

Analysis of Microsoft's Sustainable Development during post-COVID-19

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Abstract. In the post-pandemic era, the problem of environmental degradation become serious. Environmental protection has aroused the wide concern of the international community. And global economic development is still not optimistic. How enterprises achieve their stable development in the turbulent economic landscape has also attracted great attention. But there is still a lack of unified cognition about the sustainable development of three aspects (environment, society, and economy) of enterprises. Therefore, this paper takes Microsoft as an example to explore how enterprises can achieve sustainable development in the post-pandemic era. This paper uses Swot analysis to analyze the development status of Microsoft. Then present Microsoft's strategies in three aspects of sustainable development, and finally puts forward the problems and suggestions for Microsoft. This paper finds that Microsoft has made detailed measures in the environmental and social aspects, but still has some shortcomings in the economic aspect, which needs to be paid more attention to in the future.

Keywords: Sustainable Development, Environment, Economic

1. Introduction

Since the 1960s, environmental problems have become increasingly serious all over the world. In the post-pandemic era, environmental problems have become even more serious. On October 31, 2021, the World Meteorological Organization issued a report warning that record atmospheric concentrations of greenhouse gases and heat accumulation have pushed the Earth into uncharted territory. To promote the implementation of the Paris Agreement through actions that can lead the world on a more sustainable, low-carbon path, over 450 financial companies from 45 nations agreed on the rules for the Paris Agreement's implementation on November 13, 2021, at the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26). Expect environmental problems, the global economic problem is also serious. The global pandemic in 2019 has had severe impacts on the global economy. Despite the moderation in 2021, the global economic outlook for 2022 is increasingly bleak, making it extremely important for companies to explore a sustainable development path in this economic situation. Therefore, this paper uses Microsoft as a Case study to explore how to maintain sustainable development under the current international situation and provides a reference template for other companies.

This paper reviews the importance of sustainable development through the literature. Firstly, Giovannoni et al. (2013) systematically review the concept and applications of sustainability to understand the importance of sustainable development [1]. Second, Purvis et al. (2019) further search for the pillars of Three pillars of sustainability, this article Outlines the process of proposing the three pillars of sustainable development. Sustainable development is not only the environmental aspect but also the pillar of sustainability. It also includes social and economic aspects [2]. Searcy (2014) proposes that enterprises should achieve sustainable development in these three aspects: environment, society, and economy. Then, Identify the key requirements for measuring enterprise sustainability [3]. Finally, Bojan, et al (2020) studied how enterprises achieve sustainable development in the post-epidemic era [4].

Therefore, this paper adopts the Swot analysis method to analyze the development status of Microsoft. Besides, it subdivides and summarized the measures of Microsoft in the three aspects of environment, society, and economy. The research on these three aspects is very important for the future development of Microsoft. Finally, this paper come up with suggestions for Microsoft's future

development. And it also put forward corresponding solutions according to the strengths and opportunities of Microsoft. This paper shows the advantages and disadvantages of Microsoft in the three aspects of sustainable development (environment, society, and economy), which is very important for the future development of Microsoft and can also be used as a learning case for other enterprises on the road to sustainable development.

2. Case Description of Microsoft

2.1 The Background of Microsoft

Microsoft is a multinational computer technology company. Microsoft's profit increased 38% to \$61 billion in 2021 and the revenue rose 17.5% to \$168 billion, ranking the fourth position among 2022 Fortune 500 companies. It is the largest provider of computer software in the world and a pioneer in the creation, distribution, and sale of consumer electronics and PC (Personal Computer) software. The Windows operating system, Office applications, Bing, Microsoft Azure (a platform for cloud services), Xbox, and the Surface line of touchscreen personal computers are among Microsoft's most well-known and successful products.

2.2 The Development of Microsoft

Bill Gates and Paul Allen established Microsoft in Albuquerque, New Mexico in April 1975. Initially, it developed and sold BASIC interpreters for the Altair 8800. Microsoft DOS came out as the standard operating system for PCs in 1980. Microsoft started publishing Microsoft Windows 1.0 in the middle of 1980. In 1985, it was the first effort to give a PC operating system a graphical user interface. Microsoft started extending its product line into computer networking in the middle of the 1990s. Microsoft became increasingly diverse and made many corporate acquisitions, such as Skype Technologies (acquisitions in 2011), and LinkedIn (acquisitions in 2016). Microsoft launched Xbox, which is its first video gaming brand in 2001. In 2008, Microsoft released Microsoft Azure. It indicates Microsoft's entry into the cloud computing market. In 2012, Microsoft introduced its Personal Computer Brand, namely Microsoft Surface. Microsoft became the second business after Apple to achieve the \$2 trillion milestone when its market value surpassed \$2 trillion on June 23, 2021 [5]. Microsoft completed its digital transformation in the intelligent cloud and intelligent edge era in 2022. Its mission is to enable every business on the earth to do more [6].

2.3 Microsoft's main problems and the importance of solving them

The global pandemic in 2019 has adversely impacted the economy worldwide. After a tentative recovery in 2021, the global economy is looking increasingly gloomy in 2022 and risks are beginning to emerge. The International Monetary Fund (IMF) predicts that Global economic growth slowing to 3.2 percent in 2022 from 6.1 percent in 2021 [7]. In the second quarter of 2022, global output decreased as a result of the pandemic's slowing effects on global economic expansion.

As the pandemic continues, the climate has changed in recent years. The emergence of some extreme weather also appears, such as the rise of sea level, the accelerated melting of Arctic and Antarctic glaciers, and the frequent occurrence of extreme weather.

Therefore, the continuation of the pandemic and the emergence of these climate extremes is a reminder for enterprises to take a longer and more cautious view of the future relationship among people, nature, and technology. Enterprises need to act quickly to find a sustainable development plan among the interests of multiple stakeholders to achieve a valuable balance between human sustainability and the environment and ecosystem of the planet as a whole [8].

3. The Problem Analysis of Microsoft

3.1 SWOT Analysis of Microsoft

To better understand Microsoft, this section explores Microsoft's Current stage through the Swot analysis.

The next section will explain the strength of Microsoft. First of all, Microsoft has a huge market share. Microsoft offers its service worldwide. The Windows operating system is used in 190 countries and on more than 500 million devices. Secondly, Microsoft has diversified products in a wide range of market segments. Microsoft is involved in numerous areas of the computer industry and is one of the top players in gaming (Xbox), cybersecurity, productivity software, and cloud computing, in addition to its well-known Windows Operating System and software packages.

Thirdly, Microsoft has high brand value. Microsoft ranked third position among the most valuable brands by World 2022 Forbes. A strong brand is an extremely valuable asset, giving Microsoft a large and loyal customer base. Lastly, Microsoft is a global leader in environmental policy. For many years, Microsoft has implemented ethical environmental practices in its operations and has ingrained environmental principles into its corporate culture.

Although the strength of Microsoft is obvious, it also has several weaknesses. To begin with, Microsoft lacks innovation. Compared with other brands such as Google and Apple, Microsoft is less innovative in terms of computers and mobile devices. Besides, Cyber security influences Microsoft's operations. In the era of Industry 4.0, which also means the era of intelligence. Network security has grown to be a significant problem limiting the growth of the network due to the increase in personal information on the network and people's reliance on it. Threats from cyber security are becoming more advanced, with actors moving beyond individuals to governments deploying covert tactics to try to influence the sovereignty of other nations. Microsoft's software has experienced several cyber-attacks, leading to perceptions that its security features are less robust than those of rivals.

Additionally, the main market for Microsoft is over-saturated. Microsoft has occupied 70% of the operating system industry, making it harder for its market share to increase. Also, with its slow absorption of innovation and reliance on existing markets, Microsoft has some concerns about its market position. To consolidate its position, Microsoft will further develop its products and services and make more innovations.

Besides, the following paragraph will analyze the opportunities of Microsoft. Strategic collaborations and acquisitions provide Microsoft with the benefits of diversification. It is increasingly challenging for big businesses to remain on top of innovation and development as the rate of change in the consumer technology and software sectors quickens. Collaboration, mergers, or acquisitions of businesses with great market potential in developing sectors with promising development prospects might be one strategic move. Microsoft makes use of its financial edge to collaborate with or acquire young, inventive start-ups that may provide the business with new perspectives and professional skills. The acquisition of LinkedIn is an example. With more than 562 million users across more than 200 nations and territories, LinkedIn is the largest professional network online [9]. One advantage of acquiring LinkedIn is that Microsoft would be able to explore the database of work histories and extensive information on the professional network to find potential for strategic expansion.

Furthermore, Microsoft also will meet the threats in future development.

Competitive brands continue to threaten Microsoft's market position. Due to competition and a lack of innovation, Microsoft lost market share to Google, Apple, and other companies. Microsoft's Internet Explorer serves as a good illustration; it formerly had 90% of the market for Internet browsers, but Google's Chrome browser has now supplanted it.

3.2 The problem analysis of Microsoft

The study of Microsoft's issues is covered in the section that follows. It will first outline what is meant by sustainable development, which encompasses not only environmental protection but also the social and economic aspects of future firm growth.

Environmental pollution and ecological harm have been much worse all across the world since the 1960s. The most common definition of sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs," as was stated in the World Commission on Environment and Development's (WCED) final report in 1987 [10]. Since then, the 1992 Rio de Janeiro Earth Summit has confirmed the multifaceted nature of sustainability. Economic, social, and environmental sustainability were suggested as three different aspects of sustainable development [11].

As an international company, Microsoft aims at achieving Sustainable Development Goals and contributes to a sustainable future that truly belongs to everyone. Therefore, Microsoft makes ambitious promises and detailed plans to deliver on them and enables others to use technology to create and achieve their own goals.

Then the paper will continue to discuss the problem Microsoft face in the three dimensions of Sustainable Development.

3.3 The Strategy of the Environmental Dimension of Sustainable Development

In terms of the environmental dimension of sustainable development, Microsoft is integrating environmental policy into its corporate architecture for years to come. In 2020, Microsoft announced that they will achieve Carbon Negative, Water Positive, Zero waste, and Ecosystems by 2030. To achieve its commitments, Microsoft takes multiple approaches.

First of all, Microsoft has committed to achieving zero carbon emissions by 2030 and has been trying to become carbon neutral internationally since 2012. Through sustainable business practices and cloud technologies, Microsoft seeks to promote low-carbon and sustainable business practices internationally. Microsoft also plans to eliminate all of the carbon dioxides they have released into the environment since its founding in 1975 by the year 2050. Additionally, Microsoft has been striving to minimize its water usage and restore water in the regions where it works using solutions that help tackle global water concerns such as global water shortages, pollution, and ocean health to meet the Water Positive by 2030. What is more, Microsoft reduces and eliminates waste through reusing materials, reducing sources, and recycling. This method allows all waste to be disposed of in an environmentally friendly manner. Importantly, Microsoft is committed to continuously improving all of its products to make every device sustainable. Microsoft pledges to permanently safeguard and repair more land than we utilize by 2025 in terms of ecosystems. To assist people in better understanding the ecosystems around them, as well as to track and model the consequences of climatic changes or human activity, Microsoft creates tools and services (a Planetary Computer).

From Microsoft's point of view, it is not enough to achieve its emission reduction, zero-emission, and negative emission. Microsoft will also use its expertise in AI, data science, and digital transformation to help its global partners reduce their carbon footprints, build green supply chains, and give more businesses and organizations a cleaner future [8]. Microsoft created a new class of business procedures with the Microsoft Cloud for Sustainability to assist all organizations in measuring, reporting and minimizing their environmental effect. Through its \$1 billion Climate Innovation Fund, Microsoft provides direct funding to organizations to hasten the creation of carbon removal and reduction technologies.

3.4 The Strategy of the Social Dimension of Sustainable Development

In terms of society, sustainability development entails social responsibility, which is the willingness to guarantee that the economic and human resources of society are used for broad societal goals rather than just the ultimately finite interests of individuals and businesses [12]. Corporate social responsibility (CSR) is a self-policing business model that helps businesses uphold their social

responsibilities to the general public, their stakeholders, and themselves. Through CSR, businesses may become aware of how their actions affect the environment, society, and the economy. In the case of Microsoft, its commitment to sustainability, tackling racial injustice and inequalities, and investing in digital skills are the three components of its CSR strategy.

Microsoft works to make sure that technology is accessible, and reliable, and promotes sustainability to fulfill its commitment to sustainability. It aims to accelerate progress towards a more sustainable future by promoting environmentally friendly policies through the 2030 plan. Microsoft also takes several steps to alleviate racial injustice and imbalance. Microsoft creates several initiatives to enhance its residents' quality of life and promotes change in the neighborhoods where people reside and work. These initiatives include boosting Microsoft's inclusive culture by doubling the proportion of black and African American leaders by 2025. Second, through strengthening communities and contributing to the eradication of racial injustice in black and African American communities in the United States through partnerships, data, and technology. In 2021, Microsoft's proportion of transactions with financial institutions owned by people of color more than quadrupled. To assist partners in gaining access to the Microsoft Cloud and unlock partners, Microsoft has developed the Black Channel Partner Alliance community. In the future, Microsoft still has to do a lot of effort to address inequality and racial injustice.

Microsoft continues to put a strong emphasis on digital transformation, which makes it possible for Microsoft to declare in June 2020 that it is extending access to digital skills. This is part of the Investing in Digital Skills section. The skill combines educational materials, possibilities for certification, and job-seeker resources from LinkedIn, GitHub, and Microsoft Learn. To aid those in neglected and frequently excluded communities by the digital economy, Microsoft Philanthropies contributed \$20 million to significant nonprofit partners during the same period. Through the Microsoft Skills Initiative, almost 42 million individuals have received free training since 2021.

3.5 The Strategy of the Economic Dimension of Sustainable Development

According to the economic perspective, sustainability refers to a company's capacity to maintain profitability, productivity, financial performance, environmental management, and social assets [13].

During FY2021(FY is short for Financial Year), Microsoft's commercial operations and financial performance were still being impacted by the COVID-19 epidemic. At the same time, as Microsoft accelerates its digital transformation, Microsoft needs to continue to evolve and adapt to the changing market environment for a long time. The markets for devices, software, and cloud-based services are booming and extremely competitive. Competitors of Microsoft, such as Google's Google Cloud Platform and others, are also developing new software and hardware. As a result, Microsoft's 2021 revenue fluctuated from quarter to quarter. Microsoft must raise its level of competition.

4. Suggestions and Discussions

Finally, the paper will show the suggestion from the three dimensions of sustainable development based on the Microsoft Swot analysis and the current state of Microsoft's three dimensions of Sustainable Development.

For the sustainable development of Microsoft's environmental sector, although Microsoft's environmental policy is the world's leading, for this worldwide problem, Microsoft alone is not enough. To achieve Microsoft's 2030 goal, Microsoft has made detailed methods in four areas: Carbon, Water, Waste, and Ecosystem. But it's not enough for Microsoft to live up to its commitment to environmental sustainability. The 2030 Agenda for Sustainable Development, which was endorsed by all United Nations Member States in 2015, offers a unified framework for peace and prosperity for people and the planet, both now and in the future. The majority of the book is made up of the 17 Sustainable Development Goals (SDGs), an urgent call for action by all governments in a global partnership [14]. So, Microsoft needs to work more collaboratively with other organizations and government agencies to achieve Sustainable development and contribute to a sustainable future that

truly belongs to everyone. In addition, as early as July 2021, Microsoft launched Microsoft Cloud for Sustainability, which aims to help enterprises track their carbon emissions and take corresponding management measures. This service is a good foundation for Microsoft to cooperate with other organizations. It can provide comprehensive, integrated, and automated sustainability management for enterprises or organizations at any stage of the sustainability process. Microsoft also took the lead in several other collaborations in 2021, including the launch of the "Carbon Call," a program designed to assist companies in overcoming their carbon emission and elimination challenges and achieving a net-zero future. This program was developed in conjunction with the Climate Works Foundation and more than 20 other top organizations. But to achieve a truly environmentally sustainable ecosystem, Microsoft needs to continue to refine its technology and strive to collaborate and collaborate with more organizations and governments.

What is more, it explores the suggestion of Microsoft's Social Sustainable Development part. Microsoft's Corporate Social Responsibility (CSR) primarily addressed three issues: commitment to sustainability, addressing racial injustice and inequity, and investing in Digital Skills. But Microsoft hasn't been much focused on cyber security. In the 2019 Global Risks Report, the World Economic Forum (WEF) ranked data theft and cyber-attacks among the top five most likely risks, followed by extreme weather events and climate change [15]. But in this respect, Microsoft has not done a good job. The total number of vulnerabilities in Microsoft products has soared over the past five years, rising 181% from 2016 to 2020, according to Beyond Trust's Microsoft Vulnerabilities Report 2021. In early 2021, a foreign hacking group called HAFNIUM broke into servers that heavily used Microsoft Exchange programs. The group found and exploited four different zero-day vulnerabilities, terrorizing the entire cyber-Security community. Therefore, Microsoft needs to pay more attention to network security issues, focusing on protecting users' personal data information, to win customers' trust.

As for economic Sustainable Development, Microsoft's financial results for fiscal 2021 were less than stellar due to the COVID-19 pandemic and the company's capital investment during its digital transformation. In addition, as mentioned in Microsoft's Swot analysis, Microsoft's core market has become over-saturated and cannot continue to grow rapidly in the existing market. Therefore, Microsoft can collaborate with, combine with, or acquire businesses that have a promising future in emerging markets. This will not only keep Microsoft at the forefront of development and innovation but also give it the strength to explore other market segments it has not previously explored.

5. Conclusion

Through the case analysis, this paper finds that Microsoft has detailed measures in three aspects (environment, society, economics) of sustainable development, especially in terms of the environment. Microsoft puts forward the 2030 plan, which aims at achieving the goals of Carbon Negative, Water Positive, and Zero waste by 2030. However, Microsoft still needs to actively promote collaboration with other organizations and facilitate building a truly environmentally sustainable ecosystem. Without paying enough attention to other societal challenges like cyber security, Microsoft concentrates on its commitment to sustainability, tackling racial injustice and inequality, and investing in digital skills. Therefore, this paper suggests that Microsoft should pay more attention to other social issues in the future. Finally, from the aspect of economics, Microsoft's revenue in fiscal 2021 was poor due to the pandemic and the investment in digital transformation. Therefore, it is suggested that Microsoft can cooperate, merge or acquire companies in emerging industries to achieve its economic sustainable development. This study is beneficial to the future development of Microsoft in the three aspects of sustainable development. Meanwhile, Microsoft's measures in these three aspects are also worth learning for other companies.

Finally, there are still some limitations in this paper. First, this qualitative research on Microsoft is not representative. Although Microsoft is a tech behemoth, it is also one of the enterprises. It cannot represent all enterprises. Second, Microsoft has taken many measures in the three aspects of

sustainable development. This paper cannot list all of them, instead only presenting some representative measures among them. In the future, scholars can continue to study the three aspects of sustainable development of other companies and compare them with Microsoft, to put forward more representative views and suggestions.

References

- [1] Elena Giovannoni and Giacomo Fabietti. What is sustainability? A review of the concept and its applications. Switzerland: Springer International Publishing, 2013.
- [2] Ben Purvis, Yong Mao, Darren Robinson. Three pillars of sustainability: in search of conceptual origins. *Sustainability Science*, 2019, 14: 681-695.
- [3] Cory Searcy, Measuring enterprise sustainability. *Business Strategy and the Environment*, 2014. 25(2): 120-133.
- [4] Bojan Obrenovic, Jianguo Du, Danijela Godini, et al. Sustaining enterprise operations and productivity during the COVID-19 pandemic: “ Enterprise effectiveness and sustainability model”. *Sustainability*, 2020, 12: 59-81
- [5] Microsoft. Facts about Microsoft. March 31, 2022. Retrieved on October 2, 2022. Retrieved from: <https://news.microsoft.com/facts-about-microsoft/#RevenueHeadcount>
- [6] Microsoft. Earnings release FY22 Q3. April 26, 2022. Retrieved on October 2, 2022. Retrieved from: <https://www.microsoft.com/en-us/Investor/earnings/FY-2022-Q3/press-release-webcast>
- [7] International Monetary Fund. World economic outlook update: gloomy and more uncertain. July 26, 2022. Retrieved on October 1, 2022. Retrieved from: <https://www.imf.org/zh/Publications/WEO/Issues/2022/07/26/world-economic-outlook-update-july-2022>
- [8] Zhang Jiang. Construct the new normal of sustainable development with artificial intelligence. *China Academic Journal Electronic Publishing House*, 2020, (C): 1994-2022.
- [9] B. R. Kumar. Microsoft’s acquisition of LinkedIn. *Springer Nature Switzerland AG*, 2019, 27: 235-241
- [10] WCED 1987. Report of the World Commission on environment and development. May 20, 1987. Retrieved on September 25, 2022. Retrieved from: sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf
- [11] Berry, M. A. and Rondinelli, D. A. Proactive corporate environmental management: A new industrial revolution. *Academy of Management Perspectives*, 1998, 12(2): 38–50.
- [12] Frederick, W. C. The growing concern over business responsibility. *California Management Review*, 1960, 2(4): 54–61.
- [13] Deborah Doane, Alex MacGillivray. Economic sustainability: the business of staying in business. The SIGMA Project, 2001.
- [14] United Nations. Do you know all 17 SDGs. 2022. Retrieved on October 8, 2022. Retrieved from: <https://sdgs.un.org/goals>
- [15] World Economic Forum. The Global Risks Report 2019. January 15, 2019. Retrieved on October 8, 2022. Retrieved from: <https://www.weforum.org/reports/the-global-risks-report-2019>