The Impact of Technology and COVID-19 on Mergers and Acquisitions: Implications for Supply Chain Management

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***Abstract*— This paper explores the issue of M&A as it pertains to Supply chain elements such as Enterprise Resource Planning (ERP), the role of technology, and supply chain efficiency. By exploring the issue further, the research seeks to assess the recent trend of increased mergers and acquisitions (M&A) and how the activities affect the supply chain management (SCM) role. The results are important in understanding current trends in SCM when it comes to mergers and acquisitions. The discussion covered the role that COVID-19 played in increased trends in M&A and technology's role in M&A activities and success. The ultimate goal is to understand how technology and COVID-19 impact M&A activities and how, in turn, the supply chain management role gets affected.**

Keywords*— *Mergers & Acquisitions, Supply Chain, Blockchain Technology, Covid-19, Enterprise Resource Planning

1. Introduction

Mergers and acquisitions (M&A) are standard strategic moves for companies to gain a competitive advantage and survive. Applying an M&A strategy has recently become a common trend, especially after the pandemic. Within the first half of 2024, the value of M&A has risen by 5% compared to the previous year during the same period [16]. There were $2.9 trillion in transactions in the U.S. in 2021, a 55% rise from the previous year with $1.9 trillion. According to [11], one of the factors increasing the rates of M&A is the inefficiencies within the economic system. Since the pandemic, M&A rates have increased globally, and companies have tried to remain afloat and become resilient to the changing market conditions and uncertainties.

Moreover, the need to strengthen the technological capacity of the companies to gain a competitive advantage is the other motivator for M&A post-pandemic. The pandemic stimulated the growth of technology across all the industries. Factors driving the demand include the need for telehealth, digital communication, and contactless transactions within the supply chain networks. It thus presented an opportunity for companies to innovate to increase the value of their offering.

Within the supply chain industry, M&A is expected due to the need to reach the global market and reduce the risk of uncertainty and unstable market conditions. Most supply chain networks were forced into survival mode, while others ceased operating during and after the pandemic. Moreover, other changing trends, such as technology adoption, leave some supply chain systems (SCS) obsolete, leading to mergers and acquisitions to stay afloat. Therefore, M&A offers a mechanism that companies can utilize economies of scale, improve their capabilities, expand their market share, mitigate risk, and streamline their operations [16]. By combining resources, the economies of scale allow the supply chain networks to reduce costs and enhance efficiency, which keeps them operational and ensures their viability and relevance in the market.

Despite the rising trends in M&A in supply chain networks, more research is needed regarding the success of mergers and acquisitions. According to [9], some mergers lead to loss of value, erosion of market share, and disruption of operations, leading to losses instead of gains. There is also a need to assess how the pandemic and technology play an essential role in shaping M&A transactions on a global scale. The paper aims to explore the performance of mergers and acquisitions and analyze the M&A transactions that failed and those that succeeded. Further analysis of the impact of COVID-19 and technology on mergers and acquisitions and the implications for supply chain performance is needed.

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2. Literature Review

Mergers and acquisitions (M&A) have been important strategies for corporate growth and restructuring. However, given the impact of the recent pandemic, the need to adopt M&A has been great and urgent, given the hit most companies received [11]. It is one of the options for companies to stay afloat and remain resilient amid the volatile market conditions. Technology has been pivotal in facilitating M&A transactions and making them successful, allowing companies to develop resilience. Emerging technologies such as blockchain gained traction after the pandemic as they became necessary tools to help in supply chain management. They assist companies by optimizing processes, automating systems, allowing companies to utilize big data, and also transforming their organization from the analog to the digital model to reach consumers and ensure smooth operations. The supply chain management topic has also gained traction recently, given the pandemic measures such as lockdowns that restricted the movement of goods and services across the supply chain networks [12]. Companies that outsourced products, for example, suffered significant losses and needed to strategize to ensure they developed an adaptable supply chain network.

Various sources discuss the impact of M&A activities in different industries. Special attention is given to the effects of technology and other disruptions, such as COVID-19, on the sectors. Ref [12] looks at M&A activities within the defense industry. The conclusion is that the trend is likely to rise even after the pandemic, given the need to bar entry for other players and the sensitivity of the defense industry. It helps to understand the reason behind the increase in mergers and acquisitions and the role technology plays in making the companies industry leaders, barring entry to other players. The only limitation of the study is that it limits the study to the defense industry, which is unique and does not reflect the market as a whole. Ref [3], on the other hand, did a retrospective study into the AT&T/Time Warner merger and demonstrated how technology-focused mergers reshape industries. The study helps to understand the role that technology plays in shaping industries but needs more analysis of the implications of the global supply chain management system.

COVID-19, an unforeseen event, has had a significant impact on M&A trends and the supply chain management industry. [8] & [12] analyzed how the pandemic brought restructuring to the corporate world, leading to cross-border acquisitions and mergers. It disrupted the supply chain network, necessitating a change in strategies to ensure that businesses remain afloat. However, there is little mention of the impact of emerging technologies on M&A strategies and supply chain management. While [20] tries to assess the risk and synergy taking place within multinational corporations, the study needs to expound on the supply chain vulnerabilities experienced.
While the existing literature recognizes the role of technology in M&A activities and the potential impact on supply chain management, it needs to analyze the issue in-depth. The gap remains on how integrating technologies such as blockchain within the M&As affects their supply chain systems and success. It is essential to understand the challenges of technology integration post-mergers to determine the strategies' short- and long-term impact. It is also unclear whether M&A can mitigate supply chain disruptions and what its role is in building agile and advanced supply chain systems. The goal of the research is to delve further into the issues and analyze different case studies for companies engaging in M&As. The goal is to determine the role of technology and COVID-19 on M&As and how the companies survived post-merger. It also analyses the role of supply chain management in the success of the company's post-merger. The outcomes will lay the basis for understanding how the M&A can leverage technologies to enhance supply chain resilience post-pandemic to ensure sustainable growth and success.

3. Methodology

Multiple case study analysis is the method used in the inquiry. It is the most suitable because it helps to analyze an issue and understand it fully critically [7]. It allows for tracking metrics over time, ensuring just judgment of an issue. One of the drawbacks of case studies is that they could be more robust and compelling, given that they only analyze a single issue. However, using multiple case studies helps triangulate data from different sources about an issue, thus ensuring the data is credible and valid. The case analysis will help to track the short-term and long-term impact of the M&A activity on the supply chain performance of different companies across the industries.

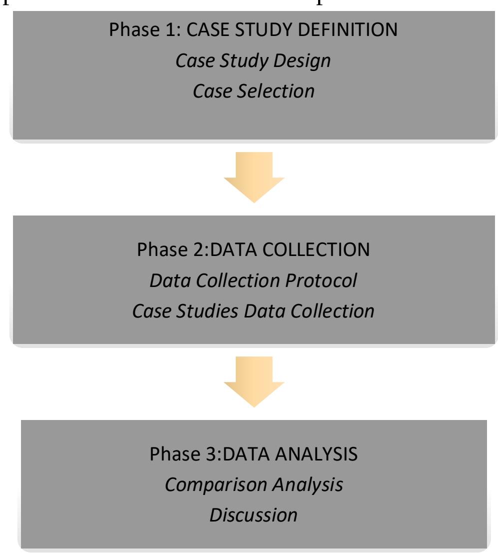

Figure 1. Methodology Process

Data collection was the initial phase that helped to identify the relevant sources and obtain data. The first stage identified the research objective, assessing the impact of technology and the pandemic on M&A activity. It also seeks to analyze companies engaged in M&A to determine why they failed or succeeded in supply chain management. Next was the determination of data collection procedures to obtain the data. Using an inductive theory-generating case study was vital to identifying multiple sources that would allow for triangulation [7]. Primary and secondary sources helped gather critical data and offer subtle information. Different information sources were included, such as archival records, company newsletters and websites, and existing data within the scholarly publication from reliable databases, such as JSTOR, Google Scholar, and Science Direct. The search strategy utilized the Boolean operators in developing the search strings, such as ERP integration, Inventory turnover, and vertical integration. After searching, the inclusion and exclusion criteria were designed to identify the relevant sources and narrow down the search results. The exclusion criteria included methodological rigor, as only scholarly and peer-reviewed papers were included. Also, sources from the last ten years were the only ones included, as older ones were discarded.

The next step included screening the remaining articles to find relevant sources. Next, a full-text review thoroughly confirmed the sources' relevance. Data extraction was another vital process that extracted essential information to answer the research questions [7]. After removing the data from multiple sources, a comparative analysis was performed to identify common themes, differences, and gaps to help explain the findings. Lastly, data synthesis was conducted to offer a comprehensive analysis of the impact of M&A on supply chain performance (SCP).

3. Findings and Discussion

This section outlines the analysis's results based on themes, including the impact of the pandemic on M&As and the role that technology played in the emergence of M&A success. It also analyzes the companies that benefited from the mergers and those that failed.

3.1. The Impact of COVID-19 On M&As

3.1.1. The Impact on Sustainability of M&As Before and After the Pandemic

Before the pandemic, Environmental, Social, and Government (ESG) performance played a role in determining M&A activities. However, the pandemic intensified the crisis, making it critical for companies to ensure high ESG performance to ensure viability and resilience. Research findings from [12] show that the pandemic catalyzes global mergers and acquisition strategies among the best ESG performers. Multinational companies were the most affected by the pandemic due to their international subsidiaries and unstable business environment. While some companies withdrew their overseas businesses, others saw an opportunity to engage in M&A activity to keep them afloat. One of the determinants of M&A activity during and after the pandemic was the managerial capabilities of the virus itself, not the pandemic. Therefore, the regions that showed more managerial capabilities in managing the virus experienced more M&A activities as businesses opened up. In developing nations, the pandemic led to an increase in M&A activity that promotes environmental sustainability. The pandemic reminded the population of the need to resolve environmental issues, given the impact of the virus on the economic systems. An analysis of 889 M&A created between 2018 and 2020 reveals that ecological, social, and governance (ESG) performance played a role [19]. The companies with a negative value effect on ESG performance experienced low mergers and acquisitions, especially after the pandemic began. The pandemic thus intensified the need to ensure sustainable M&A deals.

3.1.2. The Impact on Risk and Policy

The pandemic has significantly impacted the increasing trends of M&As across all industries affecting policies. The pandemic introduced the concept of uncertainty into the market, leading to M&As as a strategy to remain afloat and strengthen the supply chain network system. According to [8], the pandemic has also affected the defense industry due to the rising M&As necessitating policy intervention to regulate entry. It had led to liquidity challenges and distressed assets, leaving the sector vulnerable to acquisition. The recent government intervention through regulation in the defense industry is an indicator that there are changes in M&As. The case example is the regulatory requirement that led to the merger between United Technologies and Raytheon. The decision arose due to the agreement by three crucial parties, including the international regulatory bodies, the Federal Trade Commission, and the European Commission [14]. The merger would lessen competition and create a monopoly, barring entry. Mergers between multinational countries and developing nations have also been brought under scrutiny. Research by [20] analyzed the recent mergers with multinational companies and developing nations. The study showed that the economic crisis significantly impacted economic policies governing mergers and acquisitions, especially in developing countries such as Asian regions. Most of the M&A activity is related to foreign market expansion, creating risk in the home nations. Thus, the investing nations must find safe economic and legal environments to invest in cross-border mergers and acquisitions. Therefore, even though the pandemic opened up opportunities for global M&As, there is a need for caution in M&A transactions in the international markets for companies to reduce the risk associated with bad investments.

3.2. The Role of Technology in Increasing M&As and Their Success

Technology plays a role in the increasing trends in M&As. It shapes corporate strategies to remain sustainable and viable amid changing market conditions. The pandemic was a revelatory event that outlined the vulnerabilities within the companies and their supply chain management systems. Thus, technology helps to remain relevant and gain a competitive advantage. According to [2], big tech companies increasingly acquire start-ups to bar entry and remain the industry leaders. The rationale for the preference is that it helps companies gain market power and thus remain operational.

3.2.1. Technology as the Driver of M&As

According to [17], many companies look forward to leveraging technology to remain competitive in the digital age. An example is Microsoft's 2016 acquisition of LinkedIn. The primary aim of the acquisition was to improve Microsoft's cloud-based services and thus expand its market reach by targeting the professional networking space. Given Microsoft's case, one-way technology drives M&A is to ensure strategic alignment. The acquisition helped Microsoft strengthen its position in the recruitment and professional networking markets. Such a strategy complements the company products, including Office 365 and Dynamics 365. Microsoft uses LinkedIn through data analysis, user engagement, and machine learning. The data the company collects within the app helps to gain insight into the professional network thinking, trends, and behaviors that impact the product development strategy for the company [16]. The strategy also influences its marketing strategies to sell products and increase revenues. In doing so, it makes data-driven decisions that affect its growth and competition over other tech companies. The impact on the supply chain system is that companies can access technologies that enhance efficiency and reduce costs. For example, Microsoft's access to data helps make data-informed decisions, promoting forecasting. The company can thus forecast demand, which helps optimize inventory management and increase the efficiency of the supply chain system.

3.2.2. The Role in Promoting Access to Innovation and Talent

The other role of technology in driving M&As is promoting access to talent and innovation. Many significant firsts are acquiring and merging with tech companies to access major cutting-edge technologies. An example is the novel merger between United Technologies and Raytheon. United Technologies was one of the leading giants in the technology industry, and merging with Raytheon helped the company access superior technology, which gave it a competitive advantage and made it an industry leader [14]. The other example is Google's acquisition of DeepMind Technologies in 2014. The acquisition helped Google gain a competitive advantage over other tech companies through access to A.I. research and talent. The company has access to the best researchers, including great talents such as Demis Hassabis, Shane Legg, and Mustafa Suleyman. One benefit of accessing great talent and innovation is that Google significantly reduced energy consumption [6]. The element led to reduced costs and thus improved revenues. Access to data was vital in streamlining operations, which increased the efficiency of the supply chain system as it reduced the new infrastructure, thus minimizing waste across the chain.

3.3. The Role of Technology in the Success of M&As

Technology has the potential to break or make mergers and acquisitions. For most companies, the incentive for M&A activities is to access technology and innovation, which is critical to adapting to the market and staying afloat amidst the changing market conditions. According to [17], information technology plays a role in obtaining synergies that lead to the success of mergers and acquisitions. One of the ways to do this is through early engagement and alignment. Supply chain managers and executives utilize technology to help in the merger and acquisition processes. The target helps to maximize value and ensure that the mergers go as smoothly as possible, increasing the chances of success. Streamlining the I.T. system before the merger prepares organizations to transition well. When Disney was acquiring Pixar, technology helped in careful planning, which ensured that the acquisition maintained and leveraged Pixar's innovative culture.

During the post-merger phase, technology helps identify areas for improvement within the organization, which is vital in getting the right staff to the right roles. The case promotes overall business performance and reduces the cost of operations. It also helps create value through operational efficiency. During the acquisition of Whole Foods by Amazon, the company leveraged its technology to enhance its operations and customer experience and enhance Whole Foods' services. Even though the merger failed, technology helped account for the initial success experienced. The workers resisted the new technological system, including inventory management systems, making them ineffective due to low compliance and use.

3.4. The Role of Blockchain Technologies On M&As

Various emerging technologies have a significant impact on M&As. One of the roles blockchain plays is that it drives the financial services deals. It accounts for ten deals valued at $50 million. One notable acquisition that pertains to blockchain technology is the INX Digital Company. One of the benefits of blockchain technology is that it creates resilient technology that overcomes most of the challenges with other technologies, such as its scalability and large-scale use. Given the rise of cryptocurrency, blockchain technology levels the playing field for small companies to participate in AM&A activities, thus intensifying the trend. The secure network allows smart contracts to facilitate M&A transactions, improving global opportunities for companies wanting to expand. Given the expected growth in the blockchain market, it presents many opportunities for mergers and acquisition transactions. Smaller companies are leveraging M&A as a catalyst for blockchain adoption. The strategy helps smaller companies that cannot afford to acquire the technology individually, creating mergers and acquisitions. The future outlook of M&A is optimistic, given the role of technology in initializing transactions and facilitating their success.

4. Case Studies on the Role of Supply Chain in Successful and Failed M&A Transactions

4.1. Raytheon Technologies Corporation

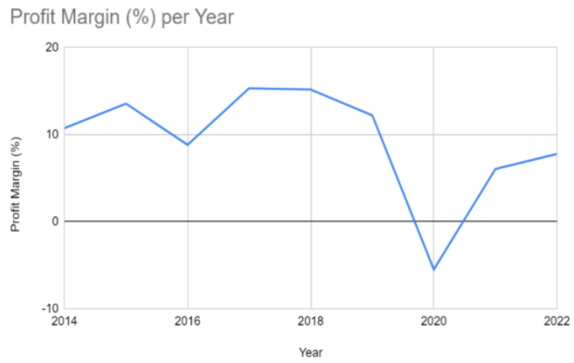

Figure 2. Raytheon United Technologies' profit margin over the years

Raytheon Company and United Technologies merged on April 3rd, 2020, to scale up and diversify their portfolio. The two companies became Raytheon Technologies Corporation (RTX). The goal of the merger was to configure resources among two abled companies and become an industry leader. The other rationale was the legislative requirement to merge to bar entry from other third parties wanting to enter the industry [15]. One of the effects of the merger is the creation of diversified aerospace and defense contractors. The executive for RTX mentioned that 65-75% of the company revenues come from the supply chain, which shows that the merger was beneficial. The merger allowed the two companies to develop alternative suppliers, which helped in risk mitigation.

The investment in acquiring a company with technological superiority benefits the aerospace company as they merge to combine forces and become industry leaders. Regarding cost reduction, the gross annual run-rate savings for the company since the merger is about $ 1 billion. Some of the actions that reduced the cost include the elimination of redundancies and combining the procurement and logistical functions. According to a study [14], the company experienced increased sales of $73.0 billion. One year after the merger, the revenue growth rate increased by 13.27% from 2020 to 2022, as shown in Figure 2. Before that, the growth declined, given the low-profit margins experienced during the pandemic. The development of the company from 2000 to 2022 is 152.32%. Therefore, the increased profit margins result from consolidating the supply chain network and its infrastructure, thus reducing costs and maximizing revenues. The company also inherited two different ERP systems after the merger. They include Raytheon SAP and UTC's PeopleSoft system [1]. Integrating the two systems helped achieve supply chain efficiency, leading to a hybrid approach. Data migration and integration strategies allowed the two companies to merge the ERP systems and ensure seamless coordination and visibility. As Figure 2 shows, the revenue grew from $184,786 before the merger in 2017 to $357,776 in 2023 [13].

4.2. Aetna-CVS Health

The merger between CVS Health and Aetna took place in 2018. The retail pharmacy giant and the health insurer merged to create the Aetna-CVS Health company, which is now worth billions [13]. The merger aimed to make healthcare more accessible to local populations by facilitating the insurance business and the retail pharmacies. The two companies consolidated their purchasing power, which helps in collective bargaining when negotiating with suppliers. This element reduces costs for the company, increasing revenues.

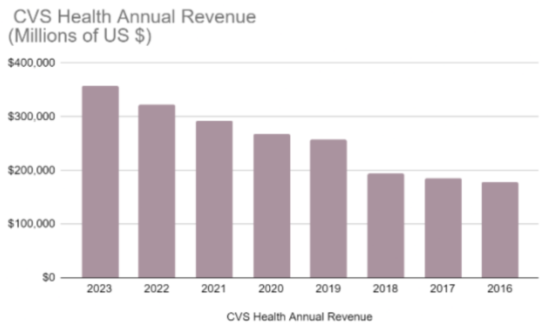

Figure 3. CVS Health Annual Revenue Growth (From 2016-2023)

Streamlining the distribution network and logistics reduces transport costs and improves the supply chain system's delivery time and efficiency. For example, combining the CVS pharmacy operations and Aetna insurance claim data allows the company to do more accurate forecasting and inventory management. The companies have complementary strengths that help them to do better data analysis and forecasting, which helps to deliver services effectively to the customers. Regarding cost reduction, the merger allows Aetna-CVS Health to negotiate better deals with pharmaceutical manufacturers and suppliers [4]. The strategy helps to reduce costs and increase profit margins. The ERP systems for both companies were integrated, allowing the company to share data and perform analytics. The data helps to strengthen the retail operation systems, making it effective. There is also increased end-to-end visibility and control of the supply chain, which ensures accountability and transparency.

4.3. Amazon's Acquisition of Whole Foods

According to [5], cultural clashes are the top reason acquisitions fail. Companies that fail to plan effectively and consider cultural differences experience integration issues, making it hard for them to succeed. One failed acquisition was the one between Amazon and Whole Foods in 2017. The goal of the acquisition was to stimulate market growth and global expansion of the business by leveraging the brand reputation of Whole Foods and its existing structure [10]. The deal was for Amazon to grow through Whole Foods stores. In turn, Whole Foods was to lower its prices and scale up, given that the company has declined. The strategy would also help the company grow, benefiting the two. Not long after the acquisition, issues started arising between the two companies. One of the reasons the merger failed was the cultural misalignment of the two companies, as they overestimated the synergies. In the short term, the impact on the business was remarkable, given that both companies experienced increased markets in the global industry. The other short-term benefit was the development of an efficient supply chain network that allowed for delivering quality produce throughout all the outlets. However, the acquisition lasted briefly due to the cultural misalignment between the two companies. According to [10], Amazon has a strict culture that Whole Foods could not live up to. For example, employees complained about the scorecards that measured compliance and the use of new inventory systems. Such systems were in place to monitor employees and terminate them. The strict rules led to unionization. On the part of Amazon, Whole Foods failed to meet its set standards, which led to angry and disappointed customers over poorly stocked stores. The inability to consider cultural compatibility led to the short-lived merger, which ended in disaster. The effect on the supply chain system in the long term is that it affected the delivery of goods to the end consumer due to poor inventory management systems that the employees protested against [5]. Given the nature of perishable goods, delays and poor forecasting led to spoilt goods that led to losses for Amazon. The cultural mismatch thus affected the success of the acquisition.

4.4. AT&T/Time Warner

Mergers fail due to a lack of strategic clarity. The companies do not recognize the impact of the merger within the external environment due to tunnel vision, leading to unintended consequences affecting performance. A retrospective analysis of the AT&T/Time Warner merger shows that the company's failure was due to the increased complexity of the supply chain management system [3]. The company failed to cater to the complexity of managing and distributing both physical and digital content. The issue led to regulatory challenges and cultural clashes that eventually led to the demise. The two companies decided to merge because of the need to eliminate competition through a vertical merger. A vertical merger works by combining one firm with another at different levels of the production process, thus barring entry to others who would trade with the company [5]. In the case of AT&T/Time Warner Merger, Time Warner dealt with content creation while AT&T dealt with distribution. The vertical merger allowed AT&T to use Time Warner content and integrate it into the distribution network, allowing for greater control of sharing, marketing, and distribution. In the short term, the merger worked effectively as it improved content distribution and access to technology for the two companies. However, the long-term merger analysis reveals that the companies experienced long-term regulatory challenges.

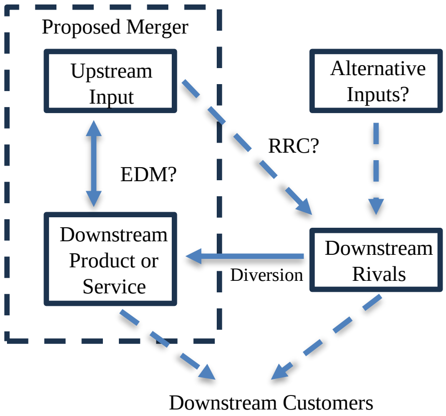

Figure 4. The effect of the vertical merger on the Supply chain

The vertical merger had a significant impact on the supply chain management network. One of the ways was through the concentration of power. The merger created a telecommunication power, allowing the two companies to control the market. As Figure 4 shows, the monopoly affected some competitors, such as HBO, Warner Bros, and Turner Broadcasting System, the downstream rivals [3]. The exclusive rights that the company owned allowed them to distribute Warner Content, which harmed the competitors, disrupting the supply chain system. As Figure 4 shows, other companies had limited access to the content, which affected the supply chain system. It became hard to determine the intra-subsidiary prices, which led to complexities within the supply chain network. Inefficiencies thus crept in, increasing the cost of operations. The merger required a new system, which the companies should have considered, leading to supply chain inefficiencies and rising costs [5]. Despite being a monopoly, poor supply chain management strategies affected the company's operations, leading to its failure. The merger failed to manage all the stakeholders within the supply chain system, leading to increased rival costs that required legal intervention from the U.S. Department of Justice and the Federal Trade Commission.

6. Conclusion

M&A activity rebounded strongly after an initial pandemic-induced decline, driven by technological adaptations and COVID-19's acceleration of digital transformation trends. The implications on supply chain management were both positive and negative. On the positive side, the M&As increased access to technologies such as blockchain that improve supply chain management through optimizing inventory management and supply chain processes. On the negative side, it affects the supply chain efficiency due to the cultural differences between the merging companies and the lack of strategic vision. While companies such as Raytheon United Technologies and Aetna CVS-Health are benefiting from the effective use of ERP and inventory management technology and from improving their supply chain efficiency, AT&T/Time Warner and Amazon/Whole Foods failed despite incorporating technology in their supply chain systems. Therefore, M&As are complex and require careful deliberation to be successful. Technology alone is not enough to ensure success. Supply chain management and efficiency are key to ensuring seamless operations post-M&A transactions.

References

[1] M. Azeem, A. Haleem, S. Bahl, M. Javaid, R. Suman, and D. Nandan, “A brief review of big data applications to take up major challenges across manufacturing industries,” *Materials Today: Proceedings*, vol. 49, no. 2, 2021.

[2] K. A. Bryan and E. Hovenkamp, "Antitrust limits on start-up acquisitions," *Review of Industrial Organization*, vol. 56, no. 4, pp. 615–636, 2020.

[3] D. W. Carlton, G. V. Giozov, M. A. Israel, and A. L. Shampine, “A retrospective analysis of the AT&T/Time Warner merger,” *The Journal of Law and Economics*, vol. 65, no. S2, pp. S461–S498, 2022.

[4] A. Chorniy, D. Miller, and T. Tang, “Mergers in Medicare Part D: Assessing market power, cost efficiencies, and bargaining power,” *International Journal of Industrial Organization*, vol. 68, 2019.

[5] N. Ersahin, M. Giannetti, and R. Huang, “Supply chain risk: Changes in supplier composition and vertical integration,” *SSRN Electronic Journal,* vol. 147, 2023.

[6] M. Glick, C. Ruetschlin, and D. Bush, “Big tech’s buying spree and the failed ideology of competition law,” *Hastings Law Journal*, vol. 72, pp. 465, 2020.

[7] D. Hancock, B. Algozzine, and J. H. Lim, “Doing case study research: A practical guide for beginning researchers,” *Journal of College Student Development,* vol. 48, no. 1, pp. 123–125, 2021.

[8] J. Harper, “The defense industry could see another wave of mergers and acquisitions,” *National Defense*, vol. 105, no. 806, pp. 30–32, 2021.

[9] W. Hu, K. Skowronski, Y. Dong, and Y. Shou, “Mergers and acquisitions in supply bases,” *Production and Operations Management,* vol. 34, no. 2, 2022.

[10] R. P. Jindal, D. K. Gauri, W. Li, and Y. Ma, “Omnichannel battle between Amazon and Walmart: Is the focus on delivery the best strategy?” *Journal of Business Research*, vol. 122, no. 1, pp. 270–280, 2021.

[11] C. Kooli and M. Lock Son, “Impact of COVID-19 on mergers, acquisitions & corporate restructurings,” *Businesses*, vol. 1, no. 2, pp. 102–114, 2021.

[12] H. Lee, E. A. Degtereva, and A. Zobov, “The impact of the COVID-19 pandemic on cross-border mergers and acquisitions determinants: New empirical evidence from quasi-Poisson and negative binomial regression models,” *Economics*, vol. 9, pp. 184, 2021.

[13] *CVS Health revenue 2006-2019*, Macrotrends LLC, [online]. Available: https://www.macrotrends.net/stocks/charts/CVS/cvs-health/revenue. [Accessed: 25-Jul-2019].

[14] Raytheon Technologies, “Raytheon Technologies reports 2022 results, announces 2023 outlook and plan to realign into three business segments,” *PRNewswire*, 2023. [Online]. Available: https://www.prnewswire.com/news-releases/raytheon-technologies-reports-2022-results-announces-2023-outlook-and-plan-to-realign-into-three-business-segments-301728712.html. [Accessed: 24-Jan-2023].

[15] *United Technologies and Raytheon completed merger of equals transaction*, RTX, [online]. Available: https://www.rtx.com/News/2020/04/03/United-Technologies-and-Raytheon-Complete-Merger-of-Equals-Transaction. [Accessed: 03-Apr-2020].

[16] V. Sekhon, “2022 Emerging U.S. mergers and acquisitions trends,” *Wolters Kluwer,* 2022. [Online]. Available: https://www.wolterskluwer.com/en/expert-insights/2022-trends-in-us-mergers-and-acquisitions. [Accessed: 03-Apr-2022].

[17] C. Shapiro, “Protecting competition in the American economy: Merger control, tech titans, labor markets,” *Journal of Economic Perspectives*, vol. 33, no. 3, pp. 69–93, 2019.

[18] L. Suo, K. Yang, and H. Ji, “The impact of technological mergers and acquisitions on enterprise innovation: A review,” *Sustainability* vol. 15, no. 17, pp. 12883-12883, 2023.

[19] I. Tampakoudis, A. Noulas, N. Kiosses, and G. Drogalas, "The effect of ESG on value creation from mergers and acquisitions. What changed during the COVID-19 pandemic?" *Corporate Governance: The International Journal of Business in Society*, vol. ahead-of-print, 2021.

[20] J. Zhang, D. Pang, L. Yang, and W. Ouyang, “Risk and synergy of multinational enterprise mergers and acquisitions under the background of the COVID-19 pandemic,” *Economic Analysis and Policy,* vol. 78, 2023.