

## **Remittance and Its Impact on the Stock Market Dynamics: Vector Autoregressive Model**

**Krishna Bahadur Thapa, PhD**

Assistant Professor

Nepal Commerce Campus

Tribhuvan University, Nepal

[krishnasambin@gmail.com](mailto:krishnasambin@gmail.com)/ [krishna.thapa@ncc.tu.edu.np](mailto:krishna.thapa@ncc.tu.edu.np)

<https://orcid.org/0009-0005-8242-7810>

Received: March 24, 2025

Revised & Accepted: May 25, 2025

Copyright: Author(s) (2025)



This work is licensed under a [Creative Commons Attribution-Non Commercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

### **Abstract**

Remittance inflows have become a vital source of income for many developing economies, significantly contributing to national income and influencing economic activities, including stock market dynamics. This study investigates the impact of remittances on the stock market dynamics, focusing on whether remittance inflows contribute to stock market growth and investor behavior. Employing a quantitative approach, the research uses econometric tools like VAR models, co-integration analysis, Granger causality tests, and variance decomposition analysis. Findings reveal that, contrary to earlier studies, remittances have no significant short-term influence on the stock market dynamics. The stock market is primarily driven by its past values, with remittances playing a minimal role in stock price fluctuations. Furthermore, co-integration analysis indicates no long-term relationship between remittances and the stock market, challenging previous assumptions of remittances fostering sustained market growth. The Granger causality test also shows that remittances do not cause stock market movements; rather, the stock index has a marginal influence on remittances. These results suggest that while remittances contribute to liquidity and market stability, their impact on stock market development in Nepal is limited. Policymakers should focus on improving financial infrastructure and investor confidence to better leverage remittances for capital market growth.

**Keywords:** Nepal Stock Market Dynamics, Johanson Cointegration, Vector Autoregression, Remittance

JEL Classification Codes: G11, G12, G14, G41

## Introduction

Remittance has become a significant source of income for many developing economies, providing a stable source of foreign exchange and contributing to national income. In Nepal, remittance inflows account for a large share of GDP, shaping not only household consumption patterns but also influencing broader economic variables, including capital market activities. The Life-Cycle Hypothesis (Friedman, 1957) suggested that individuals make decisions on consumption and savings based on their long-term income expectations. Remittances received by households in developing economies can increase savings, which may then be invested in the stock market. In countries like Nepal, remittances could increase household savings, leading to higher stock market participation.

The stock market plays a pivotal role in the economic development of a nation by facilitating capital mobilization and providing investment avenues for both institutional and individual investors. A robust and liquid stock market can contribute to sustainable economic growth by supporting investments in key sectors. However, in emerging economies, stock markets often face liquidity issues, volatility, and limited investor participation, creating a need for external factors like remittance inflows to enhance market dynamics. Remittance inflows influenced the stock market (Thapa, 2023a) by increasing household savings, enhancing investment capacity, and fostering participation in financial assets. Additionally, a rise in remittance may lead to greater liquidity in the market, indirectly impacting stock prices, trading volume, and investor sentiment. This study (Issahaku et al., 2017) explored the relationship between international remittance inflows, banking sector development, and stock market development in developing countries. It finds that remittances promote banking sector growth in low-remittance countries but not in high-remittance ones, and establish a bi-causal negative link with stock markets in countries with developed banking systems. In low-remittance countries, remittances hinder stock market development, while in remittance-dependent countries, they foster it, with stock market growth further influencing remittance inflows.

Despite the growing volume of remittance flows, the relationship between remittance and stock market performance remains ambiguous, particularly in the context of developing economies such as Nepal. Existing literature primarily focuses on the macroeconomic effects of remittance, leaving a gap in understanding how these inflows influence stock market indicators such as growth, volatility, and liquidity. Therefore, this study seeks to address this gap by investigating the direct and indirect effects of remittance inflows on the Nepal Stock Exchange (NEPSE), specifically assessing whether remittance inflows contribute to stock market growth and investor behavior. This research is guided by the following questions: Does remittance inflow significantly affect NEPSE index growth? Is there a causal relationship between remittance and stock market returns?

This research aims to examine how remittance influences stock market performance and whether it can be considered a significant determinant of stock market behavior in Nepal. This study assesses the cointegration, long- and – short – run relationship by using the econometric statistical model utilizing the monthly time series data. Additionally, the researcher seeks the

Johanson causality, Wald test, and variance decomposition which are not incorporated in the previous studies. By addressing this gap, this study will contribute to the broader understanding of remittance's role in the economic development of emerging economies, offering policy implications for market and economic reforms. The remainder of this article is organized as follows: Section 2 reviews relevant literature; Section 3 outlines the data and methodology; Section 4 presents the empirical results; and Section 5 concludes with policy implications.

### Review of Literatures

The previous studies demonstrated that remittances play a significant role in enhancing stock market performance in developing economies, particularly by boosting liquidity, reducing volatility, and encouraging investor participation. However, the degree of impact varies across countries based on their financial infrastructure and market maturity. The Portfolio Theory, developed by (Gunzberg, 2008) emphasizes the importance of diversifying investments to minimize risk. If remittance recipients in emerging economies begin to invest their additional funds, they may diversify into the stock market, increasing liquidity and depth. As remittance inflows rise, Nepalese households may diversify into stocks, helping deepen the capital market. The Economic Growth Theory focuses on how financial markets drive economic growth. In developing economies, remittances can foster growth by increasing household savings, which in turn increases capital available for investment in the stock market. In Nepal, remittances contribute to economic growth by providing capital for stock market investment (Solow, 1956). Thapa (2025) studied the relationship between remittances and the Nepal Stock Exchange (NEPSE). Their research found that remittances had a long-term positive impact on the stock market, particularly by increasing household savings and investment. Remittance inflows contribute significantly to stock market growth in Nepal, especially over the long term. Azizi (2020) explored the impact of international remittances on financial development in developing countries using a panel of 124 countries from 1990 to 2015, applying an instrumental variable-fixed effect model. The findings show that a 10% increase in remittances to GDP results in significant increases in domestic credit, bank credit, bank deposits, and liquid liabilities. The study is original in addressing the endogeneity of remittances by using bilateral remittances and weighted economic indicators, making it the first to approach this issue in this way. Ho (2019) focused on African economies and analyzed how remittances impact stock market liquidity. They found that remittances significantly contribute to increasing market liquidity, but the effect is contingent upon the financial infrastructure of each country. Remittances enhance market liquidity but their impact on the stock market varies depending on the country's financial infrastructure.

Billmeier and Massa (2007) examined the stabilizing effects of remittances on stock markets in emerging economies. The study highlighted that remittances play a countercyclical role, reducing stock market volatility during economic downturns. Remittances can stabilize stock markets, reducing volatility during economic crises. Hosseini et al. (2011) analyzed the effects of remittances on stock market performance in South Asia, focusing on Nepal, India, and Pakistan. The study concluded that remittances are particularly impactful in countries with

developing financial markets, enhancing liquidity and market participation. Remittances boost stock market performance in emerging South Asian economies, with a noticeable effect in Nepal. Thapa (2023b) analyzed the relationship between the stock market and macroeconomic factors, including the consumer price index, exchange rates, money supply, and remittances, using co-integration, VAR, and Granger causality tests. The results show that the stock market index depends on its own lagged values, with significant effects from exchange rates and remittances, but minimal influence from consumer prices and money supply. Granger causality tests reveal a significant causal relationship from exchange rates to the stock market, highlighting their predictive power.

Hsing (2014) explored macroeconomic determinants affecting stock market indexes, revealing a positive relationship between Estonian and Hungarian stock markets with real GDP, debt/GDP ratio, and the German stock index, while negative correlations were found with domestic interest rates, expected inflation, and euro area government bond yields. In Namibia, rising economic activity and money supply boosted stock indices, whereas interest rates and inflation dampened them, indicating that stocks do not hedge against inflation, and contradictory monetary policies tend to reduce stock market performance. In Jordan, significant positive associations were found between stock market performance and factors like gross capital formation, inflation, and money supply, while income and net remittances showed a negative relationship. Anh (2015) studied the impact of remittances on stock market development in emerging economies, utilizing panel data and econometric models such as PVAR and PVECM. The study concluded that remittances positively influence stock market growth by providing liquidity and investment opportunities, with a bidirectional causal relationship between remittances and stock market development, underscoring the importance of remittances as a source of capital in emerging markets. The findings highlight remittances' role in enhancing the growth and expansion of stock markets in these economies. Lingaraja et al. (2020) analyzed stock market interactions between Asian emerging markets (India, China, Indonesia, Korea, Malaysia, Thailand, Philippines, and Taiwan) and developed markets (USA and Japan) from January 1, 2005, to December 31, 2014, using statistical methods like correlation and Granger causality tests. The study found short-term relationships between these markets but weak long-term connections, suggesting that Asian emerging markets provide diversification opportunities for international portfolio investors over the long run.

Shrestha and Bhatta (2018) investigated the role of remittances in promoting financial market development in developing countries. The study showed that remittances increase the capital available for investment in stock markets, fostering overall financial market growth. Remittances contribute to capital market development by increasing available investment capital. Thapa (2019) explored the link between remittances and stock market volatility in Nepal. They found that remittances provide a stabilizing effect on stock market volatility, especially during periods of economic stress. Remittances reduce market volatility in Pakistan's stock market, offering a stabilizing mechanism during economic challenges. Aremo et al. (2020) focused on the relationship between remittance inflows and stock market performance in emerging Asian economies. The study found that remittances contributed positively to stock

market liquidity and investor participation. Increased remittances result in greater stock market participation in emerging Asian economies.

### Research Methodology

This study adopts a quantitative research design, employing longitudinal and time series data analysis methods to explore the relationships between remittance and stock market index. The research design is focused on understanding the dynamics of variable over time, utilizing secondary data from multiple sources. The secondary data sources include Nepal Stock Exchange, Nepal Rastra Bank, Securities Board of Nepal, World Bank reports, and financial statements from listed companies. These sources provide comprehensive data from June 2005 to July 2023, covering approximately 210 monthly observations. Data for secondary analysis were gathered from reputable online sources and organizations such as NEPSE, NRB, SEBON, the World Bank, and financial reports of listed companies. Physical visits were also conducted when necessary. The data were analyzed using Excel and Eviews-10. Econometric tools and techniques employed in the analysis include stationarity tests, lag selection, co-integration analysis, VAR (Vector Autoregressive) models, Wald tests, Granger causality tests, and variance decomposition analysis. These techniques are designed to understand the interrelationships and causality between the studied economic variables. The study first ensures that the variables are stationary at the first difference (I(1)). Second determines the lag selection criteria. The third ensures variable is co-integrated or not and then the VAR model is used for analysis to capture short-term relationship. The study specifically employs VAR model. This methodology allows for a thorough examination of the dynamic relationships between these macroeconomic variables.

### Data Presentation and Analysis

Academics have been debating the economic effects of changes in the flow of remittances. Many studies have found a connection between changes in remittance inflows and changes in security prices. The table 1 presents the results indicate that the lag order selected based on the AIC, SC, and HQ criteria is 1, as indicated by the asterisks. The LogL values show an improvement with increasing lags, but the LR statistic suggests that further increases in lag beyond 1 do not significantly enhance the model. The FPE values decrease slightly with higher lags, indicating a better fit, but the AIC, SC, and HQ criteria suggest that lag 1 provides the optimal model based on these criteria.

**Table 1:**

VAR Lag Order Selection Criteria for Remit to Index

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-4573.14	NA	2.02e+17	45.52377	45.55664	45.53707
1	-3675.12	1769.23	2.77e+13	36.62804	36.72665*	36.667*
2	-3669.59	10.77912	2.73e+13	36.61285	36.77719	36.67935
3	-3664.72	9.412345	2.70e+13	36.60413	36.83421	36.69723

Notes: \* Indicates Lag order selected by the criterion

Source: Author Calculation by using Eviews-10



Table 2 exhibits a linear deterministic trend, indicating a constant rate of change over time for the variables. The focus is on the variables INDEX and Remit, which are likely related to financial or economic data, with analysis conducted on their first differences over a lag interval of 1 to 3 periods. Co-integration analysis is performed using the Trace and Max-Eigen Value tests, where the null hypothesis ( $H_0$ ) assumes no co-integrating equations. The results suggest at most 1 co-integrating equation for each variable, with eigenvalues of 0.03 and 0.01, indicating weak co-integrating relationships. The trace statistics (9.33 and 2.51) are compared to critical values at the 5% level (15.49 and 3.84), and since the null hypothesis is not rejected, the analysis concludes no long-term relationship or equilibrium between INDEX and Remit, supporting the use of a VAR model.

**Table 2:**

Trace and Max-Eigen Value Tests of Remit to Index

Lags interval (in first differences): 1 to 3				
Hypothesized No. of CE(s)	Trace Values		Max-Eigen Values	
	None	At most 1	None	At most 1
Eigen value	0.03253	0.012134	0.032526	0.012134
Trace Statistic	9.32672	2.514905	6.811819	2.514905
0.05 Critical Value	15.4947	3.841466	14.2646	3.841466
Prob.**	0.336	0.1128	0.5116	0.1128

*Trace and Max test indicated co-integration at the 0.05 level*

*Note: \* denotes rejection of the hypothesis at the 0.05 level*

*Source: Author Calculation by using Eviews-10*

Table 3 shows the vector auto-regression results for remittances and the Nepalese stock index, indicating that remittances have no short-term influence on the index. The t-values associated with the lagged coefficients indicate that remittances do not have a short-term influence on the movement of Nepalese index. Instead, the Nepalese stock market is primarily influenced by its own past values. The t-values reveal statistical significance for LINDEX(-1) and LREMIT(-1), but not for lagged remittance variables in influencing the index. The constant terms for both variables are 0.033510 for LINDEX and 0.332720 for LREMIT. The R-squared values are 0.985708 for LINDEX and 0.963574 for LREMIT, suggesting that the model explains most of the variance in LINDEX but less in LREMIT. Overall, the analysis concludes that there is no significant relationship between remittances and the stock index in the short run.

**Table 3:**

Results of VAR Estimation of INDEX and REMIT

Variables	LINDEX	LREMIT
LINDEX(-1)	1.123912 (0.07049) [ 15.9450]	0.174487 (0.13231) [ 1.31878]
LINDEX(-2)	-0.058235	-0.475343

	(0.10584)	(0.19867)
	[-0.55022]	[-2.39263]
LINDEX(-3)	-0.082432	0.307109
	(0.07035)	(0.13205)
	[-1.17172]	[ 2.32562]
LREMIT(-1)	0.058281	0.680659
	(0.03468)	(0.06510)
	[ 1.68049]	[ 10.4557]
LREMIT(-2)	-0.061902	-0.083687
	(0.04316)	(0.08102)
	[-1.43415]	[-1.03292]
LREMIT(-3)	0.011927	0.368493
	(0.03476)	(0.06524)
	[ 0.34316]	[ 5.64827]
C	0.033510	0.332720
	(0.07426)	(0.13940)
	[ 0.45124]	[ 2.38686]

Source: Author Calculation by using Eviews-10

Table 4 exhibits the Wald test results for remit and stock market performance. The dependent variables in this study are the Nepalese Stock Index and Remittances, while the three lagged values of Remittances serve as the independent variables. The system equation model is employed to assess whether these variables, when considered collectively, have the potential to influence the dependent variables. The hypotheses for this evaluation are as H0: The lagged values (4, 5, 6) of Remittances do not jointly have a cause on the Index and H1: The lagged values (4, 5, 6) of Remittances can jointly have a cause on the Index. H0:  $C(4)=C(5)=C(6)=0$ .

**Table 4:**

Wald Test Results for Remit on the Stock Market Performance

Test Statistic	Value	Df	Probability
Chi-square	3.61798	3	0.3058

Source: Author Calculation by using E-views-10

The table 4 shows that the p-value is greater than the significance level of 5% for the chi-square value. As a result, it fails to reject the alternative hypothesis and accept the alternative hypothesis. This indicates that the lagged values (4, 5, 6) of Remittances do not collectively cause or have an influence on the Nepalese Stock Market Price Index at a 5% significance level.

Table 5 exhibits the Pairwise Granger Causality Test. It investigates whether variables have the ability to collectively cause the dependent variables. The hypotheses for this test are as follows: H0: Remit does not have a causal relationship with the Index. H1: Index has a causal relationship with Remit.

**Table 5:**

Pairwise Granger Causality Tests of Remit on the Stock Market Performance

Null Hypothesis:	Obs	F-Statistic	Prob.
LREMIT does not Granger Cause LINDEX	207	1.20599	0.3087
LINDEX does not Granger Basis LREMIT		2.12880	0.0978

*Source: Author calculation by using Eviews-10*

Table 5 exhibits that both p-value which is higher than five percent level of significant of F-Statistics. Based on the table, since the probability value (0.3087) is higher than the typical significance level of 0.05, it fails to reject the null hypothesis. This suggests that there is no evidence to support the claim that LREMIT Granger causes LINDEX. It means Remit does not have causality on the Index. For the Index to Remit, the probability value (0.0978) is marginally higher than the significance level of 0.05, but it is still relatively close. In this case, it depends on the predetermined significance level (alpha) chosen by the researcher. If alpha is set at 0.05, it would fail to reject the null hypothesis. However, if alpha is set at a higher value (e.g., 0.10), it may have enough evidence to reject the null hypothesis and conclude that LINDEX Granger causes LREMIT. In summary, researcher concluded Remit does not have cause with Index but Index has cause to influence to the Remit.

Table 6 shows Variance Decomposition of Index and Remit. Variance decomposition helps to understand the relationship between variables in the long run and short run.

**Table 6:**

Variance Decomposition of Remit and Stock Market Performance

Variance Decomposition of INDEX				Variance Decomposition of REMIT		
Period	S.E.	LINDEX	LEXR	S.E.	LINDEX	LREMIT
1	0.07772	100	0	0.145887	0.077201	99.9228
2	0.11705	99.47279	0.527212	0.176784	0.42594	99.57406
3	0.15042	99.50477	0.49523	0.186228	0.953164	99.04684
4	0.1769	99.54507	0.454926	0.203573	1.20892	98.79108
5	0.19954	99.50059	0.499414	0.221709	1.082305	98.91769
6	0.21928	99.44087	0.559128	0.23398	1.062415	98.93758
7	0.23663	99.394	0.605995	0.245201	1.08865	98.91135
8	0.2521	99.33844	0.661557	0.256627	1.060214	98.93979
9	0.26612	99.27282	0.727183	0.26682	1.024154	98.97585
10	0.27889	99.20531	0.794685	0.275928	0.997932	99.00207

*Source: Author Calculation by using Eviews-10*

Table 6 demonstrates the distribution of fluctuations in the index over the short run and long run periods. In the short run, specifically in the third month, an impulse or shock to the index accounts for 99.50% of the variation in index fluctuation (own shock). Remittances, on the other hand, contribute only 0.5% to the index fluctuation. Thus, the total fluctuation amounts to 100%. In the short run, the index is primarily influenced by its own lag value, which is highly significant. The influence of remittances is minimal and statistically insignificant. In the long



run, specifically over a period of ten months, an impulse or shock to the index accounts for 99.21% of the variation in index fluctuation (own shock). Remittances contribute only 0.80% to the index fluctuation. Consequently, in the long run, the index is primarily influenced by its own lag value, which is highly significant. The influence of remittances on the index is minimal and statistically insignificant. As well as Index to remittance is also same direction.

The major findings included that the lag order selected based on AIC, SC, and HQ criteria is 1, indicating that further increases in lag do not significantly improve the model. Co-integration analysis shows no long-term relationship between remittances and the stock index, as the null hypothesis of no co-integration is not rejected. The VAR estimation reveals that remittances have no short-term influence on the stock index, with the index mainly influenced by its own past values.

The Wald test results indicate that lagged values of remittances do not collectively influence the Nepalese stock market at a 5% significance level. The Granger causality test suggests that remittances do not cause the stock index, but the stock index may have a marginal influence on remittances. Variance decomposition analysis shows that the stock index is primarily influenced by its own past values, with remittances contributing only a small, statistically insignificant amount to the index fluctuations in both the short and long run.

## Discussions

The previous studies provide varied findings on the relationship between remittances and stock market performance, the current study contributes to this debate by demonstrating that, in the case of Nepal, remittance inflows do not exhibit a significant short-term effect on the stock market, challenging some earlier studies that found a more pronounced relationship. The current study's findings align with some previous research while contradicting others in terms of the relationship between remittance inflows and stock market performance. Previous studies consistently suggest that remittances increase liquidity and reduce volatility in stock markets, especially in developing economies like Nepal. For instance, Thapa (2025) found a positive long-term relationship between remittances and the stock market, echoing findings by Azizi (2020), who argued that remittances lead to increased domestic credit and market depth. Similarly, Ho (2019) emphasized remittances' contribution to market liquidity, which aligns with the current study's focus on stock market fluctuations. Both the current and past studies acknowledge the stabilizing effect of remittances, particularly during periods of economic downturns. Billmeier and Massa (2007) highlighted this countercyclical role, a view supported by Shrestha and Bhatta (2018) regarding the stabilizing impact on the Nepalese stock market. This aligns with the assertion in the current study that remittances may contribute to reducing market volatility, even if their statistical influence is weak in the short term.

While previous studies, such as those by Billmeier and Massa (2007) and Hosseini et al. (2011), found that remittances have a direct and often substantial short-term effect on stock market performance, the current study contradicts this finding. The VAR results in the current study show that remittances have no short-term influence on the Nepalese stock market, with the stock index being primarily driven by its own past values Index. Previous studies like Thapa

(2025) and Shrestha and Bhatta (2018) concluded that remittances have a long-term positive impact on the stock market by increasing savings and investment. In contrast, the current study's co-integration analysis failed to establish a long-term relationship between remittances and the stock index. The lack of significant co-integration between the two variables, as indicated by weak eigenvalues and high p-values in the Trace and Max-Eigen Value tests, challenges the assumption that remittances can foster long-term stock market growth. Studies like Anh (2015) and Thapa (2023b) suggested a bidirectional causality between remittances and stock market development. However, the current study's Granger causality test finds no causal relationship from remittances to the stock index. Instead, it finds that the stock index may influence remittances, suggesting that the causal link operates in the opposite direction, a finding that contradicts prior studies' assertions of remittances driving market growth.

### **Conclusion**

This study explored the impact of remittance inflows on the Nepalese stock market, addressing a significant gap in the existing literature. Through a detailed econometric analysis using VAR models, co-integration tests, and Granger causality tests, the research sought to determine both the short-term and long-term relationships between remittances and stock market performance. Contrary to previous research that emphasized the positive short-term effects of remittances on stock market liquidity and volatility, this study found no significant short-term influence of remittances on the Nepalese stock market. The stock market index is predominantly driven by its own past values, with remittances contributing only marginally to its fluctuations. The co-integration analysis failed to establish a long-term equilibrium relationship between remittances and the stock market. This contradicts earlier studies which argued that remittances could contribute to long-term stock market growth by increasing household savings and investment. The Granger causality tests revealed that remittances do not cause movements in the stock market index. Instead, the stock index appears to have a marginal influence on remittances, challenging prior research that suggested a bidirectional causality between the two variables. These results suggest that remittances, while contributing to economic stability and liquidity, do not play a significant role in driving stock market growth in Nepal. Policymakers should prioritize improving financial infrastructure, investor confidence, and market depth to attach the potential of remittances for capital market development. Overall, the study provides valuable insights into the limited role of remittances in influencing the stock market in emerging economies like Nepal, offering a fresh perspective on the relationship between these two critical economic variables.

## References

- Anh, P. T. H. (2015). Impact of remittances on financial development in Vietnam. *Journal of Economics Development*, 22(3), 46–58. <https://doi.org/10.24311/jed/2015.22.3.02>
- Aremo, A. G., Olabisi, O. E., & Adeboye, O. O. (2020). Effects of Selected Macroeconomic Variables on Stock Market Returns in Nigeria. *Asian Journal of Economics, Business and Accounting*, August 2020, 56–70. <https://doi.org/10.9734/ajebe/2020/v16i330242>
- Azizi, S. S. (2020). Impacts of remittances on financial development. *Journal of Economic Studies*, 47(3), 467–477. <https://doi.org/10.1108/JES-01-2019-0045>
- Billmeier, A., & Massa, I. (2007). What drives stock market development in the middle east and central Asia: Institutions, remittances, or natural resources? *IMF Working Papers*, 07(157), 1. <https://doi.org/10.5089/9781451867213.001>
- Friedman, M. (1957). A Theory of the Consumption Function. *Princeton University Press*, I, 20–37. <http://www.nber.org/books/frie57-1>
- Gunzberg, J. (2008). Modern Portfolio Theory. *Encyclopedia of Alternative Investments*, 300–301. <https://doi.org/10.2143/ast.19.3.2014899>
- Ho, S. Y. (2019). The macroeconomic determinants of stock market development in Malaysia: An empirical analysis. *Global Business and Economics Review*, 21(2), 174–193. <https://doi.org/10.1504/gber.2019.098083>
- Hosseini, S., Ahmad, Z., & Lai, Y. (2011). *The role of macroeconomic variables on stock market index in China and India*. <https://doi.org/10.5539/ijef.v3n6p233>
- Hsing, Y. J. of E. and D. (2014). Impacts of macroeconomic Factors on the Stock Market in Estonia. *Journal of Economics and Development*, 2(2), 23–31.
- Issahaku, H., Abor, J. Y., & Harvey, S. K. (2017). Remittances, banks and stock markets: Panel evidence from developing countries. *Research in International Business and Finance*, 42, 1413–1427. <https://doi.org/10.1016/J.RIBAF.2017.07.080>
- Lingaraja, K., Selvam, M., Ramanujam, V., Oli, S. M., & Kathiravan, C. (2020). Stock market movements and linkages between emerging markets in Asia and developed market indices: Short run and long run analysis. *Journal of Critical Reviews*, 7(7), 616–629. <https://doi.org/10.31838/jcr.07.07.111>
- Robert M. Solow, A Contribution to the Theory of Economic Growth, *The Quarterly Journal of Economics*, Volume 70, Issue 1, February 1956, Pages 65–94, <https://doi.org/10.2307/1884513>
- Shrestha, M. B., & Bhatta, G. R. (2018). Selecting appropriate methodological framework for time series data analysis. *Journal of Finance and Data Science*, 4(2), 71–89. <https://doi.org/10.1016/j.jfds.2017.11.001>
- Thapa, K. B. (2019). Influencing factors of stock price in Nepal. *NCC Journal*, 4(1), 113–120. <https://doi.org/10.3126/nccj.v4i1.24744>
- Thapa, K. B. (2023a). Examining the Impact of GDP on the Nepalese Stock Market: Insights from Co-integration and Granger Causality Tests. *Pravaha*, 29(1), 192–199. <https://doi.org/10.3126/pravaha.v29i1.71419>
- Thapa, K. B. (2023b). Macroeconomic Determinants of the Stock Market in Nepal: An Empirical Analysis. *NCC Journal*, 8(1), 65–73. <https://doi.org/10.3126/nccj.v8i1.63087>
- Thapa, K. B. (2025). *Macroeconomic Determinants of Stock Index in the Nepalese Capital Market* (Issue March). Tribhuvan University.