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Socio-Economic Characteristics and Taxis Services Patronage in Lagos State, Nigeria

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Abstract Taxi service is a pivotal instrument in public transport and its dominance is highly felt in providing door to door service in place and time utility. It is in respect of this importance that this study examined the socio-economic characteristics influence on taxis services patronage in Lagos State. 304 completed questionnaires were used in seeking information from the passengers on their socio-economic characteristics and variation in patronage using multistage sampling technique. Descriptive statistics were used in describing socio-economic characteristics while inferential statistical tools of multiple regression analysis were used to determine the influence of socio-economic characteristics on patronage. It was observed from the findings that there is a strong correlation between the passenger patronage of the Taxi companies and socio-economic characteristics of age (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) with R = 0.986) in Uber, R = 0.983 in Oga Taxi and R = 0.974 in Bolt Taxi. Hence, it is recommended that strict rules and regulations guiding routine operation and service delivery to the populace must be adhere to, recruitment and selection of drivers be considered on merit with high level of scrutiny

Keywords Transportation, Taxis, Patronage, Services, Passenger

JEL H54, H59, N77

1. Introduction

Transport is the backbone of urban life. It is one of the main factors that determine the socio-economic and political development of a city. Accessibility and mobility provided by the efficient transport system have been playing a significance role in shaping cities, influencing the location of economic and social activity, by facilitating trade, permitting access to resources and people, and enabling greater economies of scale globally [1]. In every aspect of man's activities, transportation has come to play a vital role, which ranks it among the most important determinants of any success in such human activities. The transportation of goods and services has become vital to the Nigerian economy due to foreign exchange earnings to this sector of the economy. Transportation is a good and very strong backbone for a vibrant and growing nation [19].

The major modes of transport in any urban and rural areas of a country either developed or developing include road, rail, air and water which are used in conveying both passengers and freight transport [4]. The freight transport is the conveyance of goods from origin to destination while passenger transport is the movement of people from one location to another all at the right time [23]. The passenger transports can be examined through it types and capacity which are public transport and private transport. Private passenger transport is the movement of passengers through private owned vehicles while public passengers transport is operated by government or individual for a share ride or group ride for the public and usually on commercial basis [3].

Shared taxis are common in many developing and several developed and developing countries. They can be seen either as a part of conventional public transport or a separate segment or as a form of street market taxi. The mode occurs in many forms with varying degrees of legality and regulation. Shared taxis are a form of conventional public transport, between mass transit systems and ordinary taxis. In some places it operates on predefined lines, as an unscheduled bus service, in other word, the taxi picks up passengers along the way after the first passenger give the direction [6]. Shared taxis will typically have larger overlapping market segments with scheduled public transport than metered taxis [10].

Reference [5] in their study of taxis services were of the opinion that taxis provide a point- to- point service available to the public and as such a part of public transport which is so even, if the lack of regular schedules, routes set stations and subsidies characterizing the main part of the public transport, gives it a semi-private character. They further assumed that, taxis constitute an accessibility component, in that they provide mobility for persons who, for geograph-

ical or disability reasons cannot use the conventional public transport system.

2. Literature Review

Taxis as a form of public transport in urban settings have been studied in diverse dimension based on the thoughts and submissions of different scholars as far as public transport research is concern. Reference [15] observed that the use of taxi is widespread in most African cities, like Nigeria, Ghana, South Africa, etc. and they dominate the urban transport market. While Reference [10] emphasized that taxis constitute about 65% or more of all passengers' journeys and render mobility service to about 3 to 5 million people on a daily basis and also National Survey posits that 46% of Africans in urban areas of South Africa travel by taxis, followed by bus (20%) and train (13%).

Reference [17] described the taxi driver's operation patterns and difference between top drivers and ordinary drivers' behaviour in Shenzhen and discussed taxi drivers' behaviour based on the taxi daily GPS traces data; they analysed the drivers' spatial selection behaviour, operation behaviour, and route choice behaviour. Reference [24] focused more on the spatial distribution of taxi services in one day, while [13] mainly analysed the one-day taxi temporal distribution of customers' pick-up and drop-off times in Guangzhou, China.

Reference [13] investigates road safety and older taxi drivers' behaviour in Monaghan. The study reports that although habits such as drunk driving and speeding, which are major risk behaviour on roads, are common among older taxi drivers, but they still drive more carefully on roads than young taxi drivers. Reference [22] also investigate relationship between demographic characteristics of drivers and driving behaviour using prevention magazine data from 1994 to 1995 on four-way ANOVA model. Study shows that only female drivers were more law-abiding compared with the male. The research, however, shows that severity of punishment and consistent penalty to offenders substantially impact driving behaviour.

Reference [14] observes the relationship between risky driving behaviour, attitudes, and accident involvement. The study notes that attitudes of drivers contribute significantly in predicting driving behaviours and involvement in accident. Many people all over the world are killed and severely injured in road traffic crashes due to incessant deviant driving behaviour of drivers particularly, commercial drivers.

Reference [20] stated that "Call taxi have a greater value in the community, the taxi industry is regulated in various ways by the state Governments through their respective Departments of Transport. Through this regulation the Government is able to exert some control over the activities of the industry, with the ultimate objective of providing a higher level of service (a complex construct in itself) to the public. This study is mainly used to identify the awareness towards call taxi services, factors influencing the choice of call taxi services, satisfaction towards the call taxi services, and the challenges faced by commuters while using call taxi services.

Reference [12] suggested that high quality service can increase customer satisfaction. Quality factors in taxi service such as comfort, reliability, safety, price affordability and driver's attitude, nonstop service influence the taxi passenger satisfaction. Reference [24] inferred that there is a relation between service quality and satisfaction in taxi industry. The results of their study showed that improved service quality can increase satisfaction of taxi passengers.

Reference [7] focuses on analyzing the cab company's customer dataset which will help company to analyze its frequent customers so that the company can understand its customers and can provide different offers to them.

Reference [21] stated that "Every other day in India, there is a new start up offering efficient cab service to the citizens operating in urban and rural lifestyles. This raises a question that is India going through a possible 'Taxi Revolution'.

Some scholars argued that the prices were the direct factors, which included monetary costs, travel time, discomfort and risk. The changes of price influenced the consumption of transport a lot. From the results of those studies, the demand for transport decreased gradually as the prices went up, [16] while [8] provided a basic model to show optimal levels of taxi prices and service quality. On the other hand, several researchers together analysed how car ownership, land use, population, employment and wider transport policies affected the demand for public transport in the Britain. They planned to produce a document to assist cost-effective schemes for improving public transport services [2].

Reference [11] argued that the development of society, urban natural conditions and urbanization level had effects on taxi passengers' demand for the taxi and they concluded that the demand would increase dramatically if society in China developed better, urban natural conditions were friendlier for taxi to run, and the urbanization level rose up.

Studies have thus been centred on types and form of market, operations, regulations; service quality as well as accidents occurrence as far as taxi industries is concern. But there is no in-depth knowledge and contribution regarding comparison of the service quality of one taxi company to one another especially in developing world which Nigeria is among and hence this creates a vacuum in public passenger's transport research.

3. The Methods

3.1. Data Collection

The primary data mainly comprised of physical observation and questionnaire administration to the customers of each taxi company at their various head offices in Lagos state. The questionnaire was used to examine the socio-economic characteristics of the passengers while the secondary data involved information gathered from reconnaissance survey in form of population of study area collected from National Bureau of Statistics (NBS) and Lagos state ministry of

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Science and Technology, brief history of the Taxi companies involved form the various archives of the companies (Uber, Oga Taxi, Bolt) as well as existing and current journals and articles relating to taxis service quality to passengers.

3.2 Study Population

The projected and estimated population of Lagos state as at 2019 is estimated at 26,435,405 and the whole 20 recognised local governments were involved in the study that is questionnaire was administered to all the local governments. Based on the overall total of sample size, a total of 400 questionnaires were administered and 304 questionnaires were returned for the analysis. The distributions were based on the basis of the fraction of individual population to the overall population of Lagos.

3.3 Sampling Techniques

A multistage sampling technique was adopted which involve the combination of quota and simple random sampling techniques analysis till the questionnaires got exhausted for the individual local government. The administration was done by placing them in the vehicles for each and every trip between origin and destination of the Taxis companies to the passengers' final destinations while the whole exercise lasted for a period of two months.

3.4 Method of Data Analysis

The descriptive tools of frequency distribution, graph, table and simple percentages were used in presenting, interpreting, explaining and describing the effect of socio-economic characteristics of passengers of the services rendered by the Taxi companies. The inferential statistical tool of multiple regression analysis was used to analyse the influence of socio-economic characteristics of passengers on patronage of the Taxis companies.

4. Results and Discussions

4.1 Socio-Economic Characteristics Influence on Taxis Services Patronage

The socio-economic characteristics of the passengers go a long way in establishing taxis services patronage in the study area. The most important and critical attributes of socio-economic status investigated in the study which efficiently influence and determine taxis services' patronage include age distribution, gender composition, educational qualification, income distribution and Occupation.

4.1.1 Age Distribution of Passengers of Taxi Companies

The study observed that out of the 304 passengers examined in the study area, out of which 37.50% (114) were from Uber taxi, 22.37% (68) from Oga taxi and 122 passengers from Bolt taxi forming 40.13%. The age distribution among these taxi shows that an average of 48.34% of the passengers was between the ages of 31 – 40 years of age while 27.72% belonged to the age range of 41 – 50 years as shown in Table 1. The similar table adequately revealed that 19.37% was between 18 – 30 years of age and 4.57% fall within 51 years and above.

Table 1. Age Distribution of Passengers of Taxi Companies

Age	Uber	%	Oga	%	Bolt	%	Total	Average (%)
18 - 30 years	17	14.91	16	23.53	24	19.67	58.11	19.37
31 - 40 years	47	41.23	31	45.59	71	58.20	145.01	48.34
41 - 50 years	45	39.47	18	26.47	21	17.21	83.16	27.72
51 years above	5	4.39	3	4.41	6	4.92	13.72	4.57
Total	**114**		**68**		**122**	**304**		
Percentage	**37.50**		**22.37**		**40.13**			

Author's Field Survey, 2021

Further investigation showed that, age grade between 31 – 40 years dominated Uber passengers with 41.23% and 51 years and above was the minimum passengers' age examined 4.39% (5). The highest age range in Oga and Bolt taxi were 31 – 40 years with 45.59 % and 58.20% respectively while the lowest age range surveyed were 51 years in Oga taxi and Bolt with 4.41% and 4.92% accordingly. The study hence observed that majority of the passengers who patronised the taxi companies fall between the ages of 18 – 50 forming 95.43% of the surveyed samples and by implication they belong to the active working force of the population of Lagos state.

4.1.2 Gender Composition of Passengers of Taxi Companies

The gender composition from the study area showed that the proportion of female is greater than the male counterpart. It was revealed that, 53.78% of the passengers were female and 46.22% were male. In the same vein, 52.63% (60) are female and 47.37% (54) are male in Uber; 45.59% (31) are female and 54.41% (37) are male in Oga taxi and 63.11% (77) are female and 36.89% (45) are male in Bolt taxi as shown in figure 1. This submission may be as a result that, most women do have flair for luxury and comfort and resulted to

the use of the taxi instead of riding in their private and personal cars.

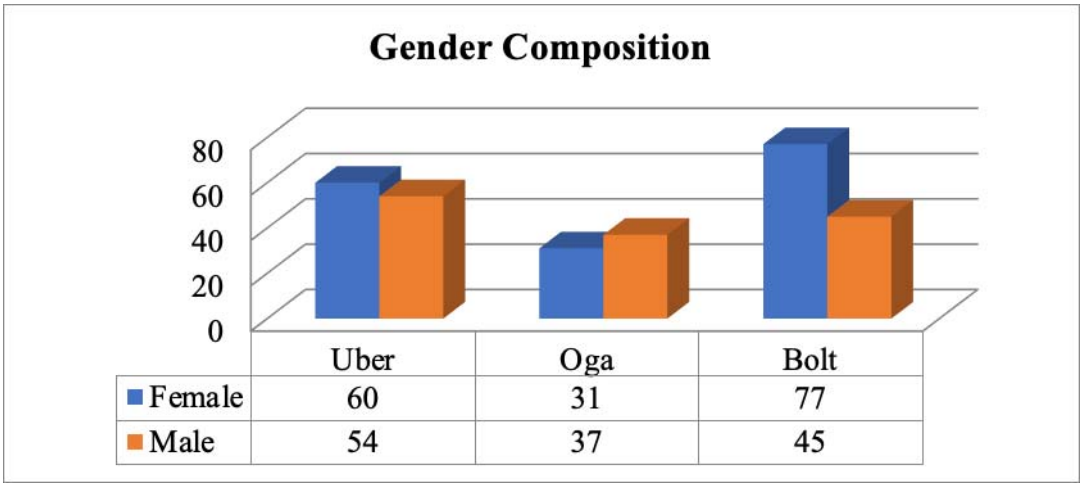

Figure 1. Gender Composition of Passengers of Taxi Companies

4.1.3 Education Qualification of Passengers of Taxi Companies

The educational status of the passengers is depicted in Table 2 with majority of the passengers have high level of educational background which ranges from higher national diploma (HND) to doctorate degree (Ph.D). 81.94% of the passengers held one or more of these while the remaining 18.06% had a brief stint of primary, secondary and other form of education in the surveyed sample. More importantly, the tertiary form of education is common with the passengers of the taxi companies in the following proportions: Uber – 97 (85.09%), Oga – 53 (77.94%) and Bolt - 101 (82.79%) as shown in Table 2.

Table 2. Educational Qualification of Passengers of Taxi Companies

Education	Uber	%	Oga	%	Bolt	%	Total	Average (%)
Primary	0	0	3	4.42	1	0.82	5.23	1.742
Secondary	4	3.51	6	8.82	2	1.64	13.97	4.66
Tertiary	97	85.09	53	77.94	101	82.79	245.82	81.94
Others	13	11.40	6	8.82	18	14.75	34.98	11.66
Total	**114**		**68**		**122**			**100**

Author's Field Survey, 2021

In all, the minimum level of education which is primary school and recorded with the least proportion with 3 (4.42%) in Oga and 1 (0.82%) in bolt taxi while Uber recorded nil. This can be assumed that majority of the passengers who fall within the active working population and highly educated use these taxi services to office, workplaces and so on within the study area.

4.1.4 The Occupation of Passengers of Taxi Companies

The profession of the passengers speaks volume of the capability and ability of patronage of the taxis companies, and this is indicated in the Table 3. The categories of passengers' occupations which dominated the study area are people who are privately employed and those on self-employment forming a proportion of 43.35% and 32.09% respectively. However, the dominance of these two, civil servants working with government ministries, agencies and department are also represented in the study with 11.84% while students and other forms of jobs were 3.73% and 3.93% respectively and unemployed people were 5.05%

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Table 3. Occupation of Passengers of Taxi Companies

Occupation	Uber	%	Oga	%	Bolt	%	Total	Average
Student	4	3.51	3	4.41	4	3.28	11.20	3.73
Civil Servant	11	9.65	7	10.29	19	15.57	35.52	11.84
Private Employment	52	45.61	29	42.65	51	41.80	130.06	43.35
Self Employed	42	36.84	17	25.00	42	34.43	96.27	32.09
Unemployed	2	1.75	8	11.76	2	1.64	15.16	5.05
Others	3	2.63	4	5.88	4	3.28	11.79	3.93
	114		**68**		**122**	**265**		**100**

Author's Field Survey, 2021

The similar table equally reflected that, passengers who are private employees dictate in the three taxi companies with the following values Uber – 52 (45.61%), Oga – 29 (42.65%) and Bolt – 51 (41.80%). On the other hand, the least occupation status of the passengers in the study area is as follows; Unemployment in Uber and Bolt with 1.75% and 1.64% respectively while student in Oga taxi with 4.41%. The share of other various form of passengers' works in the study area are as follow for individual taxi company as indicated in same table 3: {Uber – students (3.51%), civil servant (9.65%), self-employment (36.84%), and other (2.63%); Oga – civil servants (10.29%), self-employment (25%), unemployment (11.76%) and others (5.88%) while for Bolt – students and others (3.28%) each, civil servant (15.57%) and self-employment (34.43%).

3.1.5 Income Distribution of Passengers of Taxi Companies.

The incomes, earnings or salaries suggest and determine the patronage capacity and power of the taxi companies' services by the passengers. Table 4 revealed that passengers with high earned incomes has the purchasing power of these taxi services as bulk of them received between ₦50,000 - ₦100,000 and ₦100,000 & above as either wage or salary with 25.47% and 46.87% respectively.

Table 4. Income Distribution of Passengers of Taxi Companies

Occupation	Uber	%	Oga	%	Bolt	%	Total	Average (%)
Below ₦5,000	2	1.75	0	0.00	3	2.46	4.21	1.40
₦5,000 - ₦20,000	8	7.02	9	13.24	7	5.74	25.99	8.66
₦20,000 - ₦50,000	29	25.44	8	12.76	19	15.57	52.78	17.59
₦50,000 - ₦100,000	30	26.32	14	20.59	36	29.51	76.41	25.47
Above ₦100,000	45	39.47	37	54.41	57	46.72	140.61	46.87
Total	**114**		**68**		**122**	**265**		**100**

Author's Field Survey, 2021

The findings of the study further revealed that, a very minute proportion of the sample surveyed who uses the service of the taxi company earn below ₦5,000 with 1.40% which maybe as a result of emergency and exigency situations at hand. The distributions of rest of the income were as follows: Uber has the highest income of passengers with ₦100,000 and above with 39.47%, lowest with below ₦5,000 (1.75%), ₦5,000 - ₦20,000 (7.02%), ₦20,000 - ₦50,000 (25.44%) and ₦50,000 - ₦100,000 with 26.32%. The trend in income of Bolt is similar to that of Uber as follows; Bolt has highest of ₦100,000 and above (42.527%) and lowest of below ₦5,000 (2.46%), while others are ₦5,000 - ₦20,000 (5.74%), ₦20,000 - ₦50,000 (15.57%) and ₦50,000 - ₦100,000 with 29.51% while Oga taxi's highest passengers' income is also ₦100,000 and above 54.41% and lowest of ₦20,000 - ₦50,000 12.76% and ₦5,000 - ₦20,000 with 13.24%, ₦50,000 - ₦100,000 with 20.59% but with no passengers with income of below ₦5,000.

4.2 Test of Hypothesis

Hypothesis of the study state that socio-economic characteristics of passengers do not have influence on patronage of the Taxi companies.

4.2.1 Uber Taxi Passengers' Patronage Analysis

Passengers' patronage of the Uber taxi company (PpU) effect was analysed with multiple regression analysis and the results on socio-economic predictors of age (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) revealed that, there is a strong relationship between passengers patronage and independent socio-economic factors which is statistically significant with F – ratio of {$F(5, 14) = 98.75$, $p < 0.001$} as shown in Table 5. The multiple corre-

lation coefficient R = 0.986 indicates that there is a strong correlation between the passenger patronage and predicted by the regression model components. In terms of variability in passenger patronage accounted for by the fitted model, this amounts to a proportion of R2 = 0.972, or 97.2% while R2 will increase when further terms are added to the model even if these do not explain variability in the patronage.

The adjusted measure leads to a revised estimate that 97.2% of the (PpU) of Uber Taxi Company can be explained by the five explanatory contributing components. In other words, the five components together explain 97.2% of the variations in the (PpU) while 2.8% observed relationships are not explainable by the selected independent variables. Also, the output shown in the same table 5 also provides estimates of the regression coefficients, standard errors of the estimates and t-tests of a coefficient. That is, there can be an increase in patronage (PpU) when there is an increase of ten units in age (Age) from 0.616 to 6.16 and also an increase in patronage for every additional score recorded in occupation (Occ) scale (or by 10.43 for an effect of 10 units Occ scale) provided that all other predictors are the same and increase of 3.18 in PpU score for every one unit of (Inc) assuming that all other variables in the model are held constant while a decrease in PpU for one unit increase in gender (Gen) and Education (Edu) with 10.02 and 0.01 increment respectively as shown in the equation model 1.

$$(PpU) = 0.737 + 0.616(Age) - 1.002(Gen) + 1.043(Occ) - 0.001(Edu) + 0.318(Inc) + \varepsilon\ldots \text{ (Eq. 1)}$$

Table 5. Multiple Regression Analysis of Uber Patronage

Dependent variable (PpU)	Coefficient	Std Error	t - Statistics	Prob.
Variable				
C	0.737	0.321	2.299	0.037
Age (Age)	0.616	0.211	2.919	0.011
Gender (Gen)	-1.002	0.258	-3.885	0.002
Occupation (Occ)	1.043	0.298	3.495	0.004
Education (Edu)	-0.001	0.156	-0.006	0.995
Income (Inc)	0.318	0.165	1.929	0.074
R	0.986			
R – Squared	0.972			
Adjusted R- Squared	0.963			
F – statistics	98.747			
Prob. F – statistics.	0.000			

Dependent Variable: PpU, Predictors: (Constant), Inc, Age, Edu, Gen, Occ.

Author's Field Survey, 2021

The study therefore conclude that at least one of (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) contribute in predicting and determining passengers' patronage. In this regards we reject null hypothesis and accept alternative hypothesis meaning that there is significant influence of socio-economic characteristics of passengers on patronage of the Taxi companies. Conclusively, the model implies that β_1Age(0.616), β_2Gen(-1.002), and β_3Occ(1.043) are significant in predicting patronage of Uber Taxi company with the following p – values 0.011, 0.002 and 0.004. More so, there could be some other factors which can explain patronage (PpU) than (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) which could be for a further study.

4.2.2 Oga Taxi Passengers' Patronage Analysis

The multiple regression analysis results of socio-economic of age (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) on patronage of Oga Taxi passengers' patronage (PpO) revealed that, there is a strong relationship between passengers' patronage and independent socio-economic factors which is statistically significant with F – ratio of {F (5,14) = 77.917, $p < 0.001$} as shown in Table 6. The multiple correlation coefficient R = 0.983 indicates that there is a strong correlation between the passenger patronage and the predicted by the regression model components. In terms of variability in passenger patronage accounted for by the fitted model, this amounts to a proportion of $R^2 = 0.965$, or 96.5% while R^2 will increase when further terms are added to the model even if these do not explain variability in the patronage.

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Table 6. Multiple Regression Analysis of Oga Taxi Patronage

Dependent variable (PpO)	Coefficient	Std Error	t - Statistics	Prob.
Variable				
C	0.163	0.217	0.751	0.465
Age (Age)	0.031	0.185	0.170	0.868
Gender (Gen)	0.358	0.145	2.466	0.027
Occupation (Occ)	0.359	0.147	2.450	0.028
Education (Edu)	0.388	0.109	3.566	0.003
Income (Inc)	0.200	0.137	1.455	0.168
R	0.983			
R – Squared	0.965			
Adjusted R- Squared	0.953			
F – statistics	77.917			
Prob. F – statistics.	0.000			

Dependent Variable: PpO, Predictors: (Constant), Inc, Age, Edu, Gen, Occ.

Author's Field Survey, 2021

The adjusted measure leads to a revised estimate that 96.5% of the (PpO) of Oga Taxi Company can be explained by the five explanatory contributing components. In other words, the five components together explain 96.5% of the variations in the (PpO) while 3.5% observed relationships are not explainable by the selected independent variables. More importantly, the output table 6 provides estimates of the regression coefficients, standard errors of the estimates and t-tests of a coefficient. That is, there can be an increase in patronage (PpO) when there is an increase of ten units in age (Age) from 0.031 to 0.31 and also an increase in patronage for every additional score recorded in Gender (Gen) scale (or by 0.358 for an effect of 10 units Gen scale) provided that all other predictors are the same and increase PpO with a unit increase in score for every one unit of (Occ) to 3.59 assuming that all other variables in the model are held constant, an increase in PpO for one unit increase in Education (Edu) and Income (Inc) with 3.88 and 2.00 increment respectively as shown in the equation model 2.

$$(PpO) = 0.163 + 0.031(Age) + 0.358(Gen) + 0.359(Occ) + 0.388(Edu) + 0.200(Inc) + \varepsilon\ldots \quad \text{(Eq. 2)}$$

The study therefore concludes that at least one of (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) contribute to predicting and determining passengers' patronage. In this regards we reject null hypothesis and accept alternative hypothesis meaning that there is significant influence of socio-economic characteristics of passengers on patronage of the Taxi companies. Conclusively, the model implies that β_2Gen(0.358), β_3Occ(0.359) and β_4Edu (0.388) are significant in predicting patronage of Oga Taxi company with the following p – values 0.027, 0.028 and 0.003. In this regard, there could be other factors which can explain patronage (PpU) than (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) which could be for a further study.

4.2.3 Bolt Taxi Passengers' Patronage Analysis

The multiple regression analysis results of socio-economic of age (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) on patronage of Bolt Taxi passengers' patronage (PpB) revealed that, there is a strong relationship between passengers' patronage and independent socio-economic factors which is statistically significant with F – ratio of $\{F(5,14) = 51.270, p < 0.001\}$ as shown in Table 7. The multiple correlation coefficient R = 0.974 indicates that there is a strong correlation between the passenger patronage and the predicted by the regression model components. In terms of variability in passenger patronage accounted for by the fitted model, this amounts to a proportion of R2 = 0.948, or 94.8% while R2 will increase when further terms are added to the model even if these do not explain variability in the patronage.

The adjusted measure leads to a revised estimate that 94.8% of the (PpB) of Oga Taxi Company can be explained by the five explanatory contributing components. In other words, the five components together explain 94.8% of the variations in the (PpB) while 5.2% observed relationships are not explainable by the selected independent variables. More importantly, the output table 7 provides estimates of the regression coefficients, standard errors of the estimates and t-tests of a coefficient.

Table 7. Multiple Regression Analysis of Bolt Taxi Patronage

Dependent variable (PpB) Variable	Coefficient	Std Error	t - Statistics	Prob.
C	0.276	0.442	0.625	0.465
Age (Age)	0.199	0.196	1.016	0.868
Gender (Gen)	0.119	0.185	0.640	0.027
Occupation (Occ)	0.363	0.157	2.316	0.028
Education (Edu)	0.543	0.166	3.277	0.003
Income (Inc)	0.226	0.138	1.638	0.124
R	0.974			
R – Squared	0.948			
Adjusted R- Squared	0.930			
F – statistics	51.270			
Prob. F – statistics.	0.000			

Dependent Variable: PpB, Predictors: (Constant), Inc, Age, Edu, Gen, Occ.

Author's Field Survey, 2021

That is, there can be an increase in patronage (PpB) when there is an increase of ten units in age (Age) from 0.199 to 1.99 and also an increase in patronage for every additional score recorded in Gender (Gen) scale (or by 1.19 for an effect of 10 units Gen scale) provided that all other predictors are the same and increase PpB with a unit increase in score for every one unit of (Occ) to 3.63 assuming that all other variables in the model are held constant, an increase in PpB for one unit increase in Education (Edu) and Income (Inc) with 5.43 and 2.26 increment respectively as shown in the equation model 3.

$$(PpB) = 0.276 + 0.199(Age) + 0.119(Gen) + 0.363(Occ) + 0.543(Edu) + 0.226(Inc) + \varepsilon\ldots \text{ (Eq. 3)}$$

The study therefore concludes that at least one of (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) contribute in predicting and determining passengers' patronage. In this regards we reject null hypothesis and accept alternative hypothesis meaning that there is significant influence of socio-economic characteristics of passengers on patronage of the Taxi companies. Conclusively, the model implies that β_3Occ(0.363) and β_4Edu (0.543) are significant in predicting patronage of Bolt Taxi company with the following p – values 0.036 and 0.006. Therefore, there are some other factors which are not consider in the study than (Age), gender (Gen), income (Inc), occupation (Occ) and education (Edu) which could be for a further study.

It can therefore be concluded that socio-economic characteristics of passengers highly influenced the patronage of the Taxi companies by the passengers. The contribution of the independent socio-economic characteristics varies with the Taxi companies in predicting their patronages.

4. Conclusion and Recommendations

The empirical findings indicate that there is significant relationship between socio-economic characteristics and passengers' patronage of the Taxi Companies. The study further concluded that: In terms of patronage, Bolt Taxi Company is far better than the Uber and Oga taxis, as it recorded the maximum number of patronages of 122 passengers compare to that of 114 and 68 from Uber and Oga taxis respectively. Also, all the predictors of socio-economic characteristics in Bolt taxi are significant in explaining the level of patronage but significant level varies with both Uber and Oga taxis.

The consideration of the literature relating to taxi as a form of public transport as contributed immensely to the examination and investigation of the topic at hand. Hence this study aims to recommend among other thing, in order to foster high standard of service delivery to passenger/customer in the area of public transport in general and taxi service in particular. The recommendations are as follow:

Seeking for rules and regulations that guide routine operation and service delivery to the populace and high adherence to it implementation by government agencies.

Recruitment and selection process and procedures of drivers should be considered on merit with high level of scrutiny.

Sanction on free entry and exit of the Taxi Company into the industry, in order to guide against quack operators.

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