

HISTORICAL ANALYSIS OF THREE WAVES OF MERGERS AND ACQUISITIONS IN THE UNITED STATES (1887-1904, 1916-1929, 1950-1970): TRIGGERING FACTORS, MOTIVATIONS AND PERFORMANCE

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ABSTRACT

This historical study allows for the demonstration of the recurrent macro-economic and institutional triggering factors of merger waves in the United States. It equally demonstrates that each merger wave provoked an examination connected to their legitimacy and to their economic efficiency. Some lessons can be drawn from this historical hindsight to examine current mergers.

INTRODUCTION

This paper aims to shed light upon the general macro-economic and micro-economic factors that influence the emergence and the nature of merger waves. This perspective shall also provide a review of the performance of mergers and acquisitions and will show that the legitimacy of such operations has been challenged as early as the first mergers on the basis of their mitigated effects upon economic efficiency. This study focuses exclusively on three merger phases experienced by the United States, more specifically, those of 1887 to 1904, 1916 to 1929 and 1950 to 1970 and puts aside the most recent wave of mergers and acquisitions, for which we lack of historical perspective. Our rationale for confining our analysis to US firms is that, with the exception of Great Britain, the merger phenomenon is clearly more recent in Europe where larger scale operations, for the most part, have been taken place since the mid-eighties.

THE FIRST WAVE OF MERGERS AND ACQUISITIONS (1887-1904)

Economic and Institutional Factors Favorable to Mergers.

The emergence of the merger wave at the turn of the century is concomitant to the recovery of economic growth that occurred from 1892 to 1902, as well as to the development of economic infrastructures. Especially, the completion of railway and telegraphic networks, had played an important role by building a national market and by resulting in an increase in the growth opportunities for firms which used to operate at a local or regional scale (from 1882 to 1892, the average scope of the geographic market covered by firms tripled, Markham, 1955). In response to the emergence of this vast national market, producers developed mass production technologies whose implementation required a higher minimum efficient scale in order to spread out capitalistic investments. This inevitably launched a race to achieve critical size and favored mergers between competitors.

The constitution of this large national market led to a fiercer competition between firms that were not previously in direct competition in that they served distinct local and regional markets. In view of the growing intensity of competition, many firms contracted alliances with their new competitors so as to avoid a head-to-head price competition. The form assumed by these alliances (trusts, holding companies) was generally determined by the constraints imposed by anti-trust legislation. Indeed, many firms, whose goal was limited to avoiding frontal competition with competitors by simply contracting alliances, found themselves obliged, as a result of the promulgation of the Sherman Act in 1890, to regroup their respective activities within a common legal entity under the umbrella of a holding company. This legal restriction contributed to an artificial rise in the number of attempted mergers. Nonetheless, this temporary solution was thwarted in 1904 by the decision taken by The Supreme Court to condemn any holding company whose objectives were limited to reduce the rivalry intensity within the industry (this decrease in the number of mergers can also be explained by economic recession).

The vitality of the stock market after 1890 also contributed to the development of mergers and acquisitions. Recognized since 1850 as one of the most important stock markets, the New York Stock Exchange burst into activity in the 1890's. Many firms increasingly resorted to stock emission to infuse capital into their businesses. The law authorizing the formation of holding companies was very much welcomed by investors who preferred to detain holding stocks rather than trust investment certificates which were lesser established investments. The role of investors and speculators is not to be ignored to account for the buoyant merger activity, notably the one which took place at the end of the 1890's. In fact, since 1897, the majority of all mergers were initiated by financiers and speculators.

Micro-Economic Motivations of Mergers.

Faced with the intensification of competition stimulated by the opening of regional markets, firms generally attempted to become more competitive by exploiting economies of scale, recently made possible by new mass production techniques. The search for economies of scale triggered off the race to achieve critical size and fostered the regrouping of firms. Several trade associations desiring to profit from the cost-decreasing effect brought about by mass production techniques, shifted to the stage of legal consolidation without which the implementation of the consolidation of industrial assets was not feasible (Chandler, 1977).

Stigler (1950) questions this argument by which mergers pertaining to the first wave would have been motivated mostly by research of economies of scale and argues that the search for monopolistic power constituted the basic motivation of mergers within the first wave. In the same vein, Lynch (1971) supports Stigler's argument (1951) by highlighting three main features of this merger wave: (1) Concentration movements had to a large extent involved firms of significant size that were more concerned with reaching a monopolistic position than with the exploitation of economies of scale; (2) It has been often noted that at the outcome of a merger, production capacity was maintained in different manufacturing units pre-existent to the merger, while the exploitation of economies of scale would have necessitated the consolidation of existent production capacities within new sites operating at a more significant scale; (3) Mergers were undertaken in various industries among which some did not adopt new mass production technologies. The adoption of newer manufacturing technologies was not the sole source of product cost reduction. The general decrease in transport costs contributed substantially to the drop in product price.

These alternative explanations (economic efficiency versus market power) became and still remain the focus of a considerable number of studies and debates amongst economists (Cf. Weiss (1974) for a review of literature based on this issue).

Economic Performance of Mergers

The pioneering study undertaken by Dewing (1914), based on a sample of 35 mergers that took place between 1873 and 1902, shows that the performance of merging firms was much lower than the expectations made prior to the merger itself and that their performances decreased on average by 15% throughout the years following the merger. However, the results of this study suffer from some limitations given the limited size of the sample. In this respect, Dewing recognized that a considerable number of failing mergers were attributable to factors directly linked to the quality of the management of the post-acquisition process.

In 1935, Livermore undertook the first large scale statistical study of the performance of the mergers of the first wave. From a base sample of 328 mergers, Livermore demonstrates that 141 of them ended in financial failure and that 53 were dissolved shortly after their constitution. This study provides startling results by highlighting the existence of a determinism at the industry level: Horizontal mergers were generally successful in industries where size effects were present (chemicals, precious metals, glass, etc.); conversely they failed in high labor intensity industries in which large size effects did not exist (textile, leather goods and utensils). Livermore accounts for the exceptions to this rule on the basis of the factors linked to the implementation of mergers. From the same base sample, Markham (1953) replicated Livermore's research and corroborated the previous results with a similar rate of merger failure (47%). An historical analysis done by Chandler (1977) similarly supported Livermore's findings by emphasizing the importance of

industry determinism in the success of a merger. Nonetheless, Chandler stressed that, even in industries favorable to size effects, firms that did not go beyond the stage of legal consolidation did not remain profitable. Indeed, these firms that remained mere substitutes to horizontal alliances became less productive than their counterparts which opted for administrative centralization and the rationalization of manufacturing assets (Chandler, 1977). The case studies carried out by Yale Brozen (1982) and the quantitative analysis undertaken by Lamoreaux (1985) support Chandler's arguments by showing that the merging firms that were mainly driven by a search of market power turned out to be rapidly poor performers. Besides, mergers promoted by speculators based on the erroneous premise of access to market power, turned into bankrupt.

THE SECOND WAVE OF MERGERS AND ACQUISITIONS (1916-1929)

With the exception of the work initiated by Nelson (1959) and Eis (1969), economists did not embark upon major research on the mergers that occurred within the 1920's (Borg, Borg & Leeth, 1989).

Economic and Institutional Factors Favorable to Mergers.

The development of mergers during the 1920's corresponds to a period of economic growth (that is, the economic recovery of 1922). In the technological field, automotive transport development by opening local markets provided incentives for firms to undertake geographic expansion mergers, specially in service industries (distribution and cinema). Furthermore, the improvement in communication networks, like radio, gave way to the launching of advertising campaigns on the national scale. The necessity to amortize advertising expenses of this kind constituted a very important motivation for broadening the product line through related diversification mergers. Moreover, since the 1920's, the development of mass distribution systems based on low commercial margins, drove firms to reduce their production costs to a maximum by increasing their volume of production. Horizontal mergers constituted then a means of quickly acquiring new productive capacities in order to supply increasing outlets.

On the one hand, the anti-trust legislation made monopolistic industries shift to oligopolies and, on the other, broadened the firm's scope by inducing the mergers between firms whose activities were located up or downstream in the business system or in related industries. Indeed, in face of the progressive deterioration of their market share, market leaders did not search, through new horizontal acquisition program, to recover their previous monopolistic position on the market and preferred investing in related branch activities (as in the case of Du Pont). On the other hand, second range firms ventured into massive regrouping in the quest of pulling themselves upscale to second or third place (for instances, Bethlehem and Republic in the steel industry or Continental Can in the metal box domain). Furthermore, two additional factors prevented the firms with monopolistic power from

maintaining their dominant position: the amount of assets required for the acquisition of competitors and for the restructuring of their assets, as well as, the increase in number and in size of competitors.

In addition, the stock market euphoria of the second half of the 1920's favored the development of acquisitions of speculative nature. >From 1927 onwards, a substantial portion of mergers were initiated by speculators (particularly the banks).

Micro-economic Motivations of Mergers.

In the case of horizontal mergers, the motivations are similar to those of the first wave. Mergers between competitors were motivated by the search for economies of scale and for market power (Eis, 1969). However, as emphasized earlier, market power was derived from 'oligopolistic' - and no longer monopolistic - rent (Stigler, 1950). Vertical mergers were motivated by the search for increased security in outlets and a better control of supply sources. Some of these mergers were driven by increasing internal efficiency thanks to the improvement of the coordination of activity situated at different stages of the technical and organizational processes (Stocking, 1955). Finally, mergers of related diversification allowed for the expansion of the product line and the enlargement of geographic coverage of firm activities, thus, evening out expenditures on the national scale. In addition, these mergers represented a new source of growth outside the core business of the company.

Economic Performance of Mergers.

From the best of our knowledge, there exists but one empirical quantitative study based on the performance of mergers of the 1920's, recently accomplished by Borg et al.(1989). Working from a sample of 134 mergers, Borg and his co-authors observed the evolution of stock yields of acquiring firms for a period of seven years, including the three years preceding the merger, the year of the legal consolidation and the three years following the consolidation. The results showed that post-merger yields were on average 16% less than the yields before the merger. Borg and his colleagues suggest that these post-merger performances are all the more deceptive than the overall economic conditions (economic growth, the adoption of mass production techniques and national marketing techniques, the development of national brands, the sophistication of management methods of multi-product portfolios), as well as the institutional context (slackening of anti-trust legislation in the late twenties), were favorable to capturing profit from horizontal or related mergers. As for mergers launched in the service industries, their existence was generally short-lived in the sense that they essentially represented a means to federate, within the same body, firms in possession of local monopoly with no desire of achieving synergy. Last, most of the speculative mergers ended up in failure.

III. THE THIRD WAVE OF MERGERS AND ACQUISITIONS (1950-1970)

Economic and Institutional Factors Favorable to Mergers.

The climax of the merger wave in the 1960's (1967-1969) was concomitant to intense economic development and strong stock market buoyancy. This wave, in particular, came to an end with the onset of economic slow-down.

The stability of the economic environment of the 1950's and 1960's induced the formation of diversified since the adoption of strategic financial planning procedures were suitable in this kind of environment. Within this context, the efficiency of conglomerates, directed by managers endowed with general and financial managerial competence, was not at all questioned.

Anti-trust legislation strongly influenced the nature of mergers to the extent that the Celler-Kaufman amendment systematically condemned all horizontal mergers independently of its effects upon the competitive intensity (the Anti-Monopoly Act went as far as to condemn certain related diversification mergers). The few horizontal mergers in this time period were accomplished at the price of costly legal confrontations. As a result, the attitude of investors was favorable to the development of conglomerate mergers. Matsusaka (1990) demonstrated that in the 1960's, with the announcement of unrelated acquisitions, the stock value of the seller exhibited an average increase of 8 million dollars whereas the value of these shares fell by 4 million dollars with the announcement of a related acquisition. This attitude on the part of investors was influenced in part by the pressure exerted by the Anti-Monopoly Act and by the economic legitimacy that the conglomerate firm revealed in at the time.

Micro-economic Motivations of Mergers.

The associated decrease in financial risk constituted one of the principal motivations of conglomerate mergers. Weston & Mansinghka (1971) illustrated, from case studies, that firms diversified their activities into unrelated businesses in order to face the instability of demand and profits, the uncertain development of operations, the associated risks to technological obsolescence, and the uncertain evolution of the competitive environment. The consolidation of these firms also permitted the exploitation of financial synergy such as fiscal economies (tax credits in the event of the repurchase of unprofitable businesses), savings of borrowing costs or even the improvement of the capital structure of the buyer (Lintner, 1971). The studies offered by Boyle (1970), Hogarth & Gort (1970), Halpern, Stevens (1973), Conn (1973) and Melicher & Rush (1974) showed that acquired firms were, in general, more profitable and less indebted than the acquiring firms and their competitors. This gave the opportunity to the buyers to restore their capital or to increase their financial leverage effect by profiting from an idle borrowing capacity. On the other hand, target's PER (Price Earning Ratio) was weaker compared to those of acquirers to the extent that investors in the sixties, given the strong economic development and the stock market vitality, allocated a higher PER to acquiring firms because they considered their aggressive acquisition

policies as a pledge of their dynamism and growth. Conversely, they attributed a weaker PER to firms managed in a far more traditional and cautious manner, that offered limited growth perspectives. The regrouping of firms endowed with a different PER generated stock market gains, in the sense that, at the announcement of an acquisition, the market would automatically allocate to this new consolidated body the highest PER, that is, that of the buyer (May, 1968; Lintner, 1971).

Beyond economic motivations, it should be mentioned that the manager's personal motivations should also be considered to account for the number of mergers of this wave, that is, their eagerness to increase their power, prestige and financial gains in managing groups substantial in size (Marris, 1964; Baumol, 1966; Mueller, 1969).

Economic Performance of Mergers.

It was not until the wave of conglomerate mergers that researchers in finance became interested in mergers and acquisitions. They attempted to evaluate conglomerate merger performance not only according to their economic profitability, but also to their ability to reduce the global financial risk of a new consolidated body.

In a study based on the analysis of book values, Weston & Mansinghka (1971) compared the profitability of a study sample composed of 63 conglomerates to that of a controlled sample made up of selected firms chosen at random. They found that in 1958, the 63 firms of the first study sample exhibited significantly lower performance than those of the controlled group prior to their external growth economic policy (return on equity of 7.6% versus 12.6%). Inversely, 10 years later, after achieving their acquisition programs, these same firms recorded profits that were superior to the controlled group of firms (13.3% versus 12.4%) thanks to a very positive financial leverage effect (conglomerate firm ratio of indebtedness was two times greater than that of controlled group of firms).

While the research carried out by the Chicago School (Lev & Mandelker, 1972; Halpern, 1973; Mandelker, 1974) supported the results obtained by Weston & Mansinghka (1971), on the contrary, Reid's research (1971) did not reach the same conclusions. In fact, by extending the analysis of conglomerate performances until 1970, Reid demonstrated that their market value had fallen to 45.6% between the end of 1968 and about mid-year 1970, while the Dow Jones Industrial Average had recorded a decrease of only 7.8% during the same period. In studying 48 of the 63 constituent conglomerates of the research sample done by Weston & Mansinghka (1971), Weston, Smith & Schrieves (1972) explained the reasons for which Weston's and Mansinghka's (1971) studies and those of Reid (1971) came to contradictory results. Comparing market performances of these 48 conglomerates to those of the 50 investment funds selected at random, Weston, Smith & Schrieves (1972) demonstrated that conglomerates between 1950 and the beginning of 1969, displayed performances that were two times greater than

investment funds. These results confirmed Weston's and Mansinghka's initial research completed during a period that was favorable to external growth policies. Conversely, within a context marked by an economic slow-down which inevitably became less favorable to conglomerate diversification strategies (1969-1970), the opposite results found by Reid made sense. In addition, because of their high indebtedness, the conglomerates became more vulnerable financially than firms that had been managed in a more prudent fashion and in which people had much more confidence from 1970 onwards. The interpretation offered by Weston, Smith & Schrieves (1972) has been validated by research conducted by Ravenscraft & Scherer (1987) from a large longitudinal study based on the first 15 conglomerates, that is, on the 15 firms that accomplished the greatest number of acquisitions between 1950 and 1970, supporting the argument that conglomerates can be viable in an environment of stable economic growth, foreseeable and characterized by limited competitive intensity. This thesis has been questioned by Schleifer & Vishny (1991) who stipulate that the advantages of financial planning that the conglomerate firm provides can not, in any case, compensate for the associated inconveniences of inadequate knowledge of different businesses by managers of such organizations. According to Schleifer & Vishny, in the course of thirty years, American firms did not follow the paths driven by economic efficiency, so as to fundamentally by-pass constraints imposed by anti-trust legislation.

The empirical research carried out by financial researchers on conglomerate mergers also intended to evaluate the capability of conglomerates to reduce risk of investment funds for shareholders. Based on a study sample of 48 conglomerates, Weston, Smith & Schrieves (1972) illustrated that the volatility of conglomerate securities was two times greater than the sample of investment funds (average beta value of 1.93 versus 0.88). Subsequent research carried out by Lev & Mandelker (1975), Melicher & Rush (1973), Joeknk & Nielsen (1979), Ravenscraft & Scherer (1987) reached similar conclusions, challenging the capability of conglomerate acquisitions to efficiently reduce financial risk.

CONCLUSION

This historical perspective allows for the demonstration of recurrent macro-economic and institutional factors in the justification of the emergence and of the magnitude of merger and acquisition waves in the United States. The three waves of this census appeared in favorable economic context (technological development, introduction of mass production techniques and transportation development), and their nature was significantly influenced by institutional factors (anti-trust legislation, stock market vitality). It also demonstrates that each wave of mergers provoked an examination connected to their legitimacy and to their economic efficiency. The examinations inspired by recent merger operations are not a novelty and, in some cases, some lessons can be drawn from the analysis of completed work on preceding waves. However, the analysis of current mergers and acquisitions demands that specificity of size, as well as their scope, be

taken into account. More specifically, the international nature of these operations requires the adoption of larger frameworks of analysis in order to apprehend the notions of efficiency and market power within the context of emerging international oligopolies.

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