German competition law differs in its focus on counterbalancing market inequalities by promoting the productivity and competitiveness of SMEs through diverse means such as more lenient provisions on anti-competitive agreements and more far-reaching protection by the supervision of firms with market power. In the UK, the CMA essentially captures market power as the ability to profitably sustain prices above or restrict output or quality below competitive levels.

The enforcement approach of DG Comp can be located in between the British and German approaches. The introduction of the significant impediment to effective competition (SIEC) test was a politically controversial issue and can be understood as a compromise between the US SCL approach and the European ‘market dominance’ test (Röller and De la Mano 2006; FCO 2018, 26–29). The SIEC test was introduced on the European level by the second European Merger Regulation adopted in 2004 and in Germany by the eight amendment to the GWB in 2007, at least partly, due to external pressures to adopt a ‘more-economics’ approach and to converge with the US antitrust model. The process was, for example, triggered by different decisions reached by the European Commission and US antitrust authorities in cases such as the proposed GE-Honeywell merger of 2001 mentioned in the introduction.

In Germany, the SIEC test is manifested though the adding of the passus that a merger is prohibited that would ‘significantly impede effective competition’ although the maintenance of the ‘market dominance’ approach remains visible by the formulation ‘in particular [a merger that impedes effective competition] by creating or strengthening a dominant position’ (Article 36 GWB). However, while the FCO appreciates the adding of the SIEC test (FCO 2018, 28) its practical implication for enforcement decision-making remains uncertain. Some first studies indicate that the FCO essentially maintains its market dominance approach (e.g., Budzinski and Wacker 2007). Deliberations within the OECD reveal that this pattern may be applicable and characteristic of a broader sample of countries. In an OECD Competition Committee roundtable of 2002 competition officials of several countries discussed their enforcement approaches (OECD 2005). Mainly the discussions reveal that most LMEs, notably, the US, Australia, New Zealand, Ireland, and the UK pursue an SLC approach.[80] However, many CMEs such as Germany, France, Italy, Finland, the Netherlands, and Switzerland as well as the European Commission and the Czech Republic have adopted a market dominance test.

6.6 Explaining Variation in Enforcement Activity

This section explains variation in the enforcement activities of the German and British competition authorities. The thesis finds that, in their enforcement of competition policy, the FCO and the OFT respond to market characteristics likely to increase market concentration and reduce economic wealth. In addition, however, both competition authorities also show shifts in enforcement priorities likely to be caused by changing political majorities and macroeconomic trends. Therefore, the thesis finds that both competition authorities, despite being usually accredited with high levels of political independence and commitment to competition policy, show political responsiveness in their enforcement activities, and, furthermore, reports some mixed findings for the Stigler-Peltzman model of regulation. Specifically, the findings suggest that centre-left governments are associated with stricter enforcement against

[80] Australia shifted from an SLC test to a dominance test in 1977 and then back to an SLC test in 1992. New Zealand switched from a single dominance test to an SLC test in 2001 (OECD 2005, 167–68).

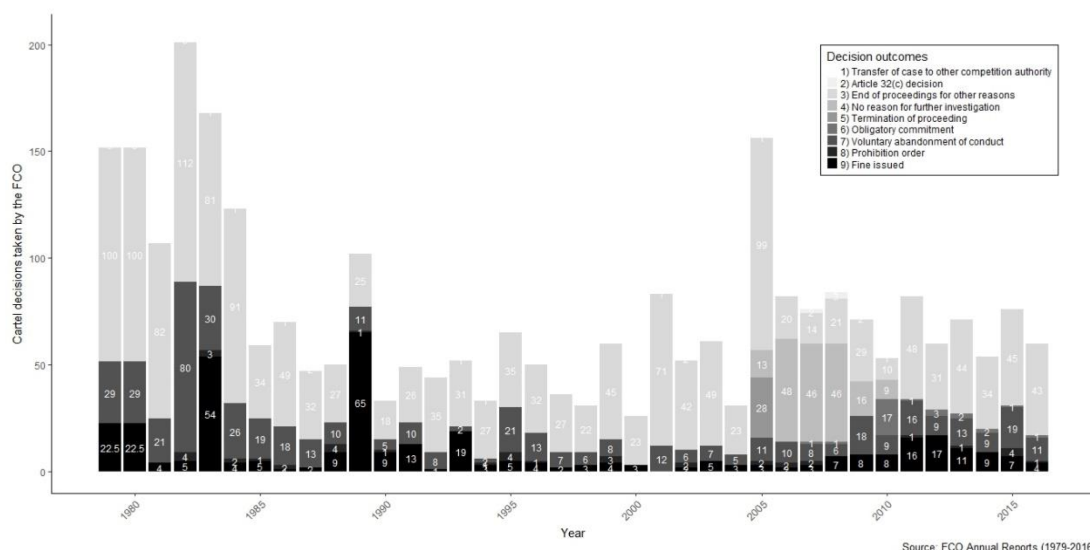
monopolists but a more lenient approach towards cartels and that rationales such as the 'trade as substitute for competition policy', the promotion of the export industry, and a softening of enforcement in times of a deteriorating economic situation are considered and play a role in the decision-making process of the competition authorities over the time period studied.

6.6.1 Explaining Variation in Enforcement Activity in Germany

In Germany, the FCO is the key enforcement agency since its establishment in 1958. The annual reports of the FCO include statistics for the different paragraphs of the German competition law, the GWB. Therefore, it is possible to run separated tests for the three main areas of competition policy enforcement: anti-competitive agreements (cartels), the abuse of a dominant position, and merger control. This is preferable because the decision-making procedures and outcome are different. How to compare or aggregate, for example, a prohibited merger with a fine imposed for a specific conduct alleged of constituting the abuse of a dominant position or an order requiring the abolishment or adjustment of a paragraph of a specific inter-firm agreement? Furthermore, there is theoretical reason to expect different causalities in these three areas, for example, as regarding political party preferences as discussed in Chapter 3.

Figure 6.4 below displays the annual number of cases and decision-making outcomes of the FCO's cartel investigations from 1979 to 2016. The annual reports of the FCO contain information on nine different outcome categories of a cartel investigation. Most of them (categories 2 to 5), refer to the end of an investigation without further action, that is, the termination of proceedings, for example, because the alleged conduct was found to be in accordance with competition law provisions or because of insufficient evidence for a successful prosecution. As is visible in Figure 6.4 there is a remarkable degree of variation in annual cases and a large proportion of annual cases ends without successful prosecution. The first category which, however, only constitutes a marginal number of cases refers to the transfer of a case to another competition authority, such as a regional competition authority in Germany, the European Commission or the authority from another EU member state.

Figure 6.4: Cartel decisions by the FCO (1979-2016)



Most interestingly are the bottom three categories 7) to 9) which are coloured grey and black in Figure 6.4 and used as dependent variable in the following regression analysis. These cases constitute instances of successful enforcement where either the private parties concerned voluntary adjusted their conduct, a prohibition order was issued or the FCO imposed a fine issue for the infringement of competition law (for example, for the discovery of a price-fixing cartel). Here, again, the data show some considerable degree of variation in successful enforcement over time and, generally, a higher number of prosecuted cases than one may expect from the occasional coverage of the discovery of a cartel in newspaper articles.

Table 6.2 below reports the main regression results for the study of the FCO's enforcement activities of the anti-cartel provisions. Table 6.2 reports separated tests for the different independent variables and rationales that may play a role in the FCO's enforcement decision-making process in models 1-7. The independent variables are always lagged for one year to account for possible endogeneity and reversed causality. Model 8 is the final model consisting of all the independent variables that are statistically significant when tested individually. Overall, the models perform rather poorly in the area of the enforcement of the anti-cartel provisions. However, some interesting findings are revealed.

Table 6.2: Explaining cartel enforcement by the FCO (1980-2016)

	Dependent variable:							
	Cartel enforcement $_{t}$							
Theory	Public interest / Market structure		Trade as substitute for competition policy	Politics	Business cycles		Export promotion	Final model
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Privatisation $_{t-1}$	-24.836***							-25.326
	(7.733)							(15.322)
Days to start business $_{t-1}$		-0.367*						
		(0.171)						
Trade (% of GDP) $_{t-1}$			-0.521*					0.914
			(0.278)					(0.554)
Government ideology $_{t-1}$				2.143				
				(3.524)				
GDP growth rate $_{t-1}$					0.504			
					(1.758)			
Unemployment (% of labour force) $_{t-1}$						-1.766**		
						(0.810)		
External balance (% of GDP) $_{t-1}$							-2.386**	-3.666
							(0.893)	(2.674)
Constant	73.589***	27.239***	52.832***	14.070	23.919***	30.245***	28.428***	28.756
	(15.466)	(3.995)	(15.250)	(18.588)	(4.673)	(6.545)	(3.378)	(34.790)
Observations	33	13	33	33	38	25	38	33
R^2	0.250	0.296	0.102	0.012	0.002	0.171	0.165	0.318
Adjusted R^2	0.225	0.232	0.073	-0.020	-0.025	0.135	0.142	0.248
Residual Std. Error	19.429 (df = 31)	6.632 (df = 11)	21.258 (df = 31)	22.297 (df = 31)	20.893 (df = 36)	7.507 (df = 23)	19.110 (df = 36)	19.148 (df = 29)
Note:						*p<0.1; **p<0.05; ***p<0.01		
						Standard errors in parentheses.		

The market structure variables in models 1 and 2 are contrary to the expectation as formulated in Hypothesis 1 and Hypothesis 7.[81] Although significant the privatisation

[81] Hypothesis 7 cannot really be tested here because there is no variation in the formal design of the agency responsible for enforcing the competition law over the time period studied.

of the economy and the days required to start a business are negatively associated with the FCO's enforcement intensity of the anti-cartel provisions while, from an economic- and public interest perspective, one would expect a positive association. The privatisation variable is always negative in all the regressions reported below which may be related to opposing trends with the dependent variables and the high level of aggregation on which economy-wide privatisation is measured. Therefore, this variable may be rather ignored. As regarding the days to start a business, the number of observations, that is, years covered by this variable may be too small to capture its effect on anti-cartel enforcement.

Model 3 works as expected. The more the German economy is exposed to international trade the lower the FCO's enforcement activities of the anti-cartel provisions. On the one side, the FCO may consider that international competition puts enough pressure on German business to behave competitive. On the other side, this relationship may be also caused by the rationale to promote the international competitiveness of German businesses and something similar to a 'raise to the bottom', as discussed in the regulatory literature, to adjust enforcement intensity to the, eventually, lower levels of international trading partners, so as not to disadvantage the German industries engaged in international trade. Conservative-led governments are associated with higher enforcement activity against cartels but not on a statistically significant level.

The Stigler-Peltzman model (Stigler 1971; Peltzman 1976) and Hypothesis 2 is tested in models 5 and 6 which investigate the extent to which enforcement activity is associated with business cycles. Note that, to support the Stigler-Peltzman model, one would expect a decrease in enforcement activity in response to a deteriorating economic situation to disperse the adjustment costs between producers and consumers and, therefore, a positive association with GDP growth but a negative association with the unemployment level (as higher unemployment is an expression of a worsening economic situation and GDP and unemployment are usually inversely related). The GDP growth rate is positive as expected but not statistically significant. Model 6, however, supports the Stigler-Peltzman model by finding a negative significant relationship between higher levels of unemployment and the intensity with which the

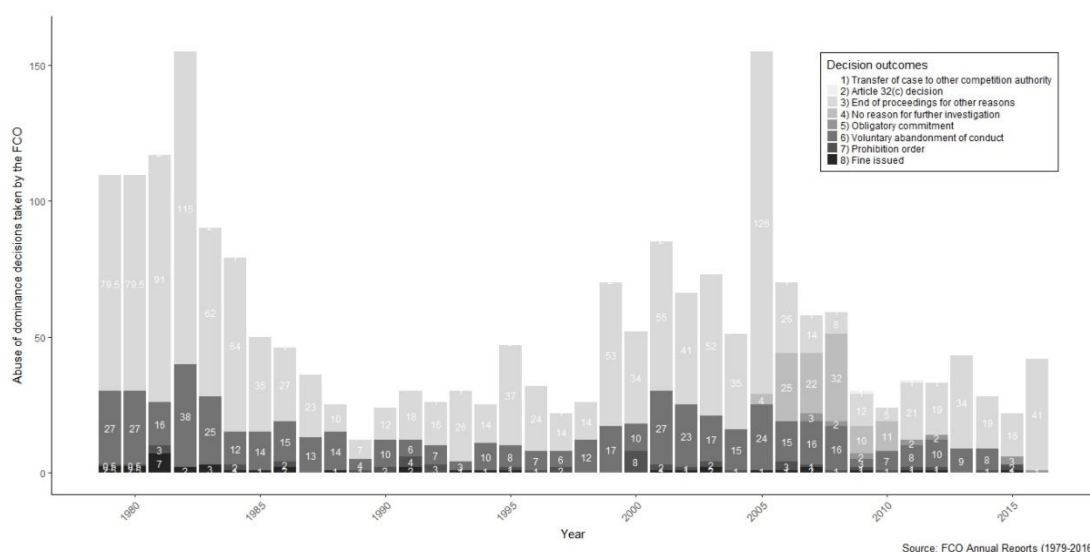
FCO enforces the anti-cartel provisions. The higher the unemployment level the less the FCO's activity to enforce the anti-cartel provisions in terms of successful prosecutions. It is noticeable that the unemployment rate alone allows to explain about 14 percent of variation in the FCO's enforcement activity over the 25 years covered by Model 6.

Model 7 finds support for Hypothesis 3 and the notion that the FCO, in its enforcement of the anti-cartel provisions, may also consider the promotion of the German export industries. The external balance is negatively associated with enforcement activity on a statistically significant level. The more positive Germany's trade balance, that is, exports outweigh imports, the lower the FCO's enforcement intensity which may be an expression of the political and economic weight and influence of the export industry and the broader interest to promote this industry. The external balance is able to explain about 14 percent of variation in cartel enforcement activity over 38 years. More specific, this finding supports Clougherty's (2005) model, according to which, competition authorities may apply a national wealth standard (as opposed to a global wealth standard) which sets incentives to apply less strict enforcement standards to the export industry as the gains mainly benefit domestic producers while the losses fall on foreign consumers. Finally, in Model 8 enforcement activity is regressed on all the factors found to be significant together. Unfortunately, the days to start a business- and unemployment variables are dropped due to the low number of observations that would have resulted in their inclusion. Model 8 performs reasonably well with an adjusted R square of 0.25 although none of the variables remain significant when tested together and the trade as percentage of GDP variable changes its sign.

Figure 6.5 below displays the annual number of cases and decision-making outcomes for the FCO's investigations into the abuse of a dominant position from 1979 to 2016. Similar as for the cartel decisions the first four outcome categories capture the transfer of a case to another competition authority and the end of an investigation without successful prosecution or the implementation of behavioural changes. The last three categories present cases of successful enforcement where the private actors voluntarily

changed their conduct and for which a prohibition order or fine was imposed upon them.

Figure 6.5: Abuse of dominance decisions by the FCO (1979-2016)



Broadly, also as regarding the abuse of a dominant position the FCO processes and investigates a relatively high number of annual cases. Furthermore, the number of investigated cases and successful enforcement appears in cyclical patterns. In other words, there is considerable variation in enforcement with periodically appearing ups and downs. As compared to cartel decision-making fewer cases conclude with the issuing of a fine order while a larger proportion of successful enforcement leads to the voluntary abandonment of the conduct in question.

In Germany, the models' ability to explain variation in enforcement activity is strongest in the area of the control and supervision of dominant businesses and monopoly. Table 6.3 below summarises the key regression results for the supervision of dominant businesses. The independent variables are again tested for their individual effects in models 1 to 7 and lagged for one year. Model 8 provides the final model in which enforcement activity is regressed on all the independent variables that are statistically significant.

Table 6.3: Explaining abuse of dominance enforcement by the FCO (1980-2016)

	Dependent variable:							
	Abuse of dominance enforcement $_t$							
Theory	Public interest / Market structure		Trade as substitute for competition policy	Politics	Business cycles		Export promotion	Final model
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Privatisation $_{t-1}$	-1.007							
	(3.483)							
Days to start business $_{t-1}$		0.452***						
		(0.137)						
Trade (% of GDP) $_{t-1}$			-0.056					
			(0.114)					
Government ideology $_{t-1}$				-4.339***				-4.206***
				(1.145)				(0.945)
GDP growth rate $_{t-1}$					0.083			
					(0.758)			
Unemployment (% of labour force) $_{t-1}$						2.392***		1.103
						(0.653)		(0.824)
External balance (% of GDP) $_{t-1}$							-1.197***	-0.568
							(0.371)	(0.482)
Constant	18.723**	2.314	19.734***	39.134***	15.270***	-5.766	17.220***	27.244**
	(6.966)	(3.204)	(6.262)	(6.039)	(2.016)	(5.275)	(1.404)	(9.545)
Observations	33	13	33	33	38	25	38	20
R^2	0.003	0.497	0.008	0.317	0.0003	0.368	0.224	0.643
Adjusted R^2	-0.029	0.451	-0.024	0.294	-0.027	0.341	0.203	0.577
Residual Std. Error	8.750 (df = 31)	5.319 (df = 11)	8.728 (df = 31)	7.244 (df = 31)	9.013 (df = 36)	6.050 (df = 23)	7.940 (df = 36)	4.665 (df = 16)
Note:								$^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$ Standard errors in parentheses.

The days required to start a business is again significant and shows the expected positive sign. As can be expected from the FCO's enforcement guidelines, the higher *de facto* barriers to market entry and competition the more active is the FCO in enforcing the provisions against dominant businesses and monopolists. Certainly, the variable measures restrictions to competition on a relatively high level of aggregation

and more detailed and, possibly, micro-level data for the relevant market would constitute additional evidence. However, the variable is significant on the 0.01 level and allows to explain remarkable 45 percent of variation in the FCO's enforcement activities.

The government ideology is negative significant, thus, supporting Hypothesis 4.3. More centre-right governments, that is, more specific, private market-oriented governments, are associated with a significant lower number of successfully enforced cases filed by the FCO. In Germany, the effect comes especially from the years where the CDU/CSU formed a government with the liberals (FDP) and, partly, also with the SPD. The Kohl government from 1982 to 1998, for example, is associated with a dramatic decrease in successful enforcement which increases under the coalition of SPD and Greens under chancellor Schroeder starting in 1998 and slightly resumes back to moderate levels under chancellor Merkel (who first formed a coalition with the FDP and later also with the SPD). The government ideology is significant on the 0.01 level and explains about 30 percent of variation in the data covering 33 years. Additional robustness checks using alternative measures for government ideology are reported in Table A.9 in the Appendix. The pattern holds. Centre-right governments are systematically associated with a lower- and centre-left governments with a higher number of enforcement activity against dominant businesses also when weighting government ideology by the seat share of the governing coalition and when using the measures on cabinet composition provided by the CPDS. Dependent on the model, the adjusted R square even increases to 0.55 in the maximum.

As regarding the causal mechanisms of political control, the appointment of ideological-close heads of agencies is a commonly discussed mechanism. When using 'classical' measures on the *de facto* political independence of competition authorities, that focus on the turnover rate of heads of agencies, the FCO performs very good and shows high levels of independence (Table A.10). Since 1958 the FCO did only have six different Presidents and only one of them, the current, Andreas Mundt, was appointed within six months after a general election. The appointment of Mundt, however, was not a classical political appointment because the government was

dissatisfied with his predecessor but rather to the contrary. In February 2010, Mundt was appointed because then-Economics Minister Rainer Brüderle (FDP) was so satisfied with Mundt's predecessor, Bernhard Heitzer, that he wanted him to work in the Ministry of Economics (Süddeutsche Zeitung 2010). This example also shows that turnover rates of heads of agencies may be low not necessarily because the government exerts little control over the agency but because heads of agencies act very much in accordance with the government's preferences.

Table A.11 in the Appendix tests for differences in enforcement activities during the terms of office of the Presidents by using dummy variables for each President of the FCO. The results, in tendency, corroborate that centre-right governments are associated with weaker enforcement against monopolists and a stricter approach against cartels and that the appointment process may be one of the mechanisms of political control but not necessarily to the extent as could be expected. The relationship is clearest for Ulf Böge who was the fourth President from 2000 to 2007. The presidency of Böge, who was appointed under the first Schroeder cabinet during a coalition government between the SPD and the Greens, is statistically significant associated with higher enforcement against monopolists and lower activity against cartels.

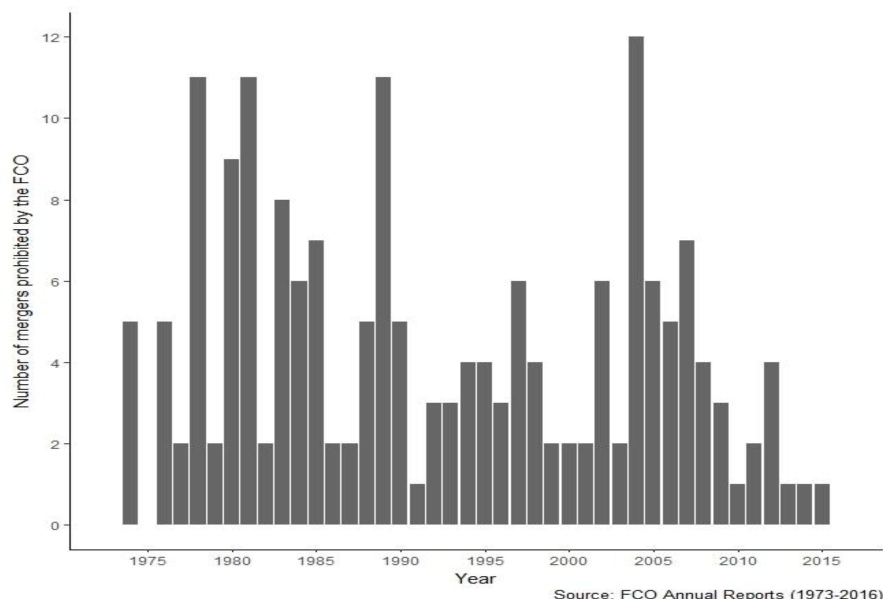
During the term of office of Wolfgang Kartte, the second President appointed under an SPD-FDP coalition, in contrast, the FCO enforced significantly more anti-cartel cases. This may be an expression of the difference that the coalition partner can make as the chancellor was from the SPD in both cases. Moreover, during Kartte's presidency the Minister of Economics, who holds direct supervising authority over the FCO, was from the FDP for most of the time while Böge mainly served under an SDP Economics Minister. The presidency of Kartte is also significantly associated with more mergers prohibited by the FCO. Finally, Mundt's term of office, who was appointed under the second Merkel cabinet by a CDU/CSU-FDP coalition, is associated with a lower number of merger prohibitions and less enforcement intensity against dominant businesses. Overall, the results for the Presidents of the FCO are not as strong as could be expected from Table 6.3 which may be also related to the rather

consensual nature of the appointment process in Germany where very controversial candidates are tried to be avoided in favour of candidates that, while setting priorities, find cross-party support.

Turning back to Table 6.3 the Stigler-Peltzman model is not supported by the findings (models 5 and 6). The GDP growth rate is positive but not significant and the unemployment level is significant but positive. This contradicts the expectation as the FCO shows higher enforcement activity against monopolists during times of rising unemployment levels. Model 7, however, is again negative significant supporting the view that the FCO may relax enforcement against dominant businesses the higher the influence and importance of the export industry becomes. In the final model, government ideology remains significant at the 0.01 level and, together with the unemployment level and the trade balance, explains about 58 percent of variation in the FCO's enforcement activities over 20 years. The days required to start a business are not included in the final model simply because this would result in a considerable reduction of the number of years covered.

The final area of competition policy enforcement which is investigated is merger control. For merger control, the FCO's annual reports contain information on the number of prohibited mergers since the introduction of merger control in Germany in 1973. Figure 6.6 below displays the annual number of mergers prohibited by the FCO from 1973 to 2016. Up until 2016 the FCO has prohibited a total of 182 mergers. On average, the FCO prohibits 4.14 mergers per year with considerable variation over time, however.

Figure 6.6: Merger prohibition decisions by the FCO (1973-2016)



The regression results for the FCO's enforcement of the merger control provisions are displayed below in Table 6.4. The independent variables are again lagged for one year and tested separately in models 1 to 8. The number of annual mergers notified to the FCO is an additional independent variable to capture general merger activity. Finally, the independent variables that are significant are added together in Model 9.

Table 6.4: Explaining merger enforcement by the FCO (1973-2016)

	Dependent variable:								
	Number of prohibited mergers $_t$								
Theory	Public interest / Market structure			Trade as substitute for competition policy	Politics	Business cycles		Export promotion	Final model
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Number of mergers notified to the FCO $_{t-1}$	-0.001								
	(0.001)								
Privatisation $_{t-1}$		-0.309							
		(1.177)							
Days to start business $_{t-1}$			0.246^{***}						

			(0.050)						
Trade (% of GDP) $_{t-1}$				-0.010					
				(0.037)					
Government ideology $_{t-1}$					-0.345				
					(0.496)				
GDP growth rate $_{t-1}$						0.042			
						(0.241)			
Unemployment (% of labour force) $_{t-1}$							0.807***		0.797***
							(0.225)		(0.236)
External balance (% of GDP) $_{t-1}$								-0.277**	-0.034
								(0.135)	(0.163)
Constant	5.115***	5.068**	-1.484	5.007**	6.245**	4.053***	-2.829	4.438***	-2.630
	(1.200)	(2.274)	(1.179)	(1.920)	(2.581)	(0.676)	(1.820)	(0.481)	(2.085)
Observations	43	39	13	39	39	44	25	44	25
R^2	0.015	0.002	0.683	0.002	0.013	0.001	0.358	0.091	0.360
Adjusted R^2	-0.009	-0.025	0.655	-0.025	-0.014	-0.023	0.330	0.070	0.301
Residual Std. Error	3.137 (df = 41)	3.184 (df = 37)	1.957 (df = 11)	3.183 (df = 37)	3.166 (df = 37)	3.188 (df = 42)	2.088 (df = 23)	3.040 (df = 42)	2.133 (df = 22)
Note:									*p<0.1; **p<0.05; ***p<0.01 Standard errors in parentheses.

Most crucially, the days to start a business are positive significant and the external trade balance is negative significant as expected. This sheds support to the economic rationale guiding enforcement which increases with *de facto* barriers to competition and the promotion of the export industry. These two factors are somehow the most consistently relevant across the three areas of competition policy enforcement (except for the days to start a business in the enforcement of the anti-cartel provisions). The unemployment level is again positive significant, thus, contradicting the expectation from the Stigler-Peltzman model. A possible explanation is that rather than dispersing the adjustment costs of a deteriorating economic situation among producers and consumers the FCO may be driven by the rationale to intensify enforcement in times of rising unemployment in order to extract some of the surplus of monopolists and to implement more competitive market structures. The other factors show no sign of

significance. In Model 9, the unemployment rate and the external trade balance are, at least, able to explain about 30 percent of variation in merger enforcement activity over 25 years.

Furthermore, generally, the enforcement data for Germany support Hypothesis 9 for the enforcement of the anti-cartel prohibition and the supervision of dominant businesses but Hypothesis 10 for the control of mergers. The enforcement of the prohibitions against anti-competitive agreements and the abuse of a dominant position decreases over time, thus, suggesting that the FCO may develop a more business-friendly approach over time. In the control of mergers, however, the number of mergers that are prohibited is remarkable stable over time despite large fluctuations in the number of notified mergers. This suggests that the FCO, besides having limited resources in the number of investigations and prosecutions, hesitates to either prohibit too many or too few mergers.

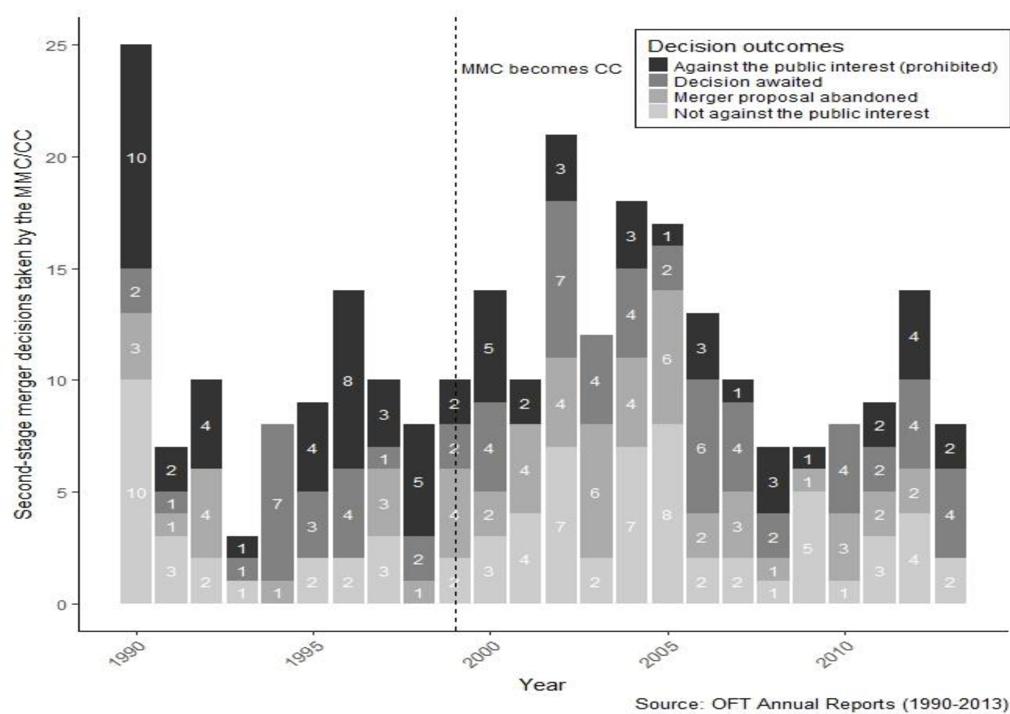
6.6.2 Explaining Variation in Enforcement Activity in the UK

The institutional structure of the UK competition policy regime experienced more changes over the post-war period. In the UK, several competition authorities, often simultaneously, were responsible for the enforcement of competition policy. For most of the time monopolies and mergers were investigated by the MMC while anti-competitive agreements were assessed by the RPC. In addition, the OFT, as third competition authority, was successively made responsible for first-stage monopolies, -mergers, and -anti-competitive agreements investigations which were then referred to the MMC and the RPC for final decision-making. It is only since 2014, that competition policy enforcement responsibilities in the UK are concentrated within a single competition authority, the CMA.

The existence of different competition authorities and the transfer of enforcement responsibilities to newly established institutions make the comparison and collection of enforcement data over time more difficult. Usually, the structure of the report and the data that are reported change with each competition authority. Sometimes, even if the competition authority remains the same the reported data change. In order to allow

for meaningful conclusions in time series statistical analysis it is important, however, that the same data are available for a minimum period of time such as, for example, 10 to 20 years. The annual reports of the OFT from 1986 to 2013 provide relatively detailed information on the number of first- and second-stage merger investigations as well as the different decision-making outcomes of the MMC/CC. Figure 6.7 below displays the total number of second-stage merger investigations by the MMC/CC from 1990 to 2013 broken down into four different outcome categories of each investigation: 1) those merger cases that were judged as against the public interest and, therefore, prohibited, 2) cases that have not yet been finally decided upon (decision awaited), 3) merger proposals that were abandoned by the private parties concerned during the course of second-stage investigations, and 4) the merger proposals that were cleared by the MMC/CC because they were not found to be against the public interest.[82]

Figure 6.7: Second-stage merger decision outcomes by the MMC/CC (1990-2013)



[82] The ‚public interest‘ was defined mainly, but not exclusively, as affected by those mergers that substantially lessen competition on the relevant market concerned.

From 1990 to 2013 the OFT referred a total of 272 cases to the MMC/CC for a second-stage merger investigation. Of those 272 cases, the MMC/CC prohibited 69 mergers which is an average of 2.9 mergers per year, whereas in 57 cases the merger proposal was abandoned voluntarily by the private parties concerned during the course of an investigation. Over the same period of time, a total of 76 mergers were cleared in second-stage merger investigations. Figure 6.7 suggests the existence of enforcement cycles that may be due to a possible co-variation with general merger activity or business cycles. However, the Pearson-correlation of the total number of second-stage merger investigations with the GDP growth rate is 0.08 and with general merger activity 0.37. Thus, these cycles may explain some but not all of the observed variation in second-stage investigations and the number of prohibited mergers.

Although not immediately visible in Figure 6.7 there is some evidence for changing enforcement intensities between the MMC and the CC and, correspondingly, between years under Conservative- and Labour political leadership respectively. For the years from 1990 to 2013 that are covered by the data from the OFT's reports the UK was governed by the Labour party from 1997 to 2010 while the remaining years were under Conservative-led governments. The MMC was transformed into the CC in 1999 (displayed with the dashed vertical line in Figure 6.7) just two years after the Labour government under Tony Blair took office. The average number of annually prohibited mergers is only 2.23 under Labour governments but amounts to 3.64 during years of Conservative leadership.[83]

Similarly, also when looking at the proportion of cases that have been prohibited among those referred to the MMC/CC, that is, the number of prohibited mergers divided by the total number of cases referred to in any given year, the MMC/CC seems to have been slightly more likely to prohibit a merger under Conservative governments. On average, under conservative governments around 32 percent of second-stage investigations concluded with the prohibition of the merger whereas under Labour governments only 20 percent of cases concluded with a prohibition

[83] Labour took office in 1997 but because it takes some time to implement preferred policy choices the numbers are calculated based on the years 1998 to 2010 for Labour governments.

order. The pattern is even slightly more pronounced when comparing enforcement decision-making between the MMC and the CC. The MMC concluded with the prohibition of a merger on average in 4.11 cases per year which translates into 37 percent of second-stage investigations whereas the CC only prohibited around 2.13 mergers per year (19 percent of cases).

Table 6.5: Merger prohibition decisions under different governments

	Conservative government (1990-1997, 2011-2013)	Labour government (1998-2010)	MMC (1990-1998)	CC (1999-2013)
Average number of prohibited mergers per year	3.64	2.23	4.11	2.13
Average proportion of prohibited mergers among second-stage investigations	0.32 (32%)	0.2 (20%)	0.37 (37%)	0.19 (19%)

Therefore, the abolishment of the MMC, despite its relatively well-regarded status and reputation among competition policy experts (e.g., Wilks 1999), and the establishment of the CC may have been an instrument by the Labour government to lock-in preferred policy choices into competition policy enforcement decision-making (Hypothesis 8). In the mid-1990s, there was no scandal or substantive criticism involving the MMC's decision-making, which may have required an institutional reform, but mainly the aim of the reform was to further improve the UK's competition policy regime. The government may not have necessarily wanted to 'generally weaken enforcement' but to implement new strategic directions which, however, leads to these observed changing enforcement intensities.

While a comparison of these descriptive statistics over different time periods suggests possible political influences and slightly changing enforcement intensities it remains open whether these impressions withstand more rigorous testing through regression analysis. Furthermore, also other factors may help explain the observed enforcement

cycles. Table 6.6 below summarises the key regression results for explaining variation in the number of mergers prohibited by the MMC and the CC from 1990 to 2013. The models are, again, structured around testing individually the different factors that may be hypothesised to influence enforcement activity and then, if relevant, adding them up together in the final model. The independent variables are all lagged for one year to account for possible endogeneity and reversed causality.

Table 6.6: Explaining merger enforcement by the MMC/CC (1990-2013)

	Dependent variable:										
	Number of mergers prohibited by the MMC/CC $_t$										
Theory	Public interest / Market structure				Trade as substitute for competition policy	Politics		Business cycles		Export promotion	Final model
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Number of domestic mergers in the UK $_{t-1}$	0.005**										0.004**
	(0.002)										(0.002)
Privatisation $_{t-1}$		-1.214									
		(5.465)									
Days to start business $_{t-1}$			0.401								
			(0.425)								
Number of mergers examined by the OFT $_{t-1}$				0.008**							
				(0.003)							
Trade (% of GDP) $_{t-1}$					-0.209						
					(0.167)						
Government ideology $_{t-1}$						0.569					
						(0.351)					
Competition Commission (CC) $_{t-1}$							-1.757*				-1.287
							(0.945)				(0.907)
GDP growth rate $_{t-1}$								0.416			
								(0.262)			
Unemployment (% of labour force) $_{t-1}$									0.155		
									(0.233)		
External Balance (% of GDP) $_{t-1}$										0.265	
										(0.452)	
Constant	-0.013	5.086	-2.593	0.710	13.533	-0.289	3.900***	2.047***	1.526	3.276***	1.148
	(1.247)	(10.017)	(4.880)	(1.007)	(8.561)	(2.013)	(0.722)	(0.705)	(1.661)	(0.847)	(1.468)

Observations	24	22	10	24	22	22	24	24	22	24	24
R^2	0.218	0.002	0.100	0.207	0.072	0.116	0.136	0.103	0.021	0.015	0.287
Adjusted R^2	0.183	-0.047	-0.012	0.171	0.026	0.072	0.097	0.062	-0.027	-0.029	0.219
Residual Std. Error	2.171 (df = 22)	2.552 (df = 20)	1.255 (df = 8)	2.186 (df = 22)	2.461 (df = 20)	2.403 (df = 20)	2.282 (df = 22)	2.326 (df = 22)	1.970 (df = 20)	2.436 (df = 22)	2.123 (df = 21)

Note: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parentheses.

The factors hypothesised to influence enforcement activity only poorly explain variation in the number of mergers prohibited by the MMC/CC. The number of annually prohibited mergers is relatively stable over time, thus, supporting Hypothesis 10, and the MMC/CC did not have any influence on selecting the mergers deemed critical for second-stage investigation. In other words, the mergers for which the MMC/CC conducted a second-stage investigation, and which possibly could be prohibited, were externally given by the OFT. Most of the explanatory factors such as the trade as substitute for competition policy rationale, the market-ideology of the government, business cycles, and the promotion of exports show no sign of having significantly influenced the MMC/CC's decision-making. Importantly, these non-findings shed support on the independence of the MMC/CC as neutral competition authority that may have focused on the economic merits of individual cases.

However, as suggested by the descriptive statistics, the establishment of the CC is significantly associated with a decrease in the number of prohibited mergers on the 0.1 level. Generally, this suggests that both the MMC and the CC, in their daily decision-making, may have been relatively independent from external non-economic factors but that the CC may have been established by the Labour government to lock-in a preferred enforcement approach. The enforcement of merger control became more lenient with the establishment of the CC. However, when it is controlled for the overall number of domestic mergers (Model 11) the establishment of the CC remains negative but is not anymore statistically significant. Therefore, the lower number of mergers prohibited by the CC may have also been partly driven by a lower number of mergers taking place during that time period.

As can be expected from a public interest perspective, the number of domestic mergers taking place in the UK economy is significantly positive associated with the number

of mergers prohibited by the MMC and the CC (Model 1). The more mergers are taking place the higher the number of mergers that are prohibited. From a simple normal probability distribution, it can be expected that the more mergers are taking place the higher the likelihood that, among the proposed mergers, is a growing number of mergers that pose anti-competitive problems in terms of critically increasing market concentration levels. Furthermore, higher merger activity generally indicates a trend towards market consolidation which bears the risk of higher market concentration levels. The competition authorities respond to such increasing merger activity by prohibiting more mergers.

Similarly, in Model 4, the number of mergers examined by the OFT in first-stage merger investigations is positively associated with the number of mergers prohibited by the MMC/CC. As the UK does not have a pre-merger notification requirement, that is, private parties that intend to merge are not formally obliged to notify the OFT, nor the CMA since 2014, about that intention, the merger screening activity by the OFT (now CMA) takes centre-stage in the detection of anti-competitive mergers. From a public interest perspective, it can be expected that the more mergers are taking place in the UK economy, the higher the merger screening activity by the OFT and, correspondingly, the higher the final number of mergers prohibited by the MMC/CC because more critical mergers that would substantially lessen competition on the relevant market are proposed, subsequently identified by the OFT and, finally, prohibited by the MMC/CC. More specific, the two factors capture different steps in the process of the detection of anti-competitive mergers in the UK in the absence of a pre-merger notification requirement. Given the data provided in the OFT's annual reports this process can be deconstructed more comprehensively as presented in the correlation matrix in Table 6.7 below.

Table 6.7: Correlation matrix: UK merger control

	Domestic mergers	Mergers examined by the OFT	Mergers identified by the OFT to fall under UK merger control	Mergers referred by the OFT to the MMC/CC for second-stage investigation	Mergers prohibited by the MMC/CC

Domestic mergers	1.0000000	**0.2862272**	0.3306141	0.3722480	0.2058898
Mergers examined by the OFT	0.2862272	1.0000000	**0.9745964**	0.2465253	0.4273665
Mergers identified by the OFT to fall under UK merger control	0.3306141	0.9745964	1.0000000	**0.2469342**	0.4898117
Mergers referred by the OFT to the MMC/CC for second-stage investigation	0.3722480	0.2465253	0.2469342	1.0000000	**0.5594525**
Mergers prohibited by the MMC/CC	0.2058898	0.4273665	0.4898117	0.5594525	1.0000000

In a first step, the more mergers are taking place in the UK economy the more mergers are examined by the OFT in order to identify which of the proposed mergers require scrutiny as regarding their anti-competitive effects, that is, which mergers fall under the merger control regime under current UK competition rules. With a Pearson-correlation of 0.97 the number of mergers identified by the OFT to fall under UK merger control rules highly correlates with the number of mergers examined by the OFT. In a second step, the OFT conducts a more detailed first-stage investigation of those mergers to fall under UK competition rules to identify those critical mergers that are likely to substantially lessen competition on the relevant market, that is, to raise serious competition concerns.

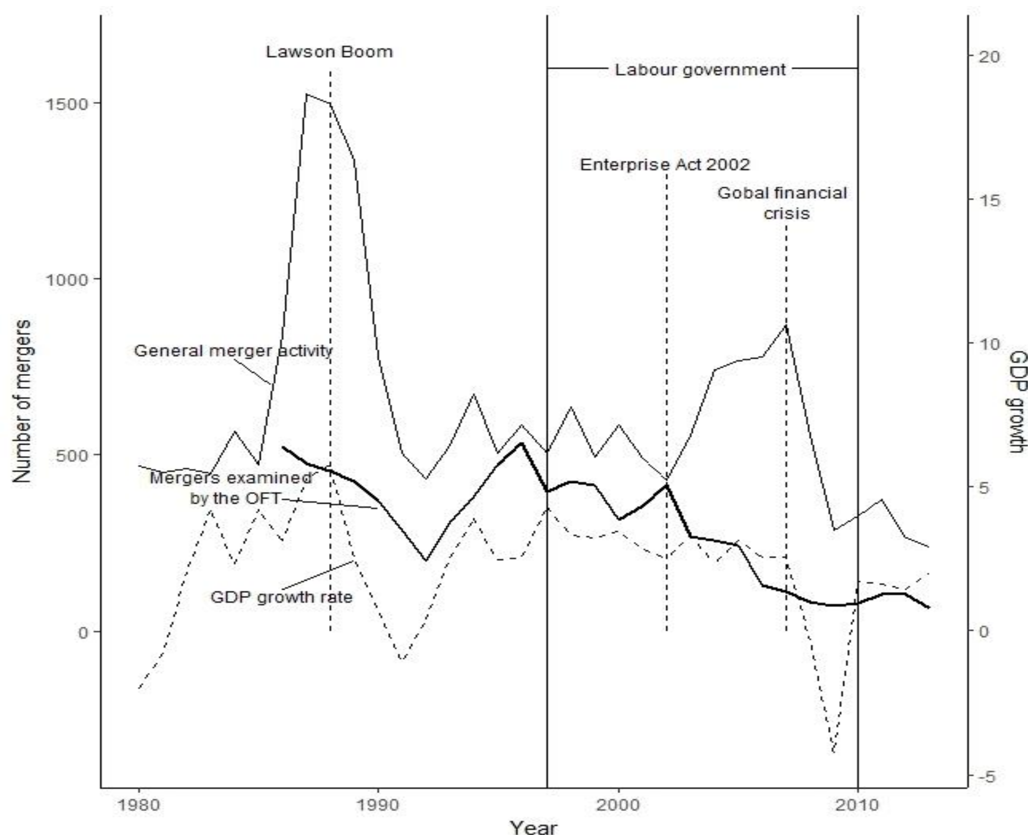
Those critical mergers are then referred to the MMC/CC for a second-stage decision and the final examination of the merger. Here, again, albeit to a lesser extent, the number of mergers referred to the MMC/CC positively correlates with the number of mergers identified to fall under UK competition rules with a Pearson-correlation of 0.25. In the final step, the MMC/CC conducts a second-stage investigation of the most critical mergers referred to it and prohibits the most serious of them respectively those that require a prohibition under current UK competition rules. The final number of mergers prohibited, again, positively correlates with the number of mergers referred to the MMC/CC by the OFT. The more mergers are referred to the MMC/CC the more mergers the competition authority finally prohibits. By the establishment of the CMA

the basic procedure and steps remain the same but are only conducted in-house within different working units of the CMA (Chisholm and Heideman 2017).

It is striking to note, that the lowest correlation values in Table 6.7 can be observed between 1) the number of domestic mergers and the number of mergers examined by the OFT (column three) and 2) the number of mergers identified by the OFT to fall under UK competition rules and the number of mergers referred to the MMC/CC for second-stage investigation (column four). It is at these two points where the OFT and the MMC/CC are likely to lack resources to fully process and investigate the high number of annual mergers. In this sense, the lower correlation values in these two columns do not necessarily imply a weaker relationship but rather may suggest a lack of enforcement which is likely caused by missing resources. However, each of the steps in the process of the detection of anti-competitive mergers also provides an opportunity for political influence and discretionary decision-making. In either way, the data strongly suggest that the OFT's screening activity takes centre-stage in the detection of anti-competitive mergers which, perfectly, corresponds to the general merger activity in the UK economy.

However, when plotting the merger screening activity by the OFT against the number of UK domestic mergers over time it is clearly visible that this relationship may not hold over the whole period (see Figure 6.8 below). Specifically, after 2002, with the adoption of the Enterprise Act, there is a diverging trend between general merger activity and the OFT's merger screening activity. From 1986 to 2002 there is a strong positive co-movement between general merger activity and the number of mergers screened by the OFT. The more (less) mergers are taking place the higher (lower) the number of mergers investigated by the OFT in first-stage screening activity. However, from 2002 onwards, there is a clear break in this pattern with general merger activity sharply rising while the OFT's screening activity markedly slows down.

Figure 6.8: UK mergers and the OFT's screening activity



When considering the previous patterns on the relationship between the OFT's screening activity and the number of mergers prohibited by the MMC/CC this would imply a decrease in the number of prohibited mergers from 2002 onwards despite a general increase in merger activity. Figure 6.8 also displays the GDP growth rate on the right scale axis and the years of Labour government from 1997 to 2010. There is general a strong positive co-movement between merger activity and GDP growth where merger boom periods such as those peaking in 1987 and 2007 precede an economic recession. The years of Labour government seem to be associated with a general decline in the OFT's screening activity.

Both of these factors, the Labour government and GDP growth, are also statistically significant in more formal analysis. Table 6.8 below summarises the key regression results for explaining variation in the OFT's merger screening activity from 1986 to 2013. The explanatory factors are, again, first tested individually and lagged for one year to account for possible endogeneity. The final model (Model 10) consists of all

independent variables that have been found to be statistically significant when tested individually.

Table 6.8: Explaining merger screening activity by the OFT (1986-2013)

	Dependent variable:									
	Number of mergers examined by the OFT $_t$									
Theory	Public interest / Market structure			Trade as substitute for competition policy	Politics		Business cycles		Export promotion	Final model
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Number of domestic mergers in the UK $_{t-1}$	0.152*									-0.057
	(0.088)									(0.088)
Privatisation $_{t-1}$		-105.362								
		(251.140)								
Days to start business $_{t-1}$			60.785***							
			(12.169)							
Trade (% of GDP) $_{t-1}$				-18.057**						-10.209*
				(8.733)						(5.896)
Government ideology $_{t-1}$					51.586***					27.684*
					(16.392)					(15.852)
Enterprise Act $_{t-1}$						-259.503***				
						(32.468)				
GDP growth rate $_{t-1}$							46.293***			41.793***
							(12.099)			(10.644)
Unemployment (% of labour force) $_{t-1}$								21.815		
								(17.536)		
External balance (% of GDP) $_{t-1}$									63.633***	36.732*
									(21.398)	(19.968)
Constant	195.741***	501.370	-571.289***	1,233.517**	10.944	397.412***	186.047***	110.462	386.390***	661.795*
	(63.798)	(452.965)	(139.801)	(446.610)	(98.709)	(20.350)	(37.065)	(124.777)	(39.793)	(340.515)
Observations	28	26	10	26	26	28	28	22	28	26
R^2	0.104	0.007	0.757	0.151	0.292	0.711	0.360	0.072	0.254	0.743
Adjusted R^2	0.070	-0.034	0.727	0.116	0.263	0.700	0.336	0.025	0.225	0.679

Residual Std. Error	147.663 (df = 26)	148.865 (df = 24)	35.946 (df = 8)	137.651 (df = 24)	125.708 (df = 24)	83.906 (df = 26)	124.782 (df = 26)	147.999 (df = 20)	134.763 (df = 26)	82.900 (df = 20)
Note:										*p<0.1; **p<0.05; ***p<0.01 Standard errors in parentheses.

The number of domestic mergers in the UK and the days required to start a business are statistically significant positive related to the number of mergers screened by the OFT. Thus, supporting the public interest perspective on competition policy and corresponding to the laws and enforcement guidelines according to which higher concentration levels and indirect barriers to effective competition lead to a higher likelihood for the prohibition of a merger and higher scrutiny by competition authorities. The more mergers are taking place in the preceding year and the more days are required to start a business (suggesting economy-wide impediments to effective competition in terms of market entry) the more mergers are scrutinised as regarding their anti-competitive effects by the OFT in the following year. Although covering only ten years the market entry variable as captured by the days required to start a business in Model 3 is able to explain remarkably 73 percent of variation in the OFT's screening activity.

The trade as percentage of GDP ratio is negative significant. Therefore, the rationale of the 'trade as substitute for competition policy' argument seems to have influenced the OFT's merger screening decision-making. The more the UK economy is exposed to international trade and -competition the lower the number of mergers screened as for their anti-competitive effects by the OFT in the following year. The statistical findings also reveal evidence for a likely political influence exerted over the OFT's merger screening activity, thus, supporting the impressions of Figure 6.8. The government ideology in Model 5 is positive significant. More conservative governments are associated with higher merger screening activity by the OFT which, reversely, reduces its merger control activities under Labour governments. The government ideology variable accounts for 26 percent of variation over the 26 years covered in Model 5. Similarly, the Enterprise Act of 2002, which was enacted under a Labour government, is negatively associated with the number of mergers screened by the OFT on a 0.01 level of statistical significance (Model 6).

Table A.15 in the Appendix reports tests for the effects of heads of agencies on enforcement decision-making. Generally, the results do not strongly support that the appointment of heads of agencies is an important mechanism of political control in UK competition policy enforcement. For the MMC/CC, none of the terms of office of individual heads of agencies is associated with a statistically significant change in enforcement decision-making. In the case of the OFT, the terms of office of Gordon Borrie (1976-1992) and Bryan Carsberg (1992-1995), which were appointed under a Labour and Conservative government respectively, are both positive associated with an increase in the OFT's merger screening activity. Contrary, the term of office of Philip Collins (2005-2014), the last Chairman of the OFT who was appointed by a Labour government, is associated with a statistically significant decrease in screening activity. The appointment of Collins may have helped to implement a new softer screening approach.

The OFT also shows some responsiveness to business cycles as expected by the Stigler-Peltzman model of regulation. In Model 7, the GDP growth rate is statistically significant positive associated with the number of mergers scrutinised by the OFT and allows to explain around 34 percent of variation over 28 years. The OFT seems to increase enforcement activity in times of economic expansion and growth but subsequently decreases merger screening activity in times of a deteriorating economic situation and declining growth rates to disperse the adjustment costs among producers and consumers. In other words, in times of economic crisis, or declining growth rates more generally, the OFT reduces its merger control activities and, therefore, allows more mergers to take place to reduce the burden on producers and to allow for market consolidation which may also include a more positive inclination towards failing firm defenses.

The promotion of the export industry does not seem to be a particular concern of the OFT. At least, in Model 9, contrary to the expectation, the external balance as percentage of GDP is positive associated with the OFT's screening activity. The more positive the UK's trade balance the higher the OFT's screening activity which may

rather counteract the success of the UK's export industry. Overall, and in comparison to the FCO's merger control enforcement activity where an export-promoting activity was confirmed, this finding may support prominent notions that often portray Germany as more (politically-induced) export-oriented than countries such as the UK. Finally, the final model displayed in the last column of Table 6.8 confirms the relevance of most explanatory factors even when it is controlled for the other factors and is able to explain around 68 percent of variation in the OFT's screening activity.

Most notably, Model 10 shows that factors such as the 'trade as substitute for competition policy' argument, the ideology of the government, and the GDP growth rate are not very sensitive to the inclusion of other variables and remain statistically significant even when it is controlled for the number of domestic mergers. This is important because, as is visible in the correlation matrix in Table 6.7 and Figure 6.8, there is a high functional correlation between the number of domestic mergers and the OFT's screening activity. Therefore, the years of Labour government may have simply coincided with a lower number of general merger activity simply implying a lower externally given workload for the OFT. However, Model 10 shows that Conservative governments, lower exposure to international trade, and higher GDP growth rates are associated with higher merger screening activity even if it is controlled for general merger activity.

6.7 Conclusion

This chapter provided the two case studies on the enforcement of competition policy in Germany and the UK. Most crucially, the case studies confirm the cross-country findings reported in Chapter 5, notably, that different legal systems and types of capitalism develop different competition policy models, for the enforcement practices of the British and German competition authorities. Specifically, whereas the UK more clearly adopted the SLC approach of the US, German competition authorities continue to rely on a 'market dominance' test for the assessment of anti-competitive conduct and market structure. Furthermore, the enforcement activities of the competition authorities of both countries show some responsiveness to political factors and business cycles. The case studies, therefore, provide supporting evidence to the Stigler-

Peltzman model of regulation and question the high levels of political independence usually ascribed to the competition authorities of the two countries. Although the enforcement of competition policy in the UK and Germany may have become depoliticised and focused on economic criteria other, non-economic factors, continue to matter.

The findings bear some important implications and possible avenues for further research. First, the finding that the legal system and type of capitalism may not only affect formal provisions but also result in different enforcement approaches provides a more comprehensive picture of institutional complementarities. Furthermore, future research may further explore the extent to which different enforcement practices can be observed more systematically across legal systems and types of capitalism, that is, across the whole sample of LMEs and CMEs, on the one hand, and common law and civil law countries, on the other hand. Second, the finding of political influence, which may be exercised less noisy than in other countries, points to possible ways to improve competition policy enforcement. Perfectly, competition authorities should only respond to market distorting business activity and ensure the functioning of competitively organised markets. In view of the general declining trend in enforcement activity and the rather constant and low number of prohibited mergers this may mean to resume a more activist enforcement strategy. However, the field of competition policy also poses some paradoxes. For example, the relaxation of enforcement in times of economic crisis may not only further producer interests but also contribute to a more competitive market structure in the long-run as more firms are able to stay in the market. The economic effects of such a policy may also be fruitfully investigated in future research.

7 Conclusion

This thesis investigated the economic, political, and institutional factors that shape the development of competition policy. By making use of the CLI and having collected original data on the enforcement activities of the British and German competition authorities the thesis provides new evidence on the factors that explain variation in formal competition laws and their enforcement over time. The better understanding of competition policy is crucial for the improvement of the policy and the macroeconomic regulatory framework more broadly. The main argument of the thesis is that competition policy is a functional regulatory response to increased private market activity and the accompanying rise in welfare-reducing business practices. In that process, however, legal systems and types of capitalism mediate the functional pressure which leads to the adoption of different competition policy models. Furthermore, the thesis provides new evidence that, even in such highly acclaimed competition policy regimes such as those of the UK and Germany, the enforcement of competition policy is subject to economic and political pressures and influences.

Although the thesis adopts a rational-institutional explanatory framework it has to be recognised that the adoption and proliferation of competition policy is a marked instance of norm change. This change, however, was not abrupt but rather incremental. For centuries, cartels and monopolies were seen as legitimate and as contributing to public policy objectives such as low and stable prices and high employment (Freyer 1992; 2006; McGowan 2010; Harding and Joshua 2010). During the nineteenth century, however, a rethinking occurred. At the turn of the nineteenth century, first in the US and Canada, and later also in continental European and other countries, legislations were adopted that increasingly prohibited and controlled business practices that unduly restrict competition and supposedly lower economic welfare.

The reasons are manifold but mainly may be related to a combination of ideational changes, that is, new economic theories, that linked economic problems such as fluctuating market conditions to the existence of anti-competitive practices and complaints from competitors about the negative effects of prevalent business practices

by more powerful companies. Both of these factors led to an increased awareness and change in attitude among legislators, and society more broadly, regarding the effects of cartels and monopolies on economic welfare. Despite this change in attitude, however, it remains controversial which business practices are likely to reduce economic welfare and, therefore, should be prohibited. Still today, there are good reasons for the possible beneficial effects of certain monopolies and cartel-like agreements. Besides an agreement on the negative effects of what came to be known as hard-core cartels (i.e., horizontal agreements between competitors to fix prices, product quantities, sales areas or customer groups) almost each area of competition policy remains contested in one way or the other.

The controversial nature of the anti- and pro-competitive effects of many business practices, and even the welfare effects of competition in itself, leaves considerable scope for administrative and political discretion. Furthermore, it also leads to relatively high levels of variation in the regulatory framework across countries and within the same country over time. Previous large-N quantitative studies have focused on investigating the factors that explain the adoption of competition policy (Palim 1998; Kronthaler and Stephan 2007; Forslid, Häckner, and Muren 2011; Parakkal 2011; Parakkal and Bartz-Marvez 2013; Weymouth 2016). However, once competition policies are adopted there is considerable variation in the strictness and scope of formal provisions and their application in the enforcement process. In most countries and jurisdictions such as the EU it took about 10 to 20 years until formal provisions were really enforced in practice.

Among those countries that have competition policies in place the competition laws differ considerably in the range of agreements and abusive practices that are prohibited. Some laws, for example, only prohibit horizontal price-fixing agreements or so-called hard-core cartels while others extend the prohibition to a vast range of horizontal and vertical agreements. This thesis is the first study to explain variation in the strictness and scope of competition laws across countries and over time by making use of the CLI (Bradford and Chilton 2018) for a sample of up to 197 countries over the period from 1890 to 2010. The thesis finds that variation in the strictness and scope

of formal competition laws can be explained by levels of privatisation and democracy and that domestic-institutional factors, notably, the legal origin and type of capitalism of a country, seem to mediate common functional pressures for the adoption of competition laws. Furthermore, the thesis produces some mixed findings for the political ideology of government and confirms the relevance of several factors found in previous studies to influence the adoption of competition policies such as the level of economic development, country-size, and membership in international organisations for a broader sample of countries and years.

The privatisation of the economy and the democratisation of society are key factors leading to the adoption of competition laws and an increase in the strictness and scope of formal provisions over time. This finding is in line with some previous studies (Palim 1998; Kronthaler and Stephan 2007; Parakkal and Bartz-Marvez 2013) but confirms the relationship for a broader sample. The individual effects of these two factors are difficult to disentangle but generally the thesis finds an independent effect of both factors which do not seem to matter only in conjunction (Parakkal and Bartz-Marvez 2013). Historically, capitalism and democratisation often developed together. When countries adopted democratic political institutions, they usually also moved towards capitalist modes of production and higher levels of private economic ownership or vis versa.

Generally, the thesis' findings suggest that the privatisation of the economy leads to an increase in market distorting business activity due to the accumulation of market power over time to which governments respond by expanding the scope and strictness of competition policy. However, democratic political institutions are likely to constitute a key factor for competitors and consumers to increase their political representation and raise concerns over existing anti-competitive practices. In the words of Parakkal and Bartz-Marvez (2013), democracy increases the winning-coalition required for (re-)election and thereby the political influence of consumers. In more authoritarian states, there is more room for governments to possibly ignore consumer interests or to solve the economic problems, for example, in the form of market power and business strategies that are against the public interest, by more direct economic

regulation instead of competition policy. While privatisation establishes a functional requirement for competition policy democracy enables broader groups in society to achieve political representation and pro-consumer policies.

For the political ideology of the government the thesis produces some mixed findings. Most studies expect centre-left governments to show a higher commitment to the regulation of markets by means of competition policy due to their higher inclination towards state interventionism and, possibly, pro-consumer outlook (e.g., Parakkal 2011; Weymouth 2016). However, the rhetoric of competition does not easily fit with socialist ideology and the pursuit of competitive markets, which may also concern state-induced distortions of competition, may also find support among liberal and conservative voters and politicians. The time series regression results generally find conservative and centre-right governments to be associated with stricter competition laws (although not always on a statistically significant level). Furthermore, however, a specific contribution of the thesis is to theorise and find empirical support for different political influences in the different areas of competition policy. Specifically, in Germany, on the level of enforcement activity, centre-left governments are associated with a shift in enforcement priority away from the control of anti-competitive agreements towards the control of the abuse of a dominant position.

The thesis also finds legal origins (La Porta, Lopez-de-Silanes, and Shleifer 2008; Reitz 2009) and varieties of capitalism (Hall and Soskice 2001) to impact upon the scope and strictness of formal competition laws. Therefore, the thesis provides supporting evidence for studies that expect domestic-institutional factors to mediate global pressures and those that expect different types of capitalism to develop also complementary sets of institutions in the regulatory domain (Guidi, Guardiancich, and Levi-Faur 2020). The findings suggest that dependent on the legal system (common law vs. civil law) and primary mode of coordinating economic activity (market vs. strategic coordination), countries develop distinct instruments and enforcement approaches to respond to similar economic challenges, most notably, in this case, the existence of market distortions due to market power.

Common law countries and LMEs are associated with stricter and more far-reaching competition laws than civil law countries and CMEs. Due to higher levels of market distorting activities, and the absence of alternative means of control through regulation or coordination by inter-firm and business-labour relations, common law countries and LMEs are faced with a higher functional need for competition policy regulation. In LMEs there is a higher functional need and institutional fit for strong competition policy to re-enforce comparative institutional advantages based on individualised competition. Furthermore, the use of economic theory and a 'substantial lessening of competition' approach seem to fit with pro-market governance, and higher levels of regulatory independence and judicial discretion that are generally prevalent in common law countries.

In contrast, civil law countries and CMEs are associated with lower levels in the strictness and scope of competition laws, especially as regarding the prohibition of anti-competitive agreements. While for CMEs there is also a functional need to control market power, competition policy bears the risk of distorting important coordinative capacity by prohibiting practices that constitute the core institutional comparative advantages of CMEs. For example, cross-shareholdings, interlocking directorates, and long-term institutionalised relationships between firms and between business and labour are all constitutive parts of CMEs' institutional advantages but can raise competition concerns under the scrutiny of US antitrust authorities. Furthermore, to some extent, a stronger influence of labour unions and the embeddedness of firms in coordinative networks with other firms that is characteristic of CMEs can be a source of democratic control and, thereby, substitute the need for strong outside intervention by competition authorities.

However, this is not to say that competition policy is not required in CMEs. Labour unions may also be driven by a profit motive to ensure 'monopolistic wages' (e.g., Guidi and Karagiannis 2016) and monopolists may abuse their dominant positions. CMEs such as Germany are fierce prosecutors of hard-core cartels. Rather, the legislative framework in CMEs aims at controlling and prohibiting market distortions that reduce economic welfare without negatively affecting institutional

complementarities. Generally, the more structured, hierarchical, and statutory approach of civil law countries fits with the 'market structure' approach which guides the enforcement of competition policy in CMEs. The laws specify clearly defined criteria and market share thresholds which trigger intervention by competition authorities.

Furthermore, the thesis investigates the factors that explain variation in the enforcement activities of the British and German competition authorities. So far, there are only two studies on the enforcement activities of the British and German competition authorities and these do generally not consider the influence of political factors (Davies, Driffield, and Clarke 1999; Lauk 2003). The study of enforcement activities is a useful complement to the analysis of formal competition laws. In some countries, formal competition laws may contain far-reaching prohibitions which are, however, only insufficiently enforced in practice. Furthermore, the study of enforcement activities enables to test predictions from the Stigler-Peltzman model of regulation and to investigate the influence of economic and political variables on the level of enforcement. The study of enforcement data is also a useful complement to existing indexes of the formal and *de facto* independence of competition authorities (Gilardi and Maggetti 2011; Maggetti 2012; Hanretty and Koop 2013; Koop and Hanretty 2018; Guardiancich and Guidi 2016; Guidi 2014; 2015; 2016).

The thesis finds that the enforcement activities of the British and German competition authorities show some responsiveness to business cycles and changing political majorities and an overall decreasing trend in enforcement intensity. Although the US is often argued to have weakened its competition policy principles relative to the EU (e.g., Ergen and Kohl 2019) the thesis reveals that also some key European competition authorities seem to have relaxed enforcement over time. This may be due to a perceived need to relax enforcement in view of increased competition from countries such as China, a general retreat of pro-competitive ideology or the development of a more pro-business regulatory approach over the life cycle of the competition authorities (Bernstein 1955). Generally, the relaxation of competition policy in an economy as important as the US may also set incentives for other countries to follow.

However, as long as the enforcement of competition policy is seen as improving economic performance by stipulating efficiency and innovation this poses important questions for a possible need to revitalise competition policy. This may be done without undermining the comparative institutional advantages of specific legal systems and types of capitalism and without undermining the international competitiveness of domestic industries.

For both countries, the UK and Germany, the thesis also finds some influence of business cycles (gdp growth rate, unemployment) and trade variables (trade balance) as well as the government in power on the enforcement of competition policy. This generally confirms the role of political factors in the enforcement of competition policy and questions the high levels of political independence usually ascribed to the British and German competition authorities. Rather, in view of the thesis' findings, political influence may be less noisy in those countries and primary take place through changing enforcement guidelines and priority settings instead of, for example, publicly making political appointments. From an economics perspective, the responsiveness of competition policy enforcement to political factors bears the risk of lowering economic welfare. Inefficient firms may be protected and practices and mergers that reduce total welfare or suppress innovation may be tolerated due to political considerations. However, from a political science perspective, political legitimacy and accountability does not only stem from economic efficiency (Majone 1999). Although economic welfare is an important reference point, in the extreme, a democratically elected government may well be legitimated to sacrifice economic efficiency for other public policy goals.

The thesis also opens new avenues for further research. The study of enforcement activities provides a useful complement to formal competition laws and existing indexes on the formal and *de facto* independence of competition authorities. In this regard, more data collection efforts on the enforcement activities of competition authorities, and other regulatory agencies, and the investigation of the factors that drive variation therein, may enrich our understanding of regulatory governance across countries and sectors. The investigation of enforcement activities may reveal more

subtle means of political influence and long-term trends that characterise regulation and which, consequently, may also impact upon regulatory and economic performance. Broadly, the influence of changing enforcement intensity and its adjustment to business cycles is not yet fully addressed in the literature. For example, due to a lack of enforcement data, there is no systematic research on the effects of relaxation of competition policy enforcement in times of economic downturns on economic performance. Furthermore, subsequent studies may further work out the factors driving the diffusion and variation of competition policy and the implications of different legal systems and types of capitalism for an effective regulatory framework in competition policy.

The findings of the thesis also have important implications for the developmental discourse and attempts for the establishment of a global competition policy within fora such as the WTO. Besides theoretical arguments, the advocacy for independent competition authorities in developing countries is empirically based on the experience of countries such as the US, the UK, and Germany that are argued to perform better since they are more insulated from electoral politics. However, if, as the results suggest, the competition authorities may not be as independent as usually suggested this argumentation may certainly be questioned. At least, the pros and cons of political responsiveness and the adjustment of enforcement to broader economic trends and business cycles may need to be reconsidered. The establishment of a global competition authority may improve economic welfare by solving the dilemma of narrow national perspectives in the control of market power. But such an endeavour would need to take into consideration different legal systems and types of capitalism, that is, continue to allow different competition policy models to co-exist, and re-enforce rather than distort existing comparative institutional advantages.

Appendix

Table A. 1: Pooled OLS regression with country- and year fixed-effects: Testing for the party composition of governments

	Dependent variable:					
	Competition Law Index (CLI) $_{t}$					
	(1)	(2)	(3)	(4)	(5)	(6)
Government ideology (ParlGov) $_{t-1}$	0.001					
	(0.003)					
Government ideology weighted by seat share (ParlGov) $_{t-1}$		0.0001				
		(0.003)				
Cabinet posts of centre-right parties as % of total cabinet posts (CPDS) $_{t-1}$			0.0003**			0.0003**
			(0.0001)			(0.0001)
Cabinet posts of centre parties as % of total cabinet posts (CPDS) $_{t-1}$				-0.0004***		
				(0.0002)		
Cabinet posts of centre-left parties as % of total cabinet posts (CPDS) $_{t-1}$					0.00000	
					(0.0001)	
Privatisation $_{t-1}$						0.300***
						(0.098)
English legal origin						0.082
						(0.100)
Privatisation x English legal origin $_{t-1}$						0.280**
						(0.136)
Democracy (Polity5) $_{t-1}$						0.030***
						(0.005)
GATT/WTO $_{t-1}$						0.065**
						(0.026)
GDP per capita (log) $_{t-1}$						0.016
						(0.032)
Population (log) $_{t-1}$						-0.027
						(0.078)
Time trend	0.008***	0.008***	0.008***	0.008***	0.008***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Constant	-15.671***	-15.675***	-15.550***	-15.402***	-15.471***	-11.715***
	(1.339)	(1.340)	(1.472)	(1.471)	(1.475)	(2.078)
Countries	37	37	36	36	36	34
Years	10-65	10-65	10-50	10-50	10-50	10-50
Observations	1,677	1,677	1,382	1,382	1,382	1,286
R^2	0.801	0.801	0.799	0.799	0.798	0.798

Adjusted R^2	0.788	0.788	0.785	0.786	0.785	0.783

Note: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$
Standard errors in parentheses.

Table A. 2: Pooled OLS regression with country- and year fixed-effects: Testing for the party composition of governments in the control of monopoly and anti-competitive agreements

	Dependent variable:									
	Control of the abuse of a dominant position (monopoly) $_t$					Prohibition against anti-competitive agreements $_t$				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Government ideology (ParlGov) $_{t-1}$	0.008^{**}					0.003				
	(0.004)					(0.003)				
Government ideology weighted by seat share (ParlGov) $_{t-1}$		0.004					0.003			
		(0.004)					(0.003)			
Cabinet posts of centre-right parties as % of total cabinet posts (CPDS) $_{t-1}$			0.0004^{**}					0.0002^{*}		
			(0.0002)					(0.0001)		
Cabinet posts of centre parties as % of total cabinet posts (CPDS) $_{t-1}$				-0.0005^{**}					-0.0001	
				(0.0002)					(0.0002)	
Cabinet posts of centre-left parties as % of total cabinet posts (CPDS) $_{t-1}$					-0.0002					-0.0001
					(0.0002)					(0.0001)
Time trend	0.009^{***}	0.009^{***}	0.011^{***}	0.011^{***}	0.011^{***}	0.006^{***}	0.006^{***}	0.005^{***}	0.005^{***}	0.005^{***}
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

Constant	-17.511***	-17.492***	-20.642***	-20.441***	-20.587***	-11.774***	-11.740***	-10.164***	-10.072***	-10.146***
	(1.754)	(1.757)	(2.028)	(2.029)	(2.032)	(1.381)	(1.381)	(1.584)	(1.586)	(1.586)
Countries	37	37	36	36	36	37	37	36	36	36
Years	10-65	10-65	10-50	10-50	10-50	10-65	10-65	10-50	10-50	10-50
Observations	1,677	1,677	1,382	1,382	1,382	1,677	1,677	1,382	1,382	1,382
R^2	0.742	0.741	0.699	0.699	0.698	0.762	0.762	0.744	0.743	0.743
Adjusted R^2	0.725	0.725	0.680	0.679	0.678	0.747	0.747	0.727	0.727	0.727

Note: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parentheses.

Table A. 3: Pooled OLS regression with country- and year fixed-effects: Testing for legal origins

	Dependent variable:				
	Competition Law Index (CLI) $_t$				
	(1)	(2)	(3)	(4)	(5)
English legal origin	0.113***				
	(0.024)				
Socialist legal origin		-0.019			
		(0.025)			
French legal origin			-0.113***		
			(0.024)		
German legal origin				0.160***	
				(0.024)	
Scandinavian legal origin					0.246***
					(0.020)
Time trend	0.004***	0.004***	0.004***	0.004***	0.004***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Constant	-8.249***	-8.249***	-8.137***	-8.249***	-8.249***
	(0.438)	(0.438)	(0.439)	(0.438)	(0.438)
Countries	186	186	186	186	186
Years	14-123	14-123	14-123	14-123	14-123
Observations	12,372	12,372	12,372	12,372	12,372
R^2	0.688	0.688	0.688	0.688	0.688
Adjusted R^2	0.680	0.680	0.680	0.680	0.680

Note: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parentheses.

Table A. 4: Pooled OLS regression with country- and year fixed-effects: Testing for Varieties of Capitalism

	Dependent variable:					
	Competition Law Index (CLI) $_t$					
	(1)	(2)	(3)	(4)	(5)	(6)
LMEs	0.460***					
	(0.020)					
CMEs		-0.460***				
		(0.020)				
MMEs			-0.217***			
			(0.020)			
Coordination index (Hall and Gingerich 2004)				-0.051		
				(0.055)		
Coordination of labour relations (Hall and Gingerich 2009)					-0.064	
					(0.068)	
Coordination of corporate governance (Hall and Gingerich 2009)						-0.039
						(0.042)
Time trend	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Constant	-9.491***	-9.030***	-9.271***	-9.036***	-9.036***	-9.036***
	(0.782)	(0.782)	(0.827)	(0.830)	(0.830)	(0.830)
Countries	22	22	20	20	20	20
Years	89-123	89-123	89-123	89-123	89-123	89-123
Observations	2,559	2,559	2,313	2,315	2,315	2,315
R^2	0.753	0.753	0.759	0.751	0.751	0.751
Adjusted R^2	0.739	0.739	0.743	0.735	0.735	0.735

Note: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parentheses.

Table A. 5: Pooled OLS regression with country- and year fixed-effects: Testing for membership in international organisations

	Dependent variable:		
	Competition Law Index (CLI) $_t$		
	(1)	(2)	(3)

EU $_{t-1}$	0.122***		
	(0.008)		
OECD $_{t-1}$		0.139***	
		(0.007)	
GATT/WTO $_{t-1}$			0.060***
			(0.005)
Time trend	0.004***	0.004***	0.004***
	(0.0002)	(0.0002)	(0.0002)
Constant	-7.722***	-7.357***	-7.330***
	(0.434)	(0.431)	(0.441)
Countries	197	197	197
Years	4-122	4-122	4-122
Observations	12,427	12,427	12,427
R^2	0.700	0.705	0.697
Adjusted R^2	0.692	0.697	0.689
Note:			*p<0.1; **p<0.05; ***p<0.01
			Standard errors in parentheses.

Table A. 6: Random effects panel data model: Explaining variation in competition laws

	Dependent variable:						
	Competition Law Index (CLI) $_t$						
Theory	Public Interest	Public Choice	Domestic-institutional factors			Main models	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Privatisation $_{t-1}$	0.436***					0.430***	0.525***
	(0.012)					(0.016)	(0.050)
Government ideology $_{t-1}$		0.0002					
		(0.003)					
English legal origin			-0.078***	0.169***		-0.134***	
			(0.027)	(0.061)		(0.034)	
LMEs					0.174***		0.388***
					(0.065)		(0.095)
Privatisation x English legal origin $_{t-1}$						0.189***	
						(0.041)	
Privatisation x LMEs $_{t-1}$							-0.379***
							(0.098)
Democracy (Polity5) $_{t-1}$						0.002***	-0.001
						(0.0004)	(0.001)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GATT/WTO $_{t-1}$						0.022^{***}	-0.034^{***}
						(0.006)	(0.012)
GDP per capita (log) $_{t-1}$						0.086^{***}	0.157^{***}
						(0.004)	(0.014)
Population (log) $_{t-1}$						0.008	-0.003
						(0.005)	(0.015)
Time trend	0.005^{***}	0.009^{***}	0.004^{***}	0.006^{***}	0.005^{***}	0.003^{***}	0.002^{***}
	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0003)
Constant	-8.973^{***}	-17.436^{***}	-8.619^{***}	-10.616^{***}	-10.089^{***}	-6.969^{***}	-6.221^{***}
	(0.103)	(0.407)	(0.104)	(0.164)	(0.180)	(0.246)	(0.515)
Countries	173	37	186	34	22	153	22
Years	4-122	10-65	14-123	19-123	89-123	17-122	87-122
Observations	11,540	1,677	12,372	3,371	2,559	9,447	2,456
R^2	0.443	0.545	0.370	0.578	0.572	0.515	0.638
Adjusted R^2	0.443	0.544	0.370	0.577	0.572	0.515	0.637
Note:							$^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$
							Standard errors in parentheses.

Table A. 7: Robustness check for Varieties of Capitalism 1

	Dependent variable:						
	Competition policy strictness against anti-competitive agreements in 2010						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coordination index (Hall and Gingerich 2004)	-0.283^{*}						
	(0.159)						
Coordination of labour relations (Hall and Gingerich 2009)		-0.253					
		(0.161)					
Coordination of corporate governance (Hall and Gingerich 2009)			-0.254				
			(0.168)				
LMEs (dummy) (Hall and Soskice 2001)				0.167^{*}			
				(0.089)			
CMEs including MMEs (dummy) (Hall and Soskice 2001)					-0.167^{*}		
					(0.089)		

CMEs excluding MMEs (dummy) (Hall and Soskice 2001)						-0.177**	
						(0.074)	
MMEs (dummy) (Hall and Soskice 2001)							0.060
							(0.091)
Constant	0.734***	0.698***	0.731***	0.533***	0.700***	0.655***	0.557***
	(0.103)	(0.094)	(0.117)	(0.044)	(0.077)	(0.049)	(0.050)
Observations	18	18	18	20	20	20	20
R^2	0.164	0.133	0.125	0.163	0.163	0.243	0.023
Adjusted R^2	0.112	0.079	0.070	0.117	0.117	0.201	-0.031
Residual Std. Error	0.180 (df = 16)	0.183 (df = 16)	0.184 (df = 16)	0.172 (df = 18)	0.172 (df = 18)	0.164 (df = 18)	0.186 (df = 18)
Note:							*p<0.1; **p<0.05; ***p<0.01
							Standard errors in parentheses.
							The above regressions exclude the US and Japan.

Table A. 8: Robustness check for Varieties of Capitalism 2

	Dependent variable:						
	Restrictive Trade Practices (Hylton and Deng 2007)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coordination index (Hall and Gingerich 2004)	-2.417**						
	(1.053)						
Coordination of labour relations (Hall and Gingerich 2009)		-2.825***					
		(0.950)					
Coordination of corporate governance (Hall and Gingerich 2009)			-1.996*				
			(1.115)				
LMEs (dummy) (Hall and Soskice 2001)				1.458**			
				(0.634)			
CMEs including MMEs (dummy) (Hall and Soskice 2001)					-1.458**		
					(0.634)		
CMEs excluding MMEs (dummy) (Hall and Soskice 2001)						-1.417**	
						(0.553)	

MMEs (dummy) (Hall and Soskice 2001)							0.313
							(0.710)
Constant	6.675***	6.759***	6.530***	4.875***	6.333***	5.917***	5.187***
	(0.670)	(0.565)	(0.756)	(0.331)	(0.541)	(0.373)	(0.371)
Observations	20	20	20	22	22	22	22
R^2	0.226	0.329	0.151	0.209	0.209	0.247	0.010
Adjusted R^2	0.183	0.292	0.104	0.170	0.170	0.209	-0.040
Residual Std. Error	1.347 (df = 18)	1.254 (df = 18)	1.411 (df = 18)	1.324 (df = 20)	1.324 (df = 20)	1.293 (df = 20)	1.482 (df = 20)
Note:							*p<0.1; **p<0.05; ***p<0.01 Standard errors in parentheses.

Table A. 9: Robustness check for the role of government ideology in competition policy enforcement in Germany

	Dependent variable:											
	Cartel enforcement				Abuse of dominance enforcement				Number of prohibition orders (merger control)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Government ideology weighted by seat share (ParlGov) $_{t-1}$	-1.709				-5.223***				-0.357			
	(3.396)				(0.946)				(0.445)			
Cabinet posts of centre-right parties as % of total cabinet posts (CPDS) $_{t-1}$		0.710**				-0.034				0.003		
		(0.279)				(0.130)				(0.044)		
Cabinet posts of centre parties as % of total cabinet posts (CPDS) $_{t-1}$			-0.100				-0.194***				-0.016	
			(0.099)				(0.029)				(0.013)	
Cabinet posts of centre-left parties as % of total cabinet posts (CPDS) $_{t-1}$				0.016				0.143***				0.013
				(0.085)				(0.028)				(0.012)
Constant	33.928*	14.248***	29.837***	24.271***	43.679***	15.930***	25.081***	10.381***	6.264***	4.092***	4.805***	3.618***

	(17.929)	(5.203)	(5.954)	(4.533)	(4.993)	(2.433)	(1.728)	(1.489)	(2.272)	(0.859)	(0.740)	(0.682)
Observations	33	38	38	38	33	38	38	38	39	44	44	44
R^2	0.008	0.153	0.028	0.001	0.496	0.002	0.559	0.420	0.017	0.0001	0.032	0.026
Adjusted R^2	-0.024	0.129	0.001	-0.027	0.480	-0.026	0.547	0.404	-0.009	-0.024	0.009	0.003
Residual Std. Error	22.338 (df = 31)	19.255 (df = 36)	20.624 (df = 36)	20.906 (df = 36)	6.220 (df = 31)	9.006 (df = 36)	5.984 (df = 36)	6.867 (df = 36)	3.159 (df = 37)	3.189 (df = 42)	3.138 (df = 42)	3.148 (df = 42)
Note:												*p<0.1; **p<0.05; ***p<0.01 Standard errors in parentheses.

Table A. 10: Presidents of the Federal Cartel Office (FCO)

Name	Start date	End date	Tenure of office
Eberhard Günther	9 January 1959	18 July 1976	16 years, 6 months and 18 days
Wolfgang Kartte	19 July 1976	2 July 1992	15 years, 11 months and 2 days
Dieter Wolff	3 July 1992	31 December 1999	7 years, 5 months and 28 days
Ulf Böge	1 January 2000	31 March 2007	7 years and 3 months
Bernhard Heitzer	1 April 2007	4 February 2010	2 years, 10 months and four days
Andreas Mundt	Since 5 February 2010		9 years (as of 5 February 2019)

Average turnover rate (TOR) = $\frac{1}{average\ tenure\ of\ office\ in\ years} = \frac{1}{10} = 0.1$

$$VUL(6) = \frac{\begin{array}{c} Number\ of\ replacements\ of\ the\ head\ of\ the\ competition\ authority \\ within\ 6\ months\ following\ a\ general\ election \end{array}}{Number\ of\ general\ elections}$$

$$VUL(6) = \frac{1}{17} = 0.0588235$$

Table A. 11: Testing for Presidents of the FCO in the enforcement of competition policy in Germany

	Dependent variable:															
	Number of prohibition orders (merger control)						Cartel enforcement					Abuse of dominance enforcement				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Günther $_{t-1}$	-1.959															
	(1.484)															
Kartte $_{t-1}$		2.143**					21.188***					4.701				
		(0.943)					(5.977)					(2.887)				
Wolff $_{t-1}$			-0.672					-14.691*					-4.194			
			(1.310)					(8.404)					(3.707)			
Böge $_{t-1}$				1.667					-15.950*					7.700**		
				(1.220)					(7.887)					(3.349)		
Heitzer $_{t-1}$					-2.238					-3.528					-9.417	
					(2.282)					(15.184)					(6.358)	
Mundt $_{t-1}$						-3.053**					-0.208					-9.802**
						(1.319)					(9.305)					(3.662)
Constant	4.359***	3.357***	4.243***	3.833***	4.238***	4.553***	16.478***	27.548***	28.200***	25.028***	24.875***	13.565***	16.194***	13.800***	15.917***	16.969***
	(0.500)	(0.569)	(0.523)	(0.520)	(0.487)	(0.487)	(3.755)	(3.607)	(3.619)	(3.484)	(3.698)	(1.814)	(1.591)	(1.537)	(1.459)	(1.455)
Observations	44	44	44	44	44	44	38	38	38	38	38	38	38	38	38	38
R^2	0.040	0.109	0.006	0.043	0.022	0.113	0.259	0.078	0.102	0.001	0.00001	0.069	0.034	0.128	0.057	0.166
Adjusted R^2	0.017	0.088	-0.017	0.020	-0.001	0.092	0.238	0.053	0.077	-0.026	-0.028	0.043	0.008	0.104	0.031	0.143
Residual Std. Error	3.125 (df = 42)	3.010 (df = 42)	3.179 (df = 42)	3.121 (df = 42)	3.153 (df = 42)	3.004 (df = 42)	18.008 (df = 36)	20.082 (df = 36)	19.821 (df = 36)	20.901 (df = 36)	20.917 (df = 36)	8.700 (df = 36)	8.858 (df = 36)	8.418 (df = 36)	8.752 (df = 36)	8.232 (df = 36)

Note: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Standard errors in parentheses.

Table A. 12: Chairmen of the Competition Commission (CC) and its predecessor organisations

Name	**Start date**	**End date**	**Title**

Archibald Carter	1 February 1949	31 December 1953	Chairman (MRPC)
David Cairns	1 January 1954	31 October 1956	Chairman (MRPC)
Richard Levy	1 November 1956	30 November 1965	Chairman (MC)
Ashton Roskill	1 December 1965	30 November 1975	Chairman (MMC)
Godfray Le Quesne	1 December 1975	31 December 1987	Chairman (MMC)
Sydney Lipworth	1 January 1988	18 April 1993	Chairman (MMC)
Graeme Odgers	19 April 1993	31 January 1998	Chairman (MMC)
Derek Morris	1 February 1998	30 April 2004	Chairman (MMC, from 1 April 1999 onwards CC)
Paul Geroski	1 May 2004	28 August 2005 (death)	Chairman (CC)
Peter Freeman	1 January 2006	6 May 2011	Chairman (CC)
Roger Witcomb	7 May 2011	31 March 2014	Chairman (CC)

$$Average\ turnover\ of\ chief\ executive\ (TOR)_{MRPC/MC/MMC/CC} = \frac{1}{Average\ tenure\ of\ office\ in\ years} = \frac{1}{5.9242} = 0.1688$$

$$VUL(6)_{MRPC/MC/MMC/CC} = \frac{0}{16} = 0$$

Table A. 13: Director Generals and Chairmen of the Office of Fair Trading (OFT)

Name	Start date	End date	Title
John Methven	1 November 1973	13 June 1976	DGFT
Gordon Borrie	14 June 1976	12 June 1992	DGFT
Bryan Carsberg	13 June 1992	20 May 1995	DGFT
Jeffrey Preston	21 May 1995	30 September 1995	DGFT
John Bridgeman	1 October 1995	30 September 2000	DGFT
John Vickers	1 October 2000	30 September 2005	DGFT (from 1 April 2003 onwards Chairman and CEO)

Philip Collins	1 October 2005	31 March 2014	Chairman
John Fingleton	1 October 2005	30 June 2012	CEO
Clive Maxwell	1 July 2012	23 February 2014	CEO
Vivienne Dews	24 February 2014	31 March 2014	CEO

$$Average\ turnover\ of\ chief\ executive\ (TOR)_{OFT} = \frac{1}{Average\ tenure\ of\ office\ in\ years} = \frac{1}{5.7738} = 0.1732$$

$$VUL(6)_{OFT} = \frac{2}{9} = 0.2222$$

Table A. 14: Chairmen and Chief Executive Officers of the Competition and Markets Authority (CMA)

Name	**Start date**	**End date**	**Title**
David Currie	1 April 2014	18 June 2018	Chairman
Alex Chisholm	1 April 2014	3 July 2016	CEO
Andrea Coscelli	Since 4 July 2016		CEO
Andrew Tyrie	Since 19 June 2018		Chairman

$$Average\ turnover\ of\ chief\ executive\ (TOR)_{CMA} = \frac{1}{Average\ tenure\ of\ office\ in\ years} = \frac{1}{2.667} = 0.375$$

Table A. 15: Testing for heads of agencies of the MMC/CC and the OFT in competition policy enforcement in the UK

	Dependent variable:										
	Number of mergers prohibited by the MMC/CC $_t$						Number of mergers examined by the OFT $_t$				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

Lipworth $_{t-1}$	0.663										
	(1.226)										
Odgers $_{t-1}$		1.926									
		(1.164)									
Morris $_{t-1}$			-0.722								
			(1.147)								
Geroski $_{t-1}$				0.130							
				(2.508)							
Freeman $_{t-1}$					-1.389						
					(1.119)						
Witcomb $_{t-1}$						-0.913					
						(2.501)					
Borrie $_{t-1}$							119.750*				
							(60.890)				
Carsberg $_{t-1}$								186.893**			
								(87.993)			
Bridgeman $_{t-1}$									104.617		
									(74.195)		
Vickers $_{t-1}$										-39.765	
										(76.583)	
Collins $_{t-1}$											-276.429***
											(41.193)
Constant	2.737***	2.474***	3.056***	2.870***	3.222***	2.913***	261.250***	275.440***	276.783***	302.565***	364.571***
	(0.560)	(0.531)	(0.574)	(0.512)	(0.559)	(0.510)	(32.547)	(28.803)	(31.353)	(32.362)	(20.597)
Observations	24	24	24	24	24	24	28	28	28	28	28
R^2	0.013	0.111	0.018	0.0001	0.065	0.006	0.129	0.148	0.071	0.010	0.634
Adjusted R^2	-0.032	0.070	-0.027	-0.045	0.023	-0.039	0.096	0.115	0.035	-0.028	0.620
Residual Std. Error	2.439 (df = 22)	2.315 (df = 22)	2.433 (df = 22)	2.455 (df = 22)	2.374 (df = 22)	2.448 (df = 22)	145.556 (df = 26)	144.013 (df = 26)	150.364 (df = 26)	155.204 (df = 26)	94.386 (df = 26)

Note: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Standard errors in parentheses.

References

Ademmer, Esther. 2018. ‘Capitalist Diversity and Compliance: Economic Reforms in Central and Eastern Europe after EU Accession’. *Journal of European Public Policy* 25 (5): 670–89.
Adler, Emanuel, and Vincent Pouliot. 2011. ‘International Practices’. *International Theory* 3 (1): 1–36.
Akman, Pinar. 2014. ‘The Role of “Freedom” in EU Competition Law’. *Legal Studies* 34 (2): 183–213.
Akman, Pinar, and Hussein Kassim. 2010. ‘Myths and Myth-Making in the European Union: The Institutionalization and Interpretation of EU Competition Policy’. *Journal of Common Market Studies* 48 (1): 111–32.
Alemani, Enrico, Caroline Klein, Isabell Koske, Cristiana Vitale, and Isabelle Wanner. 2013. ‘New Indicators of Competition Law and Policy in 2013 for OECD and Non-OECD Countries’. OECD Economics Department Working Papers No. 1104. https://www.oecd-ilibrary.org/content/paper/5k3ttg4r657h-en.
Amacher, Ryan, Richard Higgins, William Shughart II, and Robert Tollison. 1985. ‘The Behavior of Regulatory Activity over the Business Cycle: An Empirical Test’. *Economic Inquiry* 23 (1): 7–19.
Armingeon, Klaus, Virginia Wenger, Fiona Wiedemeier, Christian Isler, Laura Knöpfel, David Weisstanner, and Sarah Engler. 2019. ‘Comparative Political Data Set 1960-2017’. Zurich: Institute of Political Science, University of Zurich.
Asch, Peter. 1975. ‘The Determinants and Effects of Antitrust Activity’. *Journal of Law and Economics* 18 (2): 575–82.
Audretsch, David B. 1989. ‘Legalized Cartels in West Germany’. *Antitrust Bulletin* 34 (3): 579–600.
Avalos, Marcos, and Rafael E. De Hoyos. 2008. ‘An Empirical Analysis of Mexican Merger Policy’. Policy Research Working Paper No. 4527. Washington, DC: World Bank. https://documents1.worldbank.org/curated/en/318821468044950160/pdf/wps4527.pdf.
Baake, Pio, and Oliver Perschau. 1996. ‘The Law and Policy of Competition in Germany’. In *Regulating Europe*, edited by Giandomenico Majone. London: Routledge.
Bairoch, Paul. 1989. ‘European Trade Policy, 1815-1914’. In *The Cambridge Economic History of Europe. Volume 8: The Industrial Economies: The Development of Economic and Social Policies*, edited by Peter Mathias and Sidney Pollard. Cambridge: Cambridge University Press.
Baker, Donald I., and William Blumenthal. 1986. ‘Ideological Cycles and Unstable Antitrust Rules’. *Antitrust Bulletin* 31 (2): 323–39.
Barro, Robert J., and David B. Gordon. 1983. ‘Rules, Discretion and Reputation in a Model of Monetary Policy’. *Journal of Monetary Economics* 12 (1): 101–21.

Bartalevich, Dzmitry. 2016. ‘The Influence of the Chicago School on the Commission’s Guidelines, Notices and Block Exemption Regulations in EU Competition Policy’. *Journal of Common Market Studies* 54 (2): 267–83.
Baumol, William J., and Janusz A. Ordover. 1985. ‘Use of Antitrust to Subvert Competition’. *Journal of Law & Economics* 28 (2): 247–66.
Bawn, Kathleen. 1995. ‘Political Control Versus Expertise: Congressional Choices about Administrative Procedures’. *American Political Science Review* 89 (1): 62–73.
Baxter, William F. 1982. ‘Separation of Powers, Prosecutorial Discretion, and the “Common Law” Nature of Antitrust Law’. *Texas Law Review* 60 (4): 661–704.
Beck, Nathaniel. 2008. ‘Time-Series Cross-Section Methods’. In *The Oxford Handbook of Political Methodology*, edited by Janet M. Box-Steffensmeier, Henry E. Brady, and David Collier. Oxford: Oxford University Press.
Bergman, Mats A., Malcolm B. Coate, Maria Jakobsson, and Shawn W. Ulrick. 2010. ‘Comparing Merger Policies in the European Union and the United States’. *Review of Industrial Organization* 36 (4): 305–31.
Bergman, Mats A., Malcolm B. Coate, Anh T. V. Mai, and Shawn W. Ulrick. 2019. ‘Does Merger Policy Converge After the 2004 European Union Reform?’ *Journal of Competition Law & Economics* 15 (1): 664–89.
Bergman, Mats A., Maria Jakobsson, and Carlos Razo. 2005. ‘An Econometric Analysis of the European Commission’s Merger Decisions’. *International Journal of Industrial Organization* 23 (9–10): 717–37.
Bernstein, Marver H. 1955. *Regulating Business by Independent Commission*. Princeton: Princeton University Press.
Bertram, Geoff. 2020. ‘Why the Commerce Act 1986 Is Unfit for Purpose’. *Policy Quarterly* 16 (3): 80–87.
Best, Jacqueline. 2014. *Governing Failure: Provisional Expertise and the Transformation of Global Development Finance*. Cambridge: Cambridge University Press.
Bickel, David R. 1983. ‘The Antitrust Division’s Adoption of a Chicago School Economic Policy Calls for Some Reorganization: But Is the Division’s New Policy Here to Stay’. *Houston Law Review* 20 (4): 1083–1127.
Böheim, Michael H., and Klaus S. Friesenbichler. 2016. ‘Exporting the Competition Policy Regime of the European Union: Success or Failure? Empirical Evidence for Acceding Countries’. *Journal of Common Market Studies* 54 (3): 569–82.
Bolt, Jutta, and Jan Luiten Van Zanden. 2020. ‘Maddison Style Estimates of the Evolution of the World Economy. A New 2020 Update’. Maddison Project Database, Version 2020.
Bonefeld, Werner. 2012. ‘Freedom and the Strong State: On German Ordoliberalism’. *New Political Economy* 17 (5): 633–56.
Bork, Robert H. 1966. ‘Legislative Intent and the Policy of the Sherman Act’. *Journal of Law & Economics* 9 (1): 7–48.
———. 1978. *The Antitrust Paradox: A Policy at War with Itself*. New York: Basic Books.
Börsch, Alexander. 2007. ‘Institutional Variation and Coordination Patterns in CMEs: Swiss and German Corporate Governance in Comparison’. In *Beyond*

Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy, edited by Bob Hancké, Martin Rhodes, and Mark Thatcher. Oxford: Oxford University Press.

Bortolotti, Bernardo, Marcella Fantini, and Domenico Siniscalco. 2003. ‘Privatisation around the World: Evidence from Panel Data’. *Journal of Public Economics* 88 (1–2): 305–32.

Botero, Juan C., Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2004. ‘The Regulation of Labor’. *Quarterly Journal of Economics* 119 (4): 1339–82.

Bouwens, Bram, and Joost Dankers. 2010. ‘The Invisible Handshake: Cartelization in the Netherlands, 1930-2000’. *Business History Review* 84 (4): 751–71.

Bradford, Anu, Yun-chien Chang, Adam Chilton, and Nuno Garoupa. 2021. ‘Do Legal Origins Predict Legal Substance?’ *Journal of Law and Economics* 64 (2): 207–32.

Bradford, Anu, Adam Chilton, Katerina Linos, and Alexander Weaver. 2019. ‘The Global Dominance of European Competition Law Over American Antitrust Law’. *Journal of Empirical Legal Studies* 16 (4): 731–66.

Bradford, Anu, and Adam S. Chilton. 2018. ‘Competition Law around the World from 1889 to 2010: The Competition Law Index’. *Journal of Competition Law & Economics* 14 (3): 393–432.

Bradford, Anu, Adam S. Chilton, Christopher Megaw, and Nathaniel Sokol. 2019. ‘Competition Law Gone Global: Introducing the Comparative Competition Law and Enforcement Datasets’. *Journal of Empirical Legal Studies* 16 (2): 411–43.

Bradford, Anu, Robert J. Jackson, Jr., and Jonathon Zytnick. 2018. ‘Is E.U. Merger Control Used for Protectionism? An Empirical Analysis’. *Journal of Empirical Legal Studies* 15 (1): 165–91.

Bradley, Robert L., Jr. 1990. ‘On the Origins of the Sherman Antitrust Act’. *Cato Journal* 9 (3): 737–42.

Bridges, Hal. 1958. ‘The Robber Baron Concept in American History’. *Business History Review* 32 (1): 1–13.

Briggs, John Deq., and Howard Rosenblatt. 2001. ‘A Bundle of Trouble: The Aftermath of GE/Honeywell’. *Antitrust* 16 (1): 26–31.

Brook, Or. 2019. ‘Coding Non-Competition Interests under Article 101 TFEU: A Quantitative and Qualitative Study’. PhD dissertation. University of Amsterdam.

Buch-Hansen, Hubert, and Angela Wigger. 2010. ‘Revisiting 50 Years of Market-Making: The Neoliberal Transformation of European Competition Policy’. *Review of International Political Economy* 17 (1): 20–44.

———. 2011. *The Politics of European Competition Regulation: A Critical Political Economy Perspective*. London and New York: Routledge.

Budzinski, Oliver. 2008. ‘Monoculture versus Diversity in Competition Economics’. *Cambridge Journal of Economics* 32 (2): 295–324.

Budzinski, Oliver, and Andt Christiansen. 2005. ‘Competence Allocation in the EU Competition Policy System as an Interest-Driven Process’. *Journal of Public Policy* 25 (3): 313–37.

Budzinski, Oliver, and Katharina Wacker. 2007. 'The Prohibition of the Proposed Springer-ProSiebenSat.1 Merger: How Much Economics in German Merger Control?' *Journal of Competition Law & Economics* 3 (2): 281–306.
Bulmer, Simon. 1994. 'Institutions and Policy Change in the European Communities: The Case of Merger Control'. *Public Administration* 72 (3): 423–44.
Burnley, Richard. 2005. 'Who's Afraid of Conglomerate Mergers? A Comparison of the US and EC Approaches'. *World Competition* 28 (1): 43–70.
———. 2007. 'A Comparison of the EU and US Approaches'. In *EC Competition Law: A Critical Assessment*, edited by Giuliano Amato and Claus-Dieter Ehlermann. Oxford: Hart Publishing.
Büthe, Tim. 2007. 'The Politics of Competition and Institutional Change in European Union: The First Fifty Years'. In *Making History: European Integration and Institutional Change at Fifty*, edited by Sophie Meunier and Kathleen R. McNamara. Oxford: Oxford University Press.
Büthe, Tim, and Gabriel T. Swank. 2007. 'The Politics of Antitrust and Merger Review in the European Union: Institutional Change and Decisions from Messina to 2004'. CES Working Paper No. 142.
Buxbaum, Hannah L. 2005. 'German Legal Culture and the Globalization of Competition Law: A Historical Perspective on the Expansion of Private Antitrust Enforcement'. *Berkeley Journal of International Law* 23 (2): 474–95.
Carree, Martin, Andrea Günster, and Maarten Pieter Schinkel. 2010. 'European Antitrust Policy 1957-2004: An Analysis of Commission Decisions'. *Review of Industrial Organization* 36 (2): 97–131.
Cartwright, Phillip A., and David R. Kamerschen. 1985. 'Variations in Antitrust Enforcement Activity'. *Review of Industrial Organization* 2 (1): 1–31.
Cengiz, Firat. 2010. 'Multi-Level Governance in Competition Policy: The European Competition Network'. *European Law Review* 35 (5): 660–77.
Chandler, Alfred D., Jr. 1990. *Scale and Scope: The Dynamics of Industrial Capitalism*. Cambridge, MA: Harvard University Press.
Chisholm, Simon, and Tom Heideman. 2017. 'The Decision to Investigate Mergers in the United Kingdom's Voluntary Regime'. *Journal of Competition Law & Economics* 13 (4): 637–65.
Cho, Chansoo. 2003. 'Manufacturing a German Model of Liberal Capitalism: The Political Economy of the German Cartel Law in the Early Postwar Period'. *Journal of International and Area Studies* 10 (1): 41–57.
Clark, J. M. 1940. 'Toward a Concept of Workable Competition'. *American Economic Review* 30 (2): 241–56.
Clougherty, Joseph A. 2005. 'Antitrust Holdup Source, Cross-National Institutional Variation, and Corporate Political Strategy Implications for Domestic Mergers in a Global Context'. *Strategic Management Journal* 26 (8): 769–90.
Clougherty, Joseph A., and Anming Zhang. 2005. 'Export Orientation and Domestic Merger Policy: Theory and Some Empirical Evidence'. *Canadian Journal of Economics* 38 (3): 778–806.
Coate, Malcolm B. 1995a. 'Merger Analysis in the Courts'. *Managerial and Decision Economics* 16 (6): 581–92.

———. 1995b. ‘The Shifting Sands of Merger Enforcement at the Federal Trade Commission’. *International Journal of the Economics of Business* 2 (3): 393–407.

———. 2002. ‘A Test of Political Control of the Bureaucracy: The Case of Mergers’. *Economics & Politics* 14 (1): 1–18.

———. 2005. ‘Empirical Analysis of Merger Enforcement Under the 1992 Merger Guidelines’. *Review of Industrial Organization* 27 (4): 279–301.

Coate, Malcolm B., Richard S. Higgins, and Fred S. McChesney. 1990. ‘Bureaucracy and Politics in FTC Merger Challenges’. *Journal of Law & Economics* 33 (2): 463–82.

Coate, Malcolm B., and Fred S. McChesney. 1992. ‘Empirical Evidence on FTC Enforcement of the Merger Guidelines’. *Economic Inquiry* 30 (2): 277–93.

Coate, Malcolm B., and Shawn W. Ulrick. 2009. ‘Do Court Decisions Drive the Federal Trade Commission’s Enforcement Policy on Merger Settlements?’ *Review of Industrial Organization* 34 (2): 99–114.

Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, David Altman, Michael Bernhard, et al. 2019. ‘V-Dem [Country-Year/Country-Date] Dataset V9’. Varieties of Democracy (V-Dem) Project. https://doi.org/10.23696/vdemcy19.

Coppedge, Michael, John Gerring, Staffan I. Lindberg, Svend-Erik Skaaning, Jan Teorell, David Altman, Michael Bernhard, et al. 2017. ‘V-Dem [Country-Year/Country-Date] Dataset v7.” Varieties of Democracy (V-Dem) Project’. https://www.v-dem.net/en/data/data-version-6-2/.

Crane, Daniel A. 2011. *The Institutional Structure of Antitrust Enforcement*. New York: Oxford University Press.

Crouch, Colin. 2005. ‘Complementarity and Fit in the Study of Comparative Capitalisms’. In *Changing Capitalisms? Internationalization, Institutional Change, and Systems of Economic Organization*, edited by Glenn Morgan, Richard Whitley, and Eli Moen. Oxford: Oxford University Press.

———. 2010. ‘The Global Firm: The Problem of the Giant Firm in Democratic Capitalism’. In *The Oxford Handbook of Business and Government*, edited by David Coen, Wyn Grant, and Graham Wilson. Oxford: Oxford University Press.

Cseres, Katalin. 2007. ‘Multi-Jurisdictional Competition Law Enforcement: The Interface between European Competition Law and the Competition Laws of the New Member States’. *European Competition Journal* 3 (2): 465–502.

———. 2010. ‘Comparing Laws in the Enforcement of EU and National Competition Laws’. *European Journal of Legal Studies* 3 (1): 7–46.

Czapracka, Katarzyna. 2017. ‘The Transatlantic Divide on Verticals – The Underlying Reasons and the Way Forward’. *Antitrust Bulletin* 62 (2): 294–312.

Davies, Stephen W., Nigel L. Driffield, and Roger Clarke. 1999. ‘Monopoly in the UK: What Determines Whether the MMC Finds against the Investigated Firms?’ *Journal of Industrial Economics* 47 (3): 263–83.

Davis, Bob, and Anita Raghavan. 2001. ‘Competing Views: GE-Honeywell Deal Gets Caught Up In Diverging Histories’. *Wall Street Journal*, 2001, 03 July 2001 edition.

De Paula, Germano Mendes, and Enrico Spini Romanielo. 2017. 'Antitrust Policy in Brazil: Evolution and Perspectives'. In *The New Brazilian Economy: Dynamic Transitions into the Future*, edited by Elias C. Grivoyannis. New York: Palgrave Macmillan.

Deeg, Richard. 2005. 'Path Dependency, Institutional Complementarity, and Change in National Business Systems'. In *Changing Capitalisms? Internationalization, Institutional Change, and Systems of Economic Organization*, edited by Glenn Morgan, Richard Whitley, and Eli Moen. Oxford: Oxford University Press.

Dewey, Donald. 1955. 'The Common-Law Background of Antitrust Policy'. *Virginia Law Review* 41 (6): 759–86.

DGFT, Director General of Fair Trading. 1991. 'Annual Report of the Director General of Fair Trading for January to December 1990 to the Secretary of State for Trade and Industry'. House of Commons Papers. HC 502.

———. 1992. 'Annual Report of the Director General of Fair Trading for January to December 1991 to the Secretary of State for Trade and Industry'. House of Commons Papers. HC 38.

———. 1993. 'Annual Report of the Director General of Fair Trading for January to December 1992 to the Secretary of State for Trade and Industry'. House of Commons Papers. HC 719.

———. 1994. 'Annual Report of the Director General of Fair Trading for January to December 1993 to the President of the Board of Trade for Trade and Industry'. House of Commons Papers. HC 551.

———. 1995. 'Annual Report of the Director General of Fair Trading for January to December 1994 to the President of the Board of Trade for Trade and Industry'. House of Commons Papers. HC 419.

———. 1996. 'Annual Report of the Director General of Fair Trading to the Secretary of State for Trade and Industry and President of the Board of Trade: January to December 1995'. House of Commons Papers. HC 475.

———. 1997. 'Annual Report of the Director General of Fair Trading to the Secretary of State for Trade and Industry and President of the Board of Trade: January to December 1996'. House of Commons Papers. HC 104.

———. 1998. 'Annual Report of the Director General of Fair Trading to the Secretary of State for Trade and Industry and President of the Board of Trade: January to December 1997'. House of Commons Papers. HC 762.

———. 1999. 'Annual Report of the Director General of Fair Trading to the Secretary of State for Trade and Industry: January to December 1998'. House of Commons Papers. HC 524.

———. 2000. 'Annual Report of the Director General of Fair Trading to the Secretary of State for Trade and Industry: January to December 1999'. House of Commons Papers. HC 576.

———. 2001. 'Annual Report of the Director General of Fair Trading to the Secretary of State for Trade and Industry. January to December 2000'. House of Commons Papers. HC 419.

———. 2002. 'Annual Report of the Director General of Fair Trading to the Secretary of State for Trade and Industry: January to December 2001'. House of Commons Papers. HC 773.

DiLorenzo, Thomas J. 1985. 'The Origins of Antitrust: An Interest-Group Perspective'. *International Review of Law and Economics* 5 (1): 73–90.
Djankov, Simeon, Edward Glaeser, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2003. 'The New Comparative Economics'. *Journal of Comparative Economics* 31 (4): 595–619.
Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2002. 'The Regulation of Entry'. *Quarterly Journal of Economics* 117 (1): 1–37.
———. 2003. 'Courts'. *Quarterly Journal of Economics* 118 (2): 453–517.
Djelic, Marie-Laure. 1998. *Exporting the American Model: The Post-War Transformation of European Business*. Oxford: Oxford University Press.
———. 2002. 'Does Europe Mean Americanization? The Case of Competition'. *Competition and Change* 6 (3): 233–50.
Doern, G. Bruce. 1995. 'A Political-Institutional Framework for the Analysis of Competition Policy Institutions'. *Governance* 8 (2): 195–217.
———. 1996. 'Comparative Competition Policy: Boundaries and Levels of Political Analysis'. In *Comparative Competition Policy: National Institutions in a Global Market*, edited by G. Bruce Doern and Stephen Wilks. Oxford: Clarendon Press.
Doern, G. Bruce, and Stephen Wilks, eds. 1996. *Comparative Competition Policy: National Institutions in a Global Market*. Oxford: Clarendon Press.
Döring, Holger, and Philip Manow. 2018. 'Parliaments and Governments Database (ParlGov): Information on Parties, Elections and Cabinets in Modern Democracies'. http://www.parlgov.org/.
Dowdle, Michael W. 2013a. 'The Regulatory Geography of Market Competition in Asia (and beyond): A Preliminary Mapping'. In *Asian Capitalism and the Regulation of Competition: Towards a Regulatory Geography of Global Competition Law*, edited by Michael W. Dowdle, John Gillespie, and Imelda Maher. Cambridge: Cambridge University Press.
———. 2013b. 'Whither Asia? Whither Capitalism? Whither Global Competition Law?' In *Asian Capitalism and the Regulation of Competition: Towards a Regulatory Geography of Global Competition Law*, edited by Michael W. Dowdle, John Gillespie, and Imelda Maher. Cambridge: Cambridge University Press.
Dowdle, Michael W., John Gillespie, and Imelda Maher, eds. 2013. *Asian Capitalism and the Regulation of Competition: Towards a Regulatory Geography of Global Competition Law*. Cambridge: Cambridge University Press.
Drahos, Michaela. 2002. *Convergence of Competition Laws and Policies in the European Community: Germany, Austria and the Netherlands*. The Hague: Kluwer Law International.
Dumez, H., and A. Jeunemaitre. 1996. 'The Convergence of Competition Policies in Europe: Internal Dynamics and External Imposition'. In *National Diversity and Global Capitalism*, edited by Suzanne Berger and Ronald Dore. Ithaca, NY: Cornell University Press.
Dunne, Niamh. 2014. 'Recasting Competition Concurrency under the Enterprise and Regulatory Reform Act 2013'. *Modern Law Review* 77 (2): 254–76.

Duso, Tomaso, Damien J. Neven, and Lars-Hendrik Röller. 2007. 'The Political Economy of European Merger Control: Evidence Using Stock Market Data'. *Journal of Law and Economics* 50 (3): 455–89.

Dutz, Mark A., and Maria Vagliasindi. 2000. 'Competition Policy Implementation in Transition Economies: An Empirical Assessment'. *European Economic Review* 44 (4–6): 762–72.

Eberlein, Burkard. 2001. 'To Regulate or Not to Regulate Electricity: Explaining the German Sonderweg in the EU Context'. *Journal of Network Industries* 2 (3–4): 353–84.

Eckstein, Harry. 1975. 'Case Study and Theory in Political Science'. In *Handbook of Political Science, Vol. 7: Strategies of Inquiry*, edited by Fred I. Greenstein and Nelson W. Polsby. Reading, MA: Addison-Wesley.

Egan, Michelle. 2001. *Constructing a European Market: Standards, Regulation, and Governance*. Oxford: Oxford University Press.

Eisner, Marc Allen. 1991. *Antitrust and the Triumph of Economics: Institutions, Expertise, and Policy Change*. Chapel Hill: University of North Carolina Press.

———. 1993. 'Bureaucratic Professionalization and the Limits of the Political Control Thesis: The Case of the Federal Trade Commission'. *Governance* 6 (2): 127–53.

Eisner, Marc Allen, and Kenneth J. Meier. 1990. 'Presidential Control versus Bureaucratic Power: Explaining the Reagan Revolution in Antitrust'. *American Journal of Political Science* 34 (1): 269–87.

Elman, Colin. 2005. 'Explanatory Typologies in Qualitative Studies of International Politics'. *International Organization* 59 (2): 293–326.

Ergen, Timur, and Sebastian Kohl. 2019. 'Varieties of Economization in Competition Policy: Institutional Change in German and American Antitrust, 1960-2000'. *Review of International Political Economy* 26 (2): 256–86.

Estevez-Abe, Margarita, Torben Iversen, and David Soskice. 2001. 'Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State'. In *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, edited by Peter A. Hall and David Soskice. Oxford: Oxford University Press.

European Commission. 1978. 'Commission Notice of 18 December 1978 Concerning Its Assessment of Certain Subcontracting Agreements in Relation to Article 85 (1) of the EEC Treaty'. Official Journal of the European Communities No. C 1 of 3 January 1979. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31979Y0103%2801%29.

———. 2004a. 'Commission Notice — Guidelines on the Application of Article 81 of the EC Treaty to Technology Transfer Agreements'. Official Journal of the European Union No. C 101 of 27 April 2004. https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52004XC0427%2801%29.

———. 2004b. 'Commission Notice — Guidelines on the Effect on Trade Concept Contained in Articles 81 and 82 of the Treaty'. Official Journal of the European Communities No. C 101 of 27 April 2004. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2004.101.01.0081.01.ENG&toc=OJ:C:2004:101:TOC.

———. 2004c. ‘Commission Notice on Cooperation within the Network of Competition Authorities’. Official Journal C 101: 43-53. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52004XC0427(02)&from=EN.

———. 2004d. ‘Communication from the Commission — Notice — Guidelines on the Application of Article 81(3) of the Treaty’. Official Journal of the European Union No. C 101 of 27 April 2004. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2004.101.01.0097.01.ENG&toc=OJ:C:2004:101:TOC.

———. 2010. ‘Guidelines on Vertical Restraints’. Official Journal of the European Union No. C 130 of 19 May 2010. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52010XC0519%2804%29.

———. 2011. ‘Communication from the Commission — Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-Operation Agreements’. Official Journal of the European Union No. C 11 of 14 January 2011. https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52011XC0114(04).

———. 2014. ‘Communication from the Commission — Notice on Agreements of Minor Importance Which Do Not Appreciably Restrict Competition under Article 101(1) of the Treaty on the Functioning of the European Union (De Minimis Notice)’. Official Journal of the European Union No. C 291 of 30 August 2014. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2014.291.01.0001.01.ENG&toc=OJ:C:2014:291:TOC.

Eyre, Sebastian, and Martin Lodge. 2000. ‘National Tunes and a European Melody? Competition Law Reform in the UK and Germany’. *Journal of European Public Policy* 7 (1): 63–79.

Ezrachi, Ariel. 2017. ‘Sponge’. *Journal of Antitrust Enforcement* 5 (1): 49–75.

Faith, Roger L., Donald R. Leavens, and Robert D. Tollison. 1982. ‘Antitrust Pork Barrel’. *Journal of Law and Economics* 25 (2): 329–42.

FCO, Federal Cartel Office. 1974. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit Im Jahre 1973 Sowie Über Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 07/2250. http://dipbt.bundestag.de/doc/btd/07/022/0702250.pdf.

———. 1975. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit Im Jahre 1974 Sowie Über Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 07/3791. http://dipbt.bundestag.de/doc/btd/07/037/0703791.pdf.

———. 1976. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit Im Jahre 1975 Sowie Über Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 07/5390. http://dipbt.bundestag.de/doc/btd/07/053/0705390.pdf.

———. 1977. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit Im Jahre 1976 Sowie Über Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 08/704. http://dipbt.bundestag.de/doc/btd/08/007/0800704.pdf.

———. 1978. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit Im Jahre 1977 Sowie Über Lage Und Entwicklung Auf Seinem Aufgabengebiet’.

Bundestag-Drucksache No. 08/1925. http://dipbt.bundestag.de/doc/btd/08/019/0801925.pdf.
———. 1979. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit Im Jahre 1978 Sowie Über Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 08/2980. http://dipbt.bundestag.de/doc/btd/08/029/0802980.pdf.
———. 1981. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 1979/1980 Sowie Über Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 09/565. http://dipbt.bundestag.de/doc/btd/09/005/0900565.pdf.
———. 1983. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 1981/1982 Sowie Über Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 10/243. http://dipbt.bundestag.de/doc/btd/10/002/1000243.pdf.
———. 1985. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 1983/1984 Sowie Über Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 10/3550. http://dipbt.bundestag.de/doc/btd/10/035/1003550.pdf.
———. 1987. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 1985/1986 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 11/554. http://dipbt.bundestag.de/doc/btd/11/005/1100554.pdf.
———. 1989. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 1987/1988 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 11/4611. http://dipbt.bundestag.de/doc/btd/11/046/1104611.pdf.
———. 1991. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 1989/90 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 12/847. http://dipbt.bundestag.de/doc/btd/12/008/1200847.pdf.
———. 1993. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 1991/92 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 12/5200. http://dipbt.bundestag.de/doc/btd/12/052/1205200.pdf.
———. 1995. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 1993/94 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 13/1660. http://dipbt.bundestag.de/doc/btd/13/016/1301660.pdf.
———. 1997. ‘Bericht Des Bundeskartellamts Über Seine Tätigkeit in Den Jahren 1995/96 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet Und Stellungnahme Der Bundesregierung’. Bundestag-Drucksache No. 13/7900. http://dipbt.bundestag.de/doc/btd/13/079/1307900.pdf.
———. 1999. ‘Bericht Des Bundeskartellamts Über Seine Tätigkeit in Den Jahren 1997/1998 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet’. Bundestag-Drucksache No. 14/1139. http://dipbt.bundestag.de/doc/btd/14/011/1401139.pdf.
———. 2001. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 1999/2000 Sowie Über Die Lage Und Entwicklung Auf Seinem

Aufgabengebiet'. Bundestag-Drucksache No. 14/6300. http://dipbt.bundestag.de/doc/btd/14/063/1406300.pdf.

———. 2003. 'Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 2001/2002 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet'. Bundestag-Drucksache No. 15/1226. http://dipbt.bundestag.de/doc/btd/15/012/1501226.pdf.

———. 2005a. 'Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 2003/2004 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet Und Stellungnahme Der Bundesregierung'. Bundestag-Drucksache No. 15/5790. http://dipbt.bundestag.de/doc/btd/15/057/1505790.pdf.

———. 2005b. 'Leaflet – German Merger Control'. https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Merkblaetter/Leaflet%20-%20German%20Merger%20Control.html?nn=3590380.

———. 2007a. 'Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 2005/2006 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet Und Stellungnahme Der Bundesregierung'. Bundestag-Drucksache No. 16/5710. http://dipbt.bundestag.de/doc/btd/16/057/1605710.pdf.

———. 2007b. 'Information Leaflet of the Bundeskartellamt on the Possibilities of Cooperation for Small and Medium-Sized Enterprises'. https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Merkblaetter/Leaflet%20-%20Cooperation%20for%20SMUs.pdf?__blob=publicationFile&v=3.

———. 2007c. 'Notice on the Non-Prosecution of Cooperation Agreements of Minor Importance ("de Minimis Notice"). Notice No. 18/2007'. https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Bekanntmachungen/Notice%20-%20De%20Minimis.html.

———. 2009. 'Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 2007/2008 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet Und Stellungnahme Der Bundesregierung'. Bundestag-Drucksache No. 16/13500. http://dipbt.bundestag.de/doc/btd/16/135/1613500.pdf.

———. 2011a. 'Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 2009/2010 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet Und Stellungnahme Der Bundesregierung'. Bundestag-Drucksache No. 17/6640. http://dipbt.bundestag.de/doc/btd/17/066/1706640.pdf.

———. 2011b. 'The Bundeskartellamt in Bonn: Organisation, Tasks and Activities'. https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Brosch%C3%BCren/Brochure%20-%20About%20the%20Bundeskartellamt.pdf?__blob=publicationFile&v=19.

———. 2013. 'Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 2011/2012 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet Und Stellungnahme Der Bundesregierung'. Bundestag-Drucksache No. 17/13675. http://dipbt.bundestag.de/doc/btd/17/136/1713675.pdf.

———. 2015. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 2013/2014 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet Und Stellungnahme Der Bundesregierung’. Bundestag-Drucksache No. 18/5210. http://dipbt.bundestag.de/doc/btd/18/052/1805210.pdf.

———. 2016. ‘Effective Cartel Prosecution: Benefits for the Economy and Consumers’. https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Brosch%C3%BCren/Brochure%20-%20Effective%20cartel%20prosecution.pdf?__blob=publicationFile&v=12.

———. 2017. ‘Bericht Des Bundeskartellamtes Über Seine Tätigkeit in Den Jahren 2015/2016 Sowie Über Die Lage Und Entwicklung Auf Seinem Aufgabengebiet Und Stellungnahme Der Bundesregierung’. Bundestag-Drucksache No. 18/12760. http://dipbt.bundestag.de/doc/btd/18/127/1812760.pdf.

———. 2018. ‘60 Jahre Bundeskartellamt 1958-2018’. https://www.bundeskartellamt.de/SharedDocs/Publikation/DE/Broschueren/60_Jahre_Jubilaeumsbroschuere.pdf?__blob=publicationFile&v=3.

Fear, Jeffrey. 2006. ‘Cartels and Competition: Neither Markets nor Hierarchies’. Harvard Business School Working Paper No. 07-011. https://www.hbs.edu/faculty/Publication%20Files/07-011.pdf.

Feinberg, Robert M., and Kara M. Reynolds. 2010. ‘The Determinants of State-Level Antitrust Activity’. *Review of Industrial Organization* 37 (3): 179–96.

Felice, Flavio, and Massimiliano Vatiero. 2015. ‘Ordo and European Competition Law’. In *A Research Annual. Research in the History of Economic Thought and Methodology, Volume 32*, edited by Luca Fiorito. Bradford: Emerald Group Publishing.

Fiebig, André R. 1993. ‘The German Federal Cartel Office and the Application of Competition Law in Reunified Germany’. *University of Pennsylvania Journal of International Business Law* 14 (3): 373–408.

Fiorina, Morris P. 1982. ‘Legislative Choice of Regulatory Forms: Legal Process or Administrative Process?’ *Public Choice* 39 (1): 33–66.

Forslid, Rikard, Jonas Häckner, and Astri Muren. 2011. ‘Trade Costs and the Timing of Competition Policy Adoption’. *Canadian Journal of Economics* 44 (1): 171–200.

Fox, Eleanor M., and Mor Bakhoum. 2019. *Making Markets Work for Africa: Markets, Development, and Competition Law in Sub-Saharan Africa*. Oxford: Oxford University Press.

Fox, John, and Sanford Weisberg. 2019. *An R Companion to Applied Regression*. Thousand Oaks, CA: Sage.

Freedeman, Charles E. 1988. ‘Cartels and the Law in France before 1914’. *French Historical Studies* 15 (3): 462–78.

Freyer, Tony A. 1992. *Regulating Big Business: Antitrust in Great Britain and America, 1880-1990*. Cambridge: Cambridge University Press.

———. 2006. *Antitrust and Global Capitalism, 1930-2004*. Cambridge: Cambridge University Press.

Gailmard, Sean, and John W. Patty. 2007. ‘Slackers and Zealots: Civil Service, Policy Discretion, and Bureaucratic Expertise’. *American Journal of Political Science* 51 (4): 873–89.

Gal, Michal S. 2001. ‘Size Does Matter: The Effects of Market Size on Optimal Competition Policy’. *Southern California Law Review* 74 (6): 1437–78.

———. 2003. *Competition Policy for Small Market Economies*. Cambridge, MA: Harvard University Press.

Gallo, Joseph C., Jos L. Craycraft, and Shantanu Dutta. 1986. ‘Incarceration and Fines: An Empirical Study of Antitrust Sanctions’. *Review of Industrial Organization* 3 (2): 38–66.

Gallo, Joseph C., Kenneth Dau-Schmidt, Joseph L. Craycraft, and Charles J. Parker. 2000. ‘Department of Justice Antitrust Enforcement, 1955-1997: An Empirical Study’. *Review of Industrial Organization* 17 (1): 75–133.

Gerber, David J. 1982. ‘The German Approach to Price Discrimination and Other Forms of Business Discrimination’. *Antitrust Bulletin* 27 (1): 241–73.

———. 1987. ‘Law and the Abuse of Economic Power in Europe’. *Tulane Law Review* 62 (1): 57–108.

———. 1992. ‘The Origins of European Competition Law in Fin-de-Siècle Austria’. *American Journal of Legal History* 36 (4): 405–40.

———. 1994. ‘Constitutionalizing the Economy: German Neo-Liberalism, Competition Law and the “New” Europe’. *American Journal of Comparative Law* 42 (1): 25–84.

———. 1998. *Law and Competition in Twentieth Century Europe: Protecting Prometheus*. Oxford: Oxford University Press.

———. 2010. *Global Competition: Law, Markets, and Globalization*. Oxford: Oxford University Press.

———. 2013. ‘Asia and Global Competition Law Convergence’. In *Asian Capitalism and the Regulation of Competition: Towards a Regulatory Geography of Global Competition Law*, edited by Michael W. Dowdle, John Gillespie, and Imelda Maher. Cambridge: Cambridge University Press.

Gerbrandy, Anna. 2019. ‘Rethinking Competition Law within the European Economic Constitution’. *Journal of Common Market Studies* 57 (1): 127–42.

Gerring, John. 2007. *Case Study Research: Principles and Practices*. Cambridge: Cambridge University Press.

Ghosal, Vivek, and Joseph Gallo. 2001. ‘The Cyclical Behavior of the Department of Justice’s Antitrust Enforcement Activity’. *International Journal of Industrial Organization* 19 (1–2): 27–54.

Gifford, Daniel J., and Robert T. Kudrle. 2015. *The Atlantic Divide in Antitrust: An Examination of US and EU Competition Policy*. Chicago: University of Chicago Press.

Gilardi, Fabrizio. 2002. ‘Policy Credibility and Delegation to Independent Regulatory Agencies: A Comparative Empirical Analysis’. *Journal of European Public Policy* 9 (6): 873–93.

———. 2005. ‘The Formal Independence of Regulators: A Comparison of 17 Countries and 7 Sectors’. *Swiss Political Science Review* 11 (4): 139–67.

———. 2008. *Delegation in the Regulatory State: Independent Regulatory Agencies in Western Europe*. Cheltenham: Edward Elgar.

Gilardi, Fabrizio, and Martino Maggetti. 2011. ‘The Independence of Regulatory Authorities’. In *Handbook on the Politics of Regulation*, edited by David Levi-Faur. Cheltenham, UK: Edward Elgar.
Giocoli, Nicola. 2009. ‘Competition Versus Property Rights: American Antitrust Law, The Freiburg School, and the Early Years of European Competition Policy’. *Journal of Competition Law & Economics* 5 (4): 747–86.
Glaeser, Edward L., and Andrei Shleifer. 2003. ‘The Rise of the Regulatory State’. *Journal of Economic Literature* 41 (2): 401–25.
Glaeser, Edward, and Andrei Shleifer. 2002. ‘Legal Origins’. *Quarterly Journal of Economics* 117 (4): 1193–1229.
Gordon, Sanford D. 1963. ‘Attitudes towards Trusts Prior to the Sherman Act’. *Southern Economic Journal* 30 (2): 156–68.
Grady, Mark F. 1992. ‘Toward a Positive Economic Theory of Antitrust’. *Economic Inquiry* 30 (2): 225–41.
Gribbin, J. D. 1975. ‘Recent Antitrust Developments in the United Kingdom’. *Antitrust Bulletin* 20 (2): 377–410.
Guardiancich, Igor, and Mattia Guidi. 2016. ‘Formal Independence of Regulatory Agencies and Varieties of Capitalism: A Case of Institutional Complementarity?’ *Regulation & Governance* 10 (3): 211–29.
Guidi, Mattia. 2014. ‘Delegation and Varieties of Capitalism: Explaining the Independence of National Competition Agencies in the European Union’. *Comparative European Politics* 12 (3): 343–65.
———. 2015. ‘The Impact of Independence on Regulatory Outcomes: The Case of EU Competition Policy’. *Journal of Common Market Studies* 53 (6): 1195–1213.
———. 2016. *Competition Policy Enforcement in EU Member States: What Is Independence For?* London: Palgrave Macmillan.
———. 2022. ‘Competition Authorities’. In *Handbook of Regulatory Authorities*, edited by Martino Maggetti, Fabrizio Di Mascio, and Alessandro Natalini. Cheltenham: Edward Elgar.
Guidi, Mattia, Igor Guardiancich, and David Levi-Faur. 2020. ‘Modes of Regulatory Governance: A Political Economy Perspective’. *Governance* 33 (1): 5–19.
Guidi, Mattia, and Yannis Karagiannis. 2016. ‘Social Democratic Parties and Antitrust Policy: Evidence from Western Europe (2002-13)’. *European Political Science Review* 8 (4): 495–515.
Haley, John O. 2001. *Antitrust in Germany and Japan: The First Fifty Years, 1947-1998*. Seattle: University of Washington Press.
Hall, Peter A. 2007. ‘The Evolution of Varieties of Capitalism in Europe’. In *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy*, edited by Bob Hancké, Martin Rhodes, and Mark Thatcher. Oxford: Oxford University Press.
Hall, Peter A., and Daniel W. Gingerich. 2004. ‘Varieties of Capitalism and Institutional Complementarities in the Macroeconomy: An Empirical Analysis’. *MPIfG Discussion Paper 04/5. Max Planck Institute for the Study of Societies. Cologne*.
———. 2009. ‘Varieties of Capitalism and Institutional Complementarities in the Political Economy: An Empirical Analysis’. *British Journal of Political Science* 39 (3): 449–82.

Hall, Peter A., and David Soskice. 2001. 'An Introduction to Varieties of Capitalism'. In *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, edited by Peter A. Hall and David Soskice. Oxford: Oxford University Press.

Hall, Peter A., and Kathleen Thelen. 2009. 'Institutional Change in Varieties of Capitalism'. *Socio-Economic Review* 7 (1): 7–34.

Hancké, Bob. 2010. 'Varieties of Capitalism and Business'. In *The Oxford Handbook of Business and Government*, edited by David Coen, Wyn Grant, and Graham Wilson. Oxford: Oxford University Press.

Hancké, Bob, and Andrea Monika Herrmann. 2007. 'Wage Bargaining and Comparative Advantage in EMU'. In *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy*, edited by Bob Hancké, Martin Rhodes, and Mark Thatcher. Oxford: Oxford University Press.

Hancké, Bob, Martin Rhodes, and Mark Thatcher, eds. 2007a. *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy*. Oxford: Oxford University Press.

———. 2007b. 'Introduction: Beyond Varieties of Capitalism'. In *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy*, edited by Idem. Oxford: Oxford University Press.

Hanretty, Chris, and Christel Koop. 2012. 'Measuring the Formal Independence of Regulatory Agencies'. *Journal of European Public Policy* 19 (2): 198–216.

———. 2013. 'Shall the Law Set Them Free? The Formal and Actual Independence of Regulatory Agencies'. *Regulation & Governance* 7 (2): 195–214.

Harding, Christopher, and Julian Joshua. 2010. *Regulating Cartels in Europe*. Oxford: Oxford University Press.

Harker, Michael. 2007. 'Multi-Jurisdictional Antitrust Enforcement: Introduction'. *European Competition Journal* 3 (2): 411–12.

Hassel, Anke. 2007. 'What Does Business Want? Labour Market Reforms in CMEs and Its Problems'. In *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy*, edited by Bob Hancké, Martin Rhodes, and Mark Thatcher. Oxford: Oxford University Press.

Haucap, Justus, Ulrich Heimeshoff, and Luis Manuel Schultz. 2010. 'Legal and Illegal Cartels in Germany between 1958 and 2004'. DICE Discussion Paper No. 8. https://www.econstor.eu/bitstream/10419/41423/1/638076714.pdf.

Hazlett, Thomas W. 1992. 'The Legislative History of the Sherman Act Re-Examined'. *Economic Inquiry* 30 (2): 263–76.

Heritier, Adrienne. 1997. 'Market-Making Policy in Europe: Its Impact on Member State Policies. The Case of Road Haulage in Britain, the Netherlands, Germany and Italy'. *Journal of European Public Policy* 4 (4): 539–55.

Hindriks, Jean, and Gareth D. Myles. 2006. *Intermediate Public Economics*. Cambridge, Massachusetts: The MIT Press.

Hlavac, Marek. 2022. 'Stargazer: Well-Formatted Regression and Summary Statistics Tables. R Package Version 5.2.3.' https://CRAN.R-project.org/package=stargazer.

Holley, Donald L. 1992. 'EEC Competition Practice: A Thirty-Year Retrospective'. *Fordham International Law Journal* 16 (2): 342–411.

Hölscher, Jens, and Johannes Stephan. 2004. 'Competition Policy in Central Eastern Europe in the Light of EU Accession'. *Journal of Common Market Studies* 42 (2): 321–45.
Hölzler, Heinrich, and W. David Braun. 1982. 'Antitrust Control over Pure Export Cartels: The New German Approach'. *Antitrust Bulletin* 27 (4): 957–91.
Huang, Yong. 2008. 'Pursuing the Second Best: The History, Momentum, and Remaining Issues of China's Anti-Monopoly Law'. *Antitrust Law Journal* 75 (1): 117–31.
Hylton, Keith N., and Fei Deng. 2007. 'Antitrust around the World: An Empirical Analysis of the Scope of Competition Laws and Their Effects'. *Antitrust Law Journal* 74 (2): 271–341.
Iversen, Torben. 2007. 'Economic Shocks and Varieties of Government Responses'. In *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy*, edited by Bob Hancké, Martin Rhodes, and Mark Thatcher. Oxford: Oxford University Press.
Iversen, Torben, and David Soskice. 2006. 'Electoral Institutions and the Politics of Coalitions: Why Some Democracies Redistribute More than Others'. *American Political Science Review* 100 (2): 165–81.
———. 2010. 'Economic Interests and Political Representation: Coordination and Distributive Conflict in Historical Perspective'. In *The Oxford Handbook of Business and Government*, edited by David Coen, Wyn Grant, and Graham Wilson. Oxford: Oxford University Press.
Jackson, Gregory. 2005. 'Contested Boundaries: Ambiguity and Creativity in the Evolution of German Codetermination'. In *Beyond Continuity: Institutional Change in Advanced Political Economies*, edited by Wolfgang Streeck and Kathleen Thelen. Oxford: Oxford University Press.
Jackson, Gregory, and Richard Deeg. 2006. 'How Many Varieties of Capitalism? Comparing the Comparative Institutional Analyses of Capitalist Diversity'. MPIfG Discussion Paper 06/2. Cologne: Max Planck Institute for the Study of Societies.
———. 2012. 'The Long-Term Trajectories of Institutional Change in European Capitalism'. *Journal of European Public Policy* 19 (8): 1109–25.
Janin, Lionel, and Benoit Menoni. 2007. 'Le Contrôle Des Concentrations En France: Une Analyse Empirique Des Avis Du Conseil de La Concurrence'. *Économie et Prévision* 178–179 (2–3): 93–114.
Jenny, Frédéric. 2012. 'Competition Authorities: Independence and Advocacy'. In *The Global Limits of Competition Law*, edited by D. Daniel Sokol and Ioannis Lianos. Stanford, California: Stanford University Press.
Jewkes, John. 1958. 'British Monopoly Policy 1944-56'. *Journal of Law & Economics* 1: 1–19.
Jordana, Jacint, Xavier Fernández-i-Marin, and Andrea C. Bianculli. 2018. 'Agency Proliferation and the Globalization of the Regulatory State: Introducing a Data Set on the Institutional Features of Regulatory Agencies'. *Regulation & Governance* 12 (4): 524–40.
Jordana, Jacint, David Levi-Faur, and Xavier Fernández i Marin. 2011. 'The Global Diffusion of Regulatory Agencies: Channels of Transfer and Stages of Diffusion'. *Comparative Political Studies* 44 (10): 1343–69.

Kagan, Robert A. 2003. *Adversarial Legalism: The American Way of Law*. Cambridge, MA: Harvard University Press.

Kalt, Joseph P., and Mark A. Zupan. 1984. 'Capture and Ideology in the Economic Theory of Politics'. *American Economic Review* 74 (3): 279–300.

Kaplow, Louis. 2010. 'Why (Ever) Define Markets?' *Harvard Law Review* 124 (2): 438–517.

Karagiannis, Yannis. 2010. 'Political Analyses of European Competition Policy'. *Journal of European Public Policy* 17 (4): 599–611.

———. 2013. 'The Origins of European Competition Policy: Redistributive versus Ideational Explanations'. *Journal of European Public Policy* 20 (5): 777–94.

Kee, Hiau Looi, and Bernard Hoekman. 2007. 'Imports, Entry and Competition Law as Market Disciplines'. *European Economic Review* 51 (4): 831–58.

Kenworthy, Lane. 2003. 'Quantitative Indicators of Corporatism'. *International Journal of Sociology* 33 (3): 10–44.

Khemani, R. S., and D. M. Shapiro. 1993. 'An Empirical Analysis of Canadian Merger Policy'. *Journal of Industrial Economics* 41 (2): 161–77.

Kholodilin, Konstantin A., and Linus Pfeiffer. 2021. 'Measuring Unmeasurable: How to Map Laws to Numbers Using Leximetrics'. Discussion Paper No. 1933. German Institute for Economic Research (DIW). https://www.diw.de/documents/publikationen/73/diw_01.c.812769.de/dp1933.pdf.

King, Lawrence P. 2007. 'Central European Capitalism in Comparative Perspective'. In *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy*, edited by Bob Hancké, Martin Rhodes, and Mark Thatcher. Oxford: Oxford University Press.

Klees, Andreas M. 2006. 'Breaking the Habits: The German Competition Law after the 7th Amendment to the Act against Restraints of Competition (GWB)'. *German Law Journal* 7 (4): 399–420.

Kleiber, Christian, and Achim Zeileis. 2008. *Applied Econometrics with R*. New York: Springer.

Kleinwächter, Friedrich. 1883. *Die Kartelle: Ein Beitrag Zur Frage Der Organisation Der Volkswirtschaft*. Innsbruck: Verlag der Wagnerschen.

Koop, Christel, and Chris Hanretty. 2018. 'Political Independence, Accountability, and the Quality of Regulatory Decision-Making'. *Comparative Political Studies* 51 (1): 38–75.

Koop, Christel, and Philip Kessler. 2021. 'Keeping Control of Regulation? Domestic Constraints on the Creation of Independent Authorities in Emerging and Developing Economies'. *Governance* 34 (2): 545–64.

Kovacic, William E. 2007. 'The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix'. *Columbia Business Law Review* 2007 (1): 1–81.

Kovacic, William E., and Carl Shapiro. 2000. 'Antitrust Policy: A Century of Economic and Legal Thinking'. *Journal of Economic Perspectives* 14 (1): 43–60.

Krakowski, Michael. 2005. 'Competition Policy Works: The Effect of Competition Policy on the Intensity of Competition – an International Cross-Country Comparison'. HWWA Discussion Paper No. 332. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=854908.

Kronstein, Heinrich. 1958. 'Cartels under the New German Cartel Statute'. *Vanderbilt Law Review* 11 (2): 271–301.
Kronthaler, Franz, and Johannes Stephan. 2007. 'Factors Accounting for the Enactment of a Competition Law – An Empirical Analysis'. *Antitrust Bulletin* 52 (2): 137–68.
Kydland, Finn E., and Edward C. Prescott. 1977. 'Rules Rather than Discretion: The Inconsistency of Optimal Plans'. *Journal of Political Economy* 85 (3): 473–92.
La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2008. 'The Economic Consequences of Legal Origins'. *Journal of Economic Literature* 46 (2): 285–332.
La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. 1998. 'Law and Finance'. *Journal of Political Economy* 106 (6): 1113–55.
———. 1999. 'The Quality of Government'. *Journal of Law, Economics and Organization* 15 (1): 222–79.
———. 2002. 'Investor Protection and Corporate Valuation'. *Journal of Finance* 57 (3): 1147–70.
Laffont, Jean-Jacques, and Jean Tirole. 1991. 'The Politics of Government Decision-Making: A Theory of Regulatory Capture'. *Quarterly Journal of Economics* 106 (4): 1089–1127.
Landes, William M., and Richard A. Posner. 1981. 'Market Power in Antitrust Cases'. *Harvard Law Review* 94 (5): 937–96.
Lauk, Martina. 2003. 'Ökonometrische Analyse Der Entscheidungspraxis Des Bundeskartellamtes'. *Jahrbücher Für Nationalökonomie Und Statistik* 223 (6): 680–711.
Lee, Cassey. 2004. 'Legal Traditions and Competition Policy'. Centre on Regulation and Competition Working Paper No. 73. Manchester: University of Manchester. https://assets.publishing.service.gov.uk/media/57a08cc640f0b652dd001554/CRCwp73.pdf.
———. 2005. 'Legal Traditions and Competition Policy'. *Quarterly Review of Economics and Finance* 45 (2–3): 236–57.
Letwin, William. 1989. 'American Economic Policy, 1865-1939'. In *The Cambridge Economic History of Europe. Volume 8: The Industrial Economies: The Development of Economic and Social Policies*, edited by Peter Mathias and Sidney Pollard. Cambridge: Cambridge University Press.
Letwin, William L. 1954. 'The English Common Law Concerning Monopolies'. *University of Chicago Law Review* 21 (3): 355–85.
———. 1956. 'Congress and the Sherman Antitrust Law: 1887-1890'. *University of Chicago Law Review* 23 (2): 221–58.
Leucht, Brigitte. 2008. 'Transatlantic Policy Networks in the Creation of the First European Anti-Trust Law: Mediating between American Anti-Trust and German Ordo-Liberalism'. In *The History of the European Union: Origins of a Trans- and Supranational Polity, 1950-72*, edited by Wolfram Kaiser, Brigitte Leucht, and Morten Rasmussen. London: Routledge.
Leucht, Brigitte, and Mel Marquis. 2013. 'American Influences on EU Competition Law: Two Paths, How Much Dependence?' In *The Historical Foundations of*

EU Competition Law, edited by Kiran Klaus Patel and Heike Schweitzer. Oxford: Oxford University Press.
Levi-Faur, David. 2006. 'Varieties of Regulatory Capitalism: Getting the Most Out of the Comparative Method'. *Governance* 19 (3): 367–82.
Levinsohn, James. 1993. 'Testing the Imports-as-Market-Discipline Hypothesis'. *Journal of International Economics* 35 (1–2): 1–22.
Lewis-Beck, Michael S. 1979. 'Maintaining Economic Competition: The Causes and Consequences of Antitrust'. *Journal of Politics* 41 (1): 169–91.
Lieberman, Evan S. 2005. 'Nested Analysis as a Mixed-Method Strategy for Comparative Research'. *American Political Science Review* 99 (3): 435–52.
Liefmann, Robert. 1915. 'Monopoly or Competition as the Basis of a Government Trust Policy'. *Quarterly Journal of Economics* 29 (2): 308–25.
———. 1920. *Kartelle Und Trusts Und Die Weiterbildung Der Volkswirtschaftlichen Organisation*. Stuttgart: E. H. Moritz.
———. 1932. *Cartels, Concerns and Trusts*. New York: Dutton.
Lindsay, Alistair, Emanuela Lecchi, and Geoffrey Williams. 2003. 'Econometrics Study into European Commission Merger Decisions since 2000'. *European Competition Law Review* 24 (12): 673–82.
Long, William F., Richard Schramm, and Robert Tollison. 1973. 'The Economic Determinants of Antitrust Activity'. *Journal of Law and Economics* 16 (2): 351–64.
MacLean, Elizabeth Kimball. 2007. 'Joseph E. Davies: The Wisconsin Idea and the Origins of the Federal Trade Commission'. *Journal of the Gilded Age and Progressive Era* 6 (3): 249–84.
Mager, Ferdinand, and Martin Meyer-Fackler. 2017. 'Mergers and Acquisitions in Germany: 1981-2010'. *Global Finance Journal* 34: 32–42.
Maggetti, Martino. 2007. 'De Facto Independence after Delegation: A Fuzzy-Set Analysis'. *Regulation & Governance* 1 (4): 271–94.
———. 2012. *Regulation in Practice: The de Facto Independence of Regulatory Agencies*. Colchester, UK: The ECPR Press.
Maggetti, Martino, and Yannis Papadopoulos. 2016. 'The Principal-Agent Framework and Independent Regulatory Agencies'. *Political Studies Review, Advance Online Publication*.
Maggetti, Martino, and Koen Verhoest. 2014. 'Unexplored Aspects of Bureaucratic Autonomy: A State of the Field and Ways Forward'. *International Review of Administrative Sciences* 80 (2): 239–56.
Maisenbacher, Julia, and Angela Wigger. 2019. 'The Political Economy of EU Competition Rule Export: Unravelling the Dynamics of Variegated Convergence in Serbia and Turkey'. *Journal of International Relations and Development* 22 (4): 983–1008.
Majone, Giandomenico. 1996. 'Temporal Consistency and Policy Credibility: Why Democracies Need Non-Majoritarian Institutions'. In *EUI Working Paper RSC No 96/57*. Florence: European University Institute.
———. 1999. 'The Regulatory State and Its Legitimacy Problems'. *West European Politics* 22 (1): 1–24.
Mankiw, N. Gregory. 2004. *Grundzüge Der Volkswirtschaftslehre*. Stuttgart: Schäffer-Poeschel Verlag.

Marburg, Theodore F. 1964. ‘Government and Business in Germany: Public Policy toward Cartels’. *Business History Review* 38 (1): 78–101.
Mariani, Cristina, and Simone Pieri. 2014. ‘Lobbying Activities and EU Competition Law: What Can Be Done and How?’ *Journal of European Competition Law & Practice* 5 (7): 423–35.
Marmol, Charley, Del, and Marcel Fontaine. 1961. ‘Protection against the Abuse of Economic Power in Belgium: The Law of May 27, 1960’. *University of Pennsylvania Law Review* 109 (7): 922–43.
Marshall, Monty G., and Ted Robert Gurr. 2020. ‘Polity5: Political Regime Characteristics and Transitions, 1800-2018’. Center for Systemic Peace and Societal-Systems Research Inc.
Martimort, David. 1999. ‘The Life Cycle of Regulatory Agencies: Dynamic Capture and Transaction Costs’. *Review of Economic Studies* 66 (4): 929–47.
Martin, Cathie Jo, and Duane Swank. 2008. ‘The Political Origins of Coordinated Capitalism: Business Organizations, Party Systems, and State Structure in the Age of Innocence’. *American Political Science Review* 102 (2): 181–98.
Martinez Fernández, Borja, Iraj Hashi, and Marc Jegers. 2008. ‘The Implementation of the European Commission’s Merger Regulation 2004: An Empirical Analysis’. *Journal of Competition Law & Economics* 4 (3): 791–809.
Mateus, Abel M. 2009. ‘The Current Financial Crisis and the State Aid in the EU’. *European Competition Journal* 5 (1): 1–18.
McChesney, Fred S., and William F. Shughart II, eds. 1995. *The Causes and Consequences of Antitrust: The Public-Choice Perspective*. Chicago: University of Chicago Press.
McChesney, Fred S., William F. Shughart II, and Michael Reksulak. 2014. ‘Competition Policy in Public Choice Perspective’. In *The Oxford Handbook of International Antitrust Economics, Volume 1*, edited by Roger D. Blair and D. Daniel Sokol. Oxford: Oxford University Press.
McCubbins, Mathew D., and Thomas Schwartz. 1984. ‘Congressional Oversight Overlooked: Police Patrols Versus Fire Alarms’. *American Journal of Political Science* 28 (1): 165–79.
McGowan, Lee. 2000. ‘At the Commission’s Discretion: Cartelbusting and Fining Infringements Under the EU’s Restrictive Practices Policy’. *Public Administration* 78 (3): 639–56.
———. 2005. ‘Europeanization Unleashed and Rebounding: Assessing the Modernization of EU Cartel Policy’. *Journal of European Public Policy* 12 (6): 986–1004.
———. 2007. ‘Theorising European Integration: Revisiting Neo-Functionalism and Testing Its Suitability for Explaining the Development of EC Competition Policy?’ *European Integration Online Papers (EIoP)* 11 (3): 1–17.
———. 2010. *The Antitrust Revolution in Europe: Exploring the European Commission’s Cartel Policy*. Cheltenham: Edward Elgar.
McGowan, Lee, and Michelle Cini. 1999. ‘Discretion and Politicization in EU Competition Policy: The Case of Merger Control’. *Governance* 12 (2): 175–200.
McGowan, Lee, and Stephen Wilks. 1995. ‘The First Supranational Policy in the European Union: Competition Policy’. *European Journal of Political Research* 28 (2): 141–69.

Milgrom, Paul, and John Roberts. 1995. ‘Complementarities and Fit: Strategy, Structure, and Organizational Change in Manufacturing’. *Journal of Accounting and Economics* 19 (2–3): 179–208.

Moe, Terry M. 1982. ‘Regulatory Performance and Presidential Administration’. *American Journal of Political Science* 26 (2): 197–224.

———. 1990. ‘Political Institutions: The Neglected Side of the Story’. *Journal of Law, Economics, & Organization* 6: 213–53.

———. 1995. ‘The Politics of Structural Choice: Toward a Theory of Public Bureaucracy’. In *Organization Theory: From Chester Barnard to the Present and Beyond*, edited by Oliver E. Williamson. New York: Oxford University Press.

Molina, Oscar, and Martin Rhodes. 2007. ‘The Political Economy of Adjustment in Mixed Market Economies: A Study of Spain and Italy’. In *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy*, edited by Bob Hancké, Martin Rhodes, and Mark Thatcher. Oxford: Oxford University Press.

Morgan, Eleanor, and Steven McGuire. 2004. ‘Transatlantic Divergence: GE-Honeywell and the EU’s Merger Policy’. *Journal of European Public Policy* 11 (1): 39–56.

Morgan, Glenn. 2005. ‘Institutional Complementarities, Path Dependency, and the Dynamics of Firms’. In *Changing Capitalisms? Internationalization, Institutional Change, and Systems of Economic Organization*, edited by Glenn Morgan, Richard Whitley, and Eli Moen. Oxford: Oxford University Press.

Morgan, Glenn, Richard Whitley, and Eli Moen, eds. 2005. *Changing Capitalisms? Internationalization, Institutional Change, and Systems of Economic Organization*. Oxford: Oxford University Press.

Motta, Massimo. 2004. *Competition Policy: Theory and Practice*. Cambridge: Cambridge University Press.

Mueller, Dennis C. 1996. ‘Lessons from the United State’s Antitrust History’. *International Journal of Industrial Organization* 14 (4): 415–45.

Mundt, Andreas. 2010. ‘Angst Vor Großen Namen Dürfen Wir Nicht Haben’. Süddeutsche Zeitung. https://www.bundeskartellamt.de/SharedDocs/Publikation/DE/Interviews/Interview%20-%20Angst%20vor%20gro%C3%9Fen%20Namen%20d%C3%BCrfen%20wir%20nicht%20haben.pdf;jsessionid=1203DC3776278AF14FAE41EC51078CE1.2_cid387?__blob=publicationFile&v=2.

Murach-Brand, Lisa. 2004. *Antitrust Auf Deutsch: Der Einfluß Der Amerikanischen Aliierten Auf Das Gesetz Gegen Wettbewerbsbeschränkungen (GWB) Nach 1945*. Tübingen: Mohr Siebeck.

Murphey, William. 2013. ‘Theodore Roosevelt and the Bureau of Corporation: Executive-Corporate Cooperation and the Advancement of the Regulatory State’. *American Nineteenth Century History* 14 (1): 73–111.

NAO, National Audit Office. 2016. ‘The UK Competition Regime’. HC 737. https://www.nao.org.uk/wp-content/uploads/2016/02/The-UK-Competition-regime.pdf.

———. 2018. ‘Exiting the EU: Consumer Protection, Competition and State Aid’. HC 1384. https://www.nao.org.uk/report/exiting-the-eu-consumer-protection-competition-and-state-aid/.

Nattrass, Nicoli. 2014. ‘A South African Variety of Capitalism?’ *New Political Economy* 19 (1): 56–78.

Nicholson, Michael W. 2004. ‘Quantifying Antitrust Regimes’. FTC Bureau of Economics Working Papers No. 267. https://www.ftc.gov/reports/quantifying-antitrust-regimes.

———. 2008. ‘An Antitrust Law Index for Empirical Analysis of International Competition Policy’. *Journal of Competition Law & Economics* 4 (4): 1009–29.

Nickell, Stephen J. 1996. ‘Competition and Corporate Performance’. *Journal of Political Economy* 104 (4): 724–46.

Nikomborirak, Deunden. 2006. ‘The Political Economy of Competition Law: The Case of Thailand’. *Northwestern Journal of International Law & Business* 26 (3): 597–618.

Niskanen, William A. 1971. *Bureaucracy and Representative Government*. Chicago: Aldine Atherton.

———. 1975. ‘Bureaucrats and Politicians’. *Journal of Law and Economics* 18 (3): 617–44.

Nölke, Andreas. 2012. ‘The Rise of the “B(R)IC Variety of Capitalism” – Towards a New Phase of Organized Capitalism?’ In *Neoliberalism in Crisis*, edited by Henk Overbeek and Bastiaan Van Apeldoorn. Basingstoke: Palgrave Macmillan.

———. 2019. ‘Comparative Capitalism’. In *The Palgrave Handbook of Contemporary International Political Economy*, edited by Timothy M. Shaw, Laura C. Mahrenbach, Renu Modi, and Xu Yi-chong. London: Palgrave Macmillan.

———. 2021. ‘In Search of Institutional Complementarities: Comparative Capitalism and Economic Policy Reform’. *Journal of Economic Policy Reform* 24 (4): 405–12.

Nölke, Andreas, Tobias ten Brink, Christian May, and Simone Claar. 2020. *State-Permeated Capitalism in Large Emerging Economies*. London: Routledge.

Nölke, Andreas, and Arjan Vliegenthart. 2009. ‘Enlarging the Varieties of Capitalism: The Emergence of Dependent Market Economies in East Central Europe’. *World Politics* 61 (4): 670–702.

O’Brien, D. P. 1982. ‘Competition Policy in Britain: The Silent Revolution’. *Antitrust Bulletin* 27 (1): 217–39.

OECD, Organisation for Economic Co-operation and Development. 1992. *Regulatory Reform, Privatisation and Competition Policy*. Paris: OECD Publishing.

———. 2000. ‘Hard Core Cartels’. Paris: OECD Publishing. http://www.oecd.org/competition/cartels/2752129.pdf.

———. 2002. ‘Regulatory Reform in Canada: The Role of Competition Policy in Regulatory Reform’. OECD Reviews of Regulatory Reform. http://www.oecd.org/regreform/1960522.pdf.

———. 2005. ‘Substantive Criteria Used for the Assessment of Mergers’. *OECD Journal: Competition Law and Policy* 6 (3): 89–183.

———. 2016. 'Independence of Competition Authorities – From Designs to Practices'. Background Paper by the Secretariat. DAF/COMP/GF(2016)5. Paris: OECD. https://one.oecd.org/document/DAF/COMP/GF(2016)5/en/pdf.

OFT, Office of Fair Trading. 2003. 'Office of Fair Trading: Annual Report and Resource Accounts 2002-03'. House of Commons Papers. HC 906.

———. 2004a. 'Abuse of a Dominant Position'. OFT402. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284422/oft402.pdf.

———. 2004b. 'Agreements and Concerted Practices'. OFT401. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284396/oft401.pdf.

———. 2004c. 'Assessment of Market Power'. OFT415. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284400/oft415.pdf.

———. 2004d. 'Market Definition'. OFT 403. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284423/oft403.pdf.

———. 2004e. 'Office of Fair Trading: Annual Report and Resource Accounts 2003-04'. House of Commons Papers. HC 739.

———. 2004f. 'Services of General Economic Interest Exclusion'. OFT421. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284403/oft421.pdf.

———. 2004g. 'Trade Associations, Professions and Self-Regulating Bodies'. OFT408. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284404/oft408.pdf.

———. 2004h. 'Vertical Agreements'. OFT419. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284430/oft419.pdf.

———. 2005. 'Office of Fair Trading: Annual Report and Resource Accounts 2004-05'. House of Commons Papers. HC 171.

———. 2006. 'Office of Fair Trading: Annual Report and Resource Accounts 2005-06'. House of Commons Papers. HC 1213.

———. 2007. 'Office of Fair Trading: Annual Report and Resource Accounts 2006-07'. House of Commons Papers. HC 532.

———. 2008. 'Office of Fair Trading: Annual Report and Resource Accounts 2007-08'. House of Commons Papers. HC 836.

———. 2009. 'Office of Fair Trading: Annual Report and Resource Accounts 2008-09'. House of Commons Papers. HC 475.

———. 2010a. 'Merger Assessment Guidelines'. CC2 (Revised)/OFT1254. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284449/OFT1254.pdf.

———. 2010b. 'Office of Fair Trading: Annual Report and Resource Accounts 2009-10'. House of Commons Papers. HC 301.

———. 2011a. 'How Competition Law Applies to Co-Operation between Farming Businesses: Frequently Asked Questions'. OFT740rev. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284408/OFT740rev.pdf.

———. 2011b. 'Land Agreements and Competition Law'. OFT1317. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284409/quick-guide.pdf.

———. 2011c. 'Land Agreements: The Application of Competition Law Following the Revocation of the Land Agreements Exclusion Order'. OFT1280a. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284406/land-agreements-guideline.pdf.

———. 2011d. 'Office of Fair Trading: Annual Report and Resource Accounts 2010-11'. House of Commons Papers. HC 996.

———. 2012. 'Office of Fair Trading: Annual Report and Resource Accounts 2011-12'. House of Commons Papers. HC 40.

———. 2013. 'Office of Fair Trading: Annual Report and Resource Accounts 2012-13'. House of Commons Papers. HC 23.

———. 2014. 'Office of Fair Trading: Annual Report and Resource Accounts 2013-14'. House of Commons Papers. HC 27.

Ortwein, Edmund. 1998. *Das Bundeskartellamt: Eine Politische Ökonomie Deutscher Wettbewerbspolitik*. Baden-Baden: Nomos Verlag.

Palim, Mark R. A. 1998. 'The Worldwide Growth of Competition Law: An Empirical Analysis'. *Antitrust Bulletin* 43 (1): 105–45.

Parakkal, Raju. 2011. 'Political Characteristics and Competition Law Enactment: A Cross-Country Empirical Analysis'. *Antitrust Bulletin* 56 (3): 609–29.

Parakkal, Raju, and Sherry Bartz-Marvez. 2013. 'Capitalism, Democratic Capitalism, and the Pursuit of Antitrust Laws'. *Antitrust Bulletin* 58 (4): 693–729.

Patrikios, Stratos, and Fabrizio De Francesco. 2018. 'Churches as Firms: An Exploration of Regulatory Similarities'. *Socio-Economic Review* Advance online publication.

Patterson, Donna E., and Carl Shapiro. 2001. 'Transatlantic Divergence in GE/Honeywell: Causes and Lessons'. *Antitrust* 16 (1): 18–26.

Peltzman, Sam. 1976. 'Toward a More General Theory of Regulation'. *Journal of Law and Economics* 19 (2): 211–40.

Peritz, Rudolph J. 1990. 'A Counter-History of Antitrust Law'. *Duke Law Journal* 1990 (2): 263–320.

———. 1996. *Competition Policy in America, 1888-1992: History, Rhetoric, Law*. Oxford: Oxford University Press.

Peters, B. Guy. 1996. 'United States Competition Policy Institutions: Structural Constraints and Opportunities'. In *Comparative Competition Policy: National Institutions in a Global Market*, edited by G. Bruce Doern and Stephen Wilks. Oxford: Clarendon Press.

Petersen, Niels. 2013. 'Antitrust Law and the Promotion of Democracy and Economic Growth'. *Journal of Competition Law & Economics* 9 (3): 593–636.

Pindyck, Robert S., and Daniel L. Rubinfeld. 2005. *Mikroökonomie*. München: Pearson Education.

Pistor, Katharina. 2005. 'Legal Ground Rules in Coordinated and Liberal Market Economies'. In *Corporate Governance in Context: Corporations, States, and Markets in Europe, Japan, and the US*, edited by Klaus J. Hopt, Eddy Wymeersch, Hideki Kanda, and Harald Baum. Oxford: Oxford University Press.

Polanyi, Karl. 1944. *The Great Transformation: The Political and Economic Origins of Our Time*. Boston: Beacon Press.
Posner, Richard A. 1970. 'A Statistical Study of Antitrust Enforcement'. *Journal of Law and Economics* 13 (2): 365–419.
Pouliot, Vincent. 2008. 'The Logic of Practicality: A Theory of Practice of Security Communities'. *International Organization* 62 (2): 257–88.
Quack, Sigrid, and Marie-Laure Djelic. 2005. 'Adaptation, Recombination, and Reinforcement: The Story of Antitrust and Competition Law in Germany and Europe'. In *Beyond Continuity: Institutional Change in Advanced Political Economies*, edited by Wolfgang Streeck and Kathleen Thelen. Oxford: Oxford University Press.
Radaelli, Claudio M. 2000. 'Policy Transfer in the European Union: Institutional Isomorphism as a Source of Legitimacy'. *Governance* 13 (1): 25–43.
Ravago, Majah-Leah V., James A. Roumasset, and Arsenio M. Balisacan. 2022. 'What Influences Adoption of Competition Law? The Case of ASEAN Economies'. *Singapore Economic Review* 67 (5): 1607–36.
Reitz, John. 2009. 'Legal Origins, Comparative Law, and Political Economy'. *American Journal of Comparative Law* 57 (4): 847–62.
Rieter, Heinz, and Matthias Schmolz. 1993. 'The Ideas of German Ordoliberalism 1938-45: Pointing the Way to a New Economic Order'. *European Journal of the History of Economic Thought* 1 (1): 87–114.
Robert, Rüdiger. 1976. *Konzentrationspolitik in Der Bundesrepublik – Das Beispiel Der Entstehung Des Gesetzes Gegen Wettbewerbsbeschränkungen*. Berlin: Duncker & Humblot.
Rodger, Barry J., and Mary Catherine Lucey. 2018. 'Convergence and Divergence within the EU's Supranational Competition Law Framework: Norms, Enforcement Rules and Prioritisation in the United Kingdom and Ireland'. In *The Regionalisation of Competition Law and Policy within the ASEAN Economic Community*, edited by Burton Ong. Cambridge: Cambridge University Press.
Roe, Mark J. 2000. 'Political Preconditions to Separating Ownership from Corporate Control'. *Stanford Law Review* 53 (3): 539–606.
Rogoff, Kenneth. 1985. 'The Optimal Degree of Commitment to an Intermediate Monetary Target'. *Quarterly Journal of Economics* 100 (4): 1169–89.
Röller, Lars-Hendrik, and Miguel De la Mano. 2006. 'The Impact of the New Substantive Test in European Merger Control'. *European Competition Journal* 2 (1): 9–28.
Rousseva, Ekaterina. 2005. 'Modernizing by Eradicating: How the Commission's New Approach to Article 81 EC Dispenses with the Need to Apply Article 82 EC to Vertical Restraints'. *Common Market Law Review* 42 (3): 587–638.
Ruggie, John Gerard. 1982. 'International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order'. *International Organization* 36 (2): 379–415.
Sally, Razeen. 1996. 'Ordoliberalism and the Social Market: Classical Political Economy from Germany'. *New Political Economy* 1 (2): 233–57.
Schaede, Ulrike. 2000. *Cooperative Capitalism: Self-Regulation, Trade Associations, and the Antimonopoly Law in Japan*. Oxford: Oxford University Press.

Schapiro, Peter D. 1962. 'The German Law against Restraints of Competition – Comparative and International Aspects. Part One'. *Columbia Law Review* 62 (1): 1–48.
Scherer, F. M. 1997. 'Competition Policy Convergence: Where Next?' *Empirica* 24 (1–2): 5–19.
Schmidt, Vivien A. 2002. *The Futures of European Capitalism*. Oxford: Oxford University Press.
———. 2008. 'European Political Economy: Labour Out, State Back In, Firm to the Fore'. *West European Politics* 31 (1–2): 302–20.
———. 2009. 'Putting the Political Back into Political Economy by Bringing the State Back in Yet Again'. *World Politics* 61 (3): 516–46.
Schneider, Ben Ross. 2009. 'Hierarchical Market Economies and Varieties of Capitalism in Latin America'. *Journal of Latin American Studies* 41 (3): 553–75.
Schröter, Harm G. 1996. 'Cartelization and Decartelization in Europe, 1870-1995: Rise and Decline of an Economic Institution'. *Journal of European Economic History* 25 (1): 129–53.
Schwartz, Ethan. 1993. 'Politics as Usual: The History of European Community Merger Control'. *Yale Journal of International Law* 18 (2): 607–62.
Seawright, Jason, and John Gerring. 2008. 'Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options'. *Political Research Quarterly* 61 (2): 294–308.
Selin, Jennifer L. 2015. 'What Makes an Agency Independent?' *American Journal of Political Science* 59 (4): 971–87.
Sharpe, Thomas. 1985. 'British Competition Policy in Perspective'. *Oxford Review of Economic Policy* 1 (3): 80–94.
Shughart, William F., II. 1995. 'Public-Choice Theory and Antitrust Policy'. In *The Causes and Consequences of Antitrust: The Public-Choice Perspective*, edited by Fred S. McChesney and William F. Shughart II. Chicago: University of Chicago Press.
Shughart, William F., II, and Fred S. McChesney. 2010. 'Public Choice Theory and Antitrust Policy'. *Public Choice* 142 (3/4): 385–406.
Shughart, William F., II, and Robert D. Tollison. 1985. 'The Positive Economics of Antitrust Policy: A Survey Article'. *International Review of Law and Economics* 5 (1): 39–57.
Siegfried, John J. 1975. 'The Determinants of Antitrust Activity'. *Journal of Law and Economics* 18 (2): 559–74.
Smith, Vincent. 2004. 'Competition Concurrency between the OFT and Sector Regulators'. *Utilities Policy* 12 (2): 61–63.
Soskice, David. 2007. 'Macroeconomics and Varieties of Capitalism'. In *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy*, edited by Bob Hancké, Martin Rhodes, and Mark Thatcher. Oxford: Oxford University Press.
Stewart, Joseph, Jr., and Jane S. Cromartie. 1982. 'Partisan Presidential Change and Regulatory Policy: The Case of the FTC and Deceptive Practices Enforcement, 1938-1974'. *Presidential Studies Quarterly* 12 (4): 568–73.
Stigler, George J. 1971. 'The Theory of Economic Regulation'. *Bell Journal of Economics and Management Science* 2 (1): 3–21.

———. 1985. ‘The Origin of the Sherman Act’. *Journal of Legal Studies* 14 (1): 1–12.
Stock, James H., and Mark W. Watson. 2020. *Introduction to Econometrics*. Harlow: Pearson Education Limited.
Streeck, Wolfgang. 1991. ‘On the Institutional Conditions of Diversified Quality Production’. In *Beyond Keynesianism: The Socio-Economics of Production and Full Employment*, edited by Egon Matzner and Wolfgang Streeck. Aldershot: Edward Elgar.
Streeck, Wolfgang, and Kathleen Thelen, eds. 2005. *Beyond Continuity: Institutional Change in Advanced Political Economies*. Oxford: Oxford University Press.
Strong, Nathan, Alan Bollard, and Michael Pickford. 2000. ‘Defining Market Dominance: A Study of Antitrust Decisions on Business Acquisitions in New Zealand’. *Review of Industrial Organization* 17 (2): 209–27.
Sturm, Roland. 1996. ‘The German Cartel Office in a Hostile Environment’. In *Comparative Competition Policy: National Institutions in a Global Market*, edited by G. Bruce Doern and Stephen Wilks. Oxford: Clarendon Press.
Süddeutsche Zeitung. 2010. ‘Brüderle Holt “Einheitzer”’, 2010. https://www.sueddeutsche.de/wirtschaft/wettbewerbshueter-wird-staatssekretaer-bruederle-holt-einheitzer-1.139689.
Szücs, Florian. 2012. ‘Investigating Transatlantic Merger Policy Convergence’. *International Journal of Industrial Organization* 30 (6): 654–62.
Talbot, Conor. 2016. ‘Ordoliberalism and Balancing Competition Goals in the Development of the European Union’. *Antitrust Bulletin* 61 (2): 264–89.
Thatcher, Mark. 2014. ‘European Commission Merger Control: Combining Competition and the Creation of Larger European Firms’. *European Journal of Political Research* 53 (3): 443–64.
Troeger, Vera. 2020. ‘Time-Series-Cross-Section Analysis’. In *The SAGE Handbook of Research Methods in Political Science and International Relations*, edited by Luigi Curini and Robert Franzese. London: Sage.
UNCTAD, United Nations Conference on Trade and Development. 1998. ‘Empirical Evidence of the Benefits from Applying Competition Law and Policy Principles to Economic Development in Order to Attain Greater Efficiency in International Trade and Development’. TD/B/COM.2/EM/10/Rev.1. https://digitallibrary.un.org/record/255220.
Utton, Michael. 2000. ‘Fifty Years of U.K. Competition Policy’. *Review of Industrial Organization* 16 (3): 267–85.
Vachris, M. Albert. 1996. ‘Federal Antitrust Enforcement: A Principal-Agent Perspective’. *Public Choice* 88 (3–4): 223–38.
Vallindas, Georges. 2006. ‘New Directions in EC Competition Policy: The Case of Merger Control’. *European Law Journal* 12 (5): 636–60.
Van Aaken, Anne. 2004. ‘Independent Administrative Agencies in Germany’. In *Independent Administrative Authorities*, edited by Roberto Caranta, Mads Andenas, and Duncan Fairgrieve. London: The British Institute of International and Comparative Law.
Van Waarden, Frans, and Michaela Drahos. 2002. ‘Courts and (Epistemic) Communities in the Convergence of Competition Policies’. *Journal of European Public Policy* 9 (6): 913–34.

Vanberg, Viktor J. 2015. 'Ordoliberalism, Ordnungspolitik, and the Reason of Rules'. *European Review of International Studies* 2 (3): 27–36.
Varady, Tibor. 1999. 'The Emergence of Competition Law in (Former) Socialist Countries'. *American Journal of Comparative Law* 47 (2): 229–75.
Varga, Norbert. 2019. 'Regulation and Practice of Hungarian Cartel Law in the 20th Century'. *Athens Journal of Law* 5 (2): 99–116.
———. 2022. 'Introduction to the Hungarian Cartel Regulation in the Interwar Period'. *Cracow Studies of Constitutional and Legal History* 15 (2): 215–26.
Vatiero, Massimiliano. 2010. 'The Ordoliberal Notion of Market Power: An Institutionalist Reassessment'. *European Competition Journal* 6 (3): 689–707.
Verhoest, Koen, B. Guy Peters, Geert Bouckaert, and Bram Verschuere. 2004. 'The Study of Organisational Autonomy: A Conceptual Review'. *Public Administration and Development* 24 (2): 101–18.
Vickers, John. 2010. 'Central Banks and Competition Authorities: Institutional Comparisons and New Concerns'. BIS Working Papers No. 331. https://www.bis.org/publ/work331.htm.
Vitols, Sigurt. 2004. 'Continuity and Change: Making Sense of the German Model'. *Competition and Change* 8 (4): 331–37.
Vogel, Steven K. 1998. *Freer Markets, More Rules: Regulatory Reform in Advanced Industrial Countries*. Ithaca: Cornell University Press.
———. 2018. *Marketcraft: How Governments Make Markets Work*. Oxford: Oxford University Press.
Voigt, Stefan. 2009. 'The Effects of Competition Policy on Development – Cross-Country Evidence Using Four New Indicators'. *Journal of Development Studies* 45 (8): 1225–48.
Warlouzet, Laurent. 2016. 'The Centralization of EU Competition Policy: Historical Institutionalist Dynamics from Cartel Monitoring to Merger Control (1956-91)'. *Journal of Common Market Studies* 54 (3): 725–41.
———. 2019. 'The EEC/EU as an Evolving Compromise between French Dirigism and German Ordoliberalism (1957-1995)'. *Journal of Common Market Studies* 57 (1): 77–93.
Wassum, Moritz, and Fabrizio De Francesco. 2020. 'Explaining Regulatory Autonomy in EU Network Sectors: Varieties of Utility Regulation?' *Governance* 33 (1): 41–60.
Weber, Max. 1922. *Wirtschaft Und Gesellschaft: Grundriss Der Verstehenden Soziologie*. 5th edn. Tübingen: Mohr Siebeck.
Weingast, Barry R., and Mark J. Moran. 1982. 'The Myth of Runaway Bureaucracy: The Case of the FTC'. *Regulation* 6 (3): 33–38.
———. 1983. 'Bureaucratic Discretion or Congressional Control? Regulatory Policymaking by the Federal Trade Commission'. *Journal of Political Economy* 91 (5): 765–800.
Weir, Charlie. 1992. 'Monopolies and Mergers Commission, Merger Reports and the Public Interest: A Probit Analysis'. *Applied Economics* 24 (1): 27–34.
———. 1993. 'Merger Policy and Competition: An Analysis of the Monopolies and Mergers Commission's Decisions'. *Applied Economics* 25 (1): 57–66.

Weymouth, Stephen. 2016. ‘Competition Politics: Interest Groups, Democracy, and Antitrust Reform in Developing Countries’. *Antitrust Bulletin* 61 (2): 296–316.

Whish, Richard, and David Bailey. 2018. *Competition Law*. Oxford: Oxford University Press.

Wigger, Angela. 2017. ‘Debunking the Myth of the Ordoliberal Influence on Post-War European Integration’. In *Ordoliberalism, Law and the Rule of Economics*, edited by Josef Hien and Christian Joerges. Oxford: Hart Publishing.

Wigger, Angela, and Hubert Buch-Hansen. 2014. ‘Explaining (Missing) Regulatory Paradigm Shifts: EU Competition Regulation in Times of Economic Crisis’. *New Political Economy* 19 (1): 113–37.

Wigger, Angela, and Andreas Nölke. 2007. ‘Enhanced Roles of Private Actors in EU Business Regulation and the Erosion of Rhenish Capitalism: The Case of Antitrust Enforcement’. *Journal of Common Market Studies* 45 (2): 487–513.

Wilke, John R. 2001. ‘U.S. Antitrust Chief Criticizes EU Decision To Reject Merger of GE and Honeywell’. *Wall Street Journal*, 2001, 05 July 2001 edition.

Wilks, Stephen. 1996. ‘The Prolonged Reform of United Kingdom Competition Policy’. In *Comparative Competition Policy: National Institutions in a Global Market*, edited by G. Bruce Doern and Stephen Wilks. Oxford: Clarendon Press.

———. 1999. *In the Public Interest: Competition Policy and the Monopolies and Mergers Commission*. Manchester: Manchester University Press.

———. 2005. ‘Agency Escape: Decentralization or Dominance of the European Commission in the Modernization of Competition Policy?’ *Governance* 18 (3): 431–52.

———. 2010. ‘Competition Policy’. In *The Oxford Handbook of Business and Government*, edited by David Coen, Wyn Grant, and Graham Wilson. Oxford: Oxford University Press.

Wilks, Stephen, and Lee McGowan. 1995. ‘Disarming the Commission: The Debate over a European Cartel Office’. *Journal of Common Market Studies* 33 (2): 259–73.

———. 1996. ‘Competition Policy in the European Union: Creating a Federal Agency?’ In *Comparative Competition Policy: National Institutions in a Global Market*, edited by G. Bruce Doern and Stephen Wilks. Oxford: Clarendon Press.

Williams, Mark. 2005. *Competition Policy and Law in China, Hong Kong and Taiwan*. Cambridge: Cambridge University Press.

Winham, Gilbert R. 2011. ‘The Evolution of the Global Trade Regime’. In *Global Political Economy*, edited by John Ravenhill. Oxford: Oxford University Press.

Wise, Michael. 2005. ‘Competition Law and Policy in Germany’. *OECD Journal: Competition Law and Policy* 7 (2): 7–66.

Wonka, Arndt, and Berthold Rittberger. 2010. ‘Credibility, Complexity and Uncertainty: Explaining the Institutional Independence of 29 EU Agencies’. *West European Politics* 33 (4): 730–52.

Wood, B. Dan, and James E. Anderson. 1993. ‘The Politics of U.S. Antitrust Regulation’. *American Journal of Political Science* 37 (1): 1–39.

Wood, B. Dan, and Richard W. Waterman. 1991. ‘The Dynamics of Political Control of the Bureaucracy’. *American Political Science Review* 85 (3): 801–28.
Wooldridge, Jeffrey M. 2010. *Econometric Analysis of Cross Section and Panel Data*. Cambridge, MA: MIT Press.
Wurmnest, Wolfgang. 2005. ‘A New Era for Private Antitrust Litigation in Germany? A Critical Appraisal of the Modernized Law against Restraints of Competition’. *German Law Journal* 6 (8): 1173–90.
Yesilkagit, Kutsal, and Jørgen G. Christensen. 2010. ‘Institutional Design and Formal Autonomy: Political versus Historical and Cultural Explanations’. *Journal of Public Administration Research & Theory* 20 (1): 53–74.
Young, Brigitte. 2015. ‘Introduction: The Hijacking of German Ordoliberalism’. *European Review of International Studies* 2 (3): 7–15.
Zhang, Anming, and Hongmin Chen. 2002. ‘Horizontal Mergers in a Liberalizing World Economy’. *Pacific Economic Review* 7 (2): 359–76.
Zheng, Wentong. 2013. ‘State Capitalism and the Regulation of Competition in China’. In *Asian Capitalism and the Regulation of Competition: Towards a Regulatory Geography of Global Competition Law*, edited by Michael W. Dowdle, John Gillespie, and Imelda Maher. Cambridge: Cambridge University Press.