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Review on Innovation and Globalization Impact on the Financial Efficiency of Non-financial Multinational Enterprises in Sub-Saharan West Africa

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Abstract – The objective of this study is to systematically review and analyze the existing literature on tech innovation's impact on the financial efficiency of non-financial multinational companies (MNCs) based in Sub-Saharan West Africa during the COVID-19 crisis. The study filtered and engaged relevant resources from 1998 to 2022 from reputable business, finance, and economic journals obtained via Google Scholar and Scopus search engines. The study involved a fit assessment of materials. The findings manifested significant studies on innovation strategies and productivity of MNCs across sectors and industries. But resources were limited regarding COVID-19 and the efficiency of MNCs' operations. Also, no data is available on the impact dimensions of innovative decisions on income generation on the financial growth of the MNCs operating in the West African region during the 2020 and 2021 outbreaks of the virus. This review exemplifies a recent review on the impact and contribution of innovative strategies and technology applications on the financial advancement of MNCs in Sub-Saharan West Africa over the last three years of COVID-19 challenges. The recommendation invites research on tech innovation and its effect on the financial health of the multinationals during the global economic lockdown for the government and private sector benefit.

Keywords – Innovation Strategy, COVID-19 Challenges, Globalization, Financial Productivity, ROI, and Sub-Sahara West Africa

1. Background and Introduction

Globally, businesses and organizations strive for excellence and productivity, and globalization offers connectivity, reducing the cost of production and spreading innovation and technology. Many benefits come attaching, including accessibility to human talents and new markets, but outstandingly, tech innovation enables the turning around of firms for increased growth and strategic development. Indications reveal an exceeding impact on cross-border investment and returns on investments (ROI), though with associated environmental challenges. Rosenberg (2006) demonstrates the importance of innovation in economic growth by focusing on specific dimensions of innovation in the developed economies of the Organization for Economic Co-operation and Development (OECD).

In the organized study, Rosenberg illustrates the impacts of tech innovation and the transformational effects on the tourism business model. With different market considerations, the experience shows that business innovation is fundamental to revenue increase, accounting for 85% growth in the system due to the possible changes likely to influence business productivity. Far from just adopting newly available technology, the concept encompasses core business changes for revenue generation and sustainability. Previous investigations reveal extensive support for innovation as vital in resource utilization.

Developing and sustaining business models are strategic but deploying innovative instruments can make a remarkable difference. Technology streamlines business processes with minimal expenses and effective time management, allowing companies nationally and internationally to find leverage to secure data for competitive advantage (Miller, 2001, p. 30). Besides leveraging on competitive advantage, tech innovation offers convenient and rapid means of business transactions. Today, companies can boast of information management systems, accounting facilities, and point-of-sales mechanisms, to mention but a few.

The word - innovate comes from Latin, meaning launching into a new arena or changing the norm or established practices (Coccia, 2018, p. 10). Innovation manifests empirical dimensions of ideas by creating new services and processes and turning around business models for effective and sustainable solutions. Part of the advantages is the improvements and disruptions that enable firms strategically create wealth and empower shareholders. The era of invention began in the eighteen century with the industrial revolutions when the world accessed diverse machines and began multi-faceted productions allowing for growth and sustainability (Hill, 2002, p. 108). That gave room for technology which significantly impacts modern society and the business environments from the advanced economies to the emerging and developing nations.

Today, many countries rely on technology and innovation. Examples of technologically advanced and innovative countries include the USA, Sweden, South Korea, and Switzerland, which score about 65.5% on the leadership scale of innovation (Allen, 2012, p. 494). Innovation pivots economic growth, allowing increased productivity and empowering development. With globalization comes knowledge innovations utilization through emerging economies, enabling vertical shifts in the transfer of skills and capabilities. Increasingly, the world is experiencing dynamism in international business operations resulting from advances in innovation.

Ferraris, Santoro, and Bresciani (2017) explain the role of knowledge sourced internally and externally within multinational companies (MNCs) and the resultant effects on the subsidiaries. Engaging resources from 163 subsidiaries, the study demonstrates how firms can innovate and develop effectively with knowledge resources, highlighting future implications and considering the management of MNCs and subsidiaries. When companies innovate, advancement is possible, and to solve critical challenges, resorting to innovation offers the solution. Nobel and Birkinshaw (1998) address concerns about global innovation challenges in MNCs via examinations of research control and communication patterns. With 110 research units as a sample from 15 MNCs, the study identifies three forms of research unit roles highlighting critical aspects such as the external and internal network development of relationships which also impacts innovative capacity.

Kostopoulos, Papalexandris, Papachroni, and Ioannou (2011) examine absorptive capacity to financial efficiency and innovation, taking research from identifying and converting knowledge to profit and new dimensions for corporate-financial enhancement. That points to the criticality of technology and innovation in achieving competitive advantage, profitability, and performance. No doubt, many innovative organizations have the chance to improve revenue and earnings before deductions like taxes, amortization, interest, and depreciation (EBITDA). However, the extent of growth and distinction between innovative businesses and other companies is not in the literature, considering different business processes, environments, and involvements.

Firms in the financial sector as multinational banks, seem to have an edge in technology application since modern banking is innovation-driven. Aside from the banking regulations that enable the acceptance of deposits, the MNCs in the financial industry can admit public funds and initiate a periodic renewal of capital investments for up to 5 years (The World Bank, 2022). That demonstrates the availability of sufficient working capital for MNCs in the financial industries at any time. There is a positive effect on performance compared to the operations in non-financial corporations, which are generally into the production of goods and offering of services to the consuming public without a license to accept free deposits except for outsourcing capital through the capital markets and the financial institutions. Consequently, the review examines the literature on the effects of innovation on the productivity of non-financial MNCs vis-à-vis returns on investments and assets during the 2020 and 2021 COVID-19 crisis.

While significant resources show advances in returns on investment (ROI) of innovation, there are socioeconomic and political imperatives making the measuring processes of ROI a challenge. Government can intervene or raise the tax burden at will, informing the role of politics in the business environment, which can increase or reduce profits. For example, there are value-added taxes, among other business rates. Besides, the government can introduce new laws affecting salaries and wages and cumulatively impact the overall financial performance of firms. In another 6context, the socioeconomic effects can aid needs awareness and customer incentives in the same way it can also frustrate aspirations and resources in a particular economy.

For instance, companies using innovation can understand demands and create new services and products (Mattes, 2015, p. 148), but what about the impact of a social and health crisis like COVID-19 experienced recently? COVID-19 is part of the socioeconomic situation characterized as a pandemic, attacking the global economy and human existence (El-Chaarani, 2022, p. 1). What happens to companies locally and internationally during this time of crisis is an issue of concern bringing the importance of this research.

Innovation contributes to higher efficiency and influences customer satisfaction while increasing openings for trade and boosting new productions (Mattes, 2015, p. 148). But to what extent does it affect international business operations? What is the influence, or is there any impact on the financial productivity of multinational non-financial firms in the global COVID-19 crisis period? Therefore, the study creates research questions such as:

a. Are there reviews on technology application impact on the operation of the MNCs during the 2020 and 2021 COVID-19 inversion?
b. Were there new studies on the financial growth of the MNCs vis-à-vis innovation utilization for the sustainability of product of sales and the company productivity in sub-Saharan West Africa?
c. If there were recent pieces of literature on innovation and financial efficiency of MNCs at the period, were there materials specifically on innovation employment and productivity within international companies operating in the sub-Saharan West African region?

With these concerns, the study seeks to review the current literature on tech innovation and global business operations during the COVID-19 crisis considering the financial productivity of multinational companies within the non-financial sector. The essence is to understand what research exists regarding the effect of tech-innovation applications on the non-financial MNCs' returns on investment (ROI) and returns on asset (ROA) during the outbreak of COVID-19 in sub-Saharan West Africa. Hence, this study conducts a systematic review of the phenomenon, identifying, evaluating, and presenting summarized findings on the recent literature reviews on the subject for further investigations.

2. Research Methodology

Critical in research methodology is research objective identification already specified in the previous section. The study takes a systematic review of resources towards understanding the extent of investigation on innovation and financial productivity of the MNCs in Sub-Sahara West Africa during COVID-19 (from 2020 -2021). A research design and methodology provide the legitimacy and plan to keep focused, enabling smooth research processes and a rationalized approach to the investigation (Mohajan, 2018, p. 30).

Without this element, a paper appears unorganized and incapable of offering efficient scientific findings. In this work, keywords include COVID-19 challenges, innovation strategy, globalization, financial productivity, ROI, and Sub-Sahara West Africa from the research topic. The identified databases for the review are Scopus and Google Scholar. The adopted keywords, considering other synonyms and acronyms, were applied in the online search to retrieve all relevant materials in the period.

Engaging Boolean operators such as the AND, NOT, AND OR with double marks of quotations for multiple words were critical in searching the Scopus and Google Scholar search engines to obtain all essential resources. Boolean operators include symbols and words deployed to connect or disconnect keywords in a digital search (Lee, Kin, Kim, & Lee, 1993, p. 293). The search brought over 1845 related articles.

But with fit assessment processes limiting the search to the COVID-19 period between 2020 and 2021, the research was further filtered, streamlining to obtain the most current and relevant scientific articles on the topic. These articles were from reputable journals listed on Google scholar and Scopus web. Hence, running a streamlined online search via the Scopus and Google Scholar engines with the stated keywords and within the 2020/21 period delivered the most critical materials used in this systematic review.

3. Literature Review

Innovation is critical in business, and the MNCs looking for growth continually strategize for increased financial performance (Mortara, Napp, Slacik, and Minshall, 2009), reflecting significantly on corporate decisions regarding technologies and internationalization. The review considers recent developments concerning technology and innovations vis-à-vis the financial efficiency of global enterprises to identify the degree of impact the phenomenon had on the revenue growth of MNCs operating in the sub-Sahara west Africa during the COVID-19 period (2020 -2021). Globally, many nations shut down economies and most businesses resorted to virtual mode during the outbreak of COVID-19 (Kano and Hoon Oh, 2020).

There was economic uncertainty, and companies, including the MNCs in all industries, faced challenging moments. The way out was adapting, improving, and engaging in tech innovation to keep business partially or fully functional (Gök and Peker, 2017). More than ever, understanding adjustments and strategizing to keep focus seemed the way forward.

Zayed, Islam, Shahi, Rahman, and Raisa (2021) analyze the coronavirus impact on MNCs' financial growth. The study presents a spatiotemporal understanding of the crisis and its side effects on the financial management of MNCs. International businesses are brand makers and generally innovative, but the coronavirus invasion impacted all dimensions of operations. Utilizing data from journals, media, and other digital sources, Zayed et al. (2021) capture elements of global financial management of MNCs with threats in the face of the COVID-19 Pandemic and flexible solutions, including innovation and technology to conquer the challenges.

Gray and Gray (1981) bring data on 408 banks from 77 nations from 1945 to 1999 and demonstrate the distinction between multinational banks and other MNCs. With literature focusing on bank entry with minimal info on banking continuity, the study works on the operational continuity of foreign banks and manifests no connectivity to geographical distance. The theory holds non-financial multinational corporations as commercial. However, the non-financial MNCs include firms like General Motors, KIA Motors, AT &T (communication corporation), farms, Coca-Cola, Guinness, and the like (The World Bank, 2022).

Concerning the threats, Juergensen, Guimón, and Narula (2020) assess the dimensions of covid-19 effects and the policy reactions considering the European small and medium enterprises (SMEs). The study shows the challenges of the virus on SMEs across the manufacturing sector with policy implications. The issue is the economic shock throughout the period and the distinction between immediate impact, economic lockdowns in Europe, and the long-term implications for the SMEs and the global market. That brings attention to logistics issues and demand disruptions in the short term of the SMEs' operations, irrespective of sector and industry. The argument shows the possible long-term challenges with recommendations bothering on policy interventions.

SMEs' experience in this context points to the need for innovation different from the international businesses with capacity. Juergensen et al. (2020) recommend a shift from survival to a structurally based approach to enhance growth via networking and innovation. That can expand the global value chain even in the interruption of economic activities and offer the flexibility to optimize productivity not only for the SMEs but also for the MNCs across Europe, and digital technology plays a vital role in this scenario (Kano and Hoon, 2020). Stagnation is detrimental, and innovation gets attention from companies looking to adapt and implement relevant changes for growth.

McMaster, Nettleton, Tom, Xu, Cao, and Qiao (2020) analyze the COVID-19 implications on supply-chain management in MNCs in the fashion industry and show how the effects of the Coronavirus enforce efficient production. Part of the research outcomes of this study includes the recommendation of an alternative measure of enhancing communication measures to boost relationships between buyers and sellers that centers on technology. Technology and advanced innovation management are fundamental to achieving profitable business (Miller, 2001, p. 2). Tech innovation boosts systems efficiency and supports increasing services and products in all dimensions. The MNCs with higher capacity can streamline processes with technology and maintain an efficient database besides minimizing production costs.

Reducing the cost of production is critical to business profitability and enhancing production costs, growth, and sustainability (Michel and Shaked, 1986). The implication is the MNCs' ability to record more profits with fixed sales prices and constant or increasing sales without any quality reduction. Companies with growth objectives are likely to evaluate the current business status and the future together with investing in technology.

Gabrielsson, Seppälä, and Gabrielsson (2016) investigate the effects of internationalizing technology for competitive strategy and better financial performance. Apart from indicating the effectiveness of globalization with a comprehensive competitive strategy as essential, the study highlights the importance of MNCs' expansion to a higher capacity for improved innovations and structure across nations. Emphasis favors a hybrid competitive business strategy over maintaining only one business model. That reduces operation costs and provides an opportunity for higher profits or the leftovers after subtracting expenses.

Cost reduction is strategic and needs continuity, though not all the time does it bring positive effects. Employees can sometimes send unhealthy signals and create a panic when management is enforcing organizational changes (Pan and Chi,1999, p. 361). That can cause harm instead of improvements and profits. Gabrielsson et al. (2016) point to the need for a competitive strategy in advancing globalization and financial efficiency using the theory of evolution of MNC. The practical outcome supports globalization in realizing competitive strategies through high-tech innovation for productivity.

Ferraris et al. (2017) offer insights on open innovations in the operations of the subsidiaries of the MNCs and highlight the benefit of external and internal knowledge. In exploring through an extensive literature review on innovation, the study manifests innovation needs and the strategic relevance of converting knowledge to financial wealth. Nothing sustains competitive advantage and performance as knowledge management apart from technology application (Verwaal, 2017, p. 20).

Utilizing Amadeus data and engaging resources from 163 MNCs subsidiaries through questionnaires is efficient while conducting hypotheses testing by OLS regression makes the study credible. But then, it appears the sample size was too large. Although much smaller samples can hinder extrapolation in the investigation, more extensive data samples can magnify identification differences (Fugard and Potts, 2015). 10% of the research population is ideal, and many pieces of literature support participants of between 5 and 50 as adequate in qualitative studies (Dworkin, 2012). However, a considerably-larger sample allows a precise estimate of research effects besides enhancing generalization.

Amadeus offers comparable financial data of leading firms (private and public) in Europe with significant assets (Van Tendeloo and Vanstraelen, 2008, p. 449). Deploying information from Amadeus is a plus to this research as the database is reliable in providing secondary data. The study reveals the multiplicative impact of combining knowledge from external and internal sources in the operations of the MNCs, creating leads for future research opportunities.

In addressing global innovation challenges in MNCs, Nobel and Birkinshaw (1998) examine the control patterns and the communication trends in research and development (R&D) operations in the global space. The research identifies the international creator and adaptor and the local adaptor for the role of research and development through researching 110 research units of 15 MNCs. The study demonstrates the management of different R&D units through control, communication, and corporate network (internally and externally). It further stresses the importance of deploying knowledge within or without the organization for innovation and productivity in the MNCs while discussing the implications of innovation management.

Still, within knowledge management for innovation, Jiménez-Jiménez et al. (2014) examine issues and the importance of the practices to enhance corporate innovation among MNCs. The study connects knowledge transfer and internationalization and analyzes organizational innovation and social capital. With data from 104 MNCs and testing hypotheses, the research showed indirect effects of knowledge transfer from subsidiaries to the home base of the MNCs, manifesting criticality in innovation development which in turn impacts financial productivity. Knowledge management produces a platform necessary for creativity and innovation (West and Bogers, 2014).

The creation and sharing of knowledge bring leverage to corporate organizations, and international firms cannot afford to do without capital investments in innovation. One of the innovation advantages is the contribution to advancing economic growth (Dabla-Norris, Kersting, and Verdier (2010). Where efficiency rises, the implication goes to the increases in output and, as production elevates, sales and boosts revenue.

On production management, Zahra and Das (1993) present innovation strategy and its impact on the financial growth of firms in the manufacturing industry. Leadership orientation and external and internal means of innovation form part of the innovative strategies in this study. Investigations expand to the relationship between innovation strategy and financial efficiency and variations in financial performances resulting from different innovation strategy applications. The sequential model outputs indicate a causal effect of innovation strategy and dimensional effects of knowledge on company productivity. The result demonstrates that increased investment in innovation processes yields increasing financial output for firms (Bigliardi, 2013).

In achieving some level of profitability, innovation holds preeminence. Innovative processes minimize costs and employee turnover by branding and differentiating services and products (Lööf and Heshmati, 2006). Aguilera-Caracuel and Ortiz-de-Mandojana (2013) research linkages between corporate financial performance and Green innovation and manifest a critical role of green innovation technology in energy conservation. That opens a vista to how the corporate environment and green-products design can influence company financial outcomes and business sustainability. Although the comparative study between the green and non-green innovative firms indicates less impact of green innovation vis-à-vis the non-green innovation, the study confirms a positive relationship between green innovation on the overall productivity of a company.

On the green phenomenon, de Azevedo Rezende et al. (2019) study green innovation and financial performance of MNCs using info from 356 companies. The fixed panel model research method indicates a positive connection between green innovation and the company revenue growth after two years of investment in green innovation, irrespective of internationalization of this study. That reflects real-time proof of returns on corporate green innovation investment over time.

Offering a critical view on operational innovation and financial efficiency, Klingenberg, Timberlake, Geurts, and Brown (2013) explore the principal issues responsible for inconsistencies in research regarding operational innovations and corporate efficiency. The study examines innovation strategy and the different effects on profitability by deploying parameters like the BEP (Basic-earning-power), ROE, and ROA. When evaluating a management team, assessment of ROA and ROE is critical because the parameters indicate how well a firm manages resources (Basti, Bayyurt, and Akın, 2011). Financial leverage distinguishes ROA and ROE, which gauges company profitability and efficiency in profit generation. However, there are no existing reviews on investigations in the COVID-19 breakout period on the influence of innovation on the profit ratios of the MNCs.

4. Summary

Globalization brings tremendous transformation allowing the MNCs significant control of power and resources enabling technology and innovation, and impacting the global space. Innovation strategies, by all implications, constitute measures of resource utilization for maximum impact, and the management of MNCs needs to engage same for profits and create wealth for shareholders. Through a rigorous review of relevant pieces of literature from reputable business finance and economic journals obtained via Google Scholar and Scopus search engines with keywords including innovation strategy, COVID-19 challenges, globalization, financial productivity, ROE, and ROA, the researcher determines a gap in finding the degree of innovation application impact on the financial health of MNCs during the virus crisis.

Filtered and streamlined articles on innovative MNCs revealed many dimensions of innovation strategies and their influence on the MNCs' financial efficiency. But the level and magnitude of innovation (for example, the effects of online product sourcing and marketing apps) impact on the profitability ratios (ROA and ROE) of the MNCs specifically headquartered in Sub-Sahara West Africa is not in focus. Zayed et al. (2021) analyzed the coronavirus impact on MNCs' financial growth. The study presented a spatiotemporal understanding of the crisis. and the implication on financial management.

Juergensen et al. (2020) assessed the dimensions of COVID-19 effects and the policy reactions considering only the European small and medium enterprises (SMEs). The study uncovered issues on the economic shock throughout the period and the distinction between immediate impact, economic lockdowns in Europe, and the long-term implications for the SMEs and the global market. McMaster et al. (2020) analyzed the COVID-19 implications on supply-chain management in MNCs in the fashion industry and showed how the effects of the Coronavirus enforce enhanced production. None of these researches examined the impact variations of innovation income streams of the MNCs based in West Africa and possible effects on the economies during and after the COVID-19 crisis.

Before the advent of the virus, Gabrielsson et al. (2016) investigated the effects of internationalizing technology for competitive strategy and better financial performance and indicated the effectiveness of globalization with a comprehensive competitive strategy as essential and MNCs' expansion to a higher capacity for improved innovations and structure across nations, pointing to the need for competitive strategies in advancing globalization and financial efficiency. Nobel and Birkinshaw (1998) examined the control patterns and the communication trends in research and development (R&D) operations in the global space, identifying the international creator and adaptor and the local adaptor for the role of research and development and demonstrating control and communication essential for innovation and productivity in the MNCs. Zahra and Das (1993) presented innovation strategy and its impact on the financial growth of firms in the manufacturing industry. However, no data captured operations of the MNCs in West Africa vis-à-vis the tech innovation impact on productivity at the time of COVID-19.

Aguilera-Caracuel and Ortiz-de-Mandojana (2013) researched the linkages between corporate financial performance and Green innovation and manifest a critical role of green innovation technology in energy conservation. de Azevedo Rezende, Bansi, Alves, and Galina (2019) studied the effects of green innovation on the financial performance of MNCs, indicating a positive connection between green innovation and the company revenue growth after two years of investment in green innovation, irrespective of internationalization in this study. Klingenberg et al. (2013) explored the principal issues responsible for inconsistencies in research regarding operational innovations and corporate efficiency, examining innovation strategy and the different effects on profitability by deploying parameters like the BEP (Basic-earning-power), ROE, and ROA. As revealing as these innovative researches are, there are no investigations on the effect of the tech innovation apps on the income generation of multinationals based in West Africa during the global economic crisis of COVID-19.

Therefore, the study identifies the opportunity presented through the Coronavirus crisis period in this systematic review to examine how well the MNCs based in Sub-Sahara West Africa financially during the break out of the Pandemic with the use or no use of tech innovation. To understand whether the application of online marketing and sales apps, for example, gets relevant. Also, it is essential to have a validated position on whether the delivery mechanisms many MNCs deployed during the global economic lockdown made any significant or positive effects on companies' ROE and ROA during the hit of the COVID-19-two-year period. The potential research on this subject can inform changes in the policy framework and government regulations in Sub-Sahara West African countries to encourage process digitalization and operations in the territories. The identified future area of research is resourceful for strategic decisions that can empower growth in the MNCs, and corporate enterprises can utilize the knowledge for capital management.

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