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# The Nexus Between Waqf Funded Education and Economic Development in Malaysia: ARDL Approach to Cointegration

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**ABSTRACT**

This study investigates the relationship between cash waqf in education and Malaysia's economic development from 2013 to 2023. Using time series data sourced from the World Bank, the research employs the Autoregressive Distributed Lag (ARDL) model and Error Correction Model (ECM) to examine both short-run and long-run dynamics. The findings indicate that cash waqf in education significantly contributes to long-term economic growth, enhancing social well-being and reducing poverty. However, in the short term, its impact appears negative, suggesting societal hesitation or limited understanding of its potential in educational financing. This divergence highlights the need for greater awareness and strategic implementation of waqf-based initiatives in education. The study suggests that Malaysia's higher education institutions should actively integrate cash waqf as an alternative funding mechanism to alleviate financial constraints. This research contributes original insights to the literature on Islamic philanthropy by empirically validating the dual effects of waqf education on economic growth. Moreover, it offers practical and social implications, emphasizing how the successful implementation of educational waqf can benefit the wider Muslim community and support national economic development. This study is the first to explore this nexus in the Malaysian context using the ARDL approach, offering a novel empirical contribution to both economic and philanthropic studies.

## 1. Introduction

Waqf acts as a vital component of social financing in Islam. Generally speaking, waqf is considered an asset trust that generates income for particular organizations or people [1]. Contributions to the Waqf fund can be used not only for religious purposes, like building places of worship or paying for war costs, but also for all other types of general social and economic demands, such as infrastructure development, poverty alleviation, and sustainable business activities [2]. However, in addition to the legal issues, Waqf also has management issues because the asset is perpetual under the Waqf and

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has a permanent nature. As a result, earlier academics sought to learn whether Waqf could affect socioeconomic transformation in underdeveloped emerging economies [3].

In addition to its spiritual and religious dimensions, waqf is a financing tools that has an influence when it comes to the community, political, economic, social, as well as educational growth. This is because waqf institution places a strong emphasis on both the social and economic sides of human growth. It can be seen as one of the most important strategies for enhancing the respect and authority of Islam [4]. As a result, within the broader context of Islamic beliefs, such a significant issue cannot be permitted to develop on its own without following any established laws, regulations, and rational management frameworks.

Malaysia's cash potential waqf reaches RM2.3 million in 2020, declining if compared to year 2019 (RM2.4 mil) [5]. The COVID-19 pandemic is to blame for the sluggish decline of this. This sum is minuscule in comparison to the growth of zakat. The level of acceptance of cash waqf is lower than that of other forms of charity due to a lack of understanding of waqf, notably in respect to cash waqf in comparison to land and other forms of gift [6].

When madrasas and other types of schools were being developed, many people gave land and buildings, which the community previously believed to be the only fixed assets that could be used for waqf in education. However, there was a limited supply of land and structures because of the rapid population development. Additionally, when schools are constructed using fixed asset waqf, operational financial challenges arise; as a result, the practice of cash waqf or cash waqf has arisen to assist the community in developing the education sector [6-7].

If cash waqf is correctly managed, it will expand and produce long-term gains that can be used to pay for education [8]. Also, cash waqf is more flexible and can do more, which makes it a better way to use funds for community empowerment. Waqf has a sustainable character by virtue of its permanent property and the fact that what is delivered is the outcome or benefit. Scholars concur that those who become nazir (waqf managers) in this scenario must preserve the assets' integrity and their benefits going forward [9]. Several studies by Shatar *et al.*, [10], have shown that the waqf instrument of the Islamic social fund is a good way to support higher education programmes in many ways, especially those that have to do with money and welfare.

Despite the recognized potential of waqf in supporting socio-economic development, particularly in the education sector, empirical studies examining the direct relationship between cash waqf for education and national economic growth remain limited especially in the context of Malaysia. Most prior research has focused on theoretical discussions, legal frameworks, or the role of waqf in general philanthropy, with minimal emphasis on its measurable economic impact using robust econometric models. Furthermore, existing literature often overlooks the dual (short-run and long-run) relationship of waqf-based educational financing, leaving a gap in understanding how its contributions evolve over time.

Addressing this gap, the present study aims to investigate the short-term and long-term effects of cash waqf in education on Malaysia's economic development from 2013 to 2023. Specifically, this study seeks to assess the extent to which cash waqf in education contributes to national economic growth in the short run and long run; and to provide empirical insights using the ARDL approach, thereby offering a more nuanced understanding of Islamic philanthropic instruments in economic planning.

## 2. Methodology

The World Bank's development indicators for Malaysia served as the data source for this study. The findings for this study was gathered from the ARDL model to cointegration and ECM. This work

explores the relationship between cash waqf in education and Malaysia's economic growth from 2013 to 2023. The study's independent variable is cash waqf in education, whereas the dependent variable is economic growth. Additionally, the independent variable pertaining to the study has been validated by macroeconomic variables of capital, labor, starting real GDP, human capital, and inflation. Mckenzie and Sumiko [11], developed the ARDL strategy used in this investigation. The ARDL has a lot of benefits: Firstly, it is applicable irrespective of its stationary properties with respect to the variables. This means that matter how fractionally integrated the series are (I(0) or I(1)), they can still be employed [12]. Last, and probably the most important one, the ARDL approach produces reliable outcomes for cointegration analysis even when using a small sample size [13].The study's modest sample size provides extra motivation to adopt this exact technique.

### *2.1 Model Description*

With regards to the relationship between cash waqf in education and Malaysia's economic growth, we rigorously contemplated the theorized concept adapted and amended from the works of several researchers [14-18]. Their research was predicated on the neoclassical model regarding economic growth, emphasizing emphasizes labor, capital, as well as technical development that acts as primary drivers of economic growth. A production function represents the relationship between these factors and economic growth, thus:

$$Y = f(K, L, T) \quad (1)$$

When Y represents the level of total output, T represents the productivity of all factors, including K and L, denote the capital stock and labor, accordingly. Additionally, Levine and Renelt [19] discovered two variables: the baseline level pertaining to GDP per capita and a human capital's proxy that are reliable in predicting growth. Several scholars have utilized average years of education acting as a proxy for human capital, for instance, [20-23]. One of the elements that affects economic growth, according to studies by [24-27], is inflation. Growth, investment, and production efficiency are all impacted by inflation. Hence, these variables are incorporated to Eq. (1) and the result is as Eq. (2).

$$Y = f(IGDP, G_K, G_L, HUMAN, INF) \quad (2)$$

where HUMAN is a stand-in for human capital, INF represents inflation, and the other variables are as previously specified. It is important to note that, while implementing the aforementioned methodology, we will only be focusing on cash waqaf in education indicators. The economic growth's neoclassical model is in accordance with the principles served as the foundation for the empirical investigation of this study. Therefore, Eq. (3) can be used to define the updated model for our study.

$$Y = f(IGDP, G_K, G_L, HUMAN, INF, CWe) \quad (3)$$

where CWe is cash waqaf in education and additional constructs are as differentiated earlier. The constructs and framework for GDP growth can be obtained in Eq. (4) by excluding the error term,

$$Y_t = \beta_o + \beta_1 IGDP_{t-1} + \beta_2 G_{Kt-1} + \beta_3 G_{Lt-1} + \beta_4 HUMAN_{t-1} - \beta_5 INF_t + \beta_6 CWe_{t-1} + e_t \quad (4)$$

in which the subscript t signifies the time period, as well as $\beta_0$ is the intercept term of the panel.

Additionally, Pesaran *et al.*, [28], assessed the cointegration with respect to the hypothesized variables via the ARDL model with the Ordinary Least Squares (OLS) estimator. The short-run correlation between the cointegrated variables was then examined using ECM. The model's stability is analyzed afterward via the cumulative sum of recursive residuals (CUSUM) along with the cumulative sum of squares (CUSUMsq) of recursive residuals.

This work estimates the GDP growth ARDL bounds equation, presented in Eq. (5) below:

$$\Delta Y_t = \alpha_0 + \sum_{i=0}^{p} \beta_i \Delta Y_{t-i} + \sum_{i=0}^{p} \partial_i \Delta CWe_{t-i} + \sum_{i=0}^{p} \mu_i \Delta G_{K_{t-i}} + \sum_{i=0}^{p} \gamma_i \Delta IGDP_{t-i} + \sum_{i=0}^{p} \delta_i \Delta G_{L_{t-i}} + \sum_{i=0}^{p} \theta_i \Delta HUMAN_{t-i} + \sum_{i=0}^{p} \pi_i \Delta INF_{t-i} + \sigma_1 CWe_{t-1} + \sigma_2 Y_{t-1} + \sigma_3 G_{K_{t-1}} + \sigma_4 IGDP_{t-1} + \sigma_5 G_{L_{t-1}} + \sigma_6 HUMAN_{t-1} + \sigma_7 INF_{t-1} + \varepsilon_t \quad (5)$$

in which, $CWe_{t-i}$ stands for cash waqf on education, $G_{K_{t-i}}$ capital growth and , $G_{L_{t-i}}$ labour growth. Initial GDP is $IGDP_{t-i}$, human capital is $HUMAN_{t-i}$, and inflation is $INF_{t-i}$ . The best lag length is *p* and the initial difference of variables is Δ. Eq. (1)'s first part, which includes β, $\partial$, μ, γ, δ, θ, and π, represents the short-term one. The remaining parameters marked $\sigma_k$ are those for the long term.

Following are the hypotheses to test in order to see if the variables presented in this research exhibit any long-term cointegration: $H_0$: $\sigma_1 = \sigma_2 = \sigma_3 = \sigma_4 = \sigma_5 = \sigma_6 = \sigma_7 = 0$ and $H_1$: at least one of the $\bar{\alpha}$ is not equal to 0. Because there is neither cointegration nor a real relationship between the explanatory regressors and GDP growth, this is the joint null hypothesis. Then, the F-statistic value is characterized by F ($Y_t$ | $CWe_t$, $G_{Kt}$, $G_{Lt}$, $HUMAN_t$, $IGDP_t$, $INF_t$) in the new OLS output.

The model with regard to the cointegration equation pertaining to GDP growth is displayed in Eq. (6).

$$Y_t = \alpha_{10,0} + \sum_{i=1}^{p} a_{11,i} CWe_{t-i} + \sum_{i=1}^{p} a_{12,i} G_{K_{t-i}} + \sum_{i=1}^{p} a_{13,i} IGDP_{t-i} + \sum_{i=1}^{p} a_{14,i} G_{L_{t-i}} + \sum_{i=1}^{p} a_{15,i} HUMAN_{t-i} + \sum_{i=1}^{p} a_{16,i} INF_{t-i} + \varepsilon_t \quad (6)$$

Relying upon a cointegrating relationship's existence, the ECM can be stated as Eq. (7) below.

$$Y_t = \alpha_{10,0} + \sum_{i=1}^{p} a_{11,i} CWe_{t-i} + \sum_{i=1}^{p} a_{12,i} G_{K_{t-i}} + \sum_{i=1}^{p} a_{13,i} IGDP_{t-i} + \sum_{i=1}^{p} a_{14,i} G_{L_{t-i}} + \sum_{i=1}^{p} a_{15,i} HUMAN_{t-i} + \sum_{i=1}^{p} a_{16,i} INF_{t-i} + ECT_t \quad (7)$$

Here, $\phi ECT_{t-1}$ resembles the error correction term. Meanwhile, all other variables are set to their default values.

## 3. Results

It is possible for the unit root null hypothesis for all series at the 1% critical value to be rejected, according to the ADF test's outcomes, with the exception of inflation, human capital, as well as starting gross domestic product. However, the first difference series' one percent crucial value allows the rejection of the unit root null hypothesis.

Similar to this, the PP test's outcomes show that all series may possess the unit root null hypothesis was rejected at the 1% critical value, without inflation, human capital, as well as initial GDP. However, using annual data from 2013 to 2023, rejecting the unit root null hypothesis is

plausible when it comes to inflation, human capital, as well as the initial gross domestic product at the 1% crucial value in the first difference.

The bound test with regard to the GDP growth's computed F-statistic is 4.3626 in this research. The findings demonstrate a long-term link between the variables as indicated by the estimated F-statistics, which are the ones over the upper bound critical values of 1% (2.50, 3.68), 5% (2.04, 2.08), and 10% (1.80, 2.80). Accordingly, rejecting the null hypothesis is plausible when the variables do not exhibit long-term cointegration. A long-term cointegration link between GDP growth, cash waqf in education, capital growth, labor growth, IRGDP, human capital, and inflation can therefore be inferred from the results of the F-statistics.

Evaluation of the stability with regard to both long- and short-term features is the goal of the stability tests. CUSUM and CUSUMsq tests are two examples of these tests. According to Pesaran and Shin [29], CUSUM and CUSUM Square tests can be used to determine if short and long-term estimates are stable. This study examines the stability of the GDP growth test.

The plots are significant at a 5% level when compared to critical boundaries. This demonstrates the validity of both the long and short-term variables that affect GDP growth in Malaysia. Both tests confirm the ARDL model's stability for structural stability. This demonstrates how precisely described the model is. As a result, the ARDL technique is taken into consideration to calculate the long-run coefficient, and the findings are explained.

In this case, a positive long-term correlation between GDP growth and education cash waqf exist. According to the findings, a 1% increase in the cash waqf for education will result in a 0.28 % boost in GDP growth. This situation most likely developed as a result of the government's apprehension for making available the necessary financing to replace the charge of raising the standard of tertiary learning in the nation so that it is competitive both domestically and internationally. Unused financial resources will also cause a number of issues, including inadequate facility provision, a lack of human capitals, and the absence of marketing initiatives translating into deprived comprehension of the idea of education waqf. Therefore, managing finances and resources effectively is key to the achievement of waqf educational establishments.

Waqf's beneficial influence on Malaysia's educational advancement will not only highlight the importance of waqf in meeting public needs, but it will also have an effect on the third sector of Islamic economics, which will support charitable and educational initiatives that foster social cohesion. Kusuma *et al.,* [1], concludes that there may be a structure for a waqf instrument that can be used in the future for financing education based on this research's outcomes, supported by the conceptual cash waqf model for educational finance. Later, the conceptual work was expanded by Kusuma *et.al,* [1], into a quantitative investigation employing a survey mechanism on a Malaysian student population that was chosen at random. According to the results of their study, respondents are in favor of creating an Islamic waqf bank to fund their educational needs. As a result, it will eventually indirectly enhance economic growth.

Pertaining to this context, the connections between labor growth and GDP growth is in the long-run positive. As per the outcomes, a 1% upsurge in labor growth will result in a 0.32% rise pertaining to GDP growth. This causes more workers being hired, which raised production capacity and, ultimately, produced long-term economic growth. According to Chan [30] research, economic growth and labor growth are positively correlated. The employment prospects on the labor market typically rise with economic expansion. A rise in employment on the labor market has the tendency to raise production capacity. Long-term economic growth is thus further encouraged.

Malaysia specifically in terms of capital expansion has a long-term, beneficial influence on GDP growth. According to the findings, a 1% rise in capital growth will lead to a 0.25 % rise pertaining to the GDP growth since the adoption of a more productive, technologically advanced capital. In turn,

this raises a nation's chances of future economic growth. Additionally, by embracing newer, more effective technologies, investment capital may be able to boost long-term growth rates. The study's findings, however, differ from those of Oli and Sudan [31], who found no significance in domestic capital production's long-term advantages with regard to economic growth. This is because growth affects capital formation more causally than capital formation does on growth.

In this instance, the relationship between beginning real GDP and long-term GDP growth is positive. According to the findings, a 1% rise in starting real GDP will result in a 0.6% increase in GDP growth. The learning deficit between real and substantial learning or capability leads to positive results. A nation can increase productivity by copying, improving, and acquiring new knowledge in technologies from advanced nations more readily the bigger the knowledge gap. In turn, it would eventually increase GDP growth. The outcome is in contradiction to Levine and Renelt's [19], contention that the law of diminishing returns causes the starting level of real GDP to negatively impact economic growth.

The human capital's long-term effects with regard to the GDP growth, however, appears to be minimal. This is due to the fact that employment experience and vocational skills are crucial components that need be learned in order to eventually contribute to economic growth. The Gallup *et al*., [32], investigation backs up the conclusion. After utilizing the average total number of years of school as their primary indicator of educational attainment, the author failed to find a statistically significant link in their selection of countries between the level of education and economic growth. They discovered that experience levels influenced economic expansion.

In a similar vein, the long-term impact of inflation is negligible when compared to GDP growth. The underlying cause is a long-term causal link between inflation and economic growth. Here, the government's price control laws are to blame for this circumstance. Long-term inflation can be avoided by regulating price control since it can stop the rise in the cost of goods. The study by Su & Soon [33], which demonstrated that a short-term relationship between economic growth and inflation is the case and that this relationship is in the direction of inflation to economic growth rather than the other way around, supports the conclusion. However, inflation results from economic growth over the long term.

The short-term GDP growth coefficient model, as stated in Eq. (3), is estimated. The analysis's findings regarding the short-term impact of education's cash waqf on GDP growth are displayed. In the instance of Cash Waqf in education, the result has an immediate detrimental effect pertaining to GDP growth. According to the findings, a 1% increase in Cash Waqf for education will result in a 0.47 % decline in GDP growth. This is most likely due to the society's acknowledged hesitance regarding the value and goal of education. primarily because waqf property is not sufficiently protected by current law.

Additionally, the lack of a special regulation to safeguard waqf for educational purposes contributes to management inefficiencies. Furthermore, the negative result is most likely due to the issue linked to the waqf evolution. Due to the unaltered waqf data and information, procedural and administrative misalignment have caused disagreement in administering waqf projects. The unstandardized organizational structure, organizational divisions, and administrative units are also problematic.

The findings in the instance of labor indicate that, in the near run, an upsurge in labor is positively significant to an increase in GDP. According to the findings, a 1% upsurge in labor growth will result in a 0.30 % boost in GDP growth. This situation came about as a result of businesses extending their production in response to rising demand for their goods. In order to achieve this, a rise in labor growth could, in the short term, result in positive economic growth. Similar findings apply to the case of capital, which indicate that short-term GDP growth is positively significant to capital growth. The

flow of services over time is to blame for this. In order to produce greater production, a company would invest in more capital.

When it comes to human capital, the outcome (tertiary education) has little immediate impact on GDP growth. The cause is the impossibility of obtaining tertiary education in the near future. Gallup *et al*., [32] support the findings. After adopting the average total years of education with regard to the adult population as their fundamental indicators of human capital, they failed to locate a statistical relationship that is significant between subsequent economic growth and initial levels of education in their sample of countries.

In addition to that, the effect of inflation has no immediate impact pertaining to GDP growth. Malaysia is a developing nation, therefore the reason. Comparatively to developing and high-income nations, advanced nations are more severely impacted by inflation's short-term effects on GDP growth. The study by Miao *et al.,* [34], discovered that poorer countries suffer more from the short-term effects of inflation on growth than developing and high-income countries, supports the finding.

## 4. Conclusions

The present research aims to research how Malaysia's economic growth has been impacted by cash waqf on education from 2013 to 2023. In the example of Malaysia, the research also investigates if there are any short- and long-term correlations between cash waqf in education and GDP growth. The study employed ECM to determine the relationships over the long and short terms. The cointegration was also created using the ARDL bounds testing method. ADF and PP unit root tests were utilized in between to verify the stationarity with regard to the series. Consequently, the outcomes demonstrated the cointegration of the series.

In this study, the Cash Waqf of education possesses a long-term positive effect but has a short-term negative influence pertaining to economic growth. This is due to the government's responsiveness for putting into place the necessary resources for paying or the amount needed for raising the level of higher education in the nation to a level that is competitive both domestically and internationally. Unused financial resources will also cause a number of issues, such as inadequate facility provision, a shortage of human resources, and a lack of marketing initiatives, which will ultimately result in a defective comprehension of the idea of education waqf. In the interim, society's short-term reluctance regarding the value and purpose of education is probably to blame.

The results of this study have various ramifications for improving and overcoming the effect of Cash Waqf with regard to education pertaining to economic growth. Moreover, this waqf for education should be implemented using principles independent of any political-dominated government funding sources. Waqf, for instance, is distinct in Turkey since it is founded on respect for other people and mutual aid rather than political or religious doctrine.

The effective distribution and survival of learning resources meant for waqf, as well as the achievement of its goals of transforming into an economic giant and exploring novel opportunities to meet the social needs of Muslims, are uncertain if not handled thoroughly and professionally utilising a self-reliant welfare institution and excellent and frugal administration Therefore, the idea and practice of cash waqf should be extensively disseminated, and the tertiary leaning sector in Malaysia should now take full advantage of this by adopting cash waqf one of the options for lessening the load felt by establishments specifically in terms of finance for education. As a result, to make the sustainability of waqf for education a reality, factors such as community awareness, demographic conditions with a high Islamic population, the stability of Muslims' economic standing, and effective and professional governance should be investigated and adjusted.

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## References

[1] Kusuma, Kumara Adji, Herlinda Maya Kumala Sari, Khoong Tai Wai, and Kyki Veronica Anggraeni. "Development of Green Economy in the Perspective of Islamic Economics." In *Proceedings of the 1st UHAMKA International Conference on Economics and Business (UHICEB 2023)*, 18–19 December 2023, Jakarta, Indonesia. Published (2024). https://doi.org/10.4108/eai.18-12-2023.2349539

[2] Musa, S. O., and Che Mohd Salleh, M. "Proposing a Model for Entrepreneurship Development: The Role of Entrepreneurs' Cash Waqf Intention." Journal of Islamic Monetary Economics and Finance 4, no. 1 (2018): 183–204. https://doi.org/10.21098/jimf.v4i1.764

[3] Ratnasari, Ririn Tri, Shafinar Ismail, Mohd Halim Mahphoth, Nisful Laila, and Putri Aliah Mohd Hidzir. (2024). "Waqf Model and Sustainability of Tourism Industry: Malaysian and Indonesian Perspectives." In AIP Conference Proceedings, Vol. 2799, Article 020059. 9th International Conference on Advanced Material Engineering and Technology (ICAMET 2021), December 20–21, 2021. https://doi.org/10.1063/5.0182331

[4] Ab Shatar, W. N., Hanaysha, J. R., and Tahir, P. R. "Determinants of Cash Waqf Fund Collection in Malaysian Islamic Banking Institutions: Empirical Insights from Employees' Perspectives." *ISRA International Journal of Islamic Finance*13, no. 2 (2020): 177–193. https://doi.org/10.1108/IJIF-06-2020-0126

[5] Yayasan Waqaf Malaysia. Annual Report Yayasan Waqaf Malaysia 2020. (2020). https://www.ywm.gov.my/storage/app/uploads/public/61c/139/222/61c1392228e08810334658.pdf

[6] Alshater, M. M., Hassan, M. K., Rashid, M., and Hasan, R. "A Bibliometric Review of the Waqf Literature." Eurasian Economic Review 12, no. 2 (2022): 213–239. https://doi.org/10.1007/s40822-021-00183-4

[7] Hasan, R., Hassan, M. K., and Rashid, M. "The Role of Waqf in Educational Development – Evidence from Malaysia." Journal of Islamic Finance 8, no. 1 (2019): https://doi.org/10.31436/jif.v8i1.319

[8] Faisal, F. "Cash Waqf a Tool to Support Children Education in Covid-19 Pandemic." In Proceedings of the 1st International Conference on Law and Human Rights 2020 (ICLHR 2020), 549 (2021): 241–247. https://doi.org/10.2991/assehr.k.210506.033

[9] Chowdhury, M. S. R., Ghazali, M. F., and Ibrahim, M. F. "Economics of Cash Waqf Management in Malaysia: A Proposed Cash Waqf Model for Practitioners and Future Researchers." African Journal of Business Management 5, no. 30 (2011): 12155–12163. https://doi.org/10.5897/AJBM11.1810

[10] Ab Shatar, Wan Nuraihan, Jalal Rajeh Hanaysha, and Putri Rozita Tahir. "Determinants of Cash Waqf Fund Collection in Malaysian Islamic Banking Institutions: Empirical Insights from Employees' Perspectives." ISRA International Journal of Islamic Finance 13, no. 2 (2021): 177–193. https://doi.org/10.1108/IJIF-06-2020-0126

[11] McKenzie, C. R., and Sumiko Takaoka. "Microfit 5.0." Journal of Applied Econometrics 28, no. 1 (2013): 170–175. https://doi.org/10.1002/jae.2308

[12] Nair, Mahendhiran, Muthi Samudram, and Santha Vaithilingam. "Malaysian Money Demand Function Revisited: The ARDL Approach." Journal of Asia-Pacific Business 9, no. 2 (2008): 193–209. https://doi.org/10.1080/10599230801981944

[13] Hsiao, Cheng. Analysis of Panel Data, 2nd ed. Cambridge: Cambridge University Press, 2014. https://doi.org/10.1017/CBO9781139839327

[14] Enisan, A. A., and Olufisayo, A. O. "Stock Market Development and Economic Growth: Evidence from Seven Sub-Saharan African Countries." Journal of Economics and Business 61, no. 2 (2009): 162–171. https://doi.org/10.1016/j.jeconbus.2008.05.001

[15] Adjasi, C. K., and Biekpe, N. B. "Stock Market Development and Economic Growth: The Case of Selected African Countries." African Development Review 18, no. 1 (2006): 144–161. https://doi.org/10.1111/j.1467-8268.2006.00136.x

[16] Adefeso, H. A., Egbetunde, T., and Alley, I. "Stock Market Development and Growth in Nigeria: A Causal Analysis." Oman Chapter of Arabian Journal of Business and Management Review 2, no. 6 (2013): 78–94. https://doi.org/10.12816/0002295

[17] Beck, T., and Levine, R. "Stock Markets, Banks, and Growth: Panel Evidence." Journal of Banking and Finance 28, no. 3 (2004): 423–442. https://doi.org/10.1016/S0378-4266(02)00408-9

[18] Levine, R., and Zervos, S. J. "Stock Market Development and Long-Run Growth." The World Bank Economic Review 10, no. 2 (1996): 323–339. https://doi.org/10.1093/wber/10.2.323

[19] Levine, Ross, and David Renelt. "A Sensitivity Analysis of Cross-Country Growth Regressions." American Economic Review 82, no. 4 (1992): 942–963. https://doi.org/10.3386/w4399

[20] Benhabib, Jess, and Spiegel, M. "The Role of Human Capital in Economic Development: Evidence from Aggregate Cross-Country Data." Journal of Monetary Economics 34, no. 2 (1994): 143–173.

https://doi.org/10.1016/0304-3932(94)90047-7
[21] Krueger, A. B., and Mikael Lindahl. "Education for Growth in Sweden and the World." Journal of Economic Literature 39, no. 4 (2001): 1101–1136. https://doi.org/10.1257/jel.39.4.1101
[22] Cohen, D., and Soto, M. "Growth and Human Capital: Good Data, Good Results." Journal of Economic Growth 12 (2007): 51–76. https://doi.org/10.1007/s10887-007-9011-5
[23] Barro, R. J., and Lee, J. W. "International Data on Educational Attainment: Updates and Implications." Oxford Economic Papers 53, no. 3 (2010). https://doi.org/10.1016/j.jdeveco.2012.10.001
[24] Piazolo, M., and Bank, J. "Trade Integration Between Eastern and Western Europe: Policies Follow the Market." Journal of Economic Integration 12, no. 3 (1997): 259–297. https://doi.org/10.11130/jei.1997.12.3.259
[25] Tarnacka, Agata. "The Concept of Independence of Central Bank on the Example of the National Bank of Poland." Scientific Journal of the Bielsko-Biala School of Finance and Law 23, no. 2 (2019): 51 - 55. https://doi.org/10.5604/01.3001.0013.6521
[26] Andres, J., and Hernando, I. "Does Inflation Harm Economic Growth?" Working Paper Series, European Central Bank (1997). https://doi.org/10.3386/w6062
[27] Bruno, M., and Easterly, W. "Inflation Crises and Long-Run Growth." Journal of Monetary Economics 41, no. 1 (1998): 3–26. https://doi.org/10.1016/S0304-3932(97)00063-9
[28] Pesaran, M. H., Shin, Y., and Smith, R. "Bounds Testing Approaches to the Analysis of Level Relationships." Journal of Applied Econometrics 16 (2001): 289–326. https://doi.org/10.1002/jae.616
[29] Pesaran, M. H., and Shin, Y. "Generalized Impulse Response Analysis in Linear Multivariate Models." Economics Letters 58 (1998): 17–29. https://doi.org/10.1016/S0165-1765(97)00214-0
[30] Chan, Kam Wing. "A China Paradox: Migrant Labor Shortage Amidst Rural Labor Supply Abundance." Eurasian Geography and Economics 51, no. 4 (2010): 513–530. https://doi.org/10.2747/1539-7216.51.4.513
[31] Oli & Sudan Kumar. "Impact of Domestic and Foreign Capital on Economic Growth and Employment: Empirical Analysis of 43 Lower Middle-Income Countries." *Economic Journal of Development Issues* 37, no. 1 (2024): 79–95. https://doi.org/10.3126/ejdi.v37i1.63919
[32] Gallup, J. L., Sachs, J. D., and Mellinger, A. D. "Geography and Economic Development." International Regional Science Review 22, no. 2 (1999): 179–232. https://doi.org/10.1177/016001799761012334
[33] Su, S. K. W., and Soon, S. V. "The Impact of Inflation on Economic Growth." *Issues and Perspectives in Business and Social Sciences* 4, no. 2 (2024): 187–201. https://doi.org/10.33093/ipbss.2024.4.2.6
[34] Miao, Jianjun, and Danyang Xie. "Inflation and Economic Growth: An Empirical Analysis." *Journal of Business Economics and Management* 14, no. 55 (2013): 819–832. https://doi.org/10.3846/16111699.2012.670134