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DHAKA TRAFFIC

ARE WE GOING THE RIGHT WAY?

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In a country of 16 crore people, the central offices of all government bodies and institutions are in Dhaka. The most job opportunities, the best schools, colleges, universities, healthcare options and even the services required by business operators are far more readily available here than any other place in the whole country.

Bangladesh's population density, which is an issue in itself, is magnified manifold in Dhaka. An estimated 400,000 people move into the city every year. It has secured Dhaka a place among the fastest growing megacities, but also classifies it on the more unsavoury list of most densely populated cities.

It currently has an estimated population of about 1.7 crore. This puts a strain on the city itself. Its infrastructure, sustainability, maintenance, and development are all impeded by the sheer scale of the problems, which are practically impossible to tackle en masse.

Even though the problems from the lack of a decent service and utility infrastructure affect every inhabitant, very few of these actually come close to the suffering caused by traffic congestion. Although it is definitely more comfortable to fret in the back of an air-conditioned car while stuck on the road for hours, especially compared to the mostly awful and subpar public transport options, in its effects on loss of time and opportunity for all individuals, Dhaka traffic is a great equaliser.

According to the Economist Intelligence Unit's Global Liveability Survey for 2016, an annual report of quality of life, Dhaka landed at 137 out of 140, barely above war-torn Damascus, Lagos, and Tripoli.

Ask a local and few will think to negate that, based on traffic conditions alone. Despite being central to the country's growth, a booming business sector, and thriving real estate, Dhaka epitomises urban dysfunction to researchers and experts, simply due to its chaotic traffic situation.

The problem is all-pervasive and has seeped into the cores of all city dwellers' lives. Any and all activities have to be planned around the truth that is traffic.


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The transport system itself needs to be overhauled. There has to be objective and perhaps centralised ticketing, efficient route plans and proper systems of maintenance and accountability.

A MYRIAD OF ISSUES

Traffic is fundamentally the demand and supply gap of the people's need for and scope of mobility. It is when a large number of service seekers are squeezed through an insufficient capacity system that congestion occurs and forms bottlenecks to exacerbate the problem, and Dhaka traffic is no different.

Almost every single person in the city has need for area-to-area mobility each day. This includes people from all sectors of life; the office-goer is as pressed for time as the school student. This brings to focus the two major problems with Dhaka: its massive population, and the sheer magnitude of demand for mobility within the city and its outskirts.

The matter is compounded by the fact that roads cover just seven percent of Dhaka city, compared to about 30 percent in modern cities like Paris and 40 percent in Chicago.

The city itself, and greater Dhaka to an extent, has essentially expanded without a plan. This has led to a disproportionate pressure on just the three thoroughfares that form the skeleton of the city's road network—Mirpur Road, Kazi Nazrul Islam Avenue-Airport Road, and Pragati Sharani.

Revisiting the issue of creation of bottlenecks, these three roads are crucial to, and unavoidable, for transport within different neighbourhoods of the city, leading to creation of frequent bottlenecks at numerous transits and connecting points to other smaller vein roads.

There are more than 650 intersections of note, and less than 70 traffic lights! Also, most of these are not truly functioning, even if they are changing colours now and then, since not one vehicle, or pedestrian, would think it necessary to heed to them.

This means that the already short-staffed police force is spread thin further, managing the chaos on the roads and directing traffic, and left practically incapable of enforcing driving, parking or traffic laws and regulations.

The next aspect, so to speak, is the lack of options in public transport. As elitist as it may sound, the bus operators, and most consumers within the city, assume that public transport is for the less privileged of the society—those who cannot afford their own transport, or at least work for large enough companies that provide pick-and-drop service for their employees. And as there is a huge part of the city's population that are in fact at the bottom of the income pyramid, the public transport operators are always at full capacity or even dangerously overloaded, and feel no need to improve service quality.

A 2009 World Bank analysis found 60 bus services of various sizes operating in Dhaka with routes and fares that varied whimsically. Passengers are usually charged for the distance travelled, but there is no real system of fixing the fare. What is more concerning is that the same analysis found that less than about half of all bus drivers and even fewer auto-rickshaw drivers had genuine licenses making accountability and discipline severely difficult to enforce.

As much as we want to blame the police for overlooking such flagrant flouting of the law, the enforcers are generally a mere reflection of the population. Compounding the problem is the relentless flow of new cars, further burdening the already beleaguered road network of the city. An estimated 40,000 additional cars make their way onto the city's already stifled roads annually, and the numbers can only grow as the middle income segment of the society expands and looks to improve their standard of living.

Another major issue, easily visible to the naked eye, is the massive number of rickshaws plying the roads. This mixed nature of Dhaka's traffic also affects speed of commute in the city. Inarguably, these are also very important to the city's system and the lives of people who cannot afford private transport.

THE DRASTIC IMPACT

The average peak hour speed of Dhaka traffic, an indicator of the road system's efficiency, has been "exponentially falling since being calculated at 25 km/hour in 1997, to 16 km/hour in 2004, and 12 km/hour in 2010. It is now estimated as being 6.4 km/hour," says Professor Md Shamsul Hoque of the civil engineering department of the Bangladesh University of Engineering and Technology.

The cost of Dhaka's traffic congestion, as per recent estimates, is projected as cleaving USD 12 billion out of the economy annually. The government itself thinks the gridlocks devour 3.2 million working hours each day. Projected over the years this has cost Bangladesh perhaps many times over the damage done by the periodic cyclones in terms of loss of productive capacity and human capital. There is also the issue of the human cost. The stress of being on the roads, the uncertainty, and the sheer exhaustion have a significant human toll as well.

Studies estimate that as much as 70 percent of the city's residents are suffering from some kind of physical ailment caused or contributed to by the traffic condition. This includes mental issues fuelled by frustration, breathing issues, headaches, skin problems, hearing loss and even blood pressure and heart issues.

All this inevitably has a significant human impact on the already inadequate healthcare system, and economic consequences.

THE STEPS TAKEN

As traffic congestion remains very visible and seemingly perpetual in the capital, almost all governments have tried to tackle it. We see periodic steps to deal with the problem. These include conducting feasibility studies, of which the most recent one, RSTP, aims to invest about USD 38 billion to make Dhaka more liveable by 2035, and fixing the traffic issue is a main target.

The most visible step on part of the government has been to build flyovers. The Bus Rapid Transit or Mass Rapid Transit projects have yet to be realised, as they understandably take a lot of time and funds to execute.

Work has started on the Metro Rail project but most other projects have either been sidelined or are really far away from realisation.

Flyovers have a fundamental issue of taking up precious space in the middle of the road, with the standing pillars, divvying already scarce space with the ramps, as well as limiting underground building options.

It perhaps adds four lanes overhead, but it also covers up two lanes beneath it, and massively restricts the possibility of mass or bus transit. Moreover, flyovers encourage smaller vehicles, with a larger carbon footprint, as well as have restricted capacity of carrying commuters.

Another fundamental issue about the layering of road space is the adaptive nature of congestion: the smaller vehicles, with large environmental impact and carrying the least number of people per unit, are also most probable to take over the flyovers.

WHAT DO WE DO NOW?

The major fundamental change that we need to focus on is policy adaptation to uniquely suit our needs—the massive number of people, lack of space, unplanned and growing city.

Demand is ever-increasing with the constant influx of people, and we do not have the right of way in most of the city. This means that any development in the crowded parts of the cities has to be extremely cautious as well as utility and capacity maximising.

One bus rapid transit (BRT), or a dedicated bus lane, has the capacity to provide service equivalent or more than ten normal traffic lanes, and is probably the least expensive and time-consuming initiative to implement. The dedicated lane increases the scope for public transportation in both numbers of commuters and savings in terms of time.

For this to be effective, the transport system, however, itself needs to be overhauled. There has to be objective and perhaps centralised ticketing, efficient route plans and proper systems of maintenance and accountability.

The main player in this regard has to be the public or state-owned transport services, at least in the beginning. "A single BRT lane can have the capacity of ten physical lanes operationally," says Professor Hoque.

This also has the advantage of not always requiring land acquisition of road building, as some existing lanes of the wider roads can simply be reassigned.

The second option, although perhaps more expensive and more time-consuming, is taking the bulk of the movement underground, through a train service. In places it is operating, it is adding value of almost 15 physical lanes, due to higher carriage capacity. However, there is a concern of whether there are enough physiographic properties in the land, to allow for long-lasting subterranean projects.

The third aspect, equally important, as Professor Hoque said, is to focus on areas which are part of the greater Dhaka metropolitan, but are not yet fully built, where there are still open spaces available for building wide roads, and for allowing proper planning of townships. A very modern option is the use of elevated expressways, both for rapid and mass transit, and especially in the place of embankments.

Embankments, although once deemed necessary against nature's whimsy, have proved to be counterproductive in many places. They also necessitate massive land acquisition, especially when compared to created service capacity, and also requires massive amounts of building materials.

Expressways, however, allow for minimal footprint, and will not physically bifurcate elements of the environment, be it physical, human or ecological.

"We have to think of adaptive infrastructure," says Professor Hoque, adding, "We must also make sure appropriate usage of the infrastructure." A lot of our good infrastructure is being damaged by our abusive use. "Overloading is a huge issue. It is contributing massive damages to highways, bridges, and even ferry gangways, and contributing to accidents."

He also says, "We need proper policies to prevent abuse of the built infrastructure. Even small adaptations, like patronisation for good projects, and allowing for innovative thinking, like opting for expressways."

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