

The Review of Rural Economic Development in Developing Countries

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Abstract: The rural economic development plays a significant role in the overall economic development of developing countries or regions. The purpose of this paper is to illuminate the main issues encountered in the process of the rural economic development and countermeasures. On this basis, a complete and clear framework is intended to be established for subsequent research and development in this area of the rural economy. During this study, the major existing issues in rural economic development will be firstly integrated and summarised in the methodology of literature review, and then the current circumstances and corresponding strategies of selected countries or regions will be analysed specifically in the methodology of case studies. The results and findings of this research indicate that the methods of improving road infrastructure as well as social infrastructure, enhancing UAVs application and land productivity, and optimizing capability of getting access to financial resources are beneficial for the rural economic development in developing countries.

Keywords: Rural economy, Developing countries, Infrastructure, Agricultural productivity, financial inclusion.

1. Introduction

The rural economy could be regarded as a significant component of the overall economic system. This research aims to generalize the development of the rural economy and further address the issues and challenges encountered in the development process through a case study methodology that integrates relevant literature.

The structure of this paper will be divided into two parts. In the next chapter, it will concentrate on analysing the multifaceted obstacles during the development of the rural economy in developing countries from the perspectives of inadequate infrastructure, low agricultural productivity, and backward financial inclusion. Then, the second part will provide the corresponding strategies to abovementioned issues.

The applied value of this paper is to provide a viable platform for subsequent research on the topic of the rural economy, which intends to help better understand the current circumstance of the rural economy and the corresponding issues. It also could be advantageous that more strategies can be proposed to enhance the rural economic development.

2. Current issue of Rural Economic Development

The current circumstance of the rural economy in developing countries is confronting multifaceted potential challenges and difficulties.

2.1. Inadequate Infrastructure

Inadequate fundamental infrastructure significantly hampers the progress of the rural economic development. The key factors of the rural economy's explosive expansion are accessibility and the provision of necessary infrastructure [1]. Another research based on Indonesia also proved that the limited availability of fundamental services and insufficient infrastructure growth could be regarded as the inducements of the rural poverty [2]. For instance, the isolation due to the insufficient transportation infrastructure has a profound negative impact on rural economic development and rural poverty [3]. As a basis of the above perspective for further concentrating on the construction of road system, poor road connectivity is the critical challenge of the rural economic development. The road connectivity can be considered as an essential indicator for measuring economic growth [4], while particularly good road infrastructure can lead to the subsequent construction of amenities like electric power technologies and communication technology in rural regions [1].

Inadequate social infrastructure is also a major obstacle to rural economic development. Insufficient education infrastructure in rural regions impedes economic growth. Possible education obstacles in rural development include lower literacy rates than urban regions, gender inequality, and inadequate educational resources (e.g., insufficient human resources like teachers; lacking textbooks) [5]. Likewise, Naufal et al. [2] also proved the significant negative correlation between education infrastructure and rural poverty. It indicates that the universalization and establishment of educational infrastructure is conducive to rural economic development. Additionally, health barriers such as restricted medical facilities and malnutrition phenomenon are also detrimental to rural development [5].

2.2. Low Agricultural Productivity

Low agricultural productivity also significantly influences the rural economic development in developing countries. The rural growth is strongly related to agricultural development [5]. The agricultural industry is vital to growth, particularly in developing nations, as it contributes to a sizable proportion of the labour force and aggregate revenue [6]. However, factors like backward irrigation technology and inefficient management are unfavourable to agricultural productivity [5]. Moreover, a low rate of prevalence of skilled labours participating in rural economic events is also an obstacle [5]. Therefore, promoting agricultural extension projects, such as facilitating technology transition, encouraging rural adult education, and assisting rural populations in engaging with agricultural knowledge and information systems, is advantageous for rural poverty alleviation [7]. Nevertheless, in terms of the conditions in African developing countries, the agricultural sector is regarded as a critical source of income across Africa, which contributes approximately 15% of GDP on average, with more than 65% of the labour force employed in this sector (African agricultural sector is also predominated by smallholder farmers) [8]. The abovementioned scenario indicates the necessity of agricultural productivity enhancements for economic development and poverty alleviation [8].

2.3. Financial Inclusion

The accessibility to financial resources is also crucial to the rural economic development in emerging nations. Higher financial inclusion drastically decreases the level of poverty in emerging nations [9]. However, Persaud and Thaffe [10] illustrated that a substantial proportion of impoverished and

disadvantaged population continues to face difficulty in accessing fundamental official financial services, such as purchasing commodities and activating bank accounts. Furthermore, low financial literacy is regarded as a significant barrier to the rural economy [11]. Besides, the data collected by the Alliance for Financial Inclusion [12] demonstrated that merely 60% of the population in rural regions had activated accounts with financial institutions in emerging nations, and the utilization of financial products in rural regions is low as they are mainly developed for urban consumers.

3. Recommendations for Rural Economic Development

3.1. Infrastructure Development

As previously discussed, enhancing transportation infrastructure in rural areas requires further optimization of road transportation conditions. Sufficient road infrastructure promotes the rural development by lowering transportation expenses and relieving the time burden of rural residents [3]. Likewise, rural roads offer a cost-effective advantage for rural communities in low- and middle-income nations compared to expanding predominant transportation systems [13]. The abovementioned benefits indicate the urgent importance of optimizing rural road infrastructure. In the case study of South Africa, strategies such as improving local authority engagement and integrating multiple governmental sectors are conducive and critical for upgrading road networks; meanwhile, implementing subsequent rural road maintenance programs that engage the local population with institutions, including government and non-government organizations, can help mitigate rural poverty, strengthen communities, and increase employment [3]. Nevertheless, it is essential to establish accountability to guarantee the eradication of fraudulent activity, corruption and financial mismanagement [3].

To enhance inadequate social infrastructure, particularly in educational infrastructure, a primary strategy is to improve road accessibility, including clearing forests to improve the mobility of educational facilities and resources, such as textbooks, in remote regions [14]. The quality of education requires to be further strengthened following the reinforcement of the link between education infrastructure and rural residents. Irmayani et al. [15] demonstrated the necessity and feasibility of implementing strategies including routine supervision for enhancing teacher discipline as well as promoting personnel training-related projects and workshops to reinforce educational quality. Furthermore, endeavouring to meet the demand for schools' computer technological equipment is also vital for improving educational quality [15]. Besides, from the perspective of healthcare education, based on the case study of Indonesia, it is essential to improve health insurance coverage, particularly for the underprivileged, as it is advantageous for facilitating the accessibility of healthcare services, amenities effectiveness, and demands for healthcare [2]. Likewise, the government's initiatives on enhancing the healthcare infrastructure are crucial to mitigating poverty, while closer access to public healthcare infrastructure help reduce time and monetary costs, thereby facilitating greater investments in agricultural production to mitigate rural poverty prevalence [2].

3.2. Agricultural Productivity Enhancements

Backward agricultural productivity is also an important constraint on economic development in rural regions in developing countries. A study conducted by Ritchie [16] with the case of Sub-Saharan Africa (SSA) indicated that SSA confronts a serious issue of lagging land productivity in the agricultural sector, with lower crop yields than in other areas. Likewise, Nyambo et al. [17] also demonstrated the major reason for low yields in the agricultural sector in SSA is the low level of mechanisation, i.e., the efficiency of arable land is limited by the utilization of portable hand instruments. Besides, pests and illness are also critical barriers restricting the agricultural output in SSA [17].

In response to the abovementioned phenomenon, the following measures can effectively help alleviate the issue of poor agricultural productivity. Establishing an attractive and investment-friendly environment is necessary to drive the level of mechanisation in the agricultural sector in SSA, and subsequent commercialisation is equally essential for continued investments [17]. Additionally, Jayne and Sanchez [18] also mentioned strategies including enhancing the utilization of blending devices and high-yielding seeds in SSA. Nevertheless, unmanned aerial vehicles (UAVs) could also be applied in agricultural sectors to perform tasks such as irrigation, planting and pest diagnosis [19]. Furthermore, UAV technology is considered a cost-efficient and convenient method for assisting the agricultural sector [19]. However, given SSA's complicated agricultural system (dominated by smallholder farms), more UAV remote sensing experiments should be conducted in order to ensure the feasibility [19].

3.3. Financial Inclusion Improvements

Enhancing financial inclusion is another critical issue for rural economic development in developing countries. Based on the research conducted by Goswami et al. [20] with the case of rural India, it demonstrated that ethnic and rural regions in India endure sluggish economic development, poverty, and poor capability of utilizing formal financial services. Goswami et al. [20] also pointed out the phenomenon that the rural population in India would utilize costly and unreliable informal channels given the scarcity of legitimate monetary services. This situation underscores the need to introduce various appropriate financial services, such as savings and payment services, to meet the higher demand.

Regarding solutions to the abovementioned issues, the study conducted by Panakaje et al [11] on financial inclusion in rural India demonstrated that financial literacy is positively correlated with financial inclusion while it could empower the underprivileged in rural regions to make deliberate decisions and evaluations before getting access to financial services and commodities provided by formal financial organizations. The strategy of improving financial literacy is feasible for mitigating the encountered issues in rural economic development. Likewise, further developing finance-related educational activities is suitable for financial literacy enhancements [11]. Nevertheless, Panakaje et al. [11] also indicated that promoting the construction of digital financial services platforms like mobile banking could significantly improve financial inclusion in rural regions, while it is also conducive to facilitating the accessibility of rural remote regions. Furthermore, the establishment and prevalence of microfinance institutions, which offer small loans to the rural population, can assist them in launching startups and purchasing agricultural supplies [11].

4. Conclusion

This paper aims to analyze the circumstances and issues of rural economic development in developing countries, as well as proposing appropriate solutions through a detailed analysis of the obstacles and risks encountered in the specific selected cases.

Based on a general overview and integration of the relevant literature on the study of rural economic development in developing countries, this paper demonstrates that the current development is confronting multifaceted issues, which are inadequate transportation and social infrastructure, low agricultural productivity, and low level of financial inclusion.

According to further in-depth analyses through case studies, in terms of the inadequacy of transportation infrastructure, it is necessary to enhance the cooperation of government departments, promote road maintenance projects and establish accountability for improving road construction. In view of inadequate social infrastructure, the strategies of improving educational quality and increasing healthcare insurance coverage are also feasible. Likewise, in response to the issue of low

crop yields and low mechanisation, it requires strengthening the attractiveness of the local investment environment, increasing agricultural outputs, and introducing UAVs technology. Eventually, to improve financial accessibility, measures such as enhancing financial literacy and establishing digital platforms and microfinance organizations are feasible solutions.

The major contribution of this paper is to conduct in-depth research in the dimension of rural economy in developing countries through the methodology of aggregating related literature and case studies, and to further consolidate the existing issues in the process of development and feasible options. Besides, for future researchers in this dimension, this paper can be utilized as a reference for a better understanding of the current issues and measures, and as a foundation for future exploration and enhancements of research in the field of the rural economy.

The limitation of this paper is that the article is more based on the existing literature and case studies, while the methodology of expert interviews (e.g., semi-structured interviews with policy makers and researchers in the same field) for obtaining multi-perspective insights is not applied in this study. Furthermore, the proposed solutions should be supported with more data to ensure feasibility and authority. For future research, addressing the abovementioned limitations is recommended by collaborating with authorities in relevant fields for more comprehensive studies on this topic.

References

- [1] Manggat, I., Zain, R. and Jamaluddin, Z., (2018). *The impact of infrastructure development on rural communities: A literature review. International Journal of Academic Research in Business and Social Sciences*, 8(1), pp. 647-658.
- [2] Naufal, H.A., Mulyanto, M. and Suryanto, S., (2023). *The Effect of Social Infrastructure on Rural Poverty in Indonesia with The Village Development Index As Moderation Variable. Eko-Regional: Jurnal Pembangunan Ekonomi Wilayah*, 18(1), pp.87-98.
- [3] Sewell, S.J., Desai, S.A., Mutsaa, E. and Lottering, R.T., (2019). *A comparative study of community perceptions regarding the role of roads as a poverty alleviation strategy in rural areas. Journal of rural studies*, 71: 73-84.
- [4] Thanga, J.L., 2015. *Rural demography and road connectivity: An analysis. Rural Demography*, 6(2), p.27.
- [5] Yar, F.G.M. and Yasouri, M., (2024). *Rural Development Challenges in Addition to Effective Solutions to Overcome Obstacles. Zhongguo Kuangye Daxue Xuebao*, 29(3), pp.79-90.
- [6] Dethier, J.J. and Effenberger, A., (2012). *Agriculture and development: A brief review of the literature. Economic systems*, 36(2), pp.175-205.
- [7] Danso-Abbeam, G., Ehiakpor, D.S. and Aidoo, R., (2018). *Agricultural extension and its effects on farm productivity and income: insight from Northern Ghana. Agriculture & Food Security*, 7(1), pp.1-10.
- [8] AATF. (2023). *Scaling for Impact: AATF STRATEGY (2023 - 2027) Transforming farmers' livelihoods in Africa through the scaling of agricultural technologies. AATF-2023-2027-Strategy-Summary.pdf (aatf-africa.org)*
- [9] Omar, M.A. and Inaba, K., 2020. *Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. Journal of economic structures*, 9(1), p.37.
- [10] Persaud, A. and Thaffe, W., 2023. *The state of financial inclusion research on developing countries. Transnational Corporations Review*, 15(4), pp.22-34.
- [11] Panakaje, N., Rahiman, H.U., Parvin, S.R., Kulal, A. and Siddiq, A., 2023. *Socio-economic empowerment in rural India: Do financial inclusion and literacy matters?. Cogent Social Sciences*, 9(1), p.2225829.
- [12] Alliance for Financial Inclusion. (2022). *Enhancing Financial Inclusion in Rural Areas. Enhancing-Financial-Inclusion-in-Rural-Areas.pdf (rfilec.org)*
- [13] Kaiser, N. and Barstow, C.K., (2022). *Rural transportation infrastructure in low-and middle-income countries: a review of impacts, implications, and interventions. Sustainability*, 14(4), p.2149.
- [14] Nurhayati, L., (2021). *Policy Effectiveness Program for Improving Education Equality through the Development of Education Facilities and Infrastructure. Journal of Education Review Provision*, 1(1), pp.6-11.
- [15] Irmayani, H., Wardiah, D. and Kristiawan, M., (2018). *The strategy of SD Pusri in improving educational quality. International Journal of Scientific & Technology Research*, 7(7), pp.113-121.
- [16] Ritchie, H. and Roser, M., 2024. *Increasing agricultural productivity across Sub-Saharan Africa is one of the most important problems this century. Our world in data.*
- [17] Nyambo, P., Nyambo, P., Mavunganidze, Z. and Nyambo, V., 2022. *Sub-Saharan Africa smallholder farmers agricultural productivity: risks and challenges. In Food security for African smallholder farmers(pp. 47-58). Singapore: Springer Nature Singapore.*

- [18] Jayne, T.S. and Sanchez, P.A., 2021. *Agricultural productivity must improve in sub-Saharan Africa*. *Science*, 372(6546), pp.1045-1047.
- [19] MUGALA, S., OKELLO, D. and SERUGUNDA, J., 2020, May. *Unmanned aerial vehicles: Opportunities for developing countries and challenges*. In *2020 IST-Africa Conference (IST-Africa)* (pp. 1-10). IEEE.
- [20] Goswami, S., Sharma, R.B. and Chouhan, V., 2022. *Impact of financial technology (Fintech) on financial inclusion (FI) in Rural India*. *Universal Journal of Accounting and Finance*, 10(2), pp.483-497.