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Data Documentation

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EU Merger Control Database: 1990–2014

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1 Introduction

Competition policy, i.e. the design and enforcement of competition rules, is a cornerstone of European Union policy designed to enhance European integration and foster growth. Among the different areas of the European Commission's (EC) antitrust enforcement, i.e. collusion, merger, and abuse-of-dominance cases, this dataset focuses on EC merger policy. As common European merger control started in 1990, we can now look back at, and evaluate more than 25 years of EC merger control.

We collected data on almost the complete population of the Directorate-General Competition's (DG COMP) merger decisions, both across time and with regard to the scope of the decisions encompassed. We started data collection with the very first year of common European merger control, 1990, and included all years up to 2014. This amounts to 25 years of data on European merger control.

With regard to the scope of the decisions, we collected data in all cases where a legal decision document exists. This includes all cases settled in the first phase of an investigation (Art. 6(1)(a), 6(1)(b), 6(1)(c) and 6(2)) and all cases decided in the second phase of an investigation (Art. 8(1), 8(2), and 8(3)). Note that this also includes all cases settled under a 'simplified procedure', provided that a legal decision document exists.

Furthermore, we also intended to collect data on cases that were either referred back to member states by DG COMP or aborted by the merging parties. While we have collected some data on such cases, data on these cases is not always available. Therefore, we cannot guarantee that the final dataset covers all of these cases.

Rather than taking a particular merger case as the level of observation, we decided to collect data at a more fine-grained level, defining an observation as a particular product/geographic market combination concerned by a merger.

In total, the final dataset contains 5,196 DG COMP merger decisions, where each decision occupies a number of rows equal to the number of product/geographic markets identified in the specific transaction. Hence, the total dataset contains 31,451 observations.

The remainder of the data documentation is structured as follows. In section 2, we provide a short overview of DG COMP's merger review process. In section 3, we describe how we collected and recorded the merger data, in section 4, we describe our data cleaning and quality control procedure. Section 5 contains a description of all the variables included in the final database. Lastly, we explain the data collection procedure with the help of an example case in section 6.

2 EU Merger Review Process

Mergers that affect the European market must be notified to the EC when involving an EU community-wide dimension.

DG COMP then has 25 working days (which can be extended to a maximum of 35 working days) for an initial assessment of the merger. This is the so-called "phase-1 investigation." Based on this initial assessment DG COMP can clear the proposed merger (phase-1 clearance), clear it subject to remedies proposed by the merging parties (phase-1 remedy), or initiate a more in-depth investigation (phase-2 investigation) depending on whether the proposed transaction raises competitive concerns and depending on whether these can be addressed by initial remedies or not. Furthermore, the merging parties might also withdraw the proposed merger during phase-1 (phase-1 withdrawal).

If DG COMP initiates a more in depth investigation, this phase-2 investigation can take up to 90 working days. Following this second investigation phase, DG COMP can again unconditionally clear the merger (phase-2 clearance), clear the merger subject to commitments by the merging parties (phase-2 remedy), or prohibit the merger (phase-2 prohibition). Again, the merging parties can also still withdraw the proposed merger during phase-2 (phase-2 withdrawal). It has been argued that withdrawing a merger during phase-2 of the investigation process is virtually equivalent to a prohibition as parties often withdraw a merger before an actual prohibition by DG COMP takes place. Hence, both a prohibition as well as a phase-2 withdrawal suggest that DG COMP and the notifying parties were unable to find suitable remedies to address the anti-competitive concerns of the proposed transaction.

3 Data Collection Procedure

All decisions by DG COMP are available and publicly accessible on the EC's website.[1] We downloaded all available merger decision documents for merger cases notified to the EC between 1990 and end of 2014.

These decision documents were then partly read and scanned for the relevant information that we wanted to collect in the appropriate sections of the decisions. For example, the

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[1]The types of notified mergers, decisions taken, and reports for each of DG COMP's decisions are available at: `http://ec.europa.eu/competition/mergers/cases/`; `http://ec.europa.eu/competition/mergers/legislation/simplified_procedure.html`.

recording of a particular case will typically start with the basic case information (number, dates, decision etc.) contained on the first page(s) of the document. The typical structure of a decision document is as follows:

Introduction The case is summarized on the first pages of the document. The final decision as well as the relevant dates and parties involved are also stated here.

The Parties, The Operation, Concentration of Community Dimension This section of the decision discusses the merging parties as well as the nature of the merger proposal in detail. Under the heading "Concentration and Community Dimension" DG COMP justifies why the case has an EU-wide dimension.

Compatibility with the Common Market This section is the main part of the decision and contains most information that we collected. The sections "Relevant Product Markets" and "Relevant Geographical Markets" explain in detail which markets and products are affected by the merger. The next section (called "Assessment" or similar) typically contains the market shares of the merging parties as well as of competitors in each concerned product/geographic market. The section "Competitive Assessment" contains the discussion of the potential competitive concerns of the merger in all relevant product/geographic markets. We filter out some of the characteristics of the concerned markets (see section 5 for a description of the included variables).

Undertakings proposed by the Parties or Parties proposed remedy This section of the decision contains the description of the remedies that the merging parties proposed in order to address the competitive concerns raised by DG COMP, distinguishing between behavioral and structural remedies.

Assessment of the proposed Modifications This section contains DG COMP's evaluation of the appropriateness of the proposed remedies in alleviating the competitive concerns raised previously.

Overall Conclusion This section contains the final decision of DG COMP. Hence, it states whether the proposed merger is compatible with the common market or whether it would significantly impede competition in the common market and, consequently, is going to be prohibited.

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Appendix The final assessment by DG COMP is typically followed by numerous appendices containing tables and figures highlighting certain aspects of the decision. These are not typically relevant for the type of information we collected.

During the data collection process, we recorded all the information gathered from the decision documents in Microsoft Excel tables. The format of these tables was uniform across all research assistants involved in the data gathering process, thus facilitating merging them later.

We then merged the individual data tables into a single matrix using the statistical software package STATA. This facilitated various tasks of cross-checking the data, quality control (see section 4) and will also be helpful in the creation of standardized classification schemes. The cleaned and standardized dataset can then be exported back into any data format desired.

To date, data on almost all merger cases decided by DG COMP from 1990 through 2014, inclusive, has been collected. However, there are about 500 decision documents between 1990 and 2014 for which data is not yet recorded, primarily because most of these documents are not in English.

Given that we consider all merger cases notified to the EC between 1990 and 2014, some of these cases (around 50) were decided only in 2015.

4 Data Cleaning & Quality Control

In order to ensure a high quality and consistency of the data collected, we essentially took two measures.

First, we established a uniform data collection procedure for all research assistants going through the decision documents and recording the data. Secondly, we controlled the quality of the data once we imported the raw data from the Excel tables into STATA.

The first step is particularly crucial: we developed an approach to analyzing DG COMP's decision documents that i) makes it clear to the individual research assistant what information is to be collected from the decisions; ii) where in the decision documents this information can be found (or is most likely to be found); and iii) how these tasks can best be streamlined. To this end, we developed a 'manual' that explains in detail how the data are to be collected. Furthermore, at the beginning of the data collection stage, we asked each research assistant to re-collect data on a few mergers that were already reliably

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recorded. This allowed us to compare the 'canonical' data to the results delivered by the research assistant. Any discrepancies between the two were discussed with the research assistant, such that human mistakes or ambiguities in the data collection procedure could be ruled out to the largest extent possible.

Of course, human error cannot entirely be ruled out. That is why we conducted a second stage of quality control. While typos and other human errors are hard to spot in tables with thousands of rows and dozens of columns, the statistical evaluation of the resulting tables once imported into STATA made this consistency check easily possible. Thus, in the second stage of quality control we checked for typos in the data, unreasonably large or small values in specific variables, and missing data problems.

We corrected, for example, typos, coding errors, and missing values in the basic information about the decision (see section 5 for a detailed description of the variables). Some case numbers and country information were corrected. Furthermore, we checked whether the notification date was always prior to the decision date, which allowed for spotting typos in the date variables. At times the outcome of a decision was also wrongly coded in the Excel files. We further corrected coding errors or missing values in the indicator variables describing the type of the merger as well as the geographic market concerned. Lastly, we harmonized merging party names across markets and imputed some missing market share information. In cases where the correct values of variables were not obvious, we went back to the respective decision documents in order to correct the data.

Following the data cleaning, the final dataset contains 31,451 observations belonging to 5,196 merger cases.

5 Database Content

This section describes in detail the information contained in the final merger database. As explained above, the unit of observation is not a particular merger case but rather a particular product/geographic market combination affected by the merger. Hence, some of the variables collected vary at the merger level while others vary at the level of the concerned product/geographic market combination. The overview table in Appendix A.1 lists all variables contained in the database and specifies whether they vary at the merger or the product/geographic market level.

5.1 Basic Information about the Decision

The dataset contains first some basic information about the decision. The variable **casen** contains the case number as reported in the decision document. This variable uniquely identifies each merger case. The variables **notdate** and **decdate** contain the date of the notification to, and the date of the decision of DG COMP, respectively. We also included the variables **notyear** and **decyear** containing the year in which the notification respectively the decision took place.

We also collected information on acquiring and target firms. In some merger cases more than one acquiring and/or more than one target firm are involved. This is why the dataset contains information on up to three acquiring and up to two target firms. The string variables **acquirer1**, **acquirer2**, **acquirer3**, **target1** and **target2** contain the names of the acquiring firms as well as of the target firms. Tables 17 and 18 in Appendix A.2 and A.3 list the top 20 primary acquiring and target firms respectively. Note however that this is a preliminary assessment of acquiring and target firms before complete name harmonization.

The variables **countryacq1**, **countryacq2**, **countryacq3**, **countrytar1**, and **countrytar2** record the nationality of the acquiring and the target firms respectively. Table 19 in Appendix A.4 lists the top 20 acquiring and target firms' countries based on the primary acquiring and target firm respectively. If the notified merger is a joint venture, the parties are ordered into acquirer and target according to the order the companies appear in the title of the decision.

The variable **outcome** contains the type of decision made by DG COMP distinguishing phase-1 clearances (outcome 1 "ph1 clear"), phase-1 clearances subject to remedies (outcome 2 "ph1 rem"), phase-2 clearances (outcome 3 "ph2 clear"), phase-2 clearances subject to remedies (outcome 4 "ph2 rem"), prohibitions (outcome 5 "prohibition"), phase-1 withdrawals (outcome 6 "ph1 withdrawal"), phase-2 withdrawals (outcome 7 "ph2 withdrawal"), referrals back to the competition authority of the respective member state (outcome 8 "referral to MS"), as well as other types of decision documents (outcome 9 "other").

Phase-1 cases are decided under Art.6(1)(a), Art.6(1)(b), or Art.6(2) of the EC Merger Regulation. While phase-1 clearances are cases that are decided under Art.6(1)(a) or Art.6(1)(b) without imposing remedies, phase-1 clearances subject to remedies are cases decided under Art.6(1)(b) or Art.6(2) with imposition of remedies.

Phase-2 cases are decided under Art.8(1), Art.8(2), or Art.8(3) of the EC Merger Regulation. While phase-2 clearances are decided under Art.8(1) or Art.8(2) without imposing

remedies, phase-2 clearances subject to remedies are decided under Art.8(2) with imposition of remedies. Prohibitions are decided under Art.8(3).

Cases that are referred back to national competition authorities are decided either under Art.4(4) or Art.9(3). Lastly, all other cases were included in the outcome category "other." These cases contain, for example, cases decided under Art.14 (fines for supplying incorrect or incomplete information or for putting into effect a concentration), Art.7(3) (derogation from suspension obligation imposed under 7(1)), or Art.22 (where a member state asks the EC to treat a specific merger case).

Table 1 reports the number of phase-1 clearances, phase-1 remedies, phase-2 clearances, phase-2 remedies, prohibitions, withdrawals, referrals to member states, and other decisions. Out of the 5,196 merger cases included in the database, about 95% of the cases are either cleared or cleared subject to remedies in phase-1. Only in about 3.5% of the merger cases does DG COMP initiate an in depth phase-2 investigation. The table also shows that once a phase-2 investigation is initiated, an unconditional clearance is rather unlikely. In five merger cases, the merging parties withdrew the transaction during the phase-2 investigation. As discussed in section 2, withdrawing a merger in phase-2 of the investigation process could be regarded as equivalent to a prohibition since parties often withdraw a merger before an actual prohibition by DG COMP takes place.

Table 1: Type of Decisions, 1990-2014

Type of decision	frequency	percent
Phase-1 clearance	4,691	90.28
Phase-1 remedy	239	4.60
Phase-2 clearance	51	0.98
Phase-2 remedy	104	2.00
Prohibition	19	0.37
Phase-1 withdrawal	2	0.04
Phase-2 withdrawal	5	0.10
Referral to MS	69	1.33
Other	16	0.31
Total	5,196	100.00

In 69 merger cases (which corresponds to 406 product/geographic market observations in the dataset), the case is referred back to the national competition authority of the member

state. "Other" comprises 16 decision documents, as discussed above.

Lastly, the database also contains the variable **simplified**. This indicator variable is equal to one if the case was settled under a "simplified procedure." Since 2000, the EC has introduced "simplified procedures" for those merger notifications that are very likely to be pro-competitive in nature, i.e. that do not raise competitive concerns. In particular, conglomerate mergers, horizontal mergers with joint market shares below 20% and vertical mergers where the notifying parties have less than 30% market share in upstream and downstream markets are notified under these procedures. Information on whether a particular case was settled under simplified procedures can be downloaded from the EC's website and combined with our dataset via the case number.

Table 2 summarizes this variable by type of decision for the years 2000-2014. Since its introduction, 52% of the merger cases have been notified under simplified procedures. All of these cases have been decided in phase-1, almost entirely as phase-1 clearances.

Table 2: Indicator Variable for Simplified Procedure by Decision Type, 2000-2014

Type of decision	0	1	mean	standard deviation
Phase-1 clearance	1,628	2,221	0.58	0.494
Phase-1 remedy	189	1	0.01	0.073
Phase-2 clearance	36	0	0.00	0.000
Phase-2 remedy	74	0	0.00	0.000
Prohibition	10	0	0.00	0.000
Phase-1 withdrawal	0	2	1.00	0.000
Phase-2 withdrawal	5	0	0.00	0.000
Referral to MS	63	0	0.00	0.000
Other	13	1	0.07	0.267
Total	2,018	2,225	0.52	0.499

All of the variables containing basic information about the decision vary at the merger level.

Figure 1 shows the yearly number of merger notifications, phase-1 merger cases, mergers cleared subject to remedies (phase-1 and phase-2) and prohibitions between 1990 and 2014. Overall, merger notifications show an increasing trend with a big drop around 2002. Most of the notified mergers are decided in phase-1: Phase-1 mergers track the number

of notifications very closely. The number of mergers cleared subject to remedies increased dramatically after 1996 and oscillates between 20 and 30 per year in more recent years. The number of prohibitions vary between zero and three prohibitions per year. Table 20 in Appendix A.5 shows the number of notifications and decisions per year.

Figure 1: Enforcement History of DG COMP Merger Cases, 1990-2014
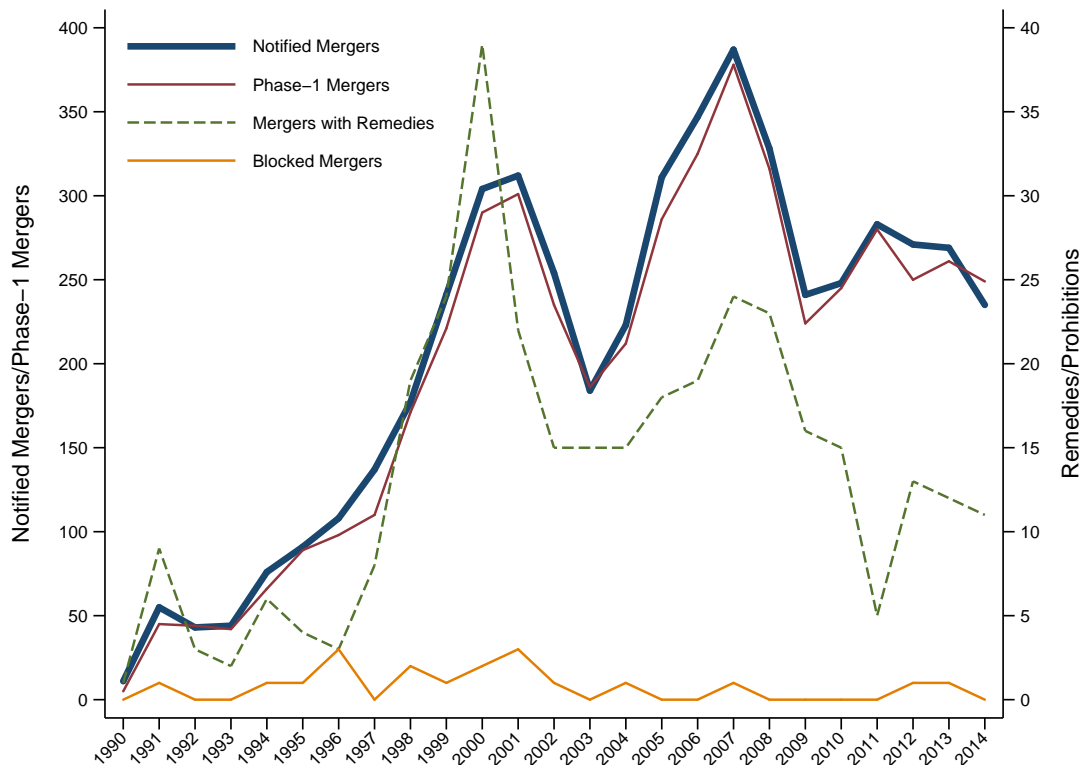
We report notified cases per notification year and phase-1 cases per decision year (left axis) as well as remedies (phase-1 and phase-2) and prohibitions per decision year (right axis). We exclude all cases where the decision type is "other".

5.2 Type of Merger

The dataset additionally contains some information about the nature of the merger.

The variable **vertical** is a dummy variable equal to one if product/geographic markets are vertically affected by the merger and zero otherwise. The variable **conglomerate** is a

dummy variable that is equal to one if the merger is conglomerate in nature. In addition, we recorded whether DG COMP considered the merger to be a full merger and/or a joint venture. This information is stored in the dummy variables **fullmerger** and **jv** respectively.

While the variables **vertical** and **conglomerate** are market specific (and hence can vary within a particular merger case), the variables **fullmerger** and **jv** vary at the merger level.

While 8,421 product/geographic markets were affected vertically by the respective merger (corresponding to 27% of observations), mergers had conglomerate aspects in only 525 (about 2% of observations) of the affected markets (see Table 3).

Table 3: Indicator Variables for Vertical and Conglomerate Merger, 1990-2014

	0	1	mean	standard deviation
conglomerate	30,926	525	0.017	0.128
vertical	23,030	8,421	0.268	0.443

Out of the 5,196 mergers, 2,872 (55%) are full mergers and 1,908 (37%) are joint ventures (see Table 4).

Note also that the variables **fullmerger** and **jv** are not mutually exclusive. If DG COMP considers the merger to be a full merger, the firms merge in such a way that the target is completely controlled by the acquiring firm. If the merger is a joint venture, the two firms merge only for a particular purpose e.g. by founding a R&D joint-venture. If both variables are equal to zero, the firms merge but the acquiring firm does not fully control the target firm. These cases are partial mergers, in most cases acquisitions of shares.

Table 4: Indicator Variables for Full Merger and Joint Venture, 1990-2014

	0	1	mean	standard deviation
Full merger	2,324	2,872	0.55	0.497
Joint Venture	3,288	1,908	0.37	0.482

5.3   Market Definition

As previously explained, the unit of observation in the merger database is a particular market concerned by the decision. A market is defined as a combination of a product and a geographic market. We recorded a number of variables that describe the particular market.

The variable **broadmarket** is a variable that we created in order to make different product markets comparable across decisions. It provides a more standardized description of the product market and contains about 460 broad product markets. We further harmonized these broad product markets into 86 product market categories. Table 21 in Appendix A.6 reports the number of notifications, phase-1 and phase-2 observations for these 86 product market categories. Many observations concern air transport and travel, banking, financial services and insurance, chemicals, communication services, energy supply, food and beverages, as well as pharmaceuticals.

The variable **prodmarket** is a string variable that contains the exact product market as specified in the decision document.

The variables **national**, **euwide**, **ww**, and **open** are dummy variables referring to the geographic market definition of DG COMP. The variables **national**, **euwide**, and **ww** are equal to one whenever the geographic market is considered to be national, EU wide, or worldwide, respectively. If DG COMP considered an exact definition of the geographic market unnecessary, the variable **open** is equal to one. The string variable **geogmarket** contains the actual verbal description DG COMP used to indicate the geographic market in the decision document.

Table 5 shows that DG COMP considers the market to be national in almost 60%, EU wide in about 20%, and worldwide in about 9% of the product/geographic markets. In 12% of the cases, DG COMP left the geographic market definition open.

Table 5: Geographic Market Definition, 1990-2014

	0	1	mean	standard deviation
National	13,004	18,447	0.59	0.492
EU wide	25,194	6,257	0.20	0.399
Worldwide	28,490	2,961	0.09	0.292
Left open	27,666	3,785	0.12	0.325

Table 6 reports the geographic market definition by type of decision.[2] While in phase-1 clearance cases the geographic market definition is often left open, mergers that are either prohibited or only cleared subject to remedies tend to affect narrow (i.e. national) geographic markets. Also note that in cases that were referred back to national competition authorities (outcome "Referral to MS"), the geographic market is evidently either defined as national or the geographic market definition is left open.

Table 6: Mean Geographic Market Definition by Decision Type, 1990-2014

Type of Decision	National	EU wide	Worldwide	Left open
Phase-1 clearance	0.33	0.17	0.07	0.43
Phase-1 remedy	0.64	0.24	0.08	0.04
Phase-2 clearance	0.35	0.31	0.27	0.07
Phase-2 remedy	0.58	0.31	0.09	0.02
Prohibition	0.56	0.11	0.24	0.09
Phase-1 withdrawal	0.00	0.00	0.00	1.00
Phase-2 withdrawal	0.00	0.00	0.00	1.00
Referral to MS	0.99	0.00	0.00	0.01
Other	0.44	0.13	0.13	0.31

We take the mean of the geographic market definition indicator variables to collapse the information from market level to merger level.

The geographic market definition can also vary across product/geographic markets within a given merger case. This is the case in 1,064 of the merger cases (about 20% of the cases contained in the database).

5.4 Classification of Remedies

The dataset also includes some information about the nature of remedies proposed by the merging parties.

While the dummy variable **remedies** is equal to one whenever the merging parties proposed any remedies to address DG COMP's competitive concerns, the dummy variables **structural** and **behavioral** are indicator variables for whether structural (i.e. divestitures) and/or behavioral remedies were proposed. We do not distinguish whether a remedy affects

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[2]We first collapse the dataset from market to merger level by taking the mean of the geographic market indicator variables by merger case. We then report the mean market definition across all mergers included in the database.

only a particular market or not, hence the variables related to proposed remedies all vary at the merger level. As it is often difficult to assess whether a particular measure, for example a certain divestiture, affects one or several concerned markets, we prefer to define the remedy variables at the merger level.

In about 7% of the merger cases, remedies were proposed by the notifying parties. As DG COMP prefers structural to behavioral remedies, it is not surprising that in 5% of the cases structural remedies were proposed while behavioral remedies were proposed in only 3.5% of the merger cases (see Table 7).

Note also that the variables **remedies**, **structural**, and **behavioral** are equal to one whenever the decision document contains information about remedies proposed by the merging parties. This implies that even for a merger that was prohibited by DG COMP, the variable **remedies** can be equal to one. This is the case whenever the merging parties proposed remedies but DG COMP considered these insufficient to address the competitive concerns and, thus, ultimately prohibited the merger.

Table 7: Indicator Variables for Proposed Remedies, 1990-2014

	0	1	mean	standard deviation
Remedies	4,845	351	0.068	0.251
Behavioural remedies	5,016	180	0.035	0.183
Structural remedies	4,931	265	0.051	0.220

5.5 Competitive Concerns

Related to proposed remedies, we also included an indicator variable **concern** in the dataset that is a dummy variable indicating which specific product/geographic market affected by the merger (granted that the merger concerned multiple product markets) raised concerns on part of DG COMP.

The indicator variable **barriers** is equal to one if DG COMP considered barriers to entry to exist in the concerned market (hence, this variable varies at the market level). Similarly, **foreclosure** is an indicator for whether DG COMP raised concerns that the merger would foreclose other firms in a particular market.

Table 8 summarized the information regarding competitive concerns. While DG COMP

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Table 8: Indicator Variables for Competitive Concerns, 1990-2014

	0	1	mean	standard deviation
Concerns	27,769	3,682	0.117	0.322
Entry barriers	27,830	3,621	0.115	0.319
Risk of Foreclosure	30,614	837	0.027	0.161

raised competitive concerns and considered entry barriers to exist in about 12% of the affected markets, it found a risk that the merger would foreclose competitors in only about 3% of the markets.

5.6   Competitors

In addition to the names of the acquiring and the target firm, we also included the names of competitors of the merging parties identified by DG COMP, in so far as such information is contained in the decision document. The identity and number of competitors varies by product/geographic market concerned. We hence record the identity of between 0 and 15 competitors (stored in the variables **rival1** to **rival15**).

In a few cases, DG COMP identifies more than 15 competitors of the merging parties. Given that this is the case for very few mergers and that competitors are typically very small in these cases, we considered the informational gain from keeping the identity of more than 15 competitors small compared to the increased unhandiness of a dataset containing many string variables.

The database also contains the variables **compcount**, which is a count of the number of competitors in the concerned market, and **misscomp**, an indicator variable equal to one if no information on competitors is available. We coded the variable **compcount** as equal to zero whenever we have no information on competitors. In these cases, the indicator **misscomp** is equal to one. Both variables vary at the market level. Missing information on competitors can have two reasons, either the merging parties have 100% market share in a given market or there is just no information on competitors in the decision document.

As Table 9 shows, there is no information on competitors in about 56% of the markets. In about 38% of the product/geographic market observations, we have information on between one and five competitors. Information on more than five competitors is very scarce.

Table 9: Number of Competitors, 1990-2014

Number of competitors	frequency	percent
0	17,671	56.19
1	1,909	6.07
2	2,746	8.73
3	3,514	11.17
4	2,183	6.94
5	1,468	4.67
6	732	2.33
7	461	1.47
8	286	0.91
9	136	0.43
10	117	0.37
>10	228	0.72
Total	31,451	100.00

Zero competitors means that there is no information on competitors in the decision document. This is either the case if the merger is a merger to monopoly or DG Comp does not mention competitor names in the decision document.

Table 10: Indicator Variable for Missing Competitor Information by Decision Type, 1990-2014

Type of decision	No information available	Information available	mean	standard deviation
Phase-1 decision	16,124	11,546	0.58	0.493
Phase-2 decision	1,140	2,187	0.34	0.475
Referral to MS	363	43	0.89	0.308
Other	44	4	0.92	0.279
Total	17,671	13,780	0.56	0.496

Table 10 reports the number of product/geographic markets without information on competitors (variable **misscomp** is equal to one) by type of decisions. Phase-1 cases comprise phase-1 clearances, phase-1 remedies, and phase-1 withdrawals, while phase-2 cases are phase-2 clearances, phase-2 remedies, prohibitions, and phase-2 withdrawals. The table highlights that information on competitors is mostly missing in phase-1 case documents: in 58% of the phase-1 case observations no information on competitors is available while this is only the case for 34% of the phase-2 product/geographic market observations.

Table 11: Mean Number of Competitors, 1990-2014

Number of competitors	Number of notifications	Percent of notifications	Number of phase-1 decisions	Percent of phase-1 decisions	Number of phase-2 decisions	Percent of phase-2 decisions
0	3,259	62.7	3,169	64.3	17	9.5
1	539	10.4	505	10.2	30	16.8
2	475	9.1	428	8.7	43	24.0
3	405	7.8	356	7.2	48	26.8
4	258	5.0	240	4.9	18	10.1
5	121	2.3	109	2.2	11	6.1
6	60	1.2	57	1.2	2	1.1
7	38	0.7	33	0.7	5	2.8
8	19	0.4	17	0.3	2	1.1
9	6	0.1	5	0.1	1	0.6
10	11	0.2	8	0.2	2	1.1
>10	5	0.1	5	0.1	0	0.0
Total	5,196	100.0	4,932	100.1	179	100.0

We take the mean number of competitors rounded to the nearest integer to collapse the information from market level to merger level. Note that phase-1 and phase-2 decisions do not add up to the number of notifications due to the 69 referrals to Member States and the 16 cases classified as 'other'.

Table 11 reports instead the mean number of competitors for notifications, phase-1, and phase-2 decisions.[3] There is no information on the number of competitors in about 63% of notified mergers and 64% of phase-1 decisions. However, it is much more likely that DG COMP investigates the competitors in detail in a phase-2 investigation. Thus, there is no information on competitors in only about 10% of phase-2 decisions, while in about 85% of phase-2 decisions there is information on between one and five competitors.

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[3]We collapse the dataset from market to merger level by taking the mean number of competitors rounded to the nearest integer by merger case.

5.7 Market Shares

We collected data on the market shares of the merging parties as well as the competitors, where available. This information was collected from DG COMP's competitive assessment in the decision document. Thus, data availability is constrained by the extent of DG COMP's analysis.

Given that DG COMP generally reports only the range of the market shares in the publicly available documents, we defined the market shares to be equal to the central value of the interval (see section 6 for an illustration).[4]

Market share information is collected at the level of the relevant product/geographic market combination, hence, in cases concerning multiple product/geographic markets, we collected market shares of the merging parties and the competitors for each individual market concerned whenever this information is available.

The market shares of the merging parties are stored in the variables **acq1ms**, **acq2ms**, **acq3ms**, **tar1ms**, and **tar2ms** for acquiring firms 1 to 3 and target firms 1 and 2, respectively, while the variable **Sum** contains the sum of the market shares of the merging parties in percent. In some cases, the decision document only contains information on the sum of the merging parties' market shares but not on individual market shares. Competitors' market shares (in percent) are contained in the variables **riv1ms** to **riv15ms** if available.

Table 12 shows summary statistics for the market shares of the merging firms as well as competitors. The average market share of the primary acquiring firm is about 20%, the average market share of the primary target is about 18%, and the average joint market share of the merging parties is about 33%. However, there is large variability in the data as the high standard deviations show. The table also reports the market shares of the second and third acquiring firm as well as of the second target firm. These secondary merging parties are in general much smaller: the mean market shares of these firms lie only between 5% and 8%. The mean market share of the first competitor is relatively high, at an average of 25%. Competitors' market shares decrease as the number of competitors increases: The average market share of the second competitor is about 14%, while the average market share of competitor 15 is only about 2%.

Table 12 also reports the number of non-missing observations in the column labelled

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[4]If, for example, the market share range indicated is [0-10] percent, we record a market share of 5 percent. However, if the interval given in the decision is only 5 percentage points wide, we report the conservative lower market share bound. If for example the market share interval is [15-20] percent, we report 15 percent market share.

"observations." As this column shows, market share information is relatively scarce: While information on the joint market share of the merging parties is available in 23,136 out of 31,451 markets (hence in about 74% of the markets), information on at least one competitor's market share is available in only about 33% of the markets. The last column labelled "cases" counts the number of merger cases for which the respective market share information is available in at least one of the concerned product/geographic market combinations. Information on primary acquirer's and primary target's market shares is available in about 1,600 out of the 5,196 merger cases.

Table 12: Summary Statistics Market Shares and HHI

	mean	sd	min	max	observations	cases
Acquirer 1 market share	19.7	20.84	0	100	13,683	1,576
Acquirer 2 market share	8.2	15.17	0	100	893	181
Acquirer 3 market share	5.3	8.81	0	30	11	6
Target 1 market share	17.5	21.04	0	100	13,701	1,585
Target 2 market share	7.8	15.10	0	100	385	76
Joint market share	32.6	23.65	0	100	23,136	2,468
Competitor 1 market share	24.8	16.34	0	100	10,354	1,645
Competitor 2 market share	14.1	9.76	0	100	8,468	1,532
Competitor 3 market share	9.7	7.55	0	95	5,988	1,323
Competitor 4 market share	7.5	6.14	0	93	3,210	949
Competitor 5 market share	6.4	5.81	0	65	1,798	605
Competitor 6 market share	5.7	6.22	0	85	957	348
Competitor 7 market share	4.9	6.15	0	95	551	191
Competitor 8 market share	5.4	6.12	0	45	330	111
Competitor 9 market share	4.6	5.26	0	45	202	70
Competitor 10 market share	4.7	5.62	0	35	139	49
Competitor 11 market share	4.1	5.91	0	45	102	34
Competitor 12 market share	3.6	3.97	0	20	78	21
Competitor 13 market share	4.2	6.64	0	35	64	17
Competitor 14 market share	2.4	3.03	0	15	45	13
Competitor 15 market share	2.0	4.34	0	25	42	11
Post-merger HHI (lower bound)	2156.2	2371.89	0	10000	23,136	2,468
Post-merger HHI (upper bound)	5643.0	2242.93	650	10000	23,136	2,468
Delta HHI	443.9	778.83	0	8450	12,957	1,467

5.8 Concentration Measures

We calculated the level of the post-merger Herfindahl-Hirschman-Index (HHI) in case that data on the market shares of competitors was available (variables **hhi_low** and **hhi_high** ranging from 0 to 10,000).

The variable **hhi_low** is a lower bound of the post-merger HHI: it is calculated as the square of the merging parties joint markets share plus the sum of squared market shares of competitors whenever information on competitors' market shares is available. This assumes that competitors are very small, whenever market share information of competitors is not available but market shares do not add up to 100%. The variable **hhi_high**, on the other hand, is an upper bound for the post-merger HHI: it adds the square of all missing market shares (100% minus all available market share information) to **hhi_low**. This hence treats all missing market share information as one missing competitor.

From the merging parties' market shares, we also calculated the increase in HHI due to the merger in the specific markets, stored in the variable **deltahhi**. In case of one acquiring and one target firm, it is calculated as $2 \cdot acq1ms \cdot tar1ms$.[5] As the market share information is specific to a certain product/geographic market combination, the concentration measures also vary at the market level.

Summary statistics for **hhi_low**, **hhi_high**, and **deltahhi** are also contained in Table 12. The mean post-merger HHI is between 2,156 (lower bound) and 5,643 (upper bound), while the mean increase in HHI due to the merger is about 440.

5.9 Complexity

The variable **complexity** contains a count of the relevant product/geographic markets concerned by the merger. Hence, it varies at the merger level.

The merger cases included in the database concern on average 6 product/geographic market combinations, varying between a minimum of 1 and 245 concerned markets (see Table 13).

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[5]We distinguish cases with one acquirer and one target, two acquirers and one target, three acquirers and one target, one acquirer and two targets, two acquirers and two targets, and three acquirers and two targets. In a case involving, for example, two acquiring and one target firm, the change in HHI is calculated as $2 \cdot acq1ms \cdot acq2ms + 2 \cdot acq1ms \cdot tar1ms + 2 \cdot acq2ms \cdot tar1ms$. The change for the other cases is calculated accordingly.

Table 13: Summary Statistics Complexity

	mean	sd	min	max
Number of markets	6.05	13.37	1	245
Observations	5196			

5.10   Sector Information

Lastly, we include information on which NACE sector(s) are concerned by the proposed merger. NACE codes are an industry classification system used by the European Union to classify different economic activities.[6] Information on the main NACE sectors concerned by the mergers can be downloaded from the EC's website and combined with the dataset via the case number.

Merger cases can concern multiple NACE sectors. The dataset contains all NACE codes reported on the EC's website (dropping duplicate NACE codes).[7] They are stored in the variables **nace1** to **nace15**. Table 14 reports the number of merger cases with information on no up to 15 NACE codes, distinguishing phase-1 and phase-2 cases as well as referrals to member states and other decision documents. For 3,894 out of the 5,196 cases, one NACE code is reported. Note that for 140 cases there is no information on the NACE code. Most of these cases are phase-1 cases. Only in a few cases are more than three NACE codes reported.

Table 15 reports the number of notifications, phase-1, and phase-2 decisions by primary NACE section (the most aggregate classification level). By far the most merger cases with 2,257 out of 5,196 cases concern mergers in the manufacturing industry, followed by wholesale and retail trade (487 cases), information and communication (478 cases), and financial and insurance activities (477 cases).

Note that phase-1 and phase-2 decisions do not always add up to the number of notifications within a given NACE section due to the 69 referrals to member states and the 16 cases classified as 'other.'

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[6]See `http://ec.europa.eu/competition/mergers/cases/index/nace_all.html` for a list of NACE codes.

[7]Following our question on whether an allocation of NACE codes to the merging parties is possible, the merger registry informed us, that the order in which NACE codes are reported is random and that NACE codes cannot be allocated to acquiring and target firms.

Table 14: Number of NACE Codes by Decision Type, 1990-2014

Type of Decision	No NACE code	1	2	3	4	5	6	7	8	9	11	15
Phase-1 decision	107	3,715	742	235	76	30	19	3	1	2	1	1
Phase-2 decision	2	138	25	6	5	2	0	0	1	0	0	0
Referral to MS	21	35	8	2	1	1	1	0	0	0	0	0
Other	10	6	0	0	0	0	0	0	0	0	0	0
Total	140	3,894	775	243	82	33	20	3	2	2	1	1

6 Case Example

In the following, the assessment of different characteristics concerning EU-merger decisions is explained with the help of one sample case, illustrating many of the different core and non-core elements that are potentially relevant for all (non-simplified) cases. The case example is the case number 623 Kimberley-Clark/Scott, an Art. 8(2) decision.

Most of the variables described above are collected by skimming the merger decisions and transcribing the main information concerning the characteristics of the merger firstly into an Excel spreadsheet. In the following, the collection is hence explained in a step-by-step procedure. Note, again, that the level of observation are product/geographic market combinations, thus for each case, the database contains as many observations (rows) as analyzed markets. This implies that some general information about the merger (e.g., the notification date) is the same for each product market involved by the merger and, therefore, it appears in all rows of a decision. In the case of the merger between Kimberley-Clark and Scott, three product markets were concerned by the transaction, hence there are three observations for this merger case.

Figure 2 shows the basic information for the merger decision. Besides the case number **casen** that serves as an identifier, the type of decision and the notification and decision dates are collected. The type of decision is assigned either to the variable **decision** — if it is decided according to Article 6(1)(b) or 6(1)(c) during phase-1 — or to **decision2** — if the case under investigation is decided according to article 8(1), 8(2) or 8(3) during phase-2. The variable **notifdat** captures the notification date and **phase1dat** and **phase2dat** the decision dates of phase-1 and phase-2 cases, respectively.

Table 15: Decisions by Primary NACE Section, 1990-2014

NACE section	Description	Notifications	Phase-1 decisions	Phase-2 decisions
A	Agriculture, forestry and fishing	38	34	3
B	Mining and quarrying	135	125	8
C	Manufacturing	2,257	2,143	103
D	Electricity, gas, steam and air conditioning supply	281	265	10
E	Water supply; sewerage; waste managment and remediation activities	63	62	0
F	Construction	90	87	1
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	487	470	7
H	Transporting and storage	326	313	7
I	Accommodation and food service activities	65	63	1
J	Information and communication	478	444	27
K	Financial and insurance activities	477	475	2
L	Real estate activities	87	87	0
M	Professional, scientific and technical activities	60	58	2
N	Administrative and support service activities	105	100	4
O	Public administration and defence; compulsory social security	22	22	0
P	Education	4	4	0
Q	Human health and social work activities	27	21	0
R	Arts, entertainment and recreation	38	36	2
S	Other services activities	14	14	0
T	Activities of households as employers; undifferentiated goods - and services - producing activities of households for own use	2	2	0
Missing		140	107	2
Total		5,196	4,932	179

Note that phase-1 and phase-2 decisions do not add up to the number of notifications due to the 69 referrals to Member States and the 16 cases classified as 'other'.

Figure 2: Basic Case Information - 1

B	C	D	E	F	G	H
casen	Decision		Decision Date			
casen	decision	decision2	notifdat	phase1dat	phase2dat	announcement
623		8,2	08.08.95		16.01.96	
623		8,2	08.08.95		16.01.96	
623		8,2	08.08.95		16.01.96	

Figure 3: Basic Case Information - 2

	R	S	T	U	V	W	X	Y	Z	AA
1						Parties				
2	acquirer 1	country acq 1	acq 1 ms	acquirer 2	country acq 2	acq 2 ms	target 1	country tar1	tar1 ms	Sum
3	KIMBERLY-CLARK (KC)	USA	15				SCOTT PAPER	USA	35	50
4	KIMBERLY-CLARK (KC)	USA	5				SCOTT PAPER	USA	15	20
5	KIMBERLY-CLARK (KC)	USA	35				SCOTT PAPER	USA	5	40

The information about the merging companies is captured by means of three variables for each of the parties as illustrated in Figure 3. While the variables **acquirer1** and **countryacq1** report the acquirer's name and country, the variable **acq1ms** indicates its market share in the respective market. Similarly, the information on the company to be acquired is stored in the variables **target1**, **countrytar1**, and **tar1ms**. In some cases, more than two parties are involved (mostly in the case of joint ventures); for these cases additional columns are provided. The variable **Sum** displays the sum of the acquirer's and target's market share after the merger in the specific product market.

Next, data on the outcome of DG COMP's investigation is collected. The variables shown in Figure 4 deal with the implemented remedies, the theory of harm, and the type of merger proposed. The three variables **remedies**, **structural**, and **behavioral** capture the remedies proposed and discussed by DG COMP. In this case, both structural and behavioral remedies were proposed by the merging parties; hence, all tree variables are equal to one.

The variables on the theory of harm include the indicators for barriers of entry, foreclosure, conglomerate concerns, or whether the merger includes a vertical component. In the merger between Kimberley-Clark and Scott, DG COMP raised concerns about barriers of entry.

Lastly, the announced concentration between the parties can either be described as a

Figure 4: Merger characteristics

remedies	structural	behavioral	conglomerate	foreclosure	vertical	barriers	fullmerger	jv
			Merger Characteristics					
1	1	1	0	0	0	1	1	0
1	1	1	0	0	0	1	1	0
1	1	1	0	0	0	1	1	0

Figure 5: Market Definition

	AE	AF	AG	AH	AI	AJ	AK
1			**Market Dimension**				
2	broad market	prod.market	national	eu-wide	ww	open	geog.market
3	Paper products	toilet paper	1	0	0		United Kingdom and Ireland
4	Paper products	kitchen paper	1	0	0		United Kingdom and Ireland
5	Paper products	handkerchiefs	1	0	0		United Kingdom and Ireland

full merger between the companies (**fullmerger** $= 1$), a joint venture (**jv** $= 1$) or a non-full merger (i.e. the acquirer buys only parts of the target: **fullmerger** and (**jv** $= 0$). In this particular case, the transaction between Kimberley-Clark and Scott is a full merger.

Figure 5 illustrates the systematic assessment of the product and geographic market for the case in the Excel spreadsheet. In the decision document, a detailed description of the relevant product and geographic market is provided. Further, the decision contains a competitive assessment in which the relevant market shares of the merging parties and the main competitors are provided for each product market.

In order to make the different product markets comparable across decisions, the variable broad market provides a more standardized description of the product market. In case 623, Kimberley-Clark/Scott, the product markets "toilet paper," "kitchen paper," and "handkerchiefs" can all be summarized under the broader term "paper products." This broader definition allows identifying connections to other cases of the same industry or value chain.

In addition to the product market, the geographic market is captured by a number of variables. The indicator variables **national**, **eu-wide**, **ww**, and **open** indicate whether the geographic scope of a product market is national, EU-wide, worldwide, or whether there is no geographic market definition provided in the decision. To allow for a more pre-

Figure 6: Competitors

rival1	riv1 ms	rival2	riv2 ms	rival3	riv3 ms	rival4	riv4 ms
Jamont	5	Fort Sterling	5	SCA/PWA	5		
Jamont	5	Fort Sterling	5	SCA/PWA	5		
Jamont	5	Fort Sterling	5	SCA/PWA			

cise geographic market definition, the variable **geog.market** names the precise geographic market definition used in the decision. In case 623, Kimberley-Clark/Scott, the market of UK and Ireland is perceived as one interrelated market. Thus, the market definition is national but comprises two countries. Hence, using the detailed description of the market in **geog.market**, one could also classify this market as cross-border/regional.

Lastly, figure 6 reports the information on competitors in case 623. In this particular case, the decision document contains information on three competitors, including market shares.

A Appendix

A.1 List of Variables

Table 16: List of Variables Contained in Database

Variable	Type	Description	Varies at level
casen	numeric	Case number as reported in decision document.	merger
notdate	date	Date of notification to DG COMP.	merger
decdate	date	Date of decision by DG COMP.	merger
notyear	numeric	Year of notification to DG COMP.	merger
decyear	numeric	Year of decision by DG COMP.	merger
outcome	string	Type of decision.	merger
simplified	dummy	1 if decided under simplified procedure.	merger
acquirer1	string	Name of primary acquiring firm.	merger
countryacq1	string	Nationality of primary acquiring firm.	merger
acquirer2	string	Name of second acquiring firm.	merger
countryacq2	string	Nationality of second acquiring firm.	merger
acquirer3	string	Name of third acquiring firm.	merger
countryacq3	string	Nationality of third acquiring firm.	merger
target1	string	Name of primary target firm.	merger
countrytar1	string	Nationality of primary target firm.	merger
target2	string	Name of second target firm.	merger
countrytar2	string	Nationality of second target firm.	merger
vertical	dummy	1 if market is vertically affected.	market
conglomerate	dummy	1 if merger has conglomerate aspects in market.	market
fullmerger	dummy	1 if merger is a full merger.	merger
jv	dummy	1 if merger is a joint venture.	merger
broadmarket	string	Standardized description of product market.	market
prodmarket	string	Product market as specified in the decision document.	market
national	dummy	1 if geographic market is defined as national.	market
euwide	dummy	1 if geographic market is defined as EU.	market
ww	dummy	1 if geogaphic market is defined as worldwide.	market
open	dummy	1 if geographic market definition is left open.	market
geogmarket	string	Geographic market as specified in decision document.	market
remedies	dummy	1 if remedies were proposed by the parties.	merger
structural	dummy	1 if structural remedies were proposed by the parties.	merger
behavioral	dummy	1 if behavioral remedies were proposed by the parties.	merger
concern	dummy	1 if DG COMP raised competitive concerns in market.	market
barriers	dummy	1 if DG COMP finds entry barriers in market.	market
foreclosure	dummy	1 if DG COMP finds risk of foreclosure in market.	market
rival1-rival15	string	Names of competitors in market.	market
compcount	numeric	Number of competitors in market.	market
misscomp	dummy	1 if no information on competitors contained in decision document.	market
acq1ms-acq3ms	numeric	Market shares of acquiring firms in percent.	market
tar1ms-tar2ms	numeric	Market shares of target firms in percent.	market
Sum	numeric	Joint market share of merging parties in percent.	market
riv1ms-riv15ms	numeric	Market shares of competitors in market.	market
hhi_low	numeric	Post-merger HHI in market (lower bound).	market
hhi_high	numeric	Post-merger HHI in market (upper bound).	market
deltahhi	numeric	Delta HHI in market due to merger.	market
complexity	numeric	Count of the number of concerned markets.	merger
nace1-nace10	string	NACE codes reported in decision documents.	merger

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A.2 Top 20 Primary Acquiring Firms

Table 17: Top 20 Primary Acquiring Firms, 1990-2014

Primary Acquirer	Number of Cases
ADVENT INTERNATIONAL CORPORATION	24
GENERAL ELECTRIC COMPANY	21
DEUTSCHE BANK AG	17
GOLDMAN SACHS GROUP, INC.	14
VOLKSWAGEN AG	13
ELECTRICITé DE FRANCE	12
GENERAL ELECTRIC	12
UNITED TECHNOLOGIES CORPORATION	12
3I GROUP PLC	11
CVC CAPITAL PARTNERS SICAV-FIS S.A.	11
PAI PARTNERS S.A.S.	11
SIEMENS AG	11
THE CARLYLE GROUP	11
BERTELSMANN AG	10
DEUTSCHE BANK	10
DEUTSCHE POST AG	10
KKR	
& CO. L.P.	10
MITSUBISHI CORPORATION	10
SIEMENS	10
THOMSON-CSF	10

A.3 Top 20 Primary Target Firms

Table 18: Top 20 Primary Target Firms, 1990-2014

Primary Target	Number of Cases
MITSUBISHI	6
SIEMENS	6
ENDESA	5
SOLVAY S.A.	5
ABB	4
ALSTOM	4
DEGUSSA	4
DELPHI CORPORATION	4
HOECHST AG	4
IMPERIAL CHEMICAL INDUSTRIES	4
SHELL	4
ABN AMRO HOLDING N.V.	3
BANCA NAZIONALE DEL LAVORO S.P.A.	3
BASF	3
BTR	3
DEUTSCHE TELEKOM	3
EDISON	3
GUIDANT	3
HOWALDTSWERKE-DEUTSCHE WERFT AG	3
MANNESMANN AG	3

A.4 Top 20 Primary Acquiring and Target Firm Countries

Table 19: Top 20 Primary Acquiring and Target Firms' Countries, 1990-2014

Country acquiring firm	Country Acquirer	Country Target
USA	1,011	578
Germany	865	953
UK	651	692
France	493	407
Netherlands	329	395
Italy	157	275
Japan	145	85
Sweden	140	204
Switzerland	138	106
Spain	126	193
Austria	113	117
Left open	107	181
Luxembourg	106	59
Belgium	82	116
Denmark	77	83
Finland	67	76
Canada	60	43
Norway	56	64
Missing	36	41
Jersey	31	11

We display primary acquiring and target firms' countries for the top 20 primary acquiring firms' countries.

A.5 Number of Notifications and Decisions over Time

Table 20: Number of Notifications and Decisions by Year, 1990-2014

Year	Notifications	Decisions
1990	11	5
1991	55	49
1992	43	49
1993	44	46
1994	76	71
1995	91	95
1996	108	107
1997	137	119
1998	178	180
1999	243	232
2000	304	311
2001	314	319
2002	254	247
2003	184	194
2004	226	224
2005	313	301
2006	349	348
2007	388	393
2008	329	336
2009	241	233
2010	249	254
2011	283	293
2012	272	262
2013	269	266
2014	235	257
2015	.	5
Total	5,196	5,196

We count notifications by notification year and decisions by decision year.

A.6 Decisions by Broad Product Market

Table 21: Decisions by Broad Product Market, 1990-2014

Broad product market	Notifications	Phase-1 decisions	Phase-2 decisions
IT and services	66	66	0
agricultural products	690	382	304
air transport and travel	1,589	1,294	282
aircraft avionic equipment	6	6	0
aircraft supplies	61	3	58
aircrafts	164	141	23
airport services	7	7	0
automation	32	16	16
automotive industry	670	639	30
banking, financial services and insurance	1,835	1,823	11
betting and gambling	9	9	0
building materials	685	530	58
car components	974	946	28
care and justice services	5	0	0
catering and restaurants	42	28	9
chemicals	2,074	1,883	187
childcare products and toys	5	5	0
communication devices	97	86	11
communication services	1,663	1,396	247
computers (hardware and software)	827	801	26
construction	281	264	0
consulting	29	5	24
cosmetics	469	319	150
defense industry	110	110	0
electrical appliances	1,075	976	99
electricity devices (batteries etc.)	399	381	18
electricity supply	44	38	6
electronic components	239	239	0
electronic devices	43	43	0
energy plants	15	3	12
energy supply	2,435	2,171	170
engines	8	8	0
entertainment	36	36	0
explosives and weapons	115	115	0
fire fighting equipment	15	15	0
food and beverages	2,266	1,946	246

Table 21: Decisions by Broad Product Market, 1990-2014

Broad product market	Notifications	Phase-1 decisions	Phase-2 decisions
furniture	79	79	0
glass	4	4	0
healthcare	72	60	0
heating systems	11	11	0
industrial engineering	127	69	58
left open	265	243	3
luxury goods	17	17	0
machinery and equipment	864	796	68
management services	17	17	0
media	1,318	1,038	263
medical devices	911	647	264
medical services	72	70	0
medical supplies and products	51	51	0
metal products	623	594	29
metals and minerals	244	223	21
office supplies	51	51	0
optics	15	15	0
packaging	359	357	0
paints and colours	89	89	0
paper	279	134	145
paper products	415	345	70
passenger transport	4	4	0
personal services	2	2	0
personnel services	234	234	0
pet food	62	62	0
pharmaceuticals	2,431	2,326	77
photography	19	10	9
plastics	18	18	0
printing	25	25	0
protective equipment	60	60	0
railway industry	233	137	96
raw materials	699	653	46
real estate	151	151	0
retail	233	232	1
sanitary	157	148	9
security	6	6	0
ships and port services	106	99	7
sports industry	59	59	0

Table 21: Decisions by Broad Product Market, 1990-2014

Broad product market	Notifications	Phase-1 decisions	Phase-2 decisions
steel industry	26	26	0
storage	15	15	0
textile and clothing	129	124	5
tobacco	99	99	0
tourism industry	411	347	51
traffic management	41	38	3
transport and logistics	838	771	52
utilities	49	32	9
various	315	294	21
waste management	30	27	0
water supply	16	16	0
wood and wood products	20	15	5
Total	31,451	27,670	3,327

Note that phase-1 and phase-2 decisions do not add up to the number of notifications due to the 69 referrals to Member States and the 16 cases classified as 'other'.