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What determines horizontal merger antitrust case selection?

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ABSTRACT

U.S. antitrust agencies claim their antitrust enforcement mission is to protect consumers, promote fair competition, and maintain efficiency. Are antitrust practices consistent with this claim? We explore this question by examining antitrust selection of horizontal merger cases in the U.S. manufacturing sector during 1980–2009. We find that antitrust agencies are more likely to intervene when foreign import pressure is low, merger industry concentration hits a hurdle level, or local or less specialized rivals suffer unfavorable wealth effects. We find no evidence that antitrust agencies systematically respond to the wealth effects of either customers in general or more affected customers. Our findings can be a useful reference for calibrating the efficiency of antitrust regulation and enforcement.

1. Introduction

Antitrust enforcement has played an important role in the United States for decades. The Department of Justice (DOJ) and the Federal Trade Commission (FTC) have authority to file antitrust complaints against a merger when they believe the merger would substantially weaken competition and violate antitrust laws.[1] To avoid overlapping effort, they divide their jurisdiction and coordinate their activities. Both the DOJ and the FTC may file civil antitrust cases that violate the Clayton Act, but only the DOJ may bring criminal lawsuits under the Sherman Act. Before mounting a preliminary investigation against a merger, each requests clearance from the other (Bruner, 2004, p.745). In practice, most business combination complaints are against horizontal mergers (Eckbo, 1988). Despite a considerable literature exploring antitrust regulation efficiency and the intensity of aggregate antitrust activities (measured by the number of cases in a year) in the areas of financial economics, political economy, and law[2], the literature is silent on what determines antitrust case selection of horizontal mergers at the deal level. Nor is it conclusive to what extent the antitrust agencies fulfil their mission statement, i.e., to protect consumers, promote fair competition, and maintain efficiency.

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[1] Wood and Anderson (1993) review U.S. antitrust policies and processes. U.S. antitrust laws include the 1890 Sherman Act, the 1914 Clayton Act, the 1914 Federal Trade Commission Act, the 1936 Robinson-Patman Act, the 1950 Celler-Kefauver Act, the 1974 Antitrust Procedures and Penalties Act, the 1976 Hart-Scott-Rodino (HSR) Antitrust Improvements Act, and other minor modifications that strengthen the Clayton Act. Despite minor modifications, the core of U.S. antitrust legislation has remained since the early 1900s, with Section 7 of the Clayton Act being the principal antitrust law regulating business combinations.

[2] Related literature includes Long et al. (1973), Ellert (1976), Stillman (1983), Wier (1983), Eckbo and Wier (1985), Johnson and Parkman (1991), Eckbo (1992), Wood and Anderson (1993), Bittlingmayer and Hazlett (2000), Ghosal and Gallo (2001), Aktas et al. (2004, 2007), Feinberg and Reynolds (2010), Ghosal (2011), Duso et al. (2007), and Duso et al. (2011).

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We examine the determinants of antitrust challenges against horizontal mergers by empirically modelling the antitrust decision process. We draw on economic theories of regulation and the literature on horizontal merger motives to derive four hypotheses that explain the likelihood that a horizontal merger faces antitrust intervention. First, public interest regulation theory (Pigou, 1932) suggests that government intervention corrects market failure and maximizes social welfare. Governments actively intervene when business combinations weaken competition, inflate input prices, and harm downstream companies, including end consumers. The prediction of this theory is that challenges are more likely for mergers that lead to worse stock market reactions at merger announcements for downstream customer companies (corporate customers or customers henceforth). Unfavorable market reactions are due to higher expected input prices that customer companies cannot entirely switch away from or pass on to end users (Eckbo, 1983; Fee and Thomas, 2004). We label this the *consumer protection hypothesis*.

Second, foreign competition increases the supply elasticity of a domestic industry and makes it more difficult to monopolize. Katics and Petersen (1994) show that strong import competition squeezes profit margins and induces domestic companies to merge in order to compete on improved efficiency. Mitchell and Mulherin (1996) find that increased import pressure promotes merger waves in the domestic market to improve efficiency. We hypothesize that, with strong foreign competition (measured by the import ratio, i.e., a merging industry's total imports divided by its total domestic supply), it is more difficult for merging firms to exercise market power and the authorities are less likely to challenge. We call this the *foreign competition hypothesis*.

Third, for decades, antitrust agencies have implemented the market concentration doctrine (Eckbo, 1988), which posits that the degree of industry concentration proxies for market power. This positive relation between market concentration and market power is implied by the canonical works of Cournot ([1838] 1927) and Nash (1950), but is challenged by Eckbo (1983). Stigler (1964, 1968) further postulates that companies in more concentrated industries are more likely to collude for anti-competitive purposes because it is easier for them to detect deviation from collusion and impose punishment. Therefore, market concentration forms a base for assessing the potentially anticompetitive effects of a proposed merger (see DOJ/FTC *Horizontal Merger Guidelines*, 1992, 1997 and 2010). The antitrust agencies divide industries into categories by market concentration thresholds and claim they pay more attention to deals that would result in high industry concentration and that would substantially increase concentration. Therefore, the *market concentration hurdle hypothesis* predicts a higher likelihood of antitrust intervention in deals that hit a stipulated concentration hurdle criterion.

These three hypotheses assume the antitrust agencies act benignly on behalf of society and make dispassionate decisions. In contrast, Stigler (1971), in his economic theory of regulation, posits that concerned parties can influence antitrust case selection. Baumol and Ordover (1985) postulate that industry rivals actively influence antitrust intervention in relation to mergers. Industry rivals may lobby the antitrust agencies to block efficient mergers to avoid being competitively disadvantaged. Since lobbying is costly, only the most disadvantaged rivals have enough incentive to lobby. These include local rivals that would lose a substantial share of geographical markets, and less specialized rivals that would suffer a greater substitution effect from efficient mergers. We hypothesize that when local or less specialized industry rivals suffer more from unfavorable wealth effects at merger announcements, the likelihood of antitrust intervention increases. We label the fourth hypothesis the *rival influence hypothesis*.

We gather a sample of 393 horizontal mergers announced in the U.S. manufacturing sector between public companies during 1980 to 2009. Each year, the FTC and the DOJ report on competition performance and enforcement activities to Congress in a joint annual report. We study these annual reports and identify 35 challenged deals during our sample period. According to Fee and Thomas (2004), the joint annual report is more accurate than Factiva for identifying challenged deals. We model the antitrust agencies' case selection using probit regressions. The variables of interest are customer and rival wealth effects estimated using the event study methodology, foreign import competition measured by the import ratio, and industry concentration measures based on the Herfindahl-Hirschman index (HHI). We control for a range of deal- and industry-specific variables.

In our probit model of antitrust intervention probability, the wealth effects estimated using stock returns potentially suffer from endogeneity. In particular, the likelihood of intervention affects abnormal announcement returns. A Rivers and Vuong (1988) type test confirms the existence of endogeneity. To address this, we follow Aktas et al. (2004, 2007) and use an instrumental variable (IV) approach (Greene, 2003; Wooldridge, 2002). Specifically, we regress announcement returns on a set of exogenous variables (details in Section 4.2) and use the fitted values in the probit model.

Our empirical analysis provides no evidence supporting the *consumer protection hypothesis*—the likelihood of antitrust intervention does not systematically respond to average customers', local customers', or reliant customers' wealth effects. Consistent with the *foreign competition hypothesis*, we find that the import ratio reduces the likelihood of an antitrust challenge. This evidence is in line with previous studies of Katics and Petersen (1994) and Mitchell and Mulherin (1996) who postulate that import competition constrains market power and forces domestic companies to compete on efficiency, thus generating less demand for antitrust intervention. We also find clear evidence for the *market concentration hurdle hypothesis*. A horizontal merger has a probability of being challenged that is 18–19% greater in an industry that hits the market concentration hurdle. This confirms that antitrust agencies follow the market concentration doctrine in selecting intervention cases.

We also find evidence consistent with the *rival influence hypothesis*. Specifically, a 10% decrease in local rivals' wealth effect increases the intervention likelihood by 14%. Similarly, a 10% decrease in specialized rivals' wealth effect leads to a 14% higher intervention likelihood. Baumol and Ordover (1985) argue that rivals may lobby against efficient mergers to avoid being competitively disadvantaged. McChesney (1997), Duso (2005) and Tahoun (2014) point out that rivals influence antitrust selection via a variety of mechanisms, e.g., lobbying, campaign contributions, and quid pro quo deals. Bittlingmayer and Hazlett (2000) postulate that antitrust agencies may yield to the influences of concerned parties and deviate from their stated mission. Our results are consistent with these arguments.