**Library Progress International**
*Vol.44 No. 3, Jul-Dec 2024: P. 15371-15375*

*Print version ISSN 0970 1052*
*Online version ISSN 2320 317X*

*Original Article*

*Available online at www.bpasjournals.com*

# Influence Of Agricultural Sector On EconomicGrowth Of Bimstec Countries

**[1]Dr. D. Janis Bibiyana, [2]Dr. K.Srinivasan, [3*]Dr.S.Kannamudaiyar**

[1]Associate Professor, Department of Commerce, Faculty of Science and Technology, SRM Institute of Science and Technology, Ramapuram, Chennai. Email id: janisbibi@gmail.com
[2]Assistant Professor, Department of Commerce, Faculty of Science and Technology, SRM Institute of Science and Technology, Ramapuram, Chennai.
Email id: srinivak7@srmist.edu.in
[3]Assistant Professor, Department of Commerce, Faculty of Science and Technology, SRM Institute of Science and Technology, Ramapuram, Chennai. Email id: kannamus@srmist.edu.in
[*]***Corresponding Author:*** **Dr.S.Kannamudaiyar**

**How to cite this article:** D. Janis Bibiyana, K.Srinivasan, S.Kannamudaiyar (2024) Influence Of Agricultural Sector On Economic Growth Of Bimstec Countries. *Library Progress International,* 44(3), 15371-15375

## 1. Abstract

*Globally Agriculture sector is a back-bone for Indian economy. It allows for economic expansion, increased revenues, and the fulfillment of food demand.Here, the present study has undergone the relationship between the Agricultural productivity and the economy growth of BIMSTEC countries. The BIMSTEC member countries consist of 7 nations namely, Bangladesh, Bhutan, India, Srilanka, Myanmar, Nepal and Thailand. From the analysis, Bhutan and Nepal had better performance on economy. Because, in those countries maximum number of peoples are involving in various agriculture & allied activities and making the economy growth. Through this unemployment rate, GDP, National Income and Exchange Rate are raising. Thefinding of the study shows that agricultural sector is significant and has a greater influence in the economy growth of GDP, National Income and Exchange Rate. So the study insight to increase the production on the agricultural sector and to have amaximum growth on economy.*

***Keywords: BIMSTEC, GDP, National Income, Exchange Rate***

## Introduction

Agricultural development is one of the most powerful tools to end poverty and to boost prosperity in all countries. The sector has two to four times more effective in raising incomes among the poorest compared to other sectors. If agriculture sector stimulates the economic growth, then that is an opportunity for agricultural production which has a positive spillover on their overall growth. BIMSTEC Countries is one among the other developed countries in agricultural production. The Bay of Bengal

Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional multilateral organisation. Its members lies in the littoral and adjacent areas of the Bay of Bengal constituting a contiguous regional unity. BIMSTEC has also created a forum for SAARC and ASEAN countries to collaborate intra-regionally. With a total gross domestic output (GDP) of 2.7 trillion economies, the BIMSTEC area is home to roughly 1.5 billion people, or around 22% of the global population. Despite the global financial crisis, BIMSTEC Member States have been able to maintain an average economic growth rate of 6.5 percent over the last five years. The abundance of natural and human resources in BIMSTEC countries can provide their countries with a significant absolute advantage if these resources are utilised effectively.

BIMSTEC countries have a variety of agricultural policies in place, including land reforms to boost agricultural production and resource subsidies to promote and support both small and large-scale farmers. Irrigation systems and smart agriculture have recently been used in order to strengthen the agriculture industry and boost the country's economic prosperity. Employment possibilities are established in this industry, and GDP, national income, exchange rate, and agriculture production output are all increased.

## Review of Literature

**Bakari and Mabrouki** (2018)Between 1982 and 2016, researchers looked at

the link between agricultural trade and economic growth in four North African nations. For the variables of GDP, gross fixed capital formation, agricultural exports, and agricultural imports, they utilised a fixed and random effect model. They discovered that agricultural trade has a positive relationship with GDP, and they accepted the fixed- effect model with the

Hausman test, indicating that all exogenous variables have a positive impact on economic growth, with the exception of agricultural imports, which had a significant sign, implying that an increase of 1% in agricultural exports could raise GDP by 0.21 percent. They also stated that in order to address the gap, the agricultural sector must be encouraged to expand and invest.

Salah Eddine Sari Hassoun (2019) The agricultural sector is vital to the growth of any economy throughout the world; it provides for economic expansion, higher revenue, and the provision of food. From 1975 to 2014, we explored the relationship between agriculture value added (LNADA), food production index (LNFPI), and economic development (LNGDP) in eight MENA countries using a panel econometric approach and panel Granger causality. Using pooled least squares with fixed-effects, FMOLS, and DOLS models, we discovered that agriculture value added has a positive impact on economic growth, and that there is bidirectional causality between LNGDP and LNADA and LNADA and LNFPI, as well as unidirectional causality running from LNFPI to LNGDP.

**Statement of Problem**

Agriculture sector plays a vital role in the Indian economy for the growth and welfare of sustainable development in the BIMSTEC countries. Many countries are suffering from climate change, Natural disasters, bio-diversity loss, Soil erosion in the world. Growth of GDP, National Income, Unemployment rate, Exchange rate are originating from agricultural and allied activities. BIMSTEC member countries are sharply decreasing by 2% during this pandemic situation and heavy rainfall, Thus this cause deteriorate the overall economic growth and touched 6.4 percent decline of agricultural production. Hence, effect of agricultural production is less and thee agricultural products reaches the maximum, which affects the economy as a whole for BIMSTEC countries. Hence, the study attempts to evaluate the effect of agricultural productivity on economic growth of BIMSTEC countries.

**Objectives**

- To examine the co-integration between agricultural productivity and economic factors of BIMSTEC member countries.
- To evaluate the effect of agricultural productivity and economic factors of BIMSTEC member countries.

**Data and Methodology**

The study is analytical in nature. The aim of the research was to investigate the impact of Agricultural productivity on BIMSTEC countries. The BIMSTEC countries are India, Srilanka, Bangladesh, Bhutan, Nepal, Thailand and Myanmar The researcher selected the period of study from 2016- 2020. To study the effect of Agricultural sector on economic growth , the researcher used economic variables like GDP, National Income and Exchange Rate. The sources of data were collected from the world bank website.

**ANALYSIS AND INTERPRETATION**

H0: There is no significant relationship exists between Agricultural Production and Economic Factors.

| **Countries** | **GDP** | | **National Income** | | **Exchange Rate** | |
|---|---|---|---|---|---|---|
| **Variable** | **r** | **Sig.** | **r** | **Sig.** | **r** | **Sig.** |
| **Bangladesh** | -.596 | .289 | .999 | .000 | .846 | .041 |
| **Bhutan** | -.824 | .004 | .926 | .024 | .703 | .186 |
| **India** | -.736 | .044 | .873 | .049 | .696 | .191 |
| **Srilanka** | -.222 | .719 | .288 | .638 | -.318 | .002 |
| **Myanmar** | -.359 | .051 | .233 | .706 | .764 | .133 |
| **Nepal** | -.058 | .026 | .869 | .048 | .620 | .004 |
| **Thailand** | -.447 | .450 | .871 | .054 | -.863 | .046 |

**Source: World Bank data**

**Bangladesh:** The table shows a significant relationship between agricultural production and two economic factors: National Income and Exchange Rate. However, GDP has a value of 0.289, which is greater than the significance threshold of 0.05, indicating no relationship between GDP and agricultural production. Therefore, the null hypothesis is accepted.

**Bhutan:** The table indicates that both GDP and National Income have a significant relationship with agricultural production. However, the Exchange Rate has a value of 0.186, which exceeds 0.05, showing no significant relationship. Thus, the null hypothesis is accepted.
**India:** GDP and National Income significantly impact agricultural production, but the Exchange Rate has a value of 0.191, which is higher than the significance level of 0.05, showing no relationship. Therefore, the null hypothesis is accepted.
**Sri Lanka:** The Exchange Rate significantly affects agricultural production, but GDP (0.719) and National Income (0.638) are above the 0.05 significance threshold, indicating no relationship. As a result, the null hypothesis is accepted.
**Myanmar:** GDP significantly impacts agricultural production, but National Income (0.706) and the Exchange Rate (0.133) do not, as their values exceed 0.05. Therefore, the null hypothesis is accepted.
**Nepal:** All economic factors—GDP, National Income, and Exchange Rate—are below the significance level of 0.05, indicating a strong relationship with agricultural production. Hence, the null hypothesis is rejected.
**Thailand:** National Income and the Exchange Rate significantly affect agricultural production, but GDP, with a value of 0.450, shows no relationship since it exceeds the threshold. Therefore, the null hypothesis is accepted.

**MULTIPLE REGRESSION ANALYSIS**

| COUNTRIES | R | R Square | Std.Error | Durbin Watson | F | Sig |
|---|---|---|---|---|---|---|
| **Bangladesh** | 1.000 | 1.000 | 0.7102 | 3.486 | 4.54 | 0.001 |
| **Bhutan** | 0.968 | 0.937 | 24.753 | 3.323 | 4.93 | 0.317 |
| **India** | 0.885 | 0.783 | 41.523 | 3.450 | 1.20 | 0.001 |
| **Srilanka** | 0.932 | 0.869 | 27.798 | 3.082 | 2.22 | 0.450 |
| **Myanmar** | 0.985 | 0.971 | 3.7764 | 3.221 | 11.012 | 0.504 |
| **Nepal** | 0.913 | 0.834 | 47.388 | 2.607 | 1.671 | 0.019 |
| **Thailand** | 0.993 | 0.986 | 9.2012 | 3.554 | 23.81 | 0.000 |

**Source: World Bank data**
**Dependent Variable: Agricultural Production**
**Independent Variable: GDP, National Income, and Exchange Rate**

The above table describes the impact of agricultural production on economic factor using multiple regression analysis. The table depicts the R square value of BIMSTEC countries is 1.00, 0.93, 0.78, 0.86, 0.97, 0.83 and 0.98; which indicates that 100, 93, 78, 86, 97, 83 and 98 percent variation in agricultural production on economic factor of BIMSTEC member countries.
The P value of F-statistic of Bangladesh, India, Nepal and Thailand is less than significant value 0.05. So the null hypothesis is rejected and there is a significant impact on agricultural production. And P value of F-statistic of Bhutan, Srilanka and Myanmar is more than significant value 0.05. So the null hypothesis is accepted and there is a no significant impact on agricultural production on economic factors of BIMSTEC member countries.

**SUGGESTIONS**

- Among the BIMSTEC member countries, Bhutan and Nepal had better performance on economy, because in both the country maximum number of peoples are involving in agriculture and making the growth on economy.
- Srilanka and Myanmar need to improve their country's agriculture sector by implementing policies like establishing long-term sustainable development mechanism of agriculture and enhancing agricultural supporting and protection system for farmers, so that both country can give their level of growth among the other countries.

**CONCLUSION**

Globally Agriculture sector is a back-bone of economy. In BIMSTEC member countries also the agriculture sector plays a

vital role on their economy growth. As a large amount of farm inputs, such as machinery and pesticides are imported, so that exchange rates and GDP will affect those growth. From this study it is clear that agricultural sector on BIMSTEC member countries has an impact on Economic growth. The finding of the study shows that agricultural sector are significant and has a greater influence in the economy growth of GDP, National Income and Exchange Rate. So the study insight to increase the production on the agricultural sector and to have a maximum growth on economy.

**REFERENCES**


1. Salah Eddine Sari Hassoun (2019),The Impact of economy, Energy and Environment factors on HDI in MENA Countries in Journal of Financial, Accounting and Managerial studies.
2. Bakari and Mabrouki (2018), The Impact of Agricultural Trade on Economic Growth in North Africa in MPRA Jouurnal.
3. Kumar, M. A., & Gopalsamy, S. (2019). Agricultural sector FDI and economic growth in SAARC countries. *International Journal of Recent Technology and Engineering*, *8*, 116-121.
4. Banik, N. (2006). How promising is BIMSTEC?. *Economic and Political Weekly*, 5264-5268.
5. Janet, G. S., & Bibiyana, D. J. (2021). A study on consumers satisfaction and service quality towards hotel industry in Tirunelveli City. Annals of the Romanian Society for Cell Biology, 17808-17811.
6. Bibiyana, D. J., & Srinivasan, K. (2024). THE APPLICATION OF VIRTUAL REALITY MARKETING STRATEGY ON TOURISM: A CONCEPTUALIZED INVESTIGATION. Journal of Philanthropy and Marketing, 4(2), 111-119.
7. Devi, K., Bibiyana, D. J., Sampath, K., & Nawazkhan, M. (2024, February). Deciphering the Indian Start-up Landscape: A Spot-light on Chennai's Ecosystem. In Proceedings of the 3rd International Conference on Reinventing Business Practices, Start-Ups and Sustainability (ICRBSS 2023) (Vol. 277, p. 43). Springer Nature.
8. Bibiyana, D. J., Punitha, K., & Meeya, N. (2023). SOCIAL INTELLIGENCE OF BANK EMPLOYEES (A COMPARATIVE STUDY BETWEEN PRIVATE AND PUBLIC BANKS) WITH SPECIAL REFERENCE TO TRICHIRAPPALLI DISTRICT. International Journal of Interdisciplinary Organizational Studies, 18(1).
9. Kovarthini, M., Balakrishnan, S., Kumar, B. P., Laxman, P., Devika, S. S., & Mishra, M. K. (2024). Teacher Training and Its Long-Term Effects on Student Success in Higher Education. Library Progress International, 44(3), 3210-3215.
10. SEKAR, S., BALAKRISHNAN, S., SOUNDARRAJ, P. L., KANNAN, P., MISHRA, A., DHANASEKARAN, P., & MISHRA, I. (2023). Assessing the Impact of Agrotourism Initiatives on Rural Development and Community-based Agricultural Management. Journal of Environment & Bio-sciences, 37(2).
11. Goswami, I., Balakrishnan, S., Vinotha, C., Chopra, R., Sivakumar, V., & Chetan, D. M. (2023). Gender And Politics: Examining Women's Representation And Empowerment. Journal of Namibian Studies: History Politics Culture, 33, 1980-1994.
12. Mahalakshmi, M., Kalpana, M. S., Balakrishnan, M. S., Lalpriya, M. L., & Kowsalyadevi, M. G. (2022). Perception of garment exporters on letter of credit in tirupur city. International Journal of Early Childhood, 14(03), 2022.
13. Saranya, R., Suryakumar, M., Sharma, A., Karthika, M., & Gopinathan, R. (2022). A STUDY ON EMPLOYER BRANDING FOR HOSPITALS WITH REFERENCE TO COIMBATORE. Journal of Pharmaceutical Negative Results, 1401-1408.
14. Balakrishnan, S., Punithavalli, R., Padmapriya, G., Priya, Y., Gnanaselvi, G., & Manopriya, V. (2024). Empowering Women Entrepreneurs: Catalysts for Sustainable Business Growth. Telematique, 23(01), 492-496.
15. Moorthy, K. S., Balakrishnan, G., Kumar, S. S., Raja, L., & Vijayalakshmi, A. (2024). Embracing Circular Economy Principles for Sustainable Green Supply Chain Management in Manufacturing Industries. In Convergence of Human Resources Technologies and Industry 5.0 (pp. 85-110). IGI Global.
16. Maheswari, P., Vinodhini, R., & Vijayan, S. (2022, August). Analysis of supply chain management in BOP markets. In *AIP Conference Proceedings* (Vol. 2460, No. 1). AIP Publishing.
17. Nithya, C., & Maheswari, P. A study on central depository services (india) limited. *Turkish Journal of Physiotherapy and Rehabilitation*, *32*(3).
18. Sahila, C., & Nithya, C. A Study on Role of Entrepreneurship in Regional Development. *The Journal of Oriental Research Madras*.
19. Ramkumar, M. G., & Srinivasan, C. (2022). FMCG Consumers' Psychology Towards Goods and Services Tax Rates in India. *Journal of Positive School Psychology*, *6*(3), 9381-9387.
20. Choudary, D. Y. L., & Chitra, S. (2012). Women Empowerment Thorough Self Help Groups A Case Study of Kancheepuram District In Tamilnadu. *International journal of management (IJM)*, *3*(2), 309-318.
21. Vengatesan, G., & Sudarshan, M. R. (2017). Usage of WhatsApp among college students in Coimbatore city.
22. Joshi, S., Balakrishnan, S., Rawat, P., Deshpande, D., Chakravarthi, M. K., & Verma, D. (2022, December). A Framework of Internet of Things (Iot) for the Manufacturing and Image Classification System. In *2022 11th*

*International Conference on System Modeling & Advancement in Research Trends (SMART)* (pp. 371-375). IEEE.

23. Kamalaveni, M., Ramesh, S., & Vetrivel, T. (2019). A review of literature on employee retention. *International Journal of Innovative Research in Management Studies (IJIRMS)*, *4*(4), 1-10.
24. Anjani, P. K., & Dhanapal, D. (2012). IMPACT OF EMPLOYEE COMMITMENT ON READINESS FOR CHANGE IN BANKING SECTOR IN SALEM DISTRICT. *Global Management Review*, *6*(3).
25. Kumar Arora, T., Kumar Chaubey, P., Shree Raman, M., Kumar, B., Nagesh, Y., Anjani, P. K., ... & Debtera, B. (2022). Optimal facial feature based emotional recognition using deep learning algorithm. Computational Intelligence and Neuroscience, 2022(1), 8379202.
26. Kamalaveni, M. S., Megala, A., Venkatesan, G., & Sumsudeen, K. S. JOB STRESS AND ITS IMPACT ON THE WORK PERFORMANCE OF WOMEN EMPLOYEES IN IT COMPANIES WITH SPECIAL REFERENCE TO CHENNAI.
27. Balakrishnan, S., & Vidya, B. (2024). Unveiling the Role of ChatGPT in Higher Education: A Qualitative Inquiry into its Implementation among Teaching Faculties in Chennai, India. *Multidisciplinary Science Journal*, (Accepted Articles).
28. Santhini, M. S., Bharathi, M. R. J., & Priya, G. M. (2012). A Study on Customers Satisfaction towards Selective Sony Products with Special Reference to Coimbatore City. *IOSR Journal of Business and Management (IOSRJBM) e-ISSN*, 28-32.
29. Chaudhary, J. K., Kapila, D., Hasan, D. S., Shafeeq, M., & Vishwakarma, S. K. (2023, November). A Novel credit card fraud detection feature selection system using machine learning. In *Proceedings of the 5th International Conference on Information Management & Machine Intelligence* (pp. 1-5
30. Chellasamy, P., & Kannamudaiyar, S. (2022). Factor influencing the particularly vulnerable tribal groups livelihood towards tribal co-operative marketing development federation: A study with reference to Nilgiris District. International Journal of Health Sciences, (II), 10886-10892.
31. Kannamudaiyar, S., & Chellasamy, P. Impact of Trifed on Livelihood Security of Tribal Households: A Special Reference to Nilgiris District, Tamilnadu.