Davor Filipovic [1]
Ilko Vrankic [2]
Damir Mihanovic [3]

THEORETICAL OVERVIEW OF MICROECONOMIC ASPECTS OF MERGERS AND ACQUISITIONS

Abstract

Mergers and acquisitions represent prominent phenomenon of the developed capitalist world. In turbulent business environment of 21st century companies are forced to use different growth strategies in order to successfully position themselves with respect to competition and to preserve and increase their profit margins. Mergers and acquisitions, as a part of a growth strategy, often fail to create synergies and value for shareholders. Therefore, variety of organizational variables like employee resistance, changes in business strategy and organizational structure, as well as changes in organizational culture are being analyzed and pointed out as crucial variables for M&A success. Since majority of research in field of M&A is focused on internal organizational variables the main aim of this paper is to present overview of microeconomic aspects of M&A with special focus on industry structure and its impact on M&A success. Besides, historical development of mergers and acquisitions is also presented in this paper.

Keywords

mergers and acquisitions, industry structure, Herfindahl-Hirschman Index, M&A waves

1. Introduction

In turbulent business environment of 21st century companies are forced to use different growth strategies in order to successfully position themselves with respect to competition and to preserve and increase their profit margins. Growth strategy is part of the corporate strategy which emphasizes corporation as a whole and provides answers regarding business scope of the corporation and recourse allocation (Tipurić, 2005, p. 105). Growth strategies are concerned with increasing the size and viability of the business over time. A successful growth strategy will allow entrepreneurs to increase its customer base, market segments, geographical scope, and/or product lines, which should lead to revenue growth. Mergers and acquisitions, as a part of growth strategy, but also as a research field of numerous scientists and consultants, represent prominent phenomenon of developed capitalist world since the end of 20th century. Mergers and acquisitions have become popular choice for companies' growth and expansion. M&A come in waves and extant literature identifies six M&A waves. In academic community heterogeneity regarding probable obstructions for

[1] University of Zagreb, Faculty of Economics and Business Zagreb, J.F. Kennedy 6, 10000 Zagreb, Croatia, e-mail: dfilipovic@efzg.hr
[2] University of Zagreb, Faculty of Economics and Business Zagreb, J.F. Kennedy 6, 10000 Zagreb, Croatia, e-mail: ivrankic@efzg.hr
[3] Croatia zdravstveno osiguranje d.d., Miramarska 22, 10000 Zagreb, e-mail: d.mihanovic@yahoo.com

successful execution of M&A prevails. Employee resistance, changes in business strategy and organizational structure, as well as changes in organizational culture are being analyzed and pointed out as crucial variables for M&A success. Since majority of research in field of M&A is focused on organizational variables the main aim of this paper is to present overview of microeconomic aspects of M&A with special focus on industry structure and its impact on M&A success. Besides, historical development of mergers and acquisitions is also presented in this paper.

2. Historical development of mergers and acquisitions

Research regarding M&A is present in economic literature for a long time period starting form 1890s. It is a well-known fact that mergers and acquisitions come in waves when firms in industries react to shocks in their operating environments. Shocks could reflect such events as deregulation; the emergence of new technologies, distribution channels, or substitute products; or a sustained rise in commodity prices (DePhampillis, 2014, p. 11). Thus far, six completed waves have been examined in the academic literature. Beginning of the first wave at the end of 19th century in the United States of America was characterized with huge technological changes, economic expansion and innovation in industrial processes. An important attribute of this wave was the simultaneous consolidation of producers within industries, thus qualifying the description "horizontal consolidation". Nobel Prize winner George Stigler described the first wave as merging for monopoly. In that time period more than 1800 firms disappeared due to consolidation, and many of the US corporate giants such as General Electric, Eastman Kodak, American Tobacco and DuPont during the first wave trough such consolidation. The wave came to an end around 1903–1904 due to the stock market crash (Sudarsanam, 2010, p. 16).

M&A activity remained at a modest level until the late 1910s as a consequence of the First World War. The second takeover wave emerged in the late 1910s and continued through the 1920s. The second wave was considered as a move towards oligopolies because, by the end of the wave, industries were no longer dominated by one giant firm but by two or more corporations. Most of the mergers of the 1920s were between small companies left outside the monopolies created during the previous wave. By merging, these companies intended to achieve economies of scale and build strength to compete with the dominant firm in their industries (Marynova and Renneboog, 2008, p. 2150). The second wave accompanied economic growth and stock market boom. An estimated 12.000 firms disappeared during this period, although the impact on the market structure of industries was much less dramatic than the first wave mostly due to antimonopoly legislation acts. This wave ended in 1929 with the stock market crash of that year. In the following four years, due to the global economic depression, many corporations formed during second wave collapsed into bankruptcy (Sudarsanam, 2010, p. 18).

After the Second World War which followed after the worldwide economic depression, M&A activities decreased significantly. The third M&A wave took off only in the 1950s and lasted for nearly two decades. The beginning of this wave in the US coincided with a tightening of the anti-trust regime in 1950. The main feature of this wave was a very high number of diversifying takeovers that led to the development of large conglomerates. Compared to first and second wave, mergers in this wave where not large and did not involve large acquirers and their motive was growth through unrelated diversification. The main feature of this wave was a very high number of diversifying takeovers that led to the development of large conglomerates. By building conglomerates, companies intended to benefit from growth opportunities in new product markets unrelated to their primary business. This allowed them to enhance value, reduce their earnings volatility, and to overcome imperfections in external capital markets. The third wave peaked in 1968 and collapsed in 1973, when the oil crisis pushed the world economy into a recession (Marynova and Renneboog, 2008, p. 2151).

Recovery of the stock markets in the USA at the middle of the 1980s indicated the revival of takeover activity and start of the fourth wave. The start of the fourth wave coincided with changes in anti-trust policy, the deregulation of the financial services sector, the creation of new financial instruments and markets (e.g. the junk bond market), as well as technological progress in the electronics industry. Many transactions were financed with large amounts of debt, and takeovers were often conducted by company's management trough management buyouts (Damodaran, 2002, p. 5). Except of management buyouts, this wave was characterized the activity of private equity funds which conducted takeovers trough leverage buyouts (Lake and Lake, 2007, p. 109-115). As the main motive for this wave, the academic literature suggests that the conglomerate structures created during the 1960s had become inefficient by the 1980s such that companies were forced to reorganize their businesses. The merger wave of the 1980s includes a number of mergers designed either to downsize or to specialize operations. Some of these corrected excessive conglomeration, others responded to excess capacity created by the 1970s recession (following the creation of the OPEC oil cartel), while yet others responded to the important advances in information and communication technologies. The 1980s also experienced the largest number of hostile bids in U.S. history. Like all earlier waves, the fourth one declined after the stock market crash of 1987 (Shleifer and Vishny, 1991, p. 51-59).

The fifth takeover wave started in 1993 along with the increasing economic globalization, technological innovation, deregulation and privatization, as well as the economic and financial markets boom. This wave is important because of its size and geographical dispersion emphasizing its international nature. Remarkably, the European takeover market was about as large as its US counterpart in the 1990s, and an Asian takeover market also emerged. Second, a substantial proportion of M&As was cross-border transactions. Previously domestically-oriented companies resorted to takeovers abroad as a means to survive the tough international competition created by global markets. The dominance of industry-related (both horizontal and vertical) takeovers and the steady decline in the relative number of divestitures during the fifth wave suggests that the main takeover motive was growth to participate in globalized markets. Compared to the takeover wave of the 1980s, the 1990s wave counted fewer hostile bids in the UK and US. However, an unprecedented number of hostile takeovers were launched in Continental Europe (Marynova and Renneboog, 2006, p. 1).

As with the four prior merger waves, the fifth wave came to an end when the economy turned down and entered a brief eight-month recession in 2001. An initially weak recovery took place after the recession ended. However, the economy was buoyed by the low interest rates initially established by the American Federal Reserve as a response to the 9/11 economic shock that took place at the end of the 2001 recession. These low rates provided the fuel for a speculative bubble in real estate that became an international bubble as the international investment world developed an insatiable appetite for mortgage-backed securities and other debt securitizations. The low interest rates also gave a major boost to the private equity business. Leveraged acquisitions became less expensive for private equity buyers to do as the bulk of the financing costs were relatively low interest rate debt. This wave came to the end in 2008 due to subprime mortgage crisis in the United States of America (Gaughan, 2013, p. 18).

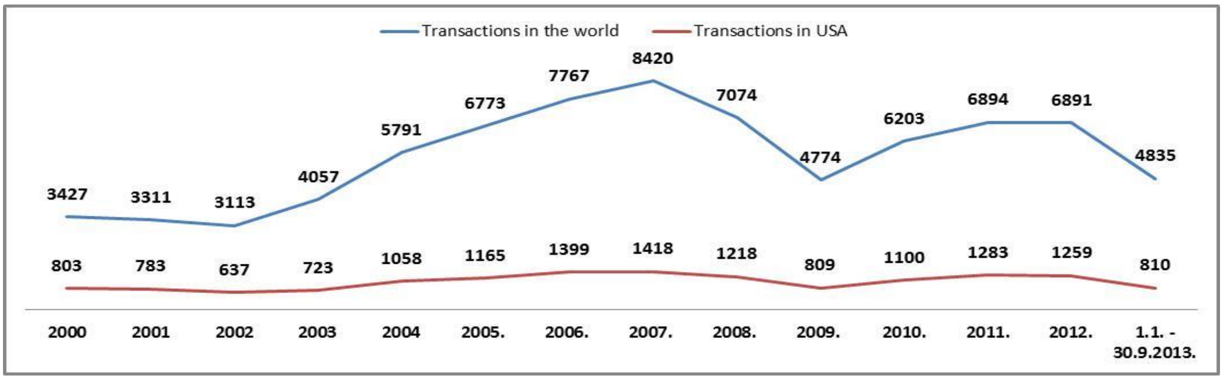

Figure 1: *M&A activity in the world in period from 2000 to 30.9.2013.*

Figure 1 presents M&A activity in the USA and world in the period from 2000 to 30.9.2013.[4], and also encompasses volume of transactions during the sixth merger wave.

3. Microeconomic aspects of mergers and acquisitions

One of the external organizational variables which is in the focus of this paper is the industry structure and its impact on the M&A success. In the long run, higher or lower profitability as a feature of a company's competitiveness is not solely the result of the development and implementation of strategic activities, but it also depends on the industry structure, i.e., the competitive space in which companies compete. The industry structure is characterized by a number of companies in the industry at a given point of time as well as by size of these companies, and the industry concentration ratio is used as a measure of industry structure (Lipczynski and Wilson, 2001, p. 103).

Scientists use different measures of concentration through which they try to describe the industry structure. Information on industry concentration suggests the nature of competitive forces in any industry. Most commonly used concentration measures are the concentration ratios and the Herfindahl-Hirschman Index. Concentration ratio measures the market share of the N largest firms in the industry, and N usually presents 3, 4, or 8 companies. The market share is generally measured by the value of sales, assets or number of employees. Concentration ratios represent an incomplete measure of industry concentration, because

[4] Information regarding M&A activity in the world was gathered from the Mergermarket data base and includes all deals with value of 5 million Euros or more.

the N shows how much of the total industry output was produced by only the largest companies in the industry. The shortcomings of these indicators include frequent impossibility of precisely defining the industry, inability of incorporating the entry and exit barriers along with the regional and foreign competition, and not taking into account the distribution of the market shares of other companies. Due to the shortcomings of the concentration ratio, some scientists use measures of concentration which take into account all the companies in the industry (DePhampillis, 2014, p. 57). Unlike the concentration ratio, the Herfindahl-Hirschman Index (HHI) shows not only the distribution of market shares by the N leading companies in the industry, but also the market shares of other companies. In order to obtain statistical measures of concentration, Herfindahl-Hirschman Index, squares the market shares of all companies in the relevant market and by doing so it gives greater importance to the shares of leading companies and thus more accurately reflects the relative importance of large companies in the event of a merger or a takeover. The index can have a value from 0 to 10 000 (100^2). If the index tends to be lower, then the industry has a large number of companies with a small market share (fragmented industry), whereas the index of 10 000 means that the industry consists of only one company - a monopoly (Tipurić, Pejić-Bach and Pavić, 2008, p. 97-118). The Federal Trade Commission (FTC) is an independent agency established to protect consumers and to prevent and eliminate what regulators think to be harmful anti-competitive business practices. According to the FTC, when the value of the HHI index is less than 1000, the market is not concentrated, while index values between 1000 and 1800 reflect moderate concentration (DePhampillis, 2010, p. 63). Index values above 1.800 suggest a concentrated market.

Industry structure may range from a highly fragmented to a firmly consolidated industry. The fragmented industry is a form of poorly concentrated industry with a large number of small or medium-sized enterprises, none of which is in a dominant position, nor does it have the power to shape the industry events (Porter, 1980, p. 196-212). Consolidated industry is a form of concentrated industry dominated by one company or a small number of large companies. The main feature of this type of industry structure is the accentuated interdependence of companies, which is reflected by the fact that the actions of one company affect the profitability of others, as well as their market shares. The more concentrated the industry, according to some research, the more likely it is for the companies in the industry to recognize their interdependence and not to encourage strong rivalry that can reduce everyone’s profitability (Tipurić, 2007, p. 2).

There are lots of studies about the influence of industry structure on the company's profitability. In 1951 Bain conducted an analysis of the impact of industry structure on the profitability of 42 manufacturing companies in the USA and came to the conclusion that the profitability of companies that operate in industries with a higher degree of concentration is higher than the profitability of companies which operate in low concentrated industries. Demsetz’s research from 1973 was conducted on a sample of 95 manufacturing companies, and it showed that the profitability of companies in the sample did not grow with the increase in the concentration ratio (Demsetz, 1973, p. 1-9). Horizontal mergers and acquisitions increase the company’s market share, as well as its market power, which can affect the price of the industry products. Increasing market share in the situation of horizontal mergers and acquisitions is a short-term increase and it is a real challenge to maintain this share in the long term. After a merger or acquisition of one or two companies within the same industry, many companies follow that trend, and the initial increase in the market share of companies is very hard to maintain (Sudarsanam, 2003, p. 100). On a sample of 1000 mergers and acquisitions in the period from 1950 to 1972, Mueller showed that only 18% of companies in the sample managed to retain their market share as opposed to 88,50 % of companies that have maintained their market share, while not being involved in mergers and acquisitions. The study did not confirm the hypothesis that mergers and acquisitions increase the efficiency of the companies involved in transactions by increasing its market share. Mueller postulates that bidders, whose market share did not increased, operated neither better nor worse than companies that did not use mergers and acquisitions as a growth strategy. In addition, Mueller’s opinion was that it was difficult to believe that the loss of market share did not affect the decrease in profitability (Mueller, 1985, p. 262-266). Mergers and acquisitions can result in increased industry concentration but that does not automatically mean a reduction of competition between established companies in the market. Thus, the increased concentration does not result in increased profitability and creation of shareholder's wealth. Schmalensee and Willig concluded that the relationship, if there is any, between concentration and profitability of companies is statistically insignificant and the estimated effect is usually small (Schmalensee and Willig, 1989, p. 992-995). Extensive research by Hay and Morris, conducted in 1991, suggests that very little research proves that the concentration has a negative impact on profitability, and that only half of the research stresses the significant positive correlation between these two variables (Hay and Morris, 1991, p. 261). Keating’s study from 1991 was conducted on a sample of 2.438 large companies and their performance in the period from 1969 to 1981. The conclusion was that the profitability of companies in concentrated industries is less stable compared to the profitability of companies in fragmented industries (Keating, 1991, p. 897-902). Research by Kandžija, Filipović and Kandžija conducted on the sample of 43 companies that were taken over in Republic of Croatia in period from 1998 to 2006 confirmed the proposed hypothesis which states that lower the concentration ratio of the target company's industry, the more successful is the target company's performance after the takeover. Authors of the same research point out that after the M&A variety of changes occur in companies involved in transaction, and therefore if the industry is characterized by lower concentration ratio, these changes will have a greater effect on the business performance of the target company as opposed to the situation when the industry is concentrated (Kandžija, Filipović and Kandžija, 2014, p. 17-25). Taking into consideration presented empirical evidence it can be concluded that industry structure impacts M&A success and that M&A practitioners should put special focus on that external organizational variable when closing M&A transactions.

4. Conclusion

Despite the increasing popularity of mergers and acquisitions, it has been reported that the rate of M&A failure is very high, so there is a need for analysis of variables that impact M&A success. It is hard to find books, journals and scientific papers in the current literature that do not address issues such as the impact of mergers and acquisitions on the increase or decrease of shareholder value, motives for M&A, realization of planned synergies, operational efficiency of acquired companies and the reasons due to which mergers and acquisitions fail and do not achieve the expected benefits. Researchers usually point out corporate culture and other internal organizational variables as the most common explanation of high failure rate for M&A while little attention is given to external organizational variables. Therefore, theoretical overview of microeconomic aspects of M&A was used to achieve the main goal of this paper which relates to the analysis of the impact that industry structure, as an external organizational variable, has on the success of mergers and acquisitions. In the long run, higher or lower profitability as a feature of a company's competitiveness is not solely the result of the development and implementation of strategic activities, but it also depends on the industry structure, i.e., the competitive space in which companies compete. Considering the results of studies presented in this paper about the impact of industry structure on M&A success it can be concluded that M&A success is related to industry structure and that it is important for M&A success that companies involved in transactions conduct business in industries which are characterized with low concentration ration. If companies operate in industry with low concentration ratio all changes that occur after the transaction will have higher impact of business performance than in the situation if companies operated in industry with high concentration ratio. Finally, after the overview of historical development of mergers and acquisitions, and microeconomic aspects of M&A reflections presented in this paper can help M&A practitioners to focus on industry structure, as well as other organizational variables, when closing M&A transactions.

5. Bibliography

1. Damodaran, A. (2002). *Investment Valuation: Acquisitions and Takeovers*. John Wiley & Sons Inc.
2. Demsetz, H. (1973). Industry structure, market rivalry and public policy. *Journal of Law and Economics*, 16(1), 1-9.
3. DePamphilis, D.M. (2014). *Mergers, acquisitions, and other restructuring activities, 7th ed*. San Diego: Academic Press.
4. DePamphilis, D.M. (2014). *Mergers, acquisitions, and other restructuring activities, 5th ed*. San Diego: Academic Press.
5. Gaughan, P.A. (2013). *Maximizing Corporate Value through Mergers and Acquisitions: A Strategic Growth Guide.* Hoboken. New Jersey: John Wiley & Sons, (71-72).
6. Hay, D.A. and Morris, D.J. (1991). *Industrial Economics and Organization*. Oxford: Oxford University Press.
7. Kandžija, V., Filipović, D. and Kandžija, T. (2014). *Impact of industry structure on success of mergers and acquisitions.* Tehnički vjesnik – Technical Gazzete, 21(1), 17-25.
8. Keating, B. (1991). *An update on industries ranked by average rates of return.* Applied Economics, 23(5), 897-902.
9. Lake, R., Lake, R.A. (2007). *Private Equity and Venture Capital*. London: Euromoney Books.
10. Lipczynski, J. and Wilson, J. (2001). *Industrial Organization: An Analysis of Competitive Markets*. Harlow Essex: Pearson Education Limited.
11. Marynova, M. and Renneboog, L. (2006). *Mergers and Acquisitions in Europe.* Brussels: European Corporate Governance Institute. Finance Working Paper.
12. Marynova, M. and Renneboog, L. (2008). *A century of corporate takeovers: What have we learned and where do we stand?* Journal of Banking and Finance, 32(10), 2148-2177.
13. Mueller, D.C. (1985). *Mergers and Market Share.* The Review of Economics and Statistics, 67(2), 262-266.
14. Porter, M.E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: The Free Press.
15. Schmalensee, R. and Willig, R. (1989). *Handbook of Industrial Organization*. Amsterdam: North-Holland.

16. Shleifer, A. and Vishny, R.W. (1991). *Takeovers in the '60 and the '80s: Evidence and Implications.* Strategic Management Journal, 12, 51-59.
17. Sudarsanam, S. (2003). *Creating Value from Mergers and Acquisitions*. London: Prentice Hall International Limited.
18. Sudarsanam, S. (2010). *Creating Value from Mergers and Acquisitions: The Challenges*. London: Prentice Hall International Limited.
19. Tipurić, D. (2005). *Alternativne strategije. In: Buble, M. (ed.) Strateški menadžment*. Zagreb: Sinergija.
20. Tipurić, D. (2007). *Porterov model industrijske strukture: industrijska analiza kao ključna pretpostavka oblikovanja strategije poduzeća*. Ekonomski fakultet Zagreb.
21. Tipurić, D., Pejić-Bach, M. and Pavić, T. (2008). *Concentration of the insurance industry in selected transition countries of Central and Eastern Europe*, 1998–2006. Post-Communist Economies, 20(1), 97–118.