

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Information Technologies



Bachelor Thesis

**Evolution of Business strategy and Success Factors of
Microsoft Corporation**

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

BACHELOR THESIS ASSIGNMENT

Elizaveta Baiborodova

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Thesis title

Evolution of Business strategy and Success Factors of Microsoft Corporation

Objectives of thesis

The thesis identifies major changes in business strategy of Microsoft Corporation and features that help sustain company's leading position in the market, throughout the history of the tech giant. The main objective of the research is to analyse the changes in the company's strategy.

The partial goals are:

- to investigate evolution of Microsoft business strategy and determines the success factors of the company,
- to study the changes in Microsoft position including the current state,
- to derive and analyze the most effective factor of success from the position of company's profitability,
- to compare results and identify common patterns and differences in Microsoft Corporation business strategies and success factors.

Methodology

Methodology of the thesis will consist of literature review and practical part. At the beginning, the literature review will be done, more specific research questions formulated and after that own research will be conducted. The methods for the own research will be quantitative analysis, qualitative content analysis and discourse analysis. All methods will be suitable for evaluation of changes in business strategies. The findings will be contrasted with the data from company's financial reports in order to find patterns in company's strategic behavior. After the data are gathered and analysed, the conclusion of the research will be provided.

The proposed extent of the thesis

30-40 pages

Keywords

Business strategy, Microsoft, success factors, operating systems, hardware

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Declaration

I declare that I have worked on my bachelor thesis titled " Evolution of Business strategy and Success Factors of Microsoft Corporation " by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 10.03.21

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Evolution of Business strategy and Success Factors of Microsoft Corporation

Abstract

The main purpose of the thesis is to evaluate the changes in the business strategy of Microsoft Corporation. The research consists of two parts: theoretical and practical sections.

In the theoretical part, detailed overview of changes in the Microsoft's business strategy in the "Gates Era" as well as in "Post Gates Era" was introduced, and the organizational changes that had been undertaken in order to shift the production and development departments to the new set of strategic goals were presented. Also, the literature review highlights the current position of the company and derives Microsoft's factors of success. Hence, the theoretical part provides a base for the analyses conducted in the practical one.

The practical part of the thesis consists of the quantitative, qualitative content, and discourse analyses. Qualitative and discourse analyses were undertaken to determine the cyclic behavior of Microsoft's M&A and to contrast the findings with the business strategies obtained from the literature review. The quantitative part, the Wilcoxon sign-rank test was used to analyze the statistical significance of mergers and acquisitions of Microsoft's operating ratios. At the end, the results of the statistical analysis were compared with the similar studies in order to identify similarities and differences and formulate conclusions.

Keywords: Business strategy, Microsoft, success factors, operating systems, hardware

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List of abbreviations

- OEM - Original Equipment Manufacturer
- AOL - American web portal
- DOD - Department of Defence
- JEDI - Joint Enterprise Defence Infrastructure
- AWS - Amazon Web Services
- D265 - Dynamics 365
- FPGA - Field Programmable Gate Array
- SaaS - Software as a service
- PaaS - platform as-a-service
- IaaS - Infrastructure as a service
- HaaS - Hardware as a Service
- AI - Artificial intelligence
- OS - Operating System
- ICT - Information and Communication Technology
- OECD Organisation for Economic Co-operation and Development
- COGS - Cost of Goods Sold
- IOT - Internet of Things
- EBIT - Earnings before interest and taxes

1 Introduction

Progress in the field of Internet technologies has accelerated since the second half of the 20th century. This development has resulted in the shift of the concept of customers' behavior, balance of revenues and costs, the nature of user needs, and competitors' responses. Nowadays, all our aspects of life are powered by modern technologies. As a high-tech industry rapidly evolve, consumers demand innovations that bring new features into their lives. While a companies' ability to quickly adjust to the market transformations was always important, it never played a role it does today. Every step in the decision-making process can either lead to the successful strategic move or, on the other hand, disastrously affect the organization's performance.

In response to the dynamic market, competition involves the capability to set up new standards and models for interworking of services and products in order to achieve market advantages. The correctly selected business strategy is one of the most essential attributes in the constantly changing business environment. The Microsoft Corporation can serve as an example of a successful company that accomplished the business attainment of the century.

In 1975 the Microsoft Corporation was established as a startup company that developed an interpreter for BASIC. By the end of 1976 company's revenues were \$16,005. Today Microsoft is known as a multinational corporation with best-selling software products such as Microsoft Windows operating system, Microsoft Office, The Internet Explorer Browser, and it also has a significant share of Cloud Computing Services such as Office 365, Azure Arc, Azure Synapse, Azure Stack Edge, Azure Generation 2 Machine, and Azure Stack Hub. The rate at which new products and technologies are produced never ceases to amaze. Microsoft created a complicated multilayer strategy that amplifies the necessity to examine not only the way of satisfying customers' needs, but also the tactics of getting the benefits from providing new products and services to capture value from them. Great merit in the success of Microsoft Corporation belongs to its former CEO – Bill Gates – who designed several business strategies that turned Microsoft into the world's most powerful software company.

Usually, success of an organization determines by its financial performance that indicates the position of a business in the market. However, financial performance displays only a partial result of implementation of the complex strategies, but it is an obvious indicator of Microsoft's success. In order to get a wider picture of company's business tactics, the thesis will focus on analyzing the Microsoft behavior in comparison with studying the financial reports to trace changes in the company's strategic approach.

2 Objectives and Methodology

2.1 Objectives

The main objective of the research is to evaluate the changes in the business strategy of Microsoft Corporation.

Also, the thesis will contain the partial objectives. Firstly, the thesis will investigate evolution of a business strategy and determines the success factors of Microsoft Corporation throughout the history of the company. Secondly, the changes in the position of Microsoft Corporation including the current state will be studied. After that, the most effective factor of success will be derived and analyzed. Finally, results obtained from the quantitative analysis of the identified success factor will be compared with the similar studies in order to identify commonalities and differences and formulate conclusions.

2.2 Methodology

Methodology of the thesis will consist of literature review and practical part. At the beginning, the literature review will be done, more specific research questions formulated, and after that own research will be conducted.

The methods for the own research will be quantitative analysis, qualitative content analysis and discourse analysis. Both quantitative and qualitative content analyses will be suitable for categorizing and interrupting raw data in the meaningful results in order to evaluate changes in business strategies. Quantitative analysis fits to sort out financial data and presents it in the systematic way using numerical value. Qualitative content analysis is a technique that examines communicative materials, which consists not only from texts and documentation, but also from visual and audio materials. Discourse method provides a way to summarize combinations of social texts that display a version of reality (Williamson, et al., 2017). This type of analysis goes beyond counting particular instances to explore the underlying meaning of these events including social implications.

The findings will be contrasted with the data from Microsoft's financial reports in order to find patterns in the company's strategic behavior. After the data are gathered and analyzed, the conclusion of the research will be provided.

3 Literature Review

3.1 Business Strategy

Creation, installation, and permanent work of business enterprise require a particular business strategy that describes a mechanism to accomplish company’s aims. The concept of a business strategy also characterizes design or architecture of a process by which the business creates a value for its products and services, allures customers to pay for that value, and transforms those payments into profit (Teece, 2010). Additionally, a business strategy displays an outline of customers’ needs and expectations and a business structure implementing which a company will be able to achieve its goals.

A proper business strategy architecture involves estimating internal factors as well as external factors connected with customers, suppliers, and the broader business environment. Internal factors include the influence of changes in some business elements on company’s value propositions (Haggège, et al., 2017). At the same time, external factors concern with shifts in competitors’ business models and technology (Haggège, et al., 2017). Also, in order to remain successful in the market and continue to deliver a customer value a company must adjust its business strategy to respond customers’ needs. In the table below, Microsoft’s strategies for the last two decades are represented. It is observable that a company’s focus slowly shifted from software development to cloud computing during the 2000-2020’s period.

| Microsoft’s Strategies | Literature Reference |
|--|--|
| “Bill Gates’ Era” (1975-2000) | |
| Low-cost licensing strategy | (Jarunee, 2012) |
| Product bundling strategy | (Jarunee, 2012) |
| Development of software strategy: <ul style="list-style-type: none"> ○ “Just enough process”, ○ "Just enough documentation" | (Brechtner, 2005) |
| “Creating Innovation” | (Yoffie, et al., 1999) |
| “Career Model” Strategy | (Olesen, et al., 2007) |
| “Open, but not open” Strategy Bill Gates’ strategic approaches: <ul style="list-style-type: none"> ○ “Look Forward, Reasoned Back” ○ “Make Big Bets without Betting the Company” ○ Build Not Just Products, but Platforms and Ecosystems ○ "Exploit Leverage and Power" | (Yoffie, et al., 2015) (Mangelsdorf, 2016) (Yoffie, et al., 2015) |
| Microsoft’s Strategies in “Post-Gates Era” (2000-present) | |
| “One Microsoft” | (Dhillon, et al., 2015) |
| Cloud Computing Strategy | (Greene, 2018) (Briggs, et al., 2017) (Newman, 2019) (Muhammed, et al., 2020) |
| “Dynamic learning culture” | (Ibbara, et al., 2018) |

Table 1: Microsoft’s Strategies
Source: made by the author of the thesis

Nevertheless, a proper business strategy is not the only thing that defines the leading position in the market. Factors of success determine a set of actions that are critically important for a company to ensure successful competitive performance. (Holotiuk, et al., 2017) Hence, these factors play a crucial role as value creation shifts due to reconsidered product and service offerings. Microsoft as one of the leading companies in the technology market has its own factors of success.

Firstly, sales and customer experience as a success factor allows to connect physical and digital channels. (Holotiuk, et al., 2017) Customer-oriented technology leads to a digitalization of customers interaction, and products and services permit Microsoft to obtain data-rich insight about its clients. Consequently, products are integrated with digital service and constantly adjusted to better reflect the consumer expectations.

Secondly, Microsoft concentrates some efforts on agility to reallocate resources and reorganize them rapidly. That is why rightfully chosen acquisitions are another factor of company's success. (Lopez, et al., 2017) identified the patterns in the Microsoft's 178 acquisitions from 1992 to 2016 that targeted various aspects of ICT business. This study demonstrated that organizational liquidity allows Microsoft to shift business in order to respond the demand for the particular products and services (Holotiuk, et al., 2017).

Thirdly, a broad network of partners is also a Microsoft's success factors. Since the main aim of the partnership is to utilize network effects with open systems, there is an growth in value with each new client added, hence digitally-enabled businesses tend to contribute "winner-takes-all dynamics". Additionally, Microsoft allows to access to its services and products to a partners community that leads to the integration of new connected devices, objects, and people via open standards allowing products in a network to be more powerful (Holotiuk, et al., 2017).

3.1.1 Business Strategy - Theoretical Framework

The conventional equilibrium point between suppliers and customers has changed due to changes of the global economy. The formation of the global trading system and growth of the E-Business sector and the Internet have created a more diversified platform for the consumer choice (Holotiuk, et al., 2017). Therefore, businesses had to reassess their value suggestions introduced to customers and become more consumer-centric since the supplier driven strategy do not work as profitable as it did before. (Holotiuk, et al., 2017)

A business strategy represents financial and organizational structure of a business enterprise that determines how a business generates innovations and delivers their products and services to consumers (Teece, 2010). Figure 1 (Teece, 2010) displays a business strategy as a circular flow with various elements that are needed not only to design and implement a business model, but also to achieve competitive advantages. It can be inferred from the Figure 1 that excellent leadership skills, superior products and technologies and professional team will not establish sustainable profit unless a business strategy is adapted to the particular environment.

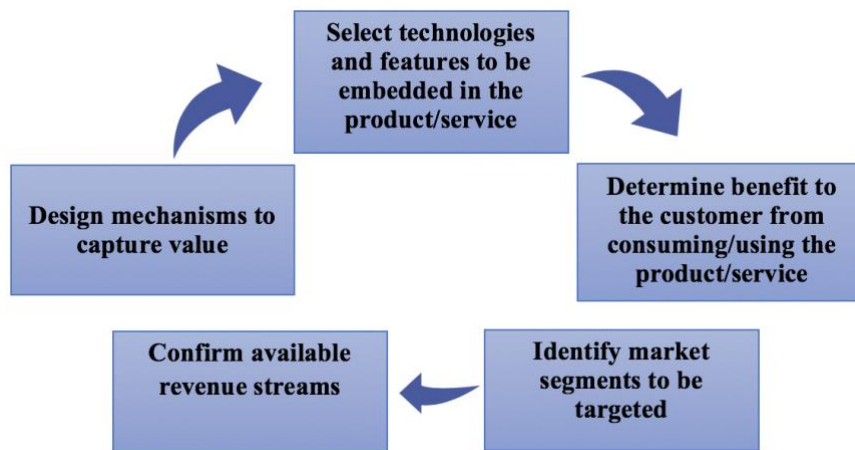


Figure 1: Business Strategy Cycle

(Source: Teece, David J. 2010. *Business models, business strategy and innovation*. 2010)

Previously, economic theories did not provide a clear explanation of a business strategy. They assumed that tangible products were the main component of trade. So, the question of how to capture value were not raised. It was thought that businesses created value to their products naturally by selling production to existing markets. Hence, there was no need to design and implement a particular strategy because of a common view that if value is supplied, consumers will buy it. However, later intangible products were accepted as essential component as tangible products, and customers not only want to purchase a product, but also need it to match their expectations. Therefore, businesses must elaborate a business strategy to be competitive in the market.

3.1.2 Barriers to Implement Business Strategy

First of all, an ability to deal with dynamic competitive conditions is related with the company's capabilities. Implementing a business strategy may demand technologies that are difficult to replicate and speed to get ahead of competitors, but the establishment of a new standard leads to competitive advantages.

(Jarunee, 2012) suggests that Microsoft employed technology strategies to cope with competitive market conditions using concept of "platforms as arrangements or combinations of organizational structures and strategies" that was created to meet the changing environment. Microsoft low cost licensing strategy to authorize its new operation system - Microsoft Windows – via Original Equipment Manufacturer agreement allowed the company to obtain market benefits.

When Apple launched Macintosh, the company did not licensed Mac OS to OEM hardware suppliers. Apple considered that its superior technology would made it a new industry standard, allowing the corporation to gain a huge profit. However, Apple did not take in account that Microsoft that was about to release Microsoft Windows, which had the similar characteristics to Mac OS and which would diminish the difference between Apple's GUI (Graphical User Interface) and its own innovation. Furthermore, the strategy of not licensing demonstrated that Apple disregarded the importance of speed to deliver innovation to market. Consequently, Microsoft Windows was able to take off much more quickly than Mac OS.

Moreover, Microsoft utilize a product bundling strategy that involves including software applications running on Microsoft Windows in the OEM arrangements. The company's operating system and Intel microprocessors were used to assemble PCs that were named as Wintel machines. Those machines with a broaden installed base resulted in large availability of software applications because of the OEM deal. That strategic move enabled Microsoft to get control of delivery channels, enlarged the value of Microsoft OS to customers, and, as a result, increased demand for products. A range of the competitors also was reduced by implementing a product bundling strategy. The created value of application programs running on Microsoft Windows allowed this operation system to get huge recognition and to become a de facto standard (Jarunee, 2012). A de facto standard of Microsoft OS gave an opportunity to launch new Windows products such as Windows 95 ,97, 98, Windows CE, Windows ME, Windows XP, etc., and start off new branches business, for example Internet browser, Cloud Computing, web TV business.

3.1.3 Business strategy to capture value from technological innovation

Every product that is elaborating by a company must be adjusted to a business strategy design. Evidently, technological innovation by itself will not ensure success. When a business develops technical innovation, it sometimes overlooks the proper analysis that can highlight ways to convert technical achievement into commercial success. A proper business strategy must include a strategic analysis to stay profitable. Otherwise, even the best technological innovation can fail to receive an advantage profit gain.

A good example of right strategic move to create innovations and stay profitable is a Microsoft's strategy in the period from 1999/2000 to 2005. Changes in customer expectations and programming models altered the development strategy of Microsoft Corporation. The range of market changes included proliferation of computer viruses, spyware, and worms, as well as customers confidence on software useful lifetime. These changes shifted the Microsoft's approach to develop software.

The first innovation was a creation .NET Framework, a simple and secure platform for software development, data manipulation, and communications that was able to support a diversity of programming languages (Brechtner, 2005). The second alteration was elaboration of an approach that worked through multiple steps algorithm, which included designing, testing, and implementing stages, to ensure no bugs. These two shifts not only influenced company's development practices, but helped it to create new competitive advantages and succeeded commercially.

First of all, to implement these shifts Microsoft designed "Just enough process", a system that allowed working teams to get the latest builds available very fast in order they could adjust the production process with partners and customers, and "Just enough documentation" (Brechtner, 2005). "Just enough process" and "Just enough documentation" were created due to fact that there was a huge variety of products and there were hundreds of working teams working on them. So, Microsoft's customers and partners were both outside and inside the corporation, but these systems allowed ongoing integration across working team, partners, and customers.

Also, these processes enabled each team to claim its own requirements, for example, delivery dates, platforms, and languages, to determine the responsibilities of each team (testing, service

operations, bug databases, source code, etc.), and to set the back positions in case if any contract is terminated.

The demand for ubiquitous interconnected devices has driven Microsoft to dramatically change its platform, development process and working environment. The alteration of .NET Framework set new standards for a development cycle to manage interfaces between services and the teams that worked on them (Brechtner, 2005).

All these efforts stimulated the development environment to ensure successful implementation of business strategies. Also, it was able to minimize work-in-progress and to continue to capture the value from the technological innovations. The key concepts of this business strategy were “Just enough process” and “Just enough documentation” to enable continuous interconnection across groups (Brechtner, 2005).

3.1.4 Business Strategy as Innovation

Although technological innovations are natural and desirable outcomes of the industrial progressive society, formation of new organizational forms - in particular new business strategies - is an essential element to stay profitable in the market. Unless an ability of a business exists to establish a new business strategy, a capacity of this business to capture value is questionable. If a company cannot supply a good product with high value propositions to customers and implement a business strategy that meet all consumer requests at the reasonable price level, an innovation will fail, despite the fact that it can be widely accept by users. As it is indicated by an example of competition between Microsoft and Netscape, a business strategy as an innovation may help to achieve a remarkable competitive advantage.

Both corporations, Microsoft and Netscape, were pioneers in the market of technologies and managed to transform themselves from software developers to suppliers of a combination of products that aggregate a wide range of content and services. Nonetheless, Netscape made wrong moves, and unsatisfactory results from implementation of these decisions allowed Microsoft to be ahead of Netscape.

Firstly, the Netscape’s business strategy included principles that helped the company to enlarge. There were three stems of Netscape’s vision - a power of networks, promise of a universal interface, and need for open standards (Yoffie, et al., 1999). The company focused on products for public networks, the WWW in general, and consumer-oriented Internet to intranets. However, Netscape tried to implement its strategy in several different directions, which created difficulties to handle the working stages and make the company work as one mechanism. For example, in 1995 Netscape started to develop products for public networks, then in 1996 the corporation were elaborating products in the sphere of Intranet - corporate networks based on Internet protocols. In 1997 Netscape shifted the focus from Intranet to Extranet, and in 1998 it restarted the work in the Internet field. While Microsoft had the similar vision, it broke its development into narrower targets and adjusted the production process to deal with these targets one by one.

Secondly, Microsoft and Netscape had different opinions regarding a hiring staff strategy. Netscape preferred recruited personnel in the late 20s- middle 30s. The average age of more that 2000 employees was 37. Marc Andreessen, co-founder of Netscape, argued that the company need people with experience in the field of their expertise. In comparison, Microsoft took on board younger people. The average age of 15000 Microsoft employees was 27 (Yoffie,

et al., 1999). The strategy of “hiring experience” allowed Netscape not only to bring into the team employees who hit the ground running, but also save on training programs. By comparison, Microsoft hired more energetic graduates and managed to cut the costs by suggesting them a low pay base in combination with relatively high stock options. Nonetheless, “hiring experience” in a startup company has its drawbacks. For instance, the senior staff who was great at quickly scaling a company was not able to expand a successful developing venture. Moreover, highly experienced staff who had not had a chance to work together before, led to the clash of egos at Netscape. Conflicting characters of senior managers and executives created obstacles to productive working environment.

Thirdly, another Netscape’s weakness was a wrong allocation of resources. The corporation struggled with limited workforce, but the heads of the company decided not to expand the staff. As a result, Netscape was stretched to its limits in allocating the development teams. However, the even bigger company’s weakness was an attitude towards partnership. Unlike Microsoft, Netscape was searching for customers, not partners. Netscape’s executives explained this strategy as a lack of cash. However, it was a losing tactics, since Microsoft had a completely different approach. Microsoft invested a huge amount money and time to support application developers who shared the same aims. Netscape, on the contrary, saved every dollar it was able to get out of the Web.

Finally, the Microsoft’s advantage over Netscape was a preference of multi-year plans. Steve Ballmer, Microsoft’s President, said that if it is necessary the corporation took immediate actions, but after it would continue with an overall strategy in mind. The advantage of a Microsoft’s approach was to complete structure on the everyday basis and elaborate plans to adjust to this environment and to shape it. All senior managers and executives should have made technical and business assumptions about the changes in the world. On contrast to Microsoft, Netscape relied on its co-founder, Marc Andreessen, and on small range of people he worked with.

From this example it can be inferred that the creation of new business strategy as an innovation can lead to the creation of new industries. While Microsoft and Netscape both invented such strategies, Netscape making several serious mistakes in its strategy allowed Microsoft to get one of the largest shares in the market.

3.2 Career Models and Cultural Change at Microsoft

Why do some companies outperform their competitors and are more suited for the particular business environment? The answer to this question lies in the understanding of the significance of the organizational configurations including a number of multi-dimensional units: business strategy, organizational culture, organizational structure, and market environment (Yarbrough , et al., 2011). Organizational culture is a set of assumptions and beliefs that helps groups of individuals to function as one mechanism within a company (Yarbrough , et al., 2011). Using a set of statistical tests Larry Yarbrough determined that organizational culture affects business strategy in several aspects: 1) business strategy and organizational culture co-vary; in other words, these two units should be intimately connected to target customers’ and company’s value propositions 2) the better the fit between an organizational culture and a business strategy the greater the level of customer satisfaction; 3) the higher the correlation between a business

strategy and an organizational culture, the higher its cash-flow return on investment (Yarbrough , et al., 2011).

These findings suggest that the business strategy and organizational culture do not change independently. On the contrary, they imply that a business strategy decision-making process must assess the organizational culture context in order to successfully perform in the market. Organizational culture is related to the company's identity reflecting purposes and values of the organization. A successful cultural change is associated with strategic changes. Nowadays, company do not perceive cultural changes as an attempt to change the employees' behavior. On the contrary, organizations pursuing cultural changes focus on their business idea itself as well as delivering customer value.

A culture comes around the point of the intersection between a company and its efforts to continue to develop and produce new products and services. A customer value is one of the forces that drive cultural changes. Creation of a customer value is connected with cultural changes in a company by linking customers value propositions and customer needs (Olesen, et al., 2007). In order to implement these changes in the organizational structure, a business must elaborate specific models.

3.2.1 Introduction to the Career Model

A Microsoft's culture can be described as competitive spirit and passion for technology. These two factors contributed to the company's growth during more than 30 years of its existence. Since the beginning of the 21st century the competition in the market of communications and technologies has enhanced due to shifts in the fields such as Internet search and service, open source programming, software development, and customer expectations for privacy and security. Microsoft's executives required a detailed plan for new market development that augmented revenues from Windows and Office.

To meet all new market requirements, Microsoft created changes in its business strategy that focused on value propositions of products and services that functioned well together across the dynamic system from enterprise platforms to pocket devices (Olesen, et al., 2007). To execute this strategy the corporation undertook cultural shifts that required dexterous organizational collaboration. Microsoft restructured functional units of products and operation and sales groups into business units with separate products portfolios and profit and loss statements (Olesen, et al., 2007). These cultural changes created demand for management talent to guide the business units. Microsoft put a lot of efforts to create a broad spectrum of leadership skills and executed a career model framework to make the new strategy work.

The first step was to conduct interviews the Microsoft's leaders and ask them to elaborate culture that will ensure the success of the new business strategy. On the base of this study, the company designed the Career Model. It is a platform of common standards that allowed to identify, assess, develop, manage people and that gave an opportunity to amend leadership and managers' talent as well as to reassess employee value propositions (Olesen, et al., 2007). In addition, Career Model enabled the value propositions to be implemented in the system. These value propositions include alignment among employees, the Microsoft's business strategy, employee engagement, discretionary effort, and transparency.

An alignment between the staff and the company's strategy consolidated the cultural changes by ensuring the standards for communication among customers, partners, and working groups. Employee engagement clarified the norms by which Microsoft could achieve next levels in the development process and specified criteria to obtain career opportunities. Transparency helped to diminish the level of bureaucracy and guided individuals across business units to collaborate together regarding the similar scope of responsibilities (Olesen, et al., 2007).

3.2.2 Career Model Performance Results

In 2004 three Microsoft groups were formed to execute the Career Model among leaders. In 2005 outcomes of the experiment with these pilot groups were formed in the plan to create a broad company's framework. Microsoft continued implementation of the Career Model by a rolling realization with employees over 2005 and 2006 Mid-year Career Discussions. To simplify the Mid Year Career Discussion the Microsoft team elaborated an online application. As a result, assessments of competencies, profiles, career histories, and desired positions of executives, managers, and employees were retained throughout a year.

The indicators of the cultural changes were mentioned in several aspects. First of all, MS Poll - annual Microsoft employee survey - showed positive results in the career development in areas, where the Career Model was executed, demonstrating the achievement of employees' value propositions. Secondly, in 2006 Microsoft traced changes in Performance Management to remove curve-based performance criteria. Also, the level of competition among employees was reduced: workers were measured against individual achievements of their goals and against a standard but not relative to one another (Olesen, et al., 2007). Thirdly, individuals who applied on important executives' positions were tested by application of the leadership competencies in a behavioral events interview. Then executives' hires were chosen based on the experience and development areas. Moreover, using the Career Model Microsoft analysts managed to predict shortages in particular professions: macro analysis of Career Stage Profile was forecasting the velocity of movements across professions.

The development and execution of the Career Model was a complicated multi-year project. The process faced complex challenges mostly because Microsoft tried to elaborate a wide enterprise model. Many existing professions had to integrate into a new framework. This task was achieved by an intensive client engagement process. The turning point happened when employees who started to embed into the Career Model's system told other workers at Microsoft about benefits they obtained utilizing this system. Also, employees recognized that the biggest advantage was how much time and energy the Microsoft team put in creating the Career Model. It showed that the company values every profession it had. All these factors together contributed to successful implementation of the Career Model and cultural changes in general that ensured accomplishment of the Microsoft's business strategy.

3.3 Leadership at Microsoft

At many businesses there is a tight relationship between leadership and organization itself. A leader must have certain characteristics to successfully rule a company. Despite a common opinion that leader should be charismatic, it is far from enough. A true leader has to be able to

establish a set of guidelines for a company's proper operation, elaborate new business strategies according to the changes in the dynamic market environment, and recognize shifts in the company's underlying values to quickly adjust them and gain the competitive advantage.

Bill Gates, co-founder and chairman of Microsoft Corporation, took the leading position since the company's establishment till 2000. He is one of the most successful CEOs and strategic thinker in the high-tech world. During the period, when Gates was a Microsoft leader, he had more influence on the company than possibly any other person. Gates was a master of business strategies and a highly qualified organization leader. He established short-term and long-run goals for the corporation and supervised teams that executed with merciless efficiency. It was partly of Gate's merit that Microsoft gains a dominating position in the market. While his successes and failures are in the past, the lessons we can take from them are timeless. As well as other successful CEOs Bill Gates had several rules to implement his strategies into reality.

3.3.1 “Look Forward, Reasoned Back”

The first rule is “Look forward, reasoned back” (Yoffie, et al., 2015). The ability to predict the future does not make a great strategy thinker. Being a good strategist required Gates to understand how to get from today to the future. For many managers, the usual manner of thinking is to look back and then reason forward about how we can achieve present goals. This practice helps to take lessons from the previous mistake in history and to prevent making the same blunders tomorrow. However, an intelligent strategy maker acts like a chess player: he has to think a couple of steps ahead to the end of the game and then reason back to a set of guidelines what he must do today (Yoffie, et al., 2015). For example, in 1980 when IBM was looking for a new operating system, Gates first thought was that it was not his field of the business. Nonetheless, he quickly figured out that IBM was giving Microsoft an opportunity to take control of the platform for all PC software applications. Accepting this offer, Gates reshaped a computer industry and founded the base for a new stage of development.

Also, Bill Gates extrapolated from Moore's Law:” the number of transistors on an integrated circuit doubling approximately every 18-24 months” (Mangelsdorf, 2016). In the early 1970s, Gates realized that the future would belong to the Internet and that the computing power, which was becoming affordable and ubiquitous, would lead to the wide spread of to personal computers. In 1975 Bill Gates with his business partner Paul Allen on the base of Moore's Law concluded that software by itself is a true source of value in the industry and that repeated doubling of computing power is a force that would convert hardware into a commodity. Based on this conclusion, Microsoft decided to elaborate software and control the market of this product. Microsoft became essentially the first software product company.

Later Bill Gates was able to extrapolate from the present. He understood that his vision of the reality needed to be corrected by analyzing the up-to-date technological tendencies. To do this he hired talented employees such as Nathan Myhrvold who was a Microsoft's chief technology officer and the founder of Microsoft Research. Myhrvold proved himself as a prolific writer of memos about future trends. Using this information, Gates remained in control of the updated Microsoft's vision and was in power when it came to interpret these trends would influence the competitive market position and company's production (Yoffie, et al., 2015).

3.3.2 “Make Big Bets without Betting the Company”

The second rule according to which Bill Gates ran Microsoft is "Make big bets without betting the company". A large market share is an essential element for success. In order to obtain the market share companies should invest manufacturing capacity. These investments include big bets because they must get ahead the actual demand. Bill Gates made a number of big bets while he was running the office as a CEO of Microsoft. For example, providing an operating system for the IBM PCs, despite the fact that the corporation had preliminarily focused on programming languages. Other bets were production of applications for the Macintosh, when most of the competitors did not take this seriously, and maintenance a responsibility to elaborate Windows, even though IBM was against that. However, one of the most significant bets was the termination of partnership IBM in 1990. After that, Microsoft was working independently and released the first version of Microsoft Windows, which layered a graphical user interface onto DOS (Disc Operating System). The new operating system gained a huge success, and by the end of 1990, when Microsoft presented Windows 3.0, corporation had sold about 2 million copies of the new version. Moreover, a lot of application developers wrote hundreds of applications for the Windows OS.

Big bets are perhaps one of the most meaningful strategic moves. Nonetheless, not every big bet is able to win. Even the best strategic thinkers can make mistakes. So, when strategists make a big bet, they have to keep the potential risk within a certain range. Bill Gates realized that even designing the ruthless strategies he must not bet the company. A possible way to do it is to diversify the risk.

After 1980s, Microsoft was able to make big bets because the company had a strong cash flow onward, but Gates was not in rush to rake a risk. On the other hand, he broadened the Microsoft's business strategy by developing application software such as Word and Excel, reducing corporation's dependence and providing it with a new revenue stream. Also, Gates made applications accessible not just on Windows, but also on some of the competitors' platforms such as Apple's Macintosh. This move guaranteed that even if Windows failed or Apple gained a major share of the high-tech market, Microsoft would still be able to run business. Despite that Bill Gates thought Windows would ultimately beat OS/2, but he was not sure how long this would take. So, Gates decided to make all of Microsoft's applications run on OS/2 if IBM made OS/2 popular among customers.

However, failures also presented in the Microsoft's history. Bill Gates made a mistake, when he overlooked the importance of the Internet in 1993/94. By contrast, Microsoft invested lavishly in Microsoft Network (MSN) - an online business that provided the Internet, but its service was not built on Internet protocols. In 1995 Gates admitted his mistake and understood that the future belongs to the Internet, where all devices would be interconnected, and people would manage to communicate through various Internet channels. The new strategy was aimed at embracing the Internet in the market of Web browsers. To achieve that Microsoft made an agreement with AOL, American web portal, in 1996 to promote Internet Explorer almost exclusively. In return, Microsoft granted AOL a desirable place on the Windows desktop (Yoffie, et al., 2015). As a result, this strategy quickly paid off. In 1995 Internet Explorer had only 3 percent of the browser market, but by the 1998 this web browser had become the market leader. Bill Gates did not let Microsoft to go down by the disruptive forces of the Internet fight. Instead, he changed direction of the business strategy to get even greater success.

3.3.3 Build Not Just Products, but Platforms and Ecosystems

A proper business strategy to be effective must operate at many different levels of a company and constantly update the business aspects such as market position, value propositions, and competitive advantages. To be competitive in the market, organizations in many cases need to go beyond their limits. That is why, a good leader will try to build an industry-broad platform prior to launch production of great products. An industry-wide platform is a tool to build a large ecosystem of partners, who are involved in the manufacturing of complementary products and services and in such operations as sales, distribution, and marketing.

When IBM offered to Bill Gates a deal to create MS-DOS, he seized an opportunity not only to expand Microsoft revenue streams and make profit by selling DOS, but also to build a platform in the high-tech industry. Gates understood that IBM set a framework for the market of compatible machines. The agreement with IBM gave a chance to sell DOS to developers of PC clones, and because of that ability Microsoft could have become not just an owner of PC clones, but a key element of a totally new industry. Following this assumption, Bill Gates made IBM accept several contractual terms. One of them was the Microsoft's right to license DOS to other companies, which later turned into PC clone makers. This right allowed Microsoft to widen its business in the high-tech industry (Yoffie, et al., 2015).

However, Microsoft had some difficulties while the company was expanding an industry platform. Microsoft depended strongly on complementors. If ecosystem partners did not elaborate new software applications for Microsoft OS or developed new versions of hardware using Windows and DOS, customer expectations could not be justified and demand for Windows could decrease. To prevent these events Gates executed "open, but not open" business strategy (Yoffie, et al., 2015). He started promoting standard to widen the market for PCs and investing in new technologies. Microsoft CEO provided enough "open space" to encourage other companies in the industry to cooperate with Microsoft, but at the same time he did not unveil a lot of aspects of Microsoft's technologies.

On the one hand, Bill Gates assured other hardware and software businesses to invest in Windows and DOS. In exchange for that, Gates gave enough knowledge of the sample code for developers to create PCs and software manufacturers to write applications. In the beginning of 1990s, this strategy brought the results and Microsoft sold millions of copies of Windows applications.

On the other hand, Microsoft's CEO did not want Microsoft to be entirely open. To do that Bill Gates made a couple of strategic moves. Microsoft began to rewrite Word and Excel applications for Windows. One of the advantages was that some rivals decided not to work with platform. For example, Lotus, American software company, made a decision not to run Lotus 1-2-3 on Windows. As a result, the company was acquired by IBM in 1995 (Yoffie, et al., 2015).

To summarize, it is necessary to say that Microsoft gained a huge benefit from implementing "open, but not open" strategy. Gates hold a balance between being "open" enough to attract Software developers and PCs manufacturers and not being pretty "open" to dominate in the market.

3.3.4 "Exploit Leverage and Power"

Finally, the last rule is to "Exploit Leverage and Power" (Yoffie, et al., 2015). Thinking strategically means to have a clear picture about a purpose of a business and at the same time not to lose the long-term vision. However, it is not enough to keep in mind big thoughts exclusively. A great leader must be able to turn these big thoughts into tactics to capture values and beat competitors. A leader should create a bridge between strategic thoughts and real results. It requires to have a competitive edge of the talent.

Bill Gates has a very important tactical ability. He was ruthless towards competitors, partners, and suppliers. He several times "played hardball with Apple" (Yoffie, et al., 2015). Apple Corporation was one of the earliest Microsoft's customers. It was licensing its BASIC interpreter for Apple II. By the end of 1985, the license was about to expire. In the meantime, The Apple II was still the Apple's dominant revenue stream. Thus, BASIC was vital software. Realizing the weak position of Apple, Bill Gates demanded Apple to terminate the elaboration of BASIC for the Macintosh. Otherwise, Microsoft would not prolong the license. Apple decided to cease the work on the MacBASIC and provide Microsoft with the code for the product.

A couple of months later, Bill Gates encountered with Apple again. Before the launch of Windows 1.01, Apple declared that Windows violated the intellectual property right. Gates claimed that if Apple continued to push the problem Microsoft would stop working on Microsoft's Macintosh applications. Gates understood that Apple would lose customers because Microsoft Word and Excel were the most popular applications on the Macintosh.

In 1985, Microsoft and Apple resolved the conflict. Microsoft got a right to employ Mac-like visual elements in its products (Yoffie, et al., 2015). In exchange, Microsoft was obliged to continue to design Microsoft applications for the Mac and to postpone the release of Microsoft Excel for PCs for a year. However, the launch of Microsoft Excel had been delayed for two years. In 1997, Gates demanded Apple to set Internet Explorer as the default browser for the Mac. If the claim had not been satisfied, Gates would have threatened to cancel the use of Mac Office.

In the same manner, Bill Gates negotiated with the CEOs of AOL, American web portal, when he was considered to enter the sector of online business. Using Microsoft's significant resources, Gates sued AOL. The purpose of this move was to make AOL adopt Internet Explorer and throw out Netscape. As a result, "playing hardball" with his competitors, Gates extracted as much advantages as possible to strengthen the Microsoft's position in the market.

3.4 Microsoft in the "Post-Gates' Era"

3.4.1 Steve Ballmer

Despite the fact that Microsoft demonstrated impressive results - steady growth of Microsoft's sales and profits over 2004-2010 - by adopting Career Model, the company's organizational culture started to show negative results. Career Model elaborated an environment of intense competition among product groups reducing the collaboration that often led to the duplication of work. Also, the dominant position of successful the Windows Team over the not-so-

successful products hindered the growth of the new solutions. Working groups of not-so-successful products were under-resourced making them work inefficiently. Consequently, Microsoft's culture created a situation, where own products were irreconcilable to each other. For example, Microsoft SharePoint and Windows Live were integrated with a delay because of the need for a Social Connector, which was developed by the business-software division for Microsoft Office Outlook 2010. Therefore, product teams considered themselves responsible for the division's growth, but not for the company's growth as a whole (Dhillon, et al., 2015).

Under the leadership of CEO Steve Ballmer, Microsoft decided to shift its organizational culture to the new stage of development in order to implement a new business strategy – “One Microsoft”- which was targeted to expand the company's market share and raise profit. Also, by implementing this strategy, Microsoft wanted to shift the public perception from a ‘devices and services’ company to a ‘software and services’ company (Dhillon, et al., 2015). Organizational culture had to be reorganized from a divisionally structured enterprise to a functionally structured organization. Product groups were restructured in nine functional units. The new model aimed to make Microsoft more flexible, collaborative and encouraged employees to share targets between the product lines so that they were not achieved separately but as a job of a whole company (Dhillon, et al., 2015). As a result, the remodeled organizational culture enabled the “One Microsoft” strategy to cope with the accelerated technological shifts and get a larger market share. Steve Ballmer left Microsoft in 2014 and the CEO position was taken by Satya Nadella who went even further in improving the Microsoft's organizational culture.

3.4.2 Satya Nadella

Satya Nadella, ex-executive vice president of the Microsoft's Cloud and Enterprise group, brought the company out of the period of stagnation. Since he took over as a CEO five years ago, Microsoft's shares have tripled. Nadella chose a different course of actions focusing company's attention on cloud computing technologies and artificial intelligence software (Greene, 2018). He refused from several Ballmer's bets driving away Microsoft's mobile-phone business and prioritized working with partners in the Cloud. During the first year on the CEO position, Nadella prepared Microsoft for a mobile- and cloud-first world, building new partnerships. In the spring of 2014, despite a contentious historical competition with Apple and lack of traction with its own Windows phones, Microsoft made Office available on all iOS devices (Greene, 2018).

Next Nadella's step was designing a new corporate culture that would be suitable for implementation of the cloud strategy. Together with a Microsoft team he spent elaborating an idea of a “dynamic learning culture” based on a growth of the mindset. Nevertheless, the biggest challenge turned out to be a question of how the organizational culture helps to migrate specific application to the Cloud (Briggs, et al., 2017). The entire company was divided into two major groups - business process units (BPUs) and centralized IT services. A corporate culture must have been changed in both groups. Nadella eradicated a stack-ranking' performance management system that pitted employees against each other every six months (Ibbara, et al., 2018). Previously, employees were divided into top, good, average, below average and poor groups. Such distribution contributed that one in 10 workers would always receive a poor rating, regardless of how much they performed. On the contrary, Nadella replaced the stack-ranking performance system with continual feedback and coaching and a compensation process that gives managers more influence (Ibbara, et al., 2018). The new CEO created a cultural model

that highlighted that each person counts as a valuable tool that influences the company’s performance.

At the meeting with 180 executives divided into 17 teams Nadella formed a “cultural cabinet” (from 17 leaders) that was responsible for growing a mindset at Microsoft. After the long working process, the team established three milestones for the new corporate culture. Firstly, customer obsession is an important element. The core of the enterprise must be a desire to deliver a customer value with the great technologies. Sales and marketing groups were provided with the trainings to improve their professional skills and bring that experience into Microsoft (Dhillon, et al., 2015). Secondly, specific roles must have been adapted to support the cloud model. This was one of the greatest benefits of cloud computing migration. When migration to the cloud occurs, IT organizations are less involved in the everyday operations of running servers and free to explore their roles to include more solution-focused responsibilities. This gives a chance to IT professionals to develop their careers, as they shift from technology and service providers to business process enablers (Microsoft IT Department, 2016).

Thirdly, an inclusion and diversity are what Microsoft seeks. The variety of workforce must continue to improve, and the company must take in count a wide range of opinions and perspectives in a decision-making process. At Microsoft meetings all member must have an opportunity to speak so that it taps into the collective power of everyone in the company. Consequently, quality of ideas and products are better, and a customer value is delivered at the better level (Ibbara, et al., 2018).

To conclude, it is necessary to say that Microsoft has gradually shifted from one cultural model to another throughout 2004-2018. The changes were associated with the CEO’s various aims: to enlarge the market share, raise the stock price or profit. However, the reorganization of the Microsoft’s cultural models was predominantly demanded by the changes in a business strategy, which is a precondition for adaptation of a new organizational culture.

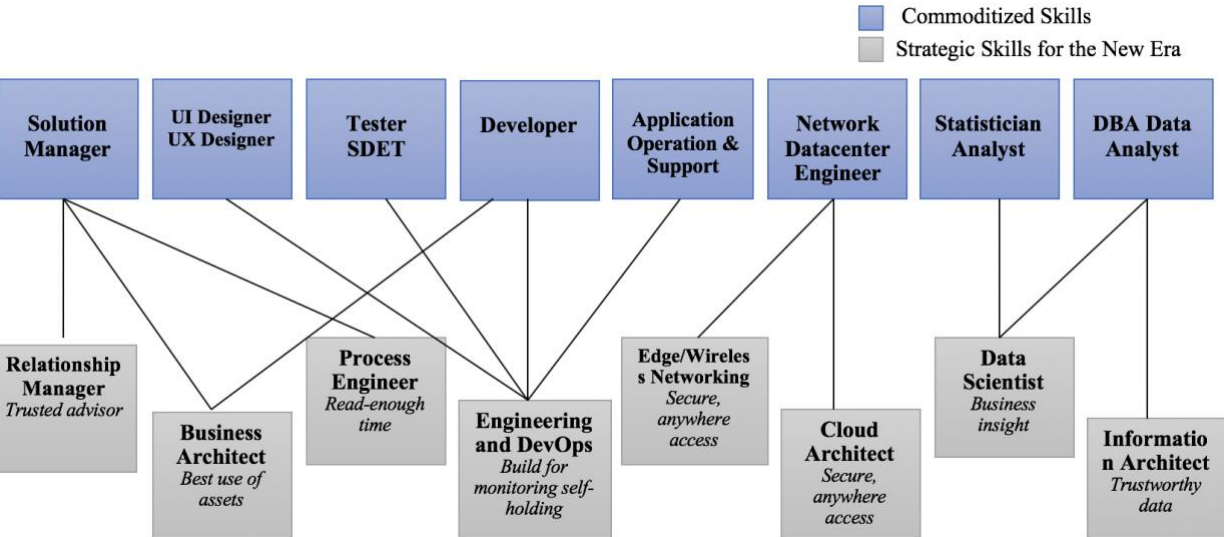


Figure 2: The evolution of the IT pro skill set

(Source: Briggs, Barry a Kassner, Eduardo. 2017. *Enterprise Cloud Strategy*. Redmond, Washington : Microsoft Press, 2017)

3.4.3 Cloud Computing Strategy

Due to accelerated technological progress businesses continue to grow not only in the number of employees, but also in the number of departments. Therefore, one third of IT teams of many companies have to maintain the datacenters, deploy the new servers, ensure that system software patches are applied timely, and etc. Thus, several technology manufactures including Microsoft realized that offering computing services is a right business strategy, which responds to the growing demand. It became obvious that a cloud computing strategy yielded significant advantages for many organizations.

First of all, a huge proportion of companies need to make better Internet services and offer more incentives than their rivals. Cloud computing is a valuable tool for business to shift their focus to elaborate multifunctional business applications that can bring true a business value. Secondly, cloud computing allows to reduce the costs of IT infrastructure. As a result, companies do not have to invest in a large number of powerful servers and can change internal computing resources. (Aljabre, 2012) One more advantage of cloud computing is a reduction of software costs. Using clouds, businesses do not have to buy separate software packages for every computer at a company. Also, cloud computing technology manages to improve compatibility between operating systems (OS). The user’s OS can be connected to the cloud and share documents with other users who have a different type of OS (Eitzman , 2019). Finally, cloud computing shifts a balance between innovation and maintenance allowing IT departments to focus more on innovations. Due to all advantages discussed above, The Microsoft’s CEO Satya Nadella, considered necessary for the company to improve the cloud computing strategy – elaboration of which began in 2010 - to gain a competitive advantage.

3.4.4 Reorganizing the Microsoft Structure and Development of the Cloud Model

The first Microsoft’s step in order to implement the Cloud Computing Strategy was an establishment of a Cloud Strategy Team guided by a Chief Technology Officer and including members of IT finance, leaders from the infrastructure security, the most senior technologists from the various IT applications groups (HR, finance, and etc.), and the enterprise architecture team (Briggs, et al., 2017). The figure below shows the structure of Cloud Strategy Team and functions that it performs.

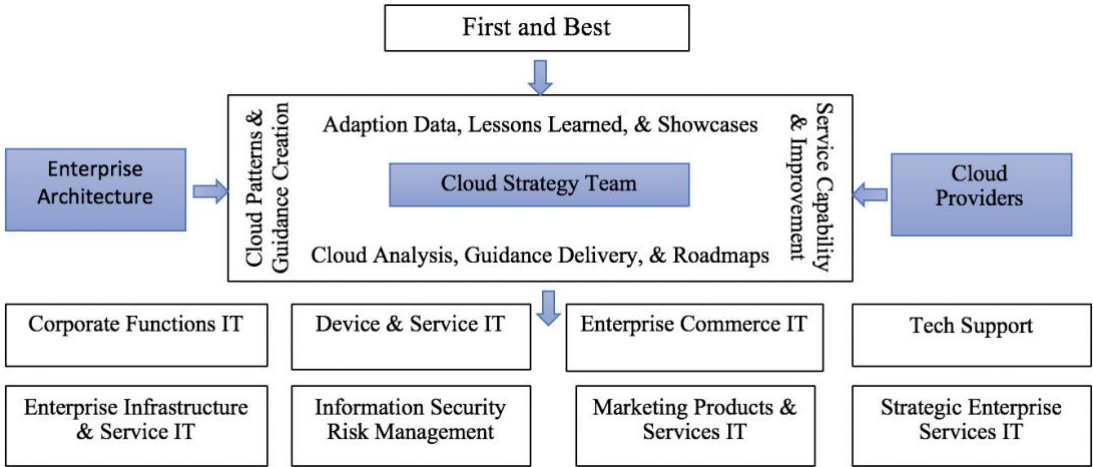


Figure 3: Cloud Strategy Team at Microsoft

Source: (Briggs, Barry a Kassner, Eduardo. 2017. *Enterprise Cloud Strategy*. Redmond, Washington : Microsoft Press, 2017)

The Cloud Strategy Team was in charge of leading the cloud analysis and experimentation stage demonstrated in the Figure 4. Moreover, it installs the architecture and guidance, which are necessary for allocation of reorganized applications and services, to establish the communication to stakeholders (Briggs, et al., 2017).

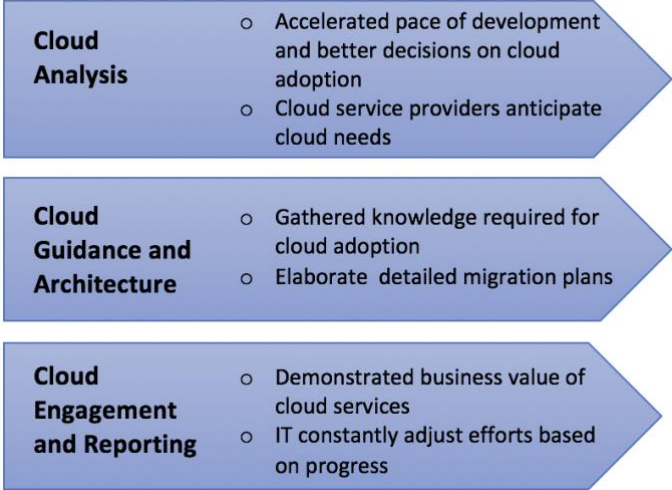


Figure 4: Cloud Strategy Team Charters

Source: (Briggs, Barry a Kassner, Eduardo. 2017. *Enterprise Cloud Strategy*. Redmond, Washington : Microsoft Press, 2017)

Among the first tasks, the Cloud Strategy Team invested time in educating itself, ensuring that all members were on the same professional level. The team got familiarized with tools and offerings from various platforms. After that, Microsoft started to draft out the cloud strategy. The team realized that not all applications and services would be in the public cloud. Thus, the Microsoft’s strategy was based on the hybrid cloud. Thus, several applications would be on premises for a certain time period (Briggs, et al., 2017). However, to make the cloud model more attractive for customers and use all resources as efficient as possible, Microsoft removed some applications by consolidating it with another ones of analogous functions or retired all applications together.

Secondly, the Cloud Strategy team sorted out apps that could be transferred to Saas, Software as a service, model, in which Microsoft IT do not need to maintain software or hardware (Briggs, et al., 2017). Also, as Microsoft had already invested in SaaS model, the company wanted to use its full capacity. The team explored if it could utilize functionality of the model to replace applications. Some customer applications that undergone new development stages were converted to Microsoft Azure Paas - platform as-a-service- apps. Thirdly, the Cloud Strategy team migrated other applications to the cloud Iaas - Infrastructure as a service- environment. This means that they were hosted in the cloud but still required database and operating system maintain. Finally, a small number of apps remained on premises for different reasons, for example legacy code (Briggs, et al., 2017).

As a result, the creation of the Cloud Strategy Team was one of the key factors of success to promote long-term development of the cloud strategy. It established a set of practices for continuously evaluating and experimenting to determine the appropriate platform and destination for each application.

3.4.5 Microsoft Cloud Strategy – Reflection of Growing Demand

When Microsoft got contracts with the US Department of Defense (DOD) and Joint Enterprise Defense Infrastructure (JEDI), the company felt ready to start competing with Amazon Web Services (AWS). In Q4 2019 Microsoft Azure gained 18% of market share, while AWS had 33% (Madhuri, 2016). However, taking in account the fact that in 2018 Microsoft achieved 15.5% of market share and AWS held close to 48%, some leading analysts concluded that Microsoft has been the first company that managed to bite into AWS's market share (Madhuri, 2016).

In 2018-2019 Azure experienced a meteoric growth. The company announced enhancements in fields such as AI (Azure ML Services), hybrid (Azure Stack), deeper customer insights (D265), and business productivity via code/no code (Power Platform) (Newman, 2019). It became clear that Microsoft Cloud Strategy is aimed at competing for the top spot in the cloud service providers.

3.4.5.1 Multi-cloud Race

Multi-cloud is one of the most important and difficult challenges for technology manufactures. Almost all tech companies offer multi-cloud services, nevertheless the winner of the competition will be an organization that will have certain workload on-premises and others in the cloud itself, but not necessarily in the same cloud.

In response to growing demand for multi-infrastructure management, Microsoft introduced Azure Arc in order to support cloud out to the edge for Azure Services. The value proposition in case of Azure Arc is that this platform is flexible regardless an amount of cloud workload located on it. The reason for that is the use of Kubernetes, a container architecture system for automating computer application deployment, management, and scaling (Muhammed, et al., 2020). Azure Arc offers serverless Kubernetes, an integrated continuous integration and continuous delivery experience, and enterprise-grade security and governance. It allows to develop and manage teams on a single platform to quickly build, deliver, and scale applications with confidence (Newman, 2019).

3.4.5.2 Data Proliferation

Microsoft addresses needs for rapid data proliferation and increasing complexity of data stored across multiple locations with the introduction of Azure Synapse (Newman, 2019). Azure Synapse became the next stage of development of SQL Data Warehouse bringing advanced performance and capabilities into the cloud computing market. Azure Synapse delivers insights from all data, across data warehouses with a high speed. Employees are able to query both relational and non-relational data using the familiar SQL language (Newman, 2019). Also, for mission-critical workloads, they can easily optimize the performance of all queries with advanced workload management, workload isolation, and limitless concurrency (Greene, 2018).

Moreover, Azure Synapse has advanced security and privacy features that are built into the Azure Synapse system such as automated threat detection and always-on data encryption. Also, businesses can be ensured that data are safe and private using column-level security and native row-level security.

3.4.5.3 Edge Computing

Growth in the demand for edge computing increased the number of projects in the field of IaaS. Microsoft also did not stay behind and announced Azure Stack Edge, a cloud-managed device offered on a HaaS - Hardware as a Service. A competitive advantage for Azure Stack Edge is that its nodes are reinforced for Artificial Intelligence – AI. It means that each node gets network data transfer capabilities and consolidates with built-in Field Programmable Gate Arrays – FPGAs - in order to speed up AI-inferencing (Newman, 2019). Azure Stack Edge has two variants – the first one for rugged environment and the second for commercial – with both FPGA and GPU options to empower AI at the edge. Due to the fact that edge computing is an essential element of modern IT infrastructure, Azure Stack Edge automatically ensures the competitiveness of Azure enterprise applications (Newman, 2019).

3.4.5.4 Staying Open to the Legacy Architecture

Microsoft realizes that virtual machines will not disappear in the nearest future. Thus, the Cloud Strategy must continue to evolve to constantly deliver a business value. One of the Microsoft's latest propositions was Azure Generation 2 virtual machines. These machines are focused on enabling larger workloads through support for larger memory up to 12 TB and through provisioning of OS Disks, whose memory exceeds 2 TB (Newman, 2019).

In addition, Microsoft enlarged the range of hybrid cloud solutions such as Azure Stack Hub and Azure Stack Hub Services. These inventions provide an opportunity to get advanced database management, real-time stream processing, real-time data ingestion, and Kubernetes. The launch of Azure Stack Hub is clearly an attempt to rival AWS Output – infrastructure and services on premises for hybrid experience - which is ahead of Azure. However, as many business analysts believe, Azure Stack Hub will help company to compete with AWS in the more direct way (Newman, 2019).

4 Practical Part

The practical part consists of qualitative content and quantitative researches as well as discourse analysis of Microsoft's mergers and acquisitions based on the data obtained from the Microsoft's annual reports and Microsoft's reports to the United States Securities and Exchange Commission. The first part of the research is conducted with the use of the qualitative content and discourse analyses to identify patterns behind the acquisition of numerous companies made by Microsoft since 1987 and to determine the cyclic behaviour of these mergers and acquisitions.

The second section of the practical part is based on the quantitative analysis that will help to figure out whether mergers and acquisitions were beneficial for the Microsoft overall performance. All the results gained from the practical part are helpful to provide answers to the objectives of the study.

Research questions

The first research question is "*Are there cyclic behaviors of Microsoft's M&A based on the results of the strategies described the literature?*". This research question will be addressed by conducting qualitative and discourse analyses.

The second research question is "*Does M&A according to the pre- and post-merger operating ratios have a significant impact on Microsoft's performance?*" This research question will be addressed by conducting a quantitative analysis.

4.1 Research Design

4.1.1 Qualitative Content and Discourse Analyses of Microsoft's M&A

By analyzing the relevant documentation, the author of the study had been able to collect the necessary data about 226 Microsoft's mergers and acquisitions in the period from 1987 to 2020. In order to divide the diverse information into stable core product categories the author used the structure adopted by (Prahalad, et al., 1990). This model implies that various competences contribute to the provision and development of core products, and core products can enrich distinct businesses segments.

Moreover, in order to build a durable classification the Organisation for Economic Co-operation and Development categorization for business segments was used for the purposes of the study. This way of grouping divides different ICT businesses in accordance to the product or service that is delivered to the final consumer. This classification consists of 3 categories: Information and Communication Technology (ICT) Products, Content and Media, and E-Business. In addition, there are 17 subcategories that include 226 acquisitions.

For core products, the framework from (Geis, 2015) was used. It comprises three fields: Internet and Software Services, Technology Platforms, and Media. Nonetheless, due to the fact that Microsoft is involved into considerable activity in productivity and home use software, Software category was added. Also, classification by (Grant, 2010) was utilized for identifying the Resource and Competence.

Finally, the qualitative analysis of the “Letter to Shareholders” made by a Chief Executive Officer in the beginning of annual reports was conducted to discover connections between mergers and acquisitions and a more general context, such as market trends.

4.1.2 Quantitative Analysis of Microsoft’s Mergers & Acquisitions

Based on the literature review, Microsoft’s mergers & acquisitions were defined as one of the factors of success. Therefore, data related with Microsoft’s M&A were used by the study to analyze pre and post-merger company’s performance and to reveal the merger-related effects. This approach was adopted by some other studies on operating performance after mergers completion, in various countries in Asia and Europe. Several researchers employed three-year data in the pre- and post- merger periods, and some others utilized five-year data (pre-merger and post-merger). In this study a set of financial ratios - for comparing the pre- and post-merger operating performance of acquiring firms - is decided to be used for 3 years before and 3 years after the effective year of merger since a data set covers the period only from 1991 to 2020. For the years prior to a merger, the operating ratios of the acquiring firm alone were collected. Post - merger operating ratios for the acquiring business were considered.

To assess the significance of the mergers and acquisitions the Wilcoxon sign-rank test was used to compare the importance of the difference between the ratios for the pre-merger and post-merger periods. The pre-merger and post-merger values of financial ratios were examined in the time interval from 1991 to 2020 for statistical significance.

4.2 Data Collection

In terms of qualitative research all information were gathered from documents published by Microsoft, specialized press, and articles related to Microsoft’s mergers and acquisitions and also the digital library of University of Washington. Whereas information related to the quantitative analysis such as operating income, revenue, gross margin, net income, stockholder’s equity, short – term debt, current portion of long – term debt, long – term debt, excluding current portion, total assets, and total current liabilities was obtained from Microsoft’s annual reports and Microsoft’s reports to the United States Securities and Exchange Commission.

4.3 Qualitative Content and Discourse Analyses

4.3.1 Categorization by Organisation for Economic Co-operation and Development

Qualitative and discourse analyses summarize the information about the Microsoft intentions of acquiring various businesses. In the period between 1987 and 2020, 226 acquisitions were reported by Microsoft. The analyses did not cover the period from 1975 to 1986 since no official information has been discovered.

| Content and Media | | | |
|-------------------|------------------------------|------------------------|-------|
| Categories | Subcategories | Number of Acquisitions | Total |
| | Animation services | 1 | |
| | Audiovisual editing services | 3 | |

| | | | |
|--|---|------------------------|------------|
| Motion picture, video, television and radio content, and related service | Broadcasting Services | 1 | 14 |
| | Motion picture, videotape and television programmed distribution services | 4 | |
| | Sound editing services | 3 | |
| | Visual effects services | 2 | |
| E-Business | | | |
| Categories | Subcategories | Number of Acquisitions | Total |
| E-Business | Retail | 5 | 5 |
| Information and Communication Technology Products | | | |
| Categories | Subcategories | Number of Acquisitions | Total |
| Business and productivity software and licensing services | Database management software, packaged | 8 | 80 |
| | Development tools and programming languages software, packaged | 23 | |
| | General business productivity and home use applications | 42 | |
| | Licensing services for the right to use computer software | 1 | |
| | Network software | 1 | |
| | Online software | 1 | |
| | Operating systems | 3 | |
| | Other application software, packaged | 1 | |
| Computers and peripheral equipment | Input peripherals (keyboard, joystick, mouse etc.) | 2 | 2 |
| Consumer electronic equipment | Monitors and projectors, not incorporating television reception apparatus and not principally used in an automatic data processing system | 1 | 1 |
| Games software | Computer game software | 18 | 28 |
| | Online games | 10 | |
| Information technology consultancy and services | Business process management services | 21 | 62 |
| | Computer systems management services | 4 | |
| | IT consulting services | 1 | |
| | IT design and development services for applications | 17 | |
| | IT design and development services for networks and systems | 13 | |
| Music content and related services | Sound recording services | 1 | 2 |
| | Sound editing and design services | 1 | |
| Online content and related services | Online directories and mailing lists | 1 | 18 |
| | Other information services | 2 | |
| | Other online content n.e.c. | 2 | |
| | Sale of Internet advertising space | 8 | |
| | Web search portal content | 5 | |
| Telecommunications services | Broadband Internet Access Services | 5 | 14 |
| | Mobile telecommunications services – access and use | 5 | |
| | Other Internet telecommunications services | 2 | |
| | Telecommunications services | 2 | |
| Grand Total | | | 226 |

Table 2: Analysis of Microsoft's M&A based on OECD Categorization

Source: made by the author of the thesis

The OECD classification gives an opportunity to sort the acquisitions according to business segments in which acquired organizations were running. As the table above specifies, 91% of M&A belong to the Information and Communication Technology products, 6.2% to Content and Media, and 2.2% to E - Business.

On the basis of the OECD classification and the data about the dates of Microsoft’s mergers and acquisitions, the cyclic behavior was identified. For the more convenience comparison of M&A with the business strategies, which were derived in the literature review, the obtained results were split into three time periods: 1987 – 2000, 2001 – 2013, and 2014 – 2020. The logic of such division is due to different CEOs running Microsoft.

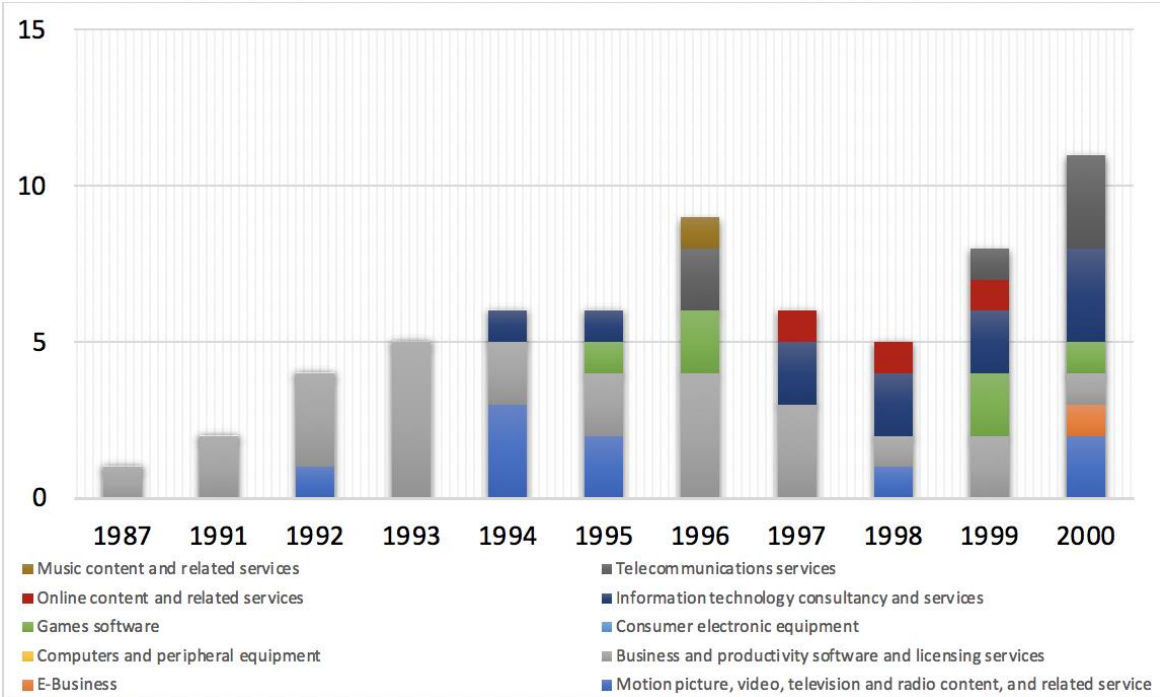


Figure 5: Number of Microsoft’s M&A (1987 - 2000): CEO – Bill Gates
 Source: Made by the author of the thesis

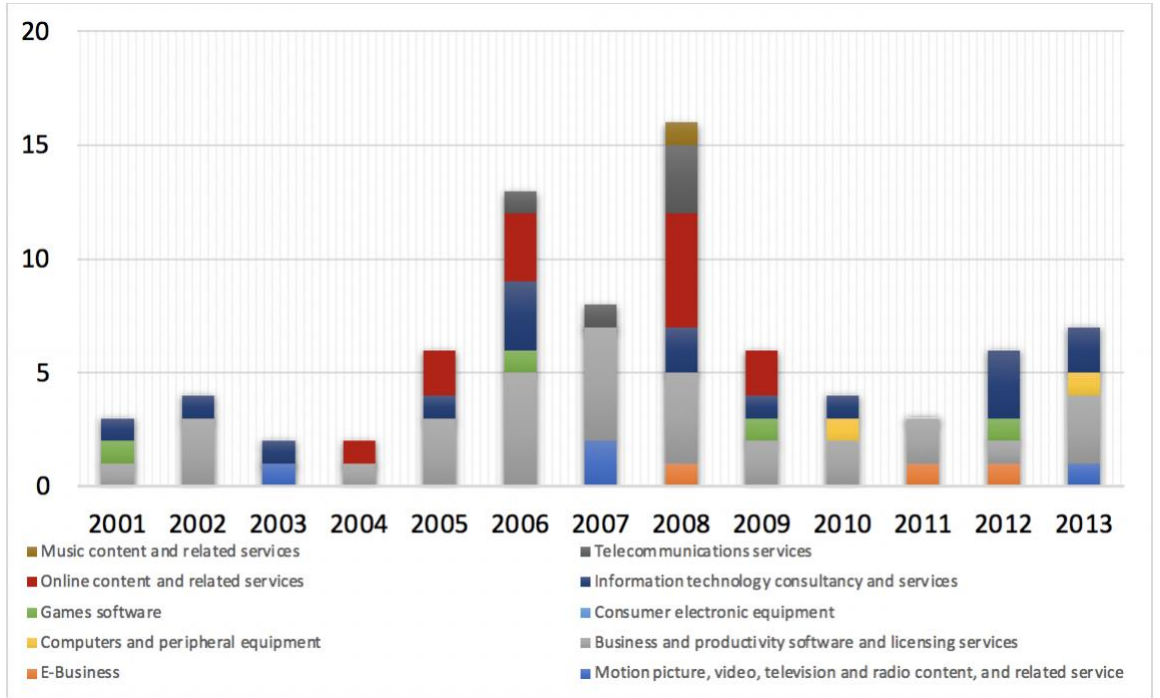


Figure 6: Number of Microsoft’s M&A (2001 - 2013): CEO – Steve Ballmer
 Source: Made by the author of the thesis

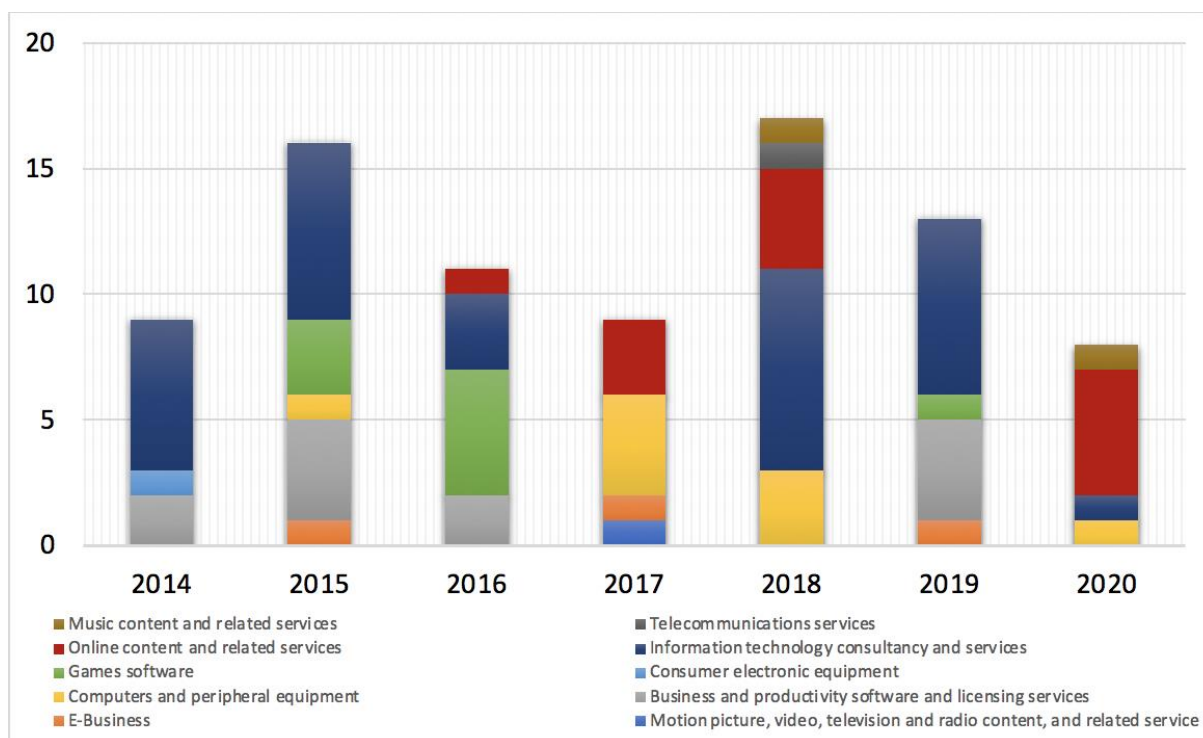


Figure 7: Number of Microsoft's M&A (2014 - 2020): CEO - Satya Nadella

Source: Made by the author of the thesis

4.3.2 Microsoft's M&A (1987-2000): CEO – Bill Gates

Figure 5 demonstrates that from 1987 till 1994 Microsoft's M&A predominantly belong to the category of "Business and productivity software and licensing services". This dynamic can be partly explained by Microsoft engagement in "Low – cost licensing strategy" and "Bundling strategy" since they implied that Microsoft licensed its new operating system – Microsoft Windows - to OEM hardware suppliers and that the company must have got control of delivery channels. In order to get more capabilities and to be ahead of Apple, Microsoft acquired several companies operating in licensing services.

Furthermore, in the beginning of Bill Gates was concerned with the further elaboration of Microsoft OS ("Look Forward, Reasoned Back"), production of applications for the Macintosh ("Make Big Bets without Betting the Company" approach), and development of Microsoft Office ("Build Not Just Products, but Platforms and Ecosystems" approach). These strategic techniques caused a second wave of M&A related to "Business and productivity software and licensing services" (1995 – 1998) and also generated a slight growth of acquisitions belonging to "Game software" subcategory.

Additionally, in 1995 Gates admitted that he overlooked the importance of Internet and launch the new strategy ("Make Big Bets without Betting the Company" approach) that should have embraced the Internet in the market of Web browsers. This explained the growth of M&A of "Online content and related services" (1996 – 2000) and of "Information technology consultancy and services" (1996 – 2000). Nevertheless, but no information has been found to clarify the cyclic patterns of M&A related to "Motion picture, video, television and radio content, and related service" and "Telecommunications services" categories.

4.3.3 Microsoft's M&A (2001-2013): CEO – Steve Ballmer

In the period from 2001 to 2004, the “Business and productivity software and licensing services” category took the leading position due to the Microsoft’s strategy proliferation of computer viruses, spyware, and worms. “Just enough process” and “Just enough documentation” were adopted. This approach required the broad range of Microsoft capabilities that was ensured by acquisitions of businesses operating in the field of data security.

From 2004 to 2005 the rise in the number of Microsoft’s M&A can partially be justified by the implementation of Career Model: due to restructuring and formation of the new work teams one organization was purchased to ensure the product development. Furthermore, from 2003 to 2010 there were four cycles of M&A related to the “Information technology consultancy and services” category. In 2010 and 2012 R&D capabilities and resources were acquired that enabled Microsoft to design performance monitoring and diagnostics for distributed applications connected with .NET framework on the cloud. Besides, the integration of CiS technology added important Microsoft Azure platform features of data storage, backup and recovery.

In the period of 2003 – 2010, there were two cycles of “Online content and related services” M&A and one cycle of “Business and productivity software and licensing services” acquisitions. Such activities were undertaken as a part of the “One Microsoft” strategy that aimed to shift Microsoft to a ‘software and services’ company.

Additionally, in the effort to expand the market share Microsoft also completed M&A in the sphere of games and music: four cycles of acquisitions connected to “Game software” and two cycles of associated with “Music content and related services” were performed after the implementation of the “One Microsoft” Strategy. However, acquisitions of “Motion picture, video, television and radio content, and related service” had rather irregular patterns.

4.3.4 Microsoft's M&A (2014 - 2020): CEO - Satya Nadella

Since 2014 Microsoft has shifted its focus to the intelligent Cloud Platform under the premise of Mobile First Cloud First and started to employ a “Cloud Strategy”. First of all, the company had previously invested in Saas. Nonetheless, because new product teams needed it in the full capacity, Microsoft acquired 3 businesses - “Business and productivity software and licensing services” category – in 2014/15: they ensured on-demand capabilities for software manufacturers, real time data analysis through mobile apps, and machine learning to detect uncommon activities on the cloud.

Moreover, there were two cycles of M&A related to “Information technology consultancy and services” category: acquisitions from 2014 - 2017 were accomplished primarily because the company explored its opportunities with Paas, Iaas, and AI; organizations that joined Microsoft in the period from 2017 – 2020 were acquired for further development of the line of Azure products – Azure Stack, Azure Synapse, and etc. The Microsoft Azure platform was considerably improved by the addition of right management and security features, machine learning and IoT - Internet of Things - capabilities.

In addition, there was a cycle of acquisitions associated with “Game Software” category most of which belong to “Online Games” subcategory. The Azure platformed was strengthened by

the real time collision detection for cloud-based games. At the same time, companies that were a part of M&A of “Consumer electronic equipment” category were acquired not only for production of computer hardware, but mainly for manufacture of Xbox equipment due to the growing demand for such products.

Also, from 2014 – 2019 Microsoft purchased 3 companies - E-Business category – in order to build better analytical models for retail and commerce to make data-driven decisions, provide retailers with a range of technology solutions to modernize their e-commerce platforms and maximize the monetization opportunity.

4.3.5 Microsoft’s M&A by Core Product

| Core Product | | | | | | | |
|--------------|-----------|-----------------|-------------|-----------|----------|-----------|----------|
| Windows OS | Cloud | Mobile Platform | Peripherals | Xbox | TV | Web | Others |
| 98 | 25 | 14 | 3 | 15 | 8 | 60 | 3 |

Table 3: Analysis of Microsoft’s M&A by Core Product (1987 – 2020)
 Source: made by the author of the thesis

Analysis of Microsoft’s M&A by the core product allows to look at the acquisition’s cycles from the different prospective. Table 3 demonstrates the number of acquisitions for each core product and Figure 8 shows the pattern of the shifts over time. It can be inferred that acquisitions connected to Microsoft Windows not only represent the highest proportion of acquisitions – 43.3% - but also occurred regularly over selected time period. Furthermore, acquisitions connected with the Web core product that make up the second highest proportion of Microsoft’s M&A – 26.5% - are mostly concentrated between 1994 and 2010.

Also, acquisitions related Xbox happened with 2-year intervals from 2008 – 2020 were related with “One Microsoft” and Cloud Computing strategies. While, M&A associated with the TV core product were rather irregularly distributed over the 33-year period. Acquisition related to the Cloud and Mobile platform took place during the 2010 - 2020 period, which is not surprising since Microsoft active engagement in the Cloud and AI happened at around that time.

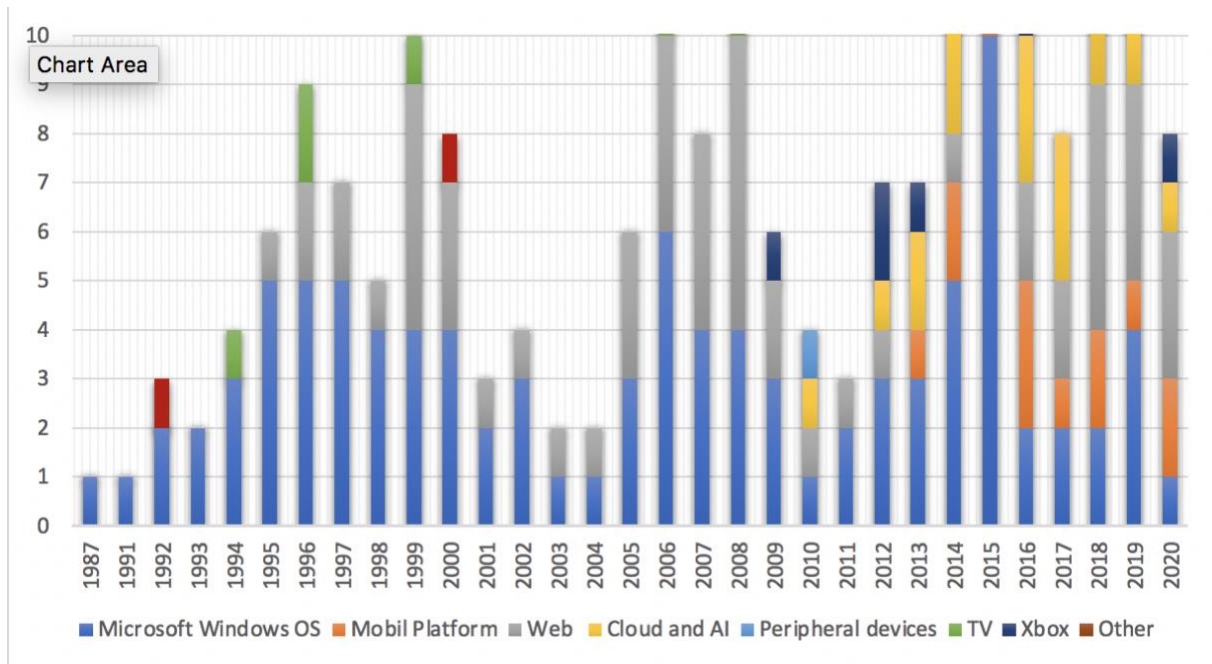


Figure 8: Microsoft's M&A by Core Product (1987 - 2020)

Source: made by the author of the thesis

4.4 Quantitative Analysis

To perform a statistical analysis the paired sample Wilcoxon sign rank test was chosen because this statistical procedure is a popular, nonparametric substitute for the t-test when data is not distributed normally. The Wilcoxon sign rank test contains repeated-measures design. The tests were undertaken in Microsoft Excel with the significance level of 5%. However, before the tests were conducted, financial ratios required for the analysis were calculated in Microsoft Excel as well.

Microsoft's operating performance before and after mergers was assessed using financial measures that are related to the company's operating efficiency performance. Profitability, Returns and Capital Structure Ratios were compared in order to evaluate the pre-merger and post-merger operating performance.

Pre-merger and post-merger performance of Microsoft was compared using the following financial ratios: Operating Profit Margin, Gross Profit Margin, Net Profit Margin, Return on Net worth, Return on Capital Employed, and Debt-equity Ratio. These ratios were also compared during pre-merger and post-merger periods to reveal whether there was a significant difference in the Microsoft's leverage that could possibly explain the change in profitability or returns to the company on invested capital.

4.4.1 Description of Financial Ratios involved in the Analysis

- Operating profit margin = $100 \times \text{Operating income} \div \text{Revenue}$
- Gross profit margin = $100 \times \text{Gross margin} \div \text{Revenue}$
- Net profit margin = $100 \times \text{Net income} \div \text{Revenue}$
- Return on Net worth = $100 \times \text{Net income} \div \text{Stockholders' equity}$

- $\text{Return on Capital Employed} = \text{EBIT} / (\text{Total Assets} - \text{Total Current Liabilities})$
- $\text{Debt to equity} = \text{Total debt} \div \text{Stockholders' equity}$

Operating income (EBIT) - accounting indicator that measures the amount of profit realized from a business's operations, after deducting operating expenses such as wages, depreciation, and cost of goods sold (COGS). (Mantravadi, 2008)

Revenue (Net Sales) – accounting figure that is calculated by deducting from Gross revenues, any effect of statutory deductions like excise and sales tax, which do not accrue to the company, but have to be paid to the government. (Mantravadi, 2008)

Net income - accounting indicator that is calculated as sales minus cost of goods sold, selling, general and administrative expenses, operating expenses, depreciation, interest, taxes, and other expenses. (Mantravadi, 2008)

Stockholders' equity – accounting measure that is arrived at summing up the book value of equity capital, free reserves and surpluses, in the company's balance sheet that represent the shareholders' wealth in the company. (Mantravadi, 2008)

Total debt - sum of all short- and long-term debt.

4.4.2 Time Periods

The calculated financial ratios were covered the time intervals from 1988 to 2020. However, due to the fact that the Wilcoxon sign rank test requires the information from 3 years before and after the mergers the real time period for the test is 1991 – 2017.

During this time period impact of 225 Microsoft M&A was assessed. The acquisition, which took place in 1987 was disregarded since necessary data for calculating financial ratios have not been obtained.

4.4.3 Algorithm of the Wilcoxon Sign Rank Test

In order to perform the Wilcoxon sign rank, test an algorithm shown below must be followed (Harris, et al., 2013; Lopez, et al., 2017):

- First of all, the null and alternative hypothesis must be determined:
 - H_0 : there is no significant difference between pre – and post – merger values of the selected financial ratio
 - H_1 : there is a significant difference between pre – and post – merger values of the selected financial ratio
- The second step is to prepare 2 columns with the calculated financial data: the first columns represents pre – merger values (x_i) for the selected financial ratio and the second column is denoted as post – merger values of the (y_i) financial ratio.

- The next step is to calculate the differences between pre – merger and post – merger values: $d_i = x_i - y_i$, where d_i stands for the difference.
- After that, the third column must be created. It is used to determine whether the results are positive or negative. To perform this task the Excel logic function “= IF” was used. The procedure is: = IF (cell>0;1; -1), which means that if the difference between the two observations is negative, then a value “-1” will display; if it is positive, then a value will be denoted as “1”. In case the difference is zero, the cell will remain empty, and the pair of observations is not counted.
- The next step is to create a new column that is called “Rank”. To calculate the values for this column Excel logic function “= RANK” was used. The procedure is: =RANK (cell, ref, [order]), which means that each cell will have a rank from 1 to 27 since 27 the list consists of 27 observations. Consequently, the lowest rank is 1 and the greatest is zero. “ref” means list of numbers that must be ranked. It is essential to put a dollar sign before the letter and the number of the cell, for example ref is H3:H29, then a dollar sign must be placed as following: \$H\$3:\$H\$29. Also, [order] has two options: ascending (1) and descending (0). However, it was chosen to place the ranks in the ascending order. If the assigned ranks are the same, the average of the ranks will be assigned for each of the cells.
- The fifth step is to calculate the signed rank. It can be done by multiplying the column “Rank” by the column “Sign” to each cell.
- After the signed-rank is calculated, the positive (W_+) and negative (W_-) sums must be found. It can be performed using Excel function “=SUMIF”. The procedure is: = SUMIF (ref; “>0”; ref) and = SUMIF (ref; “<0”; ref) for the positive and negative sum respectively. Then, the absolute values of W_+ and W_- must be compared and the least number is denoted as the test statistics.
- The seventh step is to check the hypothesis:
 - If the critical value of the Wilcoxon sign rank test is less than the value of the Wilcoxon table, then the null hypothesis is rejected. In case of $n=27$ (number of observations) and the significance level alpha of 5%, the table value equals to 107.
 - If the z – score of the Wilcoxon sign rank test is more than 1.96 or less than - 1.96, which is z – score of Z table with significance level alpha of 5%, then the null hypothesis is rejected.

The formula for calculation of the z – score:

$$Z = \frac{\max(W_+, W_-) - \frac{n(n+1)}{4}}{\sqrt{\frac{n(n+1)(2n+1)}{24}}}$$

However, before the z – score is computes it is necessary to calculate the mean and the standard error.

The formula for mean is:

$$\mu_w = \frac{n(n + 1)}{4}$$

The formula for standard error:

$$\sigma_w = \sqrt{\frac{n(n + 1)(2n + 1)}{24}}$$

Where n – number of observations in the list.

4.4.4 Results of the Wilcoxon sign rank test

| Financial Ratio | Critical Value of Wilcoxon Table | Wilcoxon test statistics | Calculated z - score | Critical z – score value (two tailed; alpha 0.05) | Results |
|--|---|---------------------------------|-----------------------------|--|--|
| Hypothesis 1: Operating Profit Margin | 107 | 99 | 2.16 | To reject H0 must be z > 1.96 or z < - 1.96 | Critical value of Wilcoxon test: 99 < 107 z – score: 2.16 > 1.96 The H0 is rejected |
| Hypothesis 2: Gross Profit Margins | 107 | 103 | 2.07 | To reject H0 must be z > 1.96 or z < - 1.96 | Critical value of Wilcoxon test: 103 < 107 z – score: 2.07 > 1.96 The H0 is rejected |
| Hypothesis 3: Net Profit Margin | 107 | 90 | 2.38 | To reject H0 must be z > 1.96 or z < - 1.96 | Critical value of Wilcoxon test: 90 < 107 z – score: 2.38 > 1.96 The H0 is rejected |
| Hypothesis 4: Return on Net worth | 107 | 98 | 2.19 | To reject H0 must be z > 1.96 or z < - 1.96 | Critical value of Wilcoxon test: 98 < 107 z – score: 2.19 > 1.96 The H0 is rejected |

| | | | | | |
|---|-----|----|------|--|--|
| Hypothesis 5: Return on Capital Employed | 107 | 91 | 2.35 | To reject H0 must be $z > 1.96$ or $z < - 1.96$ | Critical value of Wilcoxon test: $91 < 107$ z – score: $2.35 > 1.96$ The H0 is rejected |
| Hypothesis 5: Debt to Equity Ratio | 13 | 25 | 0.39 | To reject H0 must be $z > 1.96$ or $z < - 1.96$ | Critical value of Wilcoxon test: $25 > 13$ z – score: $0.39 < 1.96$ The H0 is accepted |

Table 4: Results of the Wilcoxon sign - rank test
Source: made by the author of the thesis

5 Results and Discussion

5.1 Interpretation of findings

In this section the findings obtained from the literature review and the practical part will be interpreted. In addition, the results derived from the quantitative analysis will be compared with the similar studies that examined the statistical significance of the selected financial ratios in the pre – merger and post – merger periods. Also, this section will include the limitations of the research.

5.1.1 Qualitative Content and Discourse Analyses of Microsoft's M&A

In the practical part an exploration of mergers and acquisitions of Microsoft was displayed over the biggest part of its history, from 1987 to 2020. The distribution of these M&A was presented by business segment and by core product during this period.

Regarding the number of acquisitions, it can be noticed that a dominant share of Microsoft's acquisitions concentrates on complementing the core business, rather than promoting diversification. In the context of Business segment, Business and Productivity Software and Information Technology Consultancy and Services are the most frequent categories. Referring to the core products, Web services, Microsoft Windows, and Cloud are the three main categories.

Furthermore, the obtained results both from categorization by business segment and from core product classification were contrasted with the Microsoft's business strategies described in the literature review. The detailed comparison of the goals of each strategy of Microsoft and the number of companies acquired revealed the correlation between the implementation of Microsoft's business strategies and the acquired firms that belong to certain categories. The cyclic behavior of Microsoft's M&A follows the patterns of changes in the company's business strategy.

The most noticeable cycles are connected with the “low – cost licensing strategy”, “bundling strategy”, “One Microsoft” and Cloud Computing strategy. Microsoft's mergers and acquisitions related to Mobile First Cloud First concept had especially perceptible correlations with the targets of the Cloud Computing strategy. Acquisitions that belong to “Business and productivity software and licensing services” category contributed to the elaboration of innovative capabilities in order to develop an intelligent platform that will manage to convert data into predictive and analytical services. The Microsoft Azure platform was considerably strengthened by the addition of right management and security services, machine learning and Internet of Things – IOT - capabilities, and real time collision detection for cloud-based games. Moreover, the security features implemented in cloud services, allowed Microsoft to present cloud-versions of Office 365 and of its search engine Bing.

Nonetheless, Microsoft's M&A related to “Telecommunications services” were rather irregularly distributed and, therefore, are difficult to be explained by the company's business strategy.

5.1.2 Quantitative Analysis

5.1.2.1 Hypothesis 1

The first hypothesis investigates the statistical significance of pre – merger and post – merger values of operating profit margin.

- Ho: there is no significant difference between pre – and post – merger values of operating profit margin
- H1: there is a significant difference between pre – and post – merger values of operating profit margin

As the Table 5 indicates, the null hypothesis is rejected by the z – score and the Wilcoxon test statistics results. Thus, there is a statistical difference between pre –and post – merger values.

Furthermore, the mean pre – merger value of operating profit margin is 35% and that of post – merger period is 39%, and this growth is found statistically significant according to the results obtained from the Wilcoxon sing – rank test. If a company is able to generate operating profit rather than operating loss, it is a positive sign for potential investors because such growth indicates that operating margin creates a value for shareholders and continuous loan servicing for lenders. Also, a continuous rise in profit margin over time demonstrates that profitability is improving due to either factors that have an impact on revenue build-ups such as higher pricing, proper marketing, and growth in customer demand or efficient control of operating costs.

5.1.2.2 Hypothesis 2

As the Table 5 shows, the second hypothesis is used to determine whether there is a difference between the of pre – merger and post – merger values of gross profit margin.

- Ho: there is no significant difference between pre – and post – merger values of gross profit margin.
- H1: there is a significant difference between pre – and post – merger values of gross profit margin.

The results column of the Table 5 demonstrates that the null hypothesis about zero significance between the of pre – merger and post – merger values of gross profit margin is rejected.

Additionally, there is a slight growth in the mean values of gross profit margin of pre – merger and post – merger intervals – 78% and 82% respectively. This increase has been found statistically significant in accordance with the Wilcoxon sing – rank test. Moreover, an increase in gross profit margin means that a business is capable of generating a considerable portion of profit on sales, as long as it is in control of overhead costs. Thus, the higher the gross profit margin the more attractive a firm id for investors.

5.1.2.3 Hypothesis 3

Is there a statistical difference between pre – merger and post – merger values of net profit margin?

- Ho: there is no significant difference between pre – and post – merger values of net profit margin
- H1: there is a significant difference between pre – and post – merger values of net profit margin

As the Table 5 indicates the null hypothesis is rejected by the z – score and the Wilcoxon test statistics results. Consequently, there is a statistical significance between pre – and post – merger values of net profit margin.

Also, the mean pre – merger value of net profit margin is 26% and that of post – merger period is 30%, and this growth is found statistically significant according to the results obtained from the Wilcoxon sing – rank test. Such increase indicates that the amount of net profit Microsoft obtains per dollar of revenue gained has increased and that a company has become more efficient at converting sales into actual profit.

5.1.2.4 Hypothesis 4

The first hypothesis investigates the statistical significance of pre – merger and post – merger values of return on net worth.

- Ho: there is no significant difference between pre – and post – merger values of return on net worth
- H1: there is a significant difference between pre – and post – merger values of return on net worth

From the results obtained from Table 5, it is clear that the null hypothesis about no difference is rejected and the alternative hypothesis is accepted. Moreover, there is a steep growth in the mean values of gross profit margin in pre – merger and post – merger intervals – 27% and 33% respectively, and this rise is found statistically significant based on the results obtained from the Wilcoxon sing – rank test. Therefore, an increasing percentage means higher efficiency in generating profit on every dollar of investment.

5.1.2.5 Hypothesis 5

Is there a statistical difference between pre – merger and post – merger values of return on capital employed?

- Ho: there is no significant difference between pre – and post – merger values of return on capital employed

- H1: there is a significant difference between pre – and post – merger values of return on capital employed

As the Table 5 demonstrates, the null hypothesis is rejected by the z – score and the Wilcoxon test statistics results. Hence, there is a statistical significance between pre – and post – merger values of return on capital employed. Besides, the mean pre – merger value of return on capital employed is 28% and that of post – merger period is 36%, and this growth is found statistically significant according to the results obtained from the Wilcoxon sing – rank test. Additionally, an increasing return on capital employed shows that a larger proportion of profits can be invested back into the business for the benefit of shareholders. Microsoft’s reinvested capital was employed again at a higher rate of return. It means that higher earnings-per-share was produced.

5.1.2.6 Hypothesis 6

As the Table 5 shows, the sixth hypothesis is used to determine whether there is a difference between the of pre – merger and post – merger values of debt to equity ratio.

- Ho: there is no significant difference between pre – and post – merger values of debt to equity ratio
- H1: there is a significant difference between pre – and post – merger values of debt to equity ratio

The results column of the Table 5 demonstrates that the null hypothesis about zero significance between the of pre – merger and post – merger values of the debt to equity ratio is accepted by the z – score and the Wilcoxon test statistics results.

Further, there is a minor decrease in the mean values of the debt to equity ratio in pre – merger and post – merger intervals – 55% and 47% respectively, and this rise is not found statistically significant based on the results obtained from the Wilcoxon sing – rank test. Such decline in the value of debt to equity ratio implies that Microsoft lowered the amount of financing by debt via lenders and increased funding through equity via shareholders.

The above results of the Wilcoxon sign – rank test point out that the net profits of Microsoft had increased, due to possible lower interest costs, caused by lower debt to manage the merger process. Furthermore, M&A resulted in increasing returns on investments, as seen from returns on net worth and capital employed. The results of the test also implied that Microsoft was motivated probably by considerations like consolidation of asset or market share etc., rather than rising operating efficiency or asset/capital base utilisation.

5.2 Discussion

In the first part of the discussion the results gained from the quantitative analysis will be compared with the similar study that examined the impact of mergers and acquisitions on the chosen financial ratios of selected Indian airline companies in order to see whether the own

results corroborate with results from similar studies. In the second part the research questions will be answered.

5.2.1 Post – merger Financial performance of Selected Airlines Companies

The scope of (Mantravadi, 2008) research was to analyze the difference between pre- and post-merger values of operating performance, for a longer time period of reference, for different industries, including chosen airline companies. Methodology of the research was identical to that was used for analysis of Microsoft’s M&A, and the financial ratios also was as follows: operating profit margin, gross profit margin, net profit margin, return on net worth, return on capital employed, and debt to equity. The time intervals were 3 years before and 3 years after the effective year of merger.

To test the values of financial measurement of the research (Mantravadi, 2008) used paired t-test to reveal whether acquisitions have caused an improvement or deterioration of the acquiring company’s operating performance. Time interval covered 12 years period from 1991 to 2003 and the sample size involved 29 firms.

- H0: there is no statistical difference between the pre – and post – merger value of the selected financial ratio
- H1: there is a statistical difference between the pre – and post – merger value of the selected financial ratio

Reason to reject the null hypothesis:

- If the absolute value of the t-value is greater than the critical value, then the null hypothesis is rejected: $|t\alpha| > t \text{ critical}$.

| Financial Ratio | Pre-merger (3 years before) | Post-merger (3 years after) | t (0.05 significance) | t-critical (two tail) | Results |
|--|-----------------------------|-----------------------------|-----------------------|-----------------------|----------------------------------|
| Hypothesis 1: Operating Profit Margin | 21.68 | 20.83 | 0.68 | 1.99 | $0.68 < 1.99$; accept the H0 |
| Hypothesis 2: Gross Profit Margins | 17.52 | 15.74 | 1.47 | 1.99 | $1.47 < 1.99$; accept the H0 |
| Hypothesis 3: Net Profit Margin | 7.5 | 4.22 | 2.43 | 1.99 | $2.43 > 1.99$; reject the H0 |
| Hypothesis 4: Return on Net worth | 16.62 | 6.76 | 3.39 | 1.99 | $3.39 > 1.99$; reject the H0 |
| Hypothesis 5: Return on Capital Employed | 25.61 | 16.49 | 5.37 | 1.99 | $5.37 > 1.99$; reject the H0 |
| Hypothesis 5: Debt to Equity Ratio | 1.13 | 1.35 | -1.67 | 1.12 | $ -1.67 > 1.12$; reject the H0 |

Table 5: Results of the paired t-test of the selected Indian airline companies

Source: (Mantravadi, Meher Pramod. 2008. *Impact of mergers and acquisitions on operating performance of firms in India*. 2008)

As Table 6 demonstrates, the comparison of the pre-merger and post-merger operating performance ratios for the sample set indicated that there was a slight decrease in the mean operating profit margin, from 21.68% to 20.83%, and gross profit margin ratios, from 17.52% to 15.74%. Nevertheless, these drops were not statistically significant: t-statistic values of 0.68 and 1.47 respectively. Despite that, there was a significant fall of net profit margins, from 7.5% to 4.22%, which was found statistically significant.

Although, mean values of return on net worth and return on capital employed experienced a significant decrease, and it was found to be statistically significant: t-values of 3.394 and 5.37 respectively. Moreover, a marginal leverage effect seems to take place as the debt-equity ratios indicated before and after the acquisitions, from 1.13 to 1.35, but not statistically significant: t-value of -1.67.

5.2.2 Results of the Comparison

From the results of the Wilcoxon sign – rank test and the paired t – test conducted by (Mantravadi, 2008) it can be inferred that outcomes of these methods have several similarities. First of all, in both cases the null hypothesis regarding net profit margin, return on net worth, and return on capital employed was rejected. This implies that in both situations the net profits of companies involved in the analyses increased most probably due to lower interest costs, promoted by a lower debt to manage the merger process. Secondly, in both cases acquired businesses appeared to be encouraged by concerns like consolidation of market share or assets, rather than asset /capital base utilisation and increasing operating efficiency.

In addition, that indicates that companies involved in both analyses managed to improve profit margins and cost efficiencies through forward/ backward integration as well as to translate that into noticeable returns on investment.

5.2.3 Answers to Research Questions

The first research question is “*Are there cyclic behaviors of Microsoft M&A based on the results of the strategies described the literature?*”. This question was addressed by conducting qualitative content and discourse analyses. The results obtained from these analyses imply that an answer is “Yes”. The qualitative and discourse analyses allowed to determine the cycles of Microsoft M&A in the period from 1987 – 2020 by building a stable categorization of mergers and acquisitions and transforming it into bar charts divided into three time intervals. Also, cyclic patterns of the company’s acquisitions were compared to the certain business strategies implemented in the periods of acquisitions’ cycles in order to explain underlying causes of the Microsoft’s acquiring behavior.

The second research question is “*Does M&A according to the pre- and post-merger operating ratios have a significant impact on Microsoft performance?*” This research question was addressed by conducting a quantitative analysis. The outcomes of this analysis were translated from the numeric values into the meaningful results that allowed to say that an answer to this research question is “Yes”. The values of selected pre- and post-merger financial ratios were found to be statistically significant to have an impact on the Microsoft’s overall performance. After that, the potential outcomes of this impact on the Microsoft’s performance were suggested.

5.3 Limitations of the research

First of all, the qualitative, discourse, and quantitative analysis were conducted in the period from 1987 to 2020 and from 1991 to 2020 respectively since no information about Microsoft's mergers and acquisitions has been discovered in the years preceding the selected time intervals. Furthermore, no annual reports have been found available prior to 1987.

Regarding the qualitative content and discourse analyses the acquisitions related to the "Telecommunication services" category were considered to have an irregular pattern and no applicable explanations have been found to clarify these irregularities. Moreover, the cycles of acquisitions were compared with the goals of the Microsoft's exercised business strategies on the basis of the available literature, Microsoft's annual reports, and the "Letter of the Shareholder. However, the possibility that some firms were acquired by Microsoft for the reason not relevant to the business strategy cannot be excluded.

Finally, there could also be a sampling bias introduced due to the selection criteria adopted for arriving at the sample – information for the statistical test should have been 3 years before and after an effective year of merger. However, due to multiple acquisitions the data can partially be distorted.

6 Conclusion

The conclusion part will focus on main and partial objectives as well as on the main findings that have been discovered in the thesis.

First of all, the main objective of the study was to analyze the changes in the business strategy of Microsoft Corporation. It has mainly been done in the literature review.

The first partial objective was to investigate evolution of a Microsoft's business strategy and determines the success factors of the company. It was performed in the literature review. The author of the study provides a detailed overview of shifts in the Microsoft's business strategy in the "Gates Era" as well as in the "Post Gates Era", and sales and customer experience, a broad network of partners, and M&A were determined as Microsoft's factors of success. After that, the systematic view of business strategies and success factors has become the base for the research that was conducted in the practical part.

The second partial objective was to study the changes in the Microsoft's position including the current state. The thesis is focused on this objective mainly in the "Post Gates Era", when the Microsoft team had decided to shift its focus on the Cloud computing strategy. The thesis describes the organizational changes that had been undertaken in order to shift the production and development departments to the new set of strategic goals and highlight the current state position of the company. This part of the thesis also presents a current position of Microsoft's products and services in the IT market. Also, strengths and weaknesses of implemented business strategies were assessed from the company's viewpoint. It was again conducted in the literature review. Benefits and drawback of the Microsoft's strategies were provided for each of them, and the consequences of their implementation were formulated.

The third partial objective was to derive and analyze the most effective factor of success from the position of company's profitability. It was presented in the practical part of the thesis. The research questions were formulated on the basis of the results obtained from the literature review, then the research designed was determined using various frameworks and classification relevant to address the research questions. Subsequently, Microsoft's mergers and acquisitions as a factor of success was analyzed from the position of qualitative, quantitative, and discourse analyses. The qualitative and discourse analyses helped to discover the cyclic behavior of Microsoft's M&A and to contrast the findings with the business strategies derived in the literature review. The quantitative part was presented in the form of the statistical analysis by the means of the Wilcoxon sign-rank test. It was useful to analyze the statistical significance of mergers and acquisitions on Microsoft's operating ratios. As a result, outcomes of all techniques were interpreted, and on the base of gathered results the significance of Microsoft's M&A as a factor of success was assessed.

The fourth partial objective was to compare the result obtained from the quantitative analysis with the similar studies in order to analyze whether the results achieved in the own research correlate with the outcomes of the similar studies. It was performed by contrasting the results of the Wilcoxon sign-rank test with the those of an analysis of post – merger financial performance of selected airlines companies. The similarities of the findings were described along with providing the explanations of the underlying causes regarding cost efficiencies, consolidation of market share/ assets, and fluctuations in net profit.

7 References

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8 Appendix

| Date | Name of a Company | Business Category | Abrv. |
|--------------------|-------------------------|--|-------|
| September 21, 2020 | ZeniMax Media | Computer game software | F |
| July 7, 2020 | Orions Systems | IT design and development services for networks and systems | G |
| June 22, 2020 | CyberX | IT design and development services for networks and systems | G |
| June 18, 2020 | ADRM Software | Business process management services | G |
| May 19, 2020 | Softomotive | IT design and development services for networks and systems | G |
| May 14, 2020 | Metaswitch Networks | Telecommunications services | I |
| April 15, 2020 | npm^ | Development tools and programming languages software, packaged | C |
| March 26, 2020 | Affirmed Networks | IT design and development services for networks and systems | G |
| October 21, 2019 | Mover | IT design and development services for applications | G |
| September 18, 2019 | Semmler^ | Computer systems management services | G |
| September 4, 2019 | Movere | Computer systems management services | G |
| August 19, 2019 | jClarity | Development tools and programming languages software, packaged | C |
| August 5, 2019 | PromoteIQ | Retail | B |
| July 29, 2019 | BlueTalon | General business productivity and home use applications | C |
| June 17, 2019 | Pull Panda | Computer systems management services | G |
| June 9, 2019 | Double Fine Productions | Computer game software | F |
| May 28, 2019 | Drawbridge* | Business process management services | G |
| May 23, 2019 | Dependabot^ | IT design and development services for applications | G |
| April 18, 2019 | Express Logic | Operating systems | C |
| February 4, 2019 | DataSense | IT design and development services for applications | G |
| January 24, 2019 | Citus Data | Database management software, packaged | C |
| November 30, 2018 | Spectrum^ | Mobile telecommunications services – access and use | I |
| November 19, 2018 | FSLogix | Online games | F |
| November 14, 2018 | XOXCO | Development tools and programming languages software, packaged | C |
| November 10, 2018 | Obsidian | Computer game software | F |
| November 10, 2018 | Inxile | Computer game software | F |
| October 8, 2018 | Glint* | Database management software, packaged | C |
| September 13, 2018 | Lobe | IT design and development services for networks and systems | G |
| June 20, 2018 | Bonsai | IT design and development services for networks and systems | G |
| June 18, 2018 | Flipgrid | Other information services | H |
| June 10, 2018 | Ninja Theory | Computer game software | F |
| June 10, 2018 | Playground Games | Computer game software | F |
| June 10, 2018 | Undead Labs | Computer game software | F |
| June 10, 2018 | Compulsion Games | Computer game software | F |
| June 04, 2018 | GitHub | Development tools and programming languages software, packaged | C |
| May 20, 2018 | Semantic Machines | IT design and development services for networks and systems | G |
| January 29, 2018 | PlayFab | Online games | F |
| January 3, 2018 | Avere Systems | IT support services | G |
| October 3, 2017 | AltSpaceVR | Development tools and programming languages software, packaged | C |
| August 15, 2017 | Cycle Computing | General business productivity and home use applications | C |
| June 29, 2017 | Cloudyn | General business productivity and home use applications | C |
| June 8, 2017 | Hexadite | Business process management services | G |
| April 18, 2017 | Intentional Software | Development tools and programming languages software, packaged | C |
| April 10, 2017 | Deis | IT design and development services for applications | G |
| January 17, 2017 | Simplygon | Audiovisual editing services | A |
| January 13, 2017 | Maluuba | IT design and development services for networks and systems | G |
| August 22, 2016 | Genee | General business productivity and home use applications | C |
| August 11, 2016 | Beam | Online games | F |
| June 28, 2016 | Code Connect | Online games | F |

| | | | |
|--------------------|-----------------------------|--|---|
| June 16, 2016 | Wand Labs | Information technology consultancy and services | G |
| June 13, 2016 | LinkedIn | Online content and related services | H |
| May 3, 2016 | Solair | IT design and development services for applications | G |
| February 24, 2016 | Xamarin | Online games | F |
| February 3, 2016 | SwiftKey | General business productivity and home use applications | C |
| January 19, 2016 | MinecraftEdu | Computer game software | F |
| January 13, 2016 | Event Zero | Information technology consultancy and services | G |
| December 21, 2015 | Talko | Online games | F |
| December 12, 2015 | Metanautix | Database management software, packaged | C |
| November 9, 2015 | Secure Islands | Information technology consultancy and services | G |
| November 5, 2015 | Mobile Data Labs | Information technology consultancy and services | G |
| October 2, 2015 | Havok | Computer game software, packaged | G |
| September 28, 2015 | Adxstudio Inc | Information technology consultancy and services | G |
| September 11, 2015 | Double Labs | IT design and development services for applications | G |
| September 8, 2015 | Adallom | IT design and development services for networks and systems | G |
| September 3, 2015 | VoloMetrix | General business productivity and home use applications | C |
| August 3, 2015 | Incent Games Inc | Computers and peripheral equipment | D |
| July 16, 2015 | FieldOne Systems LLC | Computer game software | F |
| June 10, 2015 | BlueStripe | IT design and development services for networks and systems | G |
| June 2, 2015 | 6Wunderkinder | Computer game software | F |
| April 14, 2015 | Datazen Software | General business productivity and home use applications | C |
| February 11, 2015 | Sunrise | General business productivity and home use applications | C |
| January 23, 2015 | Revolution Analytics | Retail | B |
| January 20, 2015 | Equivio | General business productivity and home use applications | C |
| December 11, 2014 | HockeyApp | Information technology consultancy and services | G |
| December 1, 2014 | Acompli | Information technology consultancy and services | G |
| November 13, 2014 | Aorato | Information technology consultancy and services | G |
| September 15, 2014 | Mojang | Information technology consultancy and services | G |
| July 11, 2014 | InMage | General business productivity and home use applications | C |
| July 2, 2014 | SyntaxTree | Consumer electronic equipment | E |
| May 28, 2014 | Captain | Business process management services | G |
| May 1, 2014 | GreenButton | Computer game software, packaged | G |
| January 7, 2014 | Parature | General business productivity and home use applications | C |
| October 23, 2013 | Apiphany | General business productivity and home use applications | C |
| June 3, 2013 | InRelease | Development tools and programming languages software, packaged | C |
| March 7, 2013 | NetBreeze | Business process management services | G |
| March 4, 2013 | MetricsHub | Information technology consultancy and services | G |
| February 2, 2013 | Pando Networks | Audiovisual editing services | A |
| December 28, 2012 | R2 Studios | Computer game software | F |
| October 16, 2012 | StorSimple Inc. | IT design and development services for applications | G |
| October 15, 2012 | MarketingPilot | Information technology consultancy and services | G |
| October 4, 2012 | PhoneFactor Inc. | Information technology consultancy and services | G |
| July 9, 2012 | Perceptive Pixel Inc. | General business productivity and home use applications | C |
| June 25, 2012 | Yammer Inc. | Retail | B |
| November 22, 2011 | VideoSurf Inc. | General business productivity and home use applications | C |
| June 7, 2011 | Prodiance | Retail | B |
| May 10, 2011 | Skype | General business productivity and home use applications | C |
| November 26, 2010 | Canesta, Inc. | Computers and peripheral equipment | D |
| October 6, 2010 | AVIcode | Information technology consultancy and services | G |
| February 2, 2010 | Sentillion | General business productivity and home use applications | C |
| December 11, 2009 | Opalis Software | Development tools and programming languages software, packaged | C |
| December 10, 2009 | Sentillion | Database management software, packaged | C |
| November 11, 2009 | Teamprise | Information technology consultancy and services | G |
| September 22, 2009 | LS Retail and To Increase | Online content and related services | H |
| September 21, 2009 | Interactive Super Computing | Online content and related services | H |

| | | | |
|--------------------|----------------------------|--|---|
| May 7, 2009 | BigPark Inc. | Computer game software | F |
| August 29, 2008 | Greenfield Online Inc. | Information technology consultancy and services | G |
| July 24, 2008 | DATAlegro Inc. | General business productivity and home use applications | C |
| July 14, 2008 | Zoomix | Online content and related services | H |
| July 1, 2008 | Powerset | Online content and related services | H |
| June 27, 2008 | MobiComp | Information technology consultancy and services | G |
| June 17, 2008 | Navic Networks | Online content and related services | H |
| April 9, 2008 | Farecast | Sound editing and design services | J |
| March 20, 2008 | Komoku | General business productivity and home use applications | C |
| March 14, 2008 | Rapt Inc. | Telecommunications services | i |
| March 12, 2008 | Kidaro | Telecommunications services | i |
| March 6, 2008 | Credentica | Telecommunications services | i |
| February 27, 2008 | YaData | Online content and related services | H |
| February 11, 2008 | Danger Inc. | General business productivity and home use applications | C |
| February 7, 2008 | Caligari Corporation | Online content and related services | H |
| January 21, 2008 | Calista Technologies | Operating systems | C |
| January 8, 2008 | Fast Search & Transfer ASA | Retail | B |
| December 12, 2007 | Multimap | General business productivity and home use applications | C |
| October 29, 2007 | Global Care Solutions | Database management software, packaged | C |
| August 30, 2007 | Parlano | General business productivity and home use applications | C |
| July 26, 2007 | AdECN, Inc. | General business productivity and home use applications | C |
| May 18, 2007 | aQuantive, Inc. | Broadcasting Services | A |
| May 3, 2007 | ScreenTonic | Telecommunications services | i |
| March 14, 2007 | Tellme Networks, Inc. | Sound editing services | A |
| February 26, 2007 | Medstory Inc. | Database management software, packaged | C |
| October 12, 2006 | Colloquis | General business productivity and home use applications | C |
| July 26, 2006 | Azyxxi | Information technology consultancy and services | G |
| July 18, 2006 | Winternals | Online content and related services | H |
| July 17, 2006 | Softricity | Online content and related services | H |
| May 18, 2006 | Whale Communications | Information technology consultancy and services | G |
| May 4, 2006 | Massive Inc. | Computer game software | F |
| April 6, 2006 | Lionhead Studios | Information technology consultancy and services | G |
| April 3, 2006 | ProClarity Corp | Online content and related services | H |
| March 7, 2006 | Apptimum Inc. | Development tools and programming languages software, packaged | C |
| March 7, 2006 | Onfolio Inc. | Development tools and programming languages software, packaged | C |
| February 13, 2006 | Motion Bridge | Telecommunications services | i |
| September 19, 2005 | Alacris Inc. | Online content and related services | H |
| November 3, 2005 | FolderShare | Online content and related services | H |
| November 3, 2005 | media-streams.com AG | General business productivity and home use applications | C |
| August 30, 2005 | Teleo Inc. | Development tools and programming languages software, packaged | C |
| July 20, 2005 | FrontBridge Technologies | Information technology consultancy and services | G |
| March 10, 2005 | Groove Networks Inc. | IT design and development services for applications | C |
| February 8, 2005 | Sybari Software Inc. | General business productivity and home use applications | C |
| December 16, 2004 | GIANT Company Software | Online content and related services | H |
| April 26, 2004 | ActiveViews | Database management software, packaged | C |
| April 30, 2003 | PlaceWare | IT design and development services for applications | G |
| February 19, 2003 | Connectix | Visual effects services | A |
| October 22, 2002 | Vicinity | Information technology consultancy and services | G |
| September 24, 2002 | Rare | General business productivity and home use applications | C |
| Sept. 10, 2002 | XDegrees | Development tools and programming languages software, packaged | C |
| May 7, 2002 | Navision | General business productivity and home use applications | C |
| May 3, 2001 | Ensemble Studios | Computer game software | F |
| April 30, 2001 | NCompass Labs | Development tools and programming languages software, packaged | C |
| Jan. 12, 2001 | Design Intelligence | Information technology consultancy and services | G |
| December 21, 2000 | Great Plains Software | Information technology consultancy and services | G |

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|--------------------|--|---|---|
| December 5, 2000 | Digital Anvil | Information technology consultancy and services | G |
| Oct. 26, 2000 | WebAppoint | Telecommunications services | i |
| September 18, 2000 | Pacific Microsonics Inc. | Information technology consultancy and services | G |
| September 13, 2000 | MongoMusic | Sound editing services | A |
| July 12, 2000 | NetGames USA | Online software | C |
| June 19, 2000 | Bungie Software | Computer game software | F |
| June 12, 2000 | Driveoff.Com | Retail | B |
| February 29, 2000 | Peach Networks | Motion picture, videotape and television programmed distribution services | A |
| Oct. 29, 1999 | Entropic | | |
| Sept. 17, 1999 | Softway Systems | Licensing services for the right to use computer software | C |
| Sept. 15, 1999 | Visio | Computer game software | F |
| July 21, 1999 | STNC | Telecommunications services | i |
| July 7, 1999 | ZOOMIT | Information technology consultancy and services | G |
| July 1, 1999 | Sendit | Telecommunications services | I |
| June 14, 1999 | OmniBrowse | Network software | C |
| June 7, 1999 | ShadowFactor | Online games | F |
| April 26, 1999 | Jump Networks | Online content and related services | H |
| April 19, 1999 | Access Software | Information technology consultancy and services | G |
| March 4, 1999 | CompareNet | Telecommunications services | i |
| Nov. 5, 1998 | LinkExchange | Online content and related services | H |
| August 25, 1998 | Valence Research | Information technology consultancy and services | G |
| April 28, 1998 | The MESA Group | Information technology consultancy and services | G |
| April 9, 1998 | Firefly Network | Motion picture, videotape and television programmed distribution services | A |
| Feb. 23, 1998 | Flash Communications | Development tools and programming languages software, packaged | C |
| Dec. 31, 1997 | Hotmail | General business productivity and home use applications | C |
| Aug. 5, 1997 | VXtreme | Online content and related services | H |
| June 30, 1997 | LinkAge Software | Information technology consultancy and services | G |
| June 13, 1997 | Cooper & Peters | Other application software, packaged | C |
| May 7, 1997 | Dimension X | General business productivity and home use applications | C |
| April 6, 1997 | WebTV Networks | Information technology consultancy and services | G |
| March 3, 1997 | Intersé | Development tools and programming languages software, packaged | C |
| Dec. 10, 1996 | NetCarta | Database management software, packaged | C |
| Nov. 20, 1996 | ResNova Software | Telecommunications services | I |
| Oct. 29, 1996 | OLAP technology from Panorama Software | Telecommunications services | I |
| June 17, 1996 | Electric Gravity Inc. | Computer game software | F |
| June 11, 1996 | eShop Inc. | Development tools and programming languages software, packaged | C |
| April 15, 1996 | EXOS Inc. | Online games | F |
| April 8, 1996 | aha! software | Development tools and programming languages software, packaged | C |
| March 12, 1996 | Colusa and Aspect | Sound recording services | J |
| Jan. 16, 1996 | Vermeer Technologies Inc. | Development tools and programming languages software, packaged | C |
| Dec. 12, 1995 | Bruce Artwick Organization Ltd. | Computer game software | F |
| Nov. 6, 1995 | Interoperability Technology, Expertise from Netwise Inc. | Information technology consultancy and services | G |
| Oct. 16, 1995 | The Blue Ribbon SoundWorks, Ltd. | Development tools and programming languages software, packaged | C |
| July 31, 1995 | Dare to Dream Entertainment | Sound editing services | A |
| July 10, 1995 | SNMP Technology From Network Managers | Motion picture, videotape and television programmed distribution services | A |
| Feb. 23, 1995 | RenderMorphics, Ltd. | Operating systems | C |
| Nov. 15, 1994 | One Tree Software | Information technology consultancy and services | G |
| Nov. 1, 1994 | NextBase | Motion picture, videotape and television programmed distribution services | A |
| Sept. 27, 1994 | Altamira | AUDIovisual editing services | A |
| June 28, 1994 | SOFTIMAGE | Animation services | A |
| February 5, 1993 | Amforge Industries | Business and productivity software and licensing services | C |
| March 17, 1993 | Strength Hypo | Business and productivity software and licensing services | C |

| | | | |
|-----------------|------------------------|---|---|
| May 1, 1993 | TRF Ltd | Business and productivity software and licensing services | C |
| June 16, 1993 | Eicher | Business and productivity software and licensing services | C |
| August 27, 1993 | Videocon International | Business and productivity software and licensing services | C |
| July 27, 1992 | Forethought, Inc. | Motion picture, videotape and television programmed distribution services | C |
| March 31, 1991 | Consumers Software | Development tools and programming languages software, packaged | C |
| April 16, 1991 | S K P Securities | Development tools and programming languages software, packaged | C |
| July 30, 1987 | Forethought, Inc. | Development tools and programming languages software, packaged | C |

Table 6: Microsoft's Acquisition History

Source: (Microsoft Corporation . Investor Relations. *microsoft.com*. [Online] [Citace: 5. December 2020.] <https://www.microsoft.com/en-us/Investor/acquisition-history.aspx>.
& Lopez, Giron, Jose, Ali and Vialle, Pierre. 2017. *A preliminary analysis of mergers and acquisitions by Microsoft from 1992 to 2016: A resource and competence perspective*. Passau : International Telecommunications Society, 2017)