



Informal Public Transport: A Study Of Aizawl City

¹F. Vanlalmangaihsangi, ² Bobby Beingachhi

¹Associate Professor, ² Professor

¹Department of Geography

¹ Government Hrangbana College, ² Pachhunga University College, Aizawl, Mizoram, India

Abstract: Public transports are considered crucial for the functioning of an urban areas. Informal system is born due to inadequate fund of the government that cannot meet demands for mobility. The study highlights the modes and how they function in Aizawl urban area. The system provided the much need mobility services in the city. The study presents the characteristics, trends of public transport registration through time and space. This paper identifies the preference modes used for mobility every day and tries to relate to the importance of this sector. The focus is to provide efficient

I. INTRODUCTION

INTRODUCTION:

With the progress and changing status of society, population growth and economic development Public Transportation becomes the basic necessity and most important service sector in every part of the world. Increasing urbanization contribute an overwhelming travel demand. Travel demands are met by the existing transport system. Transport infrastructure is one of the main ingredients for analysing the development level of any part of the world. While there is a significant growth in urbanization, the land area remains the same. Thus, urban area needs meticulous planning to various developmental sectors and amenities so as to tackle any problems arising due to urbanization.

Different modes of transport play a different role in improving the sustainability of mobility patterns (Cheng, L., De Vos, J., Witlox, F, 2021). Different transport modes developed all over the world enabling citizens mobility everyday to meet the need of the public. People need access to work place, recreation centre, education and to various services. Management of public transport, vehicles used, road designs, traffic, etc. has to be controlled by authority and organised for future mobility.

Informal public transport services, as the term suggests, refer to public transport services that are provided differently as compared to the typical government-provided bus- and rail-based transport in cities (Megha.K. et al, 2016). Informal public transport system refers to the Public Transport system (PTs) that are not operated by the government. These services are run by private (individual/owners) or by drivers employed by the vehicle owners and the informal transport modes use different type of vehicles. The vehicles differ in their size and seating capacity, ie., from vehicles carrying one passenger to 30-40 passengers. They include two wheelers, three wheelers, cabs and busses. The main public transportation system operating and available for the public in Aizawl city is the Informal Public Transport system (IPTs). The system provides mobility services within the city and to the adjacent rural areas.

The current public transportation mode used in the city include bus, cars, rickshaws and two-wheelers. Rickshaws are used in the peripheral areas (small areas) of the city due to traffic congestion and relief features.

OBJECTIVES:

- i) To study the modes (type of vehicle) used in Public Transportation used in Aizawl
- ii) To examine the level of change from 2010-2023
- iii) To learn the choice pattern through the number of registered vehicles.

STUDY AREA: Located in the north central part of Mizoram, the 23rd state of India, Aizawl is the state capital established on 25th February, 1890. It has a total area of 129.9 square kilometres. The geographical location extent being 23°39' and 23°48' N latitude and 92°39' to 92°46' E longitude. It is situated on a peak at the height of 950m to 1155m above mean sea level. The city has a population of 2,93,416 in 2011 Census (Mizoram Statistical Abstract, 2021) that is 26.74 % of the total population of Mizoram (1,097,206). Aizawl is connected by road with Silchar (Assam) through National Highway 54, with Agartala (Tripura) through National Highway 40 and with Imphal (Manipur) through National Highway 150.

METHODOLOGY: The study utilised secondary data collected from Directorate of Transport, Government of Mizoram. 100% of the registered vehicles has been considered in the study

Descriptive Research Method is used for this study. Sampling technique is not applied here..

Aizawl city established on 25th February, 1890

MODES OF PUBLIC TRANSPORT IN AIZAWL:

The existing mode of Public Transport system existing in Aizawl are the main mobility services found besides privately owned vehicles. They serve the public in and around the urban area. They can be hired privately or shared outside the urban area. Main modes are the buses, taxis and two wheelers providing movement for the people. Unlike buses that runs on the main roads, taxi and two wheelers can access the least accessible areas of the city making them the most preferred modes.

Informal public transport modes, year of introduction, service area and the authorised body are given in the following table:

Table 1: Aizawl Public Transport vehicles

Sl.no	Mode	Year of inception	Authority	Service area
1	City Bus	1973	State Transport Authority, Mizoram	Aizawl city area
2	Taxi(cab)	1981	State Transport Authority, Mizoram	Aizawl city area
3	Auto Rickshaw	2016	State Transport Authority, Mizoram	Thuampui, Durtlang, Luangmual, Saikhamakawn
4	Two-wheeler	2016	State Transport Authority, Mizoram	Aizawl city area
5	Aizawl City Line Bus	2004	State Transport Authority, Mizoram	Armed Veng & Bethlehem Vengthlang city ride service

Source: Directorate of Transport, Govt of Mizoram

From the given table we can see that all the modes of public transportation have been introduced by the State Transport Authority (STA). STA are the sole authority in Mizoram for vehicle registration, licence permit for transportation, provide citizen centric transport related services, strengthening transport system, ensure safety in roads and collect revenues for the government. They have laid down several rules and faring system for all modes to cater to the functioning of public transportation in the state. Although STA set the fares for all the modes, the majority of the drivers charged passengers at their own discretion and follows more on their organization. Personal-hire taxis, auto-rickshaws and two wheelers usually did not have meters installed on their vehicles. Driver groups or unions operating shared services on the same routes usually decided the fare to be charged. Also, fare charge differs during times of a day, for example; day time fares are lesser than the night time fares

The table given indicate that City buses which were introduced by the STA in 1973 were the first public transport system in Aizawl city. The second mode introduced were the Taxis (cabs) in 1981, Aizawl city line bus in 2004 followed by Auto Rickshaws and Two wheelers in 2016.

City Buses: Buses run in and around Aizawl city. They have fixed stops at favourable location in every locality. They ply along fixed routes on the main road and the cost is nominal. They are the oldest public transportation system in th city.

Auto Rickshaws: This mode services in small allocated areas, i.e., in the peripheral area of the city (Thuampui, Durtlang, Luangmual and Saikhamakawn) due to congestion and rugged terrain which is not suitable for the vehicle.

Private Taxis: These serve every area of the city providing door to door services. They can be hired personally or shared. They can be hired for a day, travelling and are reliable.

Two wheelers: They cannot be shared but are reliable for congested traffic in the city. They also give door to door services.

The modes used in the city can indicate the choice and preference of users in the mode of the PT. People have different preference that may contribute towards the fare, type of vehicles, travel time, safety and the purpose of used. The needs of PT mode may differ among different age groups of the society. Older citizen may prefer safe modes while younger and working population may prefer modes that save time. Understanding the current situation is important for the service provider. One way of showing the preferential mode is through the type of newly registered vehicles.

Vehicle registration can show the modes used may be further summarised in the table given below as;

Table2: Aizawl City Public Transport modes used and changes through time

Source: Directorate of Transport, Govt of Mizoram

NO. OF REGISTERED PUBLIC TRANSPORT VEHICLES IN AIZAWL UNDER DTO AIZAWL															
SN	VEHICLE TYPE	2010 -	2011 -	2012 -	2013 -	2014 -	2015 -	2016 -	2017 -	2018 -	2019 -	2020 -	2021 -	2022 -	Total
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
1	Bus	42	34	33	11	17	28	33	15	18	48	0	7	11	297
2	Taxi	385	397	459	506	54	50	424	528	363	278	96	39	106	3685
3	Motor Cycle/Scooter-Used For Hire	0	0	0	0	3	5	35	162	298	179	1171	1182	265	3300
4	Three Wheeler (Passenger)	38	48	37	51	14	21	153	75	61	20	249	33	62	862
Total		465	479	529	568	88	104	645	780	740	525	1516	1261	444	8144

The modes used for public transport newly registered by the Transport department of Mizoram are shown in above table from the year 2010 to 2021 till date. The total registered during the given period is 8144 for all modes of public transportation. Taxis accounts for 45.24% of all the registered vehicles followed by two wheelers 40.52%, three wheelers 10.58% and buses 3.64%. The share to taxis and two wheelers together makes 85.76% of the total registered during the given period. This data reveals clearly the choice mode for everyday mobility in the city. The level of changes each year are not tremendous for city buses, taxis, and three wheelers except for two wheelers which shows an exceptional changes from 2015-2016 to 2021-2022.

City buses have a steady growth in its numbers and no major changes is noticed in the given table. The table reveals there is no new PT bus registered during 2020-2021. From the table, the period 2010 till date, there is a total of 297 newly registered PT buses in Aizawl city.

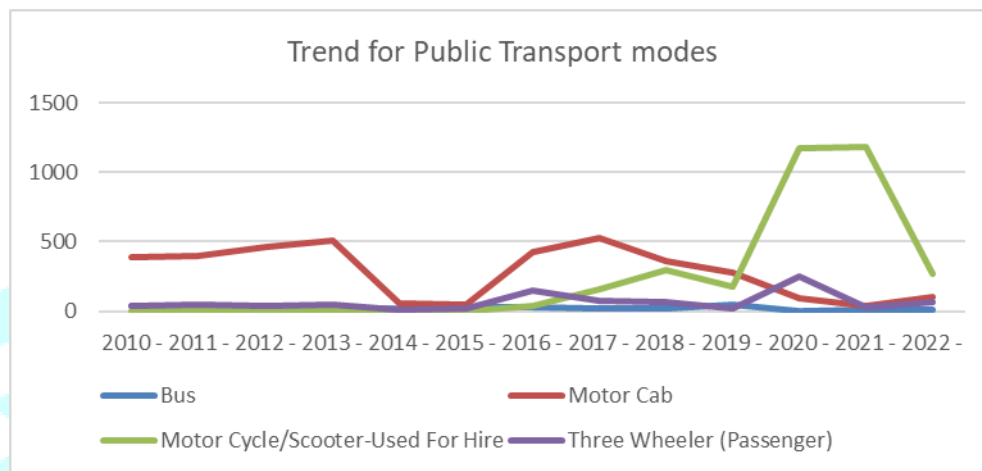
The table also reveals the status of taxis that registration increases from 2010 to 2014, declines rapidly during 2014 to 2016 and again has a notably increase 2017. There is a marked change where the newly registration decline from 278(2019-2020) to 96(2020-21) and 39(2021-22). There are 3685 newly registered taxis in Aizawl city which account for the most PT mode in the city.

There have been always been a positive change on two -wheeler mode from its inception in 2016 except on 2018-2019 to 2019-2020 where there is a negative change from 298 to 179 registered due to the Covid-19 pandemic in the world. However, the two wheelers show a drastic change in the following year during the period 2019-2020 to 2020-2021 where the number of newly registered change from 179 to 1171 that is over five-fold. 3300 two wheelers are registered during the given period.

Auto Rickshaws shows steady changes in the table. There are 872 registered vehicles during 2010 to 2023. Marked variation or positive changes occurs from 21 to 153 (2015-2016 and 2016-2017 and from 20 to 249 (2019-2020 and 2020- 2021).

The change in the number of PT modes for each given year is due to different government policies on registration and permit control. The level of change in the number of registered vehicles comply with the sole authorized department, i.e., STA (State Transport Authority)

The following graph further shows clearly the level of changes for every mode of PT vehicles.



The different modes used for PT in the city are depicted by different lines, blue line for the buses, red line for the taxis, purple line for auto rickshaws and green line for the two wheelers. The pattern or trend on the PT modes does not vary much along the given years. However, the trend on two-wheeler rises at a rapid rate from its introduction and its highest growth are observed during 2019 to 2020.

CONCLUSION:

Aizawl city roads are narrow, overcrowded and dangerous with mostly two lanes two way that are not favourably for big vehicles like buses for easy mobility. Many roads are often riddled with potholes and are uneven. Although the concern department has taken steps for road development and reconstruction, the topography, climate and geological condition of the area hinders the management in this matter. There is a lack of modern traffic signals. This given situation becomes unsatisfactory. Thus, travel time becomes slower that brings low economic growth through waste of time (Long.C, Jonas.D.V, Witlox.F2021). Therefore, for alternative of slow and over-crowded traffic the city needs motor cycles to get around quickly. At the same time, rising incomes among the Indian middle and upper classes have made car and motorcycle ownership increasingly affordable.

It is unlikely that the amounts of permits given out by the STA will minimize/ decline in the coming future. Public Tranports is extremely important as mobility needs are increasing rapidly. Careful and well management for transportation system in the city is needed for the hour. Planners must ensure the pattern of land-use, identify optimum role for each mode including non-motorized transportation to the extent that PT can be efficiently and effectively utilized. The transportation system in the city also needed consultation with experts for sustainability.

References

- Megha.K. et al(2016): Informal public transport modes in India: A case study of five city region, International Association of Traffic and Safety Services, V-39, Issue 2 P.102-109 <https://doi.org/10.1016/j.iatssr.2016.01.001>
- Japan International Cooperation Agency ALMEC Corporation (2011) The Research on Practical Approach for Urban transport Planning (Final report)
- John.P(2004): The Crisis of Public Transport in India: Overwhelming Needs but Limited Resources, Journal of Public Transportation, Volume 7, Issue 4, P.1-20 <https://doi.org/10.5038/2375-0901.7.4.1>.
- Long.C, Jonas.D.V, Witlox.F(2021): Transport Modes and Sustainability, International Encyclopedia of Transportation, P. 710-714
- L.D., Angel Ibeas, Ona, J.D., Ona,R.D.(2017)Public Transportation Quality of Service
- PATRICK.M ET. AL(2016): PUBLIC TRANSPORTATION AND SUSTAINABILITY: A REVIEW, KSCE JOURNAL OF CIVIL ENGINEERING 20(3:1076-1083) DOI:[10.1007/s12205-016-0705-0](https://doi.org/10.1007/s12205-016-0705-0)
- Raoniar,R, Rao,A.M., Senathipathi,V.(2015) Public Transport Performance Evaluation Techniques-A Review
- Tsafarakis, S., Gkorezis, P., Nalmpantis, D. *et al.* Investigating the preferences of individuals on public transport innovations using the Maximum Difference Scaling method. *Eur. Transp. Res. Rev.* 11, 3 (2019). <https://doi.org/10.1186/s12544-018-0340-6>
- Verma, A., Harsha, V. & Subramanian, G.H. Evolution of Urban Transportation Policies in India: A Review and Analysis. *Transp. in Dev. Econ.* 7, 25 (2021). <https://doi.org/10.1007/s40890-021-00136-1>
- https://www.researchgate.net/publication/345251775_Transport_Modes_and_Sustainability

