

CURRENT STATUS OF RESEARCH ON RURAL NON-FARM SECTOR: ANALYSIS OF LITERATURE

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Abstract: This article assesses the current status of research on the “Rural Non-Farm Sector” (RNFS) around the world. It also examines the role of the non-farm sector in developing rural economy and the scope for further developments. This article particularly attempts to examine the importance of the RNFS in developing nations and different regions in the Asian and African continents to find out the most recent perspectives about the RNFS and its role in developing the rural economy. Works of literature were reviewed for the last 41 years, from 1980 to 2021 from popular working papers, reports, and online research databases such as Emerald Insight, Wiley online library, Elsevier, Sage, ScienceDirect, and so on by using the keyword “Rural Non-farm Sector” and identifying 114 articles which include research papers, working papers, and reports. After the analysis of different works of literature, it was understood that proper growth and progress of off-farm activities in the rural areas pave the way for higher income levels for the rural poor, which can be improved by providing an easy way for entering into the non-farm sector for the rural people without any blocks and providing necessary skills and support so that it helps in improving their standard of living.

Keywords: Non-farm, Income, Employment, Poverty, Rural Development, RNFS

1. INTRODUCTION

The importance of the RNFS in the rural Indian economy has made its significance since the early 1970s. Nowadays, the rural non-farm sector has become a significant topic of discussion among researchers and policymakers. A large number of works of literature have been found in relation to the nature, compositions, and determinants of the RNFS as a basis of income and employment generation.

Determining the RNFS is a difficult task. Because the industry is too diverse to be captured as a tidy notion, there is no conventional definition, either globally or inside India. In the literature, there is no definite and clear-cut meaning of the phrase “non-farm.” In the literature, the phrase non-farm is used in a variety of contexts, including ‘non-agriculture,’ ‘non-crop’ and ‘off-farm’ activities. Nevertheless, the word “non-crop” activity is found to be in limited use in literature, while the notion of a rural non-farm economy is becoming more popular.

There is no commonly accepted definition of the RNFS. There are some controversies about whether non-farm should only mean non-agriculture activities because the non-crop would include homestead-based agricultural production such as raising fruits, vegetables, etc., and other non-crop agricultural production.

Hence, in a general sense, the term ‘non-farm’ is defined as an economic activity that is non-agricultural and includes all non-farm pursuits such as quarrying and mining, electricity, manufacturing, gas & water supply, transport, trade, construction, and services and all other activities undertaken on a commercial basis outside the farm sector.

Rural development thinking has its origin in the 1950s. The strength of the agricultural economy is critical to the expansion of the non-farm sector. To put it another way, resolving poverty is difficult without agricultural expansion in rural regions (Ellis & Biggs, 2001). Rural regions are evolving, especially in terms of population, diversity, and growing ties to national and global economies. If there is a liberal entrance for the rural poor into the RNFS by reducing general development limitations, promoting urban-rural linkages, and allowing enterprise development, sector or sub-sector interventions aid in helping the Rural Non-farm Sector’s growth in rural regions (Ashley & Maxwell, 2001).

In this paper, an attempt is made to summarize all those scholarly reviewed articles, working papers, and reports on the RNFS available on popular online research databases such as Science Direct, Emerald Insight, Wiley Online Library, Sage Publications, etc., during the period from 1980 to 2021. This paper also made an enquiry into the trend among researches happening in different continents explored through above mentioned online sources in the past 41 years. Further, this paper could identify the increase in interest in the research area of the RNFS.

2. METHODOLOGY

A systematic analysis of the literature available was scrutinized on the subject selected for the current study, the instigators explored all the published articles, working papers, and reports on ‘Rural Non-farm Sector’ in the last 41 years from 1984-2021 from popular online research databases. Here, the authors have made a systematic review of literature by collecting relevant works of literature from relevant databases like research articles, working papers, and reports with the greatest number of citations received by excluding irrelevant, duplicate, less cited, and non-peer-reviewed articles.

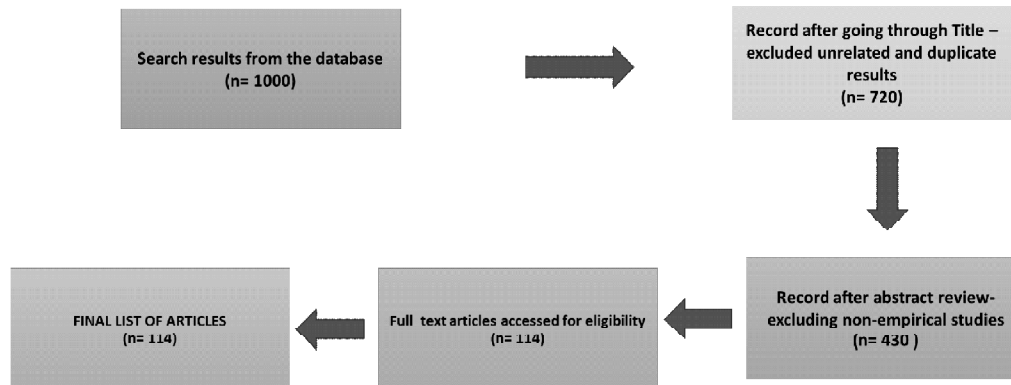


Figure 1: Selection Criteria of Articles

Source: Authors Calculation

The word “Rural Non-Farm” was used as the keyword to search the articles. The articles were downloaded from the software “Publish or Perish” and 1000 articles were downloaded. After going through the title, unrelated and duplicate results were excluded, which brought down the articles from 1000 to 720. After having a detailed review of the abstracts of the 720 articles, to ensure the relevance of those studies in the specified research area, 290 articles were rejected, because these studies were not actually focusing on the rural non-farm sector in their research objective.

After excluding non-empirical, and the accessibility to the full-text articles, working papers, and reports, 114 articles were finalized for the review paper. The remaining 114 articles which mainly focused on the RNFS were the most highly cited papers for a period ranging from the 1980s. The research articles were collected from prominent journals such as *Food Policy*, *The Journal of Development Studies*, *Worlds Development*, *Journal of Rural Studies*, *Agrekon*, *Journal of Asian Economics*, *African Development Review*, *Bulletin of Indonesian Economic Studies*, *Procedia economics and Finance*, *Journal of Small Business & Entrepreneurship*, *World Development Perspectives*, *Financing sustainable development in Africa*, *China Agricultural Economic Review*, *Journal of Quantitative Economics*, *International Journal of Development Issues* and so on. 42 research articles were reviewed from databases such as *Emerald*, *Springer*, *Taylor and Francis*, and *Wiley Online Library*. Citations for the articles ranged from 871, from the area of Rural Non-Farm Sector and 32 articles have 100 and above citations ranging from a period of 1980-2021.

The abstracts of all the 114 papers were examined by the authors, followed by a thematic analysis of the content. In order to ensure validity and reliability of classification, the authors followed several procedures, like, keywords were used to check the proper selection of the articles. Since we are focusing on the overall analysis of the articles all over the world, Continent wise classification of articles and the Country-wise classification of the

articles were done, so that the major studies in different Continents and different countries, were able to be studied and focused separately.

3. ANALYSIS

3.1. Studies on Rural Non-Farm Sector: Year Wise Classification from 1994-2021

Out of the 114 articles on the RNFS, ranging from the period 1980 to 2021, there was an increasing trend in the research on the area of RNFS. The majority of the works were done in the period between 2012 & 2017. There was a volatile trend in the number of research papers from the period 1980. The researchers had given great importance to focusing on the research area of the rural non-farm sector.

Year-wise highly cited papers on the Rural Non-farm Sector Published between 1994-2021

Table 1: Articles Published each year throughout the research period

Year	"Publications	Year	Publications	Year	Publications	Year	Publications"
1980	1	2001	10	2008	2	2015	5
1988	1	2002	3	2009	4	2016	5
1994	1	2003	1	2010	4	2017	12
1995	2	2004	8	2011	4	2018	3
1996	1	2005	3	2012	12	2019	4
1998	2	2006	2	2013	7	2020	4
2000	4	2007	2	2014	5	2021	4
Total: 116							

Source: Authors Calculation

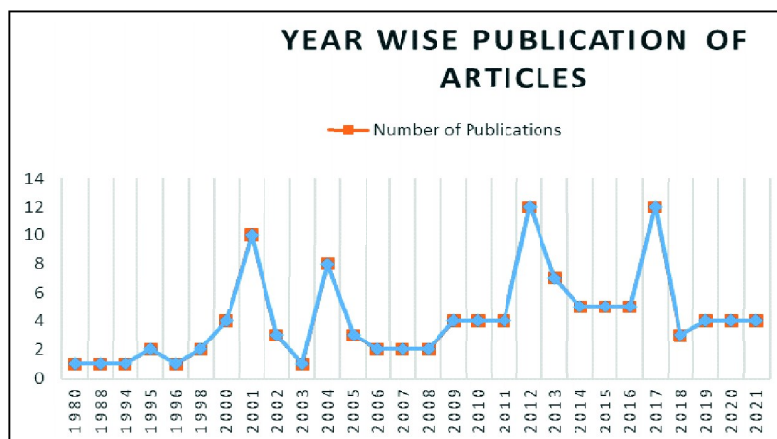


Figure 2: Articles Published each year throughout the research period

Source: Authors Calculation

3.2. Continent wise classification of the articles on Rural Non-Farm Sector

Out of the 7 Continents in the world, 6 Continents namely Australia, North America, Europe, Asia, South America, and Africa have their research done in the area of the RNSF, which states the importance of the topic universally. The majority of the studies on the RNSF have been done in Asia and Africa, comprising 38.9% of studies in the African Continent, 38.2% in the Asian Continent, and 18.3 % of studies had taken place in Europe on the RNSF.

The below diagram shows the Continent-wise Pictorial Representation of the highly cited articles focusing on the topic of the RNSF.

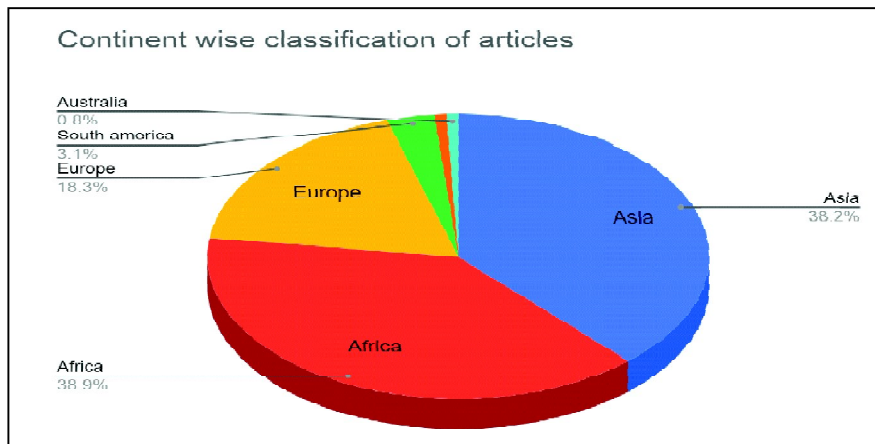


Figure 3: Pie representation of Continental wise classification of highly cited articles

Source: The Authors

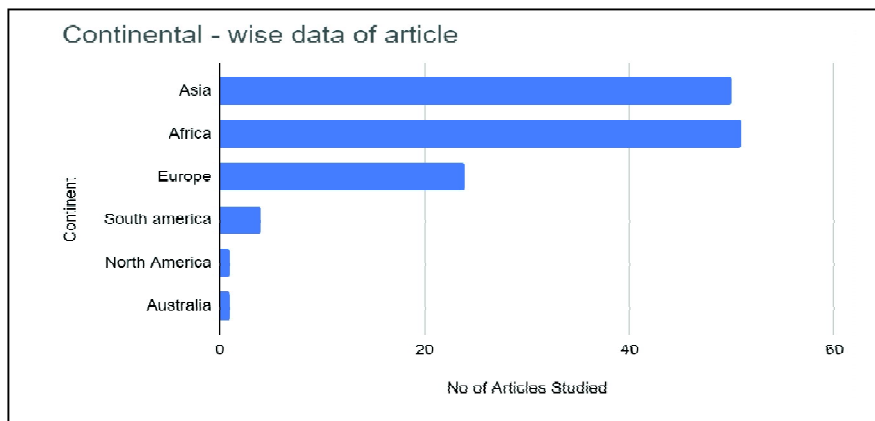


Figure 4: Bar diagrammatic representation of Continental wise classification of highly cited articles

Source: The Authors

3.3. Country Wise Classification of the studies on Rural Non-Farm Sector

Studies on the RNFS were carried out in different countries all over the world. More than 46 Countries have studied in these areas such as Vietnam, Thailand, Romania, Nigeria, Malta, India, Uganda, Finland, Ghana, Pakistan, Indonesia, Ethiopia, and so on. The majority of the studies have been done in India, Ethiopia, Bangladesh, and Nigeria.

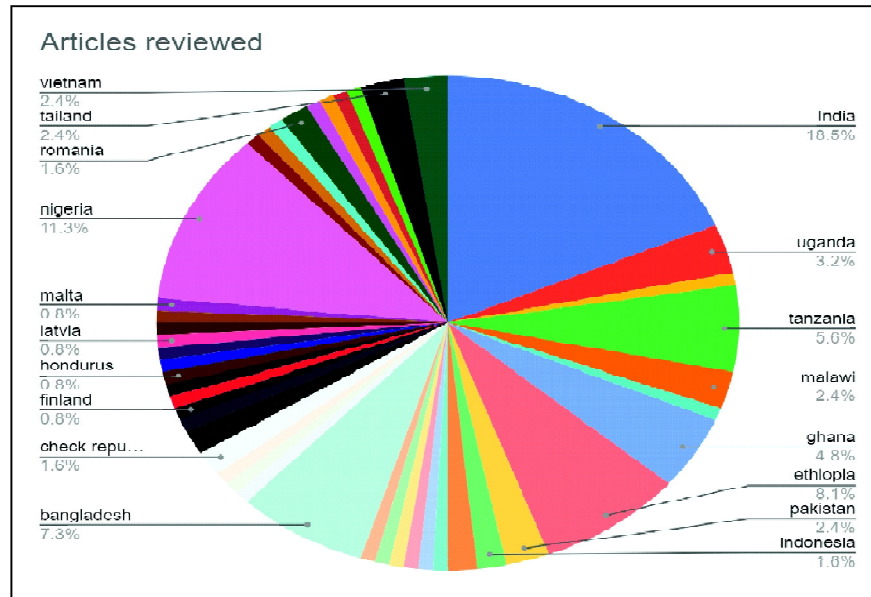


Figure 5: Pie diagrammatic representation of Country-wise classification of highly cited articles on RNFS

Source: The Authors

RNFS related studies from African Continent

Many works of literature studies had been done in the area of the RNSF in different parts of the African Continent including Ethiopia, Tanzania, and its peri-urban areas, Ghana and its Northern regions, Uganda, Mali, Kenya, and Malawi. A paper on the rural livelihoods in Tanzania, Malawi, Kenya, and Uganda, investigates the micro-level situations of the rural poor people by utilizing the framework for sustainable livelihoods that serves as a guide for the research techniques used and making the micro-macro relations between the rural poverty experience as well as strategic policies designed to deal with its causes and decrease its occurrence. All four nations studied in this research have a PRSP (Poverty Reduction Strategy Paper) or something similar. The paper focuses on characteristics of rural poverty that are found across the area. PRSP or equivalent documents were written between 1999- and 2001 to outline macro-level methods for poverty reduction; the question to ask is whether these papers express the problem of poverty reduction in a manner that takes into account real obstacles that rural residents face in their attempts to build mechanisms out of

poverty. PRSP and equivalent documents. The micro-level sustainable livelihoods model is used to get a more precise image of the assets and activity patterns that define the poor in specific, and the institutional backdrop that either inhibits or supports rural inhabitants' pursuit of more secured livelihoods over time.

A Household-level panel data study which is conducted in Southern Mali (CroleRees & Abdulai, 2001), depicts that the poorer households have fewer chances in non-farm work, and non-cropping activities so they have less diversified income. This reflects in the lack of capital and makes them stay in agriculture itself. It also states that the people in the remote areas are less interested in the non-farm sector activities but the households with educated heads are more probably to participate in the same. Entry constraints to the RNFC are considered a major cause of their non-participation.

In a study of evidence from rural Uganda and Ghana (Canagarajah *et al.*, 2001), it was observed that non-farm incomes led to growing inequality, but the lower-income groups have also benefited from significant overall evolution in non-farm earnings. Non-farm income has a larger propensity to contribute to inequality in woman-headed families, where self-employment is significant and non-farm options are more limited. It also points out that age, education, location, and distance to market are the major elements of non-farm income. We observe a connection between non-farm income as well as agriculture, particularly export agriculture, in Ghana, although the effects do not seem to be significant. This shows that the "non-farm sector" could be more effective in decreasing the threat in Ghana. Among the farm families in rural northern Ghana (Owusu *et al.*, 2011), a matching propensity score with positive and statistically significant effect was shown in relation to participation in non-farm work to the influence on family income and status of food security. The household survey of 600 households in peri-urban regions of Tanzania (Lanjouw *et al.*, 2001) shows that in peri-urban settings, education and access to infrastructure, are major factors of non-farm income. The non-farm income grows fast and monotonically when quintiles are described in terms of per capita food utilization. In that respect, the industry looks to be a viable means of escaping poverty.

A bivariate probit model study of households in Ethiopia (Beyene, 2008), shows that human capital characteristics like training and health, availability of transfer, and credit income on non-farm activities had a favorable influence on the off-farm participation choices of male members of farm families. Financial constraints to entering the non-farm activities act as a hindrance for the rural farmers, therefore, the growth of rural microcredit financial transitions helps in serving the need of the rural population. The biophysical and socio-economic aspects of a less-favored location in Ethiopia's highlands were studied using a bio-economic model (Holden *et al.*, 2004) point out that the total agricultural production, as well as farm inputs, have been decreased when access to non-farm employment have been enhanced and thus increase the requirement to import food to the area.

An empirical study on rural sub-Saharan Africa by LSMS-ISA ("Living Standard Measurement Study - Integrated Surveys in Agriculture") data set, a generally representative

data set comprising 6 nations from 2005 to 2013, namely Uganda, Tanzania, Nigeria, Niger, Malawi, and Ethiopia. In this study, it was found that families run businesses as a result of both push and pull influences. It also states that the distance to markets and good local infrastructure make it easier for businesses to operate, implying that rural locations provide business opportunities (Nagler & Naudé, 2017).

RNFS related studies from Asian Continent

A number of studies had taken place in different parts of Asia regarding the term Rural non-farm/ off-farm. This paper focuses on the Rural non-farm sector studies that had taken place in different countries of Asia, such as China, Pakistan, India, Vietnam, Indonesia, Laos, and Bangladesh.

China's progress in the reduction of rural poverty should be considered as a derived inspiration for other countries. non -farm employment in China is considered a major contributor to their rural development (de Janvry *et al.*, n.d.). Results from the detailed household survey done in the Hubei province of China indicate that without non-farm employment rural poverty, as well as income inequality, will be deeper and higher. Proximity to a town, education, neighborhood effect, and village effect are considered as factors influencing increment in their household production (Liu, 2017).

According to research conducted in the mid-2000s on 4000 families in the Indonesia Family Life Survey (IFLS) (Gibson & Olivia, 2010), there is a rising interest in the RNFS in Indonesia due to two main forms of infrastructure, electricity, and roads. Both have an impact on rural non-farm employment & income. In Indonesia, the non-farm activities of rural families are hampered by a lack of infrastructure and poor quality.

While researching the RNFC of rural Pakistan (Adams, Jr., 1993), two significant results emerged: 40% of their overall income originated from non-farm sources, and income has a positive influence on income distribution. Although agriculture continues to dominate in rural Pakistan, there was a transition from the farm into non-farm activity, and wage employees in the non-farm sector are deemed better paid than agricultural laborers (Arif *et al.*, 2000).

Laos is considered one of the world's poorest nations (Bouahom *et al.*, 2004). The expanding involvement of the RNFC in Laos is viewed as a contrast between 'distressed' and 'progressive' diversification. The report investigates how households manage the transition from subsistence to market by studying nine villages in three regions. Households' capacity to access possibilities outside of agriculture, as well as families' ability to provide their children with the skills and contacts to capitalize on these changes, especially if they are high-return pursuits, will become more crucial.

An empirical study on Bangladesh (Deichmann *et al.*, 2009), states that the individuals who live close to urban regions are more probably to be working in well-paying wage jobs and "self-employment" in the non-farm sector, and the interaction influence of education

and infrastructure is probably to be equally essential for income growth and non-farm employment.

RNFS related studies in India

From 1993-to 1994, the “National Council of Applied Economic Research” examined rural data from 32,000 families in 1765 villages around India and discovered that non-farm revenue accounted for a considerable share of rural Indian family revenue as a result of the influence of various determinants such as population density, education, wealth, caste, and village-level agricultural conditions on the ability to access non-farm occupations (Lanjouw, 2002).

In a research conducted in West Bengal (Khatun & Roy, 2012), the key restraints encountered by the rural people were poor asset base, lack of opportunities, training facilities, lack of credit facilities, lack of proper infrastructure, and awareness of the non-farm sector. It was observed that proper growth of non-farm activities in the rural areas paves the way for higher income levels for the rural poor, which can be improved by providing an easy way for entry into the non-farm sector for the rural people without any blocks and providing higher education so that it helps in improving their standard of living (Lanjouw, 2002). Major studies which have taken place in India suggest many strategies for the rural poor to enhance their livelihood such as providing credit facilities, storage facilities, infrastructure, etc., and also mainly reducing the entry barriers to the rural poor in entering the RNFS activities (Khatun & Roy, 2012).

The key to boosting expansion in the RNFS is to stimulate evolution in major regional trades, such as tourism, agriculture, or mining, or to connect rural regions to external engines of economic development that give opportunities for growing rural markets & employment. Interactions in the labour market between agricultural and non-farm enterprises, as well as between urban and rural regions, provide critical connective tissue for connecting rural employees, mainly the rural poor, to these growth processes. Access to rural non-farm employment has substantially been deemed a factor that reduces the vulnerability of countries like India and Vietnam (Imai et al., 2015).

In both India and Vietnam, the effects on vulnerability and poverty of sales, professionals, and clerks are substantially greater than those of unskilled or physical labour when work in the non-farm sector is broken down by category. Nevertheless, unskilled or manual non-farm employment greatly decreases poverty levels in India and poverty in certain years in Vietnam, this has important implications because the rural poor lack simple access to skilled non-farm employment. Another study, which used the “Vietnamese Household Living Standards Survey” in 2002, 2004, 2006, & 2008, found that one extra family member engaged in non-farm employment decreases the likelihood of poverty by 7 to 12% and boosts family spending by 14% over a 2-year period. (Hoang et al., 2014).

3.3. Studies in Developed and Developing Countries

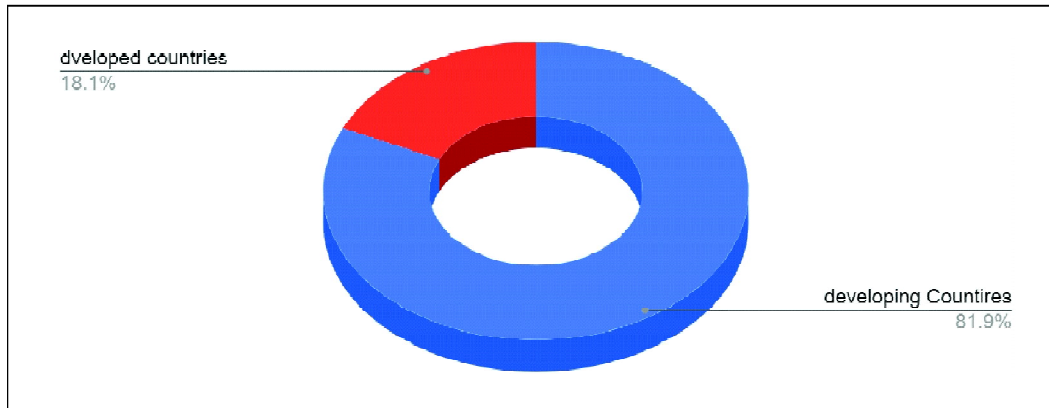


Figure 6: Diagrammatic representation of studies done in Developed and Developing Countries

Source: The Authors

More studies have been done in developing countries than that in developed countries. 81.9% of the studies have been done in Developing Countries, and 18.1% of studies in Developed Countries.

Challenges and Facts from Developing Countries

Most of the population in most emerging countries lives in rural regions, and this population is rapidly growing. As there is a limit on the access to suitable land for agriculture, the development in the rural labor force cannot be productively utilized to the full extent in the agriculture sector alone. Either shifting to the urban regions or developing the rural non-farm sector, employment opportunities can fill in the gap (Lanjouwa, n.d.). There are various reasons why policymakers and scholars in developing countries should promote rural non-farm activity. Rural non-farm income is seen as an essential aspect of the food security of rural family economics. The significant reasons for household engagement in the Rural Non-Farm activities were either “push” or “pull” variables such as education, credit availability, poverty, land limits, and so on (Reardon, n.d.). According to a study of household study findings from Latin America, Asia, and Africa, nonfarm employment had a mixed influence on rural income disparity. According to this analysis, non-farm work tends to enhance inequality in Africa while decreasing inequality in Latin America and being mixed in Asia. The significant evidence of the rural poor incapacity to overcome significant entrance obstacles to numerous non-farm occupations concerned policymakers. The fundamental source of the rural poor’s uneven access and entrance obstacles to non-farm enterprises is the relative shortage of low capital for investment in non-farm activities. As a result, policy implications and public investments in removing entrance obstacles are critical (Reardon *et al.*, 2008).

In those nations where large-scale wage labour farms remain the major type of agricultural production (i.e., most nations except Georgia, Armenia, Moldova, Latvia, Albania, former Yugoslavia, and Poland), farm organizations are likely to account for a relatively significant share (relative to developing nations) of rural non-farm employment. This is where the human, as well as social capital for rural non-farm work, is concentrated, and policymakers should take this into account. The elasticity of assessed poverty to agricultural production and development investment did not vary substantially among states in a study of 15 major states over a period from 1960 to 1994, by conducting 20 household surveys. Low agricultural production, low rural living standards in comparison to metropolitan regions, more landlessness in rural regions, and poor basic education, as well as health all, hampered the poor's chances of engaging in the non-farm sector's development (Datt & Ravallion, 2002). Agriculture has contributed significantly to the expansion of the economic foundation of rural areas in emerging countries. In the same way, the RNFS has also enjoyed rapid growth by the improved infrastructure, globalization, and urbanization, and dependence on agriculture has been reduced on other hand. Rural economic growth due to the contribution made by the RNFS is considered now a new pathway to reducing poverty in rural areas. For countries with densely populated, like India and China, the role of the rural non-farm sector is considered a powerful tool for poverty reduction and improvement in rural livelihoods and savings.

4. CONCLUDING REMARKS

During the previous decade, rural communities have seen significant job and livelihood expansion into non-farm sectors. Rural non-farm income is regarded as a significant component for rural agricultural families, with the RNFS regarded as a development promise due to its potential for encouraging growth and alleviating poverty. Based on the literature analysis, it is possible to infer that dynamic labor-intensive agriculture mixed with a modernizing non-agricultural sector may result in widespread income and employment, leading to rapid growth, equal distribution, and the abolition of rural poverty. Lack of access to infrastructure and low infrastructure quality hinders non-farm companies of rural families in countries such as Indonesia and Vietnam; consequently, enhancing infrastructure quality aids their growth.

The growth of rural non-farm sectors in various locations highlights the need for adequate infrastructural amenities like power, water supply, roads, schools, and training facilities in non-farming industries. When non-farm sector work is broken down by occupational category, it is clear that access to higher-skilled employment has a greater influence on poverty and vulnerability reduction than unskilled or manual labour.

According to the study, engagement in non-farm sectors in countries such as China, India, and Vietnam significantly decrease the depth & severity of poverty and aids in closing the income disparity among rural families. As a result, the RNFS may be viewed as a solution for the absorption of rural excess labour as well as a source of additional income, enhancing their living standards and closing income inequalities.

5. POLICY IMPLICATIONS FROM THE REVIEW OF LITERATURE

Poor households stuck in poverty can be helped by the government through short-term but considerable cash transfers; major “public investments” in irrigation and catastrophe forecasts; and easier access to a stronger agricultural insurance system. Central and State government, international donors, and NGOs’ aids and donations could help in developing the infrastructure which is necessary for endorsing non-farm economy in rural areas. Microfinance programs help in assisting the rural people to have an entry without difficulty into the rural non-farm sector. Newly created training centers for starting small startups and self-help group programs in rural areas help them to get introduced to non-farm activities.

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