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Shareholder value mining: Wealth effects of takeovers in German coal mining, 1896–1913 ☆

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ABSTRACT

We investigate the wealth effects of takeovers in the mining industry of the German Ruhr district between 1896 and 1913. We employ event study methodology and use a new data set that covers stock prices of joint-stock mining companies and information on share prices of *Gewerkschaften*, an organisational form that was exclusively designed for German mining companies. Our empirical results show that takeovers enhanced shareholder value. The clear beneficiaries were the owners of the acquired companies, those of the acquirers hardly gained significantly. Collusion in the mining industry benefited the shareholders of small, poorly performing takeover targets.

1. Introduction

The accepted view on the economy of Imperial Germany holds that there existed a peculiar German business model—sometimes labelled as "organised capitalism" (Kocka, 1974) or "cooperative capitalism" (Chandler, 1990)—that was characterised by dominant joint-stock credit banks, tariffs, and concentration through cartels and other collusive arrangements rather than through mergers, acquisitions, and trust building. Consequently, takeover activity is regarded as a marginal phenomenon that was more symptomatic for the Anglo-American than for the German way of doing business. This view on German economic history has also shaped cliometric research in the field. As a result, there are numerous—partly conflicting—studies on the role of the joint-stock credit banks (Becht and Ramirez, 2003; Burhop, 2006; Edwards and Ogilvie, 1996; Fohlin, 2007) and also a growing amount of investigations into cartels (Bittner, 2005; Kinghorn and Nielsen, 2004; Peters, 1989; Webb, 1980) and tariffs (Webb, 1980, 1982). In contrast, for a long time the only cliometric study on takeovers has been Tilly's (1982) seminal work on the role and the determinants of external growth in Germany between 1880 and 1913. Only recently, additional evidence was produced. Kling (2006a,b) studies the short-term wealth effects of mergers in 1908 as well as the long-term wealth effects and the determinants of takeovers that took place between 1870 and 1913.

In our study, we look at the external growth of publicly owned companies in the mining industry of Imperial Germany. More specifically, we examine 21 acquiring and 23 acquired companies from the most important of Germany's coal mining areas, the Ruhr district. The investigation period ranges from the second half of the 1890s up to the First World War. By the choice of this period, we cover the years with the most intense takeover activity in the mining industry of the Ruhr district (see Fig. 1 in Section 2) as well as in the German economy as a whole (Kling, 2006b). The main focus of the study is on the

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wealth effects of external growth and the distribution of potential wealth gains and losses. Thus, we use event study methodology and cross-sectional regressions.

Our paper contributes to the research on takeovers in Imperial Germany in several respects. First, we add detailed evidence for a single industry to a research program that has so far concentrated on the German economy as a whole. This approach enables us to investigate a homogenous group of companies and to highlight their form of organisation. In addition, we can examine the industry under investigation in more detail. In particular, we are able to study the interplay between cartelisation and external growth. Second, we use a newly constructed dataset that has not been used in cliometric studies before and that is unique for two reasons. In the first place, we do not only examine the performance of stock prices. For the first time in a historical event study, we also consider a type of publicly owned company with tradable shares called *Gewerkschaft* that—with respect to the number of companies and their market share—was of outstanding importance for the mining industry in Imperial Germany. Furthermore, the fact that our investigation covers a period of 18 years and uses monthly as well as daily data makes our dataset unique, as the combination of a long time period and high frequency data is not available for the German case yet.

Event studies on mergers and acquisitions using data from the 1970s until today indicate that the owners of the acquired companies gain significantly, with abnormal performance ranging from 16 to 30 percent.[1] In contrast, significant gains for the owners of the acquiring companies are hardly ever observed. Sometimes even losses are reported. A historical event study by Leeth and Borg (2000) shows that the wealth effects of takeovers did not change dramatically over time. They find that during the takeover movement of the 1920s in the United States, the wealth gains for the owners of targets were around 16 percent, whereas the owners of the bidders did not gain significantly.

The empirical finding that the shareholders of targets gain whereas those of the acquirers break even or lose is referred to as the 'merger paradox'. Economic theory has provides several explanations for this phenomenon. In one strand of the literature, the emphasis is on market structure. Salant et al. (1983) conclude that in a Cournot oligopoly, with homogenous goods, and no synergies, horizontal takeovers will only be profitable, if the combined market share of the merging companies is at least 80 percent. Otherwise, the profit share of the merged company will be smaller than the combined shares of bidder and target before the acquisition, because outsiders (i.e., companies not engaged in the merger) will be able to free-ride on the market structure effect of the takeover (i.e., any reduction in output by the merged entity will be met by an increase in their output and profit shares). Following Salant et al. (1983), economists proposed models, in which takeovers that fall short of the 80 percent threshold can be profitable for the participating companies: Levin (1990) shows that if the merged company becomes a Stackelberg leader after a takeover, the transaction will not reduce profitability; Huck et al. (2001) predict the same outcome for a scenario, where a Stackelberg leader merges with a Stackelberg follower. However, given merger control in most industrialised countries today it is not too far-fetched to assume that regulatory bodies would object to all three types of profitable takeovers (especially, if their decision is based on an analysis of market shares). Thus, we can conclude that in general, tight regulation of takeovers will reduce their profitability.

Another strand of the theoretical literature explains the 'merger paradox' by agency problems, i.e., the fact that usually managers and not necessarily the owners of a company decide on the terms and timing of a takeover. In a principal-agent framework, Wiedenbaum and Vogt (1987) argue that managers will overpay on takeover targets to increase company size, because in larger and more complex organisations monitoring of the management by shareholders becomes more difficult. Roll (1986) and Shleifer and Vishny (1988) claim that managers engage in takeover activity that does not maximise their shareholder's value, because they are driven by hubris and eager to build empires.

In his study on the wealth effects of takeovers in Imperial Germany, Kling (2006a) investigates acquisitions that took place in 1908 using daily data. He finds significant wealth gains for both the owners of the targets and the bidders, the returns to the former being more than twice as high as those to the latter. Cumulated abnormal returns over a symmetric 31-day event window average 5.47 percent and 2.27 percent, respectively; the abnormal returns on the announcement day average 0.62 percent for the targeted and non-significant 0.19 percent for the bidding companies.[2] Based on these findings, Kling rejects the 'merger paradox' for Imperial Germany. Moreover, he concludes that theories based on agency costs and tight merger regulation are well suited to explain the phenomenon. The latter was non-existent in Imperial Germany. In addition, even collusion was legal and the number of cartels operating was unmatched by any other European country.[3] Thus, profitable mergers should have been possible. Furthermore, Kling argues that agency problems in Imperial Germany were less severe, because managers were more closely monitored—by majority shareholders and integration among companies through cross-shareholding and communities of interest—than nowadays. In addition, he claims that the separation of ownership and control was not as predominant as it is today, because often managers were principal shareholders of their companies.

Our paper yields the following results: first, we observe significant wealth gains for the shareholders of the targets and almost no gains for those of the bidders. Furthermore, on the market, where the shares of the *Gewerkschaften* were traded, the positive wealth effects for the owners of the acquired companies were significantly higher than on the stock market. Given these results, we can neither convincingly reject nor accept the 'merger paradox'. Finally, we conclude that in takeovers

[1] Summaries of these studies are given in Andrade et al. (2001) and Jarrell et al. (1988).

[2] The terminology of event studies is explained in Section 4.

[3] From 1897 onwards, collusive arrangements were not only not forbidden. In this year, the German Imperial Court (*Reichsgericht*) judged cartel contracts to be legally binding and enforceable (Böhm, 1948).