

**THE EFFECT OF MERGER LAWS ON MERGER ACTIVITY:
INTERNATIONAL EVIDENCE**

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Abstract

This paper is the first attempt to isolate the direct effect of competition laws on a country's merger activity and indirectly on corporate value. We find that, although the direct relationship between Merger Laws and Tobin's Q is positive and significant, the relationship vanishes once we control for the net cross-border merger flows in a particular country. We conclude that the positive effect of Merger Laws on corporate value is driven by their deterring effect on horizontal, cross-border, anti-competitive mergers. To the extent that the trend towards globalization in the world has dramatically increased merger flows from some countries to others, we argue that there is a need for competition laws that make up for the pervasive effects of the global market on some countries.

Keywords: mergers, market regulation, cross-border acquisitions

JEL classification: F3, F4, G3

THE EFFECT OF MERGER LAWS ON MERGER ACTIVITY: INTERNATIONAL EVIDENCE

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1. Introduction

The 1990s show an unprecedented increase in the number of mergers and acquisitions. The distinguishing characteristic of this late twentieth-century wave is its global dimension. In 2000, almost 2,300 mergers were successfully completed across countries for a total value of \$740 billion. This compares to only 650 cross border acquisitions in 1990, worth \$74 billion.¹ Since it has been demonstrated that mergers have implications on the market power of the firms and on social welfare, it comes as no surprise that a number of new merger and competition laws have been introduced worldwide during the same decade. Today, there are over 80 countries in the world with antitrust laws, of which about 45 specifically provide for some kind of merger review.¹ Most of these laws have been enacted in very recent years, many in countries with no history of competition law and with vastly different economic systems.

The objective of this paper is to isolate the direct effect of competition, antitrust, and Merger Laws (MLs) on a country's merger activity. Sound merger enforcement must prevent anti-competitive mergers, but avoid deterring the larger universe of efficiency-enhancing mergers. Therefore, we try to determine the impact of competition laws on the frequency and size of acquisitions, and on the characteristics of the merging firms. In this paper, we distinguish between domestic and cross-border mergers. Cross-border mergers can allow companies to

¹ Source: Securities Data Corporation

create monopolistic positions which are not under the jurisdiction of any one competition authority. For instance, in the proposed merger between Wilkinson Sword (UK) and Gillette (US) in 1990, 14 different agencies, including some outside the U.S. and E.U., were involved in oversight proceedings. In many markets, the proposed merger would have given the resulting single company 90% of the market. The prevention of anti-competitive, cross border mergers is of prime interest to regulators, since they imply a transfer of resources and control from domestic to foreign firms. National competition laws may put controls on domestic acquisitions as well as certain cross-border deals with domestic effects.

We construct country-level measures of merger intensity using a base sample of about 62,000 acquisitions from 41 countries that have enacted MLs as of December 2001. Such measures quantify the fraction of a country's publicly listed firms that changes ownership every year. We also classify merger flows into domestic and cross-border, and into and from a given country measures within countries, as well as across borders.

Our main finding is that MLs do have a significant effect on the merger activity in a country. In particular, we find that the existence of MLs reduces uncertainties and spurs merger activity, by both domestic and foreign acquirers. Specifically, we show that the existence of antitrust and competition laws (ACLs) in a country increases by 20 percent the number of domestic firms that become targets of an acquisition. Among those, ACLs increase the frequency of cross-border acquisitions increase by 8 percent. Antitrust laws, however, do not affect the characteristics of the acquisitions; that is, domestic firms are acquired in horizontal as well as non-horizontal mergers as frequently after the first enactment of the law as prior to it. However,

ACLs do determine the acquisition propensity **by** firms in a given country: we find that, when ACLs are enacted, domestic firms are 4 percent more likely to become acquirers in a non-horizontal, conglomerate merger. Our evidence supports the idea that regulation levels the playing field and reduces information asymmetries.

We do not find that MLs per se have an effect on the merger activity within a country. However, we do find that the severity of the law affects the frequency of mergers. We construct an index of merger quality that takes into account the notification requirements in a country, as well as the penalties imposed by merger authorities if notification does not occur. Our results show that a one-standard deviation increase in the quality index increases cross-border merger activity by 2 percent. That is, two out of one hundred firms in a country that would not be acquired otherwise, become acquisition targets in a cross-border deal when the quality of the regulation in the country increases by one standard deviation (which is equivalent to one point of the quality index). This suggests that MLs facilitate the internationalization of the corporate sector in a country, by making the domestic firms available for foreign acquirers. We do not find any effect of MLs on the frequency of domestic acquisitions.

In the next section we describe the related literature. In Section 3, we describe the data on MLs that we use throughout the paper. In Section 4, we outline the measures of merger frequency and volume on which we focus our analysis. In Section 5, we present the econometric analysis of our study. We analyze the impact of MLs on domestic and cross-border merger flows and describe the relationship between MLs, merger flows, and corporate value. In Section 6, we conclude.

2. Related Literature

Generally, the literature related to mergers employs static modeling structures that study the performance and welfare implications of a merger. By doing so, the literature identifies the incentives that firms have to merge as well as the need – or absence thereof – for public policy. Any introductory Industrial Organization textbook outlines two incentives for mergers: the first relates to the efficiency gain that stems from reduced costs due to elimination of duplication and enhancement of information; the second associates with the increased monopoly power enjoyed by the fewer post-merger firms in the market. While mergers and acquisitions that result in the former category are presumably welfare enhancing and, therefore, beneficial from a social point of view, the latter result in an increased monopoly power and therefore are not beneficial in terms of welfare.

In general, the literature on mergers predicts that an industry that is active in mergers will experience an increase in profitability. However, there is not a general agreement as to whether the participating firms in a merger enjoy higher profitability than the non-participating firms. Stigler (1950) suggested that the non-participating firms may benefit more than the merger participating firms, a point that Salant, Switzer and Reynolds (1983) showed in a simple Cournot model. The main reason that drives the result in the Salant, Switzer and Reynolds (1983) paper is that the new merged entity is indistinguishable from the merger non-participating firms. Deneckere and Davidson (1985), Perry and Porter (1985), and Farrell and Shapiro (1990) suggest ways that the merged entity is bigger in one way or another from the non-participating firms, resulting in a reversal of the Stigler suggestion.

Several other papers have studied the stock market valuation effects of mergers. Their focus is on the effect of the merger on the joint returns of bidder and targets (Bradley, Desai and Kim, 1988; Jensen and Ruback, 1983; Schwert, 1996; Jarrell, Brickley and Netter, 1988). Results are mixed. Eckbo (1983), Mitchell and Mulherin (1996), and Moon and Walkling (2000) find that rivals of acquisition targets earn significant abnormal returns. The relationship between legal variables and corporate valuation has been analyzed in La Porta et. al. (2002) and Daines (2001). La Porta et al. (2002) show that measures of shareholder protection -- legal origin of the country, and indexes of specific legal rules -- are positively related to firm's Tobin's Q. Daines (2001) shows that the market assigns a higher value to the assets of firms incorporated in Delaware. Finally, ours has the same flavor as the paper by Andrade et al. (2001), which only considers U.S. acquisitions in its analysis of the reasons why companies merge. However, Andrade et al. (2001) focus on the distribution of wealth that is created in a merger only between the merger participants, and not on the effect of merger activity on corporate valuation at the country level.

Our paper also relates to the literature on cross-border and international mergers. Gugler et al. (2000) analyze the effect of mergers on a sample of 14,000 mergers from more than one hundred countries. They find that 27% of all the acquisitions they consider result in both a loss of efficiency and an increase in market power for the merging firms. Harris and Ravenscraft (1991) find that U.S. targets of foreign acquirers have significantly higher wealth gains than do targets of U.S. firms. Finally, Brady and Feinberg (2000) find that the enforcement of the European regulation has substantial price effects on the stocks of companies affected.

3. Merger Laws

3.1 Data Sources

We have collected information on ACLs and MLs for a large sample of countries worldwide. We use several sources of information. We first use the White & Case's 2003-4 survey of worldwide notification requirements, which is a widely recognized catalog of MLs and control regimes for 131 countries.ⁱⁱ We complement this information with Cicero (2001), which summarizes the merger control provisions in 46 countries and provides information on filing deadlines and thresholds. We complement the above information by checking domestic regulators' webpages, contacting antitrust local authorities directly, and employing information contained in the International Securities Services Association (ISSA) database.

We have found reliable information on enactment dates and data on merger deals for 41 countries. Only the U.S. (1914) and Japan (1947) passed MLs prior to 1950. Two countries passed laws in the 1950s, 6 in the 1970s, 8 in the 1980s, and 24 since 1990. These numbers give us an indication of the importance of MLs in the last two decades. Most E.U. countries have passed competition laws following the European Merger Regulation of 1989. Table 1 describes the enactment date, the date of first amendment, and other changes in the law, for the countries in our sample.

In general, national merger laws (MLs) aim to promote competition by establishing controls in the merger process, and put limits to the concentration of economic powers that result in market dominance. For instance, Article 1 of the Swedish Competition Act, passed in 1993, states that "The purpose of this Act is to eliminate and counteract obstacles to effective

competition in the field of production of and trade in goods, services and other products.” This is similar to Article 2 of the Mexican Federal Law of Economic Competition which pronounces that “The purpose of this law is to protect the process of competition and free market participation, through the prevention of monopolies, monopolistic practices and other restrictions that deter the efficient operation of the market for goods and services.”

[INSERT TABLE 1 ABOUT HERE]

In Table 2, we show in a timeline the dates at which ACLs and MLs were enacted. The early nineties was the period when most laws were passed, especially in Western Europe and Latin America. Table 2 also illustrates that a few countries do not have merger regulation, even though they have antitrust regulation in place.ⁱⁱⁱ A large set of countries have enacted simultaneously both pieces of regulation, like Italy, Switzerland, and South Africa, among others.

[INSERT TABLE 2 ABOUT HERE]

3.2 Merger Law Quality Index

For each of the 41 countries under analysis, we construct an index of merger law quality. Our main source for the index comes from the White & Case 2003-2004 report. We characterize the severity of the law depending on four factors. Each factor receives a score of one when it is present, zero otherwise. The four factors we consider are:

- Pre-merger notification requirements.
- Post-merger notification requirements.
- The mandatory nature of these requirements.^{iv}

- The type of penalties imposed for lack of notification. Penalties may be proportional to the value of the transaction or they may represent a fixed cost.^v

An example to illustrate our index can be found in the Czech Republic's Competition Act. Under this Act, the "mergers and acquisitions are subject to approval of the Czech Office for the Protection of Economic Competition where (i) the aggregate net worldwide turnover for the last accounting period exceeded CZK 5 billion or (ii) the aggregate net turnover on the market of the Czech Republic during the last accounting period exceeded CZK 550 million and each of at least two of the undertakings concerned achieved a net turnover of at least CZK 200 million during the last accounting period."^{vi} The Czech Republic's Competition Act features mandatory pre-merger notification, with filing fees of CZK 10,000 (approximately USD 327). Penalties for failure to comply with the notification provisions of the Act may result in fines of up to CZK 300,000 (approximately USD 9,810); penalties of up to CZK 10 million (USD 327,011) or up to 10% of the net turnover for the last accounting period may be imposed if the undertakings concerned fail to notify of the merger or complete it before receiving clearance.

Out of the 131 countries covered by the White & Case report, 76 have either no kind of merger control notification or no penalty to enforce it. 33 countries have penalties but not explicitly dependent on size or revenue, and 22 countries have some form of penalty proportional to size or revenue. Table 3 summarizes the characteristics of the MLs for our sample countries.

Another example can be drawn from the penalties imposed under the Austrian jurisdiction. Austria has a mandatory pre-merger notification law, with a penalty of between

EUR 10,000 and EUR 1 million or 10% of the world-wide turnover of the parties in the last financial year imposed on the companies involved for unlawful completion of a merger. Canada has a mandatory pre-merger notification law, with a penalty of CAD 50,000 for unlawful completion of a merger. In addition, there are countries such as Sweden that do have a pre-merger notification law; however, there are no penalties to enforce the law. In this case, Sweden is assigned a zero. Thus, this coding is meant to capture the disparities in severity of law across different countries. The implicit assumption here is that countries that introduce proportionality in penalties rather than a fixed amount are more severe, while the ones that have no penalties are least severe of all.

The main idea driving the coding decisions is that a proportional penalty is more costly for larger firms, while a constant penalty is more costly for very small firms. We thus expect to observe that in countries with fixed penalties the likelihood of small mergers decreases.

[INSERT TABLE 3 ABOUT HERE]

4. Merger Data

Our sample includes all the acquisitions of public companies available in Securities Data Corporation, from January 1, 1990 through December 31, 2001. Only completed transactions are considered, and we exclude from the initial sample "leverage buy out" deals, as well as spin-offs, recapitalizations, self-tender and exchange offers, repurchases, minority stake purchases, acquisitions of remaining interest, and privatizations. Table 4 describes our sample, which

contains 62,119 acquisitions in 41 countries. Horizontal mergers account for 50 percent of the sample. They are defined as acquisitions where the 2-digit SIC codes of the bidder and the acquirer coincide.^{vii} We call the complementary group “Non-horizontal mergers”, which includes both vertical and conglomerate mergers.

Of all observations, cross-border mergers represent 19 percent. The number of cross-border mergers decreases in the early 1990s and rises again to attain its original level by 2001. In 2001, one out of four mergers in our sample countries is cross-border.

[INSERT TABLE 4 ABOUT HERE]

The Securities Data Corporation provides details on each acquisition. Unfortunately, for a vast majority of the countries, information on bid prices, accounting data, and other bid characteristics are either unavailable, or unreliable. This, however, does not hinder our research since our interest centers on the date and industry characteristics of acquirer and target firms. Some concerns have been raised in the literature regarding the concept of announcement date in some developing economies (see Bhattacharya et al., 1999). We do not think this problem affects our results, since we aggregate acquisitions by year of announcement. Therefore, to the extent that the announcement date reported by SDC is not very different from the actual announcement date, our results are accurate.

We also compile information on the number of listed companies, and the market capitalization in dollars, in each country and year, from the IFC manuals. This allows us to

construct measures of merger intensity by country and year, by dividing the number of acquisitions by the number of publicly listed companies. We compute these measures for each of the 32 different industries in a country (using the industry classification in Datastream), and depending on whether national firms are either targets or acquirers, whether the merger is domestic or cross-border, and whether the merger is horizontal or non-horizontal.

[INSERT FIGURE 1 ABOUT HERE]

Figure 1 illustrates how the number of acquisitions has increased in the 1990s. If about 16 percent of all firms in the world were subject to a merger attempt, that number increases to 35 percent by 1998, and then drops to 20 percent in 2001. For the cross-border mergers, the frequency increased from 4 percent in 1990 to 7 percent in 2000.

Table 5 reports the number of firms in a country which are merger targets, relative to the number of publicly listed firms. We have aggregated the industry numbers into a single country indicator of how likely it is for a domestic firm to be acquired, either by another domestic firm, or by a foreign company. There are a few countries (Australia, Canada, New Zealand, Spain and Sweden) where in some years, more than 50 percent of the firms in the country are targets of a merger attempt.

[INSERT TABLE 5 ABOUT HERE]

One concern in our analysis is the lack of observations in the early years of the sample. SDC officially started reporting acquisition information in 1980. However, for some countries there is no evidence of actual acquisitions until as late as 1994. We cannot discern whether this is due to an actual absence of mergers, or to a lack of reporting by SDC. Therefore, in the analysis we are extremely cautious and control for time effects. As a robustness check, we investigate whether there is any news in the business press regarding an impending merger for the 389 country-year observations where SDC does not report any merger. We are not able to identify any additional event.

Table 6 reports the frequency of mergers by region and year. America, Oceania, and Africa are the regions with the largest volume of acquisitions, relative to market capitalization. In general, there is a significant increase in the merger volume during the second half of the 1990s, with a peak in 1998. There are significant differences across regions. The market for corporate control is relatively active in the U.S., Oceania, Central and South America, and Western Europe, but it is relatively weak in Africa and Asia.

[INSERT TABLE 6 ABOUT HERE]

In the next section, we analyze to what extent MLs have contributed to such an increase in the number of acquisitions within a country.

5. Domestic and Cross-Border Mergers, and Merger Laws

5.1 The Effect of Merger Laws

To analyze the effect of MLs on the frequency of acquisitions we compare our measures of merger activity before and after the enactment of merger regulation in the countries that have done so between 1990 and 2001. Providing results for the whole sample is not sensible, because we would be unable to capture the effect of the laws themselves. The U.S., for instance, enacted MLs in 1914; Argentina did it in 2001. However, one cannot conclude that it is because of the laws that the merger activity in the U.S. was larger than in Argentina in 1999.

[INSERT TABLE 7 ABOUT HERE]

We first restrict our analysis to 15 countries with observations pre- and post-merger law enactment. This subsample includes 7 Western European countries (Belgium, Denmark, Greece, Ireland, Netherlands, Norway, Sweden, and Switzerland) that passed national MLs after the 1989 European Directive on Mergers. It also includes 3 Latin American countries as well as South Africa, Taiwan, Thailand and Turkey. In Table 7 we compare the merger frequencies around the year of enactment of merger laws. Note that we exclude the year when the law is passed. On average, we find that merger frequency increases from 8.6 percent to 12.6 percent after MLs are enacted. Especially significant are the results for Mexico, where merger frequency increases by more than 10 percent. There is no country where mergers are less frequent after MLs are put in place.

With respect to cross-border mergers, there are increases in all countries except for Belgium (interestingly, Belgium has a merger law quality index of 3 from a maximum value of 4).

5.2 Cross-Sectional Evidence

We do not claim any causal relationship between laws and merger activity. The results could be purely driven by an increasing trend in the market for corporate control in the last decade. Therefore, we go back to our original sample and perform a panel regression with measures of merger frequency by industry in each country, which span the period 1990-2001.

There are several determinants of merger activity in an industry. In addition to the industry characteristics, the market valuation of the industry, the economic and financial development of the country, as well as institutional characteristics are employed to study the number of mergers.

With respect to industry characteristics, we argue that the level of concentration in the industry will affect the likelihood of mergers. In industries with fewer participants, there is less room for consolidation. We then use the number of publicly listed firms in the industry as an exogenous variable in our panel regressions. Additionally, we control for the industry return in the previous year. The idea is that a stock price run-up in the industry deters mergers by making target firms too expensive. From the point of view of the acquiring firms, a stock price run-up in the industry makes industry participants more likely to engage in acquisitions. Finally, we estimate our panel regressions with industry-fixed effects in order to capture industry-specific,

time-invariant factors that determine the likelihood of firms in the industry to acquire and be acquired by other firms.

Mergers are determined by the market valuation of an industry. In principle, an industry with a high market-to-book ratio is a growth industry, thereby attractive for potential acquirers. Alternatively, acquisitions are more likely when firms are more undervalued. We compute the average Tobin's Q in each industry in our sample to capture such effects. The average Tobin's Q is computed by adding up the market capitalization of all firms in an industry and dividing the result by the sum of all asset values of the same firms.

Merger activity is also determined by country characteristics and in particular by the economic and financial development in the country. We follow the general practice in the literature and we measure economic development with GDP per capita and the level of financial development with the ratio of total market capitalization to GDP. In addition, we control for the return of the stock market index in the country in the previous year. We compute value-weighted returns for all firms in the country using stock price information from Datastream.

Finally, mergers are determined by institutional characteristics. We capture these effects with a time-varying index of corruption constructed by the International Country Risk Guide. The index varies from zero to ten, with zero being for the most corrupted countries, and ten for the least corrupted countries. In addition, we use as determinants of merger activity: the merger law quality index, and two dummy variables that equal one whenever there are ACLs and MLs enacted in the country, in that given year.

We estimate our panel regressions with year-fixed effects in addition to industry-fixed effects. We adjust standard errors for heteroskedasticity, and report in all tables the economic significance of the coefficients. Economic significance levels allow us to compare the magnitude of the effect of all variables, and it is measured as the percent change in the standard deviation of the endogenous variable that is caused by a one-standard deviation change in the exogenous variable.

5.3 Regression Results

5.3.1 Acquisitions of firms in the industry, both domestic and cross-border

In Table 8 we report aggregate results for domestic mergers and cross-border mergers. The endogenous variable is the number of firms in an industry that are targets of a merger, divided by the number of listed firms in the country.

Because the effect of our control variables will be similar in all the remaining specifications, let us comment on the results at this point. We find that market valuations (Tobin's Q) positively affect merger activity. This is consistent with the idea that, the higher the Tobin's Q, the more attractive the industry is for potential acquirers. This effect is not significant for cross-border mergers.

Mergers are less likely in more developed countries, at least in our sample period. This is reflected in the negative (or insignificant) coefficients of the GDP per capita and the market capitalization to GDP ratio.

Our variable “Number of Firms” reflects the total number of firms in a given industry. We use this measure as a proxy for concentration. Ideally, the Herfindal Index is a more appropriate figure. However, the Herfindal Index cannot be calculated for a number of industries related to countries for which data is not available. Therefore, we decided to employ the absolute number of firms in order to circumvent the loss of sample points. Not surprisingly, the larger the number of industry participants, the fewer the merger frequency. Even though concentration affects the number of mergers, it affects as well the denominator in our measure, hence the result.^{viii} Stock returns—whether industry or country—do not determine merger activity.

With respect to merger and antitrust laws, two results deserve a comment. First of all, we do find that the existence of antitrust laws has a significantly positive effect on the frequency of both domestic and cross-border mergers. In economic terms, firms in countries with antitrust laws have a 20 percent higher probability of acquisition than firms in countries without ACLs. In other words, the enactment of ACLs increases the frequency of domestic mergers by 20 percent. The equivalent number for cross-border mergers is 9 percent.

[INSERT TABLE 8 ABOUT HERE]

The second result is that the quality of the law matters, but only for cross-border mergers. Domestic firms are more likely to be acquired the better the MLs are. In economic terms, a one-standard deviation increase in the quality index (an increase of one point) increases the frequency of mergers by 0.06 standard deviations (equivalent to a frequency of 2%). Given that for the average industry in our sample, the frequency of mergers is 2 percent, this result means that

having a law that is only one scoring point better (for instance, by having mandatory notification requirements) doubles the frequency of cross-border mergers in the country.

5.3.2 Acquisitions of firms in the industry, horizontal vs. non-horizontal

In Table 9 we classify acquisitions into horizontal and non-horizontal. Our findings are similar to the previous section. It is noteworthy that there is a differential effect of regulation on the frequency of horizontal mergers. Intuitively, one expects that antitrust laws have a more significant effect on horizontal, anti-competitive mergers. In recent years antitrust authorities have been concerned with market power coming from vertical integration and therefore, this result is to be expected.

5.3.3. Acquisitions by firms in the industry

Last, we report regression results with the frequency of mergers by firms in the industry. The endogenous variable in these regressions measures the likelihood that a firm becomes an acquirer and how this is determined by merger laws. We report these results in Table 10.

We have concluded from the previous section that antitrust laws remove information asymmetries and make acquisitions more likely. We confirm this result here. When a country enacts ACLs, firms in that country increase their acquisition activity: the probability that a firm in a country with ACLs engages in a domestic acquisition is 19 percent higher, and the probability that the same firm engages in a cross-border deal increases by about 9 percent.

A very important result is that a higher quality of MLs deters domestic acquirers. That is, firms in an industry are 3% less likely to engage in domestic mergers when the merger law

quality index increases by one standard deviation (one point). This is a reflection of the costs of compliance. Merger regulation affects both the target and the acquiring firm, but the severity of the penalty in case of infringement affects the acquiring firm only. That is why tougher laws are associated with less acquisition activity by domestic firms.

[INSERT TABLE 9 ABOUT HERE]

[INSERT TABLE 10 ABOUT HERE]

5.4 Summary of the results

This study shows that merger laws are a very important determinant of merger activity, and contributes to the Law and Finance literature (La Porta et al., 2002) by showing that not only the existence of the law matters, but also how well it is applied.

We focus on antitrust and competition laws and show that whenever countries introduce regulations that aim to protect domestic firms against unfair concentration, by setting uniform standards and imposing legal requirements, mergers become more frequent. The idea is that by making transactions more transparent, agents are more willing to initiate them.

We do not find that merger regulation per se has an effect on merger activities. However, this study shows that the better the quality of the law — measured by the severity of the penalties and the notification requirements imposed on the parties — the higher the frequency of cross-border acquisitions **of** domestic firms, and the higher the frequency of domestic acquisitions **by** domestic firms.

6. Conclusion

This study is a first attempt to quantify the effects of merger laws on merger activity. We identify two different effects of merger laws. First, merger laws directly affect the frequency of acquisitions in a given country. This can have both positive and negative implications for the country. Positive implications because, if industry concentration is not at its optimal level, to the extent that merger laws make acquisitions happen, they can create efficiency gains from integration. However, laws can have negative implications as well by preventing some profitable acquisitions from succeeding through their effects on domestic acquirers.

We analyze the effect of merger laws on a sample of 41 countries with laws in place. There is strong evidence of a trend towards globalization in the financial markets. Especially after 1995, cross-border merger flows have increased dramatically. However, we do not find national laws having a significant effect on domestic or cross-border merger flows, after controlling for time effects and market conditions.

Our paper contributes to the debate on the need for market regulation. However, some important extensions deserve further research. The effectiveness of competition laws obviously depends on the market and regulatory environments. But effectiveness should be reflected ultimately on the value of the corporate sectors. In the article we do not take a stand on whether mergers are profitable for an industry. Therefore, it would be interesting to analyze the indirect effect of merger laws on corporate value through their effects on competition.

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Appendix: Tables

Country	Antitrust Laws		Merger Laws	
	Date of Initial Enactment	Date of Initial Enactment	First Amendment	Notes
Argentina	1980	2001		
Australia	1974	1974	1975	
Austria	1988	1988		
Belgium	1991	1991	1999	
Brazil	Before 1990	1994		
Canada	Before 1990	1985		
Chile	1973			
Colombia	1959			
Denmark	1997	1997	2000	
Finland	1992	1992	1998	
France	1986	1986	2000	Another act passed in 2001.
Germany	1957	1958	1999	There have been several other amendments prior to 1999.
Greece	1991	1977	2000	
Hong Kong	Before 1990			
India	1969	1956	1997	
Indonesia	Before 1990			
Ireland	1991	1978	1996	
Israel	1988	1988		
Italy	1990	1990		Presidential Decree of April 30, 1998, No. 217 contains some procedural and enforcement rules.
Japan	1947	1947	2001	
Malaysia	Before 1990			
Mexico	1992	1993		
Netherlands	1997	1997		The 1997 act came into force in 1998.
New Zealand	1986	1986		
Norway	1993	1993	2000	
Pakistan	1970			
Peru	1991			
Philippines	Before 1990			
Portugal	1983	1993		
Singapore	Before 1990			
South Africa	1998	1998	2000	The 2000 act came into force in 2001.
Korea	1980	1980		The Monopoly Regulation and Fair Trade Act (MRFTA) of 1980 has undergone nine amendments.
Spain	1989	1989	1999	Other amendments have been made since 1999.
Sweden	1993	1993		
Switzerland	1995	1996		
Taiwan	1991	1991	1999	
Thailand	1999			
Turkey	1994	1994	1997	
United Kingdom	1973	1973		
United States	1976	1914	1950	The Hart-Scott-Rodino Antitrust Improvements Act ('the HSR Act') was enacted in 1976 and amended in 2001.
Venezuela	1992	1992	1996	

Table 1. Merger Laws Around the World

Date of first enactment, and amendments, of merger regulations in countries with available information. Source: White and Case 2003-2004 Edition of the Worldwide Antitrust Merger Notification Requirements, Cicero (2001), National Regulators, and ISSA Handbook

Antitrust and Competition Laws

Before 1990	Brazil, Canada, Hong Kong, Indonesia, Malaysia, Philippines, Singapore, Japan, Germany, Colombia, India, Pakistan, Chile, United Kingdom, Australia, United States, Argentina, Korea, Portugal, France, New Zealand, Austria, Israel, Spain
1990	Italy
1991	Belgium, Greece, Ireland, Peru, Taiwan
1992	Finland, Mexico, Venezuela
1993	Norway, Sweden
1994	Turkey
1995	Switzerland
1996	
1997	Denmark, Netherlands
1998	South Africa
1999	Thailand
2000	
2001	
No Law	

Merger Laws

Before 1990	United States, Japan, India, Germany, United Kingdom, Australia, Greece, Ireland, Korea, Canada, France, New Zealand, Austria, Israel, Spain
1990	Italy
1991	Belgium, Taiwan
1992	Finland, Venezuela
1993	Portugal, Mexico, Norway, Sweden
1994	Brazil, Turkey
1995	
1996	Switzerland
1997	Denmark, Netherlands
1998	South Africa
1999	
2000	
2001	Argentina
No Law	Hong Kong, Indonesia, Malaysia, Philippines, Singapore, Colombia, Pakistan, Chile, Peru, Thailand

Table 2. Antitrust and Merger Laws Around the World

Countries are classified by the year of enactment of Antitrust and Competition Laws, and Merger Laws. Source: White and Case 2003-2004 Edition of the Worldwide Antitrust Merger Notification Requirements, Cicero (2001), National Regulators, and ISSA Handbook

Country	Quality Index	Pre-notification Mandatory (Y/N)	Post-notification Mandatory (Y/N)	Notification is Not Voluntary (Y/N)	Penalties are Proportional to Size of Transaction
Argentina	4	Yes	Yes	Yes	Yes
Australia	1	No	No	No	Yes
Austria	3	Yes	No	Yes	Yes
Belgium	3	Yes	No	Yes	Yes
Brazil	4	Yes	Yes	Yes	Yes
Canada	2	Yes	No	Yes	No
Chile	0	No	No	No	No
Colombia	2	Yes	No	Yes	No
Denmark	2	Yes	No	Yes	No
Finland	2	Yes	No	Yes	No
France	1	No	No	No	Yes
Germany	3	Yes	No	Yes	Yes
Greece	2	Yes	No	Yes	No
Hong Kong	1	No	No	Yes	No
India	2	Yes	No	Yes	No
Indonesia	3	No	Yes	Yes	Yes
Ireland	3	Yes	No	Yes	Yes
Israel	3	Yes	No	Yes	Yes
Italy	2	Yes	No	Yes	No
Japan	3	Yes	Yes	Yes	No
Malaysia	1	No	No	Yes	No
Mexico	2	Yes	No	Yes	No
Netherlands	3	Yes	No	Yes	Yes
New Zealand	1	No	No	No	Yes
Norway	0	No	No	No	No
Pakistan	1	No	No	Yes	No
Peru	1	No	No	Yes	No
Philippines	1	No	No	Yes	No
Portugal	3	Yes	No	Yes	Yes
Singapore	1	No	No	Yes	No
South Africa	2	Yes	No	Yes	No
Korea	2	No	Yes	Yes	No
Spain	2	Yes	No	Yes	No
Sweden	2	Yes	No	Yes	No
Switzerland	3	Yes	No	Yes	Yes
Taiwan	3	Yes	No	Yes	Yes
Thailand	3	Yes	No	Yes	Yes
Turkey	2	Yes	No	Yes	No
United Kingdom	3	Yes	Yes	Yes	No
United States	3	Yes	Yes	Yes	No
Venezuela	0	No	No	No	No

Table 3. Merger Law Quality Index

We assign a value of 1 to a country with: Pre-Merger Notification Requirements, Post-Merger Notification Requirements, Mandatory Notification Pre-Merger. Source: White and Case 2003-2004 Edition of the Worldwide Antitrust Merger Notification Requirements, Cicero (2001), National Regulators, and ISSA Handbook

Year	Domestic Mergers					Cross-Border Mergers			
	All Mergers	Number	% Over Total	Horizontal	Vertical	Number	% Over Total	Horizontal	Vertical
1990	2,470	1,885	76.32%	900	985	585	23.68%	278	307
1991	2,453	2,002	81.61%	1,009	993	451	18.39%	196	255
1992	2,784	2,314	83.12%	1,224	1,090	470	16.88%	218	252
1993	3,530	2,999	84.96%	1,558	1,441	531	15.04%	256	275
1994	4,599	3,851	83.74%	1,998	1,853	748	16.26%	331	417
1995	4,906	4,049	82.53%	2,059	1,990	857	17.47%	382	475
1996	5,647	4,707	83.35%	2,399	2,308	940	16.65%	441	499
1997	7,565	6,261	82.76%	3,114	3,147	1,304	17.24%	647	657
1998	8,427	6,896	81.83%	3,523	3,373	1,531	18.17%	818	713
1999	7,577	6,032	79.61%	3,201	2,831	1,545	20.39%	863	682
2000	8,533	6,605	77.41%	3,301	3,304	1,928	22.59%	962	966
2001	3,628	2,756	75.96%	1,299	1,457	872	24.04%	463	409
All Years	62,119	50,357	81.07%	25,585	24,772	11,762	18.93%	5,855	5,907

Table 4. Description of the sample

Number of Acquisitions in the original sample, by year. The sample includes all the acquisitions of public companies available in Securities Data Corporation, from January 1, 1980 through December 31, 2000. Only completed transactions are considered, and we exclude from the initial sample LBO deals, as well as spinoffs, recapitalizations, self-tender and exchange offers, repurchases, minority stake purchases, acquisitions of remaining interest, and privatizations. Horizontal mergers are those where the two-digit SIC code of the target and the acquiror are equal. Otherwise the merger is considered vertical.

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Argentina	0.00%	8.33%	10.53%	8.70%	27.27%	33.87%	51.56%	81.54%	44.93%	57.75%	40.54%	22.67%
Australia	35.29%	25.60%	18.48%	42.18%	37.73%	50.28%	39.24%	57.98%	80.79%	74.62%	64.27%	50.62%
Austria	3.17%	0.00%	7.32%	10.64%	10.10%	9.26%	9.65%	10.43%	4.96%	15.87%	8.27%	7.19%
Belgium	20.16%	11.72%	16.41%	11.54%	11.94%	21.90%	17.39%	13.82%	24.24%	23.83%	23.47%	25.12%
Brazil	0.00%	1.47%	3.16%	3.57%	2.66%	7.73%	23.96%	26.62%	24.83%	17.50%	25.23%	14.89%
Canada	25.84%	29.59%	33.27%	41.91%	44.30%	49.77%	50.00%	62.45%	83.36%	64.77%	86.19%	68.98%
Chile	2.91%	3.51%	8.00%	6.16%	12.26%	9.43%	8.75%	18.50%	11.96%	17.65%	13.30%	9.04%
Colombia			8.33%	0.00%	23.08%	16.13%	19.35%	12.90%	31.25%	0.00%	3.13%	0.00%
Denmark	4.55%	10.70%	6.45%	10.81%	10.36%	5.26%	5.04%	13.11%	13.94%	23.75%	25.75%	18.32%
Finland	5.48	14.29	21.31	35.09	24.62	34.25	32.39	21.77	20.16	32.65	37.01	23.28%
France	19.73%	16.80%	19.41%	16.84%	19.53%	17.34%	18.12%	25.74%	24.97%	20.85%	23.13%	13.76%
Germany	7.36%	6.53%	4.50%	5.78%	4.29%	7.90%	8.89%	11.01%	13.47%	13.21%	12.80%	7.41%
Greece	0.00%	3.81%	1.69%	0.00%	0.00%	1.15%	1.03%	0.48%	3.15%	7.53%	5.58%	9.19%
Hong Kong	6.17%	18.92%	16.50%	18.31%	21.08%	13.80%	12.18%	18.22%	15.96%	19.76%	26.44%	14.16%
India	0.00%	0.00%	2.01%	1.82%	4.55%	8.76%	3.49%	10.65%	11.03%	10.99%	24.19%	11.87%
Indonesia	6.38%	6.10%	6.38%	7.21%	13.28%	12.16%	23.72%	10.30%	4.47%	12.22%	16.49%	17.68%
Ireland	21.21%	22.39%	28.57%	9.86%	13.70%	42.86%	25.00%	34.57%	32.58%	53.19%	52.48%	35.58%
Israel	0.00%	15.79%	10.00%	4.76%	6.98%	28.89%	28.57%	31.48%	59.09%	49.30%	84.00%	18.18%
Italy	14.49%	18.75%	21.83%	16.16%	23.31%	16.18%	16.86%	24.07%	26.60%	27.67%	37.65%	24.93%
Japan	0.54%	0.92%	0.58%	0.32%	1.08%	0.79%	0.98%	1.41%	2.16%	5.28%	8.15%	6.17%
Malaysia	8.82%	25.09%	9.46%	18.68%	26.63%	42.89%	35.17%	31.98%	28.04%	24.08%	24.60%	20.27%
Mexico	17.14%	0.00%	19.05%	18.06%	25.53%	33.01%	19.23%	37.29%	31.01%	21.05%	28.47%	19.18%
Netherlands	28.04%	11.28%	17.41%	22.17%	31.37%	18.87%	41.74%	46.19%	54.10%	40.74%	51.70%	24.08%
New Zealand	41.67%	27.08%	10.00%	44.64%	39.13%	34.67%	48.75%	37.35%	67.06%	50.00%	47.73%	29.67%
Norway	8.33%	24.73%	14.00%	18.42%	21.26%	18.88%	16.46%	15.98%	20.68%	32.55%	32.82%	18.75%
Pakistan		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.05%	0.00%	2.53%	0.00%	2.53%
Peru		0.00%	0.00%	6.06%	12.77%	3.33%	16.13%	12.50%	18.46%	15.38%	8.57%	4.29%
Philippines	0.00%	2.74%	2.50%	2.22%	7.48%	13.39%	4.05%	8.02%	4.22%	16.57%	7.60%	5.75%
Portugal	7.25%	6.41%	10.71%	6.82%	5.05%	5.71%	10.09%	8.11%	8.55%	15.00%	27.87%	9.52%
Singapore	9.92%	18.67%	10.69%	14.04%	16.75%	15.35%	15.63%	16.46%	22.18%	19.55%	26.60%	19.09%
South Africa	1.82%	4.80%	4.67%	9.33%	12.47%	19.16%	24.32%	29.21%	35.18%	18.37%	18.36%	7.53%
Korea	0.19%	0.92%	0.55%	0.00%	0.35%	2.53%	1.91%	1.45%	6.89%	9.23%	9.08%	10.16%
Spain	37.50%	37.82%	36.29%	19.85%	28.57%	17.36%	13.01%	44.81%	68.07%	51.12%	75.40%	33.51%
Sweden	23.19%	34.93%	29.22%	24.53%	41.11%	20.87%	20.91%	31.35%	27.42%	40.64%	52.56%	24.00%
Switzerland	3.19%	9.38%	9.64%	12.00%	16.67%	13.74%	18.72%	17.47%	11.52%	16.99%	22.42%	17.35%
Taiwan	1.52%	0.67%	1.15%	0.00%	2.35%	1.27%	2.92%	2.33%	1.23%	4.25%	9.55%	10.15%
Thailand	0.00%	1.92%	1.49%	0.00%	1.64%	2.95%	2.50%	4.96%	17.31%	14.84%	9.89%	8.80%
Turkey	0.00%	3.03%	2.70%	1.23%	1.12%	0.00%	0.00%	3.70%	6.09%	5.22%	6.84%	10.83%
United Kingdom	40.29%	30.62%	30.94%	35.49%	41.75%	40.73%	41.36%	47.11%	48.97%	41.36%	42.32%	23.84%
United States	17.11%	16.40%	20.60%	24.67%	30.20%	30.25%	33.92%	45.66%	48.34%	40.51%	42.37%	
Venezuela	0.00%	0.00%	0.00%	0.00%	20.00%	40.00%	5.88%	11.11%	31.58%	13.64%	34.62%	7.14%

Table 5. Number of Acquisitions by Country

The table shows the Number of Consumated Acquisitions of Domestic Firms, relative to the Number of Listed Firms, by country and year. Number of Listed Firms in each country is from the IFC Yearbooks.

Number Domestic Acquisitions / Total Number of Firms in Country

Region	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Africa	1.49%	4.16%	4.04%	7.71%	10.03%	14.25%	18.74%	24.07%	31.05%	14.91%	15.12%	6.33%
Asia	1.43%	3.79%	2.22%	2.90%	4.49%	5.82%	5.38%	6.10%	6.90%	8.53%	11.27%	8.81%
Eastern Europe	0.00%	1.37%	2.20%	2.91%	1.86%	5.09%	7.14%	6.55%	10.89%	15.48%	18.21%	13.79%
Western Europe, E.U. countries	12.67%	12.01%	12.61%	10.38%	11.51%	11.22%	12.38%	16.37%	19.52%	19.05%	22.41%	13.16%
Central and South America	2.24%	1.25%	3.73%	3.97%	7.65%	9.26%	11.60%	16.06%	14.77%	11.81%	13.56%	7.72%
Western Europe, non E.U. countries	26.37%	22.01%	21.57%	25.43%	30.21%	27.32%	27.46%	31.33%	31.94%	29.20%	30.78%	17.92%
Oceania	23.43%	18.46%	12.88%	30.29%	28.86%	36.36%	30.04%	40.43%	60.00%	56.27%	48.74%	39.65%
North America	14.04%	15.00%	19.35%	23.64%	28.13%	27.96%	31.67%	42.27%	45.69%	36.92%	38.33%	56.87%

Number Cross-Border Acquisitions / Total Number of Firms in Country

Region	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Africa	0.30%	0.55%	1.62%	2.31%	2.01%	4.75%	6.54%	4.94%	4.07%	3.57%	3.34%	1.58%
Asia	0.35%	0.65%	0.73%	0.97%	1.75%	1.57%	1.36%	1.76%	2.65%	2.56%	3.05%	2.00%
Eastern Europe	0.00%	1.37%	2.20%	1.94%	1.24%	1.39%	3.17%	2.55%	7.92%	10.22%	8.36%	7.47%
Western Europe, E.U. countries	9.62%	6.33%	7.28%	6.78%	8.05%	8.03%	8.77%	11.93%	12.99%	11.71%	13.52%	8.56%
Central and South America	1.79%	0.94%	3.50%	2.72%	5.74%	6.28%	9.16%	12.99%	9.72%	8.80%	9.04%	5.65%
Western Europe, non E.U. countries	5.73%	5.27%	4.59%	4.45%	5.92%	5.88%	6.48%	8.12%	8.15%	8.53%	9.32%	4.78%
Oceania	12.94%	7.38%	4.29%	12.29%	9.11%	11.19%	10.65%	14.49%	18.81%	14.85%	13.37%	8.39%
North America	3.67%	2.35%	2.21%	2.28%	3.11%	3.75%	3.44%	4.69%	5.61%	5.81%	8.31%	12.10%

Table 6. Number of Acquisitions By Region

The table shows the \$ Value of Consumated Acquisitions of Domestic Firms, relative to the Total Market Capitalization, by region and year; and the Number of Consumated Acquisition, relative to the Number of Listed Companies, by year and Region

Country	Number of Acquisitions				Number of Acquisitions / Number of Listed Firms			
	Domestic		Cross-Border		Domestic		Cross-Border	
	Before the Enactment of Merger Laws	After the Enactment of Merger Laws	Before the Enactment of Merger Laws	After the Enactment of Merger Laws	Before the Enactment of Merger Laws	After the Enactment of Merger Laws	Before the Enactment of Merger Laws	After the Enactment of Merger Laws
Argentina	10	16	8	13	17.42%	22.46%	12.22%	17.86%
Belgium	13	17	12	13	10.48%	10.48%	9.68%	7.83%
Denmark	10	29	6	21	4.81%	11.08%	2.79%	7.89%
Greece	0	6	0	1	0.00%	2.46%	0.00%	0.59%
Ireland	9	17	5	11	13.64%	19.80%	7.58%	12.09%
Mexico	2	17	2	11	4.29%	15.17%	4.29%	10.02%
Netherlands	27	64	23	50	13.19%	24.28%	11.23%	19.08%
Norway	10	29	5	15	10.72%	14.45%	4.97%	7.30%
South Africa	45	101	11	18	10.58%	17.00%	2.64%	2.86%
Sweden	29	58	14	30	19.56%	20.69%	9.56%	10.80%
Switzerland	13	25	9	20	6.46%	9.68%	4.31%	7.74%
Taiwan	1	7	1	4	0.76%	2.09%	0.76%	1.17%
Thailand	7	20	3	11	2.45%	7.18%	1.20%	4.00%
Turkey	1	4	0	3	0.75%	3.79%	0.41%	2.74%
Venezuela	0	2	0	1		9.44%		6.96%
TOTAL	175	413	98	222	8.59%	12.55%	4.81%	6.82%

Table 7. Merger Activity and Merger Laws

Effect of Merger Laws on the number of acquisitions. Only those countries with information available in the pre-law period are shown. The number of acquisitions includes completed acquisitions in a given year, of companies domiciled in the corresponding country

	Domestic Target	Cross Border, Domestic Target
Quality Index	0.004 [0.007]	0.021*** [0.056]
Market Capitalization to GDP	0 [0.009]	-0.000*** [-0.045]
Log (Tobin's Q) Previous Year	0.036*** [0.032]	0.003 [0.003]
Corruption Index (More Corruption, Lower Value)	0.074*** [0.177]	0.027*** [0.091]
Merger Law Existence	-0.046 [-0.027]	-0.004 [-0.003]
Antitrust Law Existence	0.192*** [0.093]	0.089*** [0.061]
Number of Firms	-0.001*** [-0.059]	-0.001*** [-0.093]
GDP Per Capita	-0.000*** [-0.065]	0.000** [0.031]
Industry Average Stock Return	0 [0.009]	0 [0.007]
National Stock Market Return	0 [-0.012]	0 [-0.009]
Constant	-0.168*** [-0.315]	-0.076** [-0.202]
Observations	7947	7947
Number of Industries	38	38
R-squared within	0.04	0.03
R-squared between	0.07	0.05
R-squared total	0.04	0.03

Normalized beta coefficients in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 8. Panel Regressions – Total Merger Activity by the Nationality of the Target Firm

Panel regressions with the number of acquisitions in each category, divided by the number of publicly listed firms in a country, as endogenous variable. The Quality Index measures the quality of merger regulation in the country. Data on market capitalization to GDP, GDP per capita is from the World Bank Development Indicators. The corruption index is obtained from the International Risk Guide. The number of firms is from the IFC manuals. Industry and country stock returns are constructed from all the firms in each industry and country with data available in Datastream. The sample includes acquisitions of firms in the countries considered in the study. We estimate the model with robust standard errors adjusted for heteroskedasticity and with year- and industry-fixed effects. In brackets we report the economic significance of each coefficient: the effect of a one-standard deviation increase in the corresponding exogenous variable on the standard deviation of the endogenous variable.

	Horizontal, Domestic Target	Horizontal, Cross-Border, Domestic Target	Non-horizontal, Domestic Target	Non- horizontal, Cross-Border, Domestic Target
Quality Index	0.005 [0.015]	0.013*** [0.050]	-0.001 [-0.004]	0.009*** [0.041]
Market Capitalization to GDP	-0.000*** [-0.038]	-0.000*** [-0.048]	0.000*** [0.054]	-0.000* [-0.023]
Log (Tobin's Q) Previous Year	0.026*** [0.038]	0.003 [0.007]	0.01 [0.015]	-0.001 [-0.002]
Corruption Index (More Corruption, Lower Value)	0.035*** [0.138]	0.014*** [0.069]	0.039*** [0.157]	0.013*** [0.081]
Merger Law Existence	-0.029 [-0.028]	-0.011 [-0.014]	-0.017 [-0.017]	0.008 [0.012]
Antitrust Law Existence	0.096*** [0.077]	0.055*** [0.057]	0.095*** [0.078]	0.034** [0.042]
Number of Firms	-0.000*** [-0.034]	-0.001*** [-0.068]	-0.001*** [-0.063]	-0.001*** [-0.086]
GDP Per Capita	-0.000*** [-0.045]	0 [0.018]	-0.000*** [-0.063]	0.000** [0.034]
Industry Average Stock Return	0 [0.008]	0 [0.004]	0 [0.007]	0 [0.007]
National Stock Market Return	0 [-0.011]	0 [-0.009]	0 [-0.009]	0 [-0.006]
Constant	-0.085*** [-0.261]	-0.053*** [-0.216]	-0.083*** [-0.262]	-0.022 [-0.106]
Observations	7947	7947	7947	7947
Number of Industries	38	38	38	38
R-squared within	0.03	0.02	0.04	0.02
R-squared between	0.18	0.11	0.01	0.01
R-squared total	0.03	0.02	0.04	0.02

Normalized beta coefficients in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 9. Panel Regressions – Horizontal vs. Non-Horizontal Mergers

Panel regressions with the number of acquisitions in each category, divided by the number of publicly listed firms in a country, as endogenous variable. Horizontal mergers are mergers where the acquirer and the target have the same 2-digit main SIC code. The Quality Index measures the quality of merger regulation in the country. Data on market capitalization to GDP, GDP per capita is from the World Bank Development Indicators. The corruption index is obtained from the International Risk Guide. The number of firms is from the IFC manuals. Industry and country stock returns are constructed from all the firms in each industry and country with data available in Datastream. The sample includes acquisitions of firms in the countries considered in the study. We estimate the model with robust standard errors adjusted for heteroskedasticity and with year- and industry-fixed effects. In brackets we report the economic significance of each coefficient: the effect of a one-standard deviation increase in the corresponding exogenous variable on the standard deviation of the endogenous variable.

	Domestic Acquiror	Cross-Border, Domestic Acquiror
Quality Index	-0.015*** [-0.030]	0.003 [0.010]
Market Capitalization to GDP	0.000*** [0.059]	0 [0.019]
Log (Tobin's Q) Previous Year	0.057*** [0.056]	0.024*** [0.039]
Corruption Index (More Corruption, Lower Value)	0.080*** [0.209]	0.033*** [0.137]
Merger Law Existence	-0.041 [-0.026]	0 [-0.000]
Antitrust Law Existence	0.190*** [0.101]	0.086*** [0.074]
Number of Firms	-0.001*** [-0.033]	-0.001*** [-0.066]
GDP Per Capita	-0.000*** [-0.074]	0.000** [0.034]
Industry Average Stock Return	0 [0.008]	0 [0.005]
National Stock Market Return	0 [-0.005]	0 [0.001]
Constant	-0.245*** [-0.504]	-0.153*** [-0.507]
Observations	7947	7947
Number of Industries	38	38
R-squared within	0.06	0.04
R-squared between	0.11	0.13
R-squared total	0.07	0.05

Normalized beta coefficients in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 10. Panel Regressions – Total Merger Activity by the Nationality of the Acquiror

Panel regressions with the number of acquisitions in each category, divided by the number of publicly listed firms in a country, as endogenous variable. The Quality Index measures the quality of merger regulation in the country. Data on market capitalization to GDP, GDP per capita is from the World Bank Development Indicators. The corruption index is obtained from the International Risk Guide. The number of firms is from the IFC manuals. Industry and country stock returns are constructed from all the firms in each industry and country with data available in Datastream. The sample includes acquisitions of firms in the countries considered in the study. We estimate the model with robust standard errors adjusted for heteroskedasticity and with year- and industry-fixed effects. In brackets we report the economic significance of each coefficient: the effect of a one-standard deviation increase in the corresponding exogenous variable on the standard deviation of the endogenous variable.

Appendix: Figures

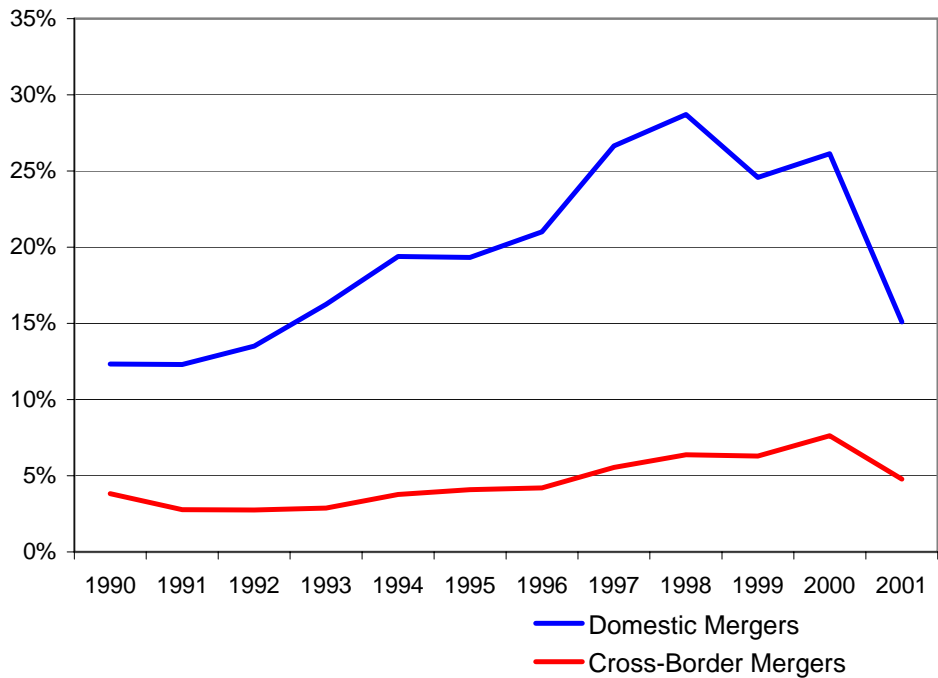


Figure 1. Frequency of Domestic and Cross-Border Mergers

The figure shows the Number of Consummated Acquisitions of Domestic Firms, relative to the Number of Listed Firms, by year. Number of Listed Firms in each country is from the IFC Yearbooks.

Endnotes

ⁱ The United Nations Conference on Trade and Development (UNCTAD) lists 82 countries that have competition authorities. See www.unctad.org/en/docs/c2clp99d16.en.pdf.

ⁱⁱ For more detail on how this survey is conducted, please see the Introduction to White & Case's *2003-2004 Edition of Worldwide Antitrust Merger Notification Requirements*.

ⁱⁱⁱ Some of these countries have enacted MLs between 2001 and 2006, but their laws are not considered in the analysis. For instance, this is the case with the Czech Republic, where merger regulation came into force on July 1, 2001.

^{iv} In some jurisdictions, pre- and post-notification requirements are voluntary and therefore ineffective.

^v In jurisdictions where the penalty is a fixed cost, it becomes negligible for large acquirers and henceforth ineffective. Countries with no penalties receive a score of zero. Countries that gave any penalties proportional to size or revenue (sometimes these countries also gave a penalty value range, depending on the type of infraction) and countries that had penalties but not explicitly dependent on size or revenue receive a score of one. Note that frequently, the countries in this group gave a possible dollar value range for the penalties.

^{vi} Note that the Czech Republic's Competition Act is not in our sample of countries because the law has been enacted in 2001, the last year of our data.

^{vii} Six SIC codes are considered per firm.

^{viii} If we use the absolute number of mergers as endogenous variable, the coefficient of the number of listed firms is positive and highly significant.