**INTRODUCTION**

Understanding the external environment is crucial for organizations, particularly in the context of sustainable development (Uitto, 2016). This understanding is negotiated through communication and shapes organizational strategic norms (Dirsmith and Covaleski 2023). However, the assessment of the external environment is complex and requires clear definitions and measures (Miller *et al*, 2016). The impact of the external environment on management information systems is also significant, with different states of the environment requiring different information characteristics and collection approaches (Ewusi-Mensah, 2021). Therefore, a critical evaluation of the external environment is essential for organizations to effectively navigate and respond to its challenges and opportunities.

The PESTEL analysis framework, which considers political, economic, social, technological, environmental, and legal factors, has been widely used in various industries to assess the external environment. Mokhtar (2021) and Schütz *et al* (2018) both highlight the relevance of this framework in strategic management, with Mokhtar specifically applying it to event management and Schütz demonstrating its use in analysing a company's macroenvironment. The environmental aspect of the PESTEL framework is particularly important for companies like Microsoft, as it helps them understand the impact of environmental factors on their operations and strategic position. This is further supported by Zhang *et al* (2011), who emphasizes the need for a holistic strategic analysis framework, and Galindro *et al* (2019) who suggests the use of data envelopment analysis to benchmark environmental product declarations. These studies collectively underscore the rationale for using the PESTEL framework to explain the environmental analysis of Microsoft, as it provides a comprehensive and structured approach to understanding the environmental factors that can influence the company's performance.

**MACRO-ENVIRONMENT ANALYSIS**

Microsoft, being a global tech giant, operates in a dynamic macro-environment influenced by various factors (Microsoft Corporation, 2024). The political factors pose both opportunities and threats (Microsoft Corporation, 2023). The company faces political tensions, particularly with the Chinese government, impacting its operations due to the distribution and supply chain issues (Jahan & Sazu, 2023). Additionally, issues with the European Union, such as fines imposed, highlight the challenges Microsoft faces in navigating diverse political landscapes. The changing political environment and the need for lobbying efforts add complexity to the company's strategic considerations (Modak, Sinha & Ghosh 2023). Microsoft's proactive approach, spending tens of millions of dollars annually on lobbyists, indicates its commitment to establishing a favorable political image globally. However, the accusations of creating a monopoly environment raise concerns, emphasizing the delicate balance the company must maintain in the political arena (Phan 2021).

Economic factors significantly affect Microsoft's performance. Economic stability in developed countries provides a steady market, while the growth of developing countries offers opportunities for increased sales (U.S. Department of Commerce – International Trade Administration Year). Exchange rates and protectionist policies, especially during the Trump administration, can impact multinational corporations like Microsoft, requiring careful financial management and strategic adaptation. The overhaul of the H-1B visa program, though potentially limiting for foreign employees, could benefit Microsoft's growth and profitability by enforcing higher wages (Microsoft Corporation, 2024).

With the surge in computer and laptop adoption, Microsoft thrived as its operating system dominated. However, the shift towards mobile usage demands a strategic pivot. Mobiles have become indispensable, yet Microsoft primarily concentrates on computers (Seitova 2022). The company's major products are computer-centric, and to enhance sales, Microsoft needs to adapt to the smartphone landscape, aligning with changing customer preferences and the mobile-centric culture (Williams and Figueiredo, 2021)

Technological factors underscore the competitive nature of the tech industry. Microsoft must continuously innovate to stay ahead, facing strong competition from companies like Google and Apple (Bakri *et al, 2012)*. Investing in research and development, especially in artificial intelligence, provides opportunities for Microsoft to maintain a leading position in the market (Nkang, 2023).

Microsoft has positioned itself as a leader in environmental responsibility, garnering the title of the world's most environmentally friendly company in 2019 (Microsoft Corporation, 2024). The tech giant actively promotes sustainability through initiatives like granting funds for AI-driven research on global warming and supporting environmentally sensitive computing. Operating as a 100% carbon-neutral company, Microsoft implements an internal carbon tax, allocating $50 million over five years to leverage AI and machine learning technology for addressing environmental challenges, showcasing its commitment to a green future (Jahan & Sazu 2023).

As the world's largest company, Microsoft faces a high risk of legal challenges, having paid a substantial $9 billion in lawsuits (Microsoft Corporation, 2023). A major legal entanglement arose when 8,600 current and former employees sued for gender discrimination, alleging systematic bias against female engineers. In another case, a customer sued Microsoft in 2018 after a forced Windows upgrade rendered his PC non-functional, emphasizing the company's need for careful customer satisfaction strategies while avoiding discrimination (Microsoft Legal Issues, 2024).

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| --- | --- | --- |
| **Factor** | **Advantage** | **Disadvantage** |
| Political | - Proactive engagement and lobbying demonstrate commitment | - Tensions impact distribution and supply chain operations |
|  | - Stability in developed countries offers market expansion | - Accusations of monopoly raise concerns |
| Economic | - Stability in developed countries provides a steady market | - Exchange rates and protectionist policies impact MNCs |
|  | - Growth opportunities in developing countries | - H-1B visa program overhaul may limit foreign employees |
| Social (Mobile Adoption) | - Historical dominance in computer adoption | - Focus on computers amid the shift to mobile usage |
| Technological | - Continuous innovation to stay ahead of strong competition | - High competition requires ongoing R&D investment |
| Environmental (Sustainability) | - Recognition as the world's most environmentally friendly | - Carbon-neutral practices and internal tax demonstrate commitment |
| Legal | - Proactive legal approach and spending on lobbyists | - High risk of legal challenges and substantial payouts |
|  | - Commitment to careful customer satisfaction strategies | - Legal entanglements and discrimination issues |

*Summary of the Macro-Environment Analysis for Microsoft*

*Source: Nkang, (2023)*

**STRATEGY AND MARKET ANALYSIS**

Microsoft's strategy and market dynamics are characterized by a focus on anticipating and responding to market changes (Jae-woong and Geun-woo, 2010). The company's success is attributed to its ability to find and retain talented employees, organize small teams, and pioneer evolving mass markets (Microsoft Corporation, 2024). This is complemented by a flexible, incremental approach to product development and a relentless pursuit of future markets (Microsoft Corporation, 2024). In the area of business intelligence, Microsoft has employed various expansion strategies to increase its market share, including acquisitions and customer-focused initiatives (Qisman *et al.,* 2021). These strategies have enabled Microsoft to maintain its position as a leader in the software industry.

**CONCLUSION**

The company faces challenges such as political tensions, changing customer preferences towards mobile devices, and legal entanglements. However, Microsoft's strategic initiatives, such as proactive political engagement, environmental responsibility, and a focus on innovation, position it for resilience and growth. The emphasis on sustainability, carbon neutrality, and AI-driven environmental initiatives showcases Microsoft's commitment to responsible business practices. The company's success in anticipating market changes, retaining talent, and flexible product development strategies reinforces its market leadership. Moving forward, Microsoft must balance technological innovation with adapting to evolving customer trends for sustained success in the dynamic tech landscape.

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