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Role of Public Transportation in Employment and Income Generation of Urban Poor: A Case Study of Allahabad District Of Uttar Pradesh

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Abstract

There can be so many aspects related to the public transport and urban poors; however from the point of view of time and resources available the present study confined itself to study the role of public transportation in the income and employment generation of the urban poors with special reference to Allahabad district of Uttar Pradesh. The study is based on primary as well as secondary data. To assess the association between selected attributes Pearson chi square test of association has been used. It has been revealed from the study that public transportation plays a very vital role in the income and employment generation of the same. There are many drivers who want to purchase their own vehicle whether it is cycle rickshaw, auto rickshaw, e rickshaw or cab. A growing attraction towards the e rickshaw in Allahabad district has also been observed during the field survey. The greatest hurdle experienced by them in this respect is poor financial condition. Therefore the study suggests that if easy availability of loans for the purchase of vehicles can be assured especially for the e rickshaw, some new opportunities can be created in terms of employment and income generation while leading to relatively green transportation.

Keywords: Public Transportation, Employment, Income Generation, Urban Poor, Chi Square.

Introduction

India's public transport systems are among the most heavily used in the world, satisfying transportation needs of world's second largest population. The automobile industry in India is rapidly growing with an annual production of over 4.6 million vehicles, and vehicle volume is expected to rise greatly in the future so if you want enjoy travelling in India with local people and seeing each corner of a city without worrying about your rented car then you might want to consider using public transport, which includes¹ Cycle rickshaw, Auto rickshaw, Taxi/Cab/Rented Car, Bus, Local train, Metro, Tanga etc. There can be so many aspects related to the public transport and urban poors; however from the point of view of time and resources available the present study confined itself to study the role of public transportation in the income and employment generation of the urban poor's.

Review of literature

Ayesha Bangi (2004)² attempted to study the impact of increased motorization on traffic congestion and higher level of pollution in Hyderabad city. The study observed that the rapid urbanization and increasing land use changes have led to a tremendous increase in the travel demand. A high vehicle density with mixed traffic conditions coupled with an inadequate road have led to an increase in traffic congestion.

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¹ <https://www.justlanded.com/english/India/India-Guide/Travel-Leisure/Public-transport-in-India/a/o/19/11/15>

² Ayesha Bangi., (2004), "Traffic and Overuse Impact, A Case Study of Hyderabad City", Indian Journal of Transport Management, Volume, 28(1), P. 65.

Lohia sanjeev kumar (2010)³, tried to examine the development of urban public transport infrastructure and services in India and to explore the Potentials for International Cooperation. The study suggests various measures to be taken by the government. The study estimates that in order to improve the Urban Transport Infrastructure and provide the gaps, the investment requirement is estimated as USD 30 billion in the 11th five year plan and about USD 97 billion over next 20 years. Loughhead et al. (2001)⁴, Urban Poverty & Vulnerability in India, discusses various aspects related to the urban poor's including their priorities, protection and engagement. The study comes up with the conclusion that there is a rich and diverse policy landscape in India. The State has accepted responsibility for reducing poverty, and for ameliorating certain aspects of it. In effect, it recognizes that individual poor women, men and children need to be disaggregated on the basis of gender, age, caste and class, and accepts that the coping and declining poor are not in a position to take advantage of economic growth and specific social development activities without a helping hand.

Natraj (2015)⁵ has examined the role of public private partnership in the infrastructural development in India. The study observed that the infrastructure development in India will continue to be mainly demand led and therefore efficient use of existing infrastructure and efficient construction of new assets will be critical in the pursuit of higher economic growth. Fiscal support will continue to be dominant for infrastructure development but equally important would be the enabling policies that could lead to streamlining of procedures and protecting interests of both investors and consumers.

Sahoo Pravakar(2011)⁶, examined the status of transport infrastructure in India with the help of simple tools of analysis like charts and tables. The study presented a comparative view of India's transport infrastructure compared to other developing countries like Japan. The study observed the problems faced by transport infrastructure like financing, Land acquisition and other related policy issues. Finally the study reports the development of Japan's transport infrastructure and its lessons to India.

On the basis of abridged bibliography, the study found that there is scope to conduct a field level study to assess the role of public transport in the income and employment generation of the urban poors with special reference to Allahabad City. The results would be helpful to understand some aspects of the linkages between public transport and urban poor.

³ Lohia Sanjeev Kumar (2010), Development of Urban Public Transport Infrastructure and Services In India- Initiatives, Challenges And Potentials For International Cooperation, [WbLink: https://Sustainabledevelopment.Un.Org/Content/Dsd/Susdevtopics/Sdt_Pdfs/Meetings2010/Egm0310/Presentation_Lohia.Pdf](https://Sustainabledevelopment.Un.Org/Content/Dsd/Susdevtopics/Sdt_Pdfs/Meetings2010/Egm0310/Presentation_Lohia.Pdf) DoA 18/10/2015.

⁴ Loughhead Et Al. (2001), Reducing Urban Poverty in India web link: www.ucl.ac.uk/.../pdf.../DFID_Loughhead_Reducing_Urban_Poverty_India.pdf, DoA 27/03/2018

⁵ Nataraj Geethanjali (2015) Infrastructure Challenges In India: The Role of Public-Private Partnerships, [Web Link: Iegindia.Org/Wshop2526july/Paper5.Pdf](http://Iegindia.Org/Wshop2526july/Paper5.Pdf), DoA: 20/10/2015.

⁶ Sahoo Pravakar (2011), Transport infrastructure in India: Development, Challenges and Lessons from Japan, [Web Link: www.ide.go.jp/English/Publish/Download/Vrf/pdf/465.pdf](http://www.ide.go.jp/English/Publish/Download/Vrf/pdf/465.pdf), DoA: 20/10/2015

Objectives of the Study

The major objective of this study is to study the role of public transportation in the employment and income generation of the urban poor. Particularly the paper attempts to study the satisfaction of respondents from the current occupation, Ownership of vehicle, willingness to purchase own vehicle and major hurdles in decision making.

Methodology of Research

The paper is based on the survey work done by the author during his pre D.Phil. course work at Department of Economics, University of Allahabad. The paper utilizes secondary as well as primary data to achieve the objectives of the study; however the study is mainly based on the field survey. The secondary data has been collected from various reliable sources like Government reports, journals & periodicals, news reports and internet resources.

The primary data have been collected from the drivers of the public transport vehicle, with the help of a structured schedule. The decision of selection of drivers only, for the primary data collection, is an example of convenience sampling, which has been adapted in the study. A sample which is made up of peoples who are easy to reach is called convenience sample. The field survey has been performed at city side and civil lines side taxi stand of railway station, Allahabad, during 10 April to 15 April, 2016.

Among the transport vehicle discussed above, the study has focused on Manual Rickshaw, Auto Rickshaw, E Rickshaw and Rented Cabs (OLA) as these medium of transportation covers a large part of urban public transportation in terms of income and employment generation. The respondents have been selected from the city side and civil lines side stand of Allahabad railway station. The sample size has been fixed to be 100 comprising 30 Manual Rickshaw, 30 Auto Rickshaw, 20 E Rickshaw and 20 Rented Cabs (OLA).

For the purpose of the analysis the Chi Square test of Association has been employed in study to test the significance of the association between variables. The analysis has been done with the help of statistical software SPSS 20.

Analysis

It would be beneficial to have a glance on salient features of the sample before conducting hypotheses testing in this study, the same is presented below:

Alternative occupation wise distribution of the Sample

Out of 100 selected respondents only 15 have responded that they have some kind of alternative occupation besides being engaged in the present occupation. The matter of concern is that 85 % of the same do not have any kind of alternative occupation in case of any misfortunate condition. It shows massive dependence on the present occupation of the respondents engaged in the public transportation.

Income earning Member wise Distribution of the Sample

Out of 100 respondents only 18 respondents have other income earning members in the family who shares the burden of livelihood. However 82% of the respondents have reported that they are sole income earning person of

the family and entire family depends on them.

Age wise distribution of the Sample

Table 1: Age wise distribution of the Sample

Sl.	Age Group	Frequency
1	up to 17 years	12
2	18 to 37 years	38
3	38 to 57 years	42
4	58 years and above	8
	Total	100

Source: Field Survey April 2016

It can be easily be observed from the table that most of the respondents belong to the age group 3 (38 to 57 years) followed by age group 2 (18 to 37 years). The study has revealed that even minors are driving the vehicles, especially auto rickshaw without having proper license to drive the auto rickshaw, putting the life of passengers in danger.

Income Wise Distribution of the Sample

Table 2: Income Wise Distribution of the Sample

Income Group		Frequency
1	Up to 5000 Rs. per month	24
2	5001 to 10000 Rs per Month	64
3	10001 and above	12
	Total	100

Source: Field Survey April 2016

It is evident from the table 2 that most of the respondents belong to the income group 2 (5001 to 10,000 Rupees per Month), while 24 % of the respondents have reported that they have up to 5000 per month family income, which is less than the MNREGS wages (Rs. 167 per day) prevailing in many states in 2016. That means 24 % of the persons involved in public transports as drivers are getting the remuneration which is less than that can be earned being employed in the MNREGS. However for the urban poor there is no such scheme for the urban employment guaranty scheme. A similar scheme like MNREGS is needed for the urban areas also.

Education Wise Distribution of the Sample

Table 3: Education Wise Distribution of the Sample

Educational Attainment	Frequency
Illiterate	24
Up to High School	50
Intermediate and above	26
Total	100

Source: Field Survey April 2016

It is evident from the table 3 that 24 % of the respondents were illiterate while 50 % of the respondents have education up to high school and 26 % of them have reported that they education to the level intermediate and above.

Normal Area of Residence wise Distribution of the Respondents

The 78 % of the respondents have reported that either they have permanent residence in the urban areas or they normally reside in the same while 22 % of the respondents have reported that they come from the rural areas to the city for their livelihood per day but do not reside here.

Economic Status / Poverty Line Wise Distribution

It has been revealed from the field survey that 82 % of the respondents belong to BPL category as they have BPL/Antyodaya Ration card. There are 18 % respondents. Those belong to APL category and Engaged in public transportation for their livelihood. The persons those have BPL ration card or Antyoday card have been regarded as urban poor in this study.

Ownership wise distribution of the Sample

Out of 100 respondents, 40 have responded that they are working as driver only while 25 have said that they surrenders a minimum amount to the owner per month for the vehicle they have taken on rent from the original owner while 35 have reported that the vehicle there are driving are of their own.

Area of residence (Urban-Rural) and economic status (BPL-APL) of the Respondents

It is evident from the table 4 out of 100 respondents 62 can be termed as urban poor as these respondents have normal residence in the urban areas and have BPL/Antyodaya ration card. While 20 respondents are rural poor, remaining 18 respondents belong to the APL category

Table 4: The Cross Tabulation of Urban-Rural and BPL-APL Respondents

			Area of Residence		Total
			Urban	Rural	
RationCard	BPL	Count	62	20	82
		% within RationCard	75.6%	24.4%	100.0%
		% of Total	62.0%	20.0%	82.0%
	APL	Count	16	2	18
		% within RationCard	88.9%	11.1%	100.0%
		% of Total	16.0%	2.0%	18.0%
Total	Count	78	22	100	
	% within RationCard	78.0%	22.0%	100.0%	
	% of Total	78.0%	22.0%	100.0%	

Source: Field Survey April 2016

Hypothesis Testing

To test the association between selected attributes of the sample Pearson's chi square test of association has been

employed. The results reveal that:

- At 5 % level of significance and 1 degree of freedom⁷ with 0.082 calculated value of chi square and $p = 0.774$ the null hypothesis cannot be rejected which means there is no significant association between residence of the respondents and their satisfaction from the present occupation.
- At 5 % level of significance and 1 degree of freedom with 14.034 calculated value of chi square and $p = 0.000$ the null hypothesis cannot be accepted which means there is significant association between economic status of the respondents and their satisfaction from the present occupation.
- At 5 % level of significance and 1 degree of freedom with 2.18 calculated value of chi square and $p = 0.140$ the null hypothesis cannot be rejected stating that there is no significant association between type of vehicle the respondents drive and their satisfaction from the present occupation.
- At 5 % level of significance and 2 degree of freedom with 1.499 calculated value of chi square and $p = 0.473$ the null hypothesis cannot be rejected which means there is no significant association between residence of the respondents and their Ownership of the Vehicle.
- At 5 % level of significance and 2 degree of freedom⁸ with 79.592 calculated value of chi square and $p = 0.000$ the null hypothesis cannot be accepted stating that there is significant association between type of vehicle the respondents drive and Ownership of the Vehicle.
- At 5 % level of significance and 1 degree of freedom with 0.082 calculated value of chi square and $p = 0.774$ the null hypothesis cannot be rejected which means there is no significant association between residence of the respondents and Willingness to purchase own vehicle.
- At 5 % level of significance and 1 degree of freedom with 2.597 calculated value of chi square and $p = 0.107$ the null hypothesis cannot be rejected which means there is no significant association between economic status of the respondents and Willingness to purchase own vehicle.
- At 5 % level of significance and 1 degree of freedom with 17.312 calculated value of chi square and $p = 0.000$ the null hypothesis cannot be accepted stating that there is significant association between type of vehicle the respondents drive and Willingness to purchase own vehicle.
- At 5 % level of significance and 1 degree of freedom with 0.000 calculated value of chi square and $p = 0.983$ the null hypothesis cannot be rejected which means there is no significant association between residence of the respondents and Major hurdle to purchase own vehicle.
- At 5 % level of significance and 1 degree of freedom with 0.964 calculated value of chi square and $p = 0.326$ the null hypothesis cannot be rejected which means there is no significant association between economic status of the respondents and Major hurdle to purchase own vehicle.

⁷ At 5 % level of significance and 1 degree of freedom the χ^2 tabulated = 3.841

⁸ At 5 % level of significance and 2 degree of freedom the χ^2 tabulated = 5.991

- At 5 % level of significance and 1 degree of freedom with 28.440 calculated value of chi square and $p = 0.000$ the null hypothesis cannot be accepted stating that there significant association between type of vehicle the respondents drive and Major hurdle to purchase own vehicle.

Findings and Conclusions

The satisfaction of respondents from their present occupation is independent of area of residence and type of vehicle, however there is significant association between the economic level of the respondents in terms of ration card they hold and satisfaction expressed by them to their current occupation.

Type of Vehicle has been found instrumental in deciding the ownership of vehicle as there has been significant association between the type of the vehicle (Manual or mechanized) and ownership of the same.

Type of Vehicle has also been found instrumental when associated with the willingness of the respondents to purchase their own (or one more) vehicle. There has been significant association between the two.

Besides, a significant association has been found between the type of vehicle and the greatest hurdle the respondents face while planning to purchase vehicle.

It has been revealed from the study that public transportation plays a very vital role in the income and employment generation of the same. There are many drivers who want to purchase their own vehicle whether it is cycle rickshaw, auto rickshaw, e rickshaw or cab. A growing attraction towards the e rickshaw in Allahabad district has also been observed during the field survey. The greatest hurdle experienced by them in this respect is poor financial condition. Therefore the study suggests that if easy availability of loans for the purchase of vehicles can be assured especially for the e rickshaw, some new opportunities can be created in terms of employment and income generation while leading to relatively green transportation.

It has also been observed from the study that there are several minors are engaged in driving without having proper license (mostly they are cleaners) which results in to rough and unsecured driving. The administration should look into this matter immediately. The passengers should also avoid using such vehicles which are being operated by the minors so as to discourage these kinds of practices.

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