



An econometric analysis of the European Commission's merger decisions

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Abstract

Using a sample of 96 mergers notified to the European Commission and logit regression techniques, we analyse the Commission's decision process. We find that the probability of a phase-2 investigation and of a prohibition of the merger increases with the parties' market shares. The probabilities increase also when the Commission finds high entry barriers or that the post-merger market structure is conducive to collusion. We do not find significant effects of "political" variables, such as the nationality of the merging firms.

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1. Introduction

What makes the European Commission prohibit a merger? Are the Commission's decisions consistent with economic theory? And does the Commission make consistent legal judgements in its application of the EU Merger Regulation? These are important questions, in particular in the light of the recent criticism against the Commission for not making proper economic

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analyses and the reform of merger policy following the revision of the Merger Regulation that was enacted May 1, 2004.²

During the twelve years from September 1990 through October 2002, the European Commission received more than 2100 merger notifications, and it made almost as many final decisions in such cases. The number of decisions per year increased from around 60 during the early 1990s to a peak well over 300 in the year 2000. In the last couple of years, 200 to 300 decisions have been taken annually.

Mergers—and merger control—are important, for firms as well as for society. Mergers can reduce competition, leading to allocative inefficiencies (monopoly pricing) and inefficiency in production, due to weakened incentives for cost control. But they can also lead to efficiencies, due to economies of scale and scope. Furthermore, the threat of hostile take-overs keeps management on its toes (Manne, 1965).

Only 19 (as of September 2005) of the Commission's decisions have been prohibitions in the formal sense. However, this number underestimates the importance of the Commission for the development of the structure of European industry. In an additional 26 instances, the merging parties withdrew their notification during the phase-2 investigation and many of these cases could arguably be seen as prohibitions. In addition, the conditions for allowing a merger have, in some cases, been so strict as to effectively amount to a prohibition³, while in many others the conditions have implied significant sacrifices for the firms. The most important effect of the Commission's enforcement of the Merger Regulation, however, is arguably its preventive effect, i.e., that it prevents firms from even notifying mergers that are likely to be blocked.

The European Commission holds vast powers in merger decisions. It has the power to completely block a merger—unless its decision is revoked by the Court of First Instances (CFI). However, since two or three years may easily pass between the Commission's decision and that of the CFI, few mergers are likely to be commercially relevant if and when the CFI reverses the Commission's decision.⁴ The extended legal process gives the Commission a bargaining position that allows it to enforce far-reaching commitments by the merging parties. Recently, the “inquisitorial” nature of the merger regulation has been criticised.⁵ The Commission is both prosecutor and judge, while one of its US counterparts—the Department of Justice (DOJ)—only acts as prosecutor if the DOJ wants to block a merger, the legally binding decision must be taken by a court.⁶

² Recently, the Court of First Instances reversed three of the EU Commission's merger decisions, referred to below. The formal name of the old Merger Regulation is Council Regulation (EEC) No 4064/89 of December 21, 1989 on the control of concentrations between undertakings, while the new regulation is called Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings. In addition, the EU Commission has recently published its first merger guidelines: Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C 31/03). These documents are available at <http://europa.eu.int/comm/competition/mergers/legislation/regulation/#implementing>.

³ See, e.g., *Skanska/Scancem* (case No. M 1157).

⁴ Early in 2001, the CFI introduced a system of “fast track” procedure, under which more urgent cases will be handled faster. Under this procedure, the Court's decision on the appeal of the Commission's decision in *TetraLaval/Sidel* (for references, see below) came within 12 months.

⁵ See, e.g., Hofmann, 2003.

⁶ The other US antitrust authority, the Federal Trade Commission (FTC), has a system that is more reminiscent of the European system.

During the year 2002, the European Commission lost three merger cases in court: *Airtours/First Choice*⁷, *Schneider/Legrand*⁸ and *TetraLaval/Sidel*.⁹ In all three cases, the CFI strongly criticised the Commission's economic analyses. At times, it has also been alleged that the decisions are biased against the interest of firms based in small member states or outside the European Union.¹⁰

Against this background, it seems worthwhile to evaluate what factors have historically led the Commission to investigate and prohibit mergers. An analysis of this type will also provide evidence on the consistency of its decision process. In the present paper, we provide such an evaluation, based on an econometric analysis of almost 100 decisions in EU merger cases. The main determinants of whether a merger is allowed appear to be the parties' market shares, the increase in market shares due to the merger, the existence of entry barriers and the Commission's view on the ease of collusion post merger. These variables are also the main determinants of the initiation of a phase-2 investigation. Interestingly, a number of "political" variables were *not* found to be significant. For example, it was not the case that mergers that involved firms based in large member states were less likely to be prohibited than other mergers, and there was no significant effect of the identity of the commissioner. The only indication that political considerations may have influenced the Commission's decision was some evidence that mergers with at least one US-based firm were *more* likely to be accepted than other mergers.

It should be noted that our explanatory variables are based on a reading of the decision texts. For some variables, such as the nationality of the firms, this is unproblematic. For many variables, however, we are dependent on the Commission's subjective evaluations, as stated in the decisions. For example, if the Commission wishes to block a merger, it may be tempted to delineate narrow markets, so as to exaggerate the parties' market shares, as well as to exaggerate the extent of barriers to entry. Ideally, we would of course have preferred to use measures of all variables that were completely exogenous to the decision process. On the other hand, we believe that even if there is a possibility that some of our variables are biased, our analysis may still be used to evaluate the consistency of the merger decisions, to test the hypothesis of political bias and, more generally, contribute to an understanding of which factors in practice make prohibitions more or less likely.

2. The EC merger regulation

The sample of cases used in this article predates the May 2004 reform of the Merger Regulation. For this reason, our discussion focuses on the 1989 Merger Regulation. The main changes brought about by the 2004 reforms are that the threshold for dominance has been lowered, that the standard of proofs for demonstrating anti-competitive effects have been raised and that an efficiency defence has been introduced.

Article 2 (3) of the 1989 Merger Regulation stated that a concentration (merger) shall be prohibited if it "creates or strengthens a dominant position as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it".

The European Court of Justice has defined "dominance" as "a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on

⁷ Commission decision M1524, CFI's case T—342/99, June 6, 2002.

⁸ Commission decision M2283, CFI's case T—310/01 and T—77/02, October 22, 2002.

⁹ Commission decision M2416, CFI's case T—5/00 and T—80/02, October 25, 2002.

¹⁰ Horn and Stennek (2002).

the relevant market by giving it the power to behave to an appreciable extent independent of its competitors, customers and ultimately of consumers”.¹¹ In practice, under the 1989 Merger Regulation, dominance was often found when a firm’s market share (or the combined market shares of two merging firms) exceeded 40%, although higher market shares were typically required when the buyers had strong countervailing market power or when entry barriers were particularly low. It also appears that, as soon as dominance was found, very little was required for finding competition to be “significantly impeded”.

Under the old and new Merger Regulations alike, the issue of dominance is evaluated, and market shares are calculated, in relation to a market—the “relevant market”—which is defined geographically and product-wise. Products that are sufficiently close substitutes are considered to be sold on the same relevant product market. The relevant geographical market is similarly defined as the smallest geographical area, within which the competitive situation is not considerably influenced by activities outside the area.¹²

A merger must be notified to the European Commission if the combined world-wide turnover of the merging parties is sufficiently high, if their combined intra-community sale is sufficiently high and if the intra-community sale is not too concentrated to one member state only. The Commission’s legal competence depends neither on the firms’ nationality, nor on the nature of the market in which the firms are active. In particular, the Commission is competent to assess a purely non-European merger, as long as the firms are active inside the EU. This means that mergers between multi-national firms may be assessed in more than one jurisdiction. However, according to the “one-stop-shop” principle, the Commission cannot be competent at the same time as one or more of EU’s member states (and vice versa).

When a merger is notified, the Commission must make a preliminary evaluation within a month if it finds that the merger “raises serious doubts as to its compatibility with the common market”. It may then initiate an in-depth phase-2 investigation. As of September 4, 2002, 120 of the over 2100 cases notified had been subject to a phase-2 investigation, 18 of these mergers had been blocked, while 21 mergers had been cancelled by the parties after a phase-2 investigation had begun. An additional 61 mergers were found to be compatible with the Merger Regulation after the merging parties had undertaken to promote competition, for example through the sale of overlapping activities.

3. Earlier literature

There exists a relatively large analytical economics literature on mergers. Issues that have been addressed analytically are, for example, firms’ incentives to merge (“endogenous mergers”), the effects of vertical mergers (vertical foreclosures) and how efficiency gains should be considered.¹³ Often, this literature takes a controversial merger decision as its starting point. The empirical merger literature analyses, e.g., the effects of mergers and merger announcements on share prices, firm profitability and efficiency. However, there is a paucity of positive empirical analyses of the competition authorities’ decisions that can answer the

¹¹ *United Brands* (27/76) [1978] E.C.R. 207, para. 65. See also *Korah*, 1997, p. 78.

¹² Commission Notice on the definition of the relevant market for the purposes of Community competition law, Official Journal C 372, September 9, 1997.

¹³ See, e.g., *Williamson* (1968). For extensive surveys of the literature on efficiency defence, see *Ilzkovitz and Meiklejohn* (2001), *Röller, Stennek and Verboven* (2001) and *Stennek and Verboven* (2001).

introductory questions: What types of mergers are typically prohibited? Are the decisions consistent with economic theory and is the legal enforcement consistent?

At least the first question has been addressed in the legal literature, but the mode of analysis is different from that of an economist. Often, these studies focus on a specific issue, such as how to deal with oligopoly mergers under the EU competition rules and how to account for countervailing market power. In other instances, in-depth analyses are made of certain cases.¹⁴

There exist only a few examples of research combining the two approaches, i.e., a positive but *quantitative* analysis of the authorities' decisions, even if we broaden our perspective to competition cases in general. Posner (1979) analysed the correlation between the business cycle and the *number* of competition cases at the US Department of Justice. A few more recent studies have followed a similar approach.¹⁵

McFadden (1975, 1976) developed a methodology for analysing decisions taken by a government bureaucracy. His research agenda was based on the question of *which* decisions the authorities take, not the *number* of such decisions, and he suggested that these decisions be analysed with multinomial logit models.

Statistical techniques for analysing discrete choices have only been used in a few studies focusing on competition law (antitrust) cases. Coate and McChesney (1992) used a probit model to analyse 70 merger cases handled by the US Federal Trade Commission (FTC, the other federal US agency dealing with merger and antitrust cases) during the 1982 to 1987 period. Four important explanatory variables in the regression were the Herfindahl index and three dummy variables representing, respectively, the existence of entry barriers in the affected market, the risk of collusion, and the existence of efficiency gains from the merger. Coate and McChesney found that the authority apparently did not consider efficiency gains, that mergers were highly likely to be allowed above the critical level of concentration (in terms of the Herfindahl index) indicated in the US antitrust authorities' own *Merger Guidelines* and that the existence of entry barriers is a necessary condition for a merger to be blocked. They also found indications that political pressure from the Congress influenced the merger decisions and that FTC's lawyers had more influence than the authority's economists. (This conclusion could be drawn, since the lawyers and the economists made separate reports, recommending whether the merger should be blocked or allowed.)

Similar studies have also been made by Khemani and Shapiro (1993), for mergers in Canada, and by Weir (1992, 1993), for mergers in the UK. The former found market shares and concentration to be the most important factors, but also found the level of entry barriers and competition from imports to be of importance. Weir found that the post-merger market share did *not* appear to affect the authority's decision, but that the Monopolies and Merger Commission (MMC) was less likely to allow hostile mergers. Davies et al. (1999) used a probit model to analyse 73 (non-merger) competition cases handled by the MMC in the UK.

To our knowledge, the only quantitative empirical study of the decision process in the European Commission's competition law cases using these types of analytical tools is Lindsay et al. (2003). Using a sample of 245 mergers from the period 2000–2002, the authors find that high market shares and barriers to entry are the main causes of prohibitions, while dummies indicating that the parties were incorporated in the USA or in a Nordic country have no significant effects.

¹⁴ Nilssen (1997) analyse two merger decisions taken by the Norwegian Competition Authority in depth, but from an economic viewpoint.

¹⁵ A recent example is Ghosal and Gallo (2001), who also provide references to this strand of the literature.

Some additional empirical studies of EU's merger regime, based on other methodologies, deserve mentioning. Röllner and Neven (2002) and Duso et al. (2003) analyse the relation between the Commission's decisions and the movements of the share prices on the stock market.¹⁶ If a merger is pro-competitive, we expect the share price of the merging firms' competitors to fall, while an anti-competitive merger is likely to lead to rising share prices for competitors. Both studies found that approximately three quarters of the prohibitions in their sample corresponded to a merger evaluated as anti-competitive by the stock market, while about half of the mergers given unconditional clearance were evaluated as anti-competitive by the stock market. The latter study found some evidence of political bias, suggesting that mergers were more easily approved if at least one of the merging parties was based in one of the five largest member states. Aktas et al. (2003), on the other hand, found no indications of a political bias when studying stock market reactions to mergers subject to EU merger control. This study, in contrast to the previous two, uses the share prices of the merging parties themselves.

4. Factors influencing merger decisions

From an economic point of view, a horizontal merger is potentially harmful, because it may increase the merging firms' market power. On the other hand, such a merger may increase efficiency, e.g., because of economies of scale. The negative effects are likely to be stronger when the merging parties' market shares are high¹⁷ and when there is a large increase in market shares.¹⁸ This is in accordance with legal practice under the 1989 Merger Regulation; hence, post-merger market shares and the increase in market shares are likely to influence the Commission's decisions. Other factors which, according to economic theory, are of importance for the welfare effects of a merger are the level of the entry barriers, the (increased) risk of collusion after a merger, and the possible existence of countervailing buyer or seller market power.¹⁹

The theoretical arguments against vertical mergers are less convincing than those against horizontal mergers.²⁰ It has been argued that vertical mergers can foreclose competitors. On the other hand, vertical mergers are likely to lower transactions costs and may also reduce "double-marginalization" effects. In practice, many mergers have both vertical and horizontal effects. However, given the market shares pre- and post-merger, it is interesting to evaluate whether the Commission is more or less likely to investigate or prohibit a merger with a strong vertical effect.

Under the US Horizontal Merger Guidelines, a merger may also be justified by an "efficiency defence".²¹ The new (2004) European merger regime clearly states that efficiencies should be considered, but this was not the case under the rules in force during the period we investigate.

¹⁶ These studies follow the tradition of Eckbo (1983).

¹⁷ See Farrell and Shapiro (1990), Willig (1991) and Werden and Froeb (1994), where this intuitive result is shown to hold for particular models.

¹⁸ This is consistent with the view that the industry's post-merger Herfindahl Hirschman Index (HHI) and the change in HHI brought about by a merger are rough indicators of the merger's anti-competitive impact. The use of HHI for such purposes has some theoretical support and is suggested by both American and European Horizontal Merger Guidelines. In the present study, we cannot use HHI directly, as we lack consistent information on rivals' market shares.

¹⁹ See the US Horizontal Merger Guidelines (available at http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html) and EU's new Merger Guidelines, referred to in footnote 1.

²⁰ See, e.g., the discussion in Tirole (1988), p. 195.

²¹ There is also a failing firm defence, under both the U.S. and EU rules, but there are not enough instances to evaluate its empirical relevance.

Despite this, the merging parties have, in some cases, argued that a transaction should be cleared because of efficiencies.²²

In addition, the nature of the undertakings offered by the firm is likely to influence the Commission's willingness to allow a merger. If the firms undertake to sell all overlapping business, a merger is more likely to be allowed than if no—or only limited—undertakings are offered.

Variables that are irrelevant from an economic point of view may still potentially influence the merger decision, if the Commission is amenable to political pressure. In particular, it can be hypothesised that firms based in large member states can muster stronger lobbying support for mergers in which they are involved. Conversely, firms based in small member states or outside of the EU may face stronger opposition to merger proposals, if the Commission responds to lobbying. The political and economic strength of the USA may or may not afford US based firms the same benefit as firms based in big member states.

Finally, it is possible that the policy of the Commission has changed over the years. For example, it has been suggested that Competition Commissioner Mario Monti has been tougher than his predecessors. Such effects could potentially be revealed by including a time trend or a commissioner dummy.

Ultimately, it would be desirable to check the Commission's decisions against economic theory, taking into considerations the actual circumstances of the markets concerned in the proposed mergers. With such a research question, the issue would be whether the Commission, in some sense, takes the "correct" decisions. This question would have to be evaluated against a particular standard, such as consumer surplus or total welfare.

However, following such an agenda requires that formidable empirical problems are resolved. For example, we would need to gather large amounts of information for every proposed merger. Furthermore, it is not obvious against which standard the Commission (and the Courts) evaluates mergers. In addition, these institutions are not completely free to make such evaluations, since they are bound by the wording of the Merger Regulation and by legal precedence. Hence, a distinction must be made between, on the one hand, the conformity of the rules as such with economic theory and, on the other hand, the consistency with which the Commission follows the rules. In this paper, we focus on the latter issue, although we realise that the fact that we do not have independent data on market characteristics is a limitation.

We view the Commission's decision process as a process in two stages (not to be confused with the two phases of the formal merger review). In the first stage, the Commission observes fundamental market characteristics and interprets this information as values on a number of variables. Some variables are continuous, e.g., market shares, while others are discrete, e.g., the nationality of the firms. Yet other variables are more or less continuous in the real world, but we are only able to observe them as discrete variables. An example is the entry-barriers variable, which in our research design can only take two values: "high" or "low".

In the second stage, the Commission decides whether or not to allow the merger, based on the values attributed to the relevant variables. Conceivably, the Commission's decision process could be inconsistent in the first stage (when it determines market shares, entry barriers et cetera), it could be inconsistent in the second stage (when it transforms the market shares et cetera into a decision), or it could be inconsistent in both stages.

We make a partial analysis of consistency, by taking the Commission's characterization of the market (the first stage of its analysis) as given. For example, when we evaluate the effect of market shares on the decisions, we use the market shares reported by the Commission. Similarly,

²² See, e.g., *Gencor/Lonrho*, Commission case M619 and *Danish Crown/Vestjyske Slagterier*, Commission case M1313.

we assume that entry barriers are high when the Commission states that this is the case. Hence, we can only evaluate the consistency of the second stage of the decision process.

Although it would be preferable to have independent observations of the variables on which the decisions are based, we believe, for at least three reasons, that our research agenda can shed some light on the Commission's decision process in merger cases. First, if we find indications of inconsistencies in the second stage of the decision process, this is enough to raise serious concerns. (If, on the contrary, we find no such indications, there may of course be inconsistencies in the first stage.) Second, our study can be seen as a first step towards a more complete consistency check of the decision process. Methods similar to ours could be used to analyse whether the findings of market shares, entry barriers et cetera are consistent. Such studies would be complementary to the present study; together they would illuminate the whole decision process. Third, there are good reasons to believe that the legal system provides a continuous consistency check on how market shares are calculated, in which type of markets entry barriers are high and so forth. If, for example, the Commission has in one case defined the market for heavy trucks as national, or if it has defined the market for heavy trucks as being distinct from the market for medium-heavy trucks, it is difficult to come to a different conclusion in another case. Such inconsistencies would immediately be challenged by the parties. However, it is possible that it is more complex for the parties to find inconsistencies in the second stage of the process, where these variables are weighed together into a final decision.

5. Data

Until September 2002, approximately 2100 mergers had been notified to the European Commission. The total population that we can study consists of the approximately 2020 formal decisions that had, at that time, been taken by the Commission under the Merger Regulation.²³ In order to increase the efficiency of the statistical analysis, we employed a retrospective (or choice-based) sampling technique, i.e., the sampling was made conditional on the dependent variable (the decision). Initially, our sample included all 18 negative cases, 60 of the 120 phase-2 cases and 59 cases out of the total population, 2100 cases.²⁴

Given that the first population (prohibitions) is a subpopulation of the second population (phase-2 cases) and that the latter, in turn, is a subpopulation of all cases, some cases were sampled twice. This is reported as double sampling in [Table 1](#). After considering double sampling our gross sample included 125 cases. For 15 of these, the decision was not available on the Commission's homepage. For another 14 cases, the merger was aborted or withdrawn on the companies' request. In such cases, no information is available either. This leaves us with a net sample of 96 cases for which the decision text was available at the Commission's homepage, consisting of 17 prohibitions, 30 other phase-2 cases and 49 other cases, i.e., phase-1 decisions. (See [Table 1](#).)

All aborted/withdrawn cases were phase-2 cases. Potentially, this is a serious problem, since cases aborted in phase 2 are likely to be cases where the Commission has raised strong

²³ The difference is mainly made up by notified mergers, which were withdrawn by the firms before a formal decision had been taken. Although it is easy to find the approximate number of other phase-1 decisions, it is not trivial to determine the exact number, since there may be more than one decision relating to each merger and since some decisions are merely decisions to refer the case to another jurisdiction (a member state).

²⁴ We drew our sample on September 4, 2002. In practice, for the last sample, we drew 90 random numbers between 1 and 2950. Approximately 850 numbers in that range do not correspond to any of the 2100 mergers that had been notified at that time, while the highest number assigned to a merger case was around 2950. In our draw, 59 out of 90 numbers corresponded to a merger case.

Table 1
Case population and gross and net sample, September 4, 2002

	Prohibitions	Other phase 2	Other phase 1	Total
Population	18	102	(Approx. 1900)	(Approx. 2020)
Initial sample	18	60	59	137
Double sampling	–	–8	–4	–12
Reclassification ^a	–	+1	–1	–
Actual gross sample	18	53	54	125
Withdrawn or aborted	–	–14	0	–14
No information available	–1	–9	–5	–15
Net sample	17	30	49	96

^a One phase 2 case, which was not included in the original phase 2 sample, was sampled in the phase 1 category.

objections. In fact, it has been suggested that cases aborted or withdrawn in phase 2 should be viewed as prohibitions.

In order to perform a statistical analysis, we transformed the information contained in the written decisions into a number of variables—mainly dummy variables. Some variables are unproblematic, such as the industry affiliation of the involved companies, while others could only be coded based on a subjective reading of the text. Our basic approach was to interpret from the text whether the Commission believed that, e.g., entry barriers were high, rather than trying to make independent judgements of how high the entry barriers *actually* were. An additional problem was that many of the quantitative facts were censored, as they were claimed to be confidential business secrets. In particular, this was often the case for measures of turnover and market shares.²⁵

The dependent variable is the type of decision. We view the decision process as consisting of two successive decisions, the first being whether a phase-2 analysis should be made or not. Given that a phase-2 analysis has been made, the Commission then either allows or prohibits the merger. Initially, we choose to see the extent of the undertakings by the firms as an explanatory variable. Alternatively, the extent of the undertakings can be viewed as part of the decision.

We have employed the following explanatory variables:

Marketshare: The combined post-merger market share in the relevant market where we believe the Commission expected the most serious negative consequences of the merger. Since the exact figures are often confidential, we have used the mid-point of the market-share range provided.²⁶ When the market share was only referred to as “insignificant”, we arbitrarily assumed it to be 5%.²⁷ If the exact market definition was left open, we used the widest market considered.

Dmarketshare: The difference between *Marketshare* and the market share of the larger of the two merging firm in the same relevant market, pre merger. In the three cases where no information on pre-merger market shares was available, we assumed that the merging firms had equal market shares prior to the merger.

[31–50]: A dummy variable taking the value of 1 if the market shares post merger lie between 31% and 50%.

²⁵ However, a 5%–10%-point market-share range was normally provided.

²⁶ For eight of the cases there was no available information at all on market shares due to the high level of confidentiality.

²⁷ In simplified-procedure cases, we also assumed the market share to be 5%.

Table 2
Descriptive statistics

Variable	# of observations	Mean	# of observations = 1
Phase 2	96	0.5104	49
8 (3) Cases	96	0.1771	17
<i>Marketshare</i>	88	40	–
<i>Dmarketshare</i>	87	11.7816	–
[0–30]%	88	0.4432	39
[31–50]%	88	0.2159	19
[51–75]%	88	0.1932	17
[76–100]%	88	0.1477	13
<i>Network</i>	96	0.2604	25
<i>Collusion</i>	96	0.2188	21
<i>Entrybarriers</i>	96	0.3750	36
<i>Worldleader</i>	96	0.0729	7
<i>National</i>	96	0.6354	61
<i>Big5EU</i>	96	0.5938	57
<i>US</i>	96	0.1770	17
<i>Monti</i>	96	0.5	48
<i>Undertakings</i>	95	0.3158	30
<i>Vertical</i>	91	0.2527	23

Explanatory variables in italics.

[51–75]: A dummy variable taking the value of 1 if the market shares post merger lie between 51% and 75%.

[76–100]: A dummy variable taking the value of 1 if the market shares post merger lie between 76% and 100%.

Vertical: A dummy variable taking the value of 1 if the Commission identifies important vertical aspects.²⁸

Network: A dummy variable taking the value of 1 if the merger concerns telecom, transports, electricity or the financial industry (i.e., for NACE-codes beginning with E, I or J).²⁹

Collusion: A dummy variable taking the value of 1 if the Commission finds that the firms will be collectively dominant after the merger, or if it otherwise finds that collusion will be easy (easier) in the affected markets, post merger.

Entrybarriers: A dummy variable taking the value of 1 if the Commission finds that entry barriers are high in the relevant market(s).

Worldleader: A dummy variable taking the value of 1 if at least one of the firms is referred to as “world leader”, “super dominant” or similar.

National: A dummy variable taking the value of 1 if the relevant geographical market is national or smaller. If the exact market definition is left open, we have used the widest market considered.

Big5EU: A dummy variable taking the value of 1 if at least one of the notifying firms is based in one of the five largest member states.

US: A dummy variable taking the value of 1 if at least one of the notifying firms is based in the US.

²⁸ Since there were only 3 purely vertical mergers (and 20 mixed vertical and horizontal), we include *Vertical* as an explanatory variable, rather than trying to make separate estimates for the two types of mergers.

²⁹ NACE (Nomenclature générale des Activités économiques dans les Communautés Européennes) is an industry classification code used by the EU Commission; see <http://europa.eu.int/comm/competition/mergers/cases>.

Monti: A dummy variable taking the value of 1 for decisions taken after September 15, 1999; i.e., for decisions taken under Commissioner Mario Monti.

Undertakings: A dummy variable taking the value of 1 if the merging parties propose undertakings that remove all horizontal overlap in the most problematic market. Note that undertakings that only partially removed the overlap were coded as 0, as well as behavioural undertakings. In an alternative specification, we coded undertakings which completely removed the horizontal overlap as prohibitions.

We use 30% and 50% as critical levels when constructing market share dummies, since, according to legal practice, 50% is the level above which dominance can be presumed, while 30% is the level below which dominance is presumed *not* to exist (Carlsson et al., 1999, p 234–235). However, an important practical problem is that, normally, a notified merger affects more than one relevant market, both product-wise and geographically. Our solution to this problem is to focus on the most problematic relevant market (according to our reading of the text).

For all dummy variables, we have interpreted the value as a zero if the issue to which they relate is never mentioned in the decision text. For example, if entry barriers are never discussed, we assume these to be low. The descriptive statistics for the variables are presented in Table 2.

6. The empirical model

We use logit-regression techniques to estimate the two successive decision faced by the Commission: first, whether a certain case will be brought into a phase-2 analysis and second, whether a certain merger will be prohibited. The logit model can be derived from the assumption that

$$\log\left(\frac{P_t}{1 - P_t}\right) = \mathbf{X}_t\beta$$

where P_t is the probability that a certain event occurs for observation t , \mathbf{X}_t is a vector of explanatory variables and β is the parameter vector to be estimated. Let the event, i.e., the dependent variable, be represented by the variable y_t , which takes the value 1 if the event occurs (e.g., if the Commission decides to make a phase-2 investigation or to prohibit the merger) and 0 otherwise. Hence, P_t denotes the conditional probability that $y_t=1$.

Solving for P_t , we find that

$$P_t = (1 + \exp(-\mathbf{X}_t\beta))^{-1}$$

Alternatively, the logit model can be derived from the assumption that there exists a latent variable Z , which would in our case represent the Commission's view on the "severity" of the merger's anti-competitive effects. If the latent variable Z takes a value above a critical level Z^* , then $y_t=1$. Such a derivation is similar to how the probit model is derived, except that the errors are assumed to follow the extreme-value function, rather than the normal distribution (Davidson and MacKinnon, 1993, ch. 15.2).

In the previous section, we have described the vector of explanatory variables, \mathbf{X} , as well as our sampling strategy. We sampled retrospectively, i.e., conditional on the dependent variable, such that certain types of decisions were over-represented. Relative to the probit model, the logistic model has the advantage that it can be estimated directly on a retrospective sample (see McCullagh and Nelder, 1989, ch. 4.3.3). Except for the intercept, we can estimate and interpret the parameters of interest. However, the true intercept can be calculated as $\alpha_i^* = E(\hat{a}) + \ln(A_i/S_i)$,

where A_i is the proportion of a certain decision type in the population and S_i is the proportion of that decision type in the choice-based sample (Manski and Lerman, 1977).

7. Results

7.1. The decision to initiate phase-2 investigations

Within a month of the notification, the Commission makes the decision to allow the merger—or to initiate phase-2 investigations. At that time, the Commission will have less information than when making a final decision after the phase-2 investigation. On the other hand, a substantial amount of information may be available already at this stage: the information provided by the parties in the notification, the additional information gathered during the preliminary investigation and the Commission's prior information, acquired in previous cases or by the staff in other contexts. For this reason, we use two alternative specifications of the empirical model, based on two alternative assumptions on the availability of information. Table 3, columns 1 and 2, provides the estimation results for the two alternative specifications. (Columns 3 and 4 are discussed in the next sub-section.)

In both estimations the variable *Worldleader* takes the value 1 only for cases with phase-2 investigations, i.e., it is a perfect classifier. Therefore, the variable *Worldleader* is removed from the model and the perfectly classified cases, seven in total, are dropped during the estimation, in order not to bias the remaining coefficients.³⁰

We use dummies for post-merger market shares interacted with *Dmarketshare* in both regressions.³¹ The use of an interaction term is justified if the impact of a given market-share increase becomes larger as the pre-merger market share rises, as suggested by the non-linearity of the HHI. In the first regression we use market-share variables and “political” variables only, since these represent the type of information most likely to be available at the time the decision was made. All market-share variables are significant at least at the 5-% level and have the expected sign. Interestingly, the probability of further investigations appears to depend neither on whether the merger has vertical aspects, nor on the merging parties' nationality or industry affiliation or on the identity of the commissioner.³² However, the size of the market seems to matter. If the relevant market is national or local the probability that the merger is evaluated in phase 2 decreases. This finding is consistent with the Commission implicitly weighing efficiencies against anti-competitive effects, assuming that, on average, higher concentration is needed to achieve minimum efficient scale in small markets.

In the second regression two additional variables are introduced: *Entrybarriers* and *Collusion*. With one exception, the market-share variables are still significant at the same levels of significance. The size of the market still seems to matter—*National* is significant at the 5-% level. Also, we find that the variable *Vertical* is significant at the 5-% level. However, since we do not get the same result in the first regression, we do not want to over-emphasise this

³⁰ The results are robust to including these seven observations. For a discussion of omitted-variable bias, see, e.g., Green (2000).

³¹ Because of collinearity we do not include *Dmarketshare* and the market-share dummy variables separately in the regressions above.

³² In order to evaluate whether there is a structural change in parameters before and after Monti started his term in office we separated the sample into two sets and estimated the models above. However, due to the resulting small samples it was not possible to test for changes in the parameters.

Table 3

Estimation results for the decision to initiate phase-2 investigations and to prohibit or allow mergers

Dependent variable:	Estimated coefficients			
	1 Phase 2	2 Phase 2	3 8(3)	4 8(3)
[31–50]*Dmarketshare	0.2763** (2.05)	0.4516* (1.88)	0.9889 (1.41)	0.1308 (1.43)
[51–75]*Dmarketshare	0.3519*** (2.53)	0.4352*** (2.96)	0.1227** (2.05)	0.1286* (1.92)
[76–100]*Dmarketshare	0.9967*** (3.53)	1.9435*** (2.68)	0.1186*** (2.83)	0.1244*** (2.72)
US	–1.5767 (–1.45)	–5.5862* (–1.70)		–1.2263 (–0.79)
Big5EU	–0.9801 (–1.17)	0.0444 (0.04)		1.6060 (1.24)
National	–1.2888* (–1.63)	–3.8125** (–1.97)		0.1837 (0.12)
Network	–0.2675 (–0.30)	–1.2886 (–1.17)		–1.1128 (–0.74)
Monti	0.6558 (0.87)	–2.6787 (–1.49)		–0.3019 (–0.24)
Vertical	0.4307 (0.50)	4.1179** (2.23)	–0.5116 (–0.56)	–1.1994 (–0.90)
Worldleader			2.4469* (1.76)	4.6776* (1.84)
Entrybarriers		6.4524** (2.19)	0.7885 (0.55)	0.9006 (0.61)
Collusion		7.3695*** (3.70)	0.8627 (0.69)	0.8392 (0.59)
Undertakings			–0.9647 (–0.87)	–0.2798 (–0.18)
_cons	–2.1634 (–0.03)	–3.7663 (–1.38)	–6.5296*** (–4.90)	7.6887* (1.85)
Pseudo R^2	0.5167	0.7870	0.4565	0.4319
χ^2	29.59	36.93	29.01	43.19
Number of observations	78	71	77	77
Correct predictions	79%	91%	84%	86%

Robust *t*-values in parentheses. *, ** and *** represent 10-, 5- and 1-% level of significance. The constant presented above was re-calculated with the method proposed by Manski and Lerman (1977).

result.³³ Both *Entrybarriers* and *Collusion* are significant at least at the 5-% level and have the expected sign.

A common measure of goodness-of-fit for this type of model is the percent of correctly classified cases. Overall, the models correctly classify 79% and 91% of the cases, respectively. In three cases, non-phase-2 cases were not correctly classified. At the end of this section, we discuss some possible econometric problems due to missing variables and the possibly subjective nature of the Commission's findings concerning key market characteristics.

³³ To evaluate the impact of the three purely vertical cases on our results, we dropped these observations and re-estimated the above specifications. The results did not change in any significant way.

7.2. The decision to allow or prohibit mergers

In the analysis of the decision to allow or prohibit mergers, we were in principle able to use all variables. The estimation results for two alternative specifications are provided in Table 3, columns 3 and 4.

In the first regression (column 3) we include market-share variables and the qualitative variables *Worldleader*, *Entrybarriers*, *Collusion* and *Undertakings*. We get significance at least at the 5-% level for market-share increases at the two highest levels of combined market shares. All parameters related to market shares have the expected sign. Of the four qualitative variables included, only *Worldleader* is significant (at the 10-% level of significance and with the expected sign).

This result fully carries through to the second regression (column 4 in Table 3) where, in addition, the four “political” variables and the market size variable *National* are included. However, we neither get significance for any of the political variables, such as the commissioner variable *Monti*, nor for the market-size variable.

For both models the overall level of correctly classified cases is fairly good, above 80%. When considering only the prohibited cases this result changes. The first regression correctly classifies 20% of the prohibited cases. For the second regression the fraction is 27%. All the non-prohibitions are correctly classified. In order to test the robustness of the model, we estimated the parameters with phase-2 decisions only, dropping all the phase-1 decisions; this caused no significant changes in the parameter estimates.

The low level of correctly classified prohibitions shows that neither of the two specifications presented above has the ability to distinguish between prohibitions and cases that were approved in phase 2 after commitments and obligations. The reason for this is, arguably, that the only variable that provides information to separate the two groups of cases, *Undertakings*, is not informative enough. The fact that *Undertakings* is not significant in either of the two specifications above provides further evidence of this. The reason for the poor performance of this variable may be that the variety and complexity of the undertakings cannot be captured by a single dummy variable.

7.3. The decision to prohibit/conditionally allow or unconditionally allow a merger

An alternative approach, that avoids the problem mentioned in the previous paragraph, is to group together as one category cases that were approved in phase 2 with commitments and obligations, and prohibitions. Pursuing this approach, we were in principle able to use all variables (with the exception of *Undertakings*). The estimation results for six alternative specifications are provided in Table 4.

In the first two regressions the dummies for post-merger market shares are interacted with *Dmarketshare*, in order to capture the effect that a 1-% increase in market share has on the likelihood of blocking a merger at different market-share levels. The third and fourth regressions use the dummies for market shares without considering *Dmarketshare* and in the last two regressions *Marketshare* and *Dmarketshare* are used separately.

As shown in Table 4, all parameters related to market shares have the expected sign. In the first regression, all market-share estimates are significant at the 1-% level. A merger is more likely to be blocked (or allowed with conditions) if the market share increases at market-share levels above 30%. In addition, the two qualitative variables included, *Entrybarriers* and *Collusion*, are significant at the 1-% level and have the expected sign.

Table 4
 Estimation results for the decision to prohibit/conditionally allow mergers

	Estimated coefficients					
	1	2	3	4	5	6
Quasi 8(3)						
Marketshare					0.075** (2.37)	0.069*** (2.75)
Dmarketshare					0.097 (0.91)	0.107* (1.73)
[31–50]			4.203*** (2.72)	4.261*** (3.55)		
[51–75]			4.647*** (3.77)			
[76–100]			6.270*** (3.70)			
[51–100]				4.848*** (4.01)		
[31–50]*Dmarketshare	0.224*** (2.93)	0.675** (2.12)				
[51–75]*Dmarketshare	0.291*** (3.22)	0.475** (2.08)				
[76–100]*Dmarketshare	1.340*** (4.35)	2.510** (1.98)				
Collusion	2.374*** (2.66)	4.479** (1.99)	2.950** (2.12)	3.142** (2.28)	2.849** (2.27)	
Entrybarriers	3.907*** (3.20)	10.374** (2.02)	3.816*** (3.01)	4.264*** (3.51)	3.857*** (3.78)	
Vertical	1.469 (1.11)	3.317* (1.80)	1.488 (1.33)	0.981 (0.80)	1.348 (0.92)	1.222 (1.39)
Big5EU		–1.677 (–0.91)		0.717 (0.52)	0.074 (–0.09)	–0.458 (–0.560)
US		–11.589* (–1.73)		–0.342 (–0.32)	–2.920** (–2.29)	–1.573** (–1.97)
National		0.824 (0.40)		1.664 (1.31)	–0.259 (–0.16)	–0.097 (–0.11)
Network		0.720 (0.50)		–0.809 (–0.61)	0.547 (0.45)	0.805 (1.02)
Monti		–3.853 (–1.4)		0.184 (0.18)	–1.290 (–0.79)	–0.332 (–0.38)
_cons	–6.688 (–3.43)***	–6.628 (–1.75)*	–8.498 (–5.32)***	–9.808 (–2.76)***	–7.588 (–4.63)***	–6.251 (–4.12)***
Pseudo R^2	0.757	0.852	0.708	0.717	0.713	0.474
χ^2	30.46	37.95	31.51	40.09	61.61	38.06
Number of observations	71	71	76	76	71	71
% of correct predictions	89%	93%	87%	69%	85%	72%

Robust t -values in parenthesis. *,** and *** represent 10-, 5- and 1-% level of significance. The constant presented above was re-calculated with the method proposed by Manski and Lerman (1977).

On the other hand, *Vertical* (indicating mergers with vertical aspects) turned out to be positive, but insignificant.

The results in the first regression do not fully carry through to the second one, where also “political” variables are included. As in the previous specification, all market-share estimates, as well as *Entrybarriers* and *Collusion*, are significant at the 5-% level. However, the variable *Vertical* now not only is positive, but also significant at the 10-% level, implying that mergers

with vertical aspects are significantly more likely to be blocked. Nevertheless, this result should not be emphasised too much, since the same result is not found under the other specifications.

With regards to the “political” variables, only one appears to be significant: *US*. The coefficient for this variable is negative and significant in three out of four specifications, suggesting that the probability of a negative outcome is *lower* when a US firm is one of the acquirers. There are different ways to interpret this result. For example, US firms may have stronger lobbying positions than firms from Europe or elsewhere. Alternatively, the fact that US firms have operated in an environment with competition laws for longer than their European counterparts may have an influence on their behaviour. As a result of their legal experience, US firms may be more effective in arguing their cases before the competition authorities or they may be more selective when pursuing mergers. We find the first explanation unlikely and, hence, do not interpret this finding as strong evidence of a political bias in favour of US firms.

None of the other political variables, *Big5EU* and *Monti*, turn out to be significant in any of the specifications, and neither do the variables *National* and *Network*.

Alternative specifications to the first and second regressions (columns 1 and 2) are presented as regressions number three and four (columns 3 and 4). Here, the dummy variables for market share are used without interaction with *Dmarketshare*. All of them are significant at the 1-% level. At the same time, the dummies for entry barriers and collusion remain positive and significant at least at the 5-% level.

The last two specifications use the continuous variables, *Marketshare* and *Dmarketshare*, where the former is found to be significant. As in all the other specifications, *Collusion* and *Entrybarriers* are significant at least at the 5-% level. Again, none of the “political” variables—except *US*—turned out to be significant.

Specification 1 in Table 4 is able to predict 100% of the approved cases and 75% of the prohibitions, with an overall level of predictability of 89%. In general, we can observe that the level of correctly predicted outcomes ranges from 69% to 93%, in contrast with 57% in a model where only a constant term is included.³⁴

The coefficient estimates presented in Table 4 cannot be interpreted as marginal changes in the probability that a case will be blocked. To allow interpretation of the coefficients, Figs. 1 and 2 present graphically the predicted probabilities that a proposed merger will be prohibited. Since the calculations are based on the parameter estimates from Table 4, a “prohibition” could also be a requirement that all horizontal overlap in the most problematic market must be eliminated.

Fig. 1, based on specification 3, presents the impact on the prohibition probability of the variables *Vertical*, *Collusion* and *Entrybarriers*, in the four different post-merger market share ranges and under the assumption that all other variables are at their mean values. As can be seen from the upper-left part of the figure, the probability that a case will be blocked (unless all horizontal overlap is eliminated) is approximately 5% for market shares between 1% and 30%, if the variables *Collusion*, *Vertical* and *Entrybarriers* are kept at their mean values. The probability increases with post-merger market share.

If the Commission either considers entry barriers to be high, i.e. if *Entrybarriers* takes the value 1, or that there is a risk of collusion, then the probability that a case is blocked increases to approximately 25% for a post-merger market share between 1% and 30%.

³⁴ To check the robustness of the parameters we estimated the model with only phase-2 cases, dropping all phase-1 cases. However, due to the resulting small sample, the estimations suffered from collinearity and can, therefore, not be compared to the above estimations. We have also estimated the above specifications without the three pure vertical cases. This caused no significant changes in the results.

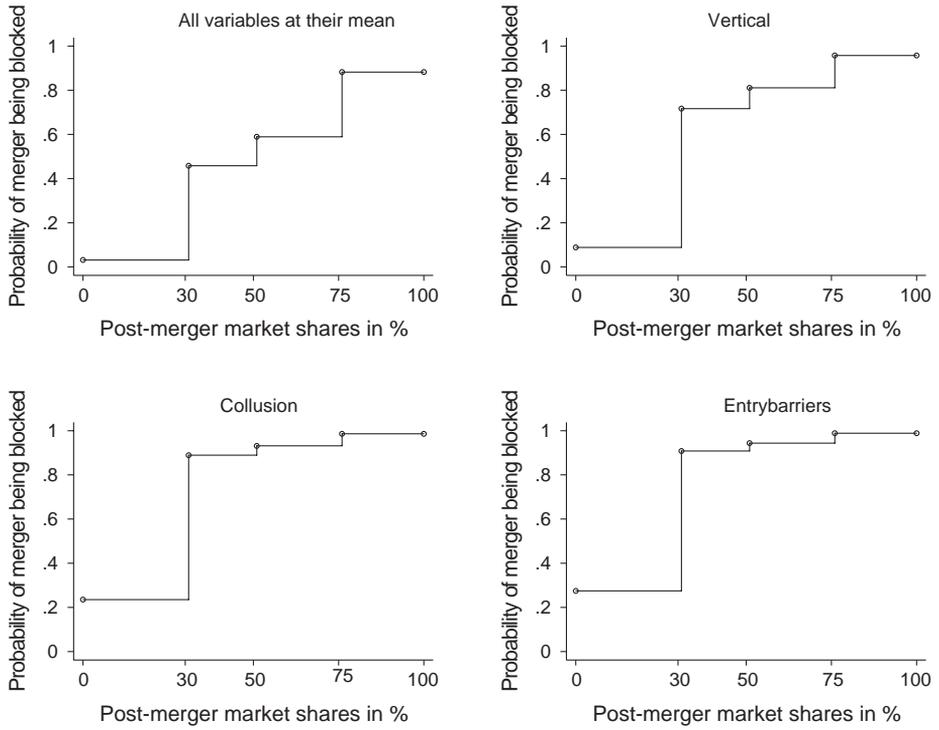


Fig. 1. Probability of blocking a merger, 3rd specification.

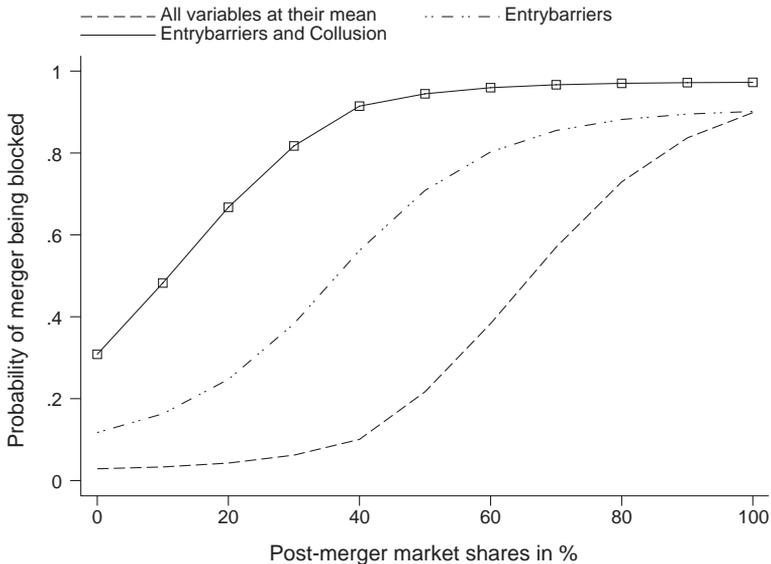


Fig. 2. Probability of blocking a merger, 5th specification.

Irrespective of the post-merger market share, the existence of entry barriers is the most influential single factor on the prohibition probability, with *Collusion* not far behind. For all market-share levels above 30%, the individual influence of these two variables is strong. If either *Entrybarriers* or *Collusion* takes the value 1, the probability of blocking a case never falls below 90%.

Using specification number 5 (column 5), Fig. 2 presents the probability of a case being blocked as a function of the combined market shares of the merging parties. The first series, *All Variables at their mean*, calculates the probability of a prohibition as a function of market shares, under the assumption that all other variables are fixed at the sample mean. The second series, *Entrybarriers*, presents a similar analysis, except that here it is assumed that the Commission considers entry barriers to be high. The third series, *Entrybarriers and Collusion*, considers the case of a market where entry barriers are high and where collusion post-merger is believed to be likely.

7.4. Some possible econometric problems

The aim of this study is to evaluate the consistency of the European Commission's findings in merger cases and, in particular, to test for a political bias in the decision process. In Section 4, we discussed the possibility that the Commission is inconsistent when defining relevant markets and when establishing the level of entry barriers, et cetera, rather than when making the final decision based on its findings concerning these market characteristics. In other words, variables that we treat as exogenous may be endogenous. We argued that although this is an important limitation of our research design, our method will at least provide a partial consistency check of the decision process, as well as a first step towards a comprehensive consistency check. In addition, we argued that the legal system limits the Commission's ability to bend the rules in this manner.³⁵

Another concern is that we have a missing-value problem for some of the assumedly exogenous variables. For example, the existence of high entry barriers or the collusion risk can sometimes be established only after a thorough investigation. This means that given that there exists, e.g., high entry barriers, it is more likely that this will be reported by the Commission after a phase-2 investigation than after a phase-1 investigation. When we coded the data, we assumed that when entry barriers are not discussed, then the Commission is of the opinion that entry barriers are *not* particularly high. This may be a reasonable assumption for cases that have undergone a phase-2 investigation, but may be less reasonable for cases where there were only phase 1 investigations. Hence, there may be some phase-1 cases where the entry barriers were indeed high, but where we erroneously coded this as a low-entry-barriers market. This missing-value problem may make some parameter estimates biased upwards, since the apparent correlation between, e.g., entry barriers and phase-2 investigations may increase.

In the Data section, we mentioned the possibility that some mergers have been withdrawn by the parties after the Commission's presentation of its preliminary views. Possibly, such outcomes should be interpreted as prohibitions, in particular if the withdrawal occurs in phase 2. From an econometric point of view, the fact that there is no decision text available for these cases

³⁵ Following Sutton (1991), we used industry averages of R&D and advertising expenditures, as a fraction of sales and by NACE code, in an attempt to measure entry barriers independently of the Commission's evaluations. Our intention was to construct an instrument for entry barriers. However, in a probit regression with the entry-barrier dummy as the independent variable, neither R&D nor advertising was significant and the pseudo R² was only 0.04.

represents a loss of information, since the negative decisions are the most informative. In addition, if withdrawn cases are systematically different from other cases, then the parameter estimates may also be biased due to a sample-selection effect.

Concerning the estimation technique, we have considered using nested logit instead of ordinary logit. Arguably, the decision process has a nested structure. Only those mergers that go to a second phase can be prohibited. However, due to the small sample size we have chosen not to use this method. It is always risky to use small sample sizes when making maximum-likelihood estimations³⁶ and nested logit will imply a smaller number of observations in each nest. Nevertheless, expanding the dataset and then estimating a nested-logit model may add important information or confirm the robustness of our results.

8. Conclusions

When empirically analysing the European Commission's merger decisions, we find no indication that the Commission allows political aspects to influence its decisions. In particular, we cannot find that the nationality of the merging firms has any effect on the probability of a merger being subjected to a phase 2 analysis or being prohibited, except, possibly, that mergers where US firms are involved are allowed *more* often. [Khemani and Shapiro \(1993\)](#) found no evidence that political variables influenced the decision process for merger decisions under the Canadian competition rules. In contrast, [Coate and McChesney \(1992\)](#) report that political pressure from the Congress influenced merger decisions by the FTC, under the US rules, while [Weir \(1992, 1993\)](#) found that hostile mergers were more likely to be blocked by the UK Monopolies and Merger Commission (MMC).

Although the contrast between the decisions made by the European Commission, on the one hand, and the decisions made by FTC and MMC, on the other, is interesting, its importance should not be exaggerated. The US and UK data used in the previous studies are approximately ten years older than our data and legal practice in both these countries have undergone important changes since the beginning of the 1990s. Furthermore, we cannot rule out the possibility that the European Commission has discriminated against, e.g., firms from certain types of countries. As discussed in the previous section, the Commission could tend to delineate narrower markets, and hence exaggerate market shares, if it wants to block a merger for political reasons — instead of openly blocking a low-market-share merger. Similarly, it could use lower standards for claiming that entry barriers were high, rather than acknowledging that entry barriers were low or moderate. Despite this and other inherent econometric difficulties associated with studying regulatory decisions, we believe that our study is a first step towards a more comprehensive evaluation of the European Commission's merger enforcement.

Our study focuses on the Commission's application of the existing rules. However, even if the rules are applied non-discriminatorily, as our results suggest, the rules as such may discriminate against firms based in small countries. For example, it may be welfare-maximising to allow mergers resulting in higher market shares in small markets than in large markets, since the optimal trade-off between competition and scale economies may vary with the size of the market.

Overall, we find that the decisions appear to be influenced by variables that, according to economic theory, are related to a merger's welfare effects. In particular, higher post-merger

³⁶ See for example [Long and Freese \(2001\)](#).

market shares increase the risk of the Commission making a phase-2 analysis, as well as the risk of the merger being prohibited. Furthermore, if entry barriers are high and if collusion is considered easy post merger, then it is more likely that the merger will be prohibited. A related conclusion is that it appears to be possible to make relatively good predictions of the Commission's decisions, using variables that are at least potentially available to outsiders, as well as to the firms themselves. This is interesting, since a predictable legal process is in itself desirable.

Finally, we would like to emphasise that our findings cannot be interpreted as suggesting that the Commission has made the *right* decisions in the past, neither in the sense of maximising welfare (or consumer surplus), nor in the legal sense. A deeper analysis of this issue would, we believe, require a case-by-case analysis. An important caveat is also that our findings are based on information provided in documents written by the Commission itself. In many cases, this information consists of subjective evaluations on issues such as the importance of entry barriers and the risk of collusion. We believe that it would be valuable to use methods similar to ours to assess to what extent the European Commission has been consistent in its market delineation and when it evaluates entry barriers et cetera. Such studies would naturally complement the present one.

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