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Unveiling Job Satisfaction Transformations: A Study on the Perspectives of Nepali IT Sector Employees Before and After Telecommuting during COVID-19

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ABSTRACT

Abstract: Focused on the IT sector in Nepal, this study investigates the impact of telecommuting on job satisfaction. The lack of specific telecommuting policies in Nepal, coupled with the sudden shift to virtual work during the pandemic, presents challenges that necessitate exploration. The primary objective is to assess and compare job satisfaction levels before and after telecommuting. The study holds significance as one of the earliest examinations of telecommuting in Nepal, aiming to guide future research and provide insights for academicians, practitioners, and corporate managers. Methodologically, a Pre-Post comparison approach is employed, utilizing a quantitative survey design. The results, analyzed using R software, reveal a significant decrease in job satisfaction after telecommuting, prompting a discussion on telecommuting capabilities, drawbacks, and the ongoing debate on its effectiveness. While the study acknowledges limitations in sample size and sector focus, it calls for future research encompassing diverse categories and larger samples to enhance generalizability.

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INTRODUCTION

The historical evolution of work structures underwent significant transformations, particularly with the transition from physical to mental tasks. Originally, prior to industrialization, work primarily occurred within the domestic realm and was labeled as cottage industries. As economic structures evolved, the nature of work shifted towards mental tasks, leading to the establishment of centralized organizational structures (International Labour Organization [ILO], 2020). Subsequently, with technological advancements, the concept of telecommuting emerged, denoting the ability to perform work remotely. Coined by Jack Nilles in 1972, the term gained prominence in subsequent years (Dailey-Hebert,

Mandemach, & Donnelli-Salle, 2020; ul Mustafa, & Nishat, 2017; Ameer, Ali, Farooq, Ayub, & Waqas, 2023).
The inception of telecommuting can be traced back to the 1970s, influenced by the oil shortage crisis (Huws, 1984). In response to economic and energy conservation imperatives, individuals began working from home, thereby initiating a revolutionary concept. Presently, telecommuting has become the predominant mode of operation for at least 50% of the U.S. population (Muhammed, 2018), extending its prevalence beyond developed nations to include developing countries such as Malaysia, the Philippines, and Thailand (ul Mustafa, Abro, & Awan, 2021; Ahmed, Mahboob, Hamid, Sheikh, Ali, Glabiszewski, & Cyfert, 2022; Teh, Hooi, Loh, Ong, & Hong, 2013).

Telecommuting, as a human resource management practice, offers benefits extending beyond work-life balance, attracting and retaining high-quality employees. Positive aspects, as highlighted by Raghuram (2014) and Roderick and Jelley (1991), include reduced traffic congestion, increased productivity, enhanced work-life balance, job satisfaction, flexible scheduling, decreased commuting costs and time, increased family time, reduced interruptions, and environmental sustainability.

The COVID-19 pandemic prompted global responses, including policies to mitigate the adverse effects and prevent the virus's spread (Abulibdeh, 2020). Recognizing potential hotspots for transmission, countries, including Nepal, implemented lockdowns, compelling many to work from home (ILO, 2020). This measure, while curbing the virus, resulted in widespread economic and social impacts.

The onset of the COVID-19 pandemic necessitated a paradigm shift in work arrangements, with numerous organizations, including IT companies, NGOs, and INGOs, adopting telecommuting to curb the virus's spread (Pant, 2020; ul Mustafa, & Nishat, 2019; Ma, Akhtar, Akhtar, Hashim, & e-Ali, 2022). Governments globally facilitated the transition to remote work. Telecommuting, defined as a work arrangement where employees perform their regular tasks at a location other than their usual workplace, supported by technological connections (Fitzer, 1997), emerged as a crucial practice for sustaining economic activities while safeguarding employee health (Abulibdeh, 2020).

The Government of Nepal implemented a total lockdown on March 24, 2020, restricting movement and business operations to mitigate the virus's spread ("Work From Home Culture in Nepal," 2020). Following a temporary easing of restrictions in July 2020, the government reinstated a second lockdown in April 2021 due to a resurgence of COVID-19 cases ("Nepal’s lockdown 2.0, new Covid curbs on travel," 2020). Telecommuting became indispensable in sustaining economic activities during these periods, although its implementation faced challenges in developing countries like Nepal, where computer access is limited in more than half of households ("Teleworking is not working for the poor, the young, and the women," 2020).

In Nepal, lacking specific telecommuting policies, the sudden shift towards virtual work during the pandemic presented challenges for both employees and organizations. Despite its relative novelty in the country, the impact of this abrupt transition towards telecommuting on employees' job satisfaction remains unclear.

Statement of the Problem

Due to lockdown measures, employees found themselves compelled to work from home; however, there has been no comprehensive study assessing the satisfaction levels of individuals in this telecommuting scenario. A Survey Monkey report, based on a survey of 9,059 respondents, indicated that over 89% of employees were satisfied with their work-from-home (WFH) arrangements. In contrast, a 2020 Martec Group study with 1,214 participants reported a lower satisfaction rate of 32% during the COVID-19 pandemic. Furthermore, an Institute for Employment Studies poll, involving 500 respondents, revealed that 50% expressed dissatisfaction with their work-from-home setups (Yu & Wu, 2021). A recent survey at Kathmandu University showed that out of 1,347 students, 42.4%, or 571 students, were not satisfied with studying from home (Kathmandu University, 2021). A similar dissatisfaction scenario may emerge in other sectors as well, especially considering the potential impact on work-family balance (Karacsony, 2021).

Various studies, such as those by Duxbury, Higgins, & Mills (1992), Golden & Veiga (2005), Ruth (2011), ul Mustafa, Nishat, & Abro, (2022), and Winderger, Chudoba, & Sundrup (2017), suggest that telecommuting might lead to job dissatisfaction in employees. Assessing the satisfaction levels of employees after working from home is crucial, as it provides guiding knowledge for future unforeseen events when telecommuting may be necessary again.

In the midst of the crisis posed by the COVID-19 pandemic, telecommuting emerged in Nepal as a viable measure to sustain economic activity while addressing the ongoing trauma. While this may be considered a positive development amid the challenges brought about by the pandemic, the lack of a comprehensive study, particularly concerning a significant determinant like job satisfaction (Fonner & Roloff, 2010), could impede Nepal's ability to extract valuable insights from this experience. Research indicates that countries without telecommuting knowledge face difficulties transitioning from traditional modes of operation to telecommuting (Abulibdeh, 2020).

Research Question: Is there a significant difference in the level of job satisfaction before and after the implementation of telecommuting practices?

Objective of the Study

The primary objective of this research was to assess and compare the levels of job satisfaction among employees in the IT sector in Nepal before and after the implementation of telecommuting. The study aimed to offer initial insights into the telecommuting experiences of IT sector employees in Nepal, particularly by examining variations in job satisfaction levels.

This research exclusively focused on employees within the IT sector in Nepal, encompassing companies involved in managing IT infrastructures, software development, information handling, and networking. Building upon the recommendations of several researchers (Teo, Lim, & Wai, 1998; Tung & Turba, 1996), who suggested that IT-related organizations are ideal for studying telecommuting, this study capitalized on the inherent telecommuting awareness expected in IT professionals due to job characteristics and available infrastructure. The IT sector, being the primary user of the internet, is particularly conducive to the implementation of telecommuting practices.

In contrast to conventional job roles, tasks within the IT sector, such as software development, database management, and web page development, often require minimal communication and collaboration. The predominant focus of IT sector companies on task completion, regardless of the physical location, suggests that working away from the office could potentially enhance employee productivity, as noted by researchers like Brown (2010) and Raghuram (2014).
Additionally, the nature of work in the IT sector allows for remote monitoring of work progress. The absence of fixed working hours, with employees needing to respond to clients even during non-traditional hours or festivals, as highlighted by the "Work From Home Culture in Nepal" (2020), further supports the feasibility of telecommuting in this sector. While challenges may exist for other sectors in transitioning to telecommuting, the distinctive characteristics of IT work suggest that employees in the IT sector in Nepal may encounter fewer obstacles when shifting from working in the office to working from home.

Significance of the Study

Telecommuting has become a standard practice in IT companies in developed countries (Ansong & Boateng, 2018), with much of the relevant research focused on these developed nations. Chepken (2012) highlights the limited exploration of the concept of working from anywhere at any time in the context of developing nations. Despite a high propensity for telecommuting in Nepal, there is a notable absence of studies guiding its proper implementation. The determination of whether telecommuting positively impacts job satisfaction in the context of Nepal remains uncertain without dedicated research in this area. The telecommuting culture that originated in developed countries in the 1970s has yet to fully penetrate developing countries like Nepal, creating a research gap, with job satisfaction being one of the unexplored aspects (Ansong & Boateng, 2018).

This study aims to fill this gap, potentially being one of the earliest examinations of telecommuting in the context of Nepal. Given the novelty of this concept in Nepal, employees' perceptions of telecommuting are largely anecdotal, especially considering the forced transition to telecommuting during the COVID-19 pandemic. The existing body of knowledge on telecommuting and its impact on job satisfaction, as studied by researchers such as Duxbury et al. (1992), Golden & Veiga (2005), Miller (2016), Ruth (2011), and Winderger et al. (2017), was established under normal conditions. The current extraordinary situation of the pandemic challenges this existing knowledge, necessitating a reevaluation (Wang, Liu, Qian, & Parker, 2020).

While the current literature on telecommuting addresses demographic, geographical, technological, economic, and environmental aspects, the studies exploring its connection with job satisfaction tend to be absolute. Without comparative analyses of job satisfaction levels before and after telecommuting, it becomes challenging to conclusively attribute job satisfaction or dissatisfaction solely to telecommuting or other factors. Mueller and Kim (2008) emphasize the need for research comparing job satisfaction levels in employees before and after telecommuting.

This research aims to lay the foundation for exploring various aspects of telecommuting in the future. The findings are expected to assist academicians and practitioners in gaining a deeper understanding of the telecommuting phenomenon. Additionally, it will provide corporate managers with insights into the perceptions of Nepali employees towards telecommuting, aiding in the formulation of effective strategies to enhance employee productivity. The study's outcomes will inform employers whether telecommuting is a viable option for work modes and, if found to increase job satisfaction, may be offered as an alternative for long-term employee retention strategies.

METHODOLOGY

The primary aim of this study was to compare the levels of job satisfaction among IT sector employees in Nepal using a Pre-Post comparison method as part of an exploratory investigation. Formulating hypotheses derived from existing theories, the study adopted a deductive approach, opting for a quantitative design method.

The survey research method was employed, conducted in the natural environment to capture employees' expectations of telecommuting against their actual experiences. The study utilized a pre-post design within a single survey by prompting respondents to report their pre and post levels of the variable under consideration (Davies, 2020). Participants were asked to reflect on their expectations and actual telecommuting experiences.

Primary data for analysis were collected through an online questionnaire survey, given the IT-related focus of the research audience, making an online survey both practical and cost-effective. A sample of 40 employees from an IT-related company was randomly selected, with 34 volunteering for participation. As the sample is random, dependent, and sufficiently large (>=30), statistical tests could be conducted.

Job satisfaction, a widely researched topic, lacks a unanimous definition in the literature, with varying interpretations depending on the context (Zijlstra, 2018). This study focused on facet job satisfaction, examining job satisfaction solely from the perspective of telecommuting. Job satisfaction was conceptualized through Locke's Value Theory (Locke, 1976) and operationalized according to (Earl et al., 2011; Ziegler et al., 2012), considering job satisfaction as a function of employees' attitudes. Attitude, reflecting satisfaction with the job, was measured using a 5-point Likert Scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), as utilized by Roderick and Jelley (1991). Positive and negative aspects of telecommuting were presented in a mixed format without separation.

To ensure content validity, the researcher conducted interviews with two professors, one specializing in Human Resources and the other in Information Technology, to assess the construct of the research. This method aims to evaluate the reasonableness, clarity, and relevance of items (Cooper & Schinder, 2003). Reliability analysis, specifically Cronbach's alpha, will be employed to assess internal consistency (Taherdoost, 2016).

RESULT, DISCUSSION AND CONCLUSION

After receiving the data, it was processed using the statistical software R, chosen for its availability and cost-effectiveness. Each response was entered into the software and thoroughly analyzed for mistakes and missing data. Respondents who answered negatively to the question "Have you telecommuted during COVID-19 lockdown?" were excluded from the study, focusing exclusively on individuals who telecommuted during the lockdown period. As the positive and negative aspects of telecommuting were presented randomly without clear separation, their responses were separated before analysis.

For hypothesis testing, a paired t-test was conducted to compare the level of job satisfaction before and after telecommuting. The results indicated a significant decrease in job satisfaction after telecommuting (M_before = 64.1, SD = 9.2; M_after = 58.7, SD = 11.9), t (33) = 3.6, p = .000.

One potential reason for this decline in job satisfaction could be disparities in telecommuting capabilities among countries. Studies reveal varying percentages of work that can be done from home in different countries, influenced by factors such as the digital divide and economic characteristics. Developing countries may face challenges in adopting telecommuting due to lower technology adoption and digital infrastructure development (Abulibdeh, 2020; ILO, 2020).

Additionally, the drawbacks of telecommuting have been highlighted in the literature. Some organizations, like Yahoo and Bank of America, oppose telecommuting, emphasizing the limitations of virtual collaboration. Studies indicate that telecommuting employees experience higher stress levels, potential distractions leading to reduced productivity, and challenges related to infrastructure, societal resistance, and organizational culture (Srivastava et al., 2015; Olen, 2020; Khanal, 2020; Raghuram, 2014).

The ongoing debate over conventional office-based work versus telecommuting has persisted since the introduction of telecommuting. While some argue that telecommuting reduces job satisfaction in employees due to the lack of face-to-face interaction and potential isolation, there is no conclusive evidence supporting or refuting the overall effectiveness of telecommuting. The consensus is the need for systematic research to understand when telecommuting is effective and when it is not.

LIMITATIONS

The limited sample size raises concern about the generalizability of the findings. Furthermore, it is crucial to recognize that the study exclusively targeted IT employees in Kathmandu, potentially restricting the applicability of the results to a broader range of firms across Nepal. Given the widespread adoption of remote work in various sectors, including education and finance, during the COVID-19 pandemic, it is important to note that this study concentrated solely on the IT sector. The researcher recommends future studies of a similar nature that encompass diverse categories and employ a larger sample size to improve the generalizability of the results.

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Advancements in Sustainable Energy Economics: A Comprehensive Review

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ABSTRACT

In the face of escalating environmental concerns and the urgent need for sustainable development, this research article embarks on a meticulous examination of the intricate landscape of sustainable energy economics. Our comprehensive review navigates through recent advancements, challenges, and potential pathways, shedding light on the economic implications of transitioning towards sustainable energy sources.The introduction sets the stage by emphasizing the critical role of sustainable energy in mitigating climate change while simultaneously fostering economic growth. Against this backdrop, the literature review meticulously dissects existing research, providing a foundation for the exploration of recent developments.The analysis begins by scrutinizing global sustainable energy policies, dissecting their economic implications. Policies targeting renewable energy sources are evaluated for their effectiveness, laying the groundwork for a nuanced understanding of the economic ramifications of sustainable energy initiatives.Delving into the financial dimensions, the article explores innovative investment and financing models propelling sustainable energy projects. This includes an examination of public-private partnerships, green bonds, and other mechanisms that mobilize funds for the critical transition towards eco-friendly energy sources.A pivotal aspect of this comprehensive review is the scrutiny of technological innovations. Advancements in solar, wind, and other renewable energy sources are evaluated, along with an exploration of energy storage, smart grids, and decentralized systems. This section underscores the transformative potential of emerging technologies and their consequential economic impacts.Beyond the monetary considerations, our research investigates the broader socio-economic co-benefits associated with sustainable energy adoption. Job creation, poverty alleviation, and improved public health are discussed as positive externalities, contributing to a holistic understanding of the multifaceted impacts of sustainable energy initiatives.However, the research doesn't shy away from addressing challenges and potential trade-offs. Intermittency issues, infrastructure costs, and potential disruptions to existing industries are examined, providing a balanced *perspective on the hurdles that must be navigated in the pursuit of sustainable energy solutions.The article further reinforces theoretical concepts through insightful case studies, showcasing regions that have successfully implemented sustainable energy strategies. These real-world examples offer practical insights into effective policy design and implementation, enhancing the applicability of the research findings.As the review concludes, it synthesizes key findings, emphasizing the necessity of a comprehensive understanding of sustainable energy economics for shaping a resilient and environmentally conscious future. The future outlook section provides foresight into potential advancements and challenges, offering practical recommendations for policymakers, researchers, and industry stakeholders navigating the complex landscape of sustainable energy.In summary, this comprehensive review encapsulates the dynamic interplay between economics and sustainability in the realm of energy. It serves as a valuable resource for policymakers and stakeholders alike, providing a roadmap towards a future where economic prosperity aligns seamlessly with environmental stewardship through advancements in sustainable energy economics.*

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INTRODUCTION

In an era defined by the dual imperatives of environmental preservation and economic vitality, the discourse surrounding sustainable energy economics stands as a linchpin in our collective pursuit of a resilient and ecologically balanced future. This research article, titled "Advancements in Sustainable Energy Economics: A Comprehensive Review," embarks on a journey through the intricate tapestry of sustainable energy, unraveling recent developments, confronting challenges, and illuminating potential pathways.

The urgency to address climate change and the growing realization of the finite nature of conventional energy sources have propelled sustainable energy to the forefront of global agendas. This introduction sets the stage by underscoring the pivotal role that sustainable energy plays in mitigating environmental degradation while concurrently fostering economic growth.As societies worldwide grapple with the imperative to transition towards sustainable energy sources, a nuanced understanding of the economic dimensions becomes imperative. The forthcoming comprehensive review navigates through the complex web of policies, investment models, and technological innovations that collectively shape the landscape of sustainable energy economics.

Amidst the myriad of perspectives and diverse solutions, this research seeks to distill a holistic comprehension of sustainable energy economics. By delving into existing literature, scrutinizing global policies, dissecting financial models, and exploring cutting-edge technologies, the article aims to provide a cohesive narrative that informs and guides stakeholders in the intricate dance between economic progress and environmental responsibility.The exploration begins by assessing the effectiveness of global sustainable energy policies, acknowledging their potential to drive the necessary transition towards renewable sources. As we delve into the economic implications of these policies, we unravel the intricate dynamics influencing the adoption and integration of sustainable energy solutions.

The financial underpinnings of sustainable energy projects also come under scrutiny, with an emphasis on innovative investment and financing models. The exploration encompasses a diverse array of mechanisms, including public-private partnerships and the burgeoning realm of green bonds, unraveling the financial tapestry that supports the evolution towards eco-friendly energy sources.Technological innovation stands as a pillar in this comprehensive review, examining the transformative impacts of advancements in solar, wind, and other renewable energy sources. Beyond these primary sources, the analysis extends to explore the economic implications of energy storage, smart grids, and decentralized systems, laying bare the intricate relationship between technology and sustainable economic progress.

However, this exploration is not confined to financial dimensions alone. The article unearths the broader socio-economic co-benefits intertwined with sustainable energy adoption, considering facets such as job creation, poverty alleviation, and public health improvements. This holistic perspective provides a more comprehensive understanding of the far-reaching impacts of sustainable energy initiatives.Yet, the journey is not without obstacles, and the research acknowledges challenges and potential trade-offs. Intermittency issues, infrastructure costs, and the potential disruption to existing industries are considered, offering a balanced perspective on the complexities inherent in the transition towards sustainable energy solutions. The integration of theory with real-world application is a hallmark of this research, with insightful case studies providing tangible examples of successful sustainable energy strategies. These case studies serve to ground the theoretical constructs, making the findings more tangible and applicable for policymakers, industry stakeholders, and researchers alike. As this comprehensive review draws to a close, it synthesizes the multifaceted insights gleaned from the exploration, reinforcing the critical need for a holistic understanding of sustainable energy economics. The future outlook section not only anticipates potential advancements and challenges but also imparts practical recommendations for navigating the complex landscape that lies ahead.

In essence, this research article aspires to be a beacon in the evolving realm of sustainable energy economics, offering a nuanced, comprehensive, and actionable guide for those who strive to harmonize economic prosperity with environmental sustainability.

Literature Review: Advancements in Sustainable Energy Economics

In the context of advancing global imperatives for environmental sustainability and economic resilience, a nuanced exploration of literature becomes imperative to comprehend the intricate dynamics of sustainable energy economics. This literature review synthesizes existing research, providing a foundation for the comprehensive analysis undertaken in the article titled "Advancements in Sustainable Energy Economics: A Comprehensive Review."

Global Energy Transition:

The literature surrounding the global transition towards sustainable energy forms the bedrock of our understanding. Works by scholars such as Söderholm et al. (2019), Ahmed, Mahboob, Hamid, Sheikh, Ali, Glabiszewski, & Cyfert, (2022), Awan, Abro, & ul Mustafa (2021), and Zhang et al. (2020) shed light on the motivations, challenges, and outcomes of transitioning from conventional to sustainable energy sources. These studies underscore the urgency and complexity inherent in this pivotal shift.

Economic Implications of Sustainable Energy Policies:

An array of scholarly contributions, including the works of Edenhofer et al. (2014) and Popp (2019), examines the economic consequences of sustainable energy policies. These studies delve into the effectiveness of policy instruments in promoting renewable energy adoption and uncover the intricate relationship between policy frameworks and economic outcomes.

Financial Models for Sustainable Energy:

The literature on financial models for sustainable energy projects is robust and diverse. Noteworthy contributions from Brounen et al. (2021) and Bosetti et al. (2018) explore innovative financing mechanisms, such as green bonds and public-private partnerships. These studies dissect the financial intricacies that underpin the successful implementation of sustainable energy initiatives.

Technological Innovations in Renewable Energy:

A plethora of research, exemplified by the works of Wang et al. (2018) and Jacobsson and Karltorp (2018), unravels the economic impacts of technological innovations in renewable energy. From advancements in solar and wind technologies to the integration of smart grids, these studies illuminate the transformative potential of technological progress in shaping sustainable energy economics.

Socio-Economic Co-benefits of Sustainable Energy:

Scholars like Sovacool (2016) and Creutzig et al. (2018) have delved into the broader socio-economic impacts associated with sustainable energy adoption. Job creation, poverty alleviation, and health benefits emerge as critical co-benefits, adding depth to the understanding of how sustainable energy contributes to holistic societal well-being.

Challenges and Trade-offs:

Recognizing the complexities inherent in the transition, studies by Sovacool and Dworkin (2015), Taqi, e-Ali, Parveen, Babar, & Khan, (2021), ul Mustafa, & Nishat, (2017) and Bistline et al. (2020) scrutinize the challenges and potential trade-offs. Issues such as intermittency, infrastructure costs, and industry disruptions are addressed, offering a realistic perspective on the hurdles that must be navigated in the pursuit of sustainable energy solutions.

Case Studies in Sustainable Energy Implementation:

Case studies play a pivotal role in grounding theoretical constructs in practical contexts. The works of Sovacool and Geels (2017) and Wang et al. (2021) offer insights into regions that have successfully implemented sustainable energy strategies. These case studies provide tangible examples, facilitating the application of theoretical findings to real-world scenarios.

Future Outlook in Sustainable Energy Economics:

The anticipation of future trends and challenges is explored by scholars such as Creutzig and Simon (2018), Ameer, Ali, Farooq, Ayub, & Waqas, (2023), Abro, Ul Mustafa, Ali, & Nayyar, (2021) and Popp (2021). These studies contribute to the understanding of the evolving landscape, guiding stakeholders with foresight into potential advancements and challenges on the horizon.

In summation, this literature review illuminates the multifaceted dimensions of sustainable energy economics, laying the groundwork for the comprehensive analysis presented in the article. The amalgamation of insights from these diverse sources forms a cohesive narrative that informs and enriches our understanding of the intricate interplay between economics and sustainability in the realm of energy.

Sustainable Energy Policy Recommendations: A Synthesis of Advancements

In light of the comprehensive review titled "Advancements in Sustainable Energy Economics," the following sustainable energy policy recommendations are proposed to foster a harmonious integration of environmental preservation and economic prosperity:

Progressive Renewable Portfolio Standards (RPS):

Implement and enhance Renewable Portfolio Standards, setting ambitious targets for the share of renewable energy in the overall energy mix. Regularly update these standards to reflect technological advancements and ensure a gradual, yet steady, transition towards sustainable energy sources.

Incentive Mechanisms for Renewable Energy Adoption:

Introduce and expand financial incentives, tax credits, and subsidies for businesses and individuals investing in renewable energy technologies. These mechanisms should be designed to stimulate early adoption and ease the financial burden associated with transitioning to sustainable energy.

Carbon Pricing Mechanisms:

Establish and strengthen carbon pricing mechanisms, such as carbon taxes or cap-and-trade systems, to internalize the environmental costs of conventional energy. This provides economic incentives for industries to reduce carbon emissions and encourages the adoption of cleaner energy alternatives.

Research and Development Investments:

Allocate substantial funding to research and development initiatives focused on sustainable energy technologies. Foster innovation in areas such as energy storage, smart grids, and emerging renewables to drive down costs and enhance the overall efficiency of sustainable energy systems.

Infrastructure Development for Sustainable Transportation:

Invest in sustainable transportation infrastructure, including electric vehicle charging stations and public transportation systems powered by renewable energy. Encourage the adoption of electric vehicles through financial incentives and regulatory measures to reduce dependence on fossil fuels in the transportation sector.

Grid Modernization and Flexibility:

Modernize the energy grid to accommodate the integration of intermittent renewable energy sources. Emphasize the development of smart grids, energy storage solutions, and demand-response programs to enhance grid flexibility and reliability.

Community-Based Renewable Energy Programs:

Facilitate the development of community-based renewable energy projects, encouraging local participation and ownership. Community solar programs and cooperatives can empower citizens to actively contribute to sustainable energy initiatives, fostering a sense of ownership and responsibility.

Green Building Standards and Incentives:

Strengthen and enforce green building standards, incentivizing the construction of energy-efficient and sustainable structures. Offer financial incentives, tax breaks, or expedited permitting for buildings that meet or exceed stringent sustainability criteria.

International Collaboration and Knowledge Exchange:

Foster international collaboration in research, technology transfer, and policy exchange. Engage in partnerships with other nations to share best practices, lessons learned, and jointly address global challenges related to sustainable energy adoption.

Economic Transition Support for Affected Industries:

Implement measures to support workers and industries affected by the transition away from traditional energy sources. Establish retraining programs, financial assistance, and regional development initiatives to ensure a just and equitable transition for communities dependent on fossil fuel industries.

These policy recommendations aim to create a conducive environment for the continued advancement of sustainable energy economics. By combining regulatory measures, financial incentives, and community engagement, these policies strive to balance economic growth with environmental responsibility, contributing to a resilient and sustainable energy future.

Innovative Investment and Financing Models for Sustainable Energy Economics:

The comprehensive review on "Advancements in Sustainable Energy Economics" underscores the pivotal role of innovative investment and financing models in propelling the transition towards eco-friendly energy sources. The following investment and financing models are proposed to foster sustainable energy initiatives and drive economic prosperity:

Green Bonds for Renewable Energy Projects:

Introduce and expand the use of green bonds specifically earmarked for financing renewable energy projects. These bonds, backed by environmentally sustainable initiatives, attract socially responsible investors and provide a dedicated capital stream for the development of solar, wind, and other clean energy projects.

Public-Private Partnerships (PPPs) in Sustainable Infrastructure:

Facilitate public-private partnerships for the development of sustainable energy infrastructure. Collaborative efforts between governments and private entities can share risks, leverage expertise, and mobilize funds for large-scale projects, such as the establishment of smart grids or renewable energy parks.

Sustainable Infrastructure Investment Funds:

Establish investment funds dedicated to sustainable infrastructure projects, including energy initiatives. These funds can attract institutional investors seeking long-term, stable returns while channeling capital into projects that enhance environmental sustainability and contribute to the energy transition.

Crowdfunding Platforms for Community Energy Projects:

Develop crowdfunding platforms specifically tailored for community-based renewable energy projects. These platforms enable local communities to collectively fund and own small-scale solar, wind, or hydro projects, fostering a sense of community involvement and ownership in sustainable energy initiatives.

Energy Performance Contracting (EPC) for Efficiency Projects:

Promote Energy Performance Contracting (EPC) arrangements where private entities invest in and implement energy efficiency projects for public or private facilities. These contracts guarantee energy savings, providing a mechanism for financing efficiency upgrades without upfront costs for the facility owner.

Carbon Finance Mechanisms:

Expand the use of carbon finance mechanisms, such as carbon offset programs and carbon credit trading. This allows businesses to generate revenue by reducing or offsetting their carbon emissions, providing a financial incentive for sustainable practices and investments in cleaner technologies.

Impact Investment Platforms:

Encourage the growth of impact investment platforms focusing on sustainable energy ventures. Impact investors, motivated by both financial returns and positive environmental or social impact, can play a crucial role in financing innovative projects that contribute to the advancement of sustainable energy economics.

Green Banks and Financial Institutions:

Establish or strengthen green banks and financial institutions dedicated to financing environmentally sustainable projects. These institutions can provide low-interest loans, grants, and financial expertise to support the development and deployment of clean energy technologies.

Energy Savings Insurance:

Introduce energy savings insurance as a risk mitigation tool for investors in energy efficiency projects. This type of insurance protects investors against potential shortfalls in energy savings, thereby reducing the perceived risks associated with energy efficiency investments.

Blockchain-based Financing Platforms:

Explore the use of blockchain technology for transparent and decentralized financing of sustainable energy projects. Blockchain platforms can enable peer-to-peer transactions, fostering direct investment in renewable energy projects and enhancing transparency and traceability of funding flows.

By integrating these innovative investment and financing models, stakeholders can cultivate a dynamic financial ecosystem that supports the transition towards sustainable energy economics. These models not only attract diverse sources of capital but also align financial interests with the imperative for environmental stewardship, ensuring a resilient and prosperous energy future.

Technological Innovations Shaping Sustainable Energy Economics:

The comprehensive review on "Advancements in Sustainable Energy Economics" highlights the transformative role of technological innovations in driving the transition towards eco-friendly energy sources. The following technological innovations are proposed, illustrating their potential to revolutionize the sustainable energy landscape and contribute to economic prosperity:

Advanced Energy Storage Systems:

Develop and deploy advanced energy storage systems, including high-capacity batteries and innovative storage technologies. These systems enhance the reliability and stability of renewable energy sources by mitigating intermittency issues, thereby promoting a more seamless integration into the energy grid.

Next-Generation Solar Technologies:

Invest in research and development of next-generation solar technologies, such as perovskite solar cells and thin-film solar panels. These advancements can significantly improve the efficiency and affordability of solar energy, making it a more accessible and competitive renewable energy source.

Wind Turbine Innovations:

Continue to advance wind turbine technologies with a focus on increasing efficiency, reducing costs, and addressing aesthetic and environmental concerns. Incorporate innovations such as taller towers, lighter materials, and improved aerodynamics to enhance the overall performance of wind energy systems.

Smart Grids and Demand Response Systems:

Implement smart grid technologies that enable real-time monitoring, control, and optimization of energy distribution. Integrate demand response systems to dynamically adjust energy consumption based on grid conditions, fostering a more flexible and efficient energy infrastructure.

Decentralized Energy Systems:

Promote the development of decentralized energy systems, including microgrids and distributed energy resources. These systems empower local communities to generate, store, and manage their energy, enhancing resilience and reducing dependence on centralized energy sources.

Hydrogen Production and Storage:

Invest in research and infrastructure for green hydrogen production and storage. Green hydrogen, produced using renewable energy, holds immense potential as a versatile and clean energy carrier for various sectors, including industry and transportation.

Advanced Geothermal Technologies:

Explore and advance technologies for enhanced geothermal systems and deep geothermal energy extraction. These innovations can expand the reach of geothermal energy, providing a reliable and continuous source of clean power.

Energy-Efficient Building Materials and Design:

Foster the development and adoption of energy-efficient building materials and design practices. Innovations in insulation, lighting, and ventilation can significantly reduce energy consumption in buildings, contributing to sustainability goals.

Blockchain for Energy Transactions:

Utilize blockchain technology for transparent and secure energy transactions. Blockchain platforms can enable peer-to-peer energy trading, traceability of renewable energy certificates, and secure data sharing in the energy sector.

Artificial Intelligence in Energy Management:

Integrate artificial intelligence (AI) for advanced energy management systems. AI algorithms can optimize energy usage, predict demand patterns, and enhance the overall efficiency of energy infrastructure.

By embracing these technological innovations, stakeholders can unlock new possibilities for sustainable energy economics. These advancements not only address current challenges but also pave the way for a future where clean and efficient energy systems play a central role in driving economic growth and environmental stewardship.

Economic and Social Co-Benefits of Sustainable Energy: A Comprehensive Analysis

The comprehensive review on "Advancements in Sustainable Energy Economics" underscores the multifaceted impacts of sustainable energy initiatives, extending beyond environmental considerations. The following economic and social co-benefits are identified, illustrating the holistic advantages that accompany the transition towards sustainable energy sources:

Job Creation and Economic Growth:

Sustainable energy projects, from the installation of solar panels to the development of wind farms, stimulate job creation across various sectors. The renewable energy industry fosters employment opportunities, contributing to economic growth and diversification.

Poverty Alleviation in Energy Access:

Access to sustainable energy plays a pivotal role in poverty alleviation. By providing reliable and affordable energy sources to underserved communities, sustainable energy initiatives empower individuals and communities, fostering economic development and reducing poverty.

Local Economic Development in Rural Areas:

The deployment of sustainable energy projects in rural areas can invigorate local economies. Whether through community-owned renewable energy installations or the establishment of energy-related businesses, these initiatives bolster economic activity in traditionally underserved regions.

Health Improvements and Cost Savings:

The reduction of air pollution associated with the use of clean energy sources leads to improved public health. The decrease in respiratory illnesses and related healthcare costs becomes a significant economic benefit, contributing to both individual well-being and societal savings.

Innovation and Technological Advancements:

Sustainable energy fosters innovation in technology and engineering. Research and development in renewable energy technologies drive technological advancements, positioning nations at the forefront of innovation and creating opportunities for technology-driven economic growth.

Increased Energy Security:

Diversifying the energy mix with sustainable sources enhances energy security by reducing dependence on finite and geopolitically sensitive fossil fuels. This diversification mitigates economic vulnerabilities associated with energy supply disruptions and price volatility.

Enhanced Productivity in Agriculture:

Access to sustainable energy facilitates advancements in agricultural practices, from precision farming technologies to efficient irrigation systems. These improvements enhance agricultural productivity, contributing to food security and bolstering rural economies.

Community Empowerment through Energy Ownership:

Community ownership models for renewable energy projects empower local communities economically. Shared ownership of wind, solar, or hydro projects provides not only a sustainable energy source but also a stream of revenue that can be reinvested in community development.

Education and Capacity Building:

Sustainable energy initiatives often involve education and capacity-building programs. These programs create opportunities for skill development, enhancing the employability of individuals in the renewable energy sector and related industries.

Social Equity and Inclusion:

Sustainable energy policies that prioritize social equity and inclusion ensure that the benefits of clean energy extend to all segments of society. This approach fosters a fair and just transition, minimizing disparities and ensuring that vulnerable populations also partake in the benefits of sustainable energy.

This comprehensive analysis underscores that sustainable energy economics is not solely confined to environmental considerations. Instead, it serves as a catalyst for a range of economic and social co-benefits, creating a robust foundation for a resilient and inclusive future.

Challenges and Trade-offs in Advancements in Sustainable Energy Economics: A Comprehensive Review

As the pursuit of sustainable energy gains momentum, it is crucial to acknowledge the inherent challenges and trade-offs that accompany this transformative journey. This comprehensive review delves into the complexities surrounding sustainable energy economics, shedding light on the obstacles and necessary compromises in achieving a harmonious balance between environmental stewardship and economic viability.

Intermittency and Reliability Issues:

One of the primary challenges is the intermittency of renewable energy sources such as solar and wind. The inherent variability in their generation poses challenges to grid stability and reliability, necessitating innovative solutions in energy storage, grid management, and backup systems.

Infrastructure Costs and Financial Barriers:

The initial costs associated with the development and implementation of sustainable energy infrastructure can be substantial. Financing large-scale projects, especially in regions with limited financial resources, poses a considerable challenge, requiring innovative financing models and supportive policies to overcome financial barriers.

Transitioning Workforce and Industry Disruptions:

The shift towards sustainable energy may lead to job displacement in traditional energy sectors. Navigating this transition while ensuring a just and equitable treatment of affected workers and communities becomes a critical consideration, requiring proactive workforce training and support mechanisms.

Land Use and Environmental Impact:

Large-scale deployment of renewable energy infrastructure may necessitate significant land use. Balancing the need for energy production with the preservation of ecosystems and biodiversity is a trade-off that demands careful planning and sustainable land-use practices.

Technological and Innovation Risks:

The rapid pace of technological advancements introduces uncertainties and risks. Investing in emerging technologies involves a degree of unpredictability, including potential technological failures or shifts in market dynamics, emphasizing the need for adaptive policies and risk mitigation strategies.

Energy Equity and Access Challenges:

Ensuring equitable access to sustainable energy solutions is a persistent challenge. Disparities in access, particularly in marginalized or remote communities, require targeted interventions to bridge the energy access gap and address social inequalities.

Policy and Regulatory Uncertainties:

The stability and coherence of policy frameworks significantly impact the success of sustainable energy initiatives. Uncertainties in regulatory environments, changes in government policies, and the absence of long-term commitments can hinder investments and project viability.

Material Resource Constraints:

The manufacturing and deployment of renewable energy technologies rely on specific materials, some of which may be finite or associated with environmental concerns. Striking a balance between resource extraction, utilization, and environmental conservation is a complex challenge in sustainable energy endeavors.

Social Acceptance and Community Engagement:

Sustainable energy projects often face opposition from local communities due to perceived environmental or aesthetic impacts. Achieving social acceptance requires transparent communication, community engagement, and inclusive decision-making processes.

Global Cooperation and Governance:

The global nature of climate change and the interconnectedness of energy systems necessitate international collaboration. Addressing challenges like cross-border transmission, technology transfer, and equitable burden-sharing requires effective global governance mechanisms.

This comprehensive review recognizes that while advancements in sustainable energy economics offer transformative potential, navigating these challenges and trade-offs is imperative. It emphasizes the need for adaptive policies, stakeholder engagement, and an integrated approach to ensure that the benefits of sustainable energy are maximized while addressing the associated complexities.

Case Studies in Advancements in Sustainable Energy Economics: A Comprehensive Review

As part of the comprehensive review on "Advancements in Sustainable Energy Economics," insightful case studies illuminate real-world applications, providing tangible examples of successful sustainable energy strategies. These cases underscore the diversity of approaches and showcase the transformative impact of sustainable energy on both economic and environmental fronts.

Germany's Energiewende:

Germany's Energiewende, or energy transition, stands as a pioneering case study. This ambitious initiative aims to shift from conventional energy sources to renewables while emphasizing energy efficiency. Examining Germany's progress reveals the challenges faced, successes achieved, and the economic transformation spurred by increased reliance on solar and wind energy.

Costa Rica's Pura Vida Paradigm:

Costa Rica's commitment to achieving carbon neutrality by harnessing its abundant renewable resources is a compelling case study. The country's reliance on hydroelectric power, wind, and geothermal energy has not only significantly reduced carbon emissions but also positioned Costa Rica as a global leader in sustainable tourism and environmental conservation.

Denmark's Wind Energy Revolution:

Denmark's success in wind energy offers a valuable case study. By pioneering advancements in wind turbine technology, implementing favorable policies, and fostering community engagement, Denmark has become a net exporter of wind energy. The case demonstrates how a comprehensive approach can turn a nation into a renewable energy powerhouse.

India's National Solar Mission:

India's National Solar Mission is a noteworthy case study exemplifying a large-scale commitment to solar energy adoption. Through targeted policies, incentives, and capacity-building efforts, India has significantly expanded its solar energy capacity, fostering economic growth, energy security, and rural electrification.

California's Cap-and-Trade Program:

California's cap-and-trade program provides insights into carbon pricing mechanisms. The case study evaluates the economic implications of this market-based approach to reduce greenhouse gas emissions. Lessons from California's experience inform discussions on effective policy design and the potential for broader implementation.

Norway's Electrification of Transportation:

Norway's successful electrification of transportation serves as a case study illustrating the synergy between sustainable energy and transportation. Aggressive incentives for electric vehicles, coupled with an abundant supply of clean hydropower, showcase how a nation can transition towards sustainable mobility while fostering economic growth.

South Africa's Renewable Energy Independent Power Producer Procurement Program (REIPPPP):

South Africa's REIPPPP is a case study demonstrating the positive economic impacts of public-private partnerships in renewable energy. By attracting private investments, the program has not only diversified the energy mix but also stimulated economic development through job creation and local community benefits.

Japan's Smart Communities:

Japan's approach to smart communities integrates sustainable energy, advanced technologies, and community engagement. Following the Fukushima disaster, Japan embarked on a journey to create resilient and energy-efficient communities. The case study explores the economic revitalization and technological innovation achieved through this holistic approach.

Brazil's Bioenergy Success:

Brazil's extensive use of bioenergy, particularly ethanol from sugarcane, provides a compelling case study. The country's successful bioenergy program showcases the economic viability of renewable alternatives in the transportation sector, reducing dependence on fossil fuels and promoting energy security.

United Arab Emirates' Masdar City:

Masdar City in the United Arab Emirates serves as a case study in sustainable urban planning. This initiative explores the integration of renewable energy, energy-efficient design, and smart technologies to create a carbon-neutral city. The case study offers insights into the economic feasibility of sustainable urban development.

These case studies collectively underscore the diversity of approaches and the global relevance of sustainable energy initiatives. They provide valuable insights for policymakers, industry stakeholders, and researchers, offering practical lessons and inspiration for creating a resilient and sustainable energy future.

Future Outlook in Sustainable Energy Economics: A Comprehensive Vision

As we navigate the dynamic landscape of sustainable energy economics, the comprehensive review on "Advancements in Sustainable Energy Economics" gazes ahead to envision a future shaped by ongoing innovations, emerging trends, and evolving challenges. The future outlook presented in this article is informed by current trajectories, technological advancements, and the imperative for sustainable development.

Technological Innovations and Breakthroughs:

The future promises continued breakthroughs in sustainable energy technologies. Advancements in energy storage, materials science, and artificial intelligence are anticipated, further enhancing the efficiency, reliability, and affordability of renewable energy sources.

Decentralized and Resilient Energy Systems:

A shift towards decentralized energy systems is foreseen, with an emphasis on community-based renewable projects, microgrids, and localized energy generation. This transition enhances resilience, reduces transmission losses, and empowers communities to actively participate in and benefit from sustainable energy initiatives.

Integration of Smart Technologies:

The integration of smart technologies is poised to revolutionize energy management. Smart grids, Internet of Things (IoT) devices, and advanced analytics will optimize energy distribution, enhance demand-side management, and foster a more responsive and adaptive energy infrastructure.

Accelerated Electrification of Transportation:

The future will witness an accelerated electrification of transportation. Electric vehicles (EVs), coupled with advancements in charging infrastructure and grid management, will contribute to reduced carbon emissions, energy security, and transformative changes in the automotive industry.

Hydrogen as a Key Energy Carrier:

The role of hydrogen as a versatile energy carrier is expected to grow. Green hydrogen, produced using renewable energy sources, will find applications in industry, transportation, and energy storage, contributing to the diversification of the energy landscape.

Circular Economy in Energy Systems:

The concept of a circular economy will gain prominence in energy systems. Recycling of materials, repurposing of components, and minimizing waste in the lifecycle of energy technologies will align with sustainability goals, reducing environmental impact and promoting resource efficiency.

Global Collaboration for Energy Transition:

The future outlook emphasizes the necessity of global collaboration. International partnerships, knowledge exchange, and coordinated efforts are crucial to address cross-border challenges, share best practices, and accelerate the transition to sustainable energy on a global scale.

Inclusive and Just Transition Policies:

Policymakers are expected to prioritize inclusive and just transition policies. Efforts will focus on mitigating social and economic disparities, ensuring that the benefits of sustainable energy are equitably distributed, and providing support for communities and industries undergoing transformation.

Dynamic Policy Frameworks:

The future will see the evolution of dynamic policy frameworks. Adaptive policies, responsive to technological advancements and changing socio-economic landscapes, will be crucial in providing a supportive and enabling environment for sustainable energy initiatives.

Resilient Energy Infrastructure:

Building resilient energy infrastructure will be a cornerstone of the future outlook. Climate-resilient designs, disaster preparedness, and robust cybersecurity measures will safeguard energy systems against emerging risks, ensuring a reliable and secure energy supply.

This comprehensive vision for the future of sustainable energy economics outlines a trajectory towards a more resilient, inclusive, and environmentally conscious energy landscape. By embracing innovation, collaboration, and adaptive governance, stakeholders can collectively pave the way for a sustainable energy future that balances economic prosperity with environmental stewardship.

Conclusion: Navigating the Horizon of Sustainable Energy Economics

In this comprehensive review, we have embarked on a journey through the intricate tapestry of sustainable energy economics, unraveling the threads of advancements, challenges, and transformative potentials. As we conclude this exploration, several key reflections and takeaways emerge, shaping our understanding of the intricate interplay between economic progress and environmental responsibility.

1. **Integration of Economic and Environmental Imperatives:**

The pursuit of sustainable energy economics encapsulates a delicate balancing act, harmonizing economic imperatives with environmental responsibilities. The transformative potential lies in recognizing that ecological stewardship is not antithetical to economic growth but rather intertwined with it.

2. Multifaceted Impacts on Society:

Beyond carbon footprints and kilowatt-hours, sustainable energy initiatives wield profound socio-economic impacts. Our exploration uncovered a spectrum of co-benefits—from job creation and poverty alleviation to enhanced public health—illustrating that the dividends of sustainable energy transcend the realm of kilocalories and megawatts.

3. Technological Innovations as Catalysts:

Technological innovations stand as the linchpin in the evolution of sustainable energy economics. From advanced energy storage systems to smart grids and artificial intelligence, these innovations not only address challenges but also unlock new possibilities, paving the way for a future defined by efficiency and resilience.

4. Real-world Lessons from Case Studies:

The case studies presented in this review serve as poignant exemplars, translating theory into tangible realities. Germany's Energiewende, Costa Rica's paradigm shift, and Denmark's wind energy revolution are not just success stories; they are blueprints that illuminate viable pathways for nations and communities alike.

5. Acknowledging Challenges and Trade-offs:

A comprehensive understanding necessitates acknowledging challenges and trade-offs. Intermittency issues, financial barriers, and the complexities of workforce transitions underscore that the path to sustainable energy is not devoid of hurdles. Recognizing these challenges becomes the first step toward innovative solutions.

6. Future Horizons:

The future outlook unveils a landscape characterized by technological marvels, decentralized energy systems, and global collaborations. The horizon holds the promise of resilient infrastructure, circular economies, and policies that transcend borders—a future where sustainable energy is not just an aspiration but an intrinsic facet of our global tapestry.

7. Call for Inclusive and Adaptive Policies:

The concluding chapters of this comprehensive review echo a call for policies that are not static doctrines but dynamic frameworks. Inclusivity, justice, and adaptability must be embedded in the policy fabric, ensuring that the benefits of sustainable energy are distributed equitably and that the framework evolves with the pace of technological change.

In concluding our expedition through the realms of sustainable energy economics, it becomes evident that this journey is not a singular event but a continuum—a continual recalibration of the delicate equilibrium between economic vitality and environmental preservation. As stakeholders navigate this horizon, armed with knowledge, innovation, and collaborative spirit, the aspiration for a sustainable energy future becomes not just a possibility but an inevitability. The comprehensive review presented here strives to be both a testament to progress made and a compass guiding us towards a future where advancements in sustainable energy economics become the cornerstone of a resilient and thriving global society.

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Public Good in Philanthropic Behavior: Associations and Location

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ABSTRACT

It's a wide spread activity of private giving on public purposes by individuals foundations and corporations. Gift giving scholarship on philanthropy whereas gift is itself an altruism. Scholarship in public economics, human resource development, econometric finance, consumer behaviour, divine economics and economics of religiosity, for economists, believers in economics. More recently economists are taking interest in philanthropic behaviour and have made distinguished contribution draw attention of public economists. This include through understanding of micro and macro factors directly taking part in philanthropic behavior. The specification of public and private interests to shape the direction and consequences of philanthropic behavior. Apparently for several disciplines of economics the individual philanthropic behaviour and motivation for the behavior are at least to some extent universal, there is strong evidence for people across the world do not equally display this behaviour in each discipline being away from religiosity. In this study we shall shed light on public entities in universal perspective on philanthropy. Macro level study of philanthropy is underdeveloped, due to three problems. First intrinsic to the study of philanthropic behaviour, location, geographic orientation and religiosity. As initial step on philanthropic behavior across different cultures, religion is taking part in public and private good more towards policy and attainment of welfare.

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INTRODUCTION

In different cultures people have wide range of philanthropic behaviour. Public good in games Henrich et al. (2004) it is benefiting others in voluntary and giving Ruiter and De Graaf (2000) giving money or helping strangers Borgonovi (2008) helping strangers Benett and Einolf (2017). Research shows that philanthropic behaviour is at least to some extent universal. Intra disciplinary research support the argument for universal parameters in individual motivation. Aknin et al. (2013) people accross cultures experience warm glow of giving. It light up for reward associated with it Campbell Meiklejohn (2019). It is when contributing to others on meta-analysis Thielmann et al. (2020) its personality traits on prosaically behaviour. On unconditional concerns of divine welfare Zafar et al. (2023) away from economic gains on life, but taking life here after and reservoir of afterlife more specifically, Loh-e-Mehfoz Qur'an (36: 1-83). To lit and collect reader, on opening words, 'And there came from the farthest end of the city a man, running. He said, O people, follow the messengers' Qur'an (36:20). Research show large variation across countries how treat phenomenon and go for it depending upon their norms if not universal at least on religiosity that it counter part of public good. Taking how society of giving scale up on data its 1427 US dollar in USA compared to 12 US dollars in Russia. And there is large variation of giving across countries, cultures reported on how much they helped stranger in a week. People in Liberia Sierra Leone and United States of America most often get reported on helping the stranger. However Japan Cambodia are least giving countries reported on stranger CAF (2022). There is strong evidence for people across the world do not equally have this behaviour. Shall we be able to explain philanthropic behaviour worldwide and more importantly what we learn out of it. Shall we take care of why people behave differently should be a remarkable contribution to public goods. It could support the development of societies where people are more reluctant to show philanthropic behaviour.

Public Good in Philanthropic Behavior

A good is strictly public if non excludable and non-rival. None can be excluded consuming it, neither any reduce its availability for others. Non excludability and non-rival precisely distinguish models of public goods with axiom that public good effectively could be used by large number of individuals. However it is limited to the size of the population meant for public. As Buchanan (1965) while goods and services may be reasonably classified as purely private, even in extreme sense, fewer goods satisfy the condition of collectiveness. Several factors limit the pool of beneficiaries able to consume non excludable and non-rival goods. One limitation is intrinsic to the service itself a children hospital is only to treat children, a public bath for men indeed exclude women, a library is only of use for literate. In philanthropic behavior similarly geography also limit the access to public good. Geographically proximity of such goods become more critical for services citizen use on every day basis. Location turns out an infrastructural provision for theoretically a public good and in some rare cases a semi private good. Geographic constraints limit use of service create allocation inequalities for residents. It matter little how much literature on demand and supply side consideration we grasp which actually reinforce allocation differences among localities and groups. In philanthropic behavior it need a complete set of action plan because of collective action problem created by heterogeneities in taste ethically and socially on diverse regions plagues and lobbying efforts with the political fronts result in lower provision of public projects. The supply side focus on distributive impact of centralization of provision of local goods Alesina et al. (1999). It is also biased for strategic on electoral basis to ensure success in making the government (Dixit and Londregan 1996; Cox and McCubbins 1986; Ahmed, Mahboob, Hamid, Sheikh, Ali, Glabiszewski, & Cyfert, 2022; Rehman, Abro, Mustafa, Ullah, & Khattak, 2021). None of the models help or predict us explain equality of access to services which elite provide public good as charitable endowment. First the bureaucratic institutions shape with collective action capacity of masses philanthropy impact the equilibrium. In absence of formal responsibility public good shall be lagging in quantity, quality or location of the good provided. On philanthropic behavior it get more complex when endower is a political elite, would be praised for voluntary investing in a project rather than being accused for investing in every locality in the country. In a system where formal institutionalized political responsibility for having equal service for all. What are the incentive to voluntary endow public good? What facilitate decision of allocation taking in account endowments? Who gets what, why, and how?

Proposition I: The optimal philanthropic activity will be higher from individuals with higher giving than from individuals with lower giving's.

Proposition II: The greater the level of consistency between philanthropic activity and a community based public austerity greater the returns of associations even if geographic distancing.

Although philanthropic behavior is a universal human trait, equally common is to build and maintain social reputation, not only mortal but supernatural. To lit the research Zafar et al. (2023) life on earth is only small part of whole life Qur'an (3: 14-15, 8: 46, 9: 25, 9: 38, 18: 16-17, 21: 64, 22: 56, 28: 60, 43: 35). It is not only mortals but supernatural Qur'an (72: 1-2). Supernatural came forth about them and for mortals, see Qur'an (72 1-28). Precisely, of course supernatural say those not follow the right path, are hell creature. According to islamic code of life, belief in life after death Hamdani (2002) Tashfeen et al. (2008) Tashfeen et al. (2013) and the Day of Judgment should have significant influence on economic decision making process of which, for example, time allocation is the most important. Under islamic research, life on earth is only one small part of the whole life. An un-ending life begins Qur'an (2023a, 2023b) Alama (2007) Mududi (1998) Hamdani (2008) Tashfeen et al. (2008) Tashfeen et al. (2013) after death Qur'an (3: 14-15, 8: 46, 9: 25, 9: 38, 22: 56). The concept of two lives, in fact is like two phases. The first phase is transitional which begins with the present life on this earth. All of its material conveniences and pleasures will come to an end on an appointed day. And then it begins the second phase, the life hereafter which is eternal and endless in terms of life and its pleasure and possessions. Social status gains could be obtained through voluntary contributions of public good insofar as community receive the provided, otherwise it will be just and almost anonymous donations. For supernatural, for most it is believed giving is good, but there are inherent complications and contradiction when private interest meet public need. In recent years nature of philanthropy in democratic societies is central topic causing disparities let open debate on public good.

Location and Association

On analysis it appear three reasons to go through. It is orientation in location definition and meanings. It lemmatise the scope of society in contribution. On social basis of society Barman (2017) examines micro, meso-and macro level explanations of philanthropy. She define philanthropy as private giving for public purposes. It need to understand characteristics traits and roles of actors in micro level in a changing social relationships. For supernatural, In meso-analysis philanthropic behaviour embodies in broader social configuration that acknowledge charitable giving Qur'an (72: 1). For further developments the study call for a macro level analysis. It also limit the contribution to the society as a whole. One reason could be to cross geographic units, in evidence based interventions to stimulate philanthropic behaviour. This shall give to a rising trends on technology in behaviour Zafar et al. (2023). Across the world governments cooperation and civil societies that are constantly advocating new technologies. And how it interact in counter analysis. These interventions are rarely evaluated. Suppose changes in laws every year it reschedule and fiscal constraints in covid and challenges organisations had to face (CAF (2022; Debne et al. 2008; Taqi, e-Ali, Parveen, Babar, & Khan, 2021); Qureshi, Ahmad, Ullah, & ul Mustafa, 2023). More relevant here are fiscal incentives for giving in charitable organisations and policies that channel billions of dollars and transactions form people abroad. Migrants through remittances in support of nuclear families such as more distant kin and communities Adelman et al. (2016) Moreno Dodon et al. (2012) Tertytchnaya et al. (2018). These are examples of how the macro level and contextual changes effect the philanthropic behaviour. It is known little about demography economic and social changes on philanthropy. Shall geographic behavior intervene in aging populations economic downturns inequality technology human and natural disasters on philanthropy such as outside of European states and North America having least developments on overall scale. One reason could be nested argument in study of philanthropy.

Location: Shall geographic distribution matter Ma and Konrath (2018) depict cluster of articles taking their origin in 19 academic journals it is evident that most of the articles are originated from North America Western Europe Australia and India. Non-profit and voluntary journals are less hope full. In year 2017, 71% published in volunts and some 84% published in Voluntary Sector Quarterly were either from north Amercia or Western Europe. Philanthropy on geographic scale depict its scatter plot for where people need to change their universal values. Higher level of philanthropic behaviour especial those in charitable giving is still not a standard Balliet et al. (2014) Wiepking (2021). This is well documented in the critiques in Europe Breeze (2019) MoGoey (2015) and in USA Callahan (2017) Reich (2018) Villanueva (2018) Wiepking (2021) Overall outcome of philanthropic behaviour should lead to improved social outcomes for al not a selected group of society. How shall one use translog cost to determine, this is out of the scope of this study. Some of the interesting findings are in the studies of Bennette and Ainolf (2017). Gotez et al. (2020), Ameer, Ali, Farooq, Ayub, & Waqas, (2023), Ali, Khan, & Mustafa, (2022), Ruiter and De Graaf (2006) and Yonah (2019) personal interaction with authors to produce articles is another key source for having more research on journals. Using geographic focus for the work itself and data used in empirical studies shall shed more light about regions. It's important in a sense to understand what is from America and Western Europe view of what is philanthropy and consequently which regions or countries are more philanthropic, English language and philanthropy. This shall let us understand more emerging areas and markets for public good and transformation in micro level identities in philanthropic scale. A one-dimensional North American and Western society is policy invariant for taking behavior in a global context.

Table 1: *Helping a stranger*

Top 10 Countries			Bottom 10 Countries		
Country	Rank	People %	Country	Rank	People%
Siera Leone	1	83%	Malta	110	485
Venezuela	2	82%	Kazakhstan	111	47%
Jamaica	3	80%	Afghanistan	112	44%
USA	4	80%	Italy	113	44%
Nigeria	5	80%	Neither land	114	43%
Costa Rica	6	79%	Switzerland	115	40%
Kenya	7	78%	France	116	38%
Uganda	8	77%	Lao	117	36%
Colombia	9	76%	Japan	118	24%
Mexico	10	76%	Cambodian	119	23%

Source: *Charities Aid Foundation 2022*

There are many barriers for scholars studying geography. On public orientation it become more important for what region and on how it discriminate. Such as underdeveloped countries like Pakistan. Market segmentation and how it interact on policy for development of fiscal and monetary black and white. Academic research in Asia for commercial banks pay well. How situation differ for America and shall religion play role in it. How religiosity in the region effect giving standards. We see geographic disparities with the following tables 1 2 and 3.

Table 2: *Donation*

Top 10 Countries			Bottom 10 Countries		
Country	Rnnk	People%	Country	Rank	People %
Indonesia	1	84%	Malawi	110	14%
Myanmar	2	73%	Jordan	111	14%
Netherland	3	68%	Namibia	112	13%
Iceland	4	67%	Gabon	113	11%

United Kingdom	5	65%	Zimbabwe	114	10%
Australia	6	64%	Tunisia	115	9%
Malta	7	64%	Egypt	116	7%
Thailand	8	62%	Afghanistan	117	7%
USA	9	61%	Marroco	118	7%
New Zealand	10	61%	Georgia	119	3%

***Source:** Charities Aid Foundation 2022*

Sierra Leone is at best in 83% of people helping someone they did not know. Closely followed by Venezuela 82% Jamaica 80% and United State of America 80%. Five out of ten countries stand in South Central America Half of the countries found in the bottom ten are high income European. One reason could be at large part of the welfare states of strong safety network.

Indonesia is the highest proportion of people some 84% donate money in charities. Mayamer sand second 73%. Widespread donation in both countries could be at large a religious activity or community cultural tradition. It is evident than 7 out of 10 countries are from high income countries. All bottom 10 are low income countries. Georgia had the lowest proportion of people donating money to charity 3% and mostly bottom line, countries are in Africa.

Volunteering is getting better from 19% to 23% returning to pre pandemic levels. Despite several lockdown and barriers. This is the highest level of volunteering since 2009. Indonesia is the country with highest rate of volunteering.63% of adult population. Kenya is second best for volunteering time slightly increased from 49% to 52%. Sirloin stand first in index stand third in volunteers. There are many barriers for scholars studying in North America and Europe because of geography and society for not following religion but norms as standard especially when we grasp research based on region. There are different forms and different programs academic research publications commercial and those paid research units to get in deeper for having none on public reasoning. More often discussed on civil society and through highly qualified value oriented quantitative outcomes with regions and their interaction for equitable source based on giving barriers is an important limiting factor in global study of philanthropy Bekkers (2016). To collect high quality quantitative data needed for publish articles. Provided there are very few data source for outputs on comparative study of philanthropic behaviour such as publically available for euro meter EB (2004), World Values Survey (2005), European Social Society (2003), Individual International Philanthropy database (2016), and the costly gallop world poll (2023), World development Indicators. Here gallop world poll and world value survey provide a global source.

Table 3: *Volunteer*

Top 10 Countries			Bottom 10 Countries		
County	Rank	People%	Country	Rank	People %
Indonesia	1	63%	Bosnia Herzegovina	110	10%
Kenya	2	52%	Pakistan	111	10%
Sire Leone	3	44%	Latvia	112	10%
Zambia	4	43%	Portugal	113	10%
Tajikistan	5	43%	Cambodia	114	10%
Pilli pines	6	39%	Jordon	115	9%
USA	7	37%	Serbia	116	9%
Srilanka	8	37%	Lebanon	117	9%
Jamaica	9	36%	Albania	118	8%
Domina Republica	10	36%	Egypt	119	4%

Source: *Charities Aid Foundation 2022*

Associations: Another important aspect is association people do with the word of philanthropy used in published research. In Europe and North America philanthropy is associated with rich when men giving away their money and this is not always for charitable reasons Herzong et al. (2020). Examples such as people images of historical figures Carnigie and Rockefeller or more recently philanthropists such as Bill Gates and Worren Buffet. People are viewed as, needing to be rich multi billionaires millionaires. Old saying of white man rich and wealthy running organizations not just regular person on it Women Philanthropy Institute (2019). In Netherlands a burgher used as a title for citizen of upper scale Jan Steen and his daughters give donations why one should be like them for having careless for what other get. This is how people mould there will for others. How others get in an equitable society. How, many people are in philanthropy and how they get assign philanthropist, or get a title. And those critiques of philanthropy Lassing (2004) Owen (1965) Rodgers (1949) Rosenthal (1972) several issues explain behavior. There are several philanthropists care for others their commitment for giving for social out comes Breeze (2019) Buchanan (2019).

The most important aspect in taking in views how geographic associations take part, for what comes, how one define for its complex for different societies. Primarily for different regions it is different of course on conventional economics there are different standards when religion is not a source of finding the facts how region do it for this. It make it more complex to study their behaviour. Geographical orientation where do people live actually or what are their origin and those migrate where ever you live you get alike for they need one to act as nonbelievers suppose in liberals Qur'an (4: 88-91). Then connotation, maters. Several people gather on research when culture and more inclusive is taken on best. Definition of philanthropy including Salamon and Anheir (1992, 1998) Payton (1988 Payton and Moody (2008) Sulek (2010a, 2010b) Bies and Kennedy (2019) Fowler and Mati (2019) Schuyt (2020) it need global research to get to the true meaning of philanthropy and how different disciplines in different cultures define. In pubic, it's biased on comprehension a comparative study of religiosity could shed light on spread effect, we use cost function, which is more suitable than production function due to several reasons. The cost function represents the minimum overall cost based on factor pricing and the amount of output, while the production function represents the output based on factor inputs. The factor price is considered exogenous in both the cost and production function. Another justification for utilizing a cost function is that it provides immediate estimations of Allen-Uzawa elasticities of substitution. These criteria are crucial for describing the pattern and extent of substitutability and complementarity among the components of production. One additional benefit of using the cost function approach is that it allows for the utilization of duality theory without any limitations on the returns to scale in the underlying technology. An example of this is Shepherd's lemma, although it is not within the topic of this research. This also call for more open understanding of philanthropy. Western view in the literature for philanthropy is typically defined in line with the view of Payton it's a voluntary action for the public good. Payton (1988). This is an optimization of charitable giving in organizations. This could be done in one of the comparative study in individual international differentials and time frames, for charitable organizations. It is because existing data sources differ in comparative source and location. In global world poll between 20 to 150 countries were having the same question. Have you gone through past month helped you are not known a stranger? Donated money to charity and volunteered for some organization? There are several issues afterword come up with the question on proxy for such behaviour see table 1, 2, 3, 4 for outcomes.

METHODOLOGY AND DISCUSSION

This research is taking cultures and norms a source of differences. Use of different time periods reported in the global world poll. It includes local and religious festivals that align with increased participation in volunteering and charitable activities. The use of aggregate statistics from the global world poll to rank countries by a charitable aid foundation is rather controversial. Another big stream of research emphasises what for waqfs is actually act to full altruism. As these are the pure charitable or waqf as an expression of pure altruism. waqf implicitly is acting in spreading the worth and It also give a detailed debate on intra faith and socioeconomic variation in public services. It also tell about universal needs and balance. In table 4 the most giving countries are shown. Indonesia has the highest giving index score in 2022. Its top ranked for 68% being unchanged since 2020 and 69% in 2022. Indonesia has highest rank in donation 84% of people and volunteering 63% in the world. Kenya is up from 58% to 61%. All the three scores are up from in the following year it has a higher value index for those helping others. Over the past five years Indonesia and Kenyans helped someone that they did not know someone it is in comparison to those on average of 62%. Both countries have rising trends. One reason could be because religion is the key deriving source for giving, on evidence comes from percentage of religious population. Another important for America Newzeland and Australia are aspect is association people do with the world of philanthropy which is quite often used in published research. In Europe and North America philanthropy is more towards rich for giving their assets and it's not only for charities Herzong et al. (2020). One example for this is image of strong partners Carnigie and Rockefeller or more recently philanthropists viewed as, needing to be rich. On ten more generous countries, Canada has a return approaching from rank of 35% to 8% an overall index score. It's at least after a year western countries have occupied the top ranking more toward English speaking, also hit by pandemic. However some of the top ten generous countries such as Uk Ireland and Netherland rise up on index scale. This statistics show some poorly low ranking countries have increased their giving. Two new entries in giving scale up Zambia and Ukrine. Apparently Ukrine is the only European country occupying place in top ten moving up from 20% in year 2020 to 10% in year 2021.

Table 4. *The 10 most generous countries of the World*

Rank	Country	Total Score	Giving	Charity	Volunteer
1	Indonesia	68%	55%	84%	63%
2	Keynya	61%	77%	55%	52%
3	USA	59%	80%	61%	37%
4	Australia	55%	69%	64%	33%
5	Newzealand	54%	66%	61%	34%
6	Myanmar	52%	55%	73%	28%
7	Sierra Leon	51%	83%	27%	44%
8	Canada	51%	65%	59%	29%
9	Zambia	50%	74%	35%	43%
t10	Ukrine	49%	75%	47%	24%

Source: Charities Aid Foundation 2022

On religion it's contemporary or at some places even kicked out for more religious, however equitable and growing, as shown in top ten countries. One example could be no prayer call for Muslims on loudspeaker in Denmark being considered noise pollution on public good. On evidence recognition of mosque in Norway is another implication, Uk to allow call for prayer is still another example rising up on world index of giving. Researchers should forward this for government to legislate, call for prayer. Norway is on 32 on list of countries indexed 45%, stands on rank 106 for 50% taking giving, on charity rank 15 with score of 49% and some 41 for 26% engaged in voluntary time allocation. United Kingdom in Birmingham mosque could be seen on higher statistics in comparison. For simplicity the scale is the same, ranking the country up on Denmark and Norway, at 17 with score of 47% as a whole, rank 97 with score of 52% on giving's, up on top ten in charity rank 5 with 65% and voluntary work rank 55 on 24%. How religion play role in charitable giving in and on recognition in developed poorly religious societies. In Islam it's forbidden to inherit women against their will and one should not treat them with harshness, however commit on illegal sexual intercourse Qur'an (4: 19). There could be cat people follow more than religion. Or this might be their religion for associated as religious. On happy index Denmark is the happiest nation indeed and what on religion, Danes. On festive nude dance, or play, it ease them get friendly or change friends said the newspaper ekstrabladet. Then again what is the definition of which. Giving's are on top scale up in these societies on public good a banner in America. Denmark is 24 in the list of countries on giving indexed 46%. In comparing with the rank 74 for giving strangers score 60% measured on charity rank 22 and score 55% even low in voluntary time allocation rank 61 with score 23%. This means for global reasoning replacing the word with generosity and there may not be one term taking all complex strategy. In philanthropy generosity is well understood comes from informal and formal interviews carried by renounced researchers across the world or its only dealing with discourse. Herzog et al. (2010) and weird like life of doing and still good on philanthropic scale here comes a question for what is actually and could be generosity. We should go for a soft concept. Its more concerned for values and act of giving taking god gift such as strengths itself also in giving Herzog et al. (2020). To get more grip on technology better find more alternatives in global scale. As this research has gone through for definition it need to get in more complex understandings on religiosity is getting more easily of course supernatural follow Qur'an (72: 1).

One possible reason for the increase in philanthropy in Ukraine might be attributed to the country's socio-economic progress and cultural changes that were occurring prior to the war. Research on charity giving reveals that variables such as increasing living standards and the adoption of innovative and creative methods of charitable activities contribute to societal transformation. The significant rise in the demand for charitable contributions during the COVID-19 epidemic has stimulated an increase in both philanthropic donations and engagement. However invade of Russia had all destruction, those dead or terribly poor had strong giving potential.

People around the world go differently and their practice identical. To overcome what type of behavior for an inclusive understanding and parameters that globally are acceptable. Its money currency or there is something else associated with it. In definition of money M6 and M7 do not incorporate philanthropy. However on tangible and non-tangible it is measured on common standard and for what. Come what kind of generosity and in which standard and in which currency. And do currency itself is more reflection of giving. Every country publish globaly acceptable currency notes. People across the world behave differently for different currencies. We should look in reputation among other it's not even less important for pleasure. There are several strategies. In research there are two strategies. One way of doing is excellent qualitative and quantitative work in all forms of generosity on which researchers are up to or have done mentioned in research Bucher and Einolf (2017) Fowler and Mati (019) Campbell and Carkoglu (2019) Bies and Kemedy (2019) and in study of state how it measure volunteering in China Hu (2020) different type of behavior in Brazil Vietes (2017) on charitable giving and heath care system in Iran Zilochi et al. (2019) people from Japan Okebe et al. (2019) Afkhami et al. (2019) and individual giving in India Sen et al. (2020) Mexico Butcher Garciacoli and Ruz (2016) on large scale quantitative where local and global researchers grouped together on generosity in their own language. We are taking behavior across the world. In this process a quantitative design shall take them all together it's weird. It is to be good at understanding language practices for behavior across the wold, 'english'. In this way a study comparatively understandable for all on measuring behavior and operational for quantitative research. It need a multi factored motivation meaning researchers have an access on multifactor philanthropic behavior. In global generosity intention behind are on linkered scale in one language zone or another and then their comparative quantitative analysis. Institutional generosity behavior available to researchers to study implications in global scale or its development of societies or gain from noting or giving from world for after world. In societal world of giving, both quantitative and qualitative technologies in philanthropic behavior. This will take geographical published research on behavior to add on existing literature. More towards solving lack of comparable institutionalization role and polices in makeup of all this in a nested modelling. In order to have a more elaborative project based study, high quality on counter count for back wash effect. The international recognition on philanthropy, on reasoning civil society and networks organizations are more relevant for a high quantitative research and gatherings.

CONCLUSION

A stranded result of philanthropic behaviour in economy is that in absence of government regulations a system of donations and voluntary time allocation. Without knowing others helping people under supply public goods. These models rarely investigate empirically allocation consequences of voluntary provisions. How do charitable contribute pubic good affect the distributional side of equilibrium across ethical groups regional disparities, organization's on efficiency standards, how it differ around the world people contribute to public goods. Research shows that philanthropic behaviour is at least to some extent universal. Intra disciplinary research support the argument for universal parameters in pavement individual motivation. People across cultures experience warm glow of giving. It light up for reward associated with it. It is when contributing to others on meta-analysis. Its personality traits on prosaically behaviour and on unconditional concerns of welfare, divine welfare, away from economic gains on life here after and reservoir of afterlife. Research show large variation across countries how treat phenomenon and go for it depending upon their norms if not universal at least on religiosity, should recognise that it counter part of public good.

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The Moderating Effect of Bank Efficiency and Relationship between Macroeconomic Factors and Mutual Funds Performance

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ABSTRACT

The proposed work explores the complex relationships that exist in the current dynamic financial environment between macroeconomic factors, bank performance, and mutual fund performance. The performance of mutual funds is correlated with changes in the macroeconomic environment as they become more important as investment vehicles. This study looks into how bank efficiency affects mutual funds by mitigating the effects of macroeconomic variables. We demonstrate the significance of mutual funds in investment portfolios and the significant impact of macroeconomic variables like inflation, interest rates, and economic growth on their returns through an extensive examination of the literature. Simultaneously, we investigate how bank efficiency contributes to both optimal resource allocation and financial stability. Based on a conceptual framework, we postulate that effective banks may be able to mitigate the negative impact of macroeconomic volatility on the performance of mutual funds. We examine data pertaining to macroeconomic trends, mutual fund performance, and bank efficiency indicators using quantitative techniques and regression analysis. Our empirical research reveals significant correlations between macroeconomic variables and the performance of mutual funds. Specifically, the analysis confirms that bank efficiency has a moderating effect on this link, suggesting that efficient banks may be able to lessen the effect of macroeconomic volatility on mutual fund performance. By shedding light on the interactions between these factors, our research helps investors make sense of the many economic conditions they may encounter. Policymakers also get insightful viewpoints on the advantages of fostering bank efficiency to improve the overall resilience of the financial system. We acknowledge the data availability limitations of the study and suggest more research to investigate subtle moderating effects in other market settings. All things considered, this study clarifies the complex relationships between macroeconomic factors, bank productivity, and mutual fund performance, assisting stakeholders in making better judgments in the constantly changing financial environment.

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INTRODUCTION

Background and Rationale

It gives a thorough synopsis of the background, emphasizing the necessity of the investigation and outlining the motivation for the research. This part is essential to comprehending the study's wider importance within the thesis, which examines the moderating role of bank efficiency on the link between macroeconomic variables and mutual fund performance.

Evolution of Mutual Funds as Investment Vehicles

Originally established as investment trusts in the 19th century, mutual funds have developed throughout time to become essential tools for investors looking for diversified exposure to the financial markets. In the second half of the 20th century, the spread of mutual funds accelerated due to a number of causes, including shifting investor tastes, technology developments, and regulatory reforms. With this transition, picking specific stocks became less common and more commonplace, allowing for increased market participation and risk reduction.

The idea of mutual funds is collective investing, in which money from different investors is combined and professionally managed (Ngatno, Apriatni, et al. 2021; Ul Mustafa, Ansari, & Younis, 2012; Taqi, e-Ali, Parveen, Babar, & Khan, 2021). Because of this evolution, investing has become more accessible to the general public and has been formerly limited to institutional players. This background lays the groundwork for understanding the contemporary function of mutual funds in the larger financial framework and highlights the importance of investigating the relationship between macroeconomic variables and bank efficiency and how it affects performance (ul Mustafa, & Nishat, 2017; Ameer, Ali, Farooq, Ayub, & Waqas, 2023; Proença, Augusto et al. 2020).

Macroeconomic Factors: Catalysts of Investment Performance

These indicators, which include things like inflation, interest rates, and economic growth, have the power to drastically change investor behaviour and market dynamics. For example, interest rates affect borrowing costs and fixed-income instruments' yields, which has an impact on the bond and equities markets. Investors want assets that outpace growing prices as inflation reduces their purchasing power. Corporate earnings, a key factor influencing stock prices, are impacted by economic growth (Neifar, Salhi et al. 2020). Variations in macroeconomic conditions might be the cause of market fluctuations due to the dynamic environment created by the interaction of these elements. Following these changes, investors modify their portfolios. They might prefer riskier assets during times of economic expansion because to the possibility of larger returns, but during times of economic uncertainty, they might lean more towards defensive investments. Efficient portfolio management and risk avoidance require a thorough understanding of how macroeconomic events impact investment performance. A comprehensive view of investment outcomes is also provided by investigating their relationship with bank efficiency. In the context of mutual funds, this section shows how macroeconomic trends and investing behaviour are intricately related. It also paves the path for further research into how bank efficiency may be able to manage these linkages (Awan, Abro, & ul Mustafa 2021; Gafrej and Boujelbéne 2022).

Bank Efficiency: A Pillar of Financial Stability

A bank's capacity to successfully manage risks, minimise operating expenses, and distribute resources is reflected in its overall level of efficiency. When it comes to financial stability, efficient banks are more resilient to shocks and economic downturns because they can work through difficult situations and still deliver crucial financial services (Huss an in, Nguyen et al., 2021). By promoting smoother capital movements, encouraging effective intermediaries between savers and borrowers, and maintaining the overall health of the banking industry, efficient banks help to ensure financial stability. Their capacity to effectively distribute capital encourages economic expansion by focusing resources on profitable industries. Effective risk management techniques also help banks weather market turbulence, which lowers the chance of systemic crises. This stable base benefits a number of stakeholders, including as investors, debtors, and regulatory bodies, and is consistent with the larger financial system. The success of mutual funds and other investment vehicles can be impacted by the efficiency of banks, which act as middlemen for these products. This study underlines the possible ramifications for the entire financial system and acknowledges the interdependence of macroeconomic conditions and mutual fund performance by investigating how bank efficiency moderates the relationship between them (Abro, Ul Mustafa, Ali, & Nayyar, 2021; Ahmed, Mahboob, Hamid, Sheikh, Ali, Glabiszewski, & Cyfert, 2022; Hasan, Manurung et al. 2020).

Mutual Funds and Investment Landscape

A bank's capacity to successfully manage risks, minimise operating expenses, and distribute resources is reflected in its overall level of efficiency. Effective banks have the resilience to handle difficult circumstances while continuing to provide crucial financial services, making them more resilient to shocks and economic downturns in the context of financial stability. By promoting smoother capital flows, facilitating efficient intermediation between savers and borrowers, and maintaining the general health of the banking industry, efficient banks help to ensure financial stability. Their capacity to distribute capital effectively encourages economic expansion by focusing resources on profitable industries. Effective risk management strategies also help banks weather market turbulence, which lowers the chance of systemic crises (Yang and Liu 2023). Stability underpins the whole financial system, affecting investors, debtors, and regulators among other parties. Because banks act as middlemen for mutual funds and other investment vehicles, the performance of these instruments may be impacted by the efficiency of banks (Liu, Saleem, et al. 2021). This study acknowledges the interdependence of these components and draws attention to the possible ramifications for the entire financial system by looking at how bank efficiency moderates the relationship between macroeconomic circumstances and the performance of mutual funds (Boachie, 2023).

Bank Efficiency in Financial Markets

As middlemen in the financial system, banks provide effective resource allocation, promote credit availability, and ease the flow of money. In the banking industry, efficiency pertains to a bank's capacity to efficiently oversee its activities, allocate resources optimally, and adjust to evolving market circumstances while minimising expenses. Bank efficiency affects many different aspects of the financial markets. The stability of the market as a whole is enhanced by banks that manage risks well and keep sound balance sheets. By directing funds towards profitable investments, their effective use of capital and resources promotes economic growth (Alsagr and Hemmen 2020). Furthermore, the smoother transactions and lower price volatility that result from the liquidity supplied by effective banks improve market functioning (Nguyen, Tran et al. 2021). As custodians of a variety of financial instruments, including mutual funds, efficient banks are also essential to the investing landscape. For investment operations to run well, they must be able to handle transactions, offer settlement services, and guarantee safe asset custody. Examining the manner in which bank efficiency attenuates the correlation between macroeconomic variables and the performance of mutual funds acknowledges the interaction between banking efficiency and investment results, contributing to a deeper comprehension of the intricate dynamics of financial markets (Ge, Cai et al. 2022).

Bridging Theory and Practice in Investment Dynamics

The relationship between theory and practice is essential to understanding the dynamics that influence investing strategies and results. Academic theories offer a conceptual framework that clarifies the workings of external factors like macroeconomic trends and bank efficiency as well as the mechanisms behind investment behaviours. Making educated judgements is facilitated for investors, financial institutions, and regulators through the translation of theoretical concepts into real-world applications (Ang, Shao et al., 2022). An example of the practical applicability of theoretical constructs is the investigation of the impact of macroeconomic circumstances on the performance of mutual funds and the possible moderating role of bank efficiency. Understanding the interaction between theory and practice becomes essential for building resilient portfolios as investors navigate unpredictable market conditions (Hussain, Quddus et al. 2020). Beyond academic boundaries, the study of investment dynamics influences the choices made by regulators and investment professionals. Bringing theory and practice together promotes a comprehensive understanding that can improve asset allocation methods, market interventions, and risk management tactics. This bridge is best illustrated by the study on the moderating effect of bank efficiency on investment outcomes (Nguyen Trong and Nguyen 2021). It shows how theoretical insights can inform practical methods that adjust to the intricacies of the actual world. This work adds to a comprehensive understanding of investment dynamics by recognising the interconnectedness of theory and practice and bringing academic insights and practical wisdom into alignment.

Macroeconomic Factors and Investment Returns

Macroeconomic variables that directly affect the returns produced by different investment assets include interest rates, inflation rates, and economic growth. These variables are powerful forces that shape market dynamics. For example, changes in interest rates can have an effect on borrowing costs, which can change the price of stocks and bonds and impact company profitability. When purchasing power is reduced by inflation, investors look for assets that may be able to outpace price increases. Corporate earnings are a key factor influencing stock performance and are impacted by economic growth (Adesina 2021). The complex and dynamic nature of financial markets is highlighted by the complicated interplay between various macroeconomic variables and investment returns. Investors continuously assess these variables in order to make well-informed choices that complement their risk tolerance and financial objectives. Understanding these connections is necessary for risk mitigation and efficient portfolio management. This study adds to a more comprehensive understanding of the complex interplay between macroeconomic trends, bank efficiency, and investment returns by examining how bank efficiency moderates this relationship and reveals a new level of complexity that affects investment outcomes (Singh and Misra 2021).

Objective and Scope of Research

Is there any effect of inflation rate on mutual funds' performance?

In the case of mutual funds, bond and stock holdings may be impacted by inflation. Increased inflation could result in higher interest rates, which would be detrimental to bond values. Inflation may also cause costs for businesses to increase, which could have an effect on stock prices and corporate earnings. Investors frequently look for mutual funds that include assets like stocks or inflation-protected securities, which can provide returns greater than inflation, in order to lessen the effects of inflation. Therefore, when assessing the performance of mutual funds, investors must comprehend and take into account the possible consequences of inflation.

Is there any effect of exchange rate of mutual funds' performance?

Returns may be impacted by changes in the exchange rates between the base currency of the fund and the currencies of the nations in which its assets are invested. When converted back, a stronger base currency can increase returns while a weaker base currency can decrease them. Changes in exchange rates have an impact on the fund's valuation of its foreign assets, including its bonds and stock holdings. Exchange rate risk should be taken into consideration by investors in foreign mutual funds since it increases the volatility of their investment returns and highlights the requirement of diversified strategies that take currency dynamics into account.

Is there any effect of foreign direct investment on mutual funds' performance?

The performance of mutual funds can be impacted by foreign direct investment (FDI), especially if those funds invest in businesses that gain from FDI. A mutual fund may perform better if it owns shares in businesses that attract significant foreign direct investment. Growing economies are frequently the result of increased FDI, and this can boost business profits and raise the value of stocks. FDI can also improve market liquidity and expand investment options, which will increase the diversification potential of mutual funds. However, depending on the market environment and the fund's investing objective, the outcome might change. Mutual funds exposed to FDI-benefited industries or geographical areas may perform better, however, evaluating FDI's effect on fund returns requires closely examining its trends.

Is there any moderating effect of banking efficiency on macroeconomic variables and mutual funds' performance?

Efficiency in banking may have a moderating effect on the correlation between macroeconomic factors and the performance of mutual funds. Effective banks can lessen the negative effects of unfavourable macroeconomic circumstances on mutual funds. The impacts of economic volatility may be mitigated by efficient banks' ability to manage risks, supply liquidity, and allocate resources in an optimal manner. Bank efficiency can manage market changes and improve the resilience of mutual funds by stabilising financial intermediation and resource allocation. Examining this moderating effect offers insights into the ways in which macroeconomic trends and bank stability and effectiveness combine to affect mutual fund investment outcomes.

LITERATURE REVIEW

Understanding Mutual Funds as Investment Instruments

These collective investment vehicles combine the money of many individuals into diverse portfolios that include different kinds of assets like bonds, equities, and money market instruments. Mutual funds, which are professionally managed, give people access to a variety of investment options that suit their financial objectives and risk tolerance. Diverse investor preferences are accommodated by the variety of fund types, which include bond funds, hybrid funds, and equity funds (Fosu, Danso et al. 2020). To put it simply, understanding mutual funds is essential to building well-rounded investment portfolios and utilising their expert management, accessibility, and benefits from diversification to meet the needs of a wide range of investors in a constantly changing financial environment (Zhang and Ma 2021).

Macroeconomic Factors and Investment Performance

These macroeconomic factors—interest rates, inflation, and economic growth, among others—have a big impact on the financial markets and have a direct bearing on how investments turn out. For example, interest rates have a significant impact on borrowing costs for both individuals and businesses, which in turn affects investment decisions and the mood of the market as a whole. Due to the fact that inflation reduces money's purchasing power, investors look for assets like stocks or real estate that can outperform price increases (Duque-Grisales and Aguilera-Caracuel 2021). Stock performance is based on economic growth, which is a major role in determining company profitability and is therefore critical to the assessment of investments. The complicated web of cause and effect that these macroeconomic variables create alters investment environments through their complex interactions. Investors, asset managers, and legislators who want to make well-informed decisions must comprehend these relationships. Moreover, the way in which the performance of mutual funds is influenced by these macroeconomic factors adds another level of complexity, making a thorough examination necessary to determine the ways in which shifts in macroeconomic indicators affect the mutual fund industry. According to Park, Lee, et al. (2020), determining this link is essential to developing successful investment strategies that negotiate the dynamic macroeconomic environment and guarantee the best possible decision-making and risk management for both investors and market players.

Bank Efficiency: Concepts and Indicators

In the banking industry, efficiency is the capacity of banks to provide high-quality services while efficiently allocating resources, controlling operating expenses, and navigating market conditions. This efficiency is measured by a number of measures, such as return on assets, asset utilisation, and cost-to-income ratio. The ratio of cost to income represents the ratio of expenses to revenue, demonstrating a bank's cost control capabilities. Asset utilisation quantifies the efficiency with which banks use their resources to produce revenue (Duque-Grisales, Aguilera-Caracuel et al. 2020). A bank's profitability in relation to its assets is assessed using return on assets. Together, these metrics give light on a bank's profitability and operational effectiveness, influencing its stability and effect on the larger financial system. Exploring how bank efficiency moderates the relationship between macroeconomic factors and mutual fund performance requires an understanding of the concepts and indicators of bank efficiency, which is essential for evaluating the stability and efficacy of financial intermediaries. This study helps to provide a more nuanced understanding of the complex relationships that support the financial ecosystem by understanding the dynamics of efficient banking. This understanding will ultimately help investors, policymakers, and other stakeholders in the financial industry make the best decisions possible (Ridlo, Yunianto et al. 2021).

Role of Banking Efficiency in Financial Stability

Efficiency in banking is essential to maintaining the robustness and seamless operation of the financial system. Banks that are efficient are able to distribute resources in the best possible ways, control risks, and supply liquidity when required. These characteristics increase their resilience to shocks and recessions, which helps to maintain the stability of the larger financial system (Karim, Akhtar et al. 2022). Banks that provide efficient intermediation encourage money flows, investment activity, and economic progress. Effective banks help to maintain economic stability by efficiently allocating resources and directing capital to profitable industries. Moreover, their cautious approaches to risk management lessen the possibility of systemic catastrophes, protecting financial institutions and the overall economy. Examining how banking efficiency contributes to financial stability recognises the critical importance of well-operating banks in preserving investor trust, drawing in capital, and lessening the effects of unfavourable economic circumstances This complex relationship is further complicated by the study's examination of how banking efficiency modifies the relationship between macroeconomic conditions and mutual fund performance, potentially having ramifications for the investing landscape. Comprehending the interrelationships between banking efficiency and financial stability holds significant consequences for policymakers, regulators, and interested parties. It offers valuable perspectives for formulating efficient policies that support a resilient financial system that can withstand setbacks and stimulate enduring expansion (Yarovaya, Mirza, et al. 2021).

Empirical Studies on Macroeconomic Factors and Mutual Funds

The impact of macroeconomic factors including inflation, interest rates, and economic growth on the risk profiles and returns of mutual funds is examined in these studies using quantitative approaches. Empirical studies shed light on the complex mechanisms at work, identifying lead-lag links, causal relationships, and correlations between macroeconomic trends and fund performance (Saadaoui and Ben Salah 2022). These studies provide valuable insights into how different fund categories may react to fluctuations in the economy by assessing the sensitivities of various fund kinds to various macroeconomic variables. Furthermore, empirical data provides a clear picture of the relationship between macroeconomic trends and the actions of mutual funds by illuminating the ways in which investor behaviour and fund flows are impacted by them. Through the consolidation of these research' findings, this review broadens our understanding of investment dynamics in the face of economic instability and advances our understanding of how macroeconomic issues impact the performance of mutual funds. By adding a further layer of complexity that acknowledges the relationship between macroeconomic indicators, mutual fund outcomes, and efficient banking practices, the ensuing research into how banking efficiency moderates these relationships further enriches this domain and ultimately helps investors make more informed decisions about their investments (Krämmer 2022).

Influence of Interest Rates on Mutual Funds Performance

A key component of monetary policy, interest rates have an immediate effect on borrowing costs, savings rates, and investment returns. Depending on the mix of assets in each form of mutual fund, different types react differently to changes in interest rates. Bond funds may suffer from falling bond prices as a result of rising interest rates (Huy, Thach et al. 2021). Conversely, when greater yields on fixed-income investments grow more alluring, investor preferences for equity funds may change. The relationship is made more complex by the interaction of interest rates, inflation expectations, and investor behaviour. Examining this impact reveals how mutual funds respond to changes in monetary policy and market sentiment, providing investors with potential ways to deal with shifting interest rate environments. Furthermore, examining the manner in which bank efficiency mitigates this correlation emphasises the significance of effective banking procedures in mitigating the effects of interest rate swings on the performance of mutual funds. This work adds to a comprehensive knowledge of how these factors jointly affect the results of mutual funds in a changing economic landscape by recognising the complex linkages between interest rates, investing behaviour, and banking efficiency (Karim, Naeem et al., 2023).

Bank Efficiency's Impact on Investment Behaviour

Effective banks have a significant impact on how investors perceive and behave. They are defined by their optimal resource allocation, risk management, and operational effectiveness. Effective banks' stability and dependability have an impact on investor trust, which may result in more investments and engagement in the financial markets (El Khoury, Nasrallah et al., 2023). Furthermore, the capacity of effective banks to supply liquidity and enable smooth transactions improves market accessibility and motivates investors to participate more actively. Beyond individual choices, market dynamics and general investment patterns are impacted by the interaction between bank efficiency and investor behaviour. This section explores the ways in which the presence of efficient banks affects investor decisions, portfolio allocations, and risk appetites. It provides insights into the ripple effects that these factors have on market liquidity, stability, and investment performance. Furthermore, by investigating the ways in which bank efficiency influences the correlation between macroeconomic variables and the performance of mutual funds, this study acknowledges the crucial role that banks play as intermediaries in investing activities. Through an in-depth analysis of these interactions, the study advances our knowledge of how effective banking practices permeate investment landscapes, influencing investor behaviour and, ultimately, the stability and resilience of the financial system as a whole (Ullah, Pinglu et al. 2020).

Inflation's Effect on Mutual Funds: A Review

The steady increase in prices over time known as inflation has a complex impact on different kinds of investments in mutual fund portfolios. The real value of fixed-income assets is diminished by inflation, which affects bond prices and may lower the returns on bond funds. However, since businesses can adapt their pricing and revenues to inflation, equity funds may gain from it as well. This could result in higher corporate earnings and stock prices costs. According to Murshed, Apergis, et al. (2022), real assets, such as commodities, can also act as a hedge against inflation, improving the performance of funds that have exposure to them. In order to understand the subtleties of how various fund categories react to different inflationary pressures, this study examines empirical research that look at the historical relationships between inflation and the returns on mutual funds. Furthermore, the investigation of the ways in which bank efficiency moderates this relationship recognises the possible contribution of efficient banking practices to reducing the impact of inflation on mutual funds. Through a close examination of this complex relationship, the research advances our understanding of the ways in which mutual funds, efficient banking, and inflation interact with one another in the context of investing. This helps investors make well-informed decisions as they navigate the challenges presented by inflationary environments (Jan, Lai et al. 2021).

Bank Efficiency and Risk Management in Investments

Effective banks greatly reduce the risks connected with investing activities through effective resource allocation, competent risk assessment, and sensible operating methods. Strong risk management procedures used by these banks guarantee capital preservation and investor interests are protected. Banks contribute to greater market stability and investor trust by effectively assessing and reducing risks, which in turn encourages increased involvement (Prasojo, Yadiati et al. 2023). This section examines how investors' perceptions of risk and decision-making are influenced by the existence of efficient banks, potentially changing their risk appetites and portfolio allocations. Moreover, this investigation is further deepened by taking into account the role that efficient banks play in reducing investment risks resulting from external economic conditions. Specifically, the investigation looks at how bank efficiency moderates the relationship between macroeconomic factors and the performance of mutual funds. This study adds to a comprehensive understanding of how efficient banking practices permeate investment behaviours and outcomes, amplifying stability and fostering resilient financial systems by recognising the symbiotic relationships between risk management in investments and banking efficiency (Desiyanti and Kassim 2020).

Banking Efficiency and Asset Allocation Strategies

Investment landscapes are significantly shaped by efficient banks, which are defined by efficient risk management and good resource allocation. Investors reassess and modify their asset allocation strategies as a result of these institutions' stability and dependability, which boosts investor trust and fosters favourable market circumstances (Nugroho 2021). Additionally, the capacity of effective banks to allow seamless transactions and supply liquidity improves market accessibility, which incentivizes investors to diversify their holdings across a range of asset classes. This section examines the effects of efficient banks on investors' asset allocation decisions, taking into account variables including market conditions, investment objectives, and risk tolerance. Further investigation into how bank efficiency modifies the correlation between macroeconomic variables and the performance of mutual funds clarifies the relationship between efficient banking operations and asset allocation choices. This study adds to a nuanced understanding of how effective banking practices cascade through investment landscapes, ultimately affecting the resilience, stability, and performance of both individual portfolios and the larger financial system by acknowledging the crucial role that banks play in forming asset allocation strategies and investment behaviours (Yang, Su et al. 2021).

Global Economic Factors and International Mutual Funds

Due to their international asset allocation, international mutual funds are susceptible to fluctuations in interest rates, currency rates, and geopolitical events that affect the world economy. Variations in the state of the world economy can have an effect on market sentiment and currency values, which can affect the returns these funds provide. Changes in interest rates, for example, might impact bond and equities holdings in international mutual funds by causing changes in borrowing costs and yields (Ehigiamusoe and Samsurijan 2021). When foreign assets are translated back to the base currency of the fund, exchange rate variations may have an effect on how much they are worth. Uncertainty and volatility can also be brought about by trade dynamics and geopolitical developments. This section examines empirical research that breaks down past correlations between foreign mutual funds' performance and global economic variables, offering insights into the challenges of international investing. Additionally, the examination of the ways in which bank efficiency moderates this relationship recognises the possible contribution of efficient banks to navigating the difficulties presented by international economic forces, hence reducing risks and improving the stability of returns on international mutual funds. This study adds to a thorough understanding of the complex forces that shape cross-border investments by illuminating the intricate interactions between international mutual funds, effective banking practices, and global economic trends. These insights help to inform strategies that manage risks and optimise returns within an increasingly interconnected global financial system.

Bank Efficiency and Diversification Benefits of Mutual Funds

Effective risk management, sensible operational strategies, and optimal resource allocation are characteristics of efficient banks, and they significantly contribute to the benefits of mutual fund diversification. By distributing investment risk among a number of holdings, diversification—the practice of investing across several asset classes and industries—reduces investment risk (Ismail, Majid et al. 2021). Smooth asset allocation and rebalancing are made possible by the stable operations and liquidity that efficient banks offer, strengthening their role as custodians of the assets of mutual funds. This section looks into how effective banks affect risk mitigation and possible rewards for investors by enhancing the efficacy of mutual fund diversification schemes. Furthermore, the investigation that follows examines how bank efficiency influences the way in which macroeconomic variables and mutual fund performance interact, acknowledging the wider effects of efficient banking practices on the ability of diverse portfolios to withstand fluctuations in the economy. This study adds to a thorough understanding of how these factors collectively shape investment outcomes by analysing the interaction between efficient banking and the diversification benefits mutual funds offer. This understanding will help investors build portfolios that balance risk and reward in constantly changing financial environments.

METHODOLOGY APPROACH

Research Design and Approach

Using an all-encompassing framework, this study aims to decipher the complex dynamics influencing how these components interact. The emphasis at the microeconomic level is on the effectiveness of specific banks, exploring their risk management, resource allocation, and operating methods. Through the use of this microeconomic lens, it is possible to conduct a thorough examination of the ways in which bank policies—from lending practices to investment choices—affect their efficiency levels and, consequently, potentially mitigate their impact on the performance of mutual funds. Simultaneously, the research acknowledges that microeconomic results are interwoven with a wider macroeconomic framework. The macroeconomic climate has a major impact on investment conditions and, in turn, the returns on mutual funds. It is determined by variables such as inflation, interest rates, and economic growth. The study evaluates critically the ways in which government policies and various macroeconomic factors interact with bank efficiency to either increase or decrease their effect on the performance of mutual funds. The interdependence of these levels is acknowledged by this dual viewpoint, which shows how bank policies have an impact on macro and micro contexts and eventually shape the investment environment. A mixed-methods approach is used in the research design, with quantitative analyses used to quantify relationships and qualitative insights used to contextualise findings. Reputable sources will be used to gather information on macroeconomic data, mutual fund performance, and bank efficiency measurements.

To evaluate the moderating influence of bank efficiency, sophisticated statistical methods such as regression analysis and moderation models will be utilised. Qualitative interviews with policy experts and banking professionals will also offer nuanced viewpoints on the ways in which government and bank policies affect the investment environment. In order to ensure the proper use of private information, ethical issues include data privacy and confidentiality. This research aims to provide a comprehensive narrative that navigates the complexities of investment performance in a dynamic and interconnected economic landscape by interlacing the complex threads of macroeconomic trends, bank policies, government interventions, and microeconomic efficiency. Figure 1 describes the many micro and macroeconomic aspects and shows the internal configuration.

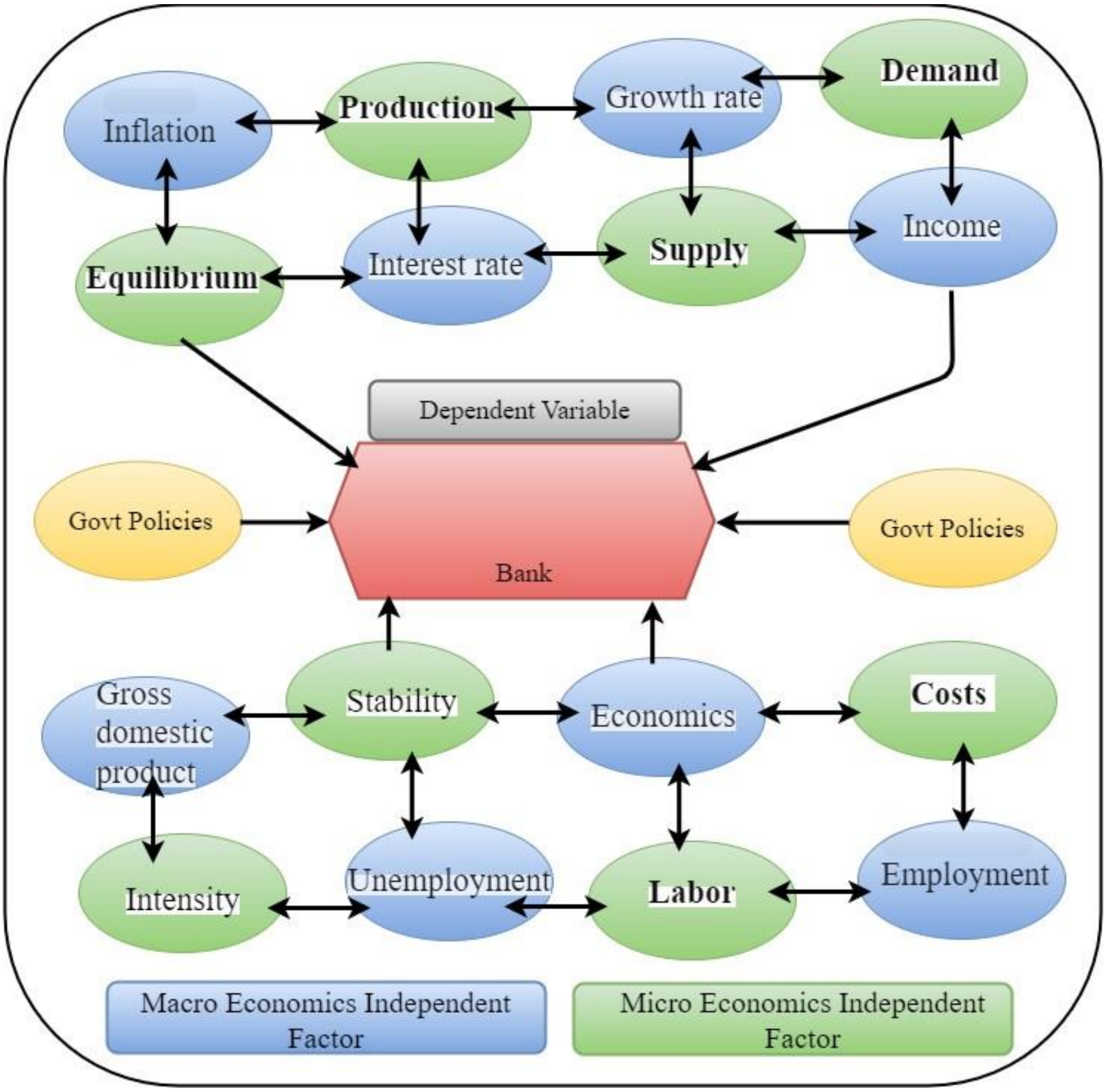

Figure 1. *Proposed Methodology*

Quantitative Analysis Framework

This framework includes a methodical approach to data analysis that uses statistical methods to extract valuable information from the gathered data. Regression-based analysis, more especially multiple regression and moderation analysis, will be used in this study to evaluate the connection between macroeconomic factors, mutual fund performance, and bank efficiency. In order to account for any confounding variables and quantify the individual impact of macroeconomic events on mutual fund returns, multiple regression will be used. In order to determine whether the influence of macroeconomic factors on the performance of mutual funds differs depending on the efficiency of the participating banks, the moderation analysis will look at how bank efficiency moderates this relationship. To guarantee the validity and trustworthiness of the findings, robustness tests will be carried out, such as sensitivity analyses and diagnostic evaluations for multicollinearity. This methodology for quantitative analysis offers an exacting framework for examining the complex interactions among macroeconomic variables, mutual fund performance.

Data Collection Sources and Variables

Data on macroeconomic indicators, mutual fund performance, and bank efficiency will be gathered from both primary and secondary sources. Primary data for bank efficiency will come from performance reports and financial statements that were acquired straight from a few chosen banks. Dependable financial journals and databases will be used as secondary data sources. We will obtain macroeconomic statistics from central banks, reputable economic databases, and official government reports. Examples of these include interest rates, inflation rates, and economic growth. Data on the performance of mutual funds will be taken from reputable financial databases. A variety of variables will be included in the study, such as macroeconomic indicators like interest rates and inflation rates, bank efficiency indicators like cost-to-income ratio and return on assets, mutual fund performance metrics like returns and risk measures, and possible control variables like fund type and fund size. A solid foundation for the research's study is intended to be provided by the use of a variety of data sources and comprehensive variables, allowing for a thorough investigation of the moderating role of bank efficiency on the relationship between macroeconomic conditions and mutual fund performance.

Sample Selection Criteria

To guarantee the representativeness and relevance of the sample, banks, mutual funds, and pertinent macroeconomic data will be chosen for this study according to strict standards. A purposive sample strategy will be used for banks, which will include both local and foreign banks with different levels of market presence, efficiency, and size. Similar selection criteria will be applied to mutual funds, covering a range of fund sizes and types. The trustworthiness of the macroeconomic data points will be guaranteed as they will come from reliable, reputable sources.The selection criteria will place a strong emphasis on diversity and comprehensiveness, taking into account macroeconomic data, mutual fund features, and different aspects of bank efficiency. This strategy seeks to improve the study's capacity to derive insights and conclusions that are broadly applicable. Standardised and transparent criteria will be used, allowing for future research and enabling replicability. The subsequent analysis is guaranteed to be strong, thorough, and representative of the complex dynamics that are the subject of the study through the careful selection of entities that are in line with its aims.

Macroeconomic Data Acquisition

Data on macroeconomic indicators including interest rates, inflation rates, and economic growth will mostly come from central bank publications, official government reports, and well-established economic databases. These sources guarantee the timeliness, correctness, and reliability of the information. Complete documentation of the acquisition process will be required, including citations of the precise sources, dates, and data extraction techniques. The selected macroeconomic indicators are essential to the study's examination of the relationships between macroeconomic variables and the performance of mutual funds since they represent important variables that significantly affect investment performance. This meticulous method to data collection strengthens the research's credibility and underpins the analysis by offering a strong base of precise and current macroeconomic data to explore their relationship with the performance of mutual funds and bank efficiency.

Mutual Funds Data Collection

The information gathered will include a range of mutual fund categories, each with a distinct risk profile and investment approach, such as bond funds, hybrid funds, and equity funds. An evaluation of their reaction to macroeconomic variables and bank efficiency will be conducted by compiling key performance data, including returns, volatility, and risk measures. Accuracy, consistency, and relevance will be given top priority during the data collection process to guarantee that the funds chosen cover a wide range of the investment market. To ensure transparency and reproducibility, meticulous documentation of data sources, retrieval dates, and procedures shall be upheld. The quantitative analysis of the research is made possible by the methodical approach to data collecting, which also provides a solid basis for investigating the relationship between the performance of mutual funds and macroeconomic trends as well as the moderating influence of bank efficiency.

Bank Efficiency Indicators

The return on assets, which gauges profitability in relation to held assets, and the cost-to-income ratio, which assesses the effectiveness of resource allocation, are important metrics. These metrics, which highlight different aspects of banking efficiency, provide information about how successfully banks control expenses and produce profits. These measurements are consistent with the research's goal of figuring out how bank efficiency influences the way macroeconomic variables and mutual fund performance interact. The study intends to provide a quantitative assessment of the efficiency levels of the chosen banks by methodically calculating and analysing these indicators. It also intends to investigate the intersections between these levels and more general investment trends. The accuracy and transparency of the bank efficiency assessment process will be guaranteed by careful documentation of the calculation methods and data sources.

Measurement of Investment Performance

The computation of returns takes into account relevant time periods, fund type, and investment goals. Metrics that account for risk in order to achieve returns include the Treynor ratio and the Sharpe ratio. The standard deviation is a common way to measure volatility, which is the distribution of returns around the mean. These measures offer a thorough understanding of how mutual funds react to various market conditions, macroeconomic variables, and bank productivity.The study guarantees a uniform and impartial evaluation of these performance metrics' results by uniformly applying them to a variety of mutual fund categories. This makes it easier to analyse how bank efficiency affects these performance metrics later on. Clear documentation of data sources and measuring techniques supports the validity of the study and facilitates possible replication of results.

Exploring Moderating Variables

In this study, bank efficiency serves as the primary moderating variable, shaping the relationship between macroeconomic factors and mutual funds' performance. Bank efficiency indicators, including the cost-to-income ratio and return on assets, will be assessed as potential moderators. These indicators are essential in understanding how the efficiency of banks might enhance or mitigate the impact of macroeconomic variables on mutual funds' outcomes. The investigation of moderating factors seeks to disclose the complex processes by which bank efficiency interacts with more general economic trends, either amplifying or attenuating their impact on the performance of mutual funds.The work adds to a more sophisticated knowledge of how effective banking practices affect investment dynamics in the setting of shifting macroeconomic conditions by identifying and examining these moderating variables.

Model Specification and Hypotheses

The associations that are to be tested are specified by the model, which includes moderating and independent factors. To forecast the anticipated results of these interactions, hypotheses are developed. The model used in this study modifies the effect of bank efficiency on the relationship between macroeconomic variables and the performance of mutual funds. There are theories that suggest the returns on mutual funds are influenced by a few macroeconomic factors, like inflation and interest rates, and that bank efficiency moderates this link. The statistical analysis that follows is guided by these hypotheses, which also help to extract useful information from the data. The model is designed to provide an organised method for investigating the intricacies of the relationship between macroeconomic factors, bank efficiency, and mutual fund performance. The study creates a clear path for verifying the suggested linkages and eventually leading to a greater understanding of the interconnected parts under examination by matching the model with research objectives and formulating hypotheses.

Regression Analysis Techniques

The research employs multiple regression analysis, a statistically sound method that permits the investigation of the influence of independent variables (macroeconomic conditions) on a dependent variable (performance of mutual funds) while accounting for possible confounding variables. This analysis sheds light on how different macroeconomic indices affect the returns of mutual funds. Furthermore, a moderation analysis will be performed to investigate the ways in which bank efficiency influences the way in which macroeconomic variables and mutual fund performance interact. Moderation research evaluates if different bank efficiency levels have different effects on the performance of mutual funds when it comes to macroeconomic variables. Regression analysis provides a methodical way to assess the research's assumptions statistically and clarify the complex relationships between macroeconomic variables, bank performance, and mutual fund performance.

Control Variables and Covariates

While not the main focus of the study, control factors have the ability to affect the dependent variable. Potential control variables in this study could be fund size, fund type (bond, hybrid, or equity), and past fund performance. The analysis can identify the precise impacts of the variables of interest, macroeconomic variables and bank efficiency, on the performance of mutual funds by adjusting for these variables. Though they are unique to moderation analysis, covariates are comparable to control variables. In order to evaluate their possible moderating influence on the relationship between macroeconomic conditions and the performance of mutual funds, bank efficiency measures will also be used as covariates in the moderation analysis conducted in this study. By adding covariates and control variables, the analysis's statistical validity is strengthened and the study's ability to measure the independent and moderating impacts of the main variables under inquiry is improved.

Addressing Multi-collinearity

When independent variables have a high degree of correlation with one another, multicollinearity occurs, making it difficult to separate out each variable's impact on the dependent variable. The study will thoroughly evaluate each independent variable's variance inflation factor (VIF) in order to address this problem. Elevated VIF levels signify a correlation, which warrants consideration of possible solutions. These could involve taking into account collinearity by applying sophisticated methods like ridge regression or by leaving out one of the associated variables. Reducing multicollinearity can also be aided by thoughtful variable selection and theoretical justification for the inclusion of covariates and control variables. Through careful consideration of multicollinearity, the study seeks to yield dependable and comprehensible regression outcomes. Ensuring the accuracy of the evaluation of the linkages among macroeconomic conditions, bank efficiency, and mutual fund performance is crucial for the validity of the research and the subsequent formulation of well-informed conclusions.

Data Pre-processing and Cleaning

Errors, missing numbers, and inconsistencies are common in raw data gathered from many sources, which can jeopardise the study. Pre-processing of data includes operations including data transformation, missing value imputation, and outlier identification. Appropriate methods will be applied to missing values in order to fill in data gaps and preserve data integrity. Results may be skewed by outliers, which will be found and either justified or rectified depending on the circumstances of the study. Standardisation and normalisation of the data will be used to make sure that the variables are comparable and do not unduly affect the analysis because of different scales. By minimising the impact of data anomalies on the research outcomes, this careful data pre-processing method improves the reliability of the subsequent analysis and ensures that the relationships between macroeconomic factors, bank efficiency, and mutual fund performance are accurately represented.

Validity and Reliability Assessment

The degree to which the study appropriately measures the concepts it plans to explore is referred to as validity. The study will make use of recognised markers for mutual fund performance, macroeconomic variables, and bank efficiency in order to improve construct validity. To guarantee accurate depiction, stringent variable definitions and unambiguous operationalizations shall be utilised. Measurement consistency is related to reliability. Test-retest reliability will be evaluated by means of statistical analysis and data replication to validate the findings' long-term stability. Checks for internal consistency will also be carried out to make sure the measurements in the research instruments make sense.The research's dependability is increased by the use of validated scales and dependable data sources. Furthermore, the general dependability of the results is strengthened by the consistency of the results across different regression models and robustness tests. The research creates a strong basis for legitimate conclusions and informed suggestions based on the correlations examined between macroeconomic conditions, bank efficiency, and mutual fund performance by systematically evaluating validity and dependability.

Statistical Software Utilization

Various statistical studies, such as multiple regression, moderation analysis, and exploratory data analysis, will be carried out using statistical software programmes like R, Python (with libraries like pandas and scikit-learn), or specialised software like SPSS. These software programmes provide an easy-to-use setting for carrying out intricate statistical calculations, visualising data patterns, and producing insightful results. The software selection will facilitate the application of regression models, the computation of descriptive statistics, and the graphical display of outcomes. Furthermore, the software's strong capabilities for managing huge datasets and applying sophisticated statistical methods guarantee the precision and effectiveness of the research. The research findings will be validated and replicated by others through thorough documentation of software use, instructions, and settings, which will be maintained to ensure transparency and reproducibility. The study's use of cutting-edge statistical software guarantees the quantitative analysis's rigour and accuracy, allowing for the examination of the complex connections between macroeconomic variables, bank productivity, and mutual fund performance.

Analysis and Expected Result

This research examines the moderating effect of bank efficiency on this dynamic interaction between macroeconomic conditions and mutual fund performance. The research comprises a detailed examination of past macroeconomic data, which includes factors like inflation, interest rates, and economic growth, along with performance indicators for mutual funds. The study looks for patterns and connections in the data using statistical methods like regression analysis. Anticipated findings aim to shed light on the moderating role of bank efficiency in determining the direction and degree of the correlation between macroeconomic variables and mutual fund performance. While negative correlations can point to a mitigating influence, positive correlations might show that effective banking institutions enhance the beneficial effects of favourable macroeconomic conditions for mutual funds. This detailed analysis seeks to illuminate the complex mechanisms influencing investment results in the financial environment by adding to our understanding of the complex dynamics at the nexus of macroeconomic determinants, banking efficiency, and mutual fund performance.

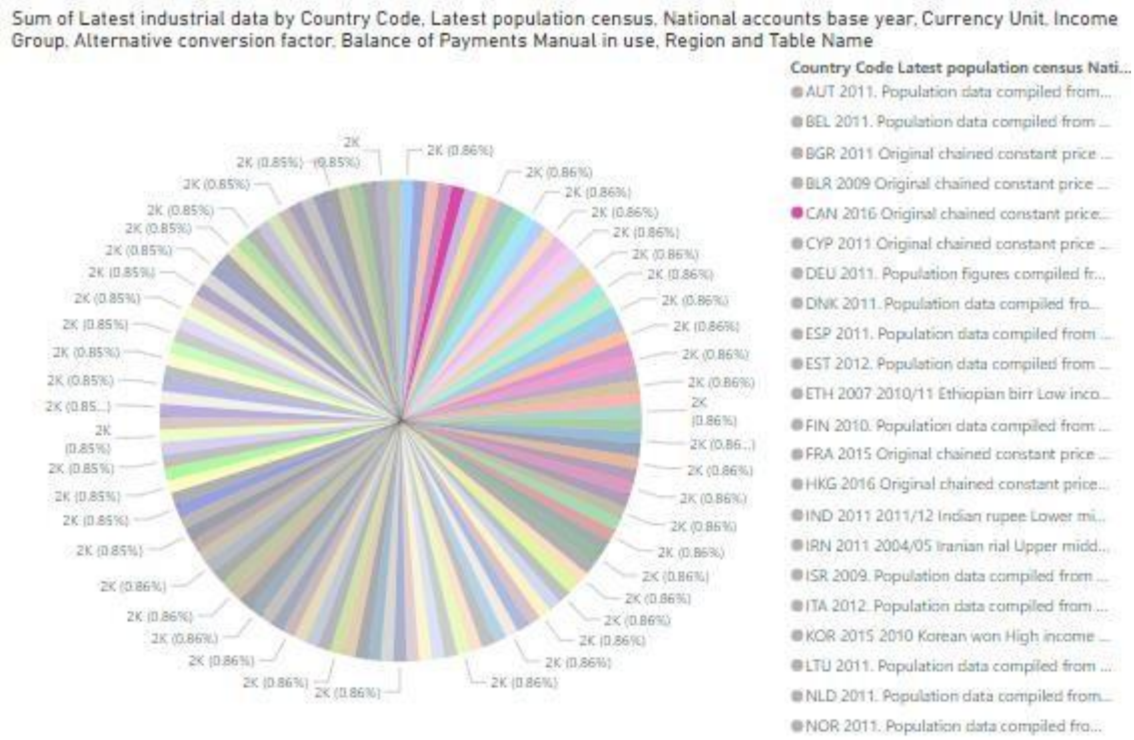

Figure 2. *Graphical Representation of World Bank Dataset Regarding Secondary Data*

The examination of the World Bank's loan provision and development facilitation is multifaceted, covering aspects related to the economy, society, and geopolitics. The World Bank is an important financial organisation in the economy, lending money to member nations for initiatives related to development. Important industries such infrastructure, healthcare, education, and environmental sustainability are frequently the focus of these loans. The study explores the financial effects of these loans, evaluating how they contribute to poverty alleviation, economic growth, and structural inequality correction. The World Bank's engagement in development projects has a significant impact on population well-being from a social standpoint. Initiatives to upgrade the infrastructure in the fields of education and healthcare, for example, add to improved human capital. The analysis takes into account the social consequences of projects supported by the World Bank and assesses how well they work to advance gender equality, social inclusion, and general improvements in living standards. Furthermore, it is impossible to ignore the geopolitical environment. The goal of the World Bank, an international organisation, is to lessen poverty and advance shared prosperity. The research investigates whether specific nations or regions are given more consideration due to strategic considerations or urgent development requirements, and it also looks at how the distribution of loans fits with global geopolitical trends.

Furthermore, a critical component of the analysis is the World Bank's emphasis on environmentally conscious development and sustainable development. The ecological impact of projects dealing with environmental degradation, climate change, and the switch to sustainable energy sources is evaluated. The report closely examines the World Bank's pledge to strike a balance between environmental sustainability and economic development. In addition, the efficacy of the World Bank's lending initiatives is assessed, taking into account variables like project execution, governance frameworks, and recipient nations' ability to make good use of the money.

Analysing the results of previous initiatives offers insights into areas for development and best practices. A comprehensive study in the complex environment of the World Bank's loan provision and development promotion requires traversing a multitude of micro and macro elements. Macroeconomic conditions are monitored by the organisation, which adjusts lending policies to correct imbalances and trends. Funding decisions are influenced by geopolitical factors, which are reflected in regional stability initiatives and strategic international relationships. The selection of projects is guided by a commitment to environmental sustainability and is in line with more general goals of mitigating climate change.The economic policies and institutional capacities of specific nations influence their development trajectory and loan utilisation efficiency on a local level. Indicators of social development guide project design, which aims to solve regional issues. Project participation is influenced by the financial health of individual banks within a nation, while legal frameworks and risk mitigation methods are influenced by macro and micro regulatory environments. To ensure the World Bank's crucial role in global sustainable development and to improve lending policies, an understanding of this complex Interaction of forces is necessary.

LIMITATIONS

One primary limitation is the availability and quality of data. Comprehensive and up- to-date data on mutual funds, macroeconomic factors, and bank efficiency may not be readily accessible. Moreover, issues like missing data or data errors could affect the accuracy and reliability of the study's findings.

Findings from this research may have limited generalizability due to the study's focus on a specific region or country. Variability in economic conditions, regulator y environments, and banking systems across different geographic areas may limit the applicability of the results to a broader context.

Establishing causality between the variables under investigation can be challenging. Additionally, the presence of endogeneity, where mutual fund performance or other unaccounted- for factors affect both bank efficiency and macroeconomic factors, could lead to potential biases in the results.

The analysis in this study may rely on certain assumptions and simplifications in statistical models. These assumptions might not perfectly align with the complex and dynamic nature of financial markets, potentially affecting the robustness of the findings.

There may be a time lag between changes in macroeconomic factors and their impact on mutual fund performance. Failing to account for this lag adequately could result in an incomplete understanding of the relationship and the moderating effect of bank efficiency.

CONCLUSION

The examination of the moderating dynamics between macroeconomic variables, mutual fund performance, and bank efficiency concludes with the identification of a complex and subtle interaction within the financial environment. Important new information is provided by this study regarding the important moderating role that banking system efficiency plays in affecting the effect of macroeconomic conditions in general on mutual fund performance. This sophisticated perspective highlights the intricacy of the financial markets, where mutual fund responses to macroeconomic swings are significantly shaped by the operational efficiency of banks. The results add to a deeper understanding of the interdependence of financial variables and highlight the necessity for investors, regulators, and financial institutions to take banking system efficiency into account in addition to the macroeconomic environment when evaluating mutual fund performance. These insights are more important than ever for making wise judgments and navigating the shifting terrain of economic impacts and investments as financial ecosystem continue to change.

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Corporate Social Responsibility and Performance of Nigerian Banks: A Quantitative Approach

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ABSTRACT

This research investigates the impact of corporate social responsibility (CSR) activities on the financial performance of Nigerian banks. The study focuses on specific banks and draws on secondary data from audited yearly financial reports spanning from 2019 to 2022. These reports encompass a range of contributions made by the banks, encompassing areas such as education, environmental sustainability, charity, healthcare, transportation services, and responses to the COVID-19 pandemic. Panel data analysis was employed, allowing for the incorporation of both time-based and cross-sectional data. Data were analyzed with the aid of PPMCC and Linear Regressions. The findings highlight that individual and combined CSR efforts, including support for education, environmental sustainability, charity work, transportation services, healthcare, and COVID-19 relief, all have an impact on the financial performance of Nigerian banks. This underscores the diverse advantages that Nigerian financial institutions have derived from their engagement in CSR undertakings, particularly in the face of challenges brought about by the COVID-19 pandemic. The study concludes that CSR initiatives can play a significant role in improving the financial performance of Nigerian banks. Banks should therefore make CSR a priority and invest in initiatives that are aligned with their business goals and the needs of their stakeholders. As a result, the study suggests that it is essential for banks to continue and actively participate in socially responsible initiatives. This approach can prove attractive to investors who place significance on corporate social responsibility.

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INTRODUCTION

Considerable research has delved into Corporate Social Responsibility (CSR) across developed and emerging economies. Nonetheless, the interplay between CSR and environmental sustainability (ES) remains a focal point for policymakers, environmentalists, and scholars (Odetayo, Adeyemi & Sajuyigbe, 2014). CSR denotes businesses' ethical and responsible conduct toward society and the environment. Within the banking sector, CSR entails integrating social and environmental factors into operational and decision-making frameworks. Given their pivotal economic role, banks profoundly influence the communities they serve (Eccles, Serafeim, & Stroehle, 2019).

Scholars have debated the impact of CSR on banks' financial performance (FP), with divergent perspectives. Thapa and Kumamoto (2021) posit that adopting CSR practices can yield multiple benefits for banks, including improved FP. They underscore banks' lending practices' significant influence on environmental performance (EP) and sustainable development promotion. According to the United Nations Environment Programme Finance Initiative, integrating environmental, social, and governance (ESG) considerations into risk management can mitigate sustainability risks and bolster FP (Eccles, Serafeim, & Stroehle, 2019). Similarly, Maroun (2016) illustrates that CSR initiatives can enhance a bank's FP by boosting reputation, mitigating risks, and attracting socially conscious investors. This underscores how responsible behavior can cultivate long-term value and competitive advantages.

However, some scholars argue that CSR activities may negatively impact banks' financial performance. They contend that the costs associated with CSR initiatives, such as increased expenses and reduced profitability, may outweigh the potential benefits (Ademola, Akintoye, & Adetutu, 2021). Consequently, banks may divert resources from core financial activities, resulting in diminished financial performance (Ibrahim, Zainol, Salleh, & Ahmed, 2021; Oikonomou, Brooks, & Pavelin, 2014; Ojeka, Anichebe, & Agbara, 2019; Taqi, e-Ali, Parveen, Babar, & Khan, 2021; ul Mustafa, & Nishat, 2017). Given the sparse research in Nigeria on how Corporate Social Responsibility (CSR) affects the financial performance (FP) of Nigerian banks amid the COVID-19 pandemic, there is a crucial need to evaluate CSR's impact on their FP. This study aims to fill this research gap by analyzing how CSR initiatives influence the FP of Nigerian banks during and after the COVID-19 pandemic surge.

Theoretical Framework

Previous studies have used several theories such as Stakeholder Theory (Ibrahim et al., 2021) Legitimacy Theory (Ojeka et al., 2019) Resource-Based View (RBV) (Gangi, 2018) Institutional Theory (Sharma, Bhattacharya, & Thukral, 2019) Signaling Theory (Ademola et al., 2021) and Relationship Marketing Theory (Ibrahim et al 2021) independently to explain the relationship between CSR and bank FP. However, no available studies used a mixture of different theories to explain the relationship between CSR and bank FP. However, no study has used a combination of theories to explain this relationship. Thus, this study warrants details to address this contemporary gap in the literature by using stakeholder theory, and resource-based view (RBV) to explain the influence of CSR on the FP of Nigerian banks.

Stakeholder theory argues that organizations should consider the interests and well-being of all their stakeholders, including customers, employees, communities, and the environment. RBV argues that organizations gain a competitive advantage by developing and leveraging their unique resources (Ameer, Ali, Farooq, Ayub, & Waqas, 2023; ul Mustafa, Abro, & Awan, 2021; Ojeka et al., 2019).

Stakeholder Theory

Stakeholder theory is a management framework introduced by Freeman in 1984, emphasizing the importance of integrating the interests and needs of all stakeholders into an organization's decision-making processes. This approach encourages organizations, including banks, not only to prioritize maximizing shareholder value but also to consider the impacts on and concerns of stakeholders such as employees, customers, suppliers, communities, and the environment (Ibrahim et al., 2021; Odetayo et al., 2014). By actively engaging with and addressing these stakeholders' concerns, organizations can foster long-term value and sustainable financial performance (Batty et al., 2016). CSR, as defined by Crisóstomo, Freire, and Vasconcellos (2011), underscores a company's commitment to operating in a socially, economically, and environmentally responsible manner.

Stakeholder theory advocates that banks should integrate CSR principles into their core operations and strategies. This can lead to several benefits, such as increased employee morale (Ibrahim et al., 2021), improved customer satisfaction (Adeola & Oni, 2018, Ahmed, Mahboob, Hamid, Sheikh, Ali, Glabiszewski, & Cyfert, 2022; ul Mustafa, & Nishat, 2019), and enhanced brand reputation (Maroun, 2016). It can also reduce the risk of being exposed to negative events (Ojo & Ogunsanwo, 2015), such as boycotts, protests, and lawsuits. Furthermore, establishing robust relationships with stakeholders has been linked to enhanced sales, increased customer loyalty, and lower operational costs (Ademola et al., 2021; Jamali & Mirshak, 2007, ul Mustafa, Nishat, & Abro, 2022). In recent years, stakeholder theory has garnered substantial attention and recognition within the CSR domain. This is primarily driven by heightened awareness of sustainability's significance and the imperative for businesses to operate in ways that benefit all stakeholders (Boulouta & Pitelis, 2014).

As global interconnectedness deepens, stakeholder theory is increasingly pivotal for banks to embrace. It underscores the management framework's emphasis on integrating the interests and needs of all stakeholders into organizational decision-making processes. While some critics contend that stakeholder theory is overly intricate and challenging to implement, others argue it can lead to conflicts among stakeholders (Ibrahim et al., 2021). Nevertheless, despite these critiques, stakeholder theory remains a critical framework for businesses striving to operate responsibly and sustainably.

The theory proposes that when banks actively address stakeholder concerns through social responsibility initiatives, it can enhance purpose and engagement among employees, leading to improved job satisfaction, productivity, and employee retention rates. Moreover, these actions can attract socially responsible investors and potentially facilitate access to capital under favorable terms. Research by Oikonomou, Brooks, and Pavelin (2014) supports this perspective, demonstrating that banks with stronger CSR performance tend to exhibit higher financial metrics such as return on assets and return on equity. In essence, stakeholder theory posits that by prioritizing the interests of all stakeholders, businesses can generate enduring value and achieve sustainable success (Ibrahim et al., 2021; Odetayo et al., 2014). This approach underscores that when businesses are perceived as ethical and responsible, they are more likely to retain and attract customers, employees, and investors while reducing exposure to negative outcomes such as boycotts, protests, and legal challenges. Admittedly, implementing stakeholder theory presents challenges, notably in balancing conflicting stakeholder interests. Nonetheless, the potential advantages of stakeholder theory are considerable, making it a framework that businesses should carefully consider as they endeavor to operate responsibly and sustainably.

Resource-Based View (RBV)

The Resource-Based View (RBV) theory is a strategic management framework that highlights a firm's internal resources and capabilities as fundamental sources of sustained competitive advantage. According to RBV, a firm's distinctive resources and capabilities, which are hard to replicate or replace, can drive superior performance and long-term success (Ibrahim et al., 2021; Odetayo et al., 2014; Eccles, Serafeim, & Stroehle, 2019). Sharma et al. (2019) argue that the RBV theory suggests that banks can achieve a competitive advantage by developing intangible assets, such as brand reputation, customer loyalty, and employee commitment through CSR. These intangible assets can differentiate banks from their competitors and enhance their financial performance. In another study, Wahba, and Elsayed (2015) argue that CSR such as supporting education and training programs, investing in renewable energy and donation to charities and other nonprofit organizations are the main drivers of banks' competitive advantage. In the same direction, Maroun (2016) advocate that CSR in terms of offering ethical and sustainable products and services, providing clear and transparent information about services and treating customers with respect and dignity are germane CSR tools that drive competitive advantage. Orlitzky et al. (2003) similarly emphasize that implementing fair wages, fostering a safe and healthy workplace, and promoting diversity and inclusion can serve as robust CSR measures that enhance competitive advantage. Research indicates that the relationship between CSR and financial performance is multifaceted and contingent upon various factors, including the specific CSR initiatives adopted, the firm's resources and capabilities, and the competitive landscape (Odetayo et al., 2014; Eccles, Serafeim, & Stroehle, 2019). According to theory, banks can achieve a competitive edge through the implementation of corporate social responsibility (CSR) initiatives. These initiatives may encompass supporting education and training programs, investing in renewable energy, contributing to charities and nonprofits, offering transparent service information, treating customers with respect, ensuring fair wages, maintaining a safe and healthy workplace, and advancing diversity and inclusion efforts.

Review of related literature and Hypotheses Development

Through CSR, companies proactively address the social, environmental, and economic consequences of their operations. Nigerian banks have implemented CSR initiatives in a wide range of areas, such as education, healthcare, environmental conservation, community development, financial literacy, and poverty alleviation. These initiatives are designed to contribute to sustainable development and improve the overall performance of the banks. Research has shown that CSR can help banks to establish a positive image, strengthen stakeholder relationships, manage risks, and promote long-term sustainability (Adeola & Oni, 2018). For example, Ojo and Ogunsanwo (2015) demonstrate that Nigerian banks have supported education by providing scholarship programs, building schools, donating educational materials, and organizing financial literacy campaigns. These initiatives have helped to improve access to education and enhance the quality of education in Nigeria, which ultimately supports human capital development and socio-economic growth. In addition to education, Nigerian banks have also implemented CSR initiatives in the area of healthcare. Okafor and Ibe (2017) note that many banks have built and supported medical facilities, provided medical supplies and equipment, sponsored health awareness campaigns, and supported initiatives to combat specific diseases. These efforts have helped to improve healthcare access and outcomes, thus positively impacting the well-being of individuals and communities. Thapa and Kumamoto (2021) also observe that Nigerian banks also provide financing for projects that promote environmental sustainability and social development. They fund renewable energy projects, green infrastructure, sustainable agriculture, and other initiatives that contribute to the transition to a low-carbon and inclusive economy. These CSR initiatives are helping to make a positive difference in the lives of Nigerians. They are improving access to education and healthcare, promoting environmental sustainability, and supporting social development.

The impact of CSR on bank FP remains a topic of debate. Empirical studies have yielded mixed results, with some suggesting a positive correlation between CSR and profitability (FB). Others have found no significant link, or even a negative association. In another study, Okafor and Ibe (2017) investigate the link between CSR and labour productivity. The study validate that CSR is a predictor of high productivity in terms of financial performance. Similarly, Surroca, Tribó, and Waddock (2010) showcase that CSR is a strong determinant of financial performance in supermarket. Another study conducted in Nigeria by Ojo and Ogunsanwo, A. (2015) indicates that CSR has a direct association with profitability. Research on the link between Corporate Social Responsibility (CSR) and bank profitability in Nigeria presents a complex picture. While some studies, like Ojeka et al. (2019) and Ademola et al. (2021), suggest a positive correlation, others, such as Adeboye and Olawale (2012), Amole et al. (2012), and Olanrewaju (2012), report no significant connection.

METHODOLOGY

Research Design: A post-hoc study design was used for this study, as it is a valuable tool for researchers interested in exploring possible relationships between non-manipulable variables. Instead, researchers observe the independent variables and measure their influence on the dependent variable. Post hoc studies can be used to explore possible relationships between sets of independent and dependent variables and to determine the effect of one variable on another.

Sample size and sampling Technique

The sample size for this study was three commercial banks: Zenith Bank, First Bank, and Access Bank. These banks were selected because they were ranked the best Nigerian banks that contributed over 53% to corporate social responsibility (CSR) initiatives. It was assumed that these banks have the same CSR policy. The study was conducted over a period of four years, from 2019 to 2022.

Method of Data Collection

Secondary data from audited annual accounts of selected banks were used for this study. Data were downloaded from the bank's corporate website for the period 2019-2022.

Method of Data Analysis

The study employed panel data analysis, which combines time-series data (observations over time) with cross-sectional data (observations from different units at a single point in time). This approach allowed for a more comprehensive examination of the relationship between SCR initiatives and [dependent variable, e.g., financial performance]. Pearson Moment Correlation Coefficient (PPMCC) was used to assess the initial strength and direction of this relationship. Subsequently, linear regressions were employed to further explore the association and account for the influence of other relevant factors [donation to education (DED), donation to environmental sustainability (DES), donation to charity (DCH), donation to health care (DHC), donation to transportation services (DTS), and donation to COVID-19 relief donations (CRD), and financial performance measured by profit after tax.

Model specification

This study adopted previous studies that measured CSR in terms of donation to education (DED) (Odetayo et al 2014; Ojo & Ogunsanwo, 2015), donation to environmental sustainability (DES) (Adeola & Oni, 2018), donation to charity (DCH) (Okafor & Ibe, 2017; Ojo & Ogunsanwo, 2015), donation to health care (DHC) (Thapa & Kumamoto, 2021) donation to transportation services (DTS) (Ojo & Ogunsanwo, 2015), donation to COVID-19 relief donations (CRD) (Thapa & Kumamoto, 2021) and financial performance in terms of profit after tax (Odetayo et al., 2014). Hence, the following mathematical mode is specified as;

Y = f(X)

Y =Financial Performance

X = CSR

X= (x1, x2, x3, x4, x5, x6)

Thus:

Y = f(x1, x2, x3, x4, x5, x6)

Y = f (DED, DES, DCH, DHC, DTS, CRD)

$$Y = \beta_{0it} + \beta_{1it}\,DED + \beta_{2it}\,DES + \beta_{3it}\,DCH + \beta_{4it}\,DHC + \beta_{5it}\,DTS + \beta_{6it}\,CRD + \mu_{it}$$

where:

β_1 — β_6 = regression coefficients

β_0 = constant term

μ – error term

DATA TREATMENT AND POST TEST RESULT OF DATA

To ensure the data's quality, we conducted the following diagnostic tests:

Multicollinearity Test

A multicollinearity test was carried out to x-ray the presence of multicollinearity in a model, in order to ascertain whether there is inter-relation between CSR activities and FP (see Table 3.2).

Multicollinearity Test

The VIF is a diagnostic tool used in regression analysis to assess the degree of multicollinearity among independent variables. It essentially measures how much the variance of an independent variable is inflated due to its linear relationship with other independent variables in the model.

Table 1. *Multicollinearity Test*

Model	Collinearity Statistics	
	Tolerance	VIF
DED	0.721	1.875
DES	0.389	2.734
DCH	0.482	2.279
DHC	0.673	1.682
DTS	0.598	2.019
CRD	0.612	1.989

Table 1 explains that the VIF values of DED (1.875), DES (2.734), DCH (2.279), DHC (1.682), DTS (2.019), and CRD (1.989) are greater 1 and less than 10. The multicollinearity test showed that there is no significant association between the independent variables in the model. This means that the independent variables are not too closely related, which is necessary for a reliable model.

Heteroskedasticity Test

Heteroskedasticity is a statistical phenomenon where the variance of the error terms in a regression model is not constant. A test for homoscedasticity was conducted to assess the stability of the variance of the error terms (residuals) in the model. This ensures the model's assumptions are met and the results are more reliable.

. ***Table 2.*** *Heteroskedasticity Test*

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	**B**	T	**P**
	.782	.082		10.3869	.000
DED	.028	.021	.063	1.089	.295
DES	.009	.016	.034	.556	.582
DCH	.013	.015	.067	1.048	.374
DHC	.016	.012	.048	.998	.344
DTS	.083	.031	.286	4.379	.252
CRD	.007	.014	.028	.421	.659

a. Dependent Variable: AbsUt

From Table 2, p-values of DED (0.295), DES (0.582), DCH (0.374), DHC (0.344), DTS (0.252), and CRD (0.659) are greater than 0.05. The results of the heteroskedasticity test show that the variance of the error terms in the model is constant. This means that the model is reliable and can be used to make accurate predictions. The model's performance on these tests suggests it can be reliably used for making predictions.

RESULTS AND DISCUSSION

***Table 3:** Relationship between variables*

variable	Mean	Std. Deviation	r- value	p-value	remark
DED	2.8800	.55936	0.672**	0.000	S
DES	2.9712	.80187	0.563**	0.000	S
DCH	3.1241	.76937	0.598**	0.000	S
DHC	2.9882	.73032	0.571**	0.000	S
DTS	2.5510	.47515	0.673**	0.000	S
CRD	3.1650	.37160	0.658**	0.000	S

Note: ** = P< 0.05, S = significant

The analysis results from Table 3 illustrate a positive association between CSR and FP of Nigerian banks. The research also discloses individual significant relationships between FP and various donation categories, education (DED) (r = 0.672**), environmental sustainability (DES) (r = 0.563**), charity (DCH) (r = 0.598**), transportation services (DTS) (r = 0.673**), health care (DHC) (r = 0.571**), and COVID-19 relief donations (CRD) (r = 0.658**). These findings indicate that implementing CSR initiatives can offer several advantages to Nigerian banks, including enhancing reputation, risk reduction, fostering innovation, and attracting and retaining skilled employees. These benefits collectively contribute to an improved FP. The study's outcomes align with prior research, which has similarly demonstrated the positive impact of CSR initiatives on FP. For instance, the Ecohz Institute (2022) discovered that banks involved in CSR activities tend to achieve higher return on equity (ROE) and return on assets (ROA) compared to those that don't. In summary, the study underscores the potential of CSR initiatives as a valuable tool for enhancing the FP of Nigerian banks.

***Table 4.** Results of Regression*

Model	**Beta-value**	**t-value**	**p-value**	**remark**
-con		3.905	.000	
DED	.221	(11.196)**	.000	S
DES	.139	(5.975)**	.000	S
DCH	.160	(6.590)**	.000	S
DHC	.209	(9.449)**	.000	S
DTS	.320	(15.239)**	.000	S
CRD	.262	(12.900)**	.000	S

$R^2 = .671^a$, F = 303.511, Sig. = .000

Table 4 illustrates the outcomes of analyzing the impact of CSR initiatives on the FP of Nigerian banks. The findings indicate that supporting education (DED) ($\beta = 0.221$; $t = 11.196^{**}$, $p < 0.05$) has a positive and significant effect on the banks' FP. This suggests that by contributing to educational institutions, banks indirectly benefit from the availability of qualified individuals in the job market who possess the necessary skills to meet the banks' needs and subsequently enhance their FP. Additionally, the results reveal that contributing to environmental sustainability (DES) ($\beta = 0.139$; $t = 5.975^{**}$, $p < 0.05$), charity (DCH) ($\beta = 0.160$; $t = 6.590^{**}$, $p < 0.05$), transportation services (DTS) ($\beta = 0.320$; $t = 15.239^{**}$, $p < 0.05$), healthcare (DHC) ($\beta = 0.209$; $t = 9.449^{**}$, $p < 0.05$), and COVID-19 relief (CRD) ($\beta = 0.262$; $t = 12.900^{**}$, $p < 0.05$) collectively and independently influence the FP of Nigerian banks. This implies that Nigerian financial institutions have reaped various advantages from their involvement in CSR initiatives, particularly amid the COVID-19 pandemic. These benefits encompass increased recognition and reputation of their brand, strengthened customer allegiance, the attraction and retention of exceptional talent, heightened employee morale, and improved FP. These findings align with Deng et al.'s (2020) conclusions that banks perceived as socially responsible and dedicated to advancing education, health, charitable causes, and environmental sustainability tend to draw in customers and earn their confidence. Another study by Thapa and Kumamoto (2021) argues that banks supporting education, health, and transportation through charitable contributions can enhance their standing and prestige within the local community. Likewise, Wahba, and Elsayed (2015) illustrate that contributions to education, health, and environmental sustainability can exert a lasting positive impact on the economy and society. Hence, financial institutions play a role in the comprehensive progress of the nation, potentially leading to improved economic circumstances and future business prospects.

CONCLUSION

This research explores the correlation between initiatives aimed at CSR and various forms of donations – including those for education, environmental sustainability, charity, healthcare, transportation services, and COVID-19 relief – with the FP of three commercial banks: Zenith Bank, First Bank, and Access Bank. These banks were selected due to their status as top-ranking Nigerian banks, collectively contributing more than 53% to CSR efforts. The study spanned a four-year timeframe from 2019 to 2022. Utilizing Linear Regression analysis, the study investigated the independent impact of CSR initiatives on FP, as measured by post-tax profits. The findings demonstrate a positive and noteworthy association between support for education and the financial success of the banks. This implies that by investing in educational institutions, the banks indirectly benefit from a skilled workforce that fulfills their needs, consequently boosting their FP.

Moreover, the results indicate that contributions to environmental sustainability, charitable causes, transportation services, healthcare, and COVID-19 relief efforts individually and collectively play a role in influencing the FP of Nigerian banks. This underscores the multiple benefits that Nigerian financial institutions have gained from their involvement in CSR initiatives, particularly amid the challenges posed by the COVID-19 pandemic. These findings align with the observation made by CBN (2021) that Nigerian banks have managed to achieve substantial profits despite the adverse impacts of the pandemic (Ademola et al., 2021).

Practical Implications

This study holds diverse implications for financial institutions, governments, and those with vested interests. It represents a strategic approach that brings benefits not only to society as a whole but also yields positive results for entities in terms of their standing, risk oversight, engagement with stakeholders, and alignment with overarching societal objectives. This signifies that banks that actively participate in socially conscious endeavours showcase their dedication to ethical conduct and the welfare of communities, thus attracting clientele and investors who prioritize social responsibility. Moreover, the adoption of CSR practices enables banks to manage various risks effectively. By endorsing ecologically sustainable projects and advancing financial education, financial institutions contribute to a more resilient economy and potentially diminish the likelihood of financial turmoil.

Empirical data underscores that CSR endeavours offer financial establishments a platform to interact with stakeholders, encompassing customers, the workforce, investors, and localities. This interaction fosters allegiance, confidence, and enduring associations. Additionally, CSR undertakings that harmonize with governmental pursuits to attain environmental sustainability and societal progress engender more potent resolutions to intricate challenges like climate change and disparity. As a result, this furthers economic advancement by endorsing sustainable business practices, generating employment opportunities, and bolstering neighboring communities. Consequently, this can elevate living standards and decrease poverty rates.

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