

Comparative Study of using Own Private Vehicle and using PMPML Bus for the Purpose of Local Commutation in the Areas of PMC and PCMC

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Abstract: Most of the public is aware that use of public transport is better for environment and also cost beneficial. However, number of privately owned vehicles has been on continuous rise. Therefore, detailed benefits as well as setbacks of privately owned vehicle and PMPML buses are analyzed in order to study public opinion on preferred mode of local transport in the areas of PMC and PCMC. Public opinion about what steps and improvisations in PMPML would shift the demand towards public transit is also studied. Also, efforts already taken by PMPML in order to popularize public transit have been studied. A detailed study of the recently implemented BRT system has been done in this research paper.

Keywords: Local Commutation, Private Vehicle, PMPML Bus

Introduction

Urbanization and urban population growth are pointers towards the change in the occupational pattern of the community, from agriculture and allied livelihoods to industrial and other non-agriculture occupations. Pune, a rapidly growing industrial hub is not an exception. Pune Municipal Corporation (PMC) jurisdiction extends up to an area of 243.84 sq. km. within 144 wards and a population of 31 lakhs in 2011. It is the most preferred destination for many citizens in Maharashtra for job, education, healthcare treatment, real estate investment, and better quality of life. Industries, trade and commerce activities and number of educational centers Pune attract floating population from all across India into the city. However, rapid growth of the city is also attributed to the expansion of information technology (IT) industry in the last decade.

As a consequence, the problem of increasing traffic volume of Pune has been on the continuous rise. Working population is preferring own two-wheeler instead of bus service in spite of low bus fare.

According to Surwat, 2016-Public Parking Policy (Draft), with rising income levels, there is an urge for people to acquire a personal motor vehicle. Pune RTO is registering almost 450-500 new vehicles everyday and Pune and Pimpri-Chinchwad RTOs are jointly registering more than 700 vehicles every day. The following graph of Pune vehicle registration data indicates the overall growth of vehicles in the city.

The current trend of increasing personal motor vehicle ownership will continue and if timely action is not taken, it is unlikely that the trend will slowdown, let alone reverse, in the next few years.

The increasing number of privately owned vehicles has been a major cause to the serious issue of traffic in the areas of PMC and PCMC. In the wake of increasing urban traffic and

environmental problems, alternative of using PMPML buses needs to be considered on a more serious level.

PMPML caters its bus services to the Puneites and plays a vital role in providing affordable and convenient public transport service that help the people reach any nook and corner in and around PMC and PCMC area. It is useful for different groups of people like students, employed people, senior citizens, people visiting Pune city etc.

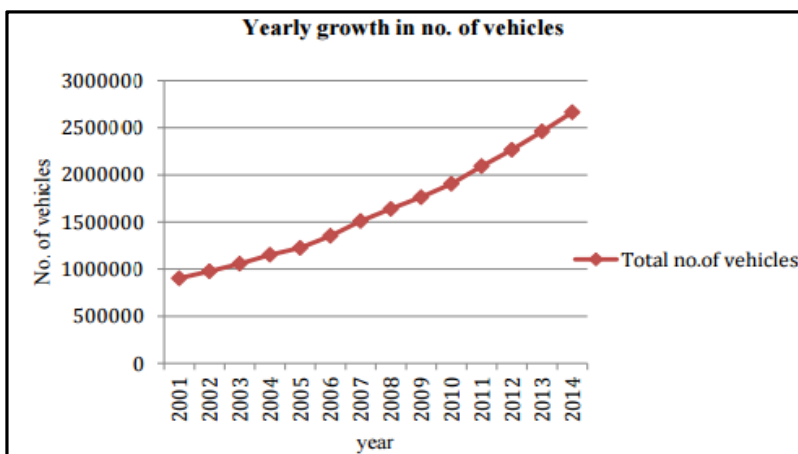


Fig. 1

Performance Matrices of PMPML as on 29 March 2017

Sr. no	Performance Matrics	Pmpml	Hired	PPP	Total
1	Total Fleet	1183	653	200	2036
2	On Road Buses	612	535	140	1287
3	Off Road Buses	571	118	60	749
4	Off Road Buses%	48%	18%	30%	37%
5	Breakdown No	167	144	34	345
6	Breakdown % (Fleet)	27%	27%	24%	27%
7	Breakdown per 10,000 km	-	-	-	-
8	Ridership	-	-	-	938369
9	Passanger Per Bus Per Day	-	-	-	729
10	Total Schedule km planned	-	-	-	-
11	Actual Schedule km operated	-	-	-	-
12	Schedules km cancelled	-	-	-	-
13	Schedules k.m. Cancelled %	-	-	-	-

Fig. 2

Source: pmpml.org-archives

Above performance matrix of PMPML for a normal working day show that on an average 938369 passengers use public transit for commutation. This number is very less as compared to total working population of Pune (3751221 persons as per Census 2011).

Objective

To study the benefits and setbacks of using privately owned vehicle and using PMPML bus for commutation purpose.

To perform detailed study of efforts taken by PMPML to increase share of public transit in local commutation.

Hypothesis

Using PMPML bus for the purpose of local commutation is more beneficial than using a privately owned vehicle.

Bottom of Form

Research Methodology

For the purpose of research, detailed study of various analytical reports from the local governing body was done. Observation of statistical representations was conducted in order to examine the trend towards a certain mode of conveyance. Also, opinion of general public and also a few experts in this field was obtained through interviews and questionnaire.

Sources of Secondary Data

Official PMPML website: www.pmpml.org

www.wikipedia.org

www.quora.com

www.sciencedirect.com

Respondents

A total of 50 people were selected on random basis from PMC and PCMC area for the purpose of survey through questionnaire and interview. These persons include regular commuters preferring either personal vehicle or public transit. Two persons from PMPML were selected as experts in the field for the interview.

Findings

Following aspects were noticed from the research:

1. Comparison of expenses incurred by both alternatives was made.
 - By way of private vehicle. (Activa)

Table 1

Inner city mileage kmpl (Activa) (A)	40
Price of petrol per litre(B)	71.31
Rate per km B/A	Rs. 1.78

Table 2

No. of Kms(A)	40
Ticket fare(B)	45
Rate per km B/A	1.12

- By way of PMPML bus (Sample ticket for Rajgurunagar to Pune Station)

By above calculations, it is understood that commutation by bus is more affordable than by private vehicle. Moreover, the purchase price of the vehicle, maintenance cost adds to the expenses for a private vehicle.

2. Majority of the respondents prefer own vehicle for commuting in Pune. Following reasons were given by them:
 - Time-saving and convenient mode.No need of waiting for bus at specific bus stop, own vehicle always available at hand, no need to face the crowd
 - Delayed buses
 - Nature of work(travel to different places frequently, location of workplace)
 - Reluctance to use public transit while having own vehicle.
 - Lack of cleanliness in PMPML buses.
3. In case of the respondents in favour of using PMPML bus, following reasons were given:
 - Commuting by bus is convenient and time-saving as per nature of work.
 - It is convenient, safe mode and stress-free
 - This opinion was mainly observed in case of respondents who travel by non-crowded routes
 - It reduces the cost of travelling. Concessional passes ranging from a single -day pass to yearly pass are made available by PMPML for regular commuters. This brings the travelling expenses even more down.
 - Own vehicle, petrol and also the maintenance expenses are not affordable.
 - Health problems due to constant need to be alert, pollution, etc.
4. Following improvements in PMPML bus transit may be able to shift the preference to public transit, according to the respondents:
 - Frequency of the buses is increased so that public transit becomes quick and crowd free.

- Buses are timely and disciplined.
 - Adequate numbers of seats are available for every route.
 - Buses are maintained properly. Modernization of bus system is carried out. e.g. increasing the coverage of BRT routes
 - Information of bus timings, bus stops is readily available.
 - Response from PMPML staff is prompt, informative and cordial.
5. Most of the two-wheeler users did not consider environmental factors while switching to private vehicle. Factors of convenience, time, fuel cost are considered by a few.
- Rise in income level has contributed to increase in the number of private vehicles. However, it is not a major factor as two-wheelers have become affordable almost for every class.
6. Experiences were observed pertaining to irresponsible or rude behavior of the PMPML staff. However, it was observed that many of the respondents have received positive experience also.

About Rainbow BRTS

BRT is a strategic long term smart transport solution towards expanding efficient and effective public transport operations in cities at a low cost. The special features of a BRT combined with its higher carrying capacity automatically makes it the right choice for enhancing existing public transport by also enhancing its image.

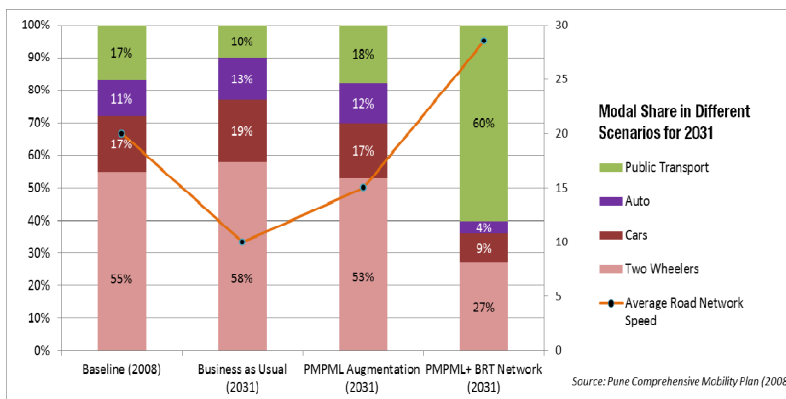


Fig. 3

Pune's Comprehensive Mobility Plan is a milestone in Pune's traffic and transport planning history and it recommends BRT as a highly effective solution for the forecasted traffic growth.

While today the Public Transport share in Pune region is as low as around 15%, it will further reduce to 10% in 2031 if no concrete efforts are made. Mere growth in PMPML service will contribute only marginally, while a comprehensive BRT network which complements regular PMPML service will cater to 60% of the modal share in 2031, making Pune comparable with other model international cities.

Rainbow BRTS aims to provide a few immediate benefits to the passengers: Comfortable ride on the BRTS buses, with shorter waiting times and shorter travel time. The long term benefits to Pune and Pimpri Chinchwad urban areas expected are:

1. Reduced pollution from motor vehicles
2. Reduced congestion due to motor vehicles
3. Reduced spending on infrastructure for motor vehicles such as flyovers, parking lots
4. Increased economic activity due to improved connectivity

Justification of Hypothesis

PMPML buses at the present condition, is not more beneficial than using own vehicle, considering plus points of time factor and convenience. However, with more improvements in PMPML combined with more BRT route projects it can be a better option for commutation than using own vehicle.

Recommendations and Suggestions

1. PMPML should take more efforts to popularize the public transit by way of modernization of bus system. For example, electronic tickets at the bus stop, bus tracking, bus guide apps, etc.
2. Rainbow BRTS plan should be continued more rigorously. New BRT routes must be planned.
3. Frequency of the buses, coverage of area by PMPML routes should be increased.
4. Bus infrastructure should be improved and well maintained. Old and obsolete buses should be retired from the fleet.
5. Delayed buses, breakdown rate of buses should be reduced.
6. Seating capacity of the buses should be increased.

Efforts for attracting public towards public transit by way of concessional passes, attractive and well maintained buses as well as bus stops and bus depots.

Conclusion

From the above research, it could be concluded that PMPML has way more improvisations to do for tackling the problem of traffic volume and congestion due to increasing private vehicles. Image of public transport has to be improved by taking rigorous and smart measures.

The status of PMPML transit, the convenience and comfort provided by PMPML system should exceed that of private vehicles from the view point of common man. Government has to take concrete measures in order to achieve the scenario.

Questionnaire

1. Which mode of transit do you prefer for commuting in Pune?
(a) Own vehicle b. Public transit
2. Why do you prefer the above option?
3. What plus points do you observe in using public transit for regular commutation?
4. What plus points do you observe in using private vehicle for regular commutation?
5. What improvements in PMPML buses may convince you to shift to using PMPML bus for commutation?
6. Do you have any special experience to share that convinced you to choose specifically the above option?
7. Do you think increase in income level may cause one to shift from public transit to private vehicle?
8. (If private vehicle user) Did you consider effect on environment while taking the decision to use private vehicle?
9. Considering most improved scenario of PMPML buses, will you travel by private vehicle or PMPML bus?
10. Do you think using PMPML bus option is socially inferior as compared to using a private vehicle?

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