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Financial Indicators as Predictors of UNDP's Human Development Index (HDI): A Literature Review

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ABSTRACT

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This paper presents a novel reinforcement of financial indicators as predictors of UNDP's Human Development Index (HDI). The review focused on the roles of each financial index as a mediator of a positive relationship between the World Bank's financial indicators and HDI. The literature review focused on how each financial indicator affects human development, whether the indicators significantly predict global HDI, and whether there was a significant relationship between the financial indicators and the 69 countries' HDI. The study used content analysis of scientific sources generated through Google Bard, ChatGPT, and the Consensus app. The sources and references came from

research databases such as Google Scholar, Scopus, Clarivate Analytics, and DOAJ. Results showed a significant correlation between financial indicators and human development. The study concluded that financial indices such as financial development, inclusion, and financial sustainability were significant predictors of human development.

INTRODUCTION

The Human Development Index (HDI) ranks nations into four levels of human development based on a composite statistic of life expectancy, education, and per capita income factors (Noubiap et al., 2023). UNDP developed it underline that, rather than relying solely on economic growth to gauge a nation`s development, consideration should be given to people and their potential (De Haas & Rodríguez, 2010). Furthermore, HDI is a useful instrument for assessing and tracking changes in human development across time and between different nations (Torchio et al., 2020).

Financial indicators are used to assess the strength and effectiveness of a nation's financial system (Kori et al., 2020). The size of the financial sector, the degree of financial intermediation, and the level of financial inclusion are a few examples of these metrics.

A rising body of research suggests that financial indicators are important predictors of human capital, economic growth, and credit growth (Guan et al., 2020; Sarwar et al., 2021). In the current review, data from the World Bank was used. It was accessible, reliable, and timely. Originally, the target population comprised 189 countries and 28 indicators but was further reduced through data elimination to 69 countries and 15 indicators.

The review focused on the role of each economic indicator in mediating the relationship between World Bank financial indicators and the HDI. A new validation of economic indicators as HDI predictors for the United Nations Development Programme was proposed. The literature review aimed to determine whether each economic indicator significantly predicts global HDI, whether there was a significant correlation between the economic indicator and HDI in 69 countries, and how each economic indicator affects human development. Understanding the factors that influence human development was crucial.

The available literature on the relationship between financial indicators and human development is vast. However, there are a few key findings that emerge from this research. First, financial development is positively correlated with human development. As a result, nations with more advanced financial systems typically have higher HDIs. Human growth can be enhanced in a number of ways by financial development. These studies suggest that financial development positively affects human development, economic growth, and globalization, although some evidence points to a decreasing effect over time (Guan et al., 2020: Sarwar et al., 2021).

Second, financial inclusion positively correlates with human development, economic growth, reduced poverty, and income inequality (Sha'ban et al., 2019). Countries with more developed financial systems have higher HDIs. In many different ways, financial inclusion can promote human growth. Giving people access to financial services, for instance, can raise their standard of living. More so, it encourages financial security by assisting people in saving money for the future.

Third, financial sustainability positively correlates with human development (Alshubiri, 2021). Higher HDIs are common among nations with more financially stable financial systems. Financial sustainability protects the financial system for coming generations and serves as a safety net against financial catastrophes.

In conclusion, it was found that through the literature presented, there was a positive correlation between financial indicators and human development. Moving forward, literature review or further research should focus on gaining a statistics perspective and hopefully recommend that policymakers concentrate on expanding and bolstering their financial systems.

OBJECTIVES OF THE STUDY

The current review aimed to (1) find empirical evidence of financial indicators as predictors of the human development index and (2) determine if financial indicators can serve as predictors of HDI.

LITERATURE REVIEW

The theory of economic convergence by multiple authors anchored the review. Economic convergence indicates that nations with lower beginning levels of development tend to overtake economies with higher levels of development over time. In the review, it was proposed that there is the possibility that certain financial variables, such as the GDP growth rate, FDI inflows, government spending on healthcare and education, and the poverty rate, could act as predictors of a nation's HDI. The underlying presumption is that gains in financial indicators show how well a nation is doing economically and how resources are being allocated, ultimately aiding human development.

Historical data for a group of nations over a predetermined time was reviewed, and the correlation between the HDI scores for the selected financial indicators was analyzed. It might be discovered that nations with greater GDP growth rates, more FDI inflows, higher government spending on healthcare and education, and lower poverty rates typically have higher HDI scores.

Moreover, it must investigate the mediating factors and effects of additional variables between financial indicators and HDI. There may be bigger correlations between financial indicators and human development in nations with more equitable wealth distribution and better governance. Any argument should be supported by existing literature; hence, align the arguments to citations.

Since there is no single author of the economic convergence theory, this study made use of five theories:

Solow-Swan growth model (1956) serves as a long-term economic growth model. It addresses capital accumulation, labor or population expansion, and productivity advances mostly fueled by technical advancement to explain long-run economic growth.

Barro and Sala-i-Martin's (1990) research focused on the factors that affected economic growth and contributed to understanding why some countries grow faster than others. Additionally, the factors helped identify the policies and institutions promoting convergence.

Endogenous growth theory was developed by Romer in 1994. The study indicated that other factors that contribute to economic growth, such as technological innovation and human capital accumulation, can also influence economic growth instead of relying only on external factors such as natural resources and capital growth. The research contributed significantly to opening the discussion for global policies and the government to play a role in economic advancement. Romer (1994) has increased knowledge of conditional convergence and the significance of institutions and policies in promoting convergence that economic growth is not solely based on external factors such as capital accumulation or natural resources; rather, it is also influenced by internal factors, such as technological innovation and human capital accumulation.

Sachs (2006) studied the role of institutions, geography, and international trade in economic development and convergence. The researcher explored how policies and external factors affect convergence between nations. Institutions, geographies, and international trade are essential to economic growth and development and can help drive economic growth by enabling new access to new markets and technologies. Results helped us understand the factors that contribute to economic development and have informed the choices policymakers can make to boost economic growth.

Aghion and Howitt's (1998) study on economic growth is explained by the innovation process and its role in shaping convergence dynamics. It is a literature study about business competition that drives innovation at a rate corresponding to economic growth. Due to competition, companies always try innovative ways to manufacture goods and provide services more effectively.

Innovation is determined by a competitive process, which stimulates economic growth. The study has provided a better understanding of why certain nations can have sustained economic growth while others cannot. The study is a source of information for policymakers on stimulating economic growth.

In association with the study, these theories confirm that economic convergence is a powerful tool for financial indicators to become predictors of human development. However, limitations are notable: (1) Economic convergence takes time and can be disrupted by delays such as wars, natural catastrophes, and other occurrences. (2) Economic convergence is unavoidable. Some countries may have been on top of their economic growth and development for a long time now, while others are just beginning to grow or have been unable to escape poverty for extended periods of time. (3) Economic convergence can benefit all countries involved instead of an equal-stakes endeavor only.

Overall, Indicators of human development frequently advance in nations that are reaching economic convergence and have robust fiscal indicators. This is because nations that experience economic convergence typically see increases in the importance of human development metrics, including income, life expectancy, and level of education. Furthermore, due to the availability of resources that may be used to enhance healthcare, nations with higher GDP typically have longer life expectancies. As a result, economic convergence and financial indicators are crucial for measuring human advancement. However, they are also certain limitations made by economic convergence theory.

RESEARCH GAPS AND DIRECTION FOR FURTHER STUDY

Further studies are needed to support and establish the following research gaps. First, a comprehensive definition of financial inclusion will be discussed. The lack of a single definition for financial inclusion makes it difficult to observe and track its progress. Second, Further research on financial inclusion. Streamlining financial inclusion's definition helps find data beneficial for understanding financial inclusion and its impact on economic and human development. Third, research is insufficient about the impact of financial inclusion on HDI. Due to this, evaluating the benefits of financial inclusion and defending the expenditure on financial inclusion initiatives is challenging. Fourth, since there is too little research on financial development and HDI, assessing the value brought by financial development programs is formidable. Fifth, there is a dearth of research on financial sustainability and HDI; thus, identifying the effect of financial sustainability and support projects is challenging. Lastly, these knowledge gaps make it challenging to fully recognize the importance of the financial indices concept in promoting HDI and its positive relation. Further research is needed to fill these gaps and encourage awareness of their relationships.

METHODOLOGY

An extensive literature review was conducted to find relevant sources. The study used content analysis of scientific sources generated through Google Bard, ChatGPT, and the Consensus app. AI leads were validated in legitimate sources from Google Scholar, Scopus, Clarivate Analytics, and DOAJ. The literature review thoroughly outlined the association between financial indicators and HDI. Future studies on this subject will be guided by the conclusions derived from the literature review.

ETHICAL CONSIDERATION

A number of ethical issues need to be considered in the study to maintain the objectivity and responsibility of the study. An illustration of how the ethical considerations section might be written is provided: (1) Data Privacy and Integrity: The World Bank and the United Nations Development Programme (UNDP), both respected and freely accessible sources, provided the data utilized in this study. The way this data is used complies with the policies of those organizations. The integrity of the data is preserved by preventing any modifications that can lead to data misrepresentation. Any alterations made to the data for analytical purposes are recorded and justified, but the data is provided and examined exactly as it is. (2) Maintaining impartiality and avoiding bias is crucial, especially given the potential impact of research on investment and policy decisions. This means disclosing conflicts of interest in advance, removing prejudices against certain countries or regions, and ensuring the objectivity and fairness of research methods and analyses. In addition, the results should not be exaggerated or minimized to achieve a certain goal. (3) Respect for autonomy and cultural diversity: The study analyzes and compares data from a number of nations, each of which has a distinct socio-economic and cultural background. Respecting these variations and avoiding generalizations and oversimplifications are essential. Research should also consider how some regional structural problems, economic inequality, or deeper-seated governance difficulties may be reflected in certain economic metrics. It is essential to convey the results in a way that honors each nation's sovereignty and considers its particular context. Additionally, the researcher must use caution when assigning particular countries undue blame for or credit for their HDI rankings based only on those countries' economic data.

RESULTS AND DISCUSSION

H1: The financial indicators from the World Bank singly or in combination predict global HDI.

Tekin (2020) and data from the OECD and Central Bank used the World Bank's data to test The Nexus between Financial Development and Human Development. The researcher cited that financial indicators have significant long-term equilibrium with human development.

In separate studies, it was also found that financial indicators are predictors of UNDP's HDI. Oyinlola and Adedeji (2019) note that their study showed that financial development promotes the extent to which human capital can facilitate inclusive growth. However, the choosing human capital and financial development measures is important in examining growth.

Kuri and Laha (2011) argue that empirical pieces of evidence from their research suggest that an all-inclusive financial system would facilitate human development by addressing the basic distortions in the level of human development in the Indian economy.

Moreover, Hathroubi (2019) notes that using GMM methodology, results suggest that financial inclusion is highly and positively correlated to the human development index and the employed share of the adult population.

H2: There is a significant relationship between the financial indicators of the 69 countries and their HDI.

The financial concepts proved that the financial indicators by the World Bank have a positive relationship with UNDP's Human Development Index. Ratnawati (2020) contends that financial inclusion can positively impact economic growth, poverty alleviation, income inequality reduction, and financial stability in Asia. Comes et al. (2018) also argue that the empirical analysis of their study points to the fact that remittances, along with FDI, play an important role in economic growth.

Furthermore, Camba-Mendez and Serwa (2014) found that global financial indicators are positively and strongly correlated with the market perception of sovereign credit risk, while macroeconomic and institutional developments were, at best, only weakly correlated with the market perception of sovereign credit risk.

Synthesis of Literature Review

This synthesis of literature revolves around understanding how financial indicators predict the United Nations Development Programme's (UNDP)

Human Development Index (HDI). The HDI, developed by UNDP, incorporates three components: education, health, and income. Education, as measured by the World Health Organization (WHO), includes mean and expected years of schooling and is seen as a crucial driver for economic growth (Malhotra, 2002; Polasek et al., 2011). Health, represented by life expectancy at birth, is also linked to better education and happiness (Guven, 2009; Yang & Waliji, 2010). Income, measured as Gross National Income per capita in Purchasing Power Parity terms, reflects economic well-being and standard of living and is crucial for enhancing happiness, social support, and infrastructural development (Azizi et al., 2017; Sauter & Huettenmoser, 2008).

The study uses three indices – financial inclusion, financial sustainability, and financial development – to examine financial indicators as predictors. Financial inclusion encompasses aspects such as the availability of ATMs, commercial bank branches, and personal remittances. Studies such as Maity and Sahu (2018) and Shihadeh and Liu (2019) indicate that financial inclusion through banking positively impacts human development. Financial sustainability includes the bank capital to assets ratio, bank nonperforming loans to total gross loans, inflation, official exchange rate, real interest rate, and total reserves. Research by Gutiérrez-López and Abad-González (2020) and Ha et al. (2019) indicates that aspects of financial sustainability like higher capitalization and lower, stable inflation are positively correlated with human development.

Lastly, financial development entails broad money, broad money growth, deposit interest rate, foreign direct investment net inflows, and total international migrant stock. Studies by Jenkins and Katircioğlu (2010) and Pradhan et al. (2017) suggest that financial development significantly influences economic growth, especially with increasing foreign direct investment. Net migration also plays a critical role in financial inclusion and development. According to Park and Mercado (2017), demographic characteristics like net migration significantly affect financial inclusion, while Wright et al. (2013) suggest that modest levels of net migration are associated with higher economic growth. Overall, the synthesis emphasizes the multifaceted interplay between financial indicators and human development as measured by the HDI.

CONCLUSION

This study examines the connection between financial indicators and the Human Development Index (HDI) to establish the reliability of financial indicators as HDI predictions. The study examines each financial index's mediating function in the favorable correlation between World Bank financial indicators and HDI. It focuses on how each financial indicator affects human development if they accurately anticipate the global HDI and whether there is a meaningful relationship between these indicators and the HDI in 69 nations. Scientific sources from multiple research databases were analyzed for content during the examination. The results show a strong relationship between economic metrics and human advancement. Particularly important predictors of human growth include financial development, financial inclusion, and financial sustainability. The paper advises policymakers to focus on developing and bolstering financial systems and urges more statistically oriented research (De Haas & Rodriguez, 2010; Torchio et al., 2020; Kori et al., 2010; Guan et al., 2010; Sarwar et al., 2021; Sha'ban et al., 2017; Alshubiri, 2017, & Noubiap et al., 2023).

Additionally, it looks at economic convergence and how financial indicators relate to it as markers of human growth. The Solow-Swan growth model, Barro and Sala-i-Martin's research on factors impacting economic growth, Romer's endogenous growth theory, Sachs' study on institutions, geography, and international trade, and Aghion & Howitt's work on the importance of innovation in economic growth are just a few of the theories that are reviewed. According to the research, a nation's Human Development Index (HDI) may be predicted by financial metrics, including GDP growth rate, FDI inflows, government spending on healthcare and education, and poverty rate. According to the study, there is a positive association between financial indicators and HDI ratings, meaning that countries with more developed financial systems often have better HDI rankings.

To support its conclusions, the study cites a number of studies. To prove the significant long-term equilibrium between financial indicators and human development (Tekin, 2020). To emphasize the benefits of financial development on human capital and inclusive growth (Kuri & Laha, 2011; Oyinlola & Adedeji, 2019). The association between financial inclusion and the human development index is supported by Hathroubi (2019). In order to show the positive correlation between financial indicators and economic growth, poverty reduction, and financial stability, the article also cites Ratnawati (2020) and Comes et al. (2018). In order to demonstrate the relationship between global financial indicators and market perception of sovereign credit risk, Camba-Mendez and Serwa (2014) are mentioned.

The HDI's three components—education, health, and income—as well as how they relate to monetary indicators are covered in the paper's synthesis of the literature review, which includes references to several research (Malhotra, 2002; Polasek et al., 2011; Yang & Waliji, 2010; Guven, 2009; Azizi et al., 2017; Sauter & Huettenmoser, 2008; Maity & Sahu, 2018; Shihadeh & Liu, 2019; Gutiérrez-López & Abad-González, 2020; Ha et al., 2019; Jenkins & Katircioğlu, 2010; Pradhan et al., 2017; Park & Mercado, 2017; and Wright et al., 2013). The research explores moral issues and offers proof from numerous studies to support the association between financial indicators and HDI.

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