

## Determining Socio-Economic Structure of Passengers in Travel Delay on the Adjourning Roads of the University of Lagos

O. O. Agunloye and D. A. Taiwo

Department of Urban and Regional Planning,  
University of Lagos, Akoka, Yaba, Lagos, Nigeria

[oagunloye@unilag.edu.ng](mailto:oagunloye@unilag.edu.ng)

[taiwodavid031@gmail.com](mailto:taiwodavid031@gmail.com)

### Abstract

*University of Lagos is one of the leading and first generation Universities in Nigeria. It is acclaimed to be the University of First Choice in Nigeria as it attracts the highest numbers of applicants consistently for over one decade. The campus population is also one of the highest in Nigeria. In the light of this, the paper investigates the social and economic structures of passengers trapped in traffic in the adjourned roads of the University of Lagos. The study adopted the preliminary study of six major parks (four internal and two external) which have an average of thirty (30) waiting passengers per hour. Each park has an average of 8 hours which results into 240 waiting passengers' per/day/park. This put the sample frame (the passengers) as 1,440 passengers. A sample size of 21.9% was used. The purposive sampling technique was used. Descriptive and inferential statistics were used for data analysis. The descriptive analysis entails the use of frequency tables. The inferential statistics entails the use of One Sample T Test in order to examine the passengers' statistical variation in gender and places of residents. The study revealed that majority (54.3%) of the passengers were students, which made up of more male than female during the time of interview. Most (61.6%) of the respondents trapped in traffic were between 21 - 40 years of age and majority (62.2%) of the passengers earn less than ₦25,000 (\$172) monthly and so on. The inferential analysis revealed that, there is a statistical significant difference in the gender distribution of respondents at the motor parks ( $n=315$ ,  $df=50.324$ ,  $p<0.05$ ) and the passengers who live within and outside the campus have a statistical variation ( $n=315$ ,  $df=36.799$ ,  $p<0.05$ ). This reveals that, the distribution of places of residents of respondents vary with one terminal to the other. The study concludes that, there is a need for partnership and efficient transportation governance in the study area.*

**Keywords:** Socio-Economic, Passengers, Travel Delay, University of Lagos

### Introduction

The urbanization process in most part of the world in both the developed and developing countries has led to increase in spatial and population sizes of towns and cities. This situation has brought about some social problems, among which are inadequate infrastructural facilities such as water, electricity, housing and transportation (Faniran 1985; Agwu, 1999; Ikya, 1993). The basic transportation problems of cities all over the world include traffic congestion, delay costs, environmental pollution, noise, parking difficulties, accidents and others. Traffic delay has been established as the time lost by vehicles due to traffic friction and traffic control devices (Adedimila, 1981). There are two types of delay i.e. Fixed and Operational delays. Fixed delay occurs mainly at road intersections where traffic light may stop vehicles for those on the intersecting roads to

pass. Operational delays occur due to ineffectiveness of vehicles in the traffic stream.

Traffic delay, which was initially noticed in Nigeria in the city of Lagos in 1960s has inevitably spread to other major cities in Nigeria like Ibadan, Benin, Port Harcourt; Kano and Kaduna. In Lagos, for example the intensity of traffic delay is high due to rapid increase in population, surging and uncontrolled residential urban growth, increasing private and public vehicles. These are inevitable functional roles of Lagos as a commercial, administrative, educational, health, recreational and industrial centres. All these have serious implications on the intra-urban travel and traffic delay in Lagos metropolitan area.

There have been many past efforts towards the alleviation of traffic delay in the metropolitan institutions by identifying the



causes, consequences and even suggesting solutions to these problems from time to time. Little emphasis has been put on the socio-economic structure of passengers in travel delay. However, this effort has not been well compensated due to the continuous presence of vehicular traffic congestion in the metropolitan institutions like the University of Lagos. Based on the foregoing, it has become increasingly important to seek information about traffic delay on the adjoining roads of the University of Lagos. In view of this, this study focused on the socio-economic attributes of the passengers in the traffic delays that occur at the external roads of the University of Lagos.

### Literature Review

#### Traffic delay

Traffic delay can be defined as the time lost by vehicles due to traffic friction and traffic control devices (Adedimila, 1981). There are two types of delay i.e. Fixed and Operational delays. Fixed delay occurs mainly at road intersections where traffic light may stop vehicles for those on the intersecting roads to pass. Operational delays occur due to ineffectiveness of vehicles in the traffic stream. Studies conducted in the United States of America on traffic delay show variations in the hours spent per traveler in a year. Schrank and Lomax (2005) noted that congestion caused 3.7 billion hours of travel delay and 8.7 billion litres of wasted fuel, an increase of 79 million hours and 262 million liters from 2002 to a total cost of more than \$63 billion for a year in the United States of America. In the study conducted on four largest cities in Texas and forty-three others in the country, the Association for Commuter Transportation (2004) noted that in 1982, the average person in one of the 75 largest cities in America is faced with seven hours of travel delay per year in 2001. It is noted that the usual period during the rush hours, stretched to cover nearly six hours of each day, and that commuters make 40% longer than the same trip at other times. Lomax and Schrank (1998) reveal that motorists in one-third of the areas studied spent at least, one work week per year in traffic delay. In quantifying the economic impact of traffic congestion, Los Angeles tends to top the list with an annual congestion cost of \$8.6 billion for the city, while

Washington D.C., has the highest per capital congestion cost at \$860.

Another study carried out by Texas Transport Institute (2003) reports that the ranked annual delay per traveler in 2003 in very large cities are as follows: Los Angeles 93 hours, San Francisco 72 hours and Washington 69 hours. In large cities like Riverside-San Bernardino 55 hours, Orlando 55 hours, San Jose 53 hours, San Diego 52 hours and Denver-Aurora 51 hours. Meredith (2006) made reference to the Department of Transport in Britain that motorists waste up to 26 minutes for every 10 miles of England's trunk roads network that they travel and that A556 South road is noted for all day traffic congestion. Thompson (1994) noted that in Sao Paulo, Brazil poor people often spend more than two hours for trips that should be for less than thirty minutes from home to work. World Bank, (1994) further showed that the traffic delay in Bangkok is very hectic as the traffic during the peak period is usually less than 10km/hr. Also that in Bangkok an average car owner is expected to spend the equivalent of 44 days per year in traffic delay.

Lagos has the worst traffic problem in Nigeria today, as it has the highest vehicular density 222 veh/km as against 11veh/km national average (Lagos State 2004). Ogunsanya (1984) also noted that delay problems in Lagos, a medium sized urban centre, accounts for more than half of the running time along the roads studied, with delay more pronounced at road intersections. He identified other causes of delay as narrow roads, absence of traffic light, inadequate parking space, poor drainage facilities, too close junctions and dumping of refuse on roads in urban centers of Nigeria. Similarly, Amuda (1995) noted that traffic delay is prominent in Akure especially during the peak traffic period. The frequency of delay varies depending on the route, time of the day and traffic control devices available on the roads. He identified poor road condition, inadequate parking facilities, and traffic control and poor drainage system as causes of delay.

#### Economic Activities

Jiriko (1999) equally noted that influx of migrants from rural areas into urban areas contributed to socio-economic activities such as street trading in the urban centers. He argued that many of these migrants are

