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CONTENTS

Prospects and Constraints of the Act East Policy (AEP) with Special Reference to Northeast India

Bonomali Bori
Assistant Professor, Department of Economics
Mariani College, Mariani

Kanchana Das
Assistant Professor, Department of Education
Mariani College, Mariani

Abstract:

The Act East Policy (AEP), launched in 2014, aims to enhance India's diplomatic, economic, and strategic ties with Southeast Asia and beyond. The (NER) of India is critical to this policy due to its strategic location as a gateway to Southeast Asia, bordering Myanmar, Bangladesh, Bhutan, and China. This seminar explores the prospects and constraints of the AEP with special reference to the NER. Key prospects include the region's potential to become a transit hub for trade and connectivity, thanks to projects like the India-Myanmar-Thailand Trilateral Highway and Kaladan Multi-Modal Transit Transport Project. Improved cross-border trade, tourism, and cultural exchanges with ASEAN nations can stimulate local economies and create jobs. The NER's cultural ties with Southeast Asia also open avenues for people-to-people diplomacy. However, the region faces significant constraints. Inadequate infrastructure, poor connectivity, and delays in key projects hinder its development. Security challenges, including insurgency and cross-border tensions, create an unstable environment for investment. Additionally, bureaucratic inefficiencies, environmental concerns, and competition from China's Belt and Road Initiative (BRI) complicate the realization of the AEP's goals. In this paper will examine how the NER can fully leverage the Act East Policy for growth and regional integration while addressing the challenges that impede its progress.

Key words: Act east policy, transit, bureaucratic, environmental concerns.

1. Introduction

The Act East Policy (AEP), launched by the Government of India in 2014, represents a pivotal shift in India's foreign policy strategy aimed at enhancing economic, cultural, and strategic ties with Southeast Asia, East Asia, and the broader Indo-Pacific region. A key component of this policy is the development of India's Northeast Region (NER), which serves as the geographic and strategic gateway to Southeast Asia. The NER comprises of eight states, shares international borders with Myanmar, Bangladesh, Bhutan, and China, making it central to the success of India's eastward engagement. This seminar paper will try to explore the importance of the Northeast Region within the framework of the Act East Policy. By enhancing infrastructure, connectivity, and

border trade between the NER and Southeast Asian countries, the policy seeks to integrate this region more closely with global markets. Major projects like the India-Myanmar-Thailand Trilateral Highway and the Kaladan Multi-Modal Transit Transport Project aim to facilitate trade and transit, turning the NER into a vital economic and strategic hub. Moreover, the region's rich cultural and ethnic linkages with Southeast Asia offer opportunities for people-to-people diplomacy and tourism. However, the NER faces significant challenges, including inadequate infrastructure, security issues, and insurgency, which need to be addressed to fully realize the potential of the Act East Policy. This introduction sets the stage for discussing the prospects and constraints of the Act East Policy in the Northeast, and how the region can play a transformative role in India's broader engagement with Southeast Asia and the Indo-Pacific region.

II. Review of Literature on the Act East Policy

1. Bhattacharya, Prabir De (2015) – *"Act East Policy: India's Trade and Investment in Southeast Asia"*: Bhattacharya explores the economic dimensions of India's Act East Policy and its focus on enhancing trade and investment relations with ASEAN nations. He highlights the importance of infrastructure development, specifically in the Northeast Region(NER), to strengthen connectivity with Southeast Asia. Bhattacharya argues that India's trade with ASEAN has increased but remains underutilized due to logistical constraints in the NER. He stresses the need for improving road, rail, and air linkages, especially through projects like the Trilateral Highway and Kaladan Multi-Modal Transit Transport Project, to unlock the potential for trade and investment growth.

2. Singh, Udai Bhanu (2016) – *"Act East and India's North East: Enhancing Connectivity with ASEAN"*: Singh provides a geopolitical analysis of the Act East Policy, emphasizing the strategic role of the North East Region in linking India with Southeast Asia. He discusses how the NER can be leveraged for better cross-border cooperation, particularly with Myanmar, and analyzes the challenges posed by insurgency, border tensions, and inadequate infrastructure. Singh argues that the Act East Policy must go beyond rhetoric and focus on addressing security concerns and governance issues in the NER to ensure seamless connectivity and integration with Southeast Asia.

3. Baruah, Sanjib (2020) – *"India's Northeast and the Act East Policy: Bridging the Gap?"*: In this study, Baruah examines the historical and socio-political context of the NER within India's Look East and Act East policies. He critiques the overemphasis on infrastructure projects without adequately addressing the region's internal conflicts and socio-political realities. Baruah suggests that while infrastructure development is vital, there needs to be a parallel focus on inclusive development, governance reforms, and fostering local participation to ensure that the benefits of the Act East Policy are equitably distributed in the NER.

4. Das, Gurudas (2018) – *"The Economic Benefits of Act East Policy for the North*

East Region: A Critical Analysis": Das evaluates the economic opportunities that the Act East Policy brings to the NER, focusing on sectors like tourism, trade, and energy. He emphasizes the NER's natural resources and cultural diversity as untapped assets that can drive economic growth. However, Das also identifies significant barriers, such as the lack of institutional capacity, poor industrial base, and border trade limitations, which have prevented the NER from fully benefiting from the Act East Policy. He calls for stronger state-level initiatives and policy interventions to enhance the region's economic integration with Southeast Asia.

5. Jha, Balaji (2017) – *"Strategic and Security Implications of the Act East Policy for India's Northeast"*: Jha's work examines the security dimension of the Act East Policy, particularly with respect to the NER's role in India's border security and counter-insurgency operations. He highlights the importance of border management, intelligence sharing, and regional cooperation with Myanmar, Bangladesh, and other ASEAN nations to address the challenges posed by cross-border insurgency and smuggling. Jha argues that enhanced security cooperation under the Act East Policy can contribute to regional stability, which is essential for the economic development of the NER.

III.   Objectives of the study

1) To Explore the Socio-Cultural Impact of the Act East Policy on the Northeast Region
2) To study the prospect Act East policy specially NER
3) To study the constraints of Act East policy on NER

IV.   Methodology

This study on the Act East Policy (AEP), with a special focus on the Northeast Region (NER) of India, will primarily rely on secondary data sources. The research will involve a comprehensive review of existing literature, including government reports, policy documents, and scholarly articles published on the AEP and its implications for the NER. This secondary data will enable a critical evaluation of the AEP's effectiveness, particularly in its impact on the NER.

V.   Socio-Cultural Impact of the Act East Policy on the Northeast Region:

a)   **Ethnic Commonalities:** The NER is home to over 200 ethnic groups, with many having ethnic, linguistic, and cultural linkages with Southeast Asia. For instance, the Chin and Kuki ethnic groups in Manipur and Mizoram share common origins with tribes in Myanmar. Similarly, the Tangkhul Nagas are found on both sides of the India-Myanmar border.

b)   **Cross-Border Festivals and Rituals:** Festivals such as the Sangai Festival in Manipur and the Hornbill Festival in Nagaland attract visitors from Southeast Asia, showcasing the shared cultural traditions. Data: In 2019, the Sangai Festival

drew over 2,000 foreign tourists, many from Southeast Asia, indicating increased cultural exchanges due to the AEP.

c) **Growth of Tourism through Cultural Connectivity:** The NER's rich cultural diversity, along with its natural beauty, makes it an emerging destination for international tourists, especially from Southeast Asia. The region's tribal festivals, traditional crafts, and eco-tourism potential are key attractions under the AEP.In 2019, the NER saw 11.9 million domestic tourists and 0.1 million international tourists. The international tourist footfall in the NER is expected to rise significantly as cross-borderconnectivity improves with projects like the India-Myanmar-Thailand Trilateral Highway. The Government of India has identified the NER as a focus area for tourism promotion under the AEP, particularly by improving visa facilitation and promoting air connectivity with Southeast Asia.

d) **Buddhist Tourism:** The promotion of Buddhist tourism under the AEP has contributed to cultural linkages between Buddhist-majority regions of the NER, such as Sikkim and Arunachal Pradesh, and countries like Thailand, Myanmar, and Cambodia.The development of the BuddhistCircuit in these states has led to increased visits by Buddhist pilgrims from Southeast Asia. In 2019, Buddhist tourism saw an uptick in states like Arunachal Pradesh, with over 15,000 international pilgrims, many from Southeast Asia.

e) **Student Exchange Programs:** The AEP has facilitated educational exchanges between institutions in the NER and Southeast Asia, with universities from the NER signing MoUs with institutions in Myanmar, Thailand, and Vietnam. These collaborations promote student exchanges, faculty development, and research collaborations in areas like ethnography, linguistics, and tribal studies. In 2020, over 1,000 students from Southeast Asia were enrolled in educational programs in the NER under various exchange initiatives.

f) Educational Partnerships: Initiatives like the Nalanda University ASEAN Scholarship and other India-ASEAN youth exchange programs have included participation from the NER, allowing students and scholars to engage in cross-cultural academic experiences. Language and Skill Development: The NER's ethnic and linguistic diversity is being leveraged through programs that promote the study of indigenous languages common to both the NER and Southeast Asia. For instance, linguists from the NER have collaborated with universities in Myanmar and Thailand to study and preserve shared linguistic roots. Over 300 research papers on indigenous languages and cultures have been published as part of collaborations between NER universities and their Southeast Asian counterparts.

g) Cultural Exchange Programs: The Indian government, through the ASEAN-India Cooperation Fund, has promoted cultural diplomacy by organizing cultural festivals, art exhibitions, and exchange programs focusing on the shared heritage of the NER and Southeast Asia. Festivals like the ASEAN-India Artists' Camp and the ASEAN-India Cultural Exchange Program have seen increased participation from cultural delegations of the NER. The ASEAN-India Artists' Camp held in 2021 saw participation

from over 50 artists from the NER and Southeast Asia, contributing to cross-cultural artistic collaborations.

i) **Cross-Border Cultural Ties:** Cultural delegations from the NER are regularly sent to Southeast Asian countries as part of India's cultural diplomacy. Additionally, Southeast Asian countries have been sending their delegations to various festivals in the NER, helping to foster people-to-people connections. In 2022, more than 200 cultural delegations from Southeast Asia participated in events in the NER, while similar numbers of NER delegations visited Southeast Asia.

VI. **The prospect Act East policy specially NER**

a) **Economic Development**

i) **Cross-Border Trade:** The NER shares borders with Myanmar, Bhutan, and Bangladesh, providing a gateway for trade with Southeast Asia. The AEP promotes trade facilitation measures such as the India-Myanmar-Thailand Trilateral Highway, which aims to enhance connectivity and trade routes. The total trade between India and ASEAN countries was approximately $94 billion in 2020-2021, with a potential to significantly increase through better access from the NER.

ii) **Investment in Infrastructure:** The NER can attract investments in sectors such as agriculture, tourism, and manufacturing through special economic zones (SEZs) and initiatives to improve logistics and transportation. Examples: The Bharatmala Project aims to improve road connectivity in the NER, which will facilitate smoother trade routes to Southeast Asia.

iii) **Agri-business Development:** The AEP emphasizes the development of agriculture and horticulture, leveraging the region's rich biodiversity and favourable climate. Products like tea, spices, and fruits can be marketed to Southeast Asian countries. The NER contributes to about 12% of India's total horticultural production, indicating strong potential for growth in export markets.

b) **Promotion of Cultural Tourism**

i. **Cultural Heritage:** The NER is rich in tribal culture, languages, and traditions. The AEP encourages the promotion of these cultural assets through festivals and fairs that attract both domestic and international tourists. Examples: Festivals like the Hornbill Festival in Nagaland and the Sangai Festival in Manipur serve as platforms to showcase the region's cultural diversity to Southeast Asian visitors.

c. **Educational and People-to-People Exchange:** The AEP fosters collaborations between educational institutions in the NER and Southeast Asia, promoting student and faculty exchanges that enhance academic ties. Programs like the India-ASEAN Youth Summit have seen participation from youth in the NER, fostering mutual understanding and cultural ties

d)   **Infrastructure Development Transportation and Connectivity:** The AEP places a strong emphasis on developing transport infrastructure, including roads, railways, and airports, to enhance connectivity within the NER and with Southeast Asia. The Trans-Asian Railway Network aims to connect the NER with other Southeast Asian countries, enhancing trade and travel opportunities.

e)   **Digital Infrastructure:** Investment in digital infrastructure can facilitate e-commerce, telemedicine, and digital education, making the NER more integrated with the Southeast Asian digital economy. Internet penetration in the NER has increased from 25% in 2016 to over 50%in 2022, indicating a growing digital landscape for economic activities.

f)   **Regional Stability and Security Cooperation**

i)   **Geopolitical Importance:** The NER's location at the crossroads of South Asia and Southeast Asia makes it a strategic area for India's security interests. Enhanced cooperation through the AEP can contribute to regional stability.

ii)   **Security Frameworks:** The AEP includes initiatives for security cooperation with ASEAN countries, aiming to address issues like cross-border insurgency, trafficking, and terrorism, which can significantly impact the stability of the NER.

g)   **Community Resilience:** By involving local communities in development initiatives under the AEP, the region can build resilience against socio-economic challenges, thereby ensuring long-term stability. Examples: The promotion of community-based tourism and sustainable practices can empower local populations while preserving cultural heritage

VII. **Constraints of Act East policy on NER**

a)   **Infrastructure Deficiencies**

i)   **Road and Rail Connectivity:** The NER is characterized by inadequate road an rail infrastructure, which limits trade and movement of goods and people. Major highways and rail lines often remain in poor condition, impacting regional connectivity. According to the Northeast Council, only 30% of the road network in the NER is paved, and the average density of roads is about 40 km per 1,000 sq km, compared to the national average of 150 km per 1,000 sq km.

ii)   **Limited Flight Services:** Many airports in the NER have limited connectivity to major cities in Southeast Asia, restricting the flow of tourists and business travellers. As of 2022, only 15% of the international flights from Indian airports operated from the NER, indicating a significant gap in air connectivity.

b)   **Political Instability and Security Issues:** The NER has faced persistent insurgency and ethnic conflicts that create an unstable environment for investment and development initiatives under the AEP. According to the Ministry of Home Affairs, the NER recorded over 1,200 insurgency-related incidents in 2021, which

adversely impacts investor confidence and tourism.

c) Administrative Challenges: Bureaucratic inefficiencies and lack of coordinated efforts between state and central governments complicate the effective implementation of policies, including the AEP. A survey conducted by the Northeast Network in 2020 indicated that 60% of local businesses faced bureaucratic hurdles in accessing government schemes related to trade and investment.

d) Economic Constraints

i) Limited Financial Resources: The NER often lacks adequate financial resources for infrastructural development and capacity building, which are critical for realizing the objectives of the AEP. In 2021, only 10% of the total budget allocation for infrastructure development in the NER was utilized effectively, indicating financial mismanagement and planning issues.

ii) **Dependence on Agriculture:** The NER's economy relies heavily on agriculture, which is often affected by seasonal fluctuations, climate change, and inadequate support for farmers. As per the Economic Survey of India, agriculture accounted for 24% of the NER's GDP in 2021, while only 15% of the agricultural land is irrigated, limiting productivity and market access.

e) Cultural and Social Constraints

i) Cultural Resistance to External Influence: There is often resistance to the influx of foreign cultures, which can lead to tensions and pushback against initiatives under the AEP.A study conducted by the Indian Institute of Advanced Study found that over 70% of the indigenous population in the NER expressed concerns about cultural erosion due to globalization and increased tourism.

f) Language Barriers: The linguistic diversity of the NER, with over 200 languages spoken, poses challenges in communication and coordination for trade and cultural exchanges. According to the Census of India (2011), around 25% of the population in the NER speaks languages that are not widely understood outside their respective communities, complicating regional integration efforts.

g) Environmental Concerns: The NER is home to diverse ecosystems, and

development initiatives may threaten the environmental balance and lead to degradation of natural resources. According to the Forest Survey of India (2021), deforestation rates in the NER have increased by 2.5% over the past decade, raising concerns about the sustainability of infrastructure projects related to the AEP.

VIII. Conclusion:

The Act East Policy holds significant promise for the Northeast Region of India, but various constraints hinder its effective implementation. Inadequate

infrastructure, political instability, economic challenges, cultural resistance, and environmental concerns are critical barriers that must be addressed to maximize the potential of the AEP in the NER. Coordinated efforts from the government, local communities, and stakeholders will be essential to overcome these constraints and ensure the successful integration of the NER with Southeast Asia. Continued investment in infrastructure, capacity building, and cultural preservation will be pivotal in transforming the NER into a vibrant gateway to Southeast Asia.

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A Study on Urbanization in India: Current Challenges and Issues

Dr. Kotra Balayogi
Assistant Professor, Unity College of Teacher Education,
Dimapur, Nagaland, India
Email: drkotrayogi@uctedimapur.org

Abstract

Urbanization is a process of society's transformation from a predominantly rural to a predominately urban population. People move to urban areas in search of better job opportunities, health facilities, education, better growth and development of life, etc. Urbanization in India began to accelerate after independence, due to the country's adoption of a mixed economy, which gave rise to the development of the private sector and it is taking place at a faster rate in India. Economy residing in urban areas in India, according to 1901 census, was 11.4%. This count increased to 28.53% according to 2001 census, and crossing 30% as per 2011 census, standing at 31.16%. According to a survey by UN State of the World Population report in 2007, by 2030, 40.76% of country's population is expected to reside in urban areas. As per World Bank, India, along with China, Indonesia, Nigeria, and the United States, will lead the world's urban population surge by 2050. Rapid rise in urban population, in India, is leading to many problems like increasing slums, unemployment, transportation, sewage problems, water difficulties, higher rates of crime, housing, infrastructure, resources, pollution, politics, health hazards, etc. decrease in standard of living in urban areas, also causing environmental damage hence the present study assess and highlight on all the issues and challenges of 21st century urbanization. The findings shows that urbanization is not a problem in itself, but unsustainable and unplanned of it is bound to create socio, economic, political, etc. problems and are need to be countered in a planned and scientific manner. Urbanization is good for financial growth of any nation but careful planning, administration, etc. is required to develop cities, towns, etc. and offer basic amenities for healthy and successful life.

Keywords: Amenities, Challenges, Economy, Finance, Health, Issues, Population, Urbanization

Introduction

Urban areas have been recognized as engines of inclusive economic growth and of the 121 crores Indians, 83.3 crores live in rural areas while 37.7 crores stay in urban areas, that is approximately 32 % of the population according to the census of India, 2011.All the places which have municipality, corporation, cantonment board or notified town area committee and all the other places which satisfy that a minimum population of 5000 persons, at least 75 % of male main working population engaged in non-agricultural pursuits and a density of population of at least 400 persons per square kilometer The first category of urban units are known as statutory town and are notified under law

by respective State/UT government and have local bodies like municipal corporation, municipality, etc, irrespective of demographic characteristics.

Objectives

- ❖ Urbanization and its history in India
- ❖ Infrastructural and negative challenges in urbanization
- ❖ Urbanization in India and its current problems and Issues

Methodology

The study has been conducted based on the method of document review in accordance with the qualitative approach of research and has been done on the basis of the secondary sources of data like books, research journals, etc. towards "A Study on Urbanization in India: Current Challenges and Issues"

Urban Agglomeration (UA): An urban agglomeration is a continuous urban spread constituting a town and its adjoining outgrowths (OGs), or two or more physically contiguous towns together with or without outgrowths of such towns. An Urban Agglomeration must consist of at least a statutory town and its total population that is all the constituents put together should not be less than 20,000 as per the 2001 census. In varying local conditions, there were similar other combinations which have been treated as urban agglomerations satisfying the basic condition of contiguity like greater Mumbai.

Out Growths (OG): It is a viable unit such as a village or a hamlet or an enumeration block made up of such village or hamlet and clearly identifiable in terms of its boundaries and location. Some of the examples are railway colony, university campus, port area, military camps, etc., which have come up near a statutory town outside its statutory limits but within the revenue limits of a village or villages contiguous to the town and while determining the outgrowth of a town, it has been ensured that it possesses the urban features in terms of infrastructure and amenities such as pucca roads, electricity, taps, drainage system for disposal of waste water etc. educational institutions, post offices, medical facilities, banks etc. and physically contiguous with the core town of the UA like Central Railway Colony (OG), Triveni

Migration: It is the key process underlying growth of urbanisation; and the process of urbanization is closely related with rural to urban migration of people and in most developing countries of the world where rate of urban growth is relatively higher the urban-ward migration is usually high. Rural to urban migration is by far the major component of urbanisation and is the chief mechanism by which urbanisation trends all the world-over has been accomplished and after independence, urbanization in India is increasing at very high pace, but at the same time there are some problems, which are becoming barriers for balance, equitable and inclusive development.

Review of Literature

The world urbanization has a level of over 50% (Liddle, 2017) and people recognize that economic growth and urbanization are mutually reinforcing. Economic and other activities transform and shift from rural to urban sectors while urbanization is occurring. The urbanization trend is associated with the concentration of economic activities, production, and productivity. The progressed to high income with urbanization happens in almost country (Turok & Mc Granahan, 2013). Though there were well-spelt policies of urban development throughout the plan period. But there was a kind of reluctance (Ahluwalia et al., 2014 & Tiwari et al., 2015) to accept the need for urban transformation. Lack of explicit constitutional status of cities and towns which people referred as anti-urban bias (Raheja, 1973) and absence of empathy regarding urban issues in the early years of the plan period in India was a kind of residual nationalist legacy of developing villages (Batra, 2012). Some of the major health problems resulting from urbanization include poor nutrition, pollution-related health conditions and communicable diseases, poor sanitation and housing conditions, and related health conditions. These have direct impacts on individual quality of life, while straining public health systems and resources. Urban dwellers also suffer from over nutrition and obesity, a growing global public health problem. Obesity and other lifestyle conditions contribute to chronic diseases (such as cancers, diabetes, and heart diseases). Although obesity is most common among the wealthy, international agencies have noted the emergence of increased weight among the middle class and poor in recent years and it affects poverty through many different channels, for example, migration from rural to urban. This migration comes from the wage gap between urban and rural areas. In addition to rising wages of migrants to cities, remittances from migrants are a factor that alters income and influences rural household consumption, saving, and investment behaviour (Harris &Todaro, 1970; Lewis, 1954; Todaro, 1969). Therefore, migration directly affects household poverty (McKenzie & Sasin, 2007) Cities are also a major contributor to climate change, as they are responsible for around 75% of global greenhouse gas emissions (UNEP). Urban areas also generate considerable amounts of waste, much of which remains poorly managed and becomes hazardous to people's and ecosystems' health and air pollution, which is responsible for 9% of deaths worldwide and many health issues (Ritchie & Roser, 2017), is also a particularly acute problem in cities, due to transportation and production patterns. In a more general sense, urbanization is the concentration of population due to the process of movement and redistribution (Geruson& McGrath, 1977, p. 3). Here movement and redistribution refers to the spatial location and relocation of human population, resources, and industries in a landscape. Growth of city and economy was brought about by the political independence of the U. S., rapid expansion of overall population, development of railroads and rapid spread of automobiles, and the high level of agricultural productivity (Bairoch, 1988). Apart from its ecological or biological services, importance of soil is deeply rooted to the foundation of human civilization through cultural, immaterial, religious and spiritual belief systems (Winiwarter& Blum, 2006). Encroachment of urban land into nearby forested or vegetated areas, and the expansion of built up areas and transportation networks into steeper terrain destabilizing slopes lead to slope failures (Beek, Cammeraat, Andreu, & Mickovski, 2008, p. 18 19).

History of Urbanization in India

In 1687-88, the first municipal corporation in India was set up at Madras. In 1726, Municipal Corporation was set up in Bombay and Calcutta. In 1882,a resolution was passed and according to which, Panchayat were to be formed at village level, district boards, taluq boards and municipalities also came into existence and at that time Lord Ripon was Viceroy of India, and for this Lord Ripon is known as father of local self-government in India and Urbanization since independence has been focused through respective five year plans as follows: First two plan focused on institution and organization building and same was instructed to the states to do. For ex. Delhi development Authority, Town and country planning organization came during this period. Third plan (1961-66) was turning point in urban planning history, as it emphasized on importance of towns and cities in balanced regional development and it advised urban planning to adopt regional approach. It also emphasized the need for urban land regulation, checking of urban land prices, preparation of master plan, etc. Forth plan (1969-74), continued with the theme of third plan and development plans for 72 urban areas were undertaken. Regional studies in respect of metropolitan regions around Delhi, Mumbai and Calcutta were initiated. During Eighth plan, the Mega city scheme was introduced in 1993-94 covering five mega cities of Mumbai, Calcutta, Chennai, Bangalore and Hyderabad. Also IDSMT scheme was revamped through it infrastructural development programs for boosting employment generation for diverting migration from big cities to the small and medium towns and the ninth plan, continued with the schemes of the eighth plan and also emphasized on decentralization and financial autonomy of urban local bodies. A new program called Swarna Jayanti Shahari Rozgar Yojna (SJSRY) in 1997 with two sub plans like urban self-employment program and Urban wage employment programme that is targeting for urban poverty reduction and employment. It was decided by central government to revamp SJSRY in 2013 as National urban Livelihood Mission (NULM).

Infrastructural Challenges

Housing: Its provision for the growing urban population will be the biggest challenge before the government and the growing cost of houses comparison to the income of the urban middle class, has made it impossible for majority of lower income groups and are residing in congested accommodation and many of those are devoid of proper ventilation, lighting, water supply, sewage system, etc. For instance in Delhi, the current estimate is of a shortage of 5, 00,000 dwelling units the coming decades. The United Nations Centre for Human Settlements (UNCHS) introduced the concept of "Housing Poverty" which includes "Individuals and households who lack safe, secure and healthy shelter, with basic infrastructure such as piped water and adequate provision for sanitation, drainage and the removal of household waste".

Safe Drinking Water: The safe drinking water sources are also found to be contaminated because of water in the cities are inadequate and in the future, the expected population cannot be accommodated without a drastic improvement in the availability of water. The expenses on water treatment and reuse will grow manifold.

Sanitation: The poor sanitation condition is another gloomy feature in urban areas and particularly in slums and unauthorized colonies of urban areas and the drainage system in many unorganized colonies and slums are either not existing and if existing are in a bad shape and in bits resulting in blockage of waste water and unsanitary conditions lead to many sanitation related diseases such as diarrhoea and malaria. Unsafe garbage disposal is one of the critical problems in urban areas and garbage management always remained a major challenge.

Health conditions: The National Family Health Survey, 2006-07 has envisaged that a lot of women and children are suffering from nutritional anaemia and diseases like tuberculosis and asthma are occurring in good number and providing health care services to the growing urban population is major challenge before the government health care delivery system.

Urban Public Transport: As high income individual are buying more private vehicle and use less public transport and huge number of vehicles in cities is causing more traffic jam, which in turn decreases the efficiency of public transport. Also the penetration of public transport is less, which make people use private vehicle and public transport.

Major Findings

- ❖ More than half of unemployed youths live in metropolitan cities around the globe, and the percentage is even higher among educated people.
- ❖ Obesity is caused by increased caloric intake and decreased physical activity, something historically associated with wealth.
- ❖ However, people in urbanized areas of developing countries are also now vulnerable to obesity due to lack of physical space, continually sitting in workplaces, and excessive energy intake and low energy expenditure.
- ❖ Inadequate sanitation can lead to the transmission of helmets and other intestinal parasites.
- ❖ Population pressure on arable land contributes to the land degradation.
- ❖ The increasing population numbers and growing affluence have already resulted in rapid growth of energy production and consumption in India.
- ❖ The environmental effects like ground water and surface water contamination; air pollution and global warming are of growing concern owing to increasing consumption levels.
- ❖ Waste generation has observed cumulative trend equivalent to the development of urbanization and industrialization.
- ❖ This problem has become one of the primary urban environmental issues.
- ❖ A huge amount of waste is produced daily, and its management is an enormous task.
- ❖ The rapid increase in urbanization combines with anxious poverty to deplete and pollute local resource basis on which the livelihood of the present and future generation depends.
- ❖ The major effect of the urbanization on the environment is major increase in green house gasses.

❖ The concentration of Greenhouse gasses (GHG's) in the atmosphere has increased rapidly due to anthropogenic activities attached with the urbanization growth and resulting in an irrelevant increase in the temperature of the earth.

❖ Inadequate drinking water and sanitation infrastructure exacerbate health risks in urban centres.

❖ Urban residents tend to have better access to water-related services than their rural counterparts, but much of the population growth is in slums, where inhabitants are confronted with limited local water availability and high costs of water relative to income (Dill and Crow 2014).

❖ Many urban cities have seen a population explosion that can be hard to plan for.

❖ As a result, employment opportunities may dry up quicker than expected leading to unemployment.

❖ Housing problems may arise with a very high population density and can lead to poor housing conditions.

❖ Unemployment and poor housing is creating an influx of crime in urban cities as well. As it stands today, urbanization has several major drawbacks.

❖ Commerce and trade play a major role in urbanization.

❖ When more people move to towns and cities, one of the major challenges posed is in the transport system.

❖ More people mean an increased number of vehicles which leads to traffic congestion and vehicular pollution.

❖ Urbanization leads to improved social integration.

❖ Urban cities accommodate everyone without distinguishing them on then above factors.

❖ The city areas have more variety of choices for education, such as public and private schools.

❖ Urbanization allows for schools to have plenty of teachers to educate students.

Negative Effects of Urbanization

❖ When a lot of people move to one single city, then it will definitely make the place overcrowded. Besides commutation, housing also becomes a struggle in such a case.

❖ Due to less residential space and growing demands, the price of property starts to increase. Rent rate becomes high and competition becomes unmanageable.

❖ The outcome is that people fail to afford to live in urban cities.

❖ The problem of joblessness is highest in urban areas and it is even higher among educated people.

❖ The increasing relocation of people from rural or developing areas to urban areas is the leading cause of urban unemployment.

❖ Another major disadvantage of urbanization is that people have to resort to criminal activities.

❖ Poverty is the cause for crime rise and what leads to poverty is unemployment.

❖ Schools in rural areas don't have as many teachers because they aren't willing to teach.

❖ They would prefer to teach in schools in the city, leaving the schools understaffed and the children without many teachers.

❖ In addition to public and private schools, cities also have better colleges and universities.

❖ The schools have plenty of courses to choose from, so the students will pursue careers in their desired fields.

❖ Cities have better security than the country because police are available to patrol the area 24 hours a day.

❖ The communication is better, allowing the police to get to you faster.

❖ The dispatchers have more access to technology to help the police get to you.

❖ As human development fragments habitat, and leaves wildlife with no place to go, there has been an increase in human-wildlife conflict.

❖ Wildlife are hit by vehicles, birds and insects hit windows on cars and buildings and are killed, and sometimes wildlife come into human communities looking for food and other resources that they need to survive.

❖ Wildlife may be killed if they exhibit aggression/prey on pets or livestock.

❖ Only a few select hardy species can ultimately adapt and survive in an urban area and in such constant proximity to humans.

Suggestions

❖ Combat poverty by promoting economic development and job creation. Involve local community in local government

❖ Reduce air pollution by upgrading energy use and alternative transport systems.

❖ Create private-public partnerships to provide services such as waste disposal and housing.

❖ Plant trees and incorporate the care of city green spaces as a key element in urban planning.

Conclusion

Meeting the needs of India's soaring urban populations is and will continue to be a strategic policy matter for various national, state and city governments and promoting an efficient urbanization process in India will require a set of policies that will deal with land policies and basic needs, connective infrastructure and specific interventions. India also needs well managed cities with high quality services. Water supply and sanitation, urban transport and urban drainage are key local services to ensure the quality of living and sustained growth. Sustained energy supply, and affordable serviced land are services that are essential for the development of the economy. In order to make policies effective, a part from making people aware of environmental concerns, educational policies play a vital role in bringing environmental awareness through setting up of appropriate curricula, syllabi, etc. further, we need to develop a strong database on environmental issues, which our policy framers mostly lack. Time series data in this regard is mostly a dream even policy formulation and their effective implementation, can be achieved when there will be cooperation and coordination between departments/agencies.

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The Spread Effect of Urbanization in Nagaland: An Empirical Analysis of Dimapur Town

Imtikokla Ozukum
Research Scholar, Department of Economics
St. Joseph University, Chumukedima Nagaland
imtikoklao@gmail.com

Dr. Debojit Konwar
Associate Professor, Department of Economics
St. Joseph University, Chumukedima, Nagaland.

Abstract

The concept of Urbanization in recent years has become an integral part in the study of economic growth and development. Urbanization has an impact on the economy in numerous ways with positive as well as negative outcome. Its impact has spread to other areas in significant ways. In this paper, the spread effect of urbanization in Dimapur town has been analyzed through a random sample survey of 200 people which has been calculated using Krejcie-Morgan model. Further it has been examined by regression analysis with four independent variables such as money send to rural areas, money spend on agricultural development, on charity and on donations and urban to rural transformation has been taken as the dependent variable. It has been found out that the independent variable, sending money to rural areas contributes significantly to the spread effect of urbanization.

Keywords: *Spread Effect, Urbanization, Economic Development, transformation, Variable*

Introduction:

Urbanization is one of the essential elements for bringing about economic development. Urbanization is the process by which large numbers of people become permanently concentrated in relatively small areas forming cities[1]. It can also be termed as the transformation of unoccupied or sparsely occupied land into densely occupied cities. It usually grows through increase in population or from migration into urban areas[2]. The concept of spread effect and backwash effect was introduced by Gunnar Myrdal and Hirschman in their work on economic development in 1957 and 1959 respectively. The concept of spread effect can be referred as the filtering of wealth from central, prosperous areas to the peripheral and poorer regions. Basically, spread effects are the positive effects of urban areas to communities which are in close proximity with the urban areas[3]. It refers to the positive impacts of economic development that spread from one region to another. When there is economic development in a certain area, its benefits like improved infrastructure, better health care and education, increased income, modern agricultural

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1 Britannica https://britannica.com>topic>urbanization
2 Urbanization Understanding global change https://ugc.berkeley.edu
3 Spread Effect Oxford Reference https://www.oxfordreference.com

inputs, transfer of information and knowledge etc can spread to the nearby areas. The spread effect induces development from the core towards the periphery which further induces growth and development in the periphery[4]

Dimapur town as the commercial hub of the state has over the years witnessed a remarkable transformation through urbanization. Shift of population from rural and other urban areas to Dimapur town has happened at a rapid pace. Urbanization in Nagaland in general and Dimapur in particular is not merely a demographic shift but a paradigm of progress providing numerous opportunities on the one hand and generating several issues and challenges on the other. With this background, an attempt has been made in this paper to examine the multifaceted aspects of urbanization in Dimapur and its spread effect on the society and economy of the rural and other urban areas.

Objectives:

1. To study spread effect of Urbanization in Dimapur
2. To study the factors which facilitate spread of urbanization in Dimapur

Methodology: The study is based on both primary and secondary data. Primary data is collected through interview schedules and set of questionnaire in Dimapur town by selecting 200 respondents through Krejci-Morgan model and further examined by multinomial logistic regression analysis. Secondary sources such as government publications, websites, journals etc have been referred.

Profile of study area: Dimapur is the largest city and municipality of the state of Nagaland. The city is the main gateway and the commercial hub of the state with a population of 122,834 (2011 census).The male population consists of 52 percent while 48 percent of the population are females .The average literacy rate was 86 percent with 88 percent for males and 84 percent for females. 12 percent of the population is under 6 years of age. The city is located near the border with Assam along the banks of the Dhansiri River. Unlike other places of the state, Dimapur has a heterogeneous mix of people from all over the country[5].It is one of the fastest growing city in Nagaland where urbanization is an important factor which has led to modern lifestyles, better education and employment opportunities. However, rapid urbanization has led to increased traffic congestion, pollution, poor infrastructure etc which acts as obstacles for further growth and development.

Findings and Analysis: The rapid pace of urbanization in Dimapur town has been primarily driven by factors such as employment opportunities, access to better educational and medical facilities, improved standard of living etc. People in rural areas are adopting urban way of living. The process of development in urban areas has a profound impact on the rural community in various aspects such as increase in income and employment, standard of living, technological knowhow etc.

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4   Cumulative Causation Theory Pan Geography https://pangeography.com
5   https://en.wikipedia.org

Table 1: Profile of Sample Population in Dimapur

Heads	Sub heads	Persons	Marginal Percentage
Occupation	Govt sector	51	25.5%
	Private sector	72	36.0%
	Self employed	59	29.5%
	Agriculture sector	5	2.5%
	Daily wage earner	13	6.5%
Age	18-25 yrs	36	18.0%
	26-35 yrs	73	36.5%
	36-45 yrs	52	26.0%
	46-55 yrs	25	12.5%
	56 yrs and above	14	7.0%
Education	Middle school	6	3.0%
	Matriculate	9	4.5%
	HSSLC	29	14.5%
	Graduate	91	45.5%
	Post Graduate	65	32.5%

Source: Field survey 2023

From the given table, it is observed that out of 200 respondents, 51 of them are employed in the government sector which consisted of 25.5 per cent of the total respondents. A total of 72 people are employed in the private sector which is 36 percent while 59 respondents are self employed and 5 are in the agriculture sector consisting of 29.5 and 2.5 per cent respectively. Daily wage earner comprises 6.5 per cent of the total which is 13 respondents. Majority of the respondents are in the age group 26 to 35 years with 73 persons which is 36.5 per cent followed by those in the age group of 36 to 45 years with 52 people which is 26.0 per cent. The respondents in the age group 56 and above is the least with only 7.0 per cent (14 people).There are more educated people which can be seen from the table that the number of graduates is the most with 91 persons which is 45.5 per cent. They are followed by 65 post graduates which is 32.5 per cent and 29 HSSLC passed with 14.5 per cent. Thus the level of education is quiet high in Dimapur town.

Spread Effect of Urbanization in Dimapur : To study the functional relation between spread effects of urbanization with various independent variables in the perspective of Dimapur town, multinomial logistic regression analysis has been performed. In the regression analysis urban to rural transformation is taken as the dependent variables and factors such as sending money to rural areas, donations, charity and expenditure for agricultural development as independent variables. The results of the regression analysis carried out among 200 respondents in Dimapur town are furnished in the table below.

Table 2.1: Case Processing Summary

Heads	Sub heads	N	Marginal Percentage
Urban to Rural	Generation of employment	89	44.5%
	Increase in production	72	36.0%
	Improved standard of living	25	12.5%
	Increase in income and investment	14	7.0%
Sending money	Not sending money	119	59.5
	Rs 500-2000	32	16.0%
	Rs 2001-3500	13	6.5%
	Rs 3501-4500	13	6.5%
	Rs 4501-5500	23	11.5%
	Rs 5501 and above	0	0%
Donations	Rs 100-300	38	19.0%
	Rs 301-500	51	25.5%
	Rs 501-700	50	25.0%
	Rs 701-900	8	4.0%
	Rs 901 and above	53	26.5%
Charity	Rs 100-300	51	25.5%
	Rs 301-500	54	27.0%
	Rs 501-700	33	16.5%
	Rs701-900	17	8.5%
	Rs 901 and above	45	22.5%
Agriculture development	Rs 500-2000	129	64.5%
	Rs 2001-3500	28	14.0%
	Rs 3501-4500	12	6.0%
	Rs 4501-5500	8	4.0%
	Rs 5501 and above	23	11.5%
Valid		200	100%
Missing		0	
Total		200	
Subpopulation		95	

Source: Field survey 2023

Table 2.1 shows urban to rural transformation where respondents who cited generation of employment in private sector as an important factor that facilitate spread effect is the highest with 89 respondents which is 44.5 percent followed by increase in production with 72 respondents which is 36.0 per cent. Increase in standard of living is the third factor with 25 respondents at 12.5 per cent. Increase in income and investment is the least important factor with 14 respondents which is 7.0 per cent. The respondents who do not send any money to rural areas are the highest with 119 persons which is 59.5 per cent. Those sending Rs 500 to 2000 is 32 with 16.0 per cent. This is followed by 13 persons each who send Rs 2001 to 3500 and between Rs 3501 to 4500 respectively with 6.5 per cent each. 23 respondents send Rs 4501 to 5500 which is 11.5 per cent and none of the respondents send more than Rs 5501 and above which is 0 per cent. The number of persons donating between Rs 901 and above is the highest with 53 people which makes 26.5 per cent. Secondly 51 persons send Rs 301 to 500 .The least is only 8 persons who send between Rs 701 and 900 which is 4.0 per cent. For charity, the highest is 54 persons who spend between Rs301 and 500 with 27.0 per cent followed by 51 persons who spend Rs 100 to 300 with 25.5 percent. The least is 17 persons who spend Rs 701 and 900 which is 8.5 percent. The highest number of respondents is 129 persons which is 64.5 per cent who spend between Rs 500 and 2000 on agriculture development. A total of 28 respondents spend Rs 2001 to 3500 which is 14.0 per cent. The least is 8 persons who spend between Rs 4501 and 5500 which is 4.0 per cent. Total respondents who spend Rs 5501 and above is 23 which is11.5 per cent. Thus, we see that urbanization in the town and its benefits has trickled down to other areas as well.

Table 2.2: Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	Df	Sig
Intercept only	327.378			
Final	260.353	67.025	48	.036

Table 2.2 shows that the model fitness was assessed using the chi square statistic. The chi square value was 67.025 and the p=.036<0.05. This proves that there is a significant relationship between the dependent variable and the independent variable in the model.

Table 2.3: Pseudo R-Square

Cox and Snell	.285
Nagelkerke	.315
McFadden	.143

Table 2.3 represents the pseudo R square that measure the Cox and Snell (0.285) which indicates that there is a relationship of 28.5 per cent between the dependent and independent variables. Nagelkerke R square (0.315) indicate a relationship of 31.5 per cent between the dependent and independent variables and McFadden (0.143) indicating 14.3 per cent relationship and prediction.

Table 2.4: Likelihood Ratio Tests

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	Df	Sig
Intercept	2.604E2	.000	0	
Sending money	284.108	23.755	12	.022
Donations	271.426	11.073	12	.523
Charity	273.593	13.239	12	.353
Agriculture development	274.163	13.810	12	.313

Table 2.4 shows the likelihood ratio tests proves that the likelihood or predictor variables such as sending money (p=0.022<0.05) is significant which proves that the predictors contribute significantly to the final model. The other independent variables such as donations (p=0.523 >0.05), charity (p=0.352>0.05) and Agriculture expenditure (p=0.313>0.05) are not significant as their p values are higher than 0.05 The model fitting information proves that there is significant relationship between urban to rural transformation and sending money, money spend on charity, donations and on agricultural development. The Cox and Snell, Nagelkerke and McFadden R square also indicate existence of relationship and prediction between the dependent and independent variables. But the likelihood ratio tests indicate that sending money is the only independent variable which contributes significantly to the transformation of rural areas. In other words, sending money is the only variable which has strong spread effect. Other independent variables such as charity, donations and agriculture expenditure do not have any significant impact on the spread effect of urbanization.

Recommendations and Conclusion: Factors which facilitate spread effect of urbanization need to be further developed for mutually beneficial development between urban and rural areas. These factors are the economic opportunities such as job creation and increase in income and employment in urban areas which will ultimately create new economic opportunities in rural areas and diversify their livelihoods. Improvement in educational and medical facilities can improve the standard of living in remote areas in a significant way. Urbanization can also help rural areas through knowledge and information flows, improved infrastructure, agricultural support,

better housing and sanitation, Banking and credit facilities, development of industries, training centres, implementation of both rural and urban development schemes and programmes etc. The state government, NGOs, village development boards and social and political leaders need to work cohesively and selflessly for the development of both rural and urban areas and deal with the numerous challenges of urbanization.

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ECONOMIC VIABILITY OF OYSTER MUSHROOM CULTIVATION AS A SOLUTION FOR UNEMPLOYMENT IN NAGALAND

Temsunaro Imsong
Research Scholar, Department of Economics, St. Joseph University
*Corresponding author email: naroims81@gmail.com
Postal address: Ward 9, Chumoukedima, 797103

Dr. Praveen Dukpa
Assistant Professor, Department of Economics,
St. Joseph University, Chumoukedima

Abstract

With the unemployment rate of 7.8% placing Nagaland in top 10 states in India with the highest unemployment rate, oyster mushroom cultivation with its low investment, high profit and quick return can help to bring a change in the unemployment status of the state. Mushroom as a vegetable is healthy, nutritious, calorie free and has medicinal properties which have been proven to maintain blood sugar and blood pressure levels, lower cholesterol levels and protection against cancer etc. Nagaland due to its favorable climatic condition, availability of raw materials and labour makes it ideal for mass scale mushroom production. The main objective of this study is to access the foretaste of oyster mushroom cultivation in reducing a small fraction of the current unemployment status of the state, which by evaluating the benefit cost ratio, oyster mushroom cultivation as a business venture was found to be profitable. A total cost of Rs.1,08,600 for 1 shed with a capacity of 500 mushrooms was spent by the mushroom farmers. From the analysis, it was estimated that the farmers gets a gross return of Rs.1,12,500 and a net income of Rs.85,400. A benefit cost ratio of 1.04 was calculated from which we can conclude that oyster mushroom cultivation is a profitable business with its low investment and quick returns with high profit feature. As far as solving the problem of unemployment in the state, oyster mushroom cultivation can go a long way in reducing a certain percentage of unemployment rates in the state.

Key words: Mushroom, Oyster mushroom, Nagaland, Unemployment, Benefit-cost ratio

Introduction

Mushroom is a spore bearing fruiting body, which is the only reproductive part of the organism. They have structures similar to plants but unlike plants they lack chlorophyll and thus cannot produce their own food. They sustain by absorbing the soluble substances that they degrade using the enzymes that they produce. They are mostly found in forests and in the gardens growing on rotten log and decaying organic matter[1]

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1   Mushroom Fungi Nutritional Content Biology Essay (2018, November). *UKEssays.*
https://www.ukessays.com/essays/biology/mushroom-fungi-nutritional-content-biology-essay.php?vref=1

Mushrooms can be classified into edible and non- edible, or poisonous ones. Most edible mushrooms are both wild and cultivated mushrooms that have been consumed by humans which can be dated back to 4000-6000 years back. The Egyptians, Greeks, Russians, Mexicans, Aztecs, Mayans and many more civilizations have records of mushrooms[1]. Scientists have described over 14,000 species of mushroom, however, that is likely only a certain fraction of mushroom species in the world[2]. From 14,000 species of mushroom, there exist over 3000 species of edible species of mushrooms; out which 200 species are commercially or scientifically cultivated and 20 species of the mushrooms have been cultivated on an industrial scale. The most popular mushroom species that are commercially grown all over the world are button mushroom (Agaricus Bisporus), oyster mushroom (Pleurotus Species), paddy straw mushrooms (Volvariella Species), enokitake mushroom, brown clamshell mushroom and white beech mushroom.

The top 10 mushroom producing countries in the world are China, Italy, USA, Netherlands, Poland, Spain, France, Iran, Canada and UK[3], while the top 10 mushroom exporting countries in the world are Vietnam, Russia, Turkey, India, Ukraine, Indonesia, Portugal, Pakistan, France and China[4]. From the data we can see that India may not be the largest mushroom producing country in the world but has placed itself among the top 10 largest exporter of mushrooms in the world.

Table 1: Mushroom production data of India (2018-2022)

Country	Production (In metric tonnes)			
	2018	2019-20	2020	2021-2022
India	155.553	201.088	225.924	258.80

Source: ICAR- DMR Annual Report 2021

From the above table it can be evaluated that there is an unprecedented growth of mushroom production in India amounting over 66.37% from 2018-2022. From the data we can observe that the demand and consumption pattern of mushroom in India had a tremendous blowout within 4 years. Thus, we can conclude that mushroom cultivation has a promising future in India and this can be proved from the existing production data and India's placement as one of world's top mushroom exporting countries.

Nutritional and health benefits: Mushrooms contain a wide range of proteins, vitamins, minerals and carbohydrates. Almost all edible mushrooms provide the same nutrients per serving. The table below highlights the amount of nutrients contained in mushrooms per 100 gm of serving.

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1   A brief cultural history of the mushrooms (2022, October, 17). *Deutsche welle* https://www.dw.com/en/a-brief-cultural-history-of-the-mushroom/a-63461380

2   Mushroom (2024, October 14). *Wikipedia.*https://en.wikipedia.org/wiki/Mushroom

3   Arora, Akansha (2024, September, 7). Top 10 Mushroom producing countries in the world. *Adda247 current affairs.* https://currentaffairs.adda247.com/top-10-mushroom-producing-countries-in-the-world/

4   Global mushrooms Top 10 Exporters in 2023- Tendata(2024, April 10). *Export News.*https://www.tendata.com/blogs/export/5607.html

Table 2: Nutrition in Mushroom per 100 gm.

Nutrients	Per 100 gm of serving
Water	92.4 gm
Energy	22 kcal
Carbohydrates	3.26 g
Calcium (Ca)	3 gm
Phosphorus (P)	86 gm
Iron (Fe)	0.5 mg
Magnesium (Mg)	9 mg
Potassium (K)	0.318 mg
Selenium (Se)	9.3 µg
Sodium (Na)	5 mg
Zinc (Zn)	0.52 mg
Vitamin C	2.1 mg
Vitamin D (D+ D3)	0.2 mg
Folate	17 µg
Chloline	17.3 mg
Niacin	3.16 mg
Fiber	1 g
Protein	3.09 g
Copper	0.318 mg
Riboflavin	0.402 mg
Vitamin B-6	0.104 mg
Vitamin B-12	0.04 µg

Source: USDA

As far as medicinal and health benefits of mushroom is concerned, the health boosting nutrient content as well as the existence of anti-oxidants can go a long way in contributing to human health, lowering the blood pressure because of its rich source of potassium and its anti-inflammatory effect due to the content of selenium, Vitamin D and Vitamin B6[1]. Even though more studies are necessary, the antioxidants found in mushrooms are found to help prevent numerous types of cancer some of which are prostate, colorectal and breast cancer. Providing 1 g of fiber, mushrooms can help manage and lower blood glucose levels. Along with fiber, potassium and Vitamin C in mushrooms may decrease the risk of hypertension and cardiovascular diseases. Folate or folic acid in mushrooms can serve as supplements during pregnancy to boost fetal health[2]. Due to all these nutritional and medicinal properties, mushrooms are a valuable asset for the welfare of humans.

Mushroom cultivation in Nagaland: Nagaland is a biodiversity rich state packed with different species of mushrooms edible and non-edible ones. While some edible wild mushrooms are locally found others are commercially grown. Mushrooms that are commercially grown are oyster mushroom, shiitake mushroom, paddy straw mushroom and button mushroom[3]. Why mushroom cultivation is favourable in Nagaland and its demand is increasing can be proved from the availability of raw materials, labour and favourable climatic conditions in the state making it possible for year round cultivation. The rise of demand in mushrooms is seen because of its nutritional and health benefits. They are often called the 'white vegetable' or the 'boneless vegetarian meat' because of its high content of proteins, vitamins and fibers which is higher than most of the fruits and vegetables[4].Moreover, the climatic conditions in Nagaland make it more favourable for year round mushroom cultivation.

Rationale behind oyster mushroom cultivation: The prevailing weather condition makes Nagaland favourable for commercial cultivation of mushrooms such as oyster mushrooms, shiitake mushroom, paddy straw mushroom and button mushroom. However, oyster mushroom is more favoured than other commercially grown mushrooms as it is easy to grow; it has a faster growth rate, its cost effective nature due to the easy availability of raw materials and initial investment, it has a high content

1   Health benefits of mushrooms (2023, September 08). *WebMD*https://www.webmd.com/diet/health-benefits-mushrooms

2   Ware, Megan (2024, February,14). What to know about the health benefits and nutritional values of mushrooms. *Medical News Today.* Retrieved from https://www.medicalnewstoday.com/articles/278858

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4   Area development scheme- Mushroom Cultivation (2018). NABARD. https://www.nabard.org/auth/writereaddata/careernotices/0910185521AJS%20%20Revised%20MUSHROOM%20ADS%202018-19%20BALOD.pdf

of nutrients like proteins, fiber, vitamins and minerals and also due to its medicinal properties.Wastes such as paddy straws and saw dust are largely burnt by the farmers, which causes air pollution. However, these raw materials can actually be used for the cultivation of mushrooms. This kind of bioconversion exercise can greatly reduce environmental pollution. Mushrooms are widely accepted as delicacy in the menu of the Naga people. Hence there is sizeable local demand for oyster mushroom produce. Besides it has high potential for export. Oyster mushroom cultivation can be a labour intensive activity. Therefore, it will serve as means of generating employment, particularly for rural women and youths in order to raise their social status. It will also provide additional work for the farmers during winter months when the farming schedule is light. Oyster mushroom growing is eco-friendly as it involves re-cycling of plant wastes to produce rich food and the spent mushroom substrate can be used to produce organic manure.

The most important if not the sole reason of oyster mushroom cultivation gaining momentum in Nagaland is because of its economic benefits. It can be a source of income for rural population and can be a promising business venture. It can help in tackling the unemployment problem in Nagaland where the state stands at an unemployment rate of 7.8 percent taking its place in top 10 states in India with the highest unemployment rate.

On the basis of manpower, infrastructure, raw materials and market, a study was conducted selecting by selecting 20 oyster mushroom cultivators in Dimapur and Chumoukedima districts of Nagaland. However it should be kept in mind that the economics of mushroom cultivation differs from seasonal farmers and year round farmers varying across regions which will have a bearing on the benefit cost ratio.

Objectives: The objective of this research is to analyse the cost and returns of oyster mushroom production.

Methodology: Personal interview has been conducted with the mushroom farmers to evaluate the cost and profitability of mushroom cultivation. For estimating the total cost, the following analysis was used:

Total cost= TFC+ TVC

Fixed Cost: Cost of building the shed, depreciation, balance weights and small equipment are all included in fixed costs

Variable cost: Cost of straw, spawn, chemical, labour, electricity, poly bags and miscellaneous items etc are included in Variable cost

To check the profitability of mushroom cultivation, Benefit- cost ratio was estimated

$$BCR= \frac{Gross\ Return}{Total\ Cost}$$

Result and discussion
Economic analysis of oyster mushroom cultivation

Table 3: Cost incurred on mushroom cultivation

1.	Fixed cost/ Non- recurring cost	Amount (₹)
	Shed (capacity of 500 mushroom cylinders)	50,000
	Shredder	25,000
	Spray machine	2500
	Balance weight	2000
	Small equipments	2000
Total Fixed Cost (TFC)		**81,500**
2.	Variable Cost/ Recurring cost	Amount (₹)
	Paddy straw (1 load)	7000
	Spawn (@ ₹150 per kg)	7500
	Labour	5000
	Poly packs (@ ₹210 per kg)	2100
	Lime	3000
	Electricity	500
	Miscellaneous	2000
Total Variable Cost (TVC)		**27,100**
Total Cost (TFC+TVC)		**1,08,600**

Source: Field Survey (2024)

From the table given above it can be estimated that a total cost of ₹.1,08,600 were estimated expenditure for mushroom cultivation. While, ₹. 81,500 were the estimated total fixed cost and ₹. 27,100 were the estimated variable cost, with the highest variable expenditure on straw i.e., 25.64%, the other on spawn i.e., 24.47% and on labour i.e., 18.32% of the total variable. Other expenditure is estimated at less than 10%.

Table 4: Average cost and Return on oyster mushroom cultivation

Average cost and Return	Amount (₹)
Total Price of mushroom (₹150per kg)	1,12,500
Gross return (per kg)	1,12,500
TFC	81,500
TVC	27,100
Total Cost (TFC+TVC)	1,08,600
Net income	85,400
B:C Ratio	1.04

Source: Field Survey (2024)

From table 4, we can depict that in a low cost mushroom cultivation of 500 mushroom cylinders the farmers can get a gross return of Rs. 1,12,500 and a net income of Rs. 85,400. From this we can say that a framer can get a benefit cost ratio of 1.04. Thus, we can conclude that oyster mushroom cultivation is a profitable business with low investment and high return.

Risk and challenges: As every business is prone to risks, mushroom cultivation as an agri-business is not shy of risk and challenges. Dimapur and Chumoukedima being a hot region is prone diseases, mould infestation and pests especially flies which contaminates the mushroom spawns. As a result there are more seasonal farmers that prefer to cultivate mushroom during the winter than to cultivate whole year round. Lack of appropriate marketing facilities is another problem. There is huge demand of oyster mushrooms in the state however the mushroom farmers are unable to meet the huge influx of demand in the market. Another major problem is high cost and lack of good quality spawn in the market, there is lack of storage facilities and mushroom processing units to enhance the shelf life and quality of the mushrooms. The price of labourers also constitutes a major section of the total cost. There is lack of high skilled labourers and if available they are expensive while unskilled labourers may cause hindrance in the cultivation process.

Suggestions: Various solutions were suggested by the farmers which were increasing the mushroom cultivation and consumption through campaigns, making available high quality inputs, having a quality control marketing body for ensuring and checking the quality of the mushrooms from different sources and regulation of the mushroom prices in the market. Providing easy access to credit facilities at a lower interest rate that will help in the growth of mushroom production in the state to meet the increasing demand is another suggestion by the farmers.

Conclusion: Even though oyster mushroom cultivation has a huge potential in the state, the mushroom cultivators are facing the huge challenge of fulfilling the increasing demand of mushroom in the market. This is probably due to the lack of adequate financial support because of which the oyster mushroom cultivators are unable to increase the production capacity of their farms. Among the other agro- economic crops, oyster mushrooms have been profitable because of its low investment and high return and the climatic condition of Nagaland makes it all the more a favourable environment to grow mushrooms year round.

With an estimated total population of 41.14 lakhs in 2023 (Census 2011) and an unemployment rate of 7.8%, commercial mushroom cultivation can become a tool of self- employment for the unemployed as well as for rural farmers that will ensure a sufficient family income due to its economic properties of low investment and high profit. Oyster mushrooms in Nagaland can be sold as high as Rs. 150-200 per kg. Nagaland has a good market for mushrooms. Potential buyers are domestic consumers as well as various restaurant and hotel chains. Thus, under the preview of this study, we can conclude that oyster mushroom as a high nutrient vegetable having innumerable health benefit, has high economic advantage which can serve as a medium for income generation for individuals as well as revenue for the state with possible exports.

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IMPACT OF EDUCATION ON EMPLOYMENT AND INCOME OF WOMEN WORKING IN THE TERTIARY SECTOR

Ms. Shilumongla T. Sangtam
Research Scholar, Department of Economics,
Nagaland University, Lumami, Zunheboto, Nagaland

Dr. Chandayya Makenni
Assistant Professor, Department of Economics,
Nagaland University, Lumami, Zunheboto, Nagaland

Abstract

The Work Participation Rate (WPR) of female in the economy has been lesser than that of male. There has been progressive dynamics in education. The performance of the economy is observed to be shifting from primary to tertiary sector. While primary sector still dominates in employment, its share in the economy both in terms of output and employment is seen to be declining. The share of tertiary sector is on the rise in both employment and contribution to output. The level of economic growth and development determines the level of employment. Education has always been taken into account in studies of employment and income. The participation of women in the economy cannot be neglected as they occupy a significant proportion in the population. Therefore, the objective of the paper is to study the trend of women's education and employment and analyze the impact of education on the level of employment and income of women working in the tertiary sector. For the purpose of the same, a study was conducted in Dimapur district to study the employability of women in the tertiary sector. A sample of 30 households were collected and analyzed using statistical tools to establish association between education and employment. The findings of the study shows there is a relation between education and employment and income of women working in the tertiary sector.

Keywords: Nagaland, Dimapur, Women, Employment, Income, Education

1.   Introduction

Education teaches a person how to read and write. If an individual knows how to read and write then he/she gets access to information. It shapes the speech and communication of a person thereby bringing skills and productivity. Education enhances the use of technology and machines. Education as a human capital investment can contribute to economic development (Kumar, 2021). Education is the process of acquiring knowledge ,skills, experience and learning. Education produces a skilled and knowledgeable workforce and contributes to social, economic and cultural development (Verma et al.,2023).

Education is a human right, a powerful driver of development, and one of the strongest instruments for reducing poverty and improving health, gender equality, peace and stability(World Bank). It further states that for individuals, education promotes employment, health and poverty reduction. For societies, it drives long-term economic

growth, spurs innovation , strengthens institutions and fosters social cohesion. UNDP has defined human development as a process of enlarging people's choice as well as raising the level of well-being. It recognizes the choice to lead a long and healthy life, the choice to acquire knowledge and be educated and to have access to resources needed for a decent level of living. The indicators of human development thus lead to education as the key indicator for the human resource development or human development which will lead to producing a skilled labor and lead to economic development. This leads to the positive relationship between education and economic development by way of human development.

The investment in human capital starts with education in the family which is the foundation of good society and economic success (Oztuk, 2001). The investment on human capital has been specifically stressed on education and the types of jobs and wages one can get is decided by the training and wages which schooling can produce. This establishes an assumed relationship between education, productivity and wages (O'Donnell, 2006).

2.Review of literature

The goals of UN SDGs, comes up with means for social progress, development and sustainability. Quality education can create healthier workforce thereby facilitating employability, development and sustainability. Cerf (2023), states that the SDGs represent global action with targets to address societal issues that include education, economic and health lags particularly in the socio-economic challenged Sub-Saharan, African and the low and middle income countries. There is established a 'social-education-economy-health nexus' where the quality education and health will lead to empowerment of society and sustainability, and bring economic growth and development.

2.1 Women's Education: O'Donnell (2006),stated that educating the girls and women as the single most effective investment that a developing country can make. Even if a woman does not work outside family, educated women brings in a lot of remunerations in the form of better health and nutrition of children and family, lower infant mortality and improved education of the children.

Hill & King (1995),statedthat education empowers a human being and so women are also empowered with education . It gives better scope for women to enter in the labour market, leading to higher employability and wages. It gives decision making power to women and uplifts her standing in family and society. A mother who is educated can produce educated and skilled children thereby increasing the human capital of the family.

Duflo (2012),on a study on the nexus of women education and economic development stated women's empowerment and economic development are closely related but not sufficient to ensure significant progress. However in its analysis of whether women empowerment can cause economic development makes a mention of education as a first dimension of women empowerment (as mentioned by Wolfensohn) where education can command higher wages and better access to jobs.

O'Donnel (2006), stated education and human capital as a dependent factor in the labour market and suggested for ways for improvement in labour market situation of girls based on areas where selections are being done on the basis of type of schooling or years of schooling .

2.2 A study on BRICS, China: Shuangshuang et al. (2023), states on the positive association and interconnection between education and female labour force participation; education and GDP; education and digitization leading to higher participation in female labour market and empowering of women. Education becomes means for women's employability as women with higher education are gaining access to internet based employability as the digital economy in BRICS countries expands. Female education is found to be positively interconnected with female labour force participation in the BRICS economies.

Liu (2022),observed that the increased women empowerment propelled by education might accrue due to the structural changes and economic transformation that has been happening in the Chinese economy post the industrial period where the tertiary sector has become a dominant factor. The same empirical study also analyzed on the well being of Chinese women determined by education, material well-being, identity and capabilities. Capabilities enables women to take on family and societal responsibilities which otherwise in Confucianism idealogy of China , women were to do only obeying role. Education is found to be directly related to income, health, hierarchy,religious practice and well-being. Therefore, here it is understood here that education has worked for the economic and social well-being of women and that changing structural transformation in the country's economy might lead to increased labour participation of women thus empowering them.

2.3 A study on India: Even in the India economy, structural changes and economic transformation has been happening. Lahoti & Swaminathan (2016) , stated that during the last 25 years, Indian economy has undergone a lot of structural changes and socio-economic transformation. There has been urbanization, educational level rising and decreased fertility rate. The key drivers of India's economic growth has been that of the service sector. The employability in the service sector requires a lot of skills that many women do not possess and it is seen a decline in the economic activity of women which is depicted by fall in labor force from 1983-84 to 2011-12. Therefore it is suggested that education opportunities can be expanded so that girls also avail technical, vocational skills that may improve employability.

Parida et al. (2023) , analyzed on the Discouraged Labour Force(DLF) in India stated that the higher economic growth and the last two decades failed to create quality jobs for its growing educated job seekers. The study also mentioned on the DLF among women where through existing literatures, several reasons were pointed on the reasons for women in India not entering the labour market. The stated reasons includes household works, socio-cultural norms, increase in the households income and education and lack of training. It further states that the declining DLF in India during 2017-18 is due to women who stopped looking for jobs. The rising population, lower fertility and increasing

educated youth demands for the industrial development, increase in real wages by addressing skill issues becomes necessary. This will help growth of job opportunities for educated and trained job seekers during the phase of transformation of the agrarian workforce to non-farm sectors.

Kumar & Mondal (2024), attempted to analyze the empowerment of women by taking several parameters where education as one of parameter was found to be playing an effective role in uplifting women empowerment. The study found Goa to be in the top position in women's empowerment and amongst the Northeastern states ,Sikkim. The reason for this good performance has been stated due to government support in infrastructural schemes of education, health, employment. It is witnessed that female literacy and education positively impact the employment , work participation, freedom of movement and decision making power of women.

2.4 On State's Economy: Vero (2018), stated on the Nagaland's economic features through its structural changes and occupational structure and observed that there is a dominance of the tertiary sector in the State's NSDP with agriculture coming next to tertiary sector. It also stated on the declining trend in primary sector both in employment and NSDP which is due to change in occupational structures and the work force participation shifting directly from primary to tertiary sector. The secondary sector is almost stagnant both in employment as well as in NSDP's share.

As per Nagaland Economic Survey (2019-2020), agriculture and allied activities is the largest employer of workforce and 60% of population depends on agriculture for their livelihood and over the years , the tertiary sector has become the most prominent sector in terms of percentage contribution of GSDP. The tertiary sector is estimated to have increased its contributory share to the GSDP from 59.89% in 2017-18 to 62.54% in 2019-20(AE). The Nagaland economy is expected to grow by 7.73 % at constant price in the fiscal year 2023-24 as per advance estimate of GSDP. The quantum of the economy in real terms is estimated to have increased from Rs. 19903 crore in 2023-24(P) to ₹21442 crore in 2023-24 (AE). The percentage contribution to GSDP in 2023-24 as per advance estimate shows that tertiary sector is the major contributor with 63.57% ,the primary sector with 24.81 % and the secondary sector with 11.61 %. This suggests the state economy being driven by tertiary sector.Vero (2018),in an article, studied on the post reform Nagaland's economy and observed that the tertiary sector's proportionate share in both NSDP and workforce have increased post the reform period. The NSDP has showed positive healthy growth where the per capita income could not. A minor shift in structural and occupational structure seems to happen where the tertiary sector gained the most in NSDP and employment. This also is an implication of the state's dependence on public services and institutions. It is also observed that education has a strong impact on the growth particularly in the level of income and labor productivity though not automatic. Nagi & Kholi (2023), in their study on youth unemployment in Nagaland suggested that integrating skills training with education as one of the measures for employment. Jamir & Ezung (2020),studied on the impact of education on employment, income and poverty in Nagaland and analyzed the relation between education and employment and also the

relation between education and income and found a positive relation between education and employment & income.

2.5 Women's Education in the State: As per Census (2011), the literacy rate of Nagaland is 79.6% in which the share of female is 76.11% and that of male is 82.75% .Gender Statistics, Nagaland (2023),   states on a commendable advancement in female literacy reflecting a significant increase of 14.6% over the past ten years ie, since 2001. While the state's female literacy rate of 76.11% surpasses the national average of 64.6%, a gender gap of 6.64% persists. As per the birth order during the 2021, the majority of the mothers are matriculate at 71.91%. Only, 1.29% of mothers in rural areas are graduates and above. In urban areas 2.40 % are graduate. This shows the poor numbers of educated mothers in the State.

Angami (2020), suggests that women should have increased access to education and employment to increase its bargaining power which would uplift their status, decision making and family welfare which ultimately leads to economic growth and development in the long run.

Imcharenla (2016) analyzed on the impact of education on employment and income of women which was found to be significant for urban areas and non-significant for rural areas. The same study supported that women's contribution to family income raises the standard of living, betters children's education and provides better food for family. The study suggested giving more attention to female education, skills and vocational trainings to enable better jobs for women and enhance all round development of the society.

3. Statement of the problem

The SDG goal 5 includes undertaking reforms to given women equal rights to economic resources, as well as access to ownership and control over forms of property, financial services, inheritance and natural resources in accordance with national laws. Shimray (2004), states that in Naga's patriarchal society, the father is the head of the family and only male members can inherit ancestral property (read as agricultural land) and no female can inherit the family landed property. Duflo (2012), states that the rights to economic resources as well as access to ownership and control over land and other of property, financial services, inheritance and natural resources is crucial for economic progress. Vero (2020), stated on the claim that in Naga society women's status is better compared to their counterparts in mainland India as open discrimination against women is lesser. However it is stated on the various aspects of gender disparities one such being education where for an instance in rural areas male were more privileged. Female were expected to stay home and do household chores and look after sick family members. Moreover it is stated that in Nagaland private schools have better quality and the enrollment is better for boys in private schools than girls. Women still is behind in literacy rate and workforce participation.

Therefore for inclusive growth and greater development, with the prevailing economic activities and status of women in education and society, this study is an attempt to study

on women's education and its impact on employment and income of women working in the service sector which might uplift their economic and social status.

4. Significance of the study: SashimatsungOzukum (2015),stated that in Naga society, the participation of women is always kept in positive aspect that allows them to maximize their possible talent and give participation in socio-cultural realm equally. Nagaland Statistical reports shows that in recent years the enrolment of female is more than that of male and there is a growing rate of literacy. In this light, it becomes important to study and analyze the status of women's education and women employment .Therefore, it is attempted to study the impact of education on employment and income in the service sector since the service sector dominates the state's economy through its GDP share. For the purpose of the study, Dimapur district has been selected. Dimapur is comparatively a more developed district of Nagaland. Dimapur is known as the commercial hub of Nagaland where wide range of economic activities are present. The workforce participation rate in Dimapur is 50.5 % for male and 28.5% for female. Therefore, the present study will analyze the impact of women's education on employment and income of women working in service sector in Dimapur.

5.Profile of the area of study: Dimapur district is selected as the study area. Dimapur is considered as advanced district of Nagaland and is the commercial hub of Nagaland with wide range of economic activities. It came into being as a district in the year 1997. With a distance of 74 km from Kohima, it has geographical proximity and advantageous ease of connectivity with the state capital. The thriving market, high level of urbanization, road, rail and air connectivity produces a potential for varied economic activities and employment.

According to 2011 census, its area is 927 sq.km, with density of 409 per sq.km and stands at 5.59% share to total geographical area. The population of the city is 378811.Male constitutes 52% and female constitute 48%. The sex ratio is 919 per 1000 males. The literacy rate is 87.54% with male 84.79% and female 81.77%. Besides, the Naga ethnic groups, the other prominent groups in the city includes the Bengalis, Assamese, Oriyas, Napalese, Biharis, Meities, Marwaris, Punjabis, Tamils, Telugues and Keralites and also Tibetan traders.

6. Objective of the study :

1)   To study the impact of education on women employment and income in service sector
2)   To observe the workforce of the State and trend of women's education and women working in private, public and business sector/self-employed

7. Methodology and data collection: In this study, both primary and secondary sources of data were used. For the collection of the raw data, the women working in the service sector were categorized into government sector, private sector and business sector/self employed .A total of 30 samples were collected which was further sub divided into 10

each for each sector. Mixed sampling method was used. Well structured questionnaire was used to collect the responses and views of the respondents. The Secondary data was based on the census of India, 2011, statistical reports of the Directorate of Economics and Statistics, Gender Statistics, 2023, Nagaland State Government Employees Census Report, 2012.

The variables used are education, income, and employment .Employment is dependent variable and education is independent variable. Correlation and simple linear regression is used to determine the association between the dependent and independent variables.

8.Results and discussion

8.1 Educational level and income: In this section, through field survey it is attempted to analyze the relation between education and income. The total 30 data sample collection was divided into three, 10 each for government employed, private employed and business/ self employed. The educational level has been classified into four: Upto class-10, Hr. Sec, graduate & post-graduate. It is depicted as follow:

8.1.1 Income and education level of the respondents in Government sector

Education	0-29000	29001-59000	59001-90000
Upto Class 10	0	0	0
Hr. Sec	0	2	0
Graduate	1	2	0
PG	0	3	2

Source: Field Survey, July 2024
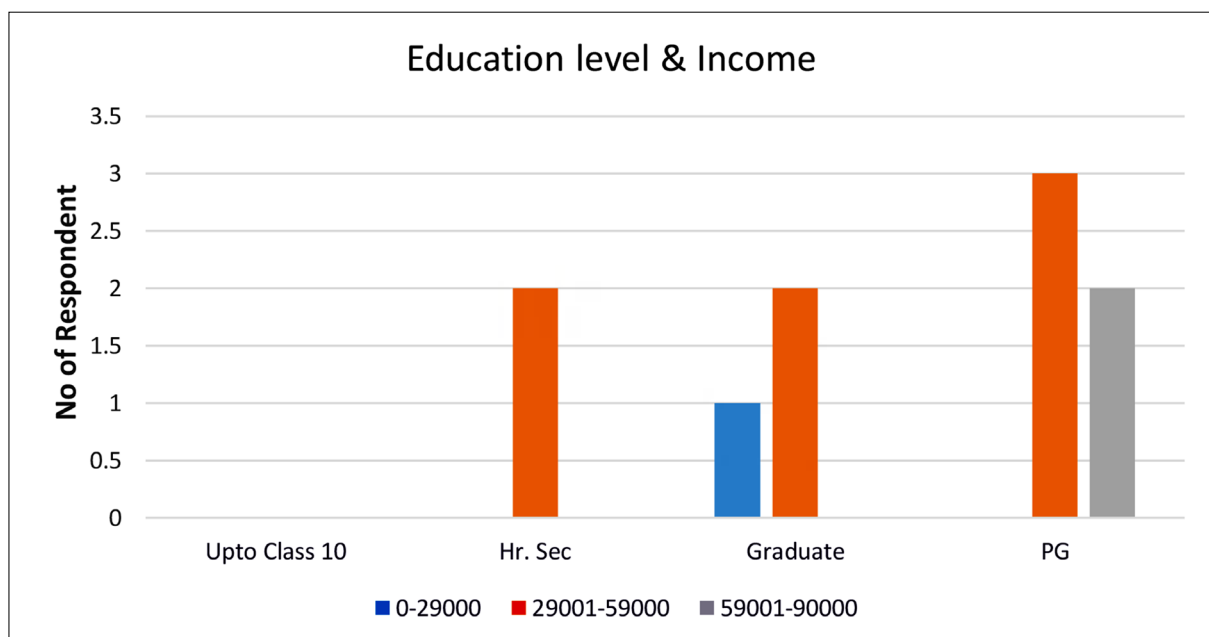
Education level & Income

In the above diagram, the X-axis and the bars depicts educational and income level and the Y-axis measures the number of respondents is observed here that except for 1 respondents , all other 9 respondents fall in the income category of 29001 and above starting with educational level of Hr. Sec. This shows good salary prospect in the government sector.

8.1.2 Income and education level of the respondents in Private sector

Education	0-29000	29001-59000	59001-90000
Upto Class 10	3	0	0
Hr. Sec	1	0	0
Graduate	4	0	0
PG	0	2	0

Source : Field Survey, July 2024
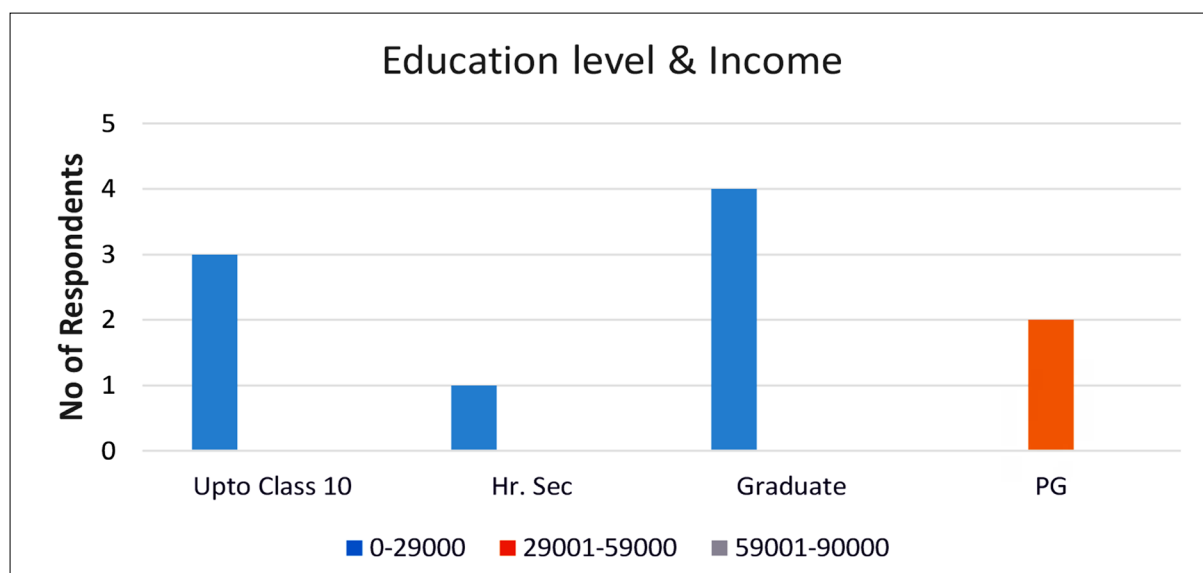
In the above diagram, the X-axis and the bars depicts educational and income level and the Y-axis measures the number of respondents is observed that majority of the respondents fall in the lowest category of income which is 0-29000 even with graduate qualification. This might indicate lower prospect of good salary even with good educational qualifications in the private sector.

8.1.3 Income and education level of the respondents in Business/Self-employed

Education	0-29000	29001-59000	59001-90000
Upto Class 10	1	0	0
Hr. Sec	1	2	0
Graduate	3	0	0
PG	0	1	2

Source : Field Survey, July 2024
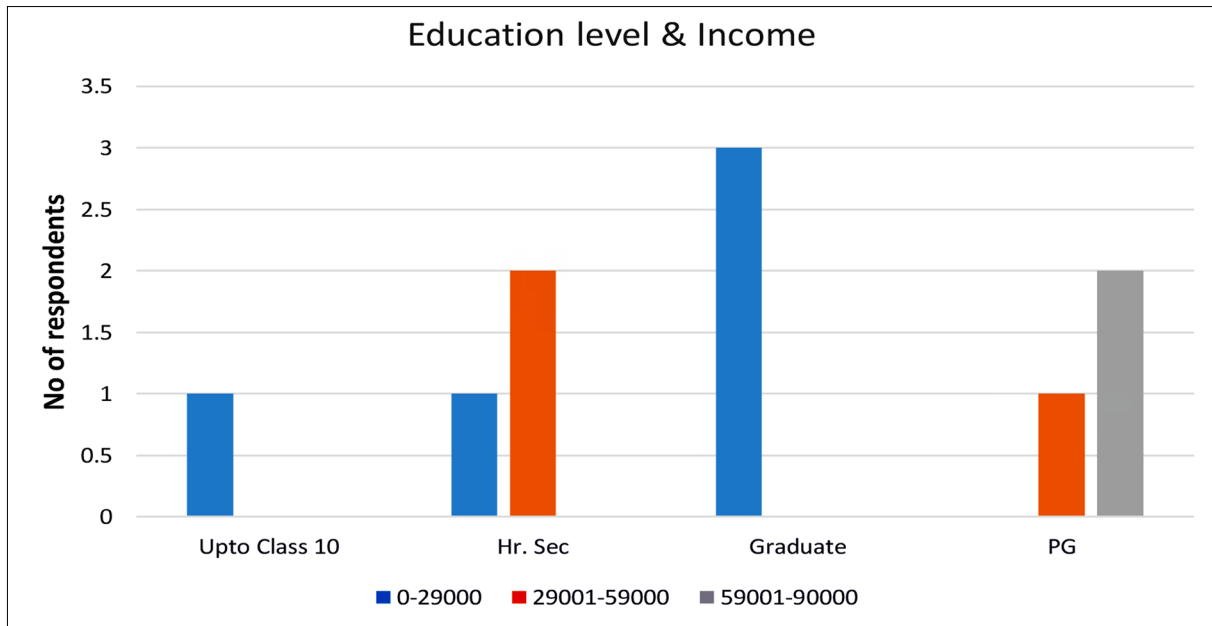
In the above diagram, the X-axis and the bars depicts educational and income level and the Y-axis measures the number of respondents. Here it is seen that educational level is doing better prospects for income than in the private sector. The graduates and post graduates are earnings fall in category of 59001 -90000. This sector is observed to be better for employment and income than the private sector.

8.1.4 Education & Income level of all respondents

Education	0-29000	29001-59000	590001-90000
Upto Cl.10	3	1	0
Hr. Sec	2	2	1
G	8	2	1
PG	0	6	4

Source : Field Survey, July 2024
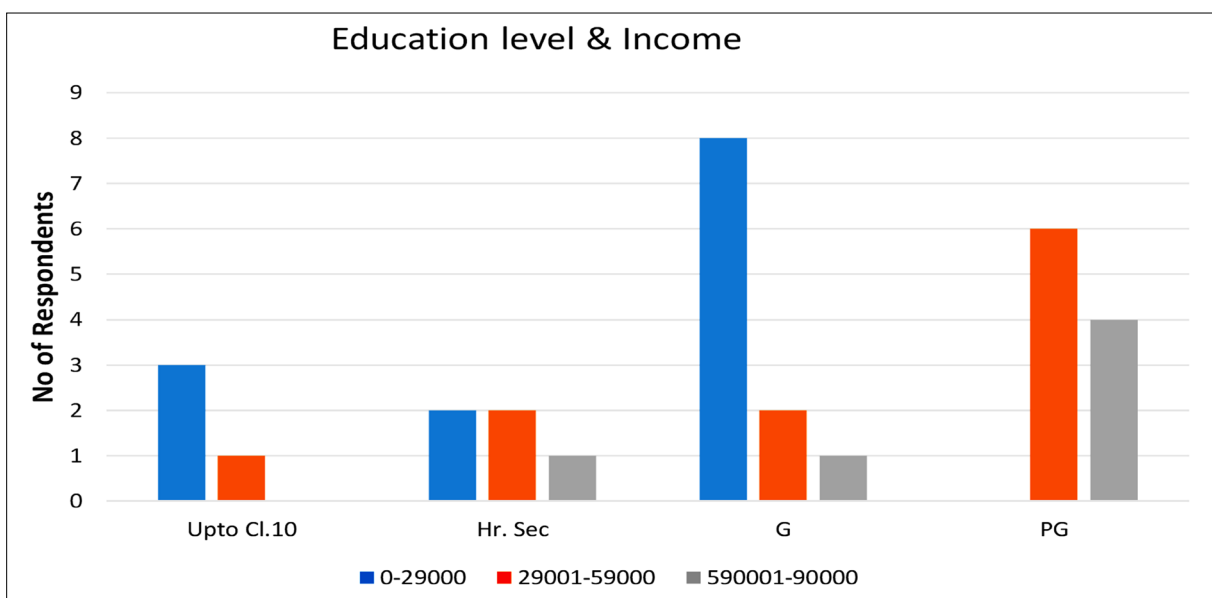
Overall ,it is observed that none of the respondents having qualification of PG fall in the lowest category of income ie, 0-29000 and none of the respondents having qualification Upto Class 10 level falls in the highest category of income which is 59001-90000. This indicate that the level of education can have an impact on the earning level of the respondents and that higher education might qualify a women to earn higher income.

8.2 Education level and Employment: A sample of 30 working women was collected in the tertiary sector to study the impact of educational level on employment. The educational level is determined with viz., upto class 10 as 1, Hr. Sec as 2, graduate as 3 and post-graduate as 4. A correlation and simple regression is run with education as independent variable and employment as dependent variable. The result of the correlation is r = .882, which shows a strong positive correlation. This means higher education level lead to higher level of employment of women.

Further, to measure the effect of employment from change in educational level ,a simple linear regression has been used and the result is

$$Y = 1.5 + 2.4x$$

The positive value of the regression coefficient indicates that the there is direct and positive relation between y and x. The result implies that a change in educational level (x) will have a positive impact on employment (y) by 2.4 times.

9. Education in the State: As per Census 2011, the literacy rate of Nagaland is 79.6% in which the share of female is 76.11% and that of male is 82.75% .Gender Statistics, Nagaland (2023), states on a commendable advancement in female literacy reflecting a significant increase of 14.6% over the past ten years.ie, since 2001. While the State's female literacy rate of 76.11% surpasses the national average of 64.6%, a gender gap of 6.64% persists. As per Nagaland State Human Development Report (2016), the HDI index for the State improved from 0.62 % in 2001 to 0.63% in 2011. The report states that this development is due to increase in the literacy rate and improved access to education in the State which is indicated in improvement in enrolment and improved gender parity in schools.

Table 1 : Decadal gender wise trend of literacy rates in Nagaland, 1991-2011

Year	Nagaland in %		
	Male	Female	Total
1991	66.27	54.75	60.59
2001	71.2	61.5	66.6
2011	82.8	76.11	79.6

Source : Gender Statistics , 2023, Director Census Operation, Nagaland, Kohima

The Percentage distribution of literate person/level of education by sex as per Census 2011 of Nagaland is shown through the following table :

Table 2 : Percentage distribution of literate person/level of education by sex as per Census 2011 of Nagaland :

State/ District	Population attending educational institutions			Illiterates			Literates		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Nagaland	638586 (51.74%)	308202 (48.26%)	101687	51959 51.10	49728 (48.90%)	101687	278425 (51.86%)	258474 (48.14%)	536899
Dimapur	66337 (51.44%)	62613 (48.56%)	128950	10222 (50.78%)	9907 (49.22%)	20129	56115 (51.57%)	52706 (48.43%)	108821

Source : Director Census Operation ,Gender Statistics , 2023

Table 3: School Enrolment during 2021-22

State/District	Secondary (Cl. 9-10)			Hr. Sec		
	Boys	Girls	Total	Boys	Girls	Total
Nagaland	28441	30280	58721	16067	17993	34060
Dimapur	9484	9863	19347	6827	7713	14540

Source : Statistical Handbook, 2023

Table 4 : Students strength by gender in Colleges during 2021-22

State/District	Male	Female	Total
Nagaland	16637	19614	36251
Dimapur	7050	8551	15601

Source : Gender Statistics, 2023; Directorate of Higher Education- AISHE Report

10. Workforce and women employed in public sector, private sector and business sector/self employed: Vero (2020), observed on the workforce participation in paid economic activities which shows the proportion of male workforce to be higher than that of female during the period 1981-2011 in Nagaland. Gender disparity in workforce stood at 15.32% which is an increase by 0.13% per annum during the period.

As per 6th Economic Census (2013), conducted by Directorate of Economic & Statistics, 33.39% of female were engaged in non-agricultural activities as compared to their male counterparts which stood at 66.61% for non-agricultural activities. Vero (2018), stated on the work force participation shifting directly from primary to tertiary sector which is the government sector in the case of Nagaland. According to Nagaland State Government Employee Census Report (2012) , as on March 31st 2012, women employees in government sector comprised 21% compared to male counterpart at 79 %.

Table 5 : As per 2011 Census the workforce participation rate

State	Male	Female	Total
Nagaland	53.4	44.7	49.2

Source : Gender Statistics, 2023

Table 6 : Percentage distribution of workers in all categories combined

Category	Female	Male
Main worker	67.8%	80.8%
Marginal workers	29.9%	19.2 %
Cultivators	65.2%	47.4%
Agricultural labourers	7.3%	5.8%
Household industry workers	3.1%	1.7 %
Other workers	24.4 %	45%
Agricultural activities	24.96	75.04 %
Non-agricultural activities	33.39%	66.1 %

Source : Gender Statistics, 2023

The 2011 Census indicate a workforce participation rate : 44.7% for females & 53.4% for males. The same for Dimapur is 28.5% for female and 50.5 for male which is the 11th position in the state. As per Gender Statistics 2023, women employed in organized sector in Nagaland has been slowly increasing over the years. During 2004-05, 18.23 % and 35.02% of women were engaged in public and private sector. The trend from the period 2014-15 to 2022-23 is extracted and depicted through diagram and shown below :

Public Sector Women Employment in Nagaland from 2014-15 to 2022-23
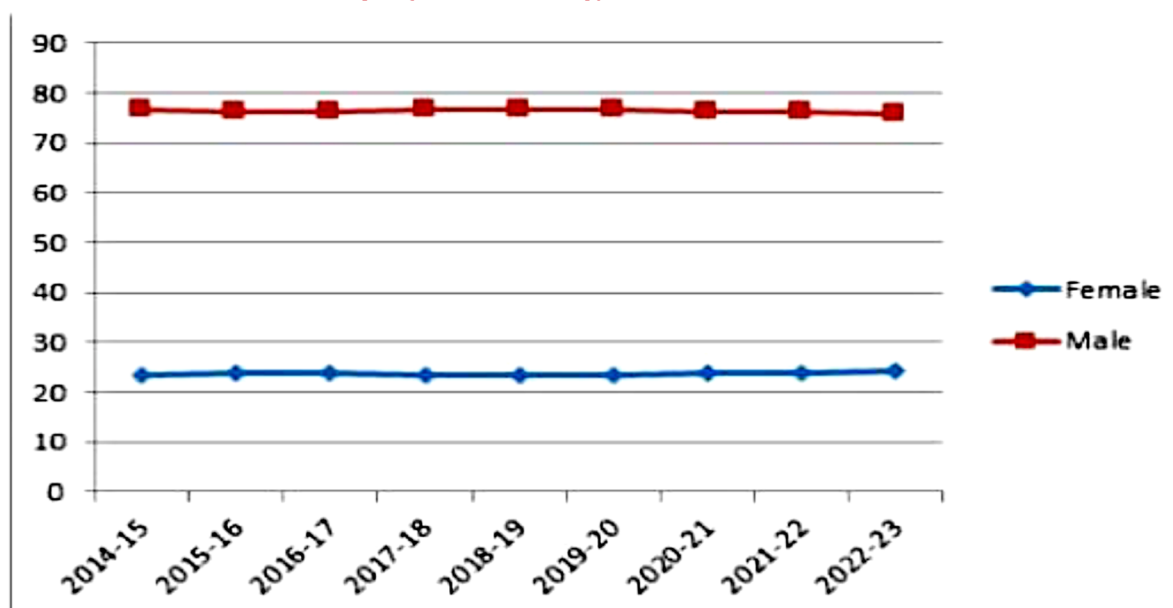
Public Sector Women Employment in Nagaland from 2014-15 to 2022-23
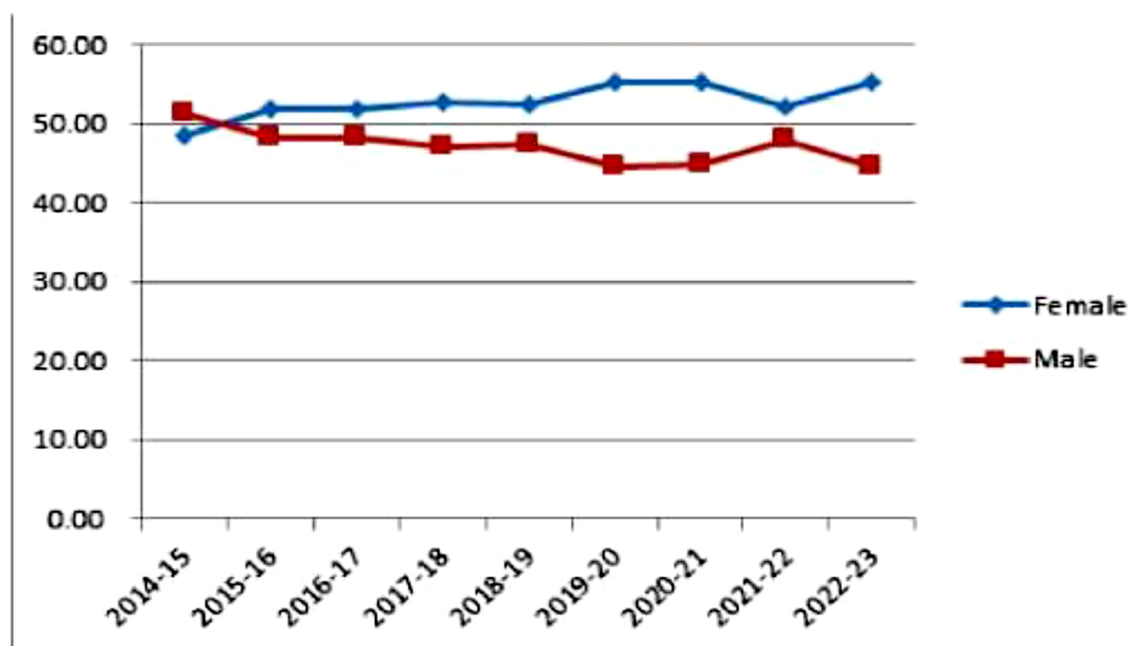
Diagram source : Gender Statistics,2023

In the year 2022-23, in the public sector, the % of female is 24.13% and in the private sector, it is 55.32. As on March,2023, in the public sector, there is 26.05% of female and in private sector it has 46.43%.(Gender statistics,2023). This shows more number of female in the private sector.

In the number of establishment owned other than public/private sector, the 7th Economic Census, stated, Dimapur has the highest number with a total of 19,078; Male ownership is 15,368 and female ownership is 3652. The overall total of the state is 63,143 with male 46005 and female 17070. In a study conducted by Government of Nagaland, Directorate of Evaluation (2006) , total number of establishment/shops/units run by Nagas/Non-Nagas were enumerated. The units were enumerated from trades of agriculture ,trading and manufacturing to service sectors. It was found that Dimapur had a annual turnover of 351.85 crore with non-Naga workforce 32700 where construction, loading & unloading and trading and entrepreneurial activities were dominant. Majority of the workforce had qualification of pre-university & below.

11. Findings and Conclusion: There has been a lower performance of women compared to men in the workforce of Nagaland and Dimapur. The work participation rate of women is lower for women than that of men in almost all categories of workers. Only in agricultural sector the women work participation is higher than that of men. Mazumdar and Neetha (2011), examined on the crisis in women's work participation in India from 1993-94 to 2009-10 and the referred period data shows that only 15% of the female population receives wages and income. Thus, at the time when the country's GDP is ever on the rise, 85% of Indian women had no employment and are economically dependent on others.

The literacy rate also shows women at a lower rate than men. There has been a rising literacy and enrolment rate of women. Education leads to higher chances of entering the labour market and may help find higher paying jobs. The results and analysis indicates higher educational level leading to higher chances of employment and higher income earning prospect for women. Most of the respondents also strongly agreed on education helping to earn more income for the family and supported education as a means to acquire knowledge and skill for employment. Thomas (2012) noted that there is requirement of education , skill and training for employability in the current nature of the economy. Abraham et al. (2024), states that as education level has risen for both male and female and sectoral composition in the economy has been changing with both relative and absolute decline in agriculture work and rise in non-agricultural works and there has been rise in salaried workers of women.

The government sector is found to be giving highest income. The wages/salary in the private sector is low. The business sector provides a better income than the private sector. In all the sectors : government, private and business sector, it is observed that the majority of the respondents have qualification of either graduate or post-graduate. There is seen a vast difference of salary in the graduate employed in the private sector and in the government sector with the government sector taking the lead in paying 100% or more higher than another women employed in the private sector with the same qualification.

In the tertiary sector the government sector is paying high income but the number of women employed in the government sector is low. There seems to be a prospect in the business sector with Dimapur having the highest growth in this among all districts of Nagaland. The possibility for entering in this thriving trade and tapping the prospect can be explored. Sashimatsung (2015), states Dimapur with female literacy rate of 81.77(2011 Census) has female WPR of 28.5%(2011 Census) whereas it has the highest absorption of female in 'other works'. The absorption of female in 'other works' were highest in the districts of Dimapur at 63.9% which is due to urbanism, advanced education, entrepreneurism, convenience, socio-economic awareness and job opportunities. As per the 1st Report of the District Domestic Product released by Directorate of Economics & Statistics, Government of Nagaland , Dimapur district is the largest economy amongst the districts in the State with GDDP value of ₹ 5,43,611 lakh during 2019-20. Service sector is contributing the maximum at 77% to GDVA during 2019-20. The district is also having the highest Per Capita Income among all the districts. It remains to be examined on whether "Income Effects" as given by Chatterjee et al. (2018), is a factor which discourages women's labor participation. The 'Income Effect' here is the women withdrawal from the labor market as household income rises to substitute their time to home works.

It has also been found that majority of the respondents agree to a large extent that educated mothers can better take care of health and education of children and education has uplifted their status in family and society and promoted unity and social harmony.

The results and analysis indicates that higher educational level leading to higher chances

of employment and income earning for women. Education leads to higher chances of employment for women and may help women find higher paying jobs.

12. Limitations of the study: This study covering 30 respondents and 10 each for the employed in the government, private and business sector does not provide a comprehensive analysis. In the methodology, the strength and association between only two variables are have been used. And therefore, these have been kept as the limitations of the study.

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MICRO, SMALL, AND MEDIUM ENTERPRISES (MSMEs) IN NAGALAND: AN OVERVIEW

Imtimongla Jamir

Ph.D. Research Scholar, Department of Economics, St. Joseph University, Chümoukedima, Nagaland, India
Email: imtimonglajamir07@gmail.com

Dr. Praveen Dukpa

Assistant Professor, Department of Economics, St. Joseph University, Chümoukedima, Nagaland, India

Email: patrickpatsju25@gmail.com

Abstract

Micro, Small, and Medium Enterprises (MSMEs) play a transformative role in Nagaland's economy, highlighting their significance as catalysts of economic growth and employment generation in a region characterized by its unique challenges. This study explores three key objectives: (1) analyzing the growth and distribution of MSMEs in Nagaland (2) assessing their role in job creation, and (3) identifying key challenges that hinder their growth. Employing a comprehensive descriptive and analytical methodology, this investigation leverages a wealth of secondary data from governmental sources and academic research. Findings reveal that Nagaland has 27,083 registered MSMEs, of which 99% are micro-enterprises. The sector generated 39,046 jobs in 2022-23, with Dimapur (12,813 jobs) and Kohima (6,536 jobs) as the leading contributors. Despite this growth, financial constraints, inadequate infrastructure, and limited digital adoption remain major challenges. Addressing these barriers through better financial accessibility, skill development, and policy interventions is crucial for sustaining MSME-led growth. This study not only sheds light on the vibrant world of MSMEs in Nagaland but also provides a roadmap for policymakers and stakeholders to harness the entrepreneurial spirit of this sector, positioning it as a cornerstone of economic resilience and sustainable growth

Keywords: *MSMEs, Employment generation, Nagaland, Government initiatives, Sustainable growth.*

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are the very threads that weave together innovation, resilience, and growth. Often overshadowed by larger industries, these small enterprises are, in fact, the silent powerhouses driving economies and sparking entrepreneurship, fostering creativity, and providing livelihoods to millions. The Micro, Small, and Medium Enterprises (MSMEs) was established by the Government of India through the Micro, Small, and Medium Enterprises Development (MSMED) Act of 2006. With subsequent revisions by the Government of India, MSMEs are classified as follows:

Enterprise Category	Previous Classification (2020)		Revised Classification (2025)	
	Investment (₹ Crore)	Turnover (₹ Crore)	Investment (₹ Crore)	Turnover (₹ Crore)
Micro	Up to 1	Up to 5	Up to 2.5	Up to 10
Small	Up to 10	Up to 50	Up to 25	Up to 100
Medium	Up to 50	Up to 250	Up to 125	Up to 500

(Source: Union Budget 2025-26)

This classification includes entities involved in the manufacturing, production, processing, and preservation of goods and commodities. In India, the MSME sector accounts for nearly 30% (FY 2018-23) of GDP and plays a crucial role in addressing regional disparities. The MSME sector plays a vital role in the country's economic development and its contribution to exports and the country's gross domestic product (GDP) has gained major significance in India (Nanda, P. and Kumar, V. ,2023). In 2013-2014, India had 4.89 crore MSMEs employing 11.14 crore people. It contributed 8% to GDP, 45% to manufacturing output, 40% to exports, and 21% to employment (Chandreshkumar. P, et.al., 2018)

Nagaland, in Northeast India, showcases how MSMEs have become a key source of non-agricultural employment, especially in rural and semi-urban areas. The MSME Development and Facilitation Office (MSME-DFO) supports these enterprises across 16 districts through initiatives like cluster-based competitiveness enhancement, credit facilitation, technology upgradation, marketing support, and skill development. Additionally, the MSME-DFO promotes exports, organizes training on export strategies, and facilitates participation in international trade fairs. The State Champions Control Room (SCCR) also addresses MSME grievances and incorporates feedback to improve services.1

Recent developments in Nagaland's MSME sector emphasizes a strategic focus on fostering growth and resilience. Notably, on August 27, 2024, Chief Minister Neiphiu Rio inaugurated the World Bank-assisted RAMP scheme, aimed at accelerating MSME performance and capacity-building. Also, the MSME-DFO has rolled out the "My MSME" app, a digital tool designed to enhance accessibility and streamline application tracking for entrepreneurs, further promoting sustainable economic growth in the region. (MSME annual report 2021-22). Earlier efforts include the approval of the Agra based rural Technology and incubation Centre under NTTC, and a Tool Room & Training Center (TRTC) in Dimapur in 2019 and 2016 respectively, and a proposed Mini Technology Centre in Razhaphe Basa, which aims to support the cultivation of medicinal and aromatic plants, both reflecting a long-term commitment to nurturing MSMEs as drivers of regional development.

LITERATURE REVIEW

The development of Micro, Small, and Medium Enterprises (MSMEs) is often rooted in theories of regional economic development, such as the endogenous growth theory, which emphasizes the role of local entrepreneurship and innovation as key drivers of economic expansion. Schumpeter's theory of innovation further complements this view, suggesting that MSMEs, through their adaptability and innovation, foster economic dynamism. In isolated regions like Nagaland, where large-scale industries are scarce, MSMEs become central to sustaining economic activity, employment generation, and wealth distribution.

Jarinaa and Manida (2024): Their study explores the role of rural entrepreneurship in strengthening the MSME sector, particularly in fostering self-reliance, reducing unemployment, and mitigating rural-to-urban migration. Given that many MSMEs in remote areas struggle with market access and resource constraints, their findings emphasize the importance of localized enterprise support initiatives.

Kumar and Vese (2024): Their work evaluates government initiatives aimed at MSME promotion, noting the sector's significant contributions to economic development. However, the study also identifies critical obstacles such as inconsistent policy implementation and inadequate financial support, which hinder the sustained growth of small enterprises

Sulistiowati et al. (2024): Their study highlights the importance of dynamic capability and innovative work behavior in enhancing MSME performance. The findings suggest that skill development, strategic resource management, and adaptive business practices are key drivers of resilience and growth, particularly for enterprises facing market fluctuations and operational limitations.

Ahamed (2023): His study examines barriers to MSME growth in rural and geographically isolated regions, identifying financial inaccessibility, outdated technology, and inadequate infrastructure as primary constraints. These findings resonate with challenges faced by MSMEs operating in less industrialized regions, where connectivity and institutional support remain limited.

Elsmere and Begum (2023): Their research highlights the role of financial inclusion, infrastructure investment, and digital literacy in unlocking the full potential of MSMEs. The study suggests that targeted policy measures aimed at improving access to credit and digital tools can significantly enhance the competitiveness of enterprises in underdeveloped regions.

Khongsai and Varma (2023): A comparative study on MSME development across Northeast India, their research finds that while infrastructure gaps and technological barriers persist, strategic government interventions have supported growth in sectors such as agriculture, handicrafts, and tourism. These industries, often central to local economies, benefit from targeted entrepreneurship programs.

Mahesh et al. (2023): Their research underscores the role of government intervention in addressing MSME constraints. The study emphasizes that well-structured policies, focusing on technology adoption, access to markets, and financial assistance can drive sustainable economic development, particularly in regions with emerging small-business ecosystems.

OBJECTIVES

1. To analyze the growth and distribution of MSMEs in Nagaland.
2. To evaluate the contributions of MSMEs to employment generation and economic resilience.
3. To identify challenges that impede their growth.

LIMITATIONS OF THE STUDY

The limitations of this study primarily stem from the reliance on secondary data sources, which may not fully capture the most current or comprehensive conditions of MSMEs in Nagaland. Additionally, the study is confined to a state-level analysis, without focusing on specific districts or sectors, potentially limiting the understanding of regional variations in MSME challenges and opportunities.

METHODOLOGY

This study employs a descriptive and analytical research approach, relying on secondary data collected from diverse sources such as peer-reviewed research journals, academic articles, newspapers, and official government reports. To ensure a comprehensive understanding of the subject matter, a thematic synthesis was conducted to identify key challenges and opportunities faced by MSMEs in the study area. Furthermore, data triangulation was employed to enhance the reliability and validity. The study also incorporates charts and tables to present data effectively, facilitating a clearer interpretation of trends and patterns.

GROWTH AND DISTRIBUTION OF MSMEs IN NAGALAND

The growth and distribution of MSMEs in Nagaland have been significantly supported by institutions like the Nagaland Handloom & Handicrafts Development Corporation Ltd. (NHHDC Ltd.), established in 1979 with the objective of promoting traditional handloom and handicraft products. The Corporation plays a crucial role by providing raw materials, organizing exhibitions, and marketing products through its emporiums both within and outside the state. In the fiscal year 2015-16, the Corporation invested ₹6,05,682 for procurement of raw materials and ₹36,66,308 for the purchase of finished goods. It achieved total sales amounting to ₹36,15,195, further highlighting its contribution to the MSME sector.[1] The MSME sector in Nagaland has evolved from a foundation rooted in traditional crafts to a more diversified landscape of enterprises. Recent trends indicate a growing interest in

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[1]   Department of Industries and Commerce: https://industry.nagaland.gov.in/nagaland-handloom-handicrafts-dev-corpn-ltd-nhhdc-dimapur/

entrepreneurship among the youth, driven by government initiatives and a supportive ecosystem. However, challenges persist, which necessitate a detailed examination.

Table –1 District wise number of MSMEs in Nagaland (2024)

Sl.no	District Name	Micro	Small	Medium	Total Udyam
1	DIMAPUR	8372	157	15	8544
2	KOHIMA	4097	33	1	4131
3	MOKOKCHUNG	1955	14	1	1970
4	MON	1784	6	0	1790
5	PHEK	1580	1	0	1581
6	ZUNHEBOTO	1494	4	0	1498
7	WOKHA	1435	9	0	1444
8	CHUMOUKEDIMA	1431	7	0	1438
9	TUENSANG	1166	1	0	1167
10	PEREN	972	0	0	972
11	KIPHRIE	727	2	0	729
12	LONGLENG	725	0	0	725
13	NIULAND	394	1	1	396
14	TSEMINYU	319	0	0	319
15	NOKLAK	291	0	0	291
16	SHAMATOR	88	0	0	88
	Total	**26830**	**235**	**18**	**27083**

(Source: MSMEs Udyam Registration 2024)

Figure-1 District wise number of MSMEs in Nagaland.
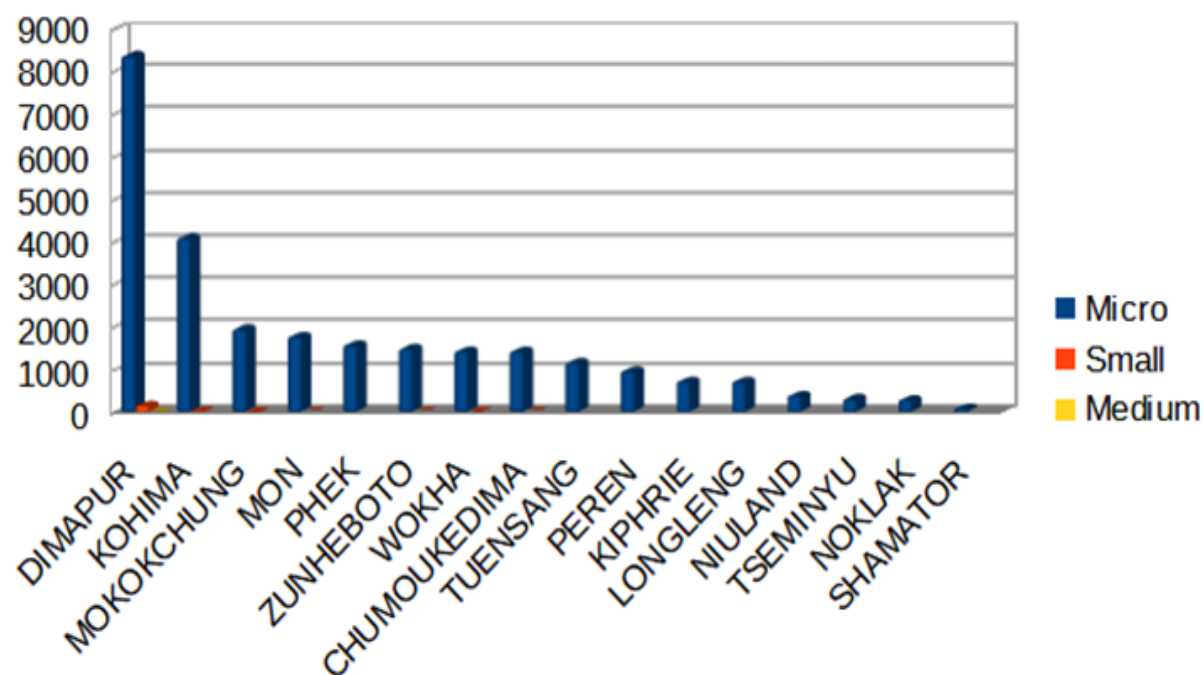
In the figure no.1 we see a breakdown of the total number of Udyam-registered enterprises in various districts of Nagaland, categorized into Micro, Small, and Medium Enterprises (MSMEs). The total number of enterprises is 27,083, with the vast majority being micro-enterprises (26,830) 99.06%, followed by small enterprises (235) 0.87%, and a few medium enterprises (18) 0.07%. Dimapur has the highest number of enterprises (8,544) 31.55%, mostly micro, while Shamator has the fewest (88) 0.32%. The data highlights the prevalence of micro-enterprises in Nagaland, with minimal representation of small and medium-sized businesses across most districts.

CONTRIBUTIONS OF MSMEs TO EMPLOYMENT GENERATION AND ECONOMIC RESILIENCE IN NAGALAND.

The Micro, Small, and Medium Enterprises (MSMEs) sector plays a crucial role in driving Nagaland's industrial development and fostering employment opportunities. It continues to broaden its impact across multiple industries, significantly contributing to the state's economic landscape through the production of a diverse array of goods and services.

Table-2: District wise number of employments in MSMEs in Nagaland 2022-2023

Sl. no	District	Regd.	Employment generated
1	Kohima	1238	6536
2	Dimapur	2274	12813
3	Phek	475	4874
4	Mokokchung	350	1442
5	Wokha	253	1430
6	zunheboto	787	3253
7	Tuensang	241	785
8	Mon	423	2165
9	Peren	262	1086
10	Kiphire	339	1711
11	Longleng	153	645
12	Noklak	59	273
13	Shamator	0	0
14	Niuland	49	282
15	Chumoukedima	231	1204
16	Tseminyu	67	547
	Total	**7201.00**	**39046.00**

(Source: Directorate of industries and commerce 2022-23)

The district wise employment data of MSMEs in Nagaland for 2022-23 reflects the sector's crucial role in job creation, with 39,046 jobs generated across 7,201 registered enterprises. District-wise variations highlight key economic centers, with Dimapur (12,813 jobs) and Kohima (6,536 jobs) leading employment generation. Other districts, such as Phek (4,874 jobs), Zunheboto (3,253 jobs), and Mon (2,165 jobs), also contributed significantly. In contrast, regions like Noklak (273 jobs) and Niuland (282 jobs) recorded lower employment figures, indicating disparities in MSME activity. Additionally, Shamator had 88 micro enterprises by the end of 2024, signifying growing entrepreneurship in emerging areas.

Table-3: Number of employments in MSMEs manufacturing industries in Nagaland 2020-2023

Years	Workers employed	Manufacturing industries
2022-2023	4958	190
2021-2022	4602	187
2020-2021	4732	186
TOTAL	**14292**	**563**

(source: Annual Survey of Industries (ASI), Nagaland, from 2020-21 to 2022-23)

Figure-2:
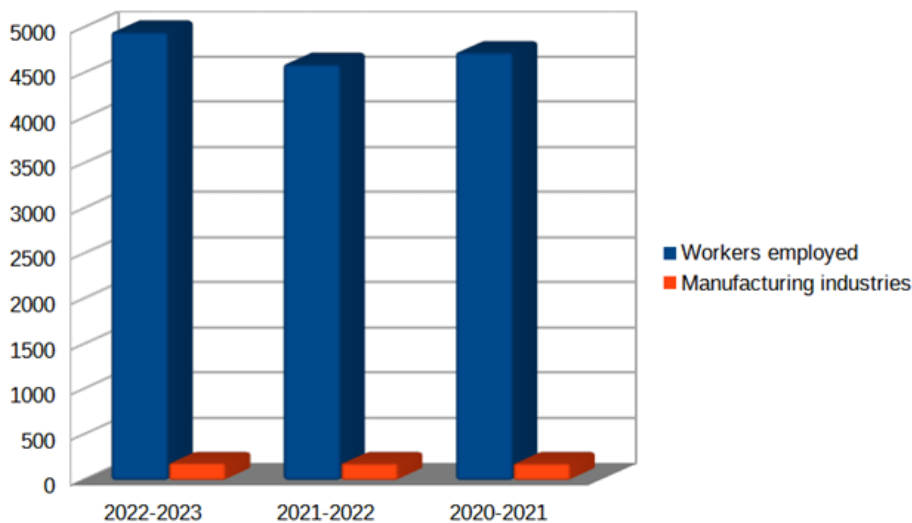
Figure-2 provides an overview of the employment trends within MSME manufacturing industries in Nagaland from 2020 to 2023. During this period, there was a noticeable increase in both the number of workers employed and the number of operational factories.

In 2022-23, the number of manufacturing workers rose to 4,958, reflecting a 7.74% increase from 4,602 workers in 2021-22. This followed a slight decrease in 2020-21, when 4,732 workers were employed. The total number of individuals engaged in factory operations also grew by 7.80%, from 5,347 in 2021-22 to 5,764 in 2022-23, showing a steady improvement in workforce engagement.

The number of factories in operation exhibited only marginal changes over the same period. In 2022-23, there were 193 factories, a small rise from 191 in 2021-22, following a similar minor fluctuation from 192 factories in 2020-21.

Overall, the years from 2020 to 2023 indicate a gradual recovery and expansion in employment within the MSME manufacturing sector, despite minimal growth in the number of operational factories. These trends suggest a focus on increasing workforce engagement, even as the number of factories remains relatively stable.

Table-4: Number of employments in MSMEs service sector in Nagaland 2020-2023

	Total	Manufacturing	service
2022-2023	46227	4958	41269
2021-2022	26062	4602	21460
2020-2021	7916	4732	3148
TOTAL	**80205**	**14292**	**65913**

(Source: MSME 2023, Annual Survey of Industries (ASI), Nagaland 2023)

Figure-3:
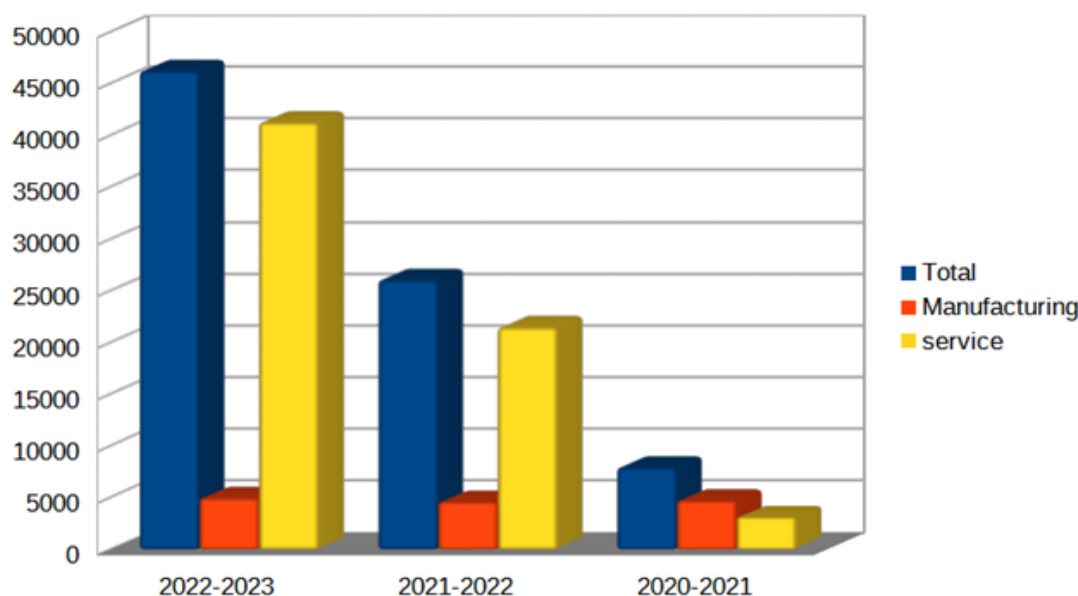
Figure -3 highlights the employment growth in Nagaland's MSME service sector from 2020 to 2023. In 2022-2023, the service sector employed 41,269 individuals, a significant increase from 21,460 in 2021-2022 and just 3,148 in 2020-2021. Over the three-year period, the service sector accounted for the majority of MSME employment, with 65,913 jobs, compared to 14,292 in manufacturing. This trend underscores the service sector's critical role in driving employment growth in Nagaland's MSME landscape during the period 2020-2023.

Key initiatives like the *Pradhan Mantri Employment Generation Programme (PMEGP)* have been instrumental in this employment surge. By focusing on engaging traditional artisans and unemployed youth, particularly in rural areas, PMEGP has not only created jobs but also enhanced the wage potential of artisans, thereby improving economic conditions at the grassroots level. With the requirement of training programs such as the Entrepreneurship Development Program (EDP), this scheme ensures that job creation is sustainable and that individuals are equipped with the necessary skills to thrive in the MSME sector.

The *MSME-Development and Facilitation Office (MSME-DFO)* further supports employment generation by expanding the market access of Micro and Small Enterprises (MSEs). Through initiatives like Vendor Development Programmes, MSMEs are integrated into supply chains of large-scale units and Public Sector Enterprises (PSUs), which generates employment as these smaller enterprises scale up to meet increased demand.

The *Khadi and Village Industries Commission (KVIC)* complements these efforts by focusing on non-farm rural employment, helping to reduce rural-to-urban migration. KVIC fosters job creation in traditional crafts and village industries, contributing significantly to rural economies and offering sustainable livelihoods.

Overall, these initiatives emphasize the strategic contributions of MSMEs to employment generation in Nagaland. By targeting both rural and urban areas and involving a wide range of stakeholders—from traditional artisans to modern enterprises—the MSME sector acts as a vital engine for economic development and job creation across the state.[1]

CHALLENGES THAT IMPEDE MSMES GROWTH IN NAGALAND.

The challenges encountered by MSMEs in Nagaland have been identified through an extensive review of literature and analytical research. Various scholars have highlighted critical structural and operational barriers that hinder the sustainable growth of these enterprises. The key challenges are as follows:

1. **Limited Access to Finance** – Many MSMEs in Nagaland face financial constraints due to strict collateral requirements, limited banking infrastructure, and lack of awareness about available financial support schemes. Studies have highlighted that despite initiatives like the Special Credit Linked Capital Subsidy Scheme and Atmanirbhar Bharat Abhiyaan, accessibility issues persist (Ahamed, 2023; Kumar & Vese, 2024). The challenge is further exacerbated by delayed supplier payments and non-performing assets (Mahesh et al., 2023).

2. Infrastructural and Technological Constraints – Poor infrastructure, including inadequate road connectivity, erratic power supply, and weak digital networks, significantly affects MSME operations (Khongsai & Varma, 2023). Technological adoption remains slow, particularly in rural MSMEs, due to high costs and limited

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1   https://msme.gov.in/sites/default/files/MSMESchemebooklet2024.pdf

digital literacy (Jarinaa & Manida, 2024). These barriers prevent businesses from integrating into digital markets and leveraging e-commerce opportunities.

3. Skill Deficiency and Workforce Challenges – The shortage of skilled labor and lack of vocational training programs pose a major challenge for MSMEs in Nagaland. Limited access to skill development initiatives hampers productivity and innovation. Studies suggest that fostering creative self-efficacy and innovative work behavior among MSME actors can improve business performance (Sulistiowati et al., 2024).

4. Market and Supply Chain Limitations – Restricted market access, inefficient supply chains, and dependency on local consumers limit MSMEs' ability to scale. Rural enterprises face additional challenges in reaching wider markets due to weak distribution networks (Jarinaa & Manida, 2024). The lack of integration into national and global value chains hinders their competitiveness.

5. Policy and Regulatory Gaps – While government initiatives have played a crucial role in supporting MSMEs, inconsistencies in policy implementation and lack of awareness about support schemes remain significant barriers (Kumar & Vese, 2024). Bureaucratic inefficiencies and outdated labor laws also create hurdles for business growth and compliance (Mahesh et al., 2023). There is a need for more targeted and context-specific policies to address the unique challenges of MSMEs in Nagaland.

These challenges collectively limit the growth potential of MSMEs in Nagaland, emphasizing the need for strategic policy interventions, improved financial access, infrastructure development, and capacity-building initiatives to foster a more resilient MSME ecosystem.

Overcoming the financial, infrastructural, and technological barriers impeding MSMEs in Nagaland necessitates a multifaceted approach. Streamlining credit access through simplified banking procedures, enhancing infrastructure- particularly transport and energy systems and fostering digital literacy through targeted training programs are critical steps. Additionally, tailored government interventions, supported by strategic partnerships with financial institutions and private sector stakeholders, can help in unlocking the full potential of MSMEs, thereby driving sustainable economic growth and contributing to the broader regional development agenda.

SUMMARY AND CONCLUSION

In conclusion, it was observed that MSMEs play a crucial role in driving economic growth and employment in Nagaland. With over 27,000 registered enterprises, the sector has significantly contributed to job creation, generating 39,046 jobs in 2022-23. The service sector, in particular, has seen impressive growth, accounting for the majority of MSME employment. Programs like PMEGP and KVIC have further supported employment generation by targeting both rural and urban areas, promoting skill development, and

enhancing market access for MSMEs.

However, persistent challenges, including financial constraints, inadequate infrastructure, and limited technological integration, continue to hinder the realization of its full potential. To address these barriers effectively, it is imperative to implement targeted interventions aimed at improving financial access, upgrading infrastructure, and fostering digital literacy. With the right policies and targeted support, MSMEs can drive sustainable economic development and resilience in Nagaland, positioning them as a cornerstone of the state's economic future.

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ASSESSING PARTICIPATION IN NON-FARM ACTIVITIES BY RURAL HOUSEHOLDS

Medokuonuo Metha

Research Scholar, Department of Economics,
Nagaland University-Lumami: Zunheboto – 798627
E-mail: methamedokuonuo@gmail.com

Abstract

Non-farm sectors have gradually evolved to play a major role in Indian economy. Its expansion arose from the structural transformation of the economy from agrarian to industrial, and then to a service-dominated environment, with occupational distribution changing in lockstep. Though, slightly different in Indian scenario where services preceded industries. In Nagaland due to the absence of large-scale urban manufacturing sector, it is unable to absorb the surplus labour force resulting in much attention getting diverted to rural non-farm sector particularly to generate income and employment. The present work focused on the understanding the determinants of growth of rural non-farm sector employment in Nagaland taking the case of Chiechama village. The descriptive survey approach involving gathering primary data through a questionnaire was used to conduct the study from a random sample of 35 households. The Garrett's ranking approach was used for the data analysis to identify the primary factor influencing the respondent's decision to participate in non-farm activities. Higher earning was found to have a considerable impact on households' decision to choose non-farm jobs. Additionally, the quality of employment was impacted by a number of factors, including education level, acquisition of required skills, rural infrastructure development, transport and communication.

Keywords: employment, rural households, participation, non-farm activities

1.Introduction: India has strayed from the theoretical road of structural change post-independence due to its inability to generate sufficient and productive jobs in the manufacturing segment, trapping the majority of its workforce in the agrarian sector. But there are definite indications that the nation is undergoing structural changes. Not everyone has the opportunity for out-migration, and it cannot be assumed that urban centres can offer or are capable of providing adequate opportunities for employment to all those who are not able to make a living in the agriculture sector. In this regard, one strategy that is advocated in literature for growth and development has been the diversification of employment as an alternative method of income generation and employment, lowering poverty, and increasing well-being and standards of living by the rural workforce.

2. Review of Literature: The non-farm sector is heterogeneous in nature and includes all economic activities i.e. mining and quarrying along with other secondary and tertiary sector activities other than agriculture, livestock, fishing and hunting (Lanjouw and Lanjouw, 2001). This would eliminate crop production as well as allied agriculture activities from the non-farm sector. Non-farm sector has been more comprehensively explained by Jha (2005) to include "mining and quarrying, household and non-household manufacturing, processing, repair, construction, trade and commerce, transport and other services in villages and rural towns undertaken by enterprises varying in size from household own account enterprises to factories."

The rural sector in India is undergoing a transformation and the contribution of rural non-farm sector to rural income and employment is growing (Sivamurugan, 2016). Although agriculture and allied activities continues to be the major source of livelihood for workers in the village, there are clear signs of diversification towards the non-farm sector, especially as younger workers get absorbed into regular jobs (Satheesha, 2023). There has been a declining share of employment in the farm sector and an increasing share in the non-farm sector (Panda, 2017) whereby majority of the workforce preferred to be absorbed in non-farm activities as their principal occupation (Lanjouw &Shariff, 2004). Moreover, the income earned by being engaged in non-farm activities was higher than farm income which is also one of the reasons why the rural labour, particularly the people in the working age group, are influenced to take up non-farm activities (Mech et. al. 2017).

3.Objective of the study: The objective of the study is to assess rural household participation in non-farm activities and to examine which factor is perceived as the most important factor that influences them to engage in these activities.

4.Methodology: The study was carried out in Chiechama Village of Kohima district, Nagaland by adopting a random sampling technique. Based on the review of literature, six factors which tend to influence the rural households to opt for non-farm activities were selected for the study. The primary data was collected from 35 randomly selected households with the help of a questionnaire in order to procure information regarding the reasons behind opting for non-farm employment and its determinants. A quantitative approach was used in the methodology whereby, the Henry Garrett's Ranking Technique was applied in order to assess household participation in non-farm activities. The respondents were asked to rank the factors based on their experience such that the most important factor will be ranked first. The rationale behind selection of this method was because of its advantage in arranging preferences based on the point of view of the respondents and has been extensively used in literature to help identity the most important factor which influences a respondent and can be converted into numerical scores.

4.1. Henry Garrett's Ranking Technique
The study made an attempt to identify the key elements influencing households in rural areas to opt for non-farm activities. Using the method, the components that were evaluated based on respondents' perspectives were then converted into score values, which facilitated them to be ranked using the following formula:

$$\textit{Percent position} = \frac{100(R_{ij} - 0.5)}{N_j}$$

Where, R_{ij} = Rank obtained by the ith variable for j^{th} respondents and N_j = Number of variables ranked by j^{th} respondents
Using the above formula, the technique determines the Garrett score in the first phase by evaluating the percentage position of each rank. The total score and mean values of the scores were then determined by adding the corresponding scores of each individual for each factor. Among the factors, those having the highest mean values were considered to be the most significant factor.

5.Results and Discussion: The demographic data from the survey as presented in Table-1 shows that while the male proportion made up 54.29% of the respondents the female proportion was 45.71%. it was found that majority of the respondents, that is 85.71%, were in the age group of 18-35 years. Therefore, this study captures the viewpoint of the young rural population about the factors that influence their engagement in non-farm activities. Most of the respondents possess the education level of a graduate (60%) followed by post-graduation (28.57%) and up to class 12 (11.43%). Furthermore, 34.29% of the respondents were earning a monthly income of Rs. 10,000- Rs. 20,000, and more than Rs. 20,000 respectively while 31.42% of the respondents were earning a monthly income of less than Rs. 10,000. The highest percentage proportion was attributed to construction and other services including education sector with 20% each followed by trade and commerce (17.14%), and household manufacturing (11.43%).

Table-1: Personal Profile of the Respondents

Characteristics	Category	Frequency	Percentage
Gender Proportion	Male	19	54.29
	Female	16	45.71
Age	Less than 18 Years	0	0
	18 Years – 35 Years	30	85.71
	36 Years – 55 Years	5	14.29
	More than 55 Years	0	0
Marital Status	Single	31	88.57
	Married	4	11.43
	Divorced	0	0
	Widowed	0	0
Educational Qualification	Illiterate	0	0
	Up to class 10	0	0
	up to class 12	4	11.43
	Graduate	21	60
	Post Graduate	10	28.57
Monthly Income	Less than Rs.10,000	11	31.42
	Rs.10,000 – Rs.20,000	12	34.29
	More than Rs.20,000	12	34.29
Non-Farm Activities	Minning and Quarrying	2	5.72
	Manufacturing	3	8.57
	Household Manufacturing	4	11.43
	Non – Household Manufacturing	3	8.57
	Construction	7	20
	Trade and Commerce	6	17.14
	Transport, storage and communication	3	8.57
	Other Services	7	20

Table-2 represents the rankings provided by the respondents on the various factors influencing them to opt for non-farm activities. Among the 35 respondents, 12 of them gave the first rank to higher earnings followed by respondents citing urban linkage and better connectivity respectively as the most important factor.

Table-2: Ranking of Factors Influencing engagement in Non-Farm Activities

Sl. No.	Reasons Behind Opting for Non-Farm Activities	Ranks given by the Respondents					
		1st	2nd	3rd	4th	5th	6th
1.	Land insufficiency	4	2	5	7	9	8
2.	Poverty	2	3	2	7	8	13
3.	High earnings	12	9	8	4	1	1
4.	Irrigation problems	4	5	4	6	5	11
5.	Better connectivity	5	6	10	4	9	1
6.	Urban linkage	8	10	6	7	3	1

The percent position for the ranks were then calculated through the application of the Garrett's ranking formula, whereby, based on the percent position, the Garrett value for the corresponding rank was found using the Garrett ranking table presented in table-3.

Table-3: Calculation of Percent Positions and the Garrett Value

Sl. No.	Percentage Position		Garrett Value
	$\dfrac{100(R_{ij}-0.5)}{N_j}$	Calculated Value	
1.	$\dfrac{100(1-0.5)}{6}$	8.33	77
2.	$\dfrac{100(2-0.5)}{6}$	25	63
3.	$\dfrac{100(3-0.5)}{6}$	41.67	54
4.	$\dfrac{100(4-0.5)}{6}$	58.33	46
5.	$\dfrac{100(5-0.5)}{6}$	75	36
6.	$\dfrac{100(6-0.5)}{6}$	91.67	23

Furthermore, in order to obtain the mean scores for each factor, the Garrett value was first multiplied with the corresponding frequencies of the respective rank (for example: 4 x 77 = 308). Then, each of the rows were added to obtain the total scores. The mean value of Garret score was obtained by dividing the total score with the total number of respondents. With the help of the mean score, the most important factor influencing the respondents were ranked accordingly. This has been represented in table-4.

Table-4: Calculation of the Garrett Mean Score and Ranking

Sl. No.	Factors	Ranks given by the Respondents						Total	Mean	Rank
		1st	2nd	3rd	4th	5th	6th			
1.	Land Insufficiency	308	315	324	368	180	161	1656	47.31	V
2.	Poverty	231	315	252	322	360	138	1618	46.23	VI
3.	High Earnings	924	567	504	230	36	0	2261	64.60	I
4.	Irrigation Problems	462	567	315	138	288	92	1862	53.20	IV
5.	Better Connectivity	462	630	504	230	144	46	2016	57.60	II
6.	Urban Linkage	616	378	567	138	180	92	1971	56.31	III

The results which have been presented in the above table based on the Garrett's ranking method after analysis of data reveals that high earnings was the most significant factor which influences the rural households to opt for non-farm activities with a Garrett mean score of 64.60 (1st rank) followed by better connectivity and urban linkage with mean scores of 57.60 (2nd) and 56.31 (3rd) respectively. Mechet. al. (2017) states that the income earned by being engaged in non-farm activities was higher than farm income and thus, influences rural labour, particularly the people in the working age group, to take up non-farm activities. The same has been observed in the study whereby there is an increasing proportion of rural workforce engaging in non-farm employment with the prospects of higher earnings.

6. Conclusion: The findings of the study indicated that the young rural workforce opt for non-farm activities due to the prospects of higher earnings which suggest that the earnings from farm activities are not sufficient and hence influence the workforce to shift to non-farm activities. In addition, the study also covered the factors that affect the quality of employment through the distributed questionnaire. It was found that factors such as access to market and commercialization of agricultural produce helps in the generation of income for the rural households and that by improving modes of communication and transportation and skill acquisition would greatly enhance the quality of employment and further help the rural workforce to diversify to non-farm activities.

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INFLUENCE OF SOCIAL MEDIA ON THE BUYING BEHAVIOUR OF SKINCARE PRODUCTS AMONG THE FEMALE COLLEGE STUDENTS IN CHUMOUKEDIMA AND DIMAPUR DISTRICT, NAGALAND

Loreno Ovung

Assistant Professor, Department of Economics,
Tetso College, Chumoukedima, Nagaland
Email: lorenoovung21@gmail.com

Abstract

The skincare industry in India, valued at approximately US$ 2,933.7 million in 2023, is projected to grow at a remarkable 14.6% CAGR, reaching an estimated US$ 12,934.2 million by 2034. This growth is driven by evolving consumer preferences, increased disposable income, and a heightened focus on personal grooming and wellness. Within this context, this study aims to determine the significant impact of the various social media on consumer behaviour in the skincare market, the target participants consist of the female college students in Chumoukedima and Dimapur districts of Nagaland State. The researcher designed the questionnaire based on the specific requirements of the study. The study indicated that social media heavily influences purchasing decisions, as many users acknowledge the role of online trends and patterns in shaping their choices. Additionally, the visual appeal of products and user-generated content such as tutorials and reviews emerged as critical factors in guiding consumer preferences. The findings underscore the growing demand for skincare products in Nagaland, particularly among individuals who are increasingly conscious of their skincare routine and solutions promoted by social media influencers. This study further aims to enhance understanding of the dynamic relationship between social media and consumer buying behaviour in the Skincare sector, contributing valuable insights to both academic literature and industry practices, while highlighting the profound influence of social media in the evolving skincare landscape. Ultimately, this study emphasizes the need for brands to adapt their strategies to engage effectively with consumers in this rapidly changing market.

Keywords: Social Media, Consumer Behaviour, Skincare, Skincare products, Social Media Marketing

Introduction

Social media refers to a tool of technologies designed to facilitate the sharing of ideas, entertainment and information among users. As an internet-based form of social communication, social media platforms allow individuals to engage in conversations, share content, and create web-based materials. The world of social media features a diverse range of platforms, such as blogs, micro-blogs, wikis, social networking sites, photo-sharing platforms, instant messaging services, video-sharing sites, podcasts, and virtual worlds, among others. With over 5 billion users worldwide—approximately 62% of the global population—platforms like Facebook, Instagram, X (formerly Twitter), and YouTube have become a necessity to daily life. By early 2024, 94.7% of users accessed chat and messaging applications, closely followed by social platforms at 94.3%. In the beginning Social media started out as a way for people to interact with friends and family, but soon expanded to serve many different purposes with time.

In 2004, MySpace became the first network to reach 1 million monthly active users and thereafter the participation in social media exploded with the entry of Facebook and

Twitter (now X). Businesses also started gravitating towards these platforms in order to reach an audience instantly on a global scale.

According to the Global Web Index, 46% of internet users rely on social media for news, surpassing the 40% who prefer traditional news websites. This trend is popular among Gen Z and millennials, who are more prone to consume news via social media compared to older generations.

Social media plays a significant role in many businesses' marketing strategies, and it's not a surprise given the large volume of hours people spend each day on social websites and apps. At the same time, social media is a constantly evolving field, with relatively recent apps such as TikTok, Signal, and Clubhouse joining the ranks of established social networks like Facebook, YouTube, X, and Instagram.

Social media platforms are often divided into six categories: social networking, social bookmarking, social news, media sharing, micro blogging, and online forums. These multifarious platforms serve a variety of purposes and user interests. Some appeal to hobbyists, others to people in their work lives. People use them to find others around the globe who shares their political or other views. Entertainers use social media to engage with fans, politicians with voters, and charities with donors. Governments often turn to social media to convey vital information during emergencies. They compiled this list of the top social media platforms. Specifically, the ranking are done based on the most popular social media networks number of users and monthly traffic data. All traffic data estimated based on the most recent available August 2024 data. Monthly active user estimates are calculated from the latest reports from each platform.

From table-1, it is evident that Facebook, YouTube and WhatsApp have the highest number of active users and these platforms also have a higher monthly traffic. It's not a surprise that the top 5 list are the big names in the social media world. These big brands like Facebook, Instagram and YouTube have changed their strategies by engaging in short-form videos like reels, shorts etc to endorse their users and also help businesses advertise their products through this feature. Although Messenger and Telegram are also messaging platforms, WhatsApp has more active users as it is easier to use and sharing of photos, videos, documents, PDFs etc is also easily processed.

Table 1. Ranks of social media based on monthly active users.

Ranking	Social Media Network	Monthly Active Users	Monthly Organic Traffic
1	Facebook	3.06 billion	13,100,000,000
2	YouTube	2.70 billion	73,000,000,000
3	WhatsApp	2.40 billion	3,900,000,000
4	Instagram	2.35 billion	6,700,000,000
5	TikTok	1.67 billion	2,700,000,000
6	WeChat	1.31 billion	6,100,000
7	Messenger	1.10 billion	253,700,000
8	Telegram	900 million	615,100,000
9	Viber	820 million	17,300,000
10	Snapchat	800 million	189,300,000

Source: Josh Howarth, Exploding topics, October 2024

Significance of Skincare: In our human body, Skin is one of the most sensitive organs. It serves as a safeguarding shield and controls body temperature. Our skin plays a very significant role in our overall health and well-being. With our skin being subjected to various environmental and lifestyle influences, it is very important to take proper care of it. This is where skin care becomes significant.

Skin care refers to the practice of preserving and enhancing the condition and appearance of our skin. It protects our skin from external factors such as UV rays, pollution, and harsh weather conditions and keeps our skin healthy, moisturized & hydrated. Skincare is not merely vital for healthy skin, but it also plays a key role in preventing early aging, reducing the risk of skin cancer. It also improves our overall appearance. By following a regular skincare routine in our daily lives, we can shield our skin from these external influences and sustain healthy, radiant skin.

Some of the benefits of skincare are:

- Skincare enhances and maintains the overall health of your skin. By following a consistent skincare routine, you can keep your skin hydrated, balanced, and nourished.
- Skincare products often contain antioxidants and UV blockers that shield your skin from environmental damage. Antioxidants can help to prevent premature aging by reducing the appearance of fine lines, wrinkles, and age spots. UV blockers help to reduce the risk of skin cancer by protecting our skin from harmful UV rays.
- Furthermore, taking care of our skin can improve our overall appearance and boost our self-confidence. When our skin looks and feels healthy, we are more likely to feel confident and comfortable in our own skin.
- Including the right products in our skincare based on our skin concern can enhance and heal the skin.

The skincare industry size in India reached US$ 2,933.7 million in 2023. Over the forecast period, skincare demand in India is anticipated to rise at 14.6% CAGR. The industry is predicted to increase from US$ 3,310.5 million in 2024 to US$ 12,934.2 million in 2034

The skincare industry in India continues to experience robust growth driven by evolving consumer preferences, increasing disposable income, and a growing focus on personal grooming & wellness. There is a rising awareness about skincare routines, a preference for natural & organic products, and even the women from the middle and lower class are now aware and have keen interest in taking care of their skin, which is predicted to further enhance the growth of Skincare market in India. The skincare industry in India has a variety of landscape with several local and international brands catering to different skincare needs. With the popularity and influence of Korean Pop and Korean Dramas the women are also seen shifting their purchase from local to Korean brands with the aim to achieve the clear glass skins like the Koreans.

The skincare industry in India is significantly influenced by digital platforms and e-commerce. Brands are directed toward social media, influencer partnerships, and

targeted marketing campaigns to engage consumers. The skincare brands recognize the potential and power of social media influencers in advertising their products with their creative and entertaining content or either with fabricated reviews, these influencers help the brands in capturing the attention of the consumers. The brand often partners with the influencer and also provides discount codes to its user through the influencers; this is also another strategy of the brands.

There has been a rise and craze over skincare in Nagaland. With social media presence and advertisement from various influencers on various social media platforms it is seen that skincare has now become a trend. From teens to women in their 40s and 50s, every one of them is now aware of the benefits of skincare and also how to use them. As skincare products flood the market it is now easily available both online and in physical store.

Literature Review

Ananthsai et. al. (2023): The study advances knowledge of consumer behaviour by offering useful insights for skincare marketers and customers. The goal of the study was to analyze the impact of social media influences on consumer behavior in purchasing skincare products and how often social media influences the consumer in their purchasing pattern. The study had 100 respondents and out of which 63 respondents believe in social media for choosing their skincare products. The study emphasizes the variety of ways that influencers have an impact on consumer behaviour and purchasing choices.

Aunkita et.al: The study looks into the factors that influence consumers buying cosmetic products from social media advertisements and find out the best social media preferred by customers in Gujarat. From the 175 respondents the results indicate that the effects of social media are very complex and vary from person to person and that Instagram and WhatsApp are most preferable social media sites for advertisements of cosmetic products

Chahat and Sachin (2020): 'Impact Of Social Media On Consumer Behaviour' This study aims to explain the empirical role of social media in the consumer decision process of New Delhi. The data collected from 136 respondents reveals that consumers in New Delhi, India are actively utilizing social media platforms as a tool in validating their purchase decisions. Social media is taken as the electronic word of mouth. Reviews and preferences by the past consumers on Social media platforms affect the decision process of potential customers.

Sharma1 and Kalra (2020) in their study states how feedback on social media affects future purchase as well and that social media conveys consumer's satisfaction and dissatisfaction to the manufacturers. Their study assesses the impact of social media marketing on consumer perception towards buying a product or making a decision to buy a product. The findings led to the revelation that there was a positive and significant relationship between problem recognition, information search and evaluation as key factors that determine how social media influences on this stage among the respondent.

Oberoi and Oberoi (2018) Their study analyzes the factors which influence the purchase of cosmetic products among Delhi/NCR consumers. The findings reveal that Trust is the most powerful factor followed by the other influential factors (which include peer group, family, advertisements and habit) that affect the decision of the consumer regarding the purchase of the cosmetic products. The second most powerful reflection of the decision regarding the cosmetic products is the influential factor that the consumer looks at while choosing the cosmetic product. The study also revealed that social, cultural and psychological factors affect the consumer's decision in a different manner regarding the purchase of cosmetic products corresponding to the different income level.

Rabab Murtaza (2021): Brings out the efficiency of social media by depicting a positive spectrum where social media may influence the consumers to buy a product. The study also highlights the role of social media in creating a brand image among the consumers and how reviews available on these platforms build a sense of trust for the particular product. According to the findings of the study 70% of the respondents agreed on being frustrated when the advertisements are lengthy and that visual appeal on these platforms gravitates the interest of the consumers.

Varghese1 and Agrawal (2021) Measures the change in perception of the consumers through the content and engagement on Social media and aimed to understand how businesses can engage more customers to increase the brand value. The findings indicate that consumers are more drawn to content featuring discounts, promotions, and influencers, as it has the potential to shift their mindset and alter their perceptions. Consumers, Influenced by Social media are also willing to spend 4 times more than their normal purchase and the attraction towards the products is so high that they buy it on the same day using Social media.

Objectives of the study: This study aims to identify the specific social media platforms that most significantly influence the purchasing decisions of female college students regarding skin care products, examine the role of social media influencers in shaping the perceptions and attitudes ,determine the awareness of skincare products through social media and to investigate and analyze the factors on social media that influence skincare purchasing decisions, with the aim of determining the correlation among these factors.

Research methodology: A structured questionnaire was used to collect primary data through Google Forms. The analysis of the study is based on data collected from a sample size of 109 female respondents from chumoukedima (51.38%) and Dimapur (48.62%). The questionnaire covers respondents' demographic information and social media usage patterns, with a series of closed-ended, indirect questions. The study follows a descriptive research design, and the sampling method employed was a convenience sampling technique under non-probability sampling and the scale used is Likert Scale. To proceed, the raw data was collected and entered into a Microsoft Excel spreadsheet, after which correlations were calculated using SPSS to address the study's objectives.

The investigation and results

The investigation is divided into two categories. The first part of the research aims to identify the basic socio-economic factors of the respondents, while the second part addresses the fulfilment of the research objectives. The basic socio-economic factors are as follows:

Table 2. Respondents Demographics

Socio Economic Factors	Particulars	Frequency	Percentage
Age of the respondents	below 18	4	3.67
	18-19	39	35.78
	20-22	47	43.12
	23-24	5	4.59
	Above 25	14	12.84
	Total	**109**	100.00
Monthly Expenses on Skin care	Below 1000	24	22.02
	1000-2000	55	50.46
	3000-4000	19	17.43
	Above 5000	11	10.09
	Total	**109**	100.00
Location of the respondents	Dimapur	53	48.62
	Chumoukedima	56	51.38
	Total	**109**	100.00
Social media - Digital Wellbeing	Less than 5 hours	40	36.70
	5 -8 hours	46	42.20
	9-12 hours	18	16.51
	More than 12 hours	5	4.59
	Total	**109**	100.00
Frequency of skincare purchases	Once a week	4	3.67
	Once a Month	75	68.81
	Once a year	7	6.42
	Twice a month	14	12.84
	Twice a year	9	3.67
	Total	**109**	100.00
Have you ever brought skincare products after seeing it on social media?	**Yes**	**No**	Total
	107	**2**	109

Source: Primary Data

Table 2 provides valuable insights regarding the socio-economic factors of the 109 respondents. With regards to age distribution, the largest group falls under 20-22 years

comprising 43.12%, and very close is the 18 -19 years age group with 35.78%. Whereas, the least age group is below 18 years, 23-24 years and above 25 years age groups with just 3.6%, 4.59% and 12.84% respectively. The data indicates that the majority of the respondents are young adults, primarily in their early adulthood.

When it comes to monthly expenses on Skincare products, the majority (50.46%) of the participants spends between ₹1,000 and ₹2,000. 22.02% of the respondents spend less than ₹1,000, while 17.43% of respondents spend between ₹3,000 and ₹4,000.The least is 10.6% of the respondents who spends above ₹5000. The data collected suggests that most participants have moderate skin care expenditures, and only few spend excessively on skincare products.

As indicated in table 2 social media usage trends show that 42.20% of respondents spend 5-8 hours on social media per day, while 36.70% spend less than 5 hours. A smaller group (16.51%) spends 9-12 hours and only 4.59% report using social media for more than 12 hours a day. These trends throw light in the notable time spent on social media, which may influence consumer behaviour, particularly regarding skincare product choices. The data also highlights the frequency of skincare purchases that the majority of respondents (68.81%) purchase skincare products once a month, indicating a regular but medium purchasing pattern. A smaller portion, 12.84%, makes purchases twice a month, suggesting a more recurrent buying habit. In contrast, a minority of respondents make purchases less frequently, with 6.42% buying skincare products once a year and 3.67% purchasing twice a year. Only 3.67% of respondents reported buying skincare products once a week, which shows that weekly purchases are uncommon among the group.

Table 3. Usage of Social media Platforms for Skincare

Which Social media platforms do you use?			Which social media platform has most influenced your purchasing decisions regarding skincare products?	
Social Media Platforms	Frequency	Percentage	Frequency	Percentage
Facebook	34	31.19	10	9.17
Instagram	108	99.08	78	71.55
Threads	10	9.17	00	00
Pinterest	58	53.21	29	26.60
YouTube	73	66.97	55	50.45
WhatsApp	109	100	30	27.52
Snapchat	35	32.11	10	9.17

Source: Primary Data

The table highlights the frequency and percentage of usage of various social media platforms by the target population of female college students in Chumoukedima and

Dimapur district, Nagaland, about their skincare product purchasing behaviour.

In terms of usage, the highest usage traffic are WhatsApp (100%), Instagram (99.08%) and Youtube (66.97%). Conversely, Pinterest (53.21%), Snapchat (32.11%), Facebook (31.19) and threads (9.7%) are the least frequented social media platforms. With regards to the social media platform that has most influenced the purchasing decisions of the respondents regarding skin care products are also analyzed with the assistance of table 3. Among them, Instagram has the highest influence with 71.55%, Youtube 50.45%, WhatsApp 27.5%. However, in contrast Pinterest (26.60%), Snapchat (9.16%), Facebook (9.17%) and threads (0.0%) had the lowest media influence among the participants.

Role of Social Media influencers

Table 4. Awareness and credibility of skincare product recommendations.

Do you feel that social media has increased your awareness of skincare products?	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree	Total
Responses	30	62	15	1	3	109
Percentage	27.52	56.88	13.76	0.91	2.75	100%
How likely are you to try a new skincare brand if you see it featured by an influencer you follow?	Very likely	likely	Neutral	Unlikely	Very unlikely	Total
Responses	14	55	28	8	4	109
Percentage	12.84	50.45	25.68	7.33	3.66	100%
How do you view the credibility of skincare product recommendations from social media influencers?	Very Credible	Somewhat Credible	Neutral	Somewhat Not Credible	Not at all Credible	Total
Responses	8	44	44	6	1	109
Percentage	7.33	40.36	40.36	5.50	0.91	100%

Source: Primary Data

From table 4 it is clear that most of the respondents Agree (56.88%) that social media has increased their awareness of Skincare products, 27.52% strongly agree and 13.76% are neutral. In contrast only 2.75% and 0.91% strongly disagree and disagree with the impact

of social media in increasing their awareness towards skincare products thereby fulfilling an objective of the study.

A high number of the participants Agree (50.45%) that they'll try a new skincare brand if they see it featured by an influencer they follow. While 24.68% and 12.84% are neutral and very likely about the idea of trying a new skincare. However, conversely it can be seen that only 7.33% and 3.66% of the participants are less likely to be influenced by the social media influencers. With regards to the credibility of skincare product recommendations from social media influencers 40.36% of the respondents are neutral and give somewhat credibility to the influencers and only 7.33% give high credibility. Whereas, somewhat not credible and not credible at all are least favored 5.50% and 0.91%. The data shows that influencers have a very positive impact on the respondents when it comes to recommendations.

Correlation Analysis: To analyze the data, Pearson's correlation method was applied because the data consists of continuous variables. This method is ideal for measuring the linear relationships between these variables. The strong correlations suggest proportional relationships, making Pearson appropriate for quantifying the strength and direction of these relationships. Additionally, Pearson is well-suited for normally distributed data and helps assess how closely the factors influence each other.

Null Hypothesis: There is no correlation among the factors on social media that influence the skincare purchase.

Alternative Hypothesis: There is correlation among the factors on social media that influence the skincare purchase.

Table 5: Correlation Analysis among factors of social media that influence skincare purchase.

	Influencers Recommendations	User Review	Advertisements	Brand Post	Friend's Post	Promotions and discounts
Influencers Recommendations	1					
User Review	.917**	1				
Advertisements	.881**	.829**	1			
Brand Post	.801**	.740**	.851**	1		
Friend's Post	.898**	.799**	.875**	.879**	1	
Promotions and discounts	.951**	.930**	.939**	.800**	.879**	1

** Correlation is significant at the 0.01 level (p value is <0.01)
Source: Computed data using SPSS 20

From Table 5 the correlation analysis reveals significant relationships among

social media factors that influence skincare purchase decisions, with all correlations being statistically significant (p < 0.01). Influencers' recommendations show strong positive correlations across all factors, especially with promotions and discounts (r = .951), highlighting their alignment with promotional efforts. Similarly, user reviews exhibit strong relationships with promotions and discounts (r = .930) and influencers' recommendations (r = .917), indicating their role in complementing promotional strategies and influencer-driven content.

Advertisements also demonstrate significant correlations, particularly with promotions and discounts (r = .939) and friends' posts (r = .875), suggesting their effectiveness in amplifying promotional efforts and peer validation. Brand posts show strong correlations with advertisements (r = .851) and friends' posts (r = .879), emphasizing their resonance within peer-driven and promotional contexts. Friends' posts further reflect significant relationships with promotions and discounts (r = .879) and influencers' recommendations (r = .898), showcasing the combined impact of peer validation and endorsements.

Among all the factors, promotions and discounts emerge as the most influential, showing the strongest correlations across the board, particularly with influencers' recommendations (r = .951) and user reviews (r = .930). This underscores their central role in bridging various social media influences and driving skincare purchase decisions. Overall, the analysis highlights the interconnected nature of these factors, with promotions and discounts standing out as the most impactful element in shaping consumer behavior.

Findings:

1.   Skincare trends are predominantly driven by younger individuals as from the data the largest group falls under 20-22(43.12%),18 -19 (35.78%). Whereas, the least age group is below 18, 23-24 and above 25 age groups with just 3.6%, 4.59% and 12.84% respectively. The data indicates that the majority of the respondents are young adults, primarily in their early adulthood indicating a strong interest for skincare in this age demographic.

2.   Most participants have moderate skin care expenditures, and excessive spending on skincare products is uncommon. The majority of participants (50.46%) spend between ₹1,000 and ₹2,000 on skincare, indicating moderate expenditure, while only a small percentage (10.6%) spend over ₹5,000. The participants are students therefore extreme spending is unusual.

3.   A large portion of respondents (42.20%) spends 5-8 hours daily on social media, while 36.70% spend under 5 hours. A smaller segment dedicates more time, with 16.51% spending 9-12 hours and only 4.59% exceeding 12 hours. The continuous daily engagement with social media platforms indicates that it likely influences consumer decisions, particularly regarding skincare products. In terms of purchasing habit, the majority (68.81%) of respondents buy skincare products once a month, indicating a consistent but moderate purchasing frequency. Smaller group (12.84%) purchases twice a month, suggesting some consumers

are more engaged in their skincare routines. In contrast, a minority buy infrequently, with 6.42% purchasing once a year and 3.67% twice a year, while weekly purchases are rare, reported by only 3.67%.

4. Out of the 109 respondents, 107 of them agreed on purchasing skincare products after seeing it on social media. The extensive time spent on social media could relate with higher exposure to skincare marketing, trends, and influencer endorsements, potentially driving purchasing behavior.

5. In terms of media platforms usage, the highest usage traffic are WhatsApp (100%), Instagram(99.08%) and Youtube (66.97%). Conversely, Pinterest (53.21%), Snapchat (32.11%), Facebook (31.19) and threads (9.7%) are the least frequented social media platforms. With regards to the social media platform that has most influenced the purchasing decisions of the respondents regarding skin care products, Instagram has the highest influence with 71.55%, Youtube 50.45%, WhatsApp 27.5%. However, in contrast Pinterest(26.60%), Snapchat (9.16%), Facebook(9.17%) and threads(00%) has the lowest media influence among the participants

6. Majority of the respondents Agree (56.88%) that social media has increased their awareness of Skincare products, 27.52% strongly agree and 13.76% are neutral. In contrast only 2.75% and 0.91% strongly disagree and disagree with the impact of social media in increasing their awareness towards skincare products thereby fulfilling an objective of the study.

7. With regards to the credibility of skincare product recommendations from social media influencers 40.36% of the respondents are neutral and give somewhat credibility to the influencers and only 7.33% give high credibility. Whereas, somewhat not credible and not credible at all are least favored 5.50% and 0.91%. The data shows that influencers have a very positive impact on the respondents when it comes to recommendations.

8. A high number of the participants Agree (50.45%) on trying a new skincare brand if they see it featured by an influencer they follow. However, conversely it can be seen that only 7.33% and 3.66% of the participants are less likely to be influenced by the social media influencers. This highlights the positive and productive role of the influencers in shaping the perception and attitude towards skincare products

9. From the data it is very evident that user review, influencers' recommendations and promotions and discounts are the key factors that drive the respondents' skincare purchasing behavior. It can be analyzed that respondents cultivate trust from the insights from actual users, reflecting how a product performs in real-world situations. Many consumers trust user reviews over marketing messages, making reviews a more reliable source of information and showcase products in use, giving potential buyers a better understanding of how they work and their benefits.

10. The correlations among the factors on social media that influence the skincare purchase are significant and positive. The Null Hypothesis was rejected; since

the P value was less than 0.01 the alternative hypothesis is accepted. In other words there is a significant positive correlation among all the influencing factors of social media.

Recommendations

1. Targeted Marketing Campaigns: Marketing efforts on social media platforms popular with younger audiences e.g. Instagram, youtube to effectively engage with the young adults should be focused. Creating contents that resonate with their interests and values, such as sustainability and inclusivity.

2. Education Content: The younger consumers acknowledge transparency and if educational resources about skincare routines and ingredients are provided, the consumer can form a sense of trust and loyalty towards the brand.

3. Collaborations with Influencers: Since from the analysis it was evident that the younger consumers have trust and have a tendency to purchase the products if they see the influencers advertising. Therefore, proper marketing techniques through influencer content can help brands boost their products' sales. Identifying relevant influencers through whom the brands can promote their products is also important for inclusivity and through whom the consumer can also relate.

4. Pricing: Pricing strategies that are accessible to younger consumers, as many of whom may be students or early in their careers should also be considered. Offering value packs or student discounts can encourage brand loyalty. As from the study we find that the consumers are attracted towards promotions and discounts given by the brands.

5. Feedbacks and Engagement: Creating platforms for engagement where young consumers can share their skincare experiences and feedback can help in product development and foster a sense of community around the brand. As authentic reviews create a sense of trust towards the product before purchasing the product.

6. Investment on social media: Brands should also invest on social media strategy that includes regular posts, stories, and interactive content to engage with their audience effectively. Developing a diverse range of content, such as tutorials, product demos, and user-generated content, to showcase products in real-life situations. Collaborating with skincare experts or influencers can further enhance brand image and popularity.

Conclusion: This research helps us to find out how young consumers are attracted towards the advertisement of skincare products in various social media sites and also help us to find out the purchasing decision of consumers of Dimapur and Chumoukedima district of Nagaland. The study highlights Instagram and WhatsApp as the most used social media sites, however for advertisements of Skincare products Instagram and Youtube are the key platforms. The research has shown a powerful impact of Social media on consumer buying behaviour among the study demographic. Even though there are numerous

products flooding the social media platforms, it was seen that consumers are highly selective and they are more attracted towards those products which are recommended by influencers or those products which have user reviews. Since the quality of the content is of huge impact, it is important for brands to create content which the consumers can relate to.

The new era of marketing is through social media; therefore brands instead of investing on billboards and print advertising, brands can now divert their investment towards social media advertising. Paid collaborations with influencers and creating a platform where real time users can share their experiences about the products. Through this brands can strengthen its bond with the consumers thereby creating a strong sense of trust and loyalty among the consumer. Inclusivity and transparency is also another important marketing strategy that can be employed as consumers will feel more connected towards the brand when they see collaborations made with social media content creators whom they can relate to.

In conclusion, Nagaland has a huge potential for the skincare market as the young adults are now more educated and aware about the skincare benefits and also they take beauty and aesthetic very sensitively. Both the domestic and foreign products have penetrated the skincare market. Brands can establish a strong foundation in Nagaland with the right marketing techniques. Local brands also have huge potential, if they are able to market their product with the proper and right use of social media. The local brands can gain popularity through social media by creating engaging and entertaining contents to attract the consumers.

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AGEING AND AGEISM IN NAGA SOCIETY: A STUDY ON DETERMINANTS

Sino Olive Shohe
Research Scholar, Department of Sociology
Nagaland University, Lumami

Prof. Toshimenla Jamir
Professor, Department of Sociology
Nagaland University, Lumami

Abstract

While the chronological process is an inevitable part of human life, the problems associated with ageing appear to be a product of modern era. As of 2022, with about 10 per cent of population above 60 years of age, India is considered a greying nation which all the more requires for review of the status of older adults from different perspectives. While traditional Naga society had assigned a place of honour and respect to the older people as they played a valuable role in transmission of cultural heritage, rapid social and economic changes are poised to have severe implications on the circumstances under which they live in contemporary Naga society. There prevails the stereotype of older adults as unproductive human resource which often leads to them being as burden towards society and redundant. Unlike other forms of discrimination such as racism, sexism, etc., ageism has not received much academic attention particularly in Naga society. Ageism can significantly impact the experiences of the older adults in terms of economic opportunities, access to health care and overall wellbeing. In light of this, the present paper explores the attitude of the society towards the older adults with the objective of arriving at a more nuanced understanding of the issue of ageism in the Naga society. As Naga society straddles the transition between traditionalism and modernity, bridging the knowledge gap of this significant segment of population through critical sociological engagement can yield important policy implications in line with the challenges and prospects of the Act East Policy.

Keywords: Population, ageing, ageism, older adults, Nagaland.

Introduction

Population ageing is one of the most prominent demographic transitions currently observed across the globe, albeit at varying scales. Key drivers of this phenomenon include a significant decline in mortality rates, reduced fertility rates, and improvements in diet, living conditions, and healthcare facilities (Weil, 1997; Zweifel, Felder &Meiers, 1999). Conceptually, population ageing was initially defined as an increase in the proportion of individuals aged 55 or 65 years and older (Clark, Kreps & Spengler, 1978). However, the United Nations defines population ageing as the rapid growth in the proportion of individuals aged 60 years and above relative to the total population. According to the UN, a country is classified as an "ageing" or "greying" nation when the proportion of people aged 60 years or older reaches 7% or more of the total population.

According to a report by IIPS and UNFPA (2023), India has been undergoing rapid population ageing since 2010. The proportion of the population aged above 60 years, which was approximately 8.6% during the 2011 census, has increased to 10.5% as of 2022, and is projected to exponentially rise to 20.8% by 2050.

Population ageing in itself is a positive aspect resulting from increase in longevity and itbecomes a concern only when at the macro level a country starts to experience increased economic challenges as a result of lower economic growth, higher strain and costs on the health care sector and labour shortages and so on. Even at the micro level, population ageing have shed light on the different aspects of life that older adults experience day in and day out.Being out of the work force, declining health condition, low income and savings, unstable living arrangements and care giving can significantly impact their wellbeing.

At the micro level, how institutions or individuals in the society perceive the older adults can also affect their experience of ageing process and overall outlook of life.As such population ageing has also shed lights on prevailing stereotype of how they are viewed or looked upon by the younger people in the society. This attitude towards the older adults either positive or negative purely on the basis of age is what came to be termed as ageism. In recent years efforts have been given to undertake studies related to ageism because, society in general devalues older adults due to their perceived redundancy which often leads to them being generalized as burdens and not as productive human resources in society.

Though ageism in different forms have been an inherent part of human nature, it was only after when Butler (1969) introduced the concept of 'ageism', which was defined as a form of prejudice or discrimination based on age normally by one age group towards other age groups, more often by young people towards older people, that interests in this subject area have gained momentum and continue to gain significant importance. Later studies like Iversen, Larsen &Solan (2009), expanded the concept of ageism by defining it as a "negative or positive stereotypes, prejudice or discrimination against (or to the benefit of) ageing people because of their chronological age or on the basis of a perception of them being old or elderly".

Ageism specifically aiming towards the older people is marked by certain predominating negative stereotypes such as after attaining certain age, older people are

generalized to have poor physical and mental abilities, become unattractive, dependent and unproductive. At the same time older people are also stereotyped to be kind, wise, dependable and happy (Palmore, 2005; Bugental & Hehman, 2007). Ageism is also prevalent in almost all the aspects of our lives, be it in the work place, health care, education, media, day to day interactions and social policies (Dennis & Thomas, 2007; Cox, 2017).

In fact, beyond the presence, the prevailing intensity and effects are what made ageism to be considered as the third great "ism" following racism and sexism (Palmore, 1999). However, ageism is considered to be different from other forms of discriminations on grounds that firstly, ageism is a disadvantage which given time everyone will get to experience and secondly it is embedded in our very culture (Calasanti, 2005).

Ageism as it has been observed could be directed towards both the young and old people alike, however it is the view against the older people that deserved more attention due to the high prevalence against the older people and issues associated with growing old does not diminish for the older adults as time goes on (Butler, 2005; Iversen, Larsen &Solan, 2009). And due to its pronounced impact and negative preconception on the rapidly growing older population both in developed and developing countries, the issue of ageism needed to become forefront of mainstream discussions.

Determinants and effects of ageism towards older adults

According to Garrido et al. (2019), in their study of ageing and incidence of ageism in Spain among different age groups,it was observed that one of the main reasons for continued wide spread was due to very low knowledge about ageing among the younger age groups of the population. The study also observed that age was a significant determinant of ageist attitude, in that older adults held more negative perception against ageing than the younger individuals. In a very elaborate review on the determinants of ageism from previous literatures, Marques et al. (2020) found that about 13 factors were closely associated with ageism against older adults. Out of the various variables, most prominent items such as age, years of education and marital status were mainly negatively associated with ageism. Whereas, factors like culture and ethnicity, area of residence whether rural or urban and behavioural and psychological factors such as fear of death, anxiety regarding ageing were found to have mainly positive association with ageism. Ha & Kim (2021) too, in their study on the factors affecting ageism among Korean nursing studentsreported that age was one of the main demographic variable related to ageism, where older nursing students were more ageist than compared to younger students.

Ageism, whether conscious or unconscious, can profoundly impact the daily lives of older adults. According to Nolan (2011), any experience with ageism will negatively impact older people's view on life and may feel like outsiders who are invisible to the society and ultimately diminish the sense of belongingness. It was particularly identified that ageism was highly prevalent in health care practice where older people were rampantly discriminated against based on their age resulting in under treatment, receive lower standard care, delay in diagnosis, treatment and may also not follow same medical protocol for older adults as done for the younger patients.

Study on the global reach of ageism by Chang et al (2020) also observed that ageism be it institutional, interpersonal or self-directed, has been found to be negatively impacting the older people in all the aspects of life in which it is manifested including health, workplace and everyday social life.

Raynor (2015) observed that impacts of ageism are commonly found in work place, healthcare, media, politics and in civil engagements. The negative impacts of ageism usually take the form of finding difficulty to get gainful employment despite willing to work, being dismissed by health care professionals due to frequent health concerns and mormally being portrayed in a negative light in media. Even in politics, older people running for office are questioned on their age and the ability to perform under intense pressure of running the government. Many a times, being generalized and looked upon as old and useless, society fail to harness the knowledge and wisdoms of the older people. Lyons et al. (2017) studied the relationship between experience of ageism and mental health outcomes such as depression, anxiety, stress and positive mental health among older adults above 60 years in Australia. In a correlation analysis between ageism and the mental health outcomes, experience of ageism was significantly linked to effects in all the factors of mental health, where higher levels of depression, anxiety and stress was observed

Given the above discussed premises, in this study we have tried to understand the overall attitude of the respondents between the age of 12 to 59 towards the older adults above 60 years of age in Nagaland, a tribal state located in the North-Eastern region of India. In order to do that thisstudy seeks to observe the characterization of the older adults in the Naga society and study the differences in the attitude towards older adults based on socio-demographic factors such as age, gender, marital status and education.

Data and Methodology

Ageism can either be directed towards others or be self-directed and in this study we are concerned with the former, particularly by the younger people towards the older adults in the society. The present study is based on a cross sectional primary data collected through online survey method from a total of 120 respondents ranging between the age of 12 to 59 years. Even though community was not a part of any variable, in order to justify the research objectives it can be stated that all the respondents were from various Naga tribes spread across the state of Nagaland. The Nagas are a very closed knitted tribal society with a sense of strong community belongingness. Elders are someone who is highly regarded and respected by the community members and considered to have an important role and position in the society. Given this background, this study will attempt to see how the younger generations will fare in our ageism scale.

In order to draw a more robust analytical comparison among the respondents, the sample was categorized into three different age groups identified as respondents belonging to Generation Z (12 to 27 years of age), millennials (28 to 43 years of age) and Generation X (44 to 59 years of age) respectively (henceforth Gen Z, millennials and Gen X). Besides age, other socio-demographic characteristics such as gender, marital status and highest level of education was defined and included as the main predictor

variables for our regression model.

To measure the level of ageism among the respondents a 4-point Likert scale based on Fraboni Scale of Ageism consisting of 28 questions was modified and implemented in the study. Scores for responses in the scale were coded as 1(Strongly disagree), 2 (Disagree), 3 (Agree) and 4 (Strongly agree) respectively and for questions reflecting positive attitude were reverse coded during the analysis process.Based on works by Sullivan& Artino (2013) and Ha& Kim (2021), score of each respondent for all questions were summed up and was placed within the range of total possible score of 28 to 112. The mid-point was marked at the score of 56 and hence defined that total score below 56 indicated that respondents as less ageist and higher score as more ageist towards the older adults. This way we derived the predictand variable having binary values where less ageist was assigned value of 0 and more ageist was assigned value of 1.

To test the reliability of the Likert scale for measure ofageist attitude, Cronbach's Alpha test was done resulting in a coefficient alpha value of 0.82 indicating a reliable correlation among the items of the scale and that the grouped values measure the referenced variable.And to model the relationship between levels of ageism with respect to various socio-demographic characteristics, binary logistic regression method was applied. All tests and analysis was done using SPSS 20.

Overview of population ageing in Nagaland

This section provides an initial preview of the population ageing status in the state of Nagaland since 2011 as recorded by the official Census of India. As seen in Table 1, the population of Nagaland can be considered a young population as per the estimates of 2011 Census where people above 60 years of age consisted of about 5.19% of the total state population. Even though data indicated a fluctuation since 1991 census, in recent years there has been an increase in proportion of population above 60 years over the past decades, as during 2001 census the percentage of individuals above age 60 was about 4.5% of the total population. Nevertheless, along with the country and the rest of the world with a better health facilities and care, access to resources, etc. proportion of people above 60 years of age is expected to increase even more.

We can also see that number of people living beyond 80 years of age may not be increasing, but number of people crossing the threshold of age 60 sure is increasing decade after decade, which to some extent does affirm that within the next two to three decades the proportion of older adults above 60 years will grow even more significantly. As of 2011, the state of Nagaland also had more older males (53.33%) than older females (46.67%). However, percentage of oldermales has been declining since 1991 at 58.67% to 56.17% in 2001 to 53.33% in 2011. On the other hand, proportion of olderfemales has been rising steadily from 41.33% in 1991 to 43.83% in 2001 and to 46.67% in 2011.

Table 1: Nagaland's population above 60 years for 1991, 2001 and 2011 censuses

Age group	Census 1991 (%)			Census 2001 (%)			Census 2011 (%)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
60-69	21063 (57.97)	15274 (42.03)	36337 (56.98)	29677 (56.31)	23027 (43.69)	52704 (58.35)	32484 (53.46)	28278 (46.54)	60762 (59.15)
70-79	9743 (58.39)	6944 (41.61)	16687 (26.16)	13349 (55.6)	10659 (44.4)	24008 (26.58)	14895 (52.9)	13263 (47.1)	28158 (27.41)
80+	6610 (61.47)	4143 (38.53)	10753 (16.86)	7710 (56.65)	5901 (43.35)	13611 (15.07)	7400 (53.6)	6406 (46.4)	13806 (13.44)
Total	37416 (58.67)	26361 (41.33)	63777 (5.27)	50736 (56.17)	39587 (43.83)	90323 (4.54)	54779 (53.33)	47947 (46.67)	102726 (5.19)
Total popu.	1209546			1990036			1978502		

Source: Government of India, Census 1991, 2001, 2011

Based on this trend, with the release of the latest census, it can be assured that the proportion of the population aged 60 years and above will be significantly higher, necessitating a deeper understanding of ageing process among the different cohorts of population so as to reduce ageism towards older adults as well as possibilities to secure their socioeconomic needs, healthcare requirements, and policy interventions to ensure their well-being and overall quality of life.

Results and Discussion

Socio-demographic characteristics of the respondents

In this section the main socio-demographic characteristics of the respondents of the study have been discussed and these variables will also be employed as the main predictor variables for the various analysis later on.

Table 2: Total respondents by age groups and gender

Age group	Male (%)	Female (%)	Total (%)
Gen Z	20	17	37 (30.8)
Millennials	31	38	69 (57.5)
Gen X	3	11	14 (11.7)
Total	54 (45)	66 (55)	120

As given in Table 2, a total of 120 respondents were covered in the survey of which 54 (45%) were male and 66 (55%) were female. The respondents were categorized into three main age groups characterized in the form of different generations namely Gen Z (12-27 years), Millennials (28-43 years) and Gen X (44-59 years) respectively. Of which

37 (30.8%) respondents were Gen Z, 69 (57%) were Millennials and 14 (11.7%) were Gen X.

In Table 3 the marital status have been broadly categorized in to unmarried and married respondents where 91 (75%) were unmarried and 29 (24.17%) were married respectively. Unlike millennials and Gen X, none of the respondents under Gen Z were married, whereas none of the male under Gen X was unmarried. Overall, 43 (35.83%) of the male respondents were unmarried and 48 (40%) of female were unmarried. On the other hand, 11 (9.17%) of male were married and 18 (15%) of female were married.

Highest level of education attained by the respondents have been recorded by categorizing the qualification into three main groups where those with at least Higher Secondary education were about 17 (14.2%) of the total respondents, followed by 28 (23.2%) graduates and 75 (62.5%) with post graduate degree respectively as shown in Table 4.

Table 3: Marital status by age and gender

Age group	Unmarried (%)		Married (%)		Total (%)
	Male	Female	Male	Female	
Gen Z	20 (46.5)	17 (35.4)	0	0	**37 (30.8)**
Millennials	23 (53.5)	29 (60.4)	8 (72.7)	9 (50)	**69 (57.5)**
Gen X	0	2	3 (27.3)	9 (50)	**14 (11.7)**
Total	**43 (35.83)**	**48 (40)**	**11 (9.17)**	**18 (15)**	**120 (100)**
	91 (75.83)		**29 (24.17)**		

Table 4: Education level by age and gender

Age group	Higher Sec. (%)		Graduate (%)		Post Graduate (%)		Total (%)
	Male	Female	Male	Female	Male	Female	
Gen Z	9	7	7	7	4	3	**37 (30.8)**
Millennials	1	0	10	0	20	38	**69 (57.5)**
Gen X	0	0	1	3	2	8	**14 (11.7)**
Total	**17 (14.2)**		**28 (23.2)**		**75 (62.5)**		**120**

Perceived characteristics of older adults in Nagaland

Normally, ageism towards older adults can take the forms of preconceived notions such as stereotypes, discrimination and avoidance by the younger cohorts. In order to have a glimpse on the impressions that younger age groups normally have when the concept of older adultwas presented, definition of older adult by age and other characteristics

was examined. As such, when it comes to consider a person as older adult or 'elderly' simply based on age, it was identified that majority of respondents 51.7% opined that anyone above the age of 60 can be considered as 'elderly' or older adult, followed by 33.3% considered a person above the age of 70 and 10% felt anyone above 50 years of age and about 5% selected the age of 80 years and above respectively.

When asked to rank the factors that contribute to labeling a person as an older adult in order of significance such as age, physical appearance, health condition, retirement status and societal norms, majority of the respondents about 71.67% ranked age as the main factor, followed by physical appearance with about 37.5% at second rank and health status with about 34.17% respectively. Factors such as societal norms including marriage, having a grand children and retirement from jobs were not considered to be an important factor in labeling a person as an older adult. Albeit different percentages, similar characteristics of labeling a person as older adult based on the above factors echoed during inter-generations comparison. This reinforces the understanding that for people between the age of 12 to 59 years, the age of a person is not just a number, rather a sign of reaching certain milestone in life which is marked by certain positive or negative preconceived notions.

Further, the respondents were also asked to rank certain characteristics such as wisdom, life experiences, and frail health, economic and physical dependency which they associated with someone they consider older adult. Based on the responses, it was observed that in rank 1 majority of about 46.67% attributed wisdom or having attributes of being knowledgeable to be the main defining characteristic of older person. In rank 2, majority of about 45% felt that older people are characterized by many life experiences. Although, they were seen as frail, majority of the respondents of about 57.5% did not find them to be someone who is economically and physically dependent.

Ageism in Nagaland

Based on the descriptive statistical analysis of the various items included in the ageism scale which is also the predictand variable, the nature of ageism both positive and negative in the form of avoidance, discrimination or stereotypes against older adults can be observed from Table 5. Questions ranging from 1 through 20 are negative in nature where on the scale of 1 to 4 (strongly disagree to strongly agree) median score above 2 indicated a more ageist attitude and vice versa. On the other hand questions from 21 through 28 are positive in nature and for uniformity have been reverse coded accordingly. The overall mean score of the ageism scale was 2.13 with a standard deviation value of .27 respectively. Review of the overall mean and median score of the scale show that young people have more negative stereotypical ageist attitude towards older adultsas reflected by matterslike death, where in comparison, death of younger people seems to be more tragic, or preference of company where older adults are expected to remain confined to their own age group. Older people were also generalized regarding the lack of physical capabilities to perform tasks such as maintaining certain level of hygiene or skillful activities such as driving vehicles reflecting certain levels of discrimination.

Table 5: Descriptive statistics of the ageism scale

Sl.no.	Items	N	Mean	Median	Std. Deviation
1.	Death of older adults less tragic than young people	120	**2.63**	**3**	0.859
2.	Older adults are stingy	120	2.11	2	0.632
3.	No interest in making new friends	120	**2.64**	**3**	0.646
4.	Older adults live in the past	120	**2.63**	**3**	0.674
5.	I normally avoid eye contact with old people	120	*1.85*	*2*	0.682
6.	Hate conversation with old people	120	*1.63*	*2*	0.581
7.	Complex conversationnot possible	120	*1.95*	*2*	0.684
8.	Feel depressed near older adults	120	*1.91*	*2*	0.674
9.	Should find friends own age	120	2.04	2	0.64
10.	Don't want to spend time	120	*1.79*	*2*	0.647
11.	Mustn't renew driving license	120	**2.63**	**3**	0.721
12.	Sports facility not needed	120	*1.84*	*2*	0.594
13.	Cannot be trusted with childcare	120	2.33	2	0.599
14.	Happy in same age circle	120	**2.72**	**3**	0.688
15.	Better live separate	120	*1.78*	*2*	0.624
16.	Sad to hear plight of older adults	120	**2.83**	**3**	0.57
17.	Older adults have poor hygiene	120	**2.58**	**3**	0.575
18.	Prefer not live with older adults	120	*1.93*	*2*	0.618
19.	Older adults are boring	120	2.3	2	0.693
20.	Older adults don't need money	120	2.29	2	0.64
21.	Older adults deserves same rights	120	*1.57*	*2*	0.632
22.	Should make feel welcome	120	*1.75*	*2*	0.598
23.	Older adults company are enjoyable	120	*1.9*	*2*	0.525
24.	Encourage to talk politics	120	2.17	2	0.665
25.	Older adults are interesting	120	2.03	2	0.564
26.	Society benefit from their wisdom	120	*1.56*	*2*	0.619
27.	Older adults arenot redundant	120	2.15	2	0.617
28.	Older adults can be productive	120	2.15	2	0.617

On the positive side, the respondents are observed to have less ageist attitude against the older adults mainly with regard to factors like inter-age group socializing, societal value contribution, rights and freedom of expression. To a certain extent, respondents did not show the need to avoid contact or conversations with the older adults and also have a positive response towards the co-inhabitant living arrangements, reflecting lower form of avoidance ageism. Overall, mean and standard deviation values from the Fraboni Scale of Ageism indicate a consistent tendency of mild to moderate ageist attitude towards older adults.

Based on the sum score of the 28 items from the ageism scale, minimum score among all the respondents was 44 and maximum individual score was 88. The overall mean score of the summed score was 59.69 and the median score was 59. Given the adopted methodology the median score was used to derive the values for the dependent variable and overall the data indicated that with 56 being the threshold score to define who is ageist and who is not, we can say that the median score do reflect that the ageism scale indeed show higher chance of ageist attitude towards the older adults, but not by significantly higher proportion.

Table 6: Cross analysis of the variables in the regression model (%)

Variables	Less ageist	More ageist	Total
Age groups			
Gen Z	13 (35.13)	24 (64.87)	**37**
Millennials	28 (40.58)	41 (54.42)	**69**
Gen X	1 (7.14)	13 (92.86)	**14**
Total	**42 (35)**	**78 (65)**	**120**
Gender			
Male	14 (25.92)	40 (74.08)	**54**
Female	28 (42.42)	38 (57.58)	**66**
Marital status			
Unmarried	33 (36.26)	58 (63.74)	**91**
Married	9 (31.03)	20 (68.97)	**29**
Education			
Higher secondary	8 (47.06)	9 (52.94)	**17**
Graduate	4 (14.29)	24 (85.71)	**28**
Post graduate	30 (40)	45 (60)	**75**

In Table 6, a cross analysis of having ageist attitude or not with regard to the main predictor variables in our logistic analysis model such as age, gender, marital status and education has been attempted. It can be observed that 42 (35%) of the total respondents scored less than the mid threshold score of 56. And on the other hand, a majority of respondents of about 78 (65%) had scored more than 56 points making them relatively

more ageist than their counterpart. Statistical significance of the cross analysis remains to be reviewed, however based on the initial result, similar outcomes of having more ageist characteristics can also be observed across the rest of the variables too.

Results for binary logistic regression

For an in-depth understanding of the nature of ageism among the younger population in Nagaland, binary logistic regression was applied as the main tool of statistical analysis. Given the nature of the modified dependent variable, it helped in examining the effects of socio-demographic factors like age, gender, marital status and education on the likelihood of having ageist attitude towards older adultsin the society. The model was statistically significant in explaining ageism, $\chi^2(7) = 18.64$, p< .005, and accounted for 19.8% of the variance in the dependent variable (Nagelkerke $R^2 = 0.198$). The Hosmer and Lemeshow test indicated a good fit to the data, $\chi^2(7) = 1.857$, p = .967.

Variable wise, age group was found to have a significant impact on the likelihood of having ageist attitude among the respondents (Table 7). Within the age groups, Gen Z compared to the reference category Gen X were significantly less likely be ageist (B = -2.778, Wald = 1.331, p = .037, Exp (B) = .062, 95% CI [.005, .844]), indicating a lower odds of about 93.8% of having ageist attitude. Millennials were also statistically significant (B=-2.66, Wald = 5.283, p = .022, Exp (B) = .07, 95% CI [.007, .676]) and less likely than Gen X to have ageist attitude with an approximate lower odds ratio of 93%.

Table 7: Results of logistic regression with respect to ageist attitude among the respondents

Variables	Coefficient (B)	SE	Sig.	Odds Ratio [Exp (B)]
Age groups (Ref: Gen X)				
Gen Z	-2.778*	1.331	.037	.062
Millennials	-2.660*	1.157	.022	.07
Gender (Ref: Female)				
Male	.087	.436	.064	2.240
Marital status (Ref: Married)				
Unmarried	.572	.596	.338	1.772
Education (Ref: Post graduate)				
Hr. secondary	-.294	.785	.708	.746
Graduate	1.232	.703	.080	3.429

-2 Log likelihood = 136.749

Cox & Snell R Square = .144

Nagelkerke R Square = .198

Hosmer and Lemeshow Test = .967

Ref = reference category; last item in each set of variables

SE = Standard Error

Level of significance at *p< 0.05

Effect of gender seems to have a result with marginal significance level (B=.807, Wald = 3.422, p = .064, Exp (B) = 2.24, 95% CI [.953, 5.265]). Accordingly, though not significant, male respondents had 2.24 times higher odds of being more ageist compared to female respondents. With a high p value of .338 there appear to be no meaningful significant linkage between marital status and likelihood of ageist attitude among the respondents. Overall education level of the respondents also did not show a statistically significant result p = .087. However, within the different education level, respondents with up to higher secondary education were less likely than post graduates to have ageist attitude (B = -.294, Wald = .14, p = .71, Exp (B) = .746, 95% CI [.16, 3.473]), but the difference is not statistically significant. On the other hand, graduates were more likely to express ageist attitude compared to post graduates, but not statistically significant (B = 1.232, Wald = 3.06, p = .08, Exp (B) = 3.429, 95% CI [.864, 13.61]).

Discussion

This study aimed to understand couple of issues related to population above 60 years of age particularly with how young people within the age group of 12 to 59 in Naga society characterize and view them. On considering a person as an older adult, age beyond 60 years was selected by majority of the respondents as the cutoff point. For many, age was also the most important factor in labeling a person as an older adult, followed by physical appearance and health status. This reinforced the understanding that in Naga society, age of a person is more than just a number rather it is seen as an important milestone that marks a person's life. Factors such as societal norms including marriage and having grand children were not viewed as much as important.Older people in Naga society were also seen as the age group attributed with characteristics like wisdom and very experienced and knowledgeable.

Analysis of mean and standard deviation of the ageism scale showed an overall mean score of 2.13 and 0.27 respectively. Based on the data, young people were found to have more negative stereotype ageist attitude towards older adults in matters like death, physical capabilities and demanding skills like driving, or maintaining a hygienic life. On the other hand, respondents showed less ageist attitude in matters like socializing, contribution to societal values, rights and freedom of expression among the older adults. Overall, the ageism scale indicated a mix of very low to moderate level of ageist attitude towards the older adults and only a slight variation among the respondents.

Our ageism scale also generated a summed median score of 59 from the possible total range score of 28 to 112. Among the respondents, the minimum score was 44 and maximum score was 88. The median score was above the mid score of 56 which cannot be considered to be very high, yet it reflect that majority of the respondents exhibit at least moderate levels of ageist attitude towards older adults, but not by significantly higher proportion. In fact, having even much more lower median score in theory will be quite favourable as a society, since it will mean less to negligible ageist attitude by younger age groups towards older adults paving way for overall healthy ageing process.

Result from the regression analysis showed that age factor had a statistically significant impact on the likelihood of ageist attitude towards older adults. Where, younger age groups such as Gen Z and millennials were less likely than the Gen X to

be ageist, which do align with finding from study such as Garrido et al. (2019). Other factors like gender and education showed likelihood of showing ageist attitude towards older adults, but were statistically not significant. And factor like marital status showed no meaningful linkage to likelihood of ageist attitude among the young people.

The current study has some noticeable limitations such as the method of data collection through online survey. Despite many merits, using this method of data generation, the reach towards diverse sample becomes limited and hence generalization of results needs caution. Limitation in the sample size has also been noticed based on the results from some of the analysis. It is hoped that increase in the sample size can present a better result for some of the variables with respect to the degree of ageist attitude towards older adults in Nagaland in future researches.

Conclusion

Population ageing will continue and sooner or later even community like the Nagas will also feel the pinch of large scale increase in the proportion of older adults to the rest of the population either directly or indirectly across the state, country and the rest of the world. Community like the Nagas are seen as a close knit society, where older people are given high respect and regarded as an important part of any socially or culturally thriving community. Perhaps this is also one of the reasons behind why our analysis did not find significantly higher range of ageist attitude among the respondents. This we feel is a positive trait which should be carried on and make changes through education and awareness about the natural process of ageing and only then any misconception of generalizing the older people as redundant and an inclination towards growing ageist attitude can be pruned.

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EXTENT OF RURAL LIVELIHOOD DIVERSIFICATION: A CASE STUDY OF KHONOMA VILLAGE

Mr. Ifolungbe Chase
Research Scholar, Department of Economics,
Nagaland University, Lumami,Zunheboto, Nagaland

Dr. Chandayya Makenni
Assistant Professor, Department of Economics,
Nagaland University, Lumami, Zunheboto, Nagaland

Abstract

Major portion of the population in Nagaland are in rural area and their economic activities are centered around the primary sector which mainly comprises of agricultural and allied activities. The livelihood diversification helps the rural economy is channelizing their income from multiple sources (both farm and non-farm). Reliance on farm activities alone does not meet the livelihood demand and there is a need for the rural economy to diversify to non-farm activities for employment and income. The present paper therefore is an attempt to study the rural livelihood diversification in Khonoma Village under Kohima district with the object to analyze the extent of diversification; relationship between age and diversification; and the diversification between men and women. It is a 30 sample study which uses the Simpson Diversity Index to study how diversified the rural livelihood is. The study finds 93% of the village engaged in agriculture, 70 % depends on agriculture for their livelihood, 73% engaged in livestock assets, 36.67% engaged in different labor activities and 16.67% in formal employment; Diversification is more advantageous for the age group 41 and above; and female respondents have higher diversity than male respondents.
Key Words: Rural Economy, Diversification, Farm, Non-farm

Introduction

Rural economy relies on a diverse array of activities. This aspect is taken account of by recent evolution of the concept of livelihood diversification as a survival strategy of the rural households in developing countries and to stabilize their incomes (Ellis, 1999). Access to the diverse form is influenced by a complex web of socio-economic as well as geographical environment in the concerned region (Datta and Singh, 2011).
Livelihood in broad aspect is what one does to sustain a living. The World Bank Dictionary edited by Barnhart (1995) defines livelihood as 'a means of living: what is needed to support life'. It is the interaction among human, resources, technology and environment in favor of human. Livelihood is a multi-dimensional concept based on the complex pattern of supporting life in a given ecosystem. According to Haan and Zoomers (2003), Livelihood is about individuals, households or group making a living, attempting to meet their various consumption and economic necessities, coping with uncertainties and responding to new opportunities.

Diversity at any one time and at all scales is one of the key features of rural livelihood system. It includes both farm and non-farm activities such as agriculture, forestry, fishing, handicrafts, blacksmith, carpentry, animal husbandry, trading, gathering common property resources, etc. Livelihood diversity means the ability to carry on with not just one but numerous activities hand-in-hand in order to sustain and add to the income of the household to raise the standard of living. When a rural household has a diverse sources of income earning activities, its chances of survival financially are better off than those households which have only one source (Ellis, 1999).

The concept of Livelihood Diversification describes a more complex and diverse strategies for living than what is meant by employment. Livelihood diversification refers to attempts made by individuals and households to add new portfolios in their income earning activities in order to sustain their livelihood or raise their living standard (Ezung, 2021). Livelihood diversification includes activities undertaken to generate income additional to that from the main household activity. Diversified activities make greater contribution to generate cash income for poorer household and it is a key strategy by which people try to make ends meet and improve their well-being. Rural livelihood is a complex structure (Mphande, 2016) and diversity of livelihood is an important feature for rural survival (Ellis, 1999). Diversities provide sustainability over time because they allow adaptation to changing circumstances (Ellis, 1999).Livelihood and earnings are influenced by the extent of diversification, occupational weightage of farm or non-farm sector, education, age pattern, etc. (Datta and Singh, 2011). Acharya (2006) is of the opinion that movement from rural to urban areas and to non-farm activities offer pathway to diversification and out of poverty.

The extent of diversification is not the same everywhere. While there are push and pull factors to diversification (Loison S A, 2015), it is found that the choices of activities are also influenced by the tradition and culture, as well as by the dueling places and nearness to resources (Zohora F T, 2001).It must also be understood that many livelihood diversification strategies are gender specific. Men are able to avail themselves of opportunities that are muscle-demand and those not open to women due to cultural constraints thereby reaping the benefits from activities skewed in favor of men, and against women. Conversely, women may also adopt strategies that are not easily available to men. Women dominate many of the non-farm activities which men think are income meager or gender-specific activities such as food processing and preparation, tailoring, vendors, etc.

Determinants of Livelihood Diversification: Factors that determine diversification include age, access to and level of education, size of the family, dependency ratio, access to and availability of land, assets, access to and availability of irrigation facility, access to credit and ability to borrow, distance from town, training/skill development, and membership to social groups (Khatun and Roy, 2012).

Assets of livelihood strategies: Assets while pursuing livelihood strategies include: human capital (the education, skills and health of household members); physical capital (e.g. farm equipment or a sewing machine); Social capital (the social network and

associations to which people belong); financial capital and its substitutes (savings, credit, cattle, etc); and natural capital (the natural resource base) (Ellis, 1999).

Area and period of study: Nagaland lies between 25°60' and 27°40'N latitude and 93°20' and 95°15'E longitude with geographical area of 16579 sq. Kmand connected to the main land India by a chicken-neck called the Silliguri-corridor. The state is a hilly region. Agriculture and allied are the main activities of the people especially in rural and there are varieties of farming practices in the state based on the geographical advantages. Thus, agricultural development is an integral part of rural development in the state.
Basically Nagaland is a rural and agrarian state (DuttaS K and Vizo K, 2006).A study on diversity in Nagaland by Ezung (2021) found rural households more diversified than urban households and those formally employed less diversified. Also household who claimed to be formally employed and cultivating their land side-by-side because of regular cash income and supply of food, have higher socio-economic status than the other occupational groups (Ao, 1993) The emerging occupations in rural sectors such as transportation, communication, health, education, infrastructure, export and marketing and connection between urban and the rural are seen a rising advantages for rural livelihood and diversifications (Suresh).

 Area of study: Khonoma village comes under SechuZubza circle of Kohima district. Khonoma has a total population of 1943 and 424 households as per the 2011 census. Agricultural and allied are the main activities here.Khonomavillage is also known for its 'alder based' cultivation. Tourism, transportation, carpentry, stonemasons, groceries, etc. are other common livelihood activities of the people here.

Period of study: The study is done during 2024.

Objectives

1. To examine the extent of diversification of livelihood activities in Khonoma Village.
2. To study the relation between Age and diversification.
3. To analyze the level of diversificationbetween male and female.

Methodology: The study is descriptive in nature.

Sampling: For the study, 30 Sample were taken using simple random sampling method. The Sample collected include 20 Female respondents and 10 male respondents. The response from each member is given due representation and importance.

Source of data: The study is based on Primary data, collected using questionnaire, structured schedule and personal interview.

Data analysis: Average and percentage, and Simpson's Diversity Index are used to examine the extent of diversification in the study area.

Livelihood activities

Tab. 1 Number of activities taken up by households for livelihood.

	Number of Activities taken up by households					
No. of activities	1	2	3	4	5	6
No. of households	1	4	16	6	2	1
percentage	3.33%	13.33%	53%	20%	6.67%	3.33%

Chart 1. Percentage wise activities taken up by households
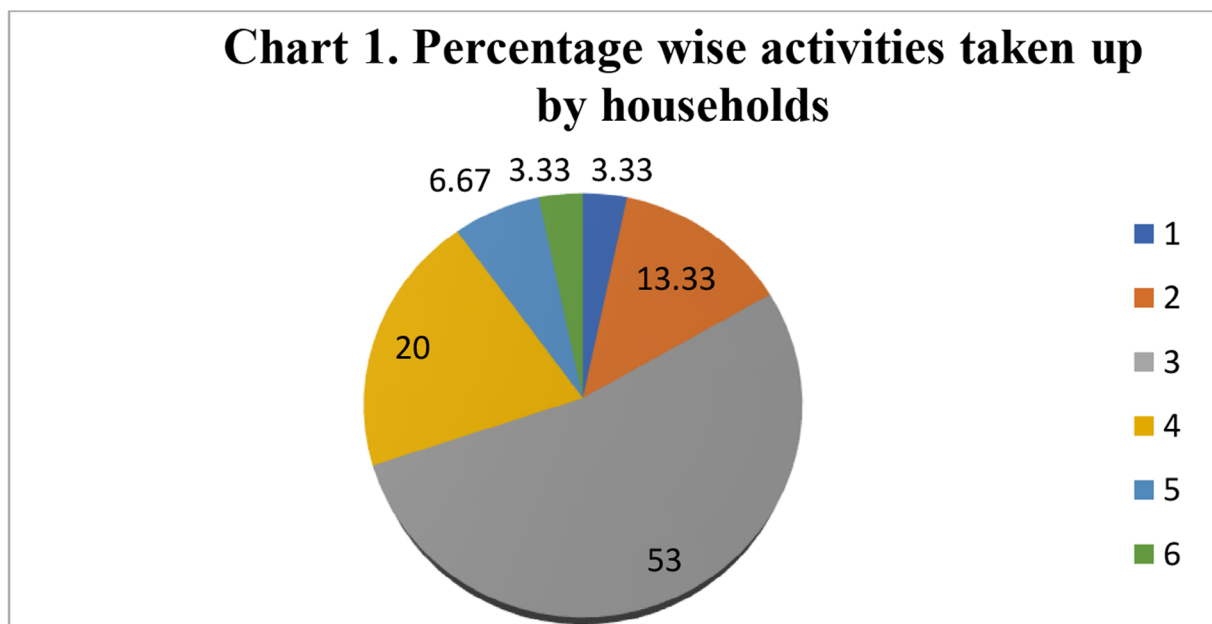
From table no. 1, it can be observed that maximum households viz. 53% in the study area get their income from 3 sources and 20% of the households engage 4 activities. Only 3.33% each of the households get income from 1 source and 6 sources. The table shows that the activities in the village are slanted towards even distribution ranging 3 to 4 activities.

Tab. 2 Number of households engaged in different activities

Activities	Farm activities	Non-farm activities	Labor activities	Formal service sector
No. of households	28	12	11	5

Chart 2. households in different activities
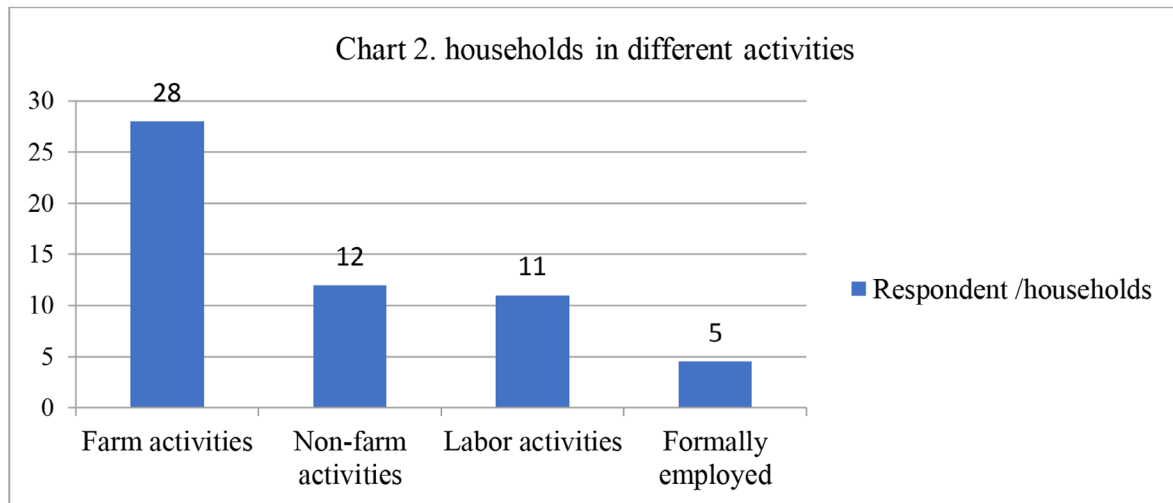
Farm activities include such as Agriculture, horticulture, floriculture, aquaculture, Apiculture, poultry, animal husbandry. Non-farm activities include shops and groceries, eatery and restaurants, vegetable vendors, weaving, jewelry making, etc., Labor activities include farm labor, stone workers, wood and carpenters, etc. Formal service include employed either in government or private sector.

Table no. 2 depict that 28 households out of 30 are engaged in farm activities, which make 93.33% of the sample. 12 and 11 households are in non-farm and labor activities respectively. Least number is found engaged in formal service sector.

Chart 3. Number of Households engage in activities
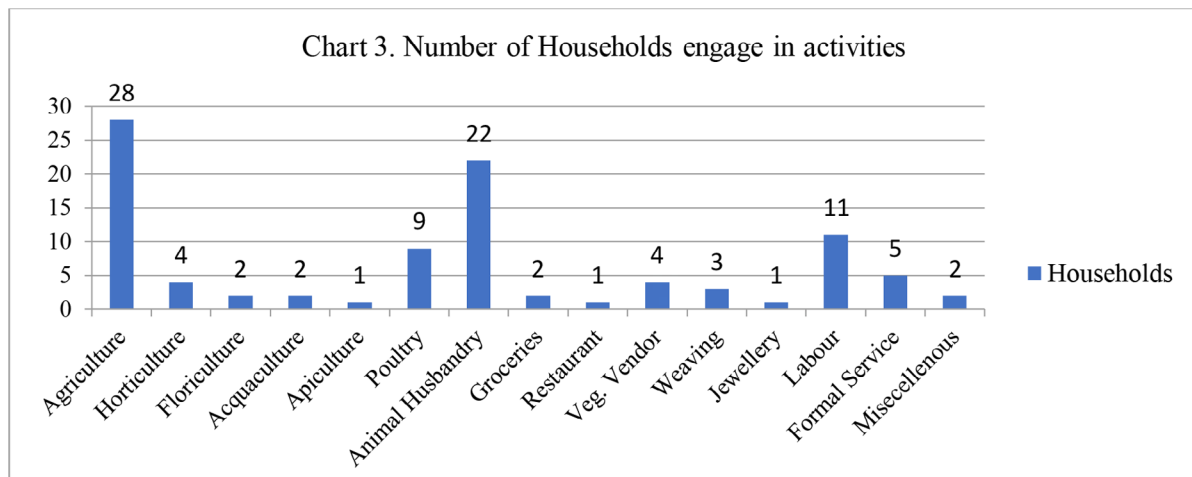
From the data collected it is observed that those families involve in formal service employment are less diversified with average holding of 2.6 activities. This is same case with the widowed having less working hands.

Among the different activities, 93 percent of the households are engage in Agriculture and 70 percent of the households depend on agriculture as main source of income. Agricultural include both Terrace and Jhum cultivation. 73 percent of the households have livestock as Asset which include Piggery, Cow andMithun. 36.67 percent are engage in different Labor activities. Labor activities are more diversified for male. 16.67 percent households are in formal employment.

Comparative analysis between different groups

Table no. 3 Comparison between gender and different age groups

	Farm activities	Non–farm activities	Labor activities	Service sector
Male	10	0	6	2
Female	18	12	5	3
40 yrs & below	13	6	7	1
41 yrs & above	15	6	6	4

Chart 4. Comparison between gender and different age groups
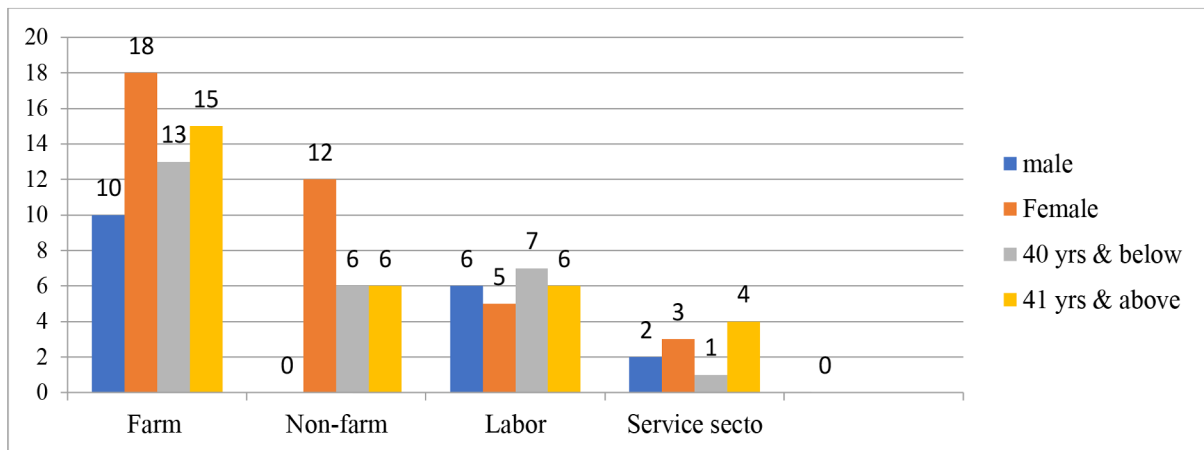
Of the 10 Male respondents, all the respondents are engage in farm activities and no respondent is engage in non-farm sector. 20 percent of the male respondents are in formal service sector. 18 females viz. 90 percent out of 20 female respondents are engage in farm sector, 60 percent in non-farm activities and 15 percent in Formal service. 60 percent of Male arein Labor activities against only 25 percent of Females in the same activities.
The Simpson's Diversification Index (D) is used to examine the diversity of activities in the village.

$$D = 1 - \left(\frac{\sum n(n-1)}{N(N-1)} \right)$$

n = the total number of households in a particular activity.
N = the total number of households in all Activities.
The value of D ranges between 0 and 1. Higher the diversity, higher is the value of D and vice-versa. Lesser than 0.38 comes under less diversity, 0.38 – 0.63 comes in medium and 0.63 to 1 comes in high category.

Table no. 4Extent of diversifications

Specification	Village	Male	Female	Age 20-40	41 years & Above
D value	0.67	0.60	0.67	0.68	0.70

Table 4 shows the diversity level of the different categories derived using SDI from table 1 and 3. It shows that activities are high diversified in the village. Female diversification is high whereas, diversification for male is medium. Also diversification is more in favor to age group above 40 years as compared to the group 40 years and below. The study also found young and active age groups are, than attaining high level diversification, more open to new ventures with specialization for earning higher income while the elderly are contended by the traditional activities (present livelihood activities) than to take up new ventures. The elderly feel more comfortable and attached to the simple living than amassing wealth.

Higher level of education and diversification do not show positive relationship. This could be because higher level of educational attainment rather leads to specialization. The average livelihood activities participation by graduate and above is only 2.33 activities while overall average of the whole population is 3.23 activities.

Conclusion: From the above study, it is found that majority of the rural are still engage in farm activities and are steadily moving towards diversification. The study and field work also found the rural moving towards farm market economy, producing not just for self consumption but also for sell in small quantities. However large scale market-oriented farming is still negligible. Households engage in formal employment are not so attracted to diversification because of the regular income. The study also found rural not free from problems such as ignorance of various government schemes, lack of market shed and ware houses, lack of training program, problem of inflation, etc. This paper conclude with suggestions, that the need for Government's role is still felt in the rural development especially in areas like providing trainings and skills for various activities, proper and honest government agencies mechanism especially to help access to subsidies and direct-transfer benefits to schemes, market shed and ware house facilities and developing win-win strategies.

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Pet ownership patterns in Dimapur-
Economic insights into popular pets & decision drivers

Ms. Imlikumla Longkumer
MA (Sociology), 1st Semester, IGNOU Study Centre 2002, Dimapur Govt. College
Ph. 8131060059 Email: imlilongkumer559@gmail.com

Dr. Vinyühu Lhoungu
Asst. Prof., Department of Economics
Dimapur Govt. College
Oriental Colony, Dimapur - 797112, Nagaland.
Ph. 9436010274 Email: ahulhoungu17@gmail.com

Abstract: This study investigates the factors influencing pet ownership decisions and the economic impact of pet ownership on household expenditure in Dimapur. Utilizing a mixed-method approach, primary data were collected via an online survey complemented by secondary data from various literature. The study reveals that younger individuals, particularly those aged 21-23, are more likely to own pets, with previous ownership experiences significantly influencing current decisions. Companionship, emotional support, and security emerge as the primary motivations for pet ownership. Financially, pet ownership requires a substantial investment. Although many households budget for these costs, notable portions do not, leading to financial strain. Despite these economic considerations, pet ownership is associated with positive mental and emotional well-being, including increased happiness and reduced stress among respondents. The findings contribute to a deeper understanding of the multifaceted nature of pet ownership and its economic implications. This study underscores the importance of responsible pet care, financial preparedness, and support networks within pet-owning communities, providing valuable insights for pet owners, policymakers and animal welfare organizations.

Keywords: pet ownership, adoption, household well-being, mental health, social well-being, responsible pet ownership.

Introduction

Pet ownership, the act of keeping animals as part of the household, often involves viewing pets as valued family members (Walsh, 2009). It influences various aspects of household life, including social, economic, and health dimensions (Turner, 2005).

Pets provide numerous benefits, including improved physical and mental health through companionship and social support. Studies have shown that human-animal interactions can reduce blood pressure, enhance cardiovascular health, and alleviate loneliness (Matchock, 2015; Stefanini et al., 2015; Harper et al., 2015; Hui Gan et al., 2020].

Additionally, pets contribute to community-building and socialization, particularly in

rural settings. Dog ownership, for instance, is more common in households with an adult female (Westgarth et al., 2007], while individuals living alone are less likely to own pets (Friedmann et al., 2020].

Globally, more than half of households own pets, with dogs being the most common at 33%, followed by cats (23%) and fish (12%) (GFK, 2016]. However, pet ownership also presents financial burdens, including costs for food, healthcare, and potential risks such as injuries and zoonotic diseases (Cherniack & Cherniack, 2014]. Despite these challenges, the mental and physical health benefits often outweigh the drawbacks (Chan, 2017].

Rationale of the study

Examining pet ownership patterns provides a comprehensive understanding of the socio-economic and cultural dynamics within the community, helping to identify areas needing community support and resource allocation for communal flourishing.

Pet ownership significantly impacts household economics, with costs related to food, healthcare, and maintenance. Analyzing these financial aspects highlights potential areas for financial assistance, improving the economic well-being of families in the society.

Pets also enhance physical and mental health, strengthen social bonds, and provide companionship. Assessing these benefits in Dimapur Town, the study intend to provide information on public health initiatives and community interventions aimed at improving overall well-being.

Moreover, pet ownership reflects cultural values and societal trends. Exploring the reasons behind pet ownership choices reveals insights into the cultural and social dynamics of village life, enriching the understanding of Dimapur's community ethos.

Significance of the study

This research paper examines the dynamics of pet ownership in Dimapur, aiming to understand its multifaceted impact on the community. By analyzing pet ownership patterns, we gain insights into the socio-economic landscape and cultural ethos of the community.

Understanding the economic implications of pet ownership is essential for addressing financial strains on households. This exploration aims to identify ways to alleviate these burdens and promote economic stability through targeted interventions.

Insights from this study can inform health initiatives that enhance community well-being. By recognizing the positive effects of pet companionship on physical and mental health, we can promote healthier lifestyles and stronger social connections.

Additionally, exploring the cultural dimensions of pet ownership reveals the traditions and values that shape community identity. Acknowledging the cultural significance of pets fosters a deeper sense of belonging and cohesion among community members.

Objectives

i. To investigate factors influencing pet ownership decisions.
ii. To examine the economic impact of pet ownership on household expenditure.

Literature Review

Research highlights the complex relationship between pet ownership, well-being, and economic considerations. Puskey and Coy (2020) found that alignment between pet preferences and ownership may influence mental health, but their findings were inconclusive, emphasizing the need to explore economic factors further. Schwarz, Troyer, and Walker (2007) identified pets as necessities for many families, with gender differences influencing pet-related spending. They suggest that economic choices impact ownership decisions, potentially intersecting with psychological factors.

Obradović et al. (2021) underscored the emotional and physical benefits of pets for older adults while acknowledging the financial burdens and safety risks associated with ownership. Similarly, Headey and Grabka (2003) demonstrated that long-term pet ownership may reduce healthcare expenses, supporting the idea of pets providing both economic and emotional benefits.

Kirk (2019) examined psychological ownership and its impact on the perceived economic value of pets, while Holland (2019) found that demographic factors such as age, income, and education influence pet acquisition decisions. Hornbrook (2014) reinforced the notion that pet ownership entails both emotional fulfillment and financial commitment.

Additionally, McMillan (2017) emphasized the importance of responsible breeding and rearing to prevent behavioral issues that could lead to higher financial costs. This shows how economic and emotional factors are deeply intertwined in the context of pet ownership.

Research Gaps

Further investigation is needed on how aligning pet preferences influences economic decisions in pet ownership, as different pets entail varying costs for food, healthcare, and maintenance. Understanding this link can help pet owners make informed financial choices and assist policymakers in tailoring support programs to meet specific needs based on pet preferences.

Additionally, the varying financial implications of pet ownership across demographic groups, such as age, income, family structure, and location, should be explored. This understanding is essential for developing effective support and educational programs that address the unique financial challenges faced by different segments,

ensuring all pet owners have access to necessary resources.

Lastly, research should examine the time invested in pet ownership and how spending habits evolve over time. Since pet ownership requires significant time and financial resources for activities like feeding, grooming, and veterinary care, understanding these commitments will help potential pet owners better prepare for their responsibilities.

Study Design & Approach
Research Questions

1. Does pet ownership have a positive or negative impact on household economic well-being?
2. Does pet ownership enhance or diminish social well-being and community engagement?
3. Does pet ownership contribute positively or negatively to the physical and mental health of individuals?

Methodology

Data collection : The study is both descriptive and analytical, employing a mixed-methods approach. Primary data were collected via a survey conducted in February 2023, using questionnaires distributed through Google Forms. Secondary data were sourced from reputed literature, including books, journals, websites, and articles. These sources provided essential context and support for the research findings. The combination of qualitative and quantitative methodologies enabled a comprehensive analysis of the data collected.

Sampling : The questionnaire was distributed online to the residents of Dimapur. A total of 109 participants responded, utilizing a random sampling method.

Analysis, findings & discussions

The research study reveals significant insights into the patterns, motivations, financial implications, and well-being associated with pet ownership. The demographic analysis shows that young adults aged 21-26 represent the highest proportion of pet owners, accounting for 56.7% of the respondents. Female respondents are slightly more prevalent (54.1%) than males (45.9%), suggesting potential gender-based differences in pet ownership patterns. Additionally, most respondents are unemployed or students (64.2%), reflecting limited income but high engagement in pet ownership.

A notable 99% of respondents have owned pets at some point, indicating a strong cultural and emotional value attached to pets. Dogs are the most popular choice, with 51.5% of respondents having owned them, followed by cats (34.8%). Presently, 89% of respondents own pets, with 60% owning dogs and 30.6% owning cats. Most respondents (66.9%) own 1-2 pets, while others manage higher numbers. Pet ownership duration varies, with 31.9% owning pets for over 10 years, suggesting a deep commitment to their animals.

The primary motivations for pet ownership include companionship (43.2%) and emotional support (23.8%), emphasizing the emotional and psychological benefits of having pets. Affordability plays a crucial role for 55.2% of respondents, with 35.6% finding it somewhat important. However, a minority (9.1%) prioritize the emotional benefits of pet ownership over financial considerations.

Monthly expenses related to pet care reveal varied spending patterns. Pet food expenses typically range between 1,000 to 1,500 INR (28.7%). Veterinary care is affordable for most, with 73.9% spending between 500-1,000 INR monthly. Approximately 51.9% of respondents reported making significant pet-related purchases within the past year. In comparison, 48.1% did not, indicating differing priorities and financial capabilities. For most respondents (53.6%), pet-related expenses are lower than other household costs, though 20.4% find them somewhat higher, indicating varied financial impacts.

Pet ownership is overwhelmingly considered positive by respondents, with 99% reporting beneficial impacts, particularly in enhancing happiness (52.6%) and reducing stress (37%). Although 33.5% of respondents report experiencing financial strain from pet-related expenses, 82.6% believe that pet ownership is worth the investment. This highlights a strong attachment to pets despite financial challenges.

Financial management and planning are essential aspects of responsible pet ownership. The study shows that 56.6% of respondents plan their household budgets with pet-related expenses in mind. Among these, 66% place moderate priority on pet expenses, while 23.2% assign high priority and 10.8% low priority. Long-term financial implications are a concern for 39.6% of respondents, while 60.4% feel confident in their financial stability. For unexpected expenses, 43% rely on savings, 39.7% seek assistance from family and friends, and 10.3% turn to other methods, including credit cards or loans.

Regarding breeding and household dynamics, only 16.3% of respondents engage in breeding and selling baby pets, with most earning between 20,000 to 50,000 INR annually. Pet approval within households is generally high (85%), though 33.3% report some family members considering pets a nuisance. The acquisition of pets primarily occurs through breeders (45.5%), though significant numbers adopt from shelters (25%) or rescue stray animals (16.1%).

Key findings indicate that factors influencing pet ownership include age, gender, occupation, and previous experience with pets. Young adults are the most frequent pet owners, with previous pet ownership experiences positively influencing ongoing attachment. Emotional motivations such as companionship and emotional support are strong drivers, with financial considerations playing a secondary but significant role.

The economic impact of pet ownership is evident through monthly expenses on food and healthcare, with an average expenditure range of ₹1000-₹2000. Budgeting practices differ among respondents, with 56.6% actively budgeting for pet-related expenses, while

43.4% do not, leading to potential financial strain. Additionally, 39.7% of respondents rely on external support for emergency expenses, highlighting inadequate preparedness. The overall impact of pet ownership on well-being is positive, with most respondents reporting enhanced happiness and reduced stress. However, long-term financial implications are underestimated by 60.4% of respondents, suggesting a need for better planning and awareness.

The study demonstrates that pet ownership significantly impacts respondents' lives emotionally, socially, and financially. While the majority experience positive effects, economic challenges are notable, especially for those without proper financial planning.

Suggestions

1. Financial Assistance Programs: Provide government aid for essential pet care costs to ensure access to veterinary services and vaccinations.
2. Health & Wellness Programs: Promote subsidized services (e.g., vaccination clinics, spaying/neutering) and educate owners on preventive care.
3. Informed Ownership: Educate prospective owners about the financial commitment of pet ownership.
4. Budgeting: Encourage including pet expenses in household budgets and saving for emergencies.
5. Pet Insurance: Promote insurance to cover unexpected veterinary costs.
6. Community Networks: Foster local groups for resource sharing and support.
7. DIY Care: Suggest learning basic grooming and medical tasks to save costs.
8. Adopt, Don't Shop: Advocate adoption from shelters to save money and support welfare.
9. Preventive Care: Stress regular check-ups to avoid costly treatments.
10. Emergency Fund: Encourage setting aside funds for unexpected pet-related expenses.

Limitations recommendation for further study

1. The study's limited number of respondents may reduce the generalizability of its findings, potentially leading to biases. Future research should involve a more diverse sample to improve validity and reliability.

2. The focus on specific variables may exclude important factors, restricting the depth of the analysis. Future studies should consider a broader range of variables for a more comprehensive understanding.

3. The reliance on quantitative data may overlook important qualitative insights. Including qualitative methods like interviews could enhance the richness of the analysis.

4. Some responses may be inaccurate due to biases, affecting the results. Researchers should implement strict data collection protocols and cross-validate findings to ensure accuracy and reliability.

Conclusion

In conclusion, this research highlights the diverse impact of pet ownership on household well-being, emphasizing the need for informed financial management and supportive environments for both pets and owners. By fostering responsible pet care, communities can leverage the benefits of pet companionship to enhance emotional, social, and economic well-being, contributing to more resilient and cohesive societies.

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Socio-economic status of college students in Dimapur:
A comparative study between two colleges

Neisevono Khawakhrie
BA 6th Sem. Economics Honours
Department of Economics
Dimapur Govt. College
Ph. 8730897217 Email: neisevonokhawakhrie@gmail.com

Dr. Vinyühu Lhoungu
Asst. Prof., Department of Economics
Dimapur Govt. College
Oriental Colony, Dimapur - 797112, Nagaland.
Ph. 9436010274 Email: ahulhoungu17@gmail.com

Abstract

Socio-economic status encompasses not only income but also educational attainment, occupational prestige and subjective perceptions of social statuses and social class. This study investigates the socio-economic status of college students in Dimapur, aiming to understand how various socio-economic factors influence their educational experiences and outcomes. The overall objective of the study is to find out if there exist any significant differences in the socioeconomic status of the students in government and private colleges, and to find out if socioeconomic status of the students plays an important role in their decision making when choosing an institution to pursue higher studies. The study is based on primary data collected through structured questionnaire. Using the latest version of Kuppuswami socio-economic status scale, the findings revealed significant disparities in educational and occupational status, highlighting the influence of parental education on the socio-economic conditions of students in higher education institutions in Dimapur.

Keywords: Socio-economic, Status, Students, Colleges, Education, Government, Private.

Introduction

The term Socio-economic refers to the interaction between the social and economic habits of a group of people. The prefix socio refers to "the study of the behavior of people, including the ways they interact with one another or their family structures. Socioeconomic means relating to or concerned with the interaction of social and economic factors

Socioeconomic study is considered as one of the important variable in social science research. It has been and is being included quite often as a variable in education and other social science streams. Students getting enrolled in higher education institutions are from the most diverse population in terms of their family background, ethnic composition, age, gender, native language and socioeconomic status. Usually the concept of socioeconomic status is taken as the category of individuals or groups of

social standing. It is mostly measured as a combination of the indicators i.e. occupation, education and income.

Higher education, which has the function of cultivating human capital, has already become a key focus of developed countries around the world. From ministries of education to higher education institutions, many bodies are dedicated to enhancing student learning outcomes. However, social and educational problems derived from disadvantaged groups have long been hindering the development of individuals and the whole country. This study examines the learning motivations of economically disadvantaged versus non-disadvantaged college students.

In Dimapur, the socio-economic status (SES) of college students is a crucial yet underexplored area of research. Additionally, the comparative analysis of SES between different colleges remains largely unaddressed. Therefore, this study aims to examine the socio-economic status of college students in Dimapur, focusing on a comparative analysis between two colleges. By examining factors such as parental education, occupation, and income, this research seeks to identify disparities in SES between the two colleges and explore their implications for students' academic performance, access to resources, and overall college experience.

Literature Review

According to Eshetu (2015), in the contemporary educational landscape, parental socioeconomic status (SES) significantly impacts student academic performance, yet findings are inconclusive. In a similar study conducted by Chmielewski et al. (2015) it is mentioned that in the realm of education, the impact of parental socioeconomic status (SES) on student academic performance is a subject of extensive study, yet results remain inconclusive. While some research highlights the significance of parental education and health, others suggest family income may not directly correlate with academic achievement. Both studies concluded that, empirical evidence on this matter is limited, particularly in Ethiopia.

Bukhari and Khanam (2015) in their study highlights the significant impact of socioeconomic status (SES) on mental health, showing that individuals from lower SES backgrounds experience increased stress and limited resource access, which heightens their vulnerability to depression, particularly among urban females. Chen et al. (2020) also investigated the psychological factors and learning motivations of economically disadvantaged students in higher education using self-determination theory (SDT). By comparing these students with their more affluent peers, their research aimed to investigate educational outcomes by addressing the unique challenges faced by economically disadvantaged populations. Together these studies underscore the critical interplay between SES, mental health, and educational success, highlighting the importance of addressing psychological needs and resource accessibility.

The interplay between socio-economic background and educational outcomes has been a focal point in educational research, revealing persistent inequalities that impact students' academic success. Crawford (2014) reveals significant disparities in university dropout rates and degree classifications in the UK, with disadvantaged students facing greater challenges even when prior academic achievement is considered. This suggests the need for targeted support beyond school performance for these students. Hadi

Mohammed (2023) further emphasizes the role of family socio-economic status, showing that parental involvement, influenced by socio-economic factors, significantly affects student achievement and motivation, particularly in the context of Gombe State College of Education and Legal Studies. Crosnoe and Muller (2014) explore how family socio-economic status influences high school curricular choices and, consequently, long-term educational trajectories. Their findings reveal that both parental and peer dynamics contribute to the perpetuation of educational inequalities. Together, these studies underscore the necessity of addressing socio-economic disparities to promote equitable educational opportunities and improve outcomes for disadvantaged students.

Neupane and Gurung (2021), explores the multifaceted factors impacting students' academic success, spanning parental expectations, socio-economic status, family dynamics, parental involvement, student behavior, academic self-concept, and school environment. Unlike prior research, it concurrently examines the influence of family financial status, parental education, occupation, education expenditure, and residence on academic performance. Also revealed in a study conducted by Merritt and Buboltz (2015, that socioeconomic status, parental involvement, and academic self-efficacy affect academic success. Lower SES often correlates with lower self-efficacy, while parental support predicts college enrollment and graduation. Bandura's theory suggests parents' belief in their influence drives academic motivation. Both the studies aims to pinpoint the most influential factor among these variables by extending its investigation to university-level students across disciplines.

Pajarillo-Aquino (2023) highlights the significant impact of socioeconomic factors on students' academic performance, revealing how family background, parental education, occupation, and income shape educational outcomes. The study also emphasizes the influence of parental involvement and family dynamics on academic success, illustrating the complex relationship between socioeconomic status and performance. Similarly Lan and Wang, (2023) explores how values and SES affect adolescents' subjective well-being (SWB). They find that values like self-improvement and collective responsibility enhance SWB, particularly for low SES individuals. However, high SES adolescents may face internal conflicts related to collective responsibility, potentially diminishing their SWB. Together, these studies underscore the multifaceted influence of socioeconomic factors on academic performance and well-being, highlighting their importance in educational contexts.

Despite the significance of SES in influencing educational opportunities and outcomes, there is limited empirical evidence on how socio-economic factors impact college students' experiences in the state of Nagaland. The study is intended help gain valuable insights into the socio-economic dynamics of college education in Dimapur and contributes to a deeper understanding of the challenges and opportunities faced by students from diverse socio-economic backgrounds in the region.

Methodology:

Data collection: The study is both descriptive and analytical, employing a mixed-methods approach. Primary data were collected via a survey conducted in June-July 2023, using questionnaires distributed through Google Forms. A sample of 200 were taken, 100 students from each college has been selected by simple random sampling. Secondary

data were sourced from reputable literature, including books, journals, websites, and articles.

Analysis tools: Statistical tools such as percentages, averages and modified Kuppuswami Scale for the year 2024 were used to analyse the data.

Objectives: The overall objectives of the study are:

1. To find out if there exist any significant differences in the socioeconomic status of the students in the government and private colleges.

2. To find out if the socioeconomic status of the students plays an important role in their decision making when choosing an institution to pursue their studies.

Data Analysis:

Father's educational status- The study revealed that the highest qualification status of fathers of students in government college is 'Below matriculate' with 10% of male and 28% of female students' while 2% of male students' fathers are 'Illiterate'. Whereas in private college the highest qualification status of fathers of students is 'Graduate' with 14% male and 28% female students father belonging to the category and the least are 2% male and 6% female at 'Below matriculate' category.

Mother's educational status- From government college, it is the same as the above ranking. With 16% male and 32% female student's mother at the 'Below matriculate' category and at the lowest is 2% of female students' mother at 'Illiterate' category. In private college, at the highest are 14% male and 16% female students' mothers at 'Graduate' category and at the lowest is 2% female student's mother at 'illiterate' category.

Mother's Occupation- In government college, the highest rank of occupation status of mothers is a housewife with 30% male and 44% female students' mothers. In the private college the highest rank of occupation status of mothers is a government job holder with 20% male and 32% female students' mother out of which 12% male and 22% female students' mothers earning about ₹ 30,000 – ₹ 80,000 per month.

Father's Occupation- In government college, the highest rank of occupation status of fathers is 'Business/Entrepreneurship' with 14% male and 14% female students' fathers engaged in and earn an average monthly income of ₹ 30,000 – ₹ 50,000. In private college, the highest rank in the father's occupation is 'Government job' with 12% male and 22% female students' fathers a govt. job holder with an average monthly income is ₹ 50,000 – ₹1.00 lakh.

Discussion:

In government college, at the highest rank we found about 70% students' mother and 28% students' father are housewives and business holders respectively. Whereas, in private college, about 52% of students' mothers earn ransom salary and about 34% of their fathers are government servants and are pretty well-off.

It is also found that about 34% male and 36% female students from Government College and 24% male and 42% female from private college belongs to big family. However, about 44% and 24% students from Govt. and Private colleges respectively are involved in social

activities while 46% and 76% students from Govt. and Private colleges respectively are not involved in any such activities. Hence, the study revealed that students in general are less indulged in social activities no matter them belonging to big, small or medium family.

Citing the example of students with less privilege goes to Govt. College and the privileged ones go to Private college stands true. We found that students who go to Govt. College have most parents working in agriculture or run small businesses with comparatively lesser earnings. On the other hand, students with comparatively higher parents' earning go to private colleges. Also, the underprivileged ones have no additional source of income, so going to Govt. College eases their monthly expenses.

Kuppuswamy Scale

Kuppuswamy devised a scale in 1976, which is commonly used to measure SES in urban and rural areas. It considers factors such as education, occupation, and family income to classify households into different socioeconomic categories.

Based on the modified Kuppuswamy scale for the year 2024, the following conclusions have been reached.

S. no.	Socio-economic Class	Kuppuswamy Score	Govt. College (No of families in %)	Private College (No of families in %)	Total
1	Upper (I)	26-29	-	3	03
2	Upper Middle (II)	16-25	13	21	34
3	Lower Middle (III)	11-15	25	20	45
4	Upper Lower (IV)	5-10	8	4	12
5	Lower	<5	4	2	06
	Total		**50**	**50**	**100**

As shown in the above table, students in Government College have a higher representation of lower-income families compared to private college. It can also be seen that Private college attract students from families with higher incomes and more diverse occupational backgrounds.

Conclusion: This study provides valuable insights into the diverse experiences and challenges faced by students from different backgrounds. By acknowledging and addressing these disparities, colleges can strive to create a more inclusive and supportive environment that enables all students to thrive academically regardless of their socio-economic circumstances. Overall, the study highlights disparities and similarities in the socio-economic backgrounds of students enrolled in government and private colleges in Dimapur. While both types of colleges have students from various socio-economic strata, private colleges continue to attract a higher proportion of students from families with higher incomes. These findings provide valuable insights into the socio-economic dynamics of college students in Dimapur and can inform policies and interventions aimed at promoting educational equity and access.

The study also found that many students irrespective of coming from large or small families are less involved in social activities preferring indoor activities over socializing.

In terms of college choices, Government College now attract not only economically disadvantaged students but also those with higher academic grades. On the other hand, private colleges are mostly attended by financially stable students irrespective of academic grades due to their higher fees, which can be a barrier for economically disadvantaged students.

This suggests that students from lower socio-economic backgrounds often opt for government colleges because they are more affordable. Meanwhile, economically stable students tend to choose private colleges. These findings shed light on the complex relationship between socio-economic status, social behaviour, and educational decisions among college students in Dimapur.

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Connectivity projects of North-East India under Act East Policy

Tolivi H Sumi
Assistant Professor, Department of Economics
Peren Government College, Peren

Abstract:

This paper examines the key connectivity initiatives in North-East India under the Act East Policy (AEP), focusing on the transformative infrastructure projects designed to boost regional integration and India's economic and geopolitical position in the Indo-Pacific. It investigates the impact of enhanced road, rail, and air connectivity, as well as multimodal transport systems, in promoting trade, fostering regional cooperation, and improving access to Southeast Asia. The study also evaluates how these initiatives have contributed to economic development in the North-East and strengthened India's strategic influence in the region. The paper identifies the challenges faced in their implementation, including infrastructural bottlenecks, political complexities, and security concerns, and discusses the potential strategies for overcoming these obstacles. The findings bring out the importance of connectivity in advancing India's role as a regional leader while highlighting the ongoing hurdles that need to be addressed to fully realize the potential of the Act East Policy.

Keywords: Connectivity; North-East India; Act East Policy.

Introduction:

The Look East Policy was introduced by India in the year 1991 for the economic and diplomatic relations with the neighbouring South East Asian countries. However, in the year 2014, the Look East Policy was renamed as Act East Policy.

India's Act East Policy (AEP), is a strategic initiative designed to enhance India's relationships with Southeast Asia and the broader Indo-Pacific region, fostering deeper economic, cultural, and strategic ties. The policy is particularly significant for North-East India, which holds a crucial position as the gateway to Southeast Asia due to its geographical proximity. As a result, the region's infrastructure has become central to the success of the AEP, with a focus on improving connectivity through roads, railways, air networks, and multimodal transport systems. These infrastructure projects are not just about improving local connectivity but are seen as a means to strengthen India's economic ties with its eastern neighbors and to assert its presence in the Indo-Pacific.

Enhanced connectivity in North-East India has far-reaching implications. It promotes regional economic cooperation, facilitates trade flows between India and Southeast Asia, and creates opportunities for the North-East to integrate more closely into the regional economy. Additionally, these improvements contribute to India's strategic positioning in the Indo-Pacific, allowing for greater geopolitical influence in the region. However, the road to realization has not been without its challenges. Issues such as political complexities, infrastructural bottlenecks, security concerns, and cross-border coordination have often hindered progress.

This paper examines the key connectivity initiatives in North-East India under the Act East Policy, assessing their impact on regional integration, economic development, and India's geopolitical strategy. Through this analysis, the paper will explore the role that enhanced connectivity plays in fostering trade, promoting regional cooperation, and improving India's strategic influence in the Indo-Pacific. Furthermore, the study will delve into the challenges that have emerged during the implementation of these projects, highlighting obstacles like political resistance, logistical limitations, and security challenges, while proposing potential solutions to overcome them. By exploring these issues, the paper seeks to provide a comprehensive understanding of the opportunities and challenges of the Act East Policy and its impact on India's regional leadership.

Objective:

- To explore the major connectivity initiatives in North-East India under Act East Policy.

- To evaluate their impact on regional integration, economic development, and geopolitical strategy.

- To identify the major challenges faced in its implementation.

Methodology:

Connectivity projects by the central and state governments will be evaluated through websites and documents available from various government sources. The study mainly looks into the secondary sources available.

Scope/ Significance of the Study:

This study is significant as it sheds light on the strategic role of North-East India in advancing the objectives of the Act East Policy, which aims to enhance India's engagement with Southeast Asia. By analyzing key connectivity initiatives, the research provides insights into how improved infrastructure fosters regional integration, stimulates economic development, and strengthens India's geopolitical presence in the Indo-Pacific. Moreover, understanding the challenges in implementation—ranging from terrain-related difficulties to administrative and security issues—can help policymakers and stakeholders devise more effective solutions. The findings are valuable for scholars, government bodies, and development agencies seeking to optimize connectivity projects and ensure inclusive growth and strategic alignment with regional partners.

Connectivity Projects under Act East Policy

The Kaladan Multi-Modal Transit Project

The **Kaladan Multi-Modal Transit Transport Project (KMTTP)**, signed on 2nd April 2008 is a strategic infrastructure initiative jointly undertaken by **India and Myanmar** to connect the **eastern Indian seaport of Kolkata** with **Sittwe port in Myanmar** and further link it to **Mizoram** in India's northeast. The goal is to create an alternative route to the

landlocked northeastern states of India, bypassing the narrow and sensitive **Chicken's Neck (Siliguri Corridor)** via all the three modes of transport, sea, river, and road.

Table 1: Route that begins from Kolkata port through Sittwe of Myanmar to Mizoram in India.

Stretch	Mode	Distance
Kolkata to Sittwe port in Myanmar	Shipping	539km
Sittwe to Paletwa (Myanmar)	Inland Water Transport	158km
Paletwa to Indo-Myanmar border (Myanmar)	Road	110km
Border to NH. 54 (Lawangtlai in India)	Road	100km

The project is funded and implemented by the Government of India and executed under India's Ministry of External Affairs. Initially, the Inland Waterways Authority of India (IWAI) and later IRCON International took over parts of the project

Progress & Challenges

Progress

- **Sittwe Port** completed and inaugurated in May 2023

- **Kaladan river dredging** and waterway navigation completed

- **Construction of the Paletwa Inland Terminal** was largely completed

- **Road stretch from Paletwa to Zorinpui** is partially complete

Reasons for Delay / Challenges

1. **Insurgency and Political Instability in Myanmar**

    o Ongoing ethnic conflict and military rule disrupted construction, especially road projects in Chin State.

2. **Challenging Terrain**

    o Remote and hilly areas in Mizoram and Chin State make infrastructure development slow and expensive.

3. **Logistical and Bureaucratic Hurdles**

    o Multiple contractors and delays in approvals between Indian and Myanmar authorities.

4. **COVID-19 Pandemic**

    o Work came to a halt in 2020–21 due to travel restrictions and supply chain disruptions.

5. **Security Risks**

   o Increased presence of armed groups in Myanmar has led to attacks on project sites and personnel.

Benefits of the Project

Strategic Benefits

- Strengthens India's Act East Policy and diplomatic ties with Myanmar.

- Enhances connectivity between India and ASEAN.

Economic and Regional Benefits

- Provides an alternate route for trade and transport to the Northeast.

- Boosts economic development and tourism in Mizoram and surrounding states.

- Facilitates faster movement of goods and reduces dependency on Siliguri Corridor.

- Opens up new markets in Myanmar and Southeast Asia for Indian businesses.

Security and Integration

- Encourages integration of the Northeast with the mainland, improving accessibility.

- Counterbalances China's influence in Myanmar and the region.

Figure 1: Map of Kaladan Multi-Modal Transit Transport Project

Inland Waterway Projects:

Waterway plays a crucial role in the Act East Policy. Some of the Inland Waterway projects are:

1. National Waterway-2 (NW-2) – Brahmaputra River: The purpose is to boost cargo, tourism, and connectivity in Northeast India. Key **route** is from Dhubri to Sadiya in Assam (~891 km)

2. India-Bangladesh Protocol Routes: To connect India's NE with Kolkata and Haldia via Bangladesh. **Key Routes** are:

- o Kolkata–Dhaka–Ashuganj–Agartala

- o Kolkata–Mongla–Tamabil–Dawki (Meghalaya)

- o Karimganj (Assam) – Bangladesh – Kolkata

3. Indo-Myanmar Inland Waterway Collaboration: Integrated with **Kaladan Multi-Modal Transit Project**

- Sittwe Port → Kaladan River → Paletwa

4. Jogighopa Multimodal Terminal: This is a part of **Bharatmala + Sagarmala** projects, which will integrate road, rail, and river logistics.

Progress & Challenges

Progress

- NW-2 is **operational for cargo** movement; night navigation aids installed.

- **Tripura, Assam, and Meghalaya,** now linked through protocol routes via Bangladesh.

- **Cargo volumes** on inland waterways have steadily increased.

- **Kaladan's waterway** (Sittwe to Paletwa) is complete.

Challenges and Delays

1. **Shifting river courses and sedimentation** – especially in Brahmaputra

2. **Limited last-mile connectivity** – poor road/rail linkages from terminals

3. **Seasonal navigability** – water levels fluctuate drastically

4. **Delays in Indo-Bangla coordination** – bureaucratic bottlenecks

5. **Security concerns** – in border regions, especially with Myanmar

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Benefits

Trade Enhancement: Faster, cheaper movement of goods to Northeast India and Bangladesh.

Cross-Border Integration: Stronger India–Bangladesh–Myanmar connectivity.

Environmental Advantage: Inland water transport is greener than road/rail.

Northeast Development: Boosts logistics, tourism, and economic integration of NE states.

Decongests Siliguri Corridor: Offers alternate trade routes via waterways

Figure 2: Map of Inland Waterways 2

Road Connectivity Projects

Road connectivity projects play a very important role in this Policy. Some of the road connectivity initiatives are:

1. The India–Myanmar–Thailand Trilateral Highway (IMT-TH):

The India–Myanmar–Thailand Trilateral Highway (IMTTH) is a key regional infrastructure initiative under India's Act East Policy to improve connectivity between India and Southeast Asia by road. The route starts from Moreh, Manipur (India) and ends in Mae Sot (Thailand)

Objectives:

- Facilitate land trade and transport between India, Myanmar, and Thailand
- Improve regional connectivity under BIMSTEC and ASEAN frameworks
- Strengthen India's strategic and economic presence in Southeast Asia

Indian Contributions:

- India is responsible for upgrading multiple road sections in Myanmar, notably:
    - Tamu–Kalewa (TK) Road (160 km) – already completed
    - Kalewa–Yagyi Road (120 km) – under construction by Indian companies
    - 16 km bypass at Kalewa – part of the Kalewa–Yagyi segment

Progress & Challenges

Progress:

- Tamu–Kalewa section has been completed
- Detailed project reports (DPRs) and construction on Kalewa–Yagyi have advanced, with some parts completed
- India and ASEAN are exploring extending the highway to Laos, Cambodia, and Vietnam

Key Challenges:

1. Political instability in Myanmar
    - Military coup (2021) disrupted ongoing construction and slowed coordination

2. Security threats
    - Insurgency and armed conflict along highway zones, especially Chin and Sagaing regions

3. Geographical difficulties
    - Mountainous and remote terrain complicates construction

4. Logistics and resource constraints
    - Delays in transporting equipment, materials, and labor

5. Cross-border coordination
    - Slow administrative clearances and inconsistent standards between India, Myanmar, and Thailand

Benefits

- Trade & Commerce: Enables land-based freight movement between India and Southeast Asia.
- Tourism Boost: Road tourism, cultural exchanges, and people-to-people contact.

- Strategic Connectivity: Enhances India's engagement with CLMV countries (Cambodia, Laos, Myanmar, Vietnam).
- Northeast Development: Strengthens infrastructure and economy in India's North-Eastern states.
- Reduced Dependency on Sea Routes: Land-based alternative to maritime shipping.

Figure 3: Map of India–Myanmar–Thailand Trilateral Highway (IMT-TH)

2. Trans-Asian Highway Network:

The Trans-Asian Highway (TAH) is a pan-Asian road connectivity initiative launched by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) in the 1950s.

India is a key part of this network, which aims to promote regional integration and enable seamless overland transport across Asia and Europe.

Key Routes in India Relevant to Act East Policy:

- TAH-1: From India (Kolkata) to Myanmar (Tamu) via NH-27 and NH-2
- TAH-2: Connects with Bangladesh and further to China and Southeast Asia
- The highway links to:
    - India-Myanmar-Thailand Trilateral Highway
    - Asian Highway 1 (AH1) and Asian Highway 2 (AH2) corridors

Indian Sections Involved:

- NH-27 (East-West Corridor) – Assam, Nagaland, Manipur
- NH-2 – Connecting Imphal to Moreh (Indo-Myanmar border)

Progress & Challenges

Progress:

- India has developed and upgraded large segments of NH-27 and NH-2
- Border infrastructure at Moreh (India-Myanmar border) has seen improvements
- Protocols signed with Bangladesh and Myanmar for overland transit
- Efforts to standardize road design, signage, and customs integration

Challenges:

1. Poor quality roads in Myanmar and Bangladesh segments
2. Security concerns in Northeastern India and Myanmar
3. Political instability in Myanmar affecting continuity of cross-border work
4. Lack of integrated customs and border control mechanisms
5. Seasonal disruption – monsoon and landslides affect road travel

Benefits

- Pan-Asian Trade Corridor: Connects India to China, Southeast Asia, and Europe by land
- Boosts NE India's economy through better trade access and logistics
- Reduces transport cost for freight by replacing shipping for certain goods
- Tourism Potential: Enables road-based tourism across South and Southeast Asia
- Strategic Importance: Counters China's Belt and Road Initiative by enhancing India's road diplomacy.

The Trans-Asian Highway Network plays an important role in integrating North-East India with our neighbouring states like Myanmar and Bangladesh. This connectivity promotes economic growth, tourism and regional integration for the North-East states of India.

3. SARDP-NE (Special Accelerated Road Development Programme in the North East)

SARDP-NE is a comprehensive programme to develop and upgrade roads and highways

in the northeastern states of India. The region, which has a challenging topography, has historically faced road infrastructure deficiencies. The primary objective of SARDP-NE is to improve connectivity within the northeastern states and with the rest of the country.

The programme consists of several phases and targets the construction of national highways, border roads, and key link roads in areas that have limited infrastructure. SARDP-NE was launched in 2005 with two major components:

- Phase A: Involves the upgradation of existing roads into two-lane standards to enhance intra-region connectivity.

- Phase B: Focuses on the construction of greenfield roads, especially in remote and strategic areas.

- Phase C: Focuses on road development in the border areas and providing enhanced connectivity to strategic military locations.

Progress and Challenges

Progress

Several roads have been constructed or upgraded, enhancing mobility and reducing travel time in the region. The SARDP-NE programme has helped improve national connectivity between the northeastern states and other parts of India. Some notable progress has been seen in states like Assam, Arunachal Pradesh, Nagaland, and Tripura, where important highways have been upgraded.

Challenges/Reasons for Delay

- Geographical Terrain: The hilly and rugged terrain of the region poses significant challenges for road construction, leading to delays.

- Weather Conditions: The monsoon season brings heavy rainfall, landslides, and floods, disrupting construction activities.

- Security Concerns: Some areas are affected by insurgency or militant activities, making it difficult to work in certain parts of the region.

- Funding Issues: There have been occasional delays in fund allocation, affecting the timely completion of projects.

- Land Acquisition and Forest Clearances: Delays in land acquisition, environmental clearances, and forest clearances also contribute to the slow progress.

- Coordination Among Agencies: There are often issues related to coordination between central and state agencies, which leads to delays in approvals and implementation.

Benefits from the Project

- Improved Connectivity: The most significant benefit is the enhanced road

connectivity within the northeastern states and to the rest of the country.

- Economic Growth: Better road infrastructure will facilitate trade, tourism, and the movement of goods and services, boosting the region's economy.

- Strategic Importance: The construction of roads in border areas is expected to improve national security by ensuring better access to remote and sensitive regions.

- Social Benefits: Improved roads will make it easier for people to access essential services like healthcare, education, and markets.

- Environmental Sustainability: The programme includes measures to minimize environmental damage and enhance sustainability, which is crucial for maintaining the fragile ecosystems of the region.

Figure 4: Map of SARDP-NE (Special Accelerated Road Development Programme in the North East)
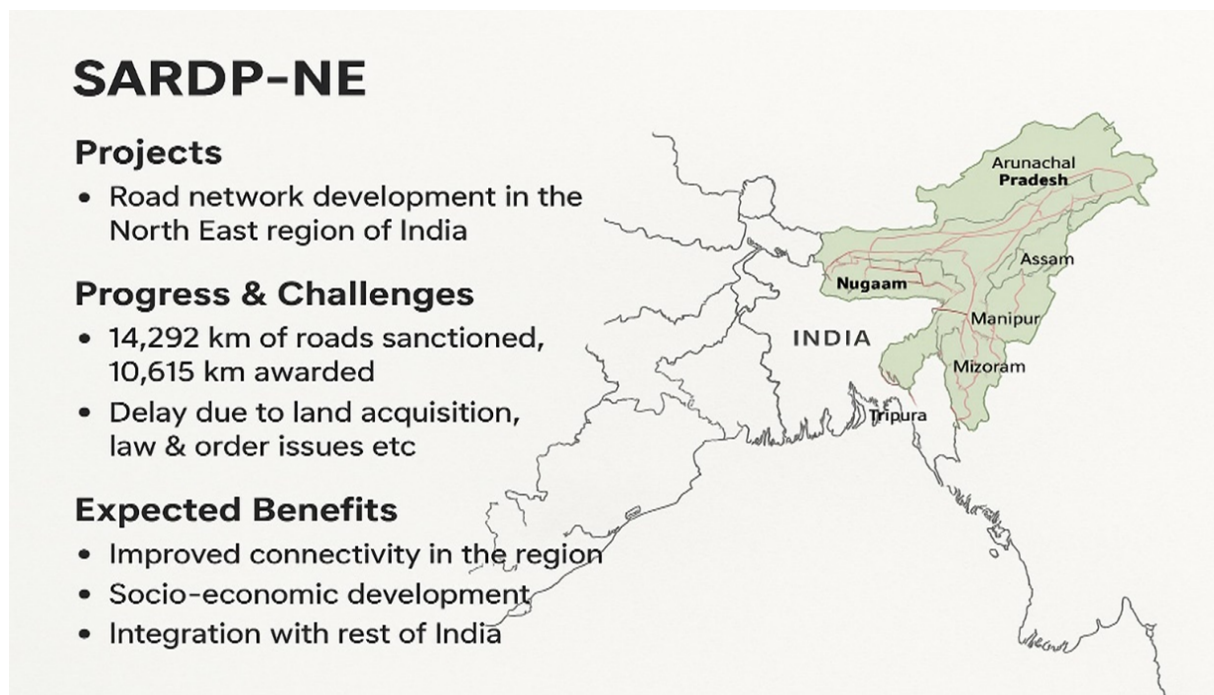
4. NHDP (National Highways Development Project) – NE Components

The objective of the project is to develop high-quality National Highways across India. In the Northeast, NHDP complements SARDP-NE by upgrading key National Highways like:

- o   NH-2 (Imphal–Moreh) – connects with Myanmar

- o   NH-10, NH-15, NH-27, NH-37 – across Assam, Nagaland, Arunachal, etc.

- o   East–West Corridor (part of NH-27) – Silchar to Saurashtra

Progress & Challenges

Progress:

- Over 60% of Phase A of SARDP-NE completed as of 2023
- Major road stretches like Silchar–Aizawl, Imphal–Kohima, Itanagar–Ziro, and Tawang roads improved
- Bridge construction on Brahmaputra (Dhola-Sadiya, Bogibeel) boosted connectivity

Challenges:

1. Difficult Terrain – Hills, rivers, landslides, and forested zones slow down work
2. Right-of-Way (RoW) issues – Land acquisition and tribal rights delays
3. Weather Dependency – Monsoon and flash floods affect construction
4. Security and Insurgency – In states like Manipur, Nagaland, and Arunachal
5. Contractor & Execution Delays – Poor contractor performance in remote areas

Benefits

- Enhanced Mobility: Better internal connectivity between NE states

- National Integration: Strengthens India's unity and presence in border zones

- Economic Growth: Facilitates trade, logistics, agriculture, and tourism

- Strategic Advantage: Faster troop and goods movement in border regions (especially near China and Myanmar)

- Cross-Border Trade: Supports trade routes to Bangladesh, Myanmar, Bhutan

Figure 5: Map of NHDP (National Highways Development Project) – NE Components

Rail Connectivity Projects

Under India's Act East Policy, rail connectivity projects are crucial for boosting economic integration, strategic security, and people-to-people linkages between India's Northeast (NE) region and Southeast Asia. The goal is to develop a robust rail network to connect remote northeastern states with the rest of India and eventually link them with neighboring countries like Myanmar, Bangladesh, Bhutan, and Thailand.

1. India–Myanmar Rail Link (Moreh–Kalay–Mandalay Project): The objective is to form part of the Trans-Asian Railway Network and strengthen trade and strategic connectivity with Myanmar and ASEAN nations. The proposed project is extending Indian railways from Imphal (Manipur) to Moreh on the India–Myanmar border and connecting it to Kalay in Myanmar.

2. Agartala–Akhaura Rail Link (India–Bangladesh): The purpose is to connect Tripura's capital Agartala with Bangladesh's Akhaura, enhancing cross-border trade, transit, and regional connectivity. The length of the connection is ~15 km (5 km in India, 10 km in Bangladesh).

3. Jiribam–Imphal Line: A 111-km railway line to connect Jiribam (Manipur) to Imphal, capital of Manipur. It includes India's tallest railway bridge (over Irang River). It will eventually extend to Moreh, facilitating future cross-border connections.

4. Sivok–Rangpo–Gangtok Railway Line (Sikkim): It is a strategic railway line connecting Sivok (West Bengal) to Rangpo (Sikkim), with a future extension to Gangtok. It is important for strategic access to the Indo-China border in north Sikkim.

5. Bhairabi–Sairang Line (Mizoram): It is a 51-km railway line connecting Bhairabi to Sairang, near Mizoram's capital, Aizawl. It aims to provide Mizoram with direct rail access to the rest of India.

6. Dimapur–Kohima Line (Nagaland): It is a Rail extension project from Dimapur to Zubza, near Kohima. I will enhance Nagaland's connectivity and access to economic centers.

b) Progress and Challenges

Progress

- Agartala–Akhaura: Construction is in advanced stages, with planned completion expected soon (partially operational).

- Jiribam–Imphal Line: Substantial progress made; several tunnels and bridges are complete.

- Bhairabi–Sairang: Over 85% of the work is complete as of early 2025.

- Sivok–Rangpo: Work is progressing steadily, with environmental clearances and tunneling underway.

Challenges and Reasons for Delay

1. Difficult Terrain: Hilly terrain, landslides, and seismic activity make rail construction extremely difficult.

2. Land Acquisition: Delays due to tribal land rights, compensation disputes, and forest clearances.

3. Security Issues: Insurgency and law-and-order issues in parts of Nagaland, Manipur, and Assam disrupt work.

4. Environmental Restrictions: Many of these routes pass through eco-sensitive zones requiring complex approvals.

5. Cross-Border Coordination: Bilateral issues, delays in coordination with Bangladesh and Myanmar authorities slow cross-border links.

Benefits from the Projects

1. Enhanced Regional Integration:

   o Railways will bridge physical gaps between NE states and the Indian mainland, facilitating the free flow of goods and people.

2. Boost to Trade & Economy:

   o Cross-border rail links will open new trade corridors with ASEAN, especially Myanmar, Bangladesh, and Thailand.

3. Tourism & Cultural Exchange:

   o Improved access will promote eco-tourism, cultural tourism, and religious tourism in NE India and neighboring countries.

4. Strategic & Security Advantage:

   o Quick troop movement and supply logistics to sensitive border areas (e.g., China and Myanmar borders).

5. Sustainable Development:

   o Railways offer an eco-friendly mode of transport compared to road freight, reducing carbon emissions and traffic congestion.

Air Connectivity Projects

Key initiatives and projects include:

1. UDAN (Ude Desh ka Aam Nagrik) – Regional Connectivity Scheme
   • Objective: Improve regional air connectivity by making air travel affordable and widespread.

- Coverage: Under UDAN 4.0 and 5.0, a major focus has been placed on expanding services in NE states like Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, and Sikkim.

- New routes have been added connecting smaller airports like Pasighat, Tezu, Ziro, Lengpui, Dibrugarh, Dimapur, and Lilabari to major cities.

2. Development and Expansion of Airports

- Guwahati (Lokpriya Gopinath Bordoloi International Airport):
  o Upgraded to handle international traffic; serves as the air hub of the NE.

- Imphal, Agartala, Dibrugarh, Dimapur, and Shillong Airports:
  o Expanded to accommodate more passengers and upgraded to meet international standards.

- Greenfield Airports:
  o Constructed in Pakyong (Sikkim) and Holongi (Arunachal Pradesh) to improve accessibility to border and remote areas.

- Upgraded Infrastructure:
  o Advanced navigation and communication systems, night landing facilities, and longer runways in hilly regions.

3. International Air Routes

- Direct flights from Guwahati to Bangkok, Dhaka, Paro (Bhutan), Mandalay, and other ASEAN destinations are being planned or operational.

- Air cargo routes and border area airstrips are also being developed to promote trade and emergency response capacity.

Progress and Challenges

Progress:

- Guwahati-Bangkok direct flights initiated under Act East push.
- Several UDAN routes operational, including Shillong–Agartala, Imphal–Dimapur, Tezu–Guwahati, and Pakyong–Kolkata.
- Holongi Airport (Donyi Polo Airport) in Arunachal Pradesh inaugurated in 2022, enabling faster access to Itanagar.
- Airports at Agartala and Imphal have been modernized with extended terminals.

Challenges:

1. Terrain and Weather:
o   Mountainous terrain and foggy weather conditions limit visibility and safe landing, especially in monsoon and winter.

2.Low Passenger Load Factors:

o   Sparse population in remote areas affects route profitability, deterring airlines from consistent operations.

3.Limited Runway Lengths:

o   Many regional airports can't handle larger aircraft due to short runways and lack of night landing facilities.

4. Security and Environmental Concerns:

o   Proximity to international borders (China, Myanmar, Bhutan) requires stricter aviation and security protocols.

5. Coordination for International Flights:

o   Bilateral agreements and cross-border aviation policies sometimes delay direct international flights.

Benefits from Air Connectivity Projects

1.   Enhanced Regional Integration:

   o   Faster movement of people within the NE region and to mainland India.

2.   Boost to Tourism:

   o   Promotes eco-tourism and adventure tourism in states like Arunachal Pradesh, Sikkim, and Meghalaya.

3.   International Trade and Investment:

   o   Air cargo and passenger flights improve access to Southeast Asian markets.

4.   Strategic and Defense Readiness:

   o   Airports near borders enhance emergency and defense logistics capacity.

5.   Economic and Employment Growth:

   o   Development of aviation infrastructure creates direct and indirect job opportunities.

6.   Medical and Educational Access:

   o   People in remote areas gain faster access to hospitals and institutions in bigger cities.

Figure 6: Map of Air Connectivity under Act East Policy

Key major development includes airport modernization such as existing airports in states like Assam, Manipur, Tripura, and Arunachal Pradesh are undergoing upgrades to accommodate larger aircraft and improve passenger facilities. For example, Lokpriya Gopinath Bordoloi International Airport in Guwahati has seen significant upgrades.

There has been an increase in international flight options connecting cities like Guwahati to Southeast Asian destinations, including Bangkok and Singapore, facilitating easier travel and trade.

Budgetary Allocations Supporting the Act East Policy:

1. Foreign Aid to Neighboring Countries: In the Union Budget 2025-26, India allocated ₹350 crore in aid to Myanmar, reflecting its strategic importance in the Act East framework. This allocation aims to support infrastructure and development projects that enhance regional connectivity and stability.

2. Development of Northeast India: The budget for Central Sector Schemes/Projects under the NEC saw a 20% increase in 2024–25 compared to 2022–23, emphasizing the region's role as a gateway to Southeast Asia. Investments in road, rail, and air connectivity in the Northeast are crucial for facilitating trade and people-to-people exchanges with ASEAN countries.

3. Ministry of External Affairs (MEA) Budget: The MEA's budget has seen a cumulative increase of 67% from 2014 to 2025, underscoring India's commitment to strengthening diplomatic and strategic ties in the Indo-Pacific region.

How Act East Policy could balance China's influence?

India's Act East Policy (AEP) is a strategic and economic initiative aimed at enhancing engagement with Southeast and East Asian countries. One of its key geopolitical goals

is to balance China's growing influence in the Indo-Pacific, particularly in South and Southeast Asia. Here's how the AEP contributes to that:

1. Strategic Connectivity and Infrastructure Development

- India-Myanmar-Thailand Trilateral Highway and Kaladan Multi-Modal Transit Transport Project help India gain direct land and sea access to ASEAN markets.

- These projects counterbalance China's Belt and Road Initiative (BRI) by offering alternative infrastructure and supply routes, particularly in Myanmar and the Bay of Bengal.

2. Deepening Economic Ties with ASEAN

- India is working to reduce trade barriers and increase regional trade with ASEAN and East Asian economies.

- Strengthened trade partnerships make India a viable economic alternative to China in sectors like IT, pharmaceuticals, and manufacturing.

3. Defense and Security Cooperation

- India has increased military diplomacy through naval exercises (like MILAN and SIMBEX) and defense exports to ASEAN countries.

- This helps build regional capacity and trust, offering a counterweight to China's assertiveness in the South China Sea.

4. Cultural and People-to-People Links

- Initiatives like Buddhist tourism circuits, educational exchange programs, and diaspora engagement build soft power — something China also pursues actively through Confucius Institutes and cultural diplomacy.

5. Strengthening Regional Multilateralism

- Through forums like the East Asia Summit, ASEAN Regional Forum, and the Quad, India pushes for a "free, open, and inclusive Indo-Pacific" — a direct contrast to China's more hierarchical regional vision.

6. Focus on Northeast India as a Strategic Pivot

- By developing India's northeastern region as a gateway to Southeast Asia, AEP strengthens India's internal integration and boosts security in border areas, indirectly countering Chinese influence in neighboring countries like Bhutan and Myanmar.

The Act East Policy acts as a multi-dimensional balancing tool—through infrastructure, diplomacy, defense cooperation, and cultural outreach, it offers Southeast Asia an alternative to Chinese dominance, while reinforcing India's role as a regional power.

Act East Policy: Boosting ASEAN Relations

1. Connectivity: Enhances physical (highways, ports) and digital links between India and Southeast Asia, improving trade and mobility.

2. Trade & Economy: Expands trade, investment, and supply chain integration in key sectors like IT, pharma, and textiles.

3. Defense Cooperation: Increases joint military exercises and maritime security efforts, supporting regional stability.

4. Cultural Ties: Promotes shared heritage, tourism, and education exchanges to build trust and soft power.

5. Multilateral Engagement: Strengthens India's role in ASEAN-led platforms (e.g., East Asia Summit), supporting ASEAN centrality.

6. Northeast Development: Turns Northeast India into a strategic gateway to ASEAN, improving regional integration.

How will better connectivity strengthen India's position in the Indo-Pacific?

Better connectivity under the Act East Policy will significantly strengthen India's position in the Indo-Pacific by enhancing its strategic relevance, economic influence, and diplomatic outreach.

1. Strategic Access and Influence

- Roads, ports, and maritime corridors (like the India-Myanmar-Thailand Highway and Kaladan project) provide India direct access to Southeast Asia and beyond.

- This counters China's Belt and Road Initiative and reinforces India's role as a security provider and alternative development partner.

2. Economic Integration

- Seamless connectivity improves trade efficiency, lowers costs, and promotes regional value chains.

- It boosts India's exports to ASEAN and Pacific nations, making it a more competitive economic player in the Indo-Pacific.

3. Regional Stability and Security

- Improved land and sea access allows faster deployment of humanitarian aid or defense assets in times of crisis.

- It also supports joint maritime patrols and security coordination with like-minded nations.

4. Strengthening Partnerships

- Better connectivity fosters closer ties with ASEAN and Quad countries, making India an essential pillar in Indo-Pacific strategies.

- It also enables more multilateral engagement and leadership in shaping regional rules and norms.

5. Northeast India as a Strategic Bridge

- Infrastructure development in the northeast turns the region into a bridge to Southeast Asia, boosting both domestic cohesion and external diplomacy.

Through improved connectivity, the Act East Policy enhances India's strategic depth, economic footprint, and diplomatic leverage, solidifying its role as a key Indo-Pacific power.

Act East Policy: A Decade- How has it impacted India

The key areas where AEP has significantly impacted India:

1. Enhanced Regional Connectivity

- Improved Infrastructure:

  o India has focused on infrastructure projects like the India-Myanmar-Thailand Trilateral Highway and Kaladan Multi-Modal Transport Project, which connect India's Northeast to Southeast Asia.

  o Ports, roadways, and railways in the Northeast have been upgraded to foster trade and people-to-people exchanges.

- Northeast India's Transformation: The region has seen increased investments in infrastructure, making it an essential gateway for trade and connectivity to Southeast Asia, thus integrating India more closely with the ASEAN region.

2. Boost in Trade and Economic Growth

- Increased Trade with ASEAN: AEP has led to a boost in trade between India and Southeast Asia, especially in sectors like pharmaceuticals, textiles, IT, and infrastructure. India has signed numerous free trade agreements (FTAs) with ASEAN countries to enhance economic cooperation.

- Investment and Market Access: India has attracted greater investments in the form of FDI (Foreign Direct Investment), especially from countries like Singapore, Japan, and South Korea, through economic corridors and initiatives under the Act East framework.

- Diversification of Trade Partners: The policy has helped reduce India's dependency on traditional markets like the U.S. and Europe, opening up newer avenues in the Indo-Pacific region.

3. Increased Geostrategic Influence

- Maritime Security Leadership: India has assumed a leadership role in promoting maritime security in the Indo-Pacific. The Act East Policy has strengthened India's naval capabilities through joint exercises, defense cooperation, and maritime patrols with countries like Singapore, Australia, and Japan.

- Countering China's Influence: By focusing on strategic connectivity projects, India has provided an alternative to China's Belt and Road Initiative (BRI). AEP helped India carve out its own space in the Indo-Pacific, balancing China's growing dominance in the region.

- Active Role in Quad: India has played an instrumental role in the Quad (Quadrilateral Security Dialogue) between India, the United States, Japan, and Australia, which has become a critical platform for maintaining a free and open Indo-Pacific.

4. Increased Diplomatic Engagement

- Stronger Ties with ASEAN: Through bilateral agreements, joint meetings, and cultural diplomacy, India has strengthened its ties with ASEAN countries. The AEP has solidified India's role as a reliable partner in Southeast Asia.

- Bilateral Cooperation: India's relations with countries like Myanmar, Thailand, Vietnam, and Indonesia have grown, particularly in areas such as trade, defense, and connectivity.

5. Cultural and Soft Power Diplomacy

- Cultural Diplomacy: India has used its cultural diplomacy to build strong people-to-people ties with Southeast Asian nations. Shared cultural heritage like Buddhism and educational exchange programs have enhanced India's soft power.

- Educational and Humanitarian Cooperation: India has provided scholarships, technical assistance, and capacity-building programs to Southeast Asian nations, making it an influential player in regional humanitarian initiatives.

6. Strategic Focus on the Indo-Pacific

- Indo-Pacific Security: India's focus on the Indo-Pacific has been reinforced through a combination of defense agreements, humanitarian aid missions, and multilateral exercises, ensuring India plays a pivotal role in shaping the regional order.

- ASEAN Centrality: India has continued to emphasize ASEAN centrality in the

region, supporting ASEAN-led initiatives like the East Asia Summit and ASEAN Regional Forum to promote a rules-based order in the Indo-Pacific.

7. Internal Growth and Development

- Economic Growth in the Northeast: The Act East Policy has stimulated growth in India's Northeast region, bringing investment and development. Improved transportation infrastructure has also boosted trade and tourism.

- Regional Stability: The improved relations with neighboring countries through economic cooperation and security ties have enhanced stability in India's border areas, reducing regional tensions and fostering cooperation.

Conclusion:

- The Act East Policy (AEP), launched in 2014 as an upgrade of the Look East Policy, aims to strengthen India's economic and strategic ties with Southeast Asia through increased connectivity and cooperation, particularly by leveraging the Northeast as a land bridge. While the intent is sound and progress has been made in some areas, the policy faces significant challenges and limitations that hinder its full realization.

1. Political Instability in the Region

- One of the most critical roadblocks is the political turmoil in neighboring countries, particularly Myanmar:

- Military Coup in Myanmar (2021) derailed several bilateral and multilateral initiatives, including the India–Myanmar–Thailand Trilateral Highway and the Kaladan Multi-Modal Transit Transport Project (KMMTTP).

- Civil unrest, ethnic conflicts, and border violence in Myanmar have made project execution risky, forcing India to slow down work and reevaluate security protocols.

- India's balancing act between strategic interests and democratic values further complicates diplomatic engagement in the region.

These geopolitical uncertainties undercut the policy's regional ambitions and reduce India's credibility as a dependable partner.

2. Slow Implementation and Institutional Bottlenecks

- The implementation pace of Act East-related infrastructure projects has been sluggish, due to:

- Bureaucratic red tape and coordination issues between central and state governments.

- Funding delays, especially in cross-border projects requiring trilateral financing or cooperation with international partners like Japan and Thailand.

- Poor project planning and execution in difficult terrains like the Northeast, where land acquisition and construction delays are common.

For example, both the Trilateral Highway and Kaladan project are running years behind schedule, with repeated cost escalations.

The gap between vision and execution undermines investor confidence and erodes local support in the Northeast.

3. Environmental and Ecological Sensitivities

Most of the Northeast region falls within biodiverse and ecologically fragile zones:

- Projects like roads, railways, and airports require deforestation, tunneling, and land use changes, which face stiff resistance from environmental groups and tribal communities.

- There is insufficient integration of environmental impact assessments (EIA) into project planning.

- Climate change impacts, such as landslides and flash floods, further delay infrastructure development.

Without sustainable practices, development may cause long-term ecological damage, leading to backlash from environmentalists and locals, and defeating the inclusive growth goals of the policy.

4. Security Challenges and Border Instability

Persistent internal security issues in the Northeast and along international borders remain a major hurdle:

- Insurgent groups in Manipur, Nagaland, and Assam often disrupt construction and oppose greater integration with mainland India.

- Cross-border crimes including drug trafficking, arms smuggling, and illegal immigration strain bilateral relations.

- Infrastructural projects close to sensitive borders (e.g., China in Arunachal, Myanmar in Manipur) are often delayed due to strategic concerns and military restrictions.

- These security concerns limit the scale and pace of development and reduce the feasibility of seamless cross-border movement.

Critical View:

While the Act East Policy is visionary in scope and essential for regional integration, it suffers from major structural, geopolitical, environmental, and logistical challenges. The policy's effectiveness is hindered by execution deficits, external instability, and lack of synergy between strategic, economic, and environmental goals.

To enhance its impact, India must:

- Engage in proactive regional diplomacy (especially with ASEAN and Myanmar).

- Strengthen federal coordination and project governance.

- Integrate sustainability into all development planning.

- Ensure local stakeholder participation in decision-making.

The Act East Policy of India initiated to connect with the South-East Asian countries mainly benefits the North-Eastern states of India. Many infrastructure projects have been completed and many are underway through the Central Government initiative and various state governments. The North-Eastern states of India is connected with the Myanmar, Bangladesh which is a boon as these states benefits from the connectivity infrastructure. This will boost tourism, cultural growth and economic development of the North-East Indian states.

However, a major concern on these connectivity projects is their implementation on the ground level. So many projects are delayed for completion due to certain internal and external factors. Thus, in general these connectivity projects would benefit the North-East states and the whole of India.

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