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## **Urban Traffic Problems in Aizawl: Issues and Challenges**

Laltleipuia<sup>\*</sup> Irina Ningthoujam Devi<sup>†</sup>

#### Abstract

With the increase in urbanization, one of the major issues for individuals and public authorities worldwide is traffic congestion. In order to live and thrive in the face of these difficulties, society needs a system of rules. Laws, as well as their implementation, have been a driving force in many communities and are among the most significant indications that serve as the foundation for their success. Traffic laws vary by state, yet they all serve the same purpose. The goal would be to provide and maintain driver safety. The achievement of success Traffic rules are a crucial component of regulation. However, it would be simply impossible for the world to exist without traffic and driving restrictions, particularly in urban areas. It is reasonable that many people regard traffic congestion to be a major issue. Congestion slows travel speed, increases uncertainty, and necessitates greater driver effort. The primary causes of increased traffic congestion according to reports are a large number of cars, poor infrastructure, and the development of irrigational distribution.

**Keywords**: Urbanization, Traffic Congestion, Traffic Coordination Committee, Vehicle Automobiles.

#### Introduction

Aizawl, the capital of Mizoram, is the first city in India to adopt the 'no-honking' policy and it is purely a people's initiative. Unlike other metropolitan cities like Mumbai, Bengaluru, Kolkata, where honking is a daily job for vehicle users, during traffic jams and in rush hour, honking is a part of everyday life. In Mizoram, to reduce noise pollution, the local people follow the no honking policy and that too, without any official support or legislation. Traffic management in Mizoram is remarkably exquisite. During traffic jams and while taking U-turn, drivers wait patiently for their turn without honking or overtaking one another. This shows the self-discipline of the local people. This practice is admired by many states in India and even the developed countries of the world.

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<sup>\*</sup>Ph.D. Scholar, Department of Public Administration, School of Social Sciences, Mizoram University, Aizawl - 796004, Mizoram, India. Email: laltleipuia@gmail.com

<sup>†</sup>Assistant Professor, Department of Public Administration, School of Social Sciences, Mizoram University, Aizawl - 796004, Mizoram, India.

Aizawl is Mizoram's oldest and largest city. It has a land area of 3,576 square kilometers, a population of 4, 00,309 people, and a population density per square kilometer of 11 people per square kilometer (Census, 2011). Like any other states in India, Aizawl also faces certain issues like traffic congestion. The growth of vehicles has a greater direct influence on the traffic system compared to population expansion. The number of people and the expanding earnings have grown dramatically during the past decade. The number of registered automobiles, both government and private, has increased year by year. The number of automobiles has increased dramatically between 2005 and 2015. Private automobiles outnumber government vehicles in terms of registered vehicles.

Traffic congestion in Aizawl is caused in part by the rising number of three types of populations, which supports future growth of transportation in various ways. First, the rise in permanent residents increased the number of private cars; second, the increase in mobile population increased the number of public transit because mobile population mostly came from relatively poor areas and earned lower income in Aizawl; and third, the increase in tourists increased the number of public transits system as well, because most tourists come from other cities to Aizawl and they usually travel by public transportation. There are no stated speed limit restrictions in Aizawl, however Traffic SP can make recommendations on speed limit, such as in Aizawl AMC area speed limit should be 20km/hr. and in other area speed limit should be 30km/hr. The main source of traffic congestion is the increased number of vehicles as a result of population growth and economic development.

The government is making several measures to avoid traffic bottlenecks and other traffic concerns. According to traffic police records, one of the most congested places in Aizawl in terms of cars passing through is between Treasury Square and Chanmari. Traffic Coordination was established to address traffic issues in Aizawl with the assistance of the AMC, Local Council, UD&PA, LAD, PWD, Revenue, Finance Department, and Home Department.

According to the Statistical Handbook Mizoram 2019-2020, the number of vehicles on road in Aizawl increased to 2,70,461 in 2019-2020, up from 1,65,694 in 2015-2016. According to the statistical handbook (2019-2020) published by the Directorate of Economics and Statistics, Government of Mizoram, the number of all private vehicles on road is 2,63,164 while the number of all Govt vehicles on road is 5,900. According to data from the Transport Department, Two-wheelers/ Motor cycles continue to dominate city roads (over 169,211), followed by motor cars (53,535). The total number of vehicles on road has steadily increased from 1,65,694 in 2015-16 to 270,461 in 2019-2020. According to Directorate of Transport Mizoram the total number of vehicles registered by type during 2019-2020 is 31,862.§

<sup>†</sup>https://www.timesofmizoram.com/2018/02/aizawl-traffic-speed-limit-322-milehour.html accessed on 20.5.2021

<sup>§</sup>Statistical Handbook Mizoram 2015 -2020

Table 1: Number of Vehicle on Road by Type 2019-2020 (Progressive)

SN	Types of Vehicles	Private	Govt	Total
1	Motor Cycles/ Scooters	167,815	1,396	169,211
2	Motor Car	50,617	2,918	53,535
3	Goods Carrier	22,265	1,041	23,306
4	Two Wheelers	6,499	5	6,504
5	Motor Cab (Taxi)	7,831	16	7,847
6	Maxi Cab	3,614	9	3,623
7	Luxury Cab	219	0	219
8	Moped	1,225	0	1,225
9	Bus	1,066	353	1,419
10	Tractor	326	47	373
11	Excavator	1,563	5	1,568
12	Ambulance	52	86	138
13	Trailer (Commercial)	54	16	70
14	Trailer (Agricultural)	18	8	26
15	Others	1,336	61	1,397
	TOTAL	2,63,164	5,900	270,461

Source: Directorate of Transport, Government of Mizoram

These figures back up a study titled "Urban mobility patterns in Indian cities and their consequences" (published in Developing Country Perspective on Public Service Delivery), which found an "alarming" shift toward private vehicles. In Aizawl district the total number of vehicles is 17,122 (17,028 private vehicles and 94 Govt vehicles) which is the highest compare to the other districts.\*\*

The following are the primary reasons for traffic congestion in Aizawl:

- Steep and narrow roads: Small and narrow roads, in comparison to large number of automobiles and motorcycles, particularly in Aizawl, are becoming narrower as a result of unlawful possession on the road, which are causing traffic congestion.
- Rapid increase of vehicles: Due to the rapid increase of the population, the number of
  automobiles on the road is rising on an annual basis. The growth in the number of
  commercial vehicles, which tends to cause loading and unloading of cargo and traffic
  congestion. Old automobiles and other vehicles, some of which are almost 50 years
  old, are still on the road.
- Unlawful Parking: In Aizawl, one of the most significant causes of traffic congestion
  is illegal parking or parking on the road, which has been causing congestion on a daily
  basis. During rush hour, it took about an hour to get from the Mizo Fed petrol pump

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<sup>\*\*</sup>Directorate of Transport, Government of Mizoram

- to the Vaivakawn area and from Bawngkawn to Dawrpui. Because the roads are steep and narrow, on-road parking of automobiles is one of the primary causes of major traffic congestion in several parts of Aizawl.
- Greater Public Purchasing Power: As the citizens of Aizawl City's purchasing power grows, the popularity of private transportation grows, yet current roads and highways are not accommodating or modified to accommodate the growing number of vehicles. The popularity of two-wheelers in Aizawl is skyrocketing. As a result, traffic congestion is worsening at an alarming rate.
- Inadequate lane management: Land management is a key aspect of traffic management in Aizawl. Many different types of vehicles attempt to overtake the car even on a single, unobstructed road. Route expansion is impossible in Aizawl, and there are only a few highways to choose from. The major road was completely overcrowded. This is the primary reason that city roads lack lane dividers, which separate the lane into incoming and departing traffic.
- Inadequate city development planning: In Aizawl, city development planning is a long-term development strategy. But, the strategy is flawed. Most of the time, some unlawfully ceased roadside land is noticed, however owing to the hazy development plan, these types of movements are pointless. The government has devised a traffic control strategy that will be implemented soon.
- Lack of enforcement of traffic discipline: The primary causes of the increasing number of accidents and traffic bottlenecks are a lack of understanding among the public and a lack of enforcement of traffic rules by the police. Many rules and regulations are unknown to the majority of us. The purpose of traffic discipline is to deal with a wide variety of component prerequisites with the primary purpose of guaranteeing the smooth and safe flow of traffic on the road. Unlawfully checking the mechanical condition of a moving vehicle on the road causes problems on the road.

#### **Relieving Traffic Congestion**

The fast growth in the number of cars has not been accompanied by an increase in road capacity. As a result, the roadways are becoming increasingly overcrowded. The entire city of Aizawl has been split into six zones for administrative ease and efficient traffic control. A Zonal Officer is tasked with the responsibility of overseeing a Zone and maintaining the smooth flow of traffic inside the Zone. He is also in charge of supervising and disciplining his field staff, as well as investigating any traffic-related issues, including accident investigations<sup>††</sup>.

Traffic jams are still an inescapable everyday occurrence on all highways in Aizawl. The following of rigorous traffic laws by drivers, on the other hand, seldom causes any form of trouble for the public. The ever-vigilant traffic officers are also on hand to manage the flow of traffic and apprehend any offenders. Road congestion is one of the most serious traffic issues in Aizawl. The length and breadth of Aizawl city remain constant, but the population, along with the number of automobiles, is rapidly expanding. The city's tiny

<sup>††</sup>https://police.mizoram.gov.in/traffic/accessed on 3.5.2021

streets lack a dedicated pedestrian route. With the fast development of automobiles, the insufficiency of the road network causes considerable congestion in Aizawl. During the working hours of the day, the density of traffic is extremely high.

However, in response to the decision of the Coordination Committee on Traffic Management, the government implemented a 'No tolerance drive' in the Aizawl district on December 14, 2016, which has been repeated every December. The committee includes officials from the Public Works Agency, the Aizawl Municipal Corporation, the state transportation department, and the traffic police. During the drive, the Traffic Police will undertake mass-checks for offenses of traffic regulations, including drunken driving and cell phone use while driving. Under the new method, which comes into effect on September 1st, 2016, about 3,526 registered taxis were divided into 3 groups - A, B, and C - and required to transport customers on alternating days. The concept was developed in collaboration with the Mizoram traffic police and the government. Traffic police in Aizawl are considering implementing a new system in which vehicles with registration numbers ending in 1 are not permitted to operate on dates such as the first, eleventh, twenty-first, and thirty-first of the month; similarly, vehicles with registration numbers ending in 2,3, and so on are not permitted to operate on these dates.

According to the Traffic Coordination Committee's meeting on October 27, 2017, and the authority given by Mizoram Government Notification No. B 12021/10/04-TRP Dt.22.8.2008 and Section 115 of the MV Act, 1988, the government has taken remedial measures to improve public safety and reduce traffic congestion. All registered private vehicles within Aizawl, as well as cars registered in other districts entering Aizawl, are included in the new system, which officially launches on October 1, 2017. The Mizoram traffic police department worked with the government to develop this strategy. In Aizawl, traffic police are introducing a new system under which vehicles with registration numbers ending in 1 will not be allowed to drive on dates such as 4, 14, and 24 of the month; similarly, vehicles with registration numbers ending in 2 will not be allowed to drive on 2, 12, and 22 of the month. This method is in effect from 8:30 a.m. to 5:30 p.m., Monday through Saturday, and does not applicable on Sunday<sup>‡‡</sup>.

This system, however, excludes the Governor, Chief Minister (associated cadre), and public service vehicles such as city buses/maxi taxis/sumos, auto rickshaws, institution buses, department buses, and two-wheeler taxis. Police department motor duty, traffic police duty, Fire (F&ES) motor duty, Excise & Narcotics motor duty, Medical & Hospital Emergency duty, Ambulance/morgue van, Executive Magistrate law and order duty and emergency duty, PHE water distributors, Media (MJA journalist), P&E emergency duty, Milk distributor, Newspaper distributor, AMC sanitation motor duty, Army and Para-military Force, Government Department motor duty.

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<sup>&</sup>lt;sup>‡‡</sup>Traffic Coordination Committee on 27.10.2017 and powers given by the Mizoram Government Notification No. B 12021/10/04-TRP Dt.22.8.2008 and section 115 of MV Act.

The government has taken corrective measures to improve public safety and reduce traffic congestion by 2020. Under the new system, all the registered private vehicles inside Aizawl and vehicle registered from another district entering Aizawl are also included. Vehicles with registration numbers ending in even and odd numbers will be allowed to drive on alternate days under this system, which is in effect from 8:30 a.m. to 5:30 p.m. and does not apply on Sunday. Around 3,526 registered taxis and 1500 registered two-wheeler taxis were divided into 5 groups - A, B, C, D, and E - and were asked to carry passengers on alternate days<sup>§§</sup>.

The Government of Mizoram has established the 2020 Parking House Support Scheme (PAHOSS) Mizoram scheme. Under this scheme the Mizoram State Government will grant funding, in order to build parking at several acceptable places inside the city, to private, recognized NGOs, and local governments. In Mizoram, the administration of the state of Mizoram seeks to alleviate the problem of traffic. The government of Mizoram would grant 1 lakh of support, under the Mizoram PAHOSS scheme 2020, to privately-owned NGOs and the local council to build private parking lots. A maximum capacity of 18,000 cars is provided for this new station. In Mizoram, public officials face challenges in traffic jams and parking lots\*\*\*. That is why this Mizoram Car Parks Support Scheme 2020 has been implemented by the Mizoram administration. Thus, the issue of traffic bottlenecks may be resolved by offering more automobile parking space in the state. Therefore, every registered NGO, local government, that are ready to build parking for at least five light-duty cars, will qualify for this Mizoram PAHOSS.

The transportation department is working on ongoing projects and initiatives. To alleviate traffic congestion in and around Chanmari and Zarkawt, development of a Multi-Level Parking Purpose Hall at Govt. Mizo High School, Aizawl began in February 2021 and is projected to be completed by 2022. To eliminate roadside parking as a measure of road safety, the building of Commercial Vehicle Terminals worth Rs 690.00 lakh at Tlabung, Vairengte, and Serchhip is being undertaken under S.E.D.P. Construction work has been underway since June 2020, and 40 percent of physical progress has already been made. It is expected to be completed by the end of 2021<sup>†††</sup>.

#### **Challenges and Recommendations**

The traffic situation in Aizawl has not yet been resolved. Despite the fact that parking has been abolished in some areas of the city, automatic signals have been built and pavements have been enlarged, traffic has increased to the point that we are still experiencing congestion. The population of Aizawl is growing quickly, as is the number of cars on the route, while the size of the road remains unchanged. As previously depicted, there are automobiles nowadays that are unable to be used efficiently owing to heavy road traffic. According to SP Traffic Aizawl Mizoram, Aizawl municipality is projected to have 60,000 to 70,000 motor vehicles, with around 50,000 of these cars mobilized every day. There are

<sup>§§</sup>dipr.mizoram.gov.in accessed on 26.05.2021

<sup>\*\*\*</sup> http://www.udpamizoram.nic.in/PAHOSS.html accessed on 27.05.2021

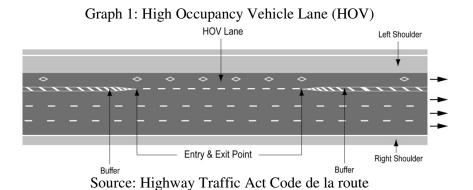
<sup>†††</sup> Transport Department Mizoram Year Book 2021

around 250 traffic police officers who can conduct their duties every day to regulate the flow of these vehicles, and it is estimated that one traffic police officer oversees the movement of around 333 cars throughout the city. It is also believed that the length of the road on which cars pass every day within the city is only around 50 km, but the length of 50,000 cars is around 250 km, highlighting the challenge of traffic management inside Aizawl. As a result, large-scale planning for appropriate traffic management inside Aizawl municipality is desperately needed.

### **Supply-side Recommendations**

Aizawl will need to develop additional roadways in the future due to population increase and urbanization. The supply of land for road construction is limited and the proportion of people who own automobiles is fairly significant. More vehicles will be generated by increased road capacity if highways are created for private automobiles. The effect of extending roads on traffic congestion is influenced by how road capacity is divided between private automobiles and public transportation. As a result, new highways should priorities public transportation. As a result, new highways should be prioritized in terms of public transportation. Some of the new roadways should be designated as buses-only right-of-ways, not just for the BRT system, but also for regular buses. In addition, more roadways for walkers and bikes should be developed.

In Aizawl, the proportion of people that use public transportation is currently extremely low when compared to other cities. If there is no reliable and efficient public transportation system, many middle-class families will opt for private vehicles as their earnings rise. As a result, larger expenditures in public transit are required. Aizawl should implement a bus rapid transit (BRT) system with more segregated buses and only right-of-way. High-Occupancy Vehicle (HOV) lanes are exclusively intended for cars transporting more than two or three people, as well as public buses. The majority of individuals prefer to drive alone since it is more comfortable and easy. However, if a significant number of single drivers use the roads, road carrying capacity would drop to a very low level. During peak hours, the HOV lane has a clear benefit in terms of saving time when the conventional lanes adjacent are extremely crowded.



#### **Demand-side Recommendations**

Supply-side instruments alone will not alleviate the traffic problem because supply-side instruments provide individuals with more options while travelling, fewer individuals may choose to utilize private automobiles. The proposals on the demand side are primarily concerned with how to limit the number of automobiles on the road. In some locations of Aizawl, road charging should be implemented. Private cars must pay to enter certain regions, while public buses are free. When it is not cost effective to utilize private automobiles, some drivers will not pass through these regions by automobile and will instead utilize alternative forms of transportation. It may be utilized during peak hours, allowing individuals to adjust their travel times and make the roads less crowded. In other words, to encourage individuals to modify their travel patterns, pricing should be varied based on traffic volume. If the effect of charging simply during peak hours is insufficient, road pricing might be implemented 24 hours a day, seven days a week.

Another significant tool for Aizawl is the parking charge. Due to Aizawl's narrow and steep route, roadside parking is one of the leading reasons for traffic delays. People will not drive by automobile if they believe it is too expensive to park in metropolitan areas, similar to how road pricing works. So, in order to persuade people to use other modes of transportation, there should be sufficient high parking prices and a sufficient number of parking garages. In addition to these market instruments, ramp metering should be employed on expressways. The expressway network will be completed within the next decade. Because ramp metering regulates the number of cars on the route, traffic flows can travel at high speeds. The mentioned measures should be implemented in order to achieve the aim of minimizing traffic congestion in Aizawl. The first step should be to improve supply-side or physical instruments, such as public transportation. These instruments should serve as the foundation for all other instruments that are used. Because tools such as road pricing and parking levies cannot achieve their objectives in the absence of adequate public transportation.

Also, when there is a good public transportation system that is accessible to the majority of people in the city, demand side instruments such as market instruments or regulatory instruments should be used, because demand side instruments, whether market instruments or regulatory instruments, directly put pressure on private vehicles. It is unknown how much of an impact the suggested instruments will have on the traffic problem. A BRT system might take five to 10 years to build, while a metro system would take much longer. During this time, even if there are more buses on the road, traffic congestion will not be lessened. And traffic jams may persist even when the BRT and road pricing are completed, because public transportation is less accessible than private automobiles, particularly in Aizawl.

It is difficult to determine if these devices will solve the traffic problem or simply alleviate it momentarily. Fees for road pricing and parking may no longer be an economic issue for people as they become wealthier. Then there will very certainly be more traffic congestion. And, if the government raises road pricing levies again, traffic congestion may be relieved briefly. People's incomes, on the other hand, continue to rise. As a result, it is

difficult to determine whether traffic congestion has been eliminated permanently or only momentarily.

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