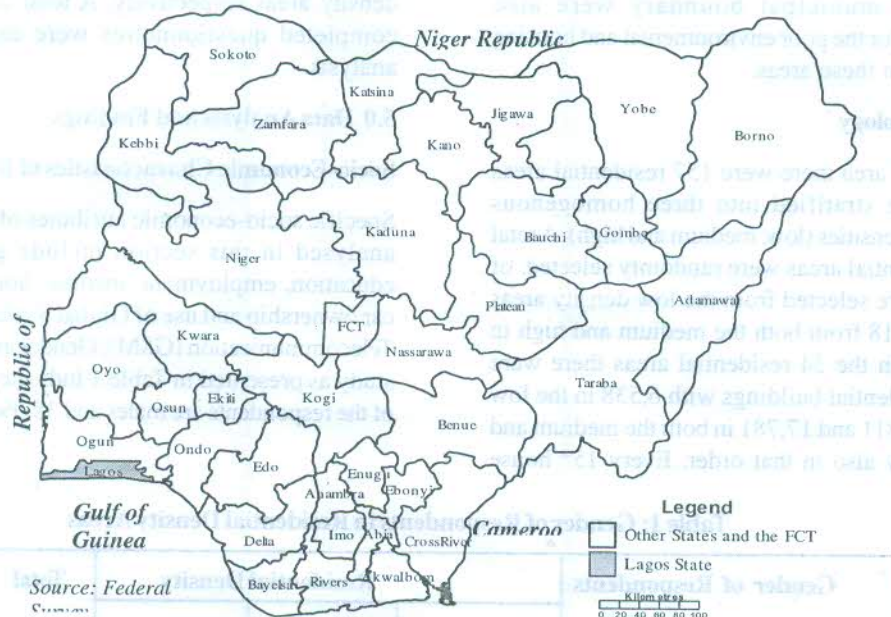


**Fig.1: Map of Nigeria Showing Lagos State**



### 3.1 Characteristics of Residential Areas in Lagos Metropolis

As far back as 1960, four residential districts were identified in Lagos. These are high grade, medium grade, lower medium grade and low grade residential districts (Mabogunje, 1968). By 1999, the Independent National Electoral Commission (INEC) clearly identified and classified the residential areas in Lagos in three homogenous densities which are low, medium and high density residential areas. This classification is also the official position of the Lagos State Government as stated in the operative Lagos State Town and Country Planning Edict, (1986); section 8(a-c). The nature and characteristics of these densities areas have been analysed by scholars (Sada, 1975, Ayeni, 1979, Olaleye, 2001 and Oduwaye, 2005). The residential areas are characterized by social, economic and physical patterns as explained below:

**3.2 Low Density Residential Areas:** These districts have the common characteristic of having well planned layouts. Most of the houses stand in the midst of well-kept lawns surrounded by neatly trimmed hedges. Except for blocks of flats, the

houses are generally single family houses. Such areas include East Marina and Victoria Island, Ikoyi, Apapa, Ogudu and Ikeja Government Reservation Area.

**3.3 Medium Density Residential Areas:** These three districts share the common characteristics of having been planned and laid out in the early 1960s to satisfy the need of the middle income households in the formal sector. They include residential areas like Surulere, Yaba/ Ebute-Metta, Ikeja and part of Lagos Island. Dominant housing types here are bungalows, and semi-detached two-storey buildings with density of housing generally higher than what obtains in the high grade, low density residential districts.

**3.4 High Density Residential Areas:** They are usually located in the central area of precolonial neighbourhoods and in the core areas occupied by the first group of immigrants. These districts include old Lagos, North Central Lagos, Mushin, Yaba East, Mushin, Somolu and Ajegunle-Araromi. Many of them now exist in the urban fringe such as Abule Egba, Ipaja, Alagbado and Ojokoro in the north and to the south eastern part are Ijanikin and Iba. They constitute the poorest grade of residential

areas as they were never planned. The absence of effective development control and general difficulty of extending the framework of basic amenities across the municipal boundary were also responsible for the poor environmental and housing conditions in these areas.

#### 4.0 Methodology

In the study area there were 157 residential areas which were stratified into three homogenous residential densities (low, medium and high). A total of 34 residential areas were randomly selected, of which 5 were selected from the low density areas and 11 and 18 from both the medium and high in that order. In the 34 residential areas there were 49,130 residential buildings with 6,538 in the low density, 24,811 and 17,781 in both the medium and high density also in that order. Every 15<sup>th</sup> house

was systematically selected in the low density areas; every 40<sup>th</sup> and every 20<sup>th</sup> house were systematically selected in the medium and high density areas respectively. A total of 1785 duly completed questionnaires were used for data analysis.

#### 5.0 Data Analysis and Findings

##### Socio-Economic Characteristics of Respondents

Specific socio-economic attributes of respondents analysed in this section include gender, age, education, employment, income, household size, car ownership and use of Global System of Mobile Telecommunication (GSM). Gender analysis in this study as presented in Table 1 indicated that 62.0% of the respondents are males and 38.0% are females.

Table 1: Gender of Respondents in Residential Density Areas

Gender of Respondents	Residential Density			Total
	Low Density	Medium Density	High Density	
Male	61.2%	62.9%	61.6%	61.9%
Female	38.8%	37.1%	38.4%	38.1%
Total	100.0%	100.0%	100.0%	100.0%

Source: Author's Field Survey, 2007

As summarized in Table 2, 70.8% of the respondents are not more than 40 years in age. Respondents within the age bracket of 41 and 50 years are 18.8% of the sample size. Similarly, 10.3% of the respondents are above 50 years. Further, the table indicates that respondents who are in their productive years (20-60 years) constitute 94.0% of

the sample size. Respondents below 20 years and above 60 years are 3.8% and 2.2% respectively. Age has been found to influence travel behaviour of urban residents in places such as Nagoya, Bangkok, Kuala Lumpur and Manila (Morikawa et al, 2001). The corresponding result in Lagos is subsequently discussed in the paper.



**Table 2: Age of Respondents in Residential Density Area**

Age of Respondents	Residential Density			Total
	Low Density	Medium Density	High Density	
<20 Yrs	4.5%	2.6%	4.3%	3.8%
20-30Yrs	37.8%	40.4%	34.9%	37.3%
31-40Yrs	21.5%	29.6%	33.7%	29.8%
41-50Yrs	19.9%	17.4%	19.3%	18.8%
51-60Yrs	12.5%	7.8%	6.3%	8.1%
>60Yrs	3.7%	2.1%	1.6%	2.2%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Author's Field Survey, 2007

Analysis of education status of respondents in Table 3 reveals that majority (97.6%) of respondents has formal education while those without formal education are only 2.4%. Further, 58.7% of the respondents have Bachelors degree and above. This tends to suggest that majority of the respondents are relatively educated.

**Table 3: Education Status of Respondents**

Education of Respondents	Residential Density			Total
	Low Density	Medium Density	High Density	
Informal	2.9%	2.3%	2.2%	2.4%
Primary	1.9%	3.0%	4.0%	3.2%
Secondary	9.3%	16.7%	23.1%	18.2%
Diploma	15.4%	17.9%	18.4%	17.6%
Bachelors	52.7%	46.9%	42.4%	46.0%
Postgraduate	17.8%	13.2%	9.9%	12.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Author's Field Survey, 2007

Table 4 shows the distribution of employment status of respondents and revealed that 70.6% are employed (44.7% formal and 25.9% informal), 7.3% are unemployed, and 18.3% are students while 3.9% are retired. This implies a relatively high level of employment among the respondents which is reflective of their relative high education.

**Table 4: Employment of Respondents in Residential Density Area**

Employment of Respondents	Residential Density			Total
	Low Density	Medium Density	High Density	
Formal	54.0%	42.9%	41.8%	44.7%
Informal	14.9%	27.5%	29.7%	25.9%
Unemployed	8.2%	7.3%	6.8%	7.3%
Student	16.8%	18.5%	18.8%	18.3%
Retired	6.1%	3.8%	2.9%	3.9%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Author's Field Survey, 2007

The relative public and private job opportunities in Lagos may also be responsible for the level of employment recorded among the respondents. Also, the proportion of students (18.3%) among the respondents could be explained by the opportunities for part-time studies provided by institution of higher learning in Lagos.

Within the context of prevailing income level in Lagos metropolis, three income groups may be

identified. These are low income (less than N20,000), medium income (N20,000 – N50,000) and high income (above N50,000). Analysis of the estimated monthly income of respondents as presented in Table 5 indicated that 65.9% of respondents were low income earners, 21.2% were middle income earners while 12.8% were high income earners. In general terms, the majority of the respondents are within the low-income group.

**Table 5: Income of Respondents in Residential Density Area**

Income of Respondents	Residential Density			Total
	Low Density	Medium Density	High Density	
Less than 20,000 (low income)	50.3%	65.5%	37.4%	65.9%
20,000-<50,000 (middle income)	25.3%	19.2%	20.8%	21.2%
>50,000 or more (high income)	24.5%	15.3%	5.9%	12.8%
<b>Total</b>	100.0%	100.0%	100.0%	100.0%

Source: Author's Field Survey, 2007

Table 6 categorized the household size of respondents into three (small, medium and large). Households with 4 members and below are regarded as "small sized" whereas the medium sized household" are 5 to 8 members. The "large sized household" group is any household with more than 8 members.

**Table 6: Household Size of Respondents in Residential Density Area**

Household Size	Residential Density			Total
	Low Density	Medium Density	High Density	
1-4	25.5%	40.6%	36.2%	35.3%
5-8	68.6%	54.0%	53.6%	57.0%
More than 8	5.9%	5.4%	10.2%	7.7%
<b>Total</b>	100.0%	100.0%	100.0%	100.0%

Source: Author's Field Survey, 2007

Table 6 indicates that respondents from small sized households are 35.4% of the total respondents. The respondents with medium sized households are 57.0% of the total households interviewed. Respondents from large sized households are 7.7% of the total sample size. This implies that medium sized household is prevalent in Lagos metropolis.

Households' car ownership pattern as presented in Table 7 indicates that 19.3% of the households have no car or any other type of vehicle. Respondents with just one vehicle accounted for 33.6% of the respondents while owners of two vehicles represented 29.0% of the sample size.



**Table 7: Car Ownership of Respondents in Residential Density Area**

Car Ownership of Respondents	Residential Density			Total
	Low Density	Medium Density	High Density	
None	6.4%	15.7%	27.7%	19.3%
1	21.8%	37.8%	35.9%	33.6%
2	33.2%	32.6%	24.7%	29.0%
3	26.1%	9.4%	7.5%	12.0%
Above 3	12.5%	4.5%	4.2%	6.0%
Total	100.0%	100.0%	100.0%	100.0%

Source: Author's Field Survey, 2007

Households with three vehicles and above are 18.0% of the respondents. In general low car ownership was found to be prevalent among households in Lagos metropolis. This also reflects the proportion of low income households in the city.

Respondents' access to GSM services is presented in Table 8 and shows that 2.9% do not have personal access to GSM services while 97.1% have personal

access to at least one GSM service. The analysis further reveals that 54.3% of the respondents have personal access to just one GSM service, 34.2% have two, and 7.7% have 3 while just 1.0% has more than three services. This suggests a very high accessibility of respondents to telecommunication facilities which is likely to have a significant implication for travel behaviour as will be revealed subsequently.

**Table 8: Use of GSM by Respondents in Residential Density Area**

Use of GSM	Residential Density			Total
	Low Density	Medium Density	High Density	
None	6.4%	15.7%	27.7%	19.3%
1	21.8%	37.8%	35.9%	33.6%
2	33.2%	32.6%	24.7%	29.0%
3	26.1%	9.4%	7.5%	12.0%
Above 3	12.5%	4.5%	4.2%	6.0%
Total	100.0%	100.0%	100.0%	100.0%

Source: Author's Field Survey, 2007

### Analysis of Variance (ANOVA) of Households' Socio-Economic Variables between the Residential Density Areas

This section is basically a test of homogeneity of each of the residential density areas. The major proposition in this paper is that there is a significant difference in the socio-economic characteristics of households which is capable of producing variation in households' travel behaviour between residential density areas in Lagos. Table 9 shows the ANOVA test of eight socio-economic variables (gender, age, education, employment, income, household size,

car ownership and use of GSM) between the residential density areas and revealed that two of the variables (gender,  $F = .183$  and employment,  $F = .343$ ) were not significant at  $p < 0.05$ . However, the other six variables (age,  $F = 3.054$ , education,  $F = 17.829$ , income,  $F = 34.932$ , household size,  $F = 8.701$  and car ownership,  $F = 88.770$  and Use of GSM,  $F = 14.912$ ) are significant at  $p < 0.05$ . This implies that each of the three residential density areas is a distinct socio-economic enclave, hence homogeneous, and thus provides a good basis for further analysis of the households' trip generation between the residential density areas.

**TABLE 10: ANALYSIS OF VARIANCE (ANOVA) OF HOUSEHOLDS' SOCIO-ECONOMIC VARIABLES BETWEEN THE RESIDENTIAL DENSITY AREAS**

HOUSEHOLD VARIABLE		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	.086	2	.043	.183	.833
	Within Groups	420.866	1782	.236		
	Total	420.952	1784			
Age	Between Groups	7.522	2	3.761	3.054	.047
	Within Groups	2194.593	1782	1.232		
	Total	2202.115	1784			
Education Status	Between Groups	46.560	2	23.280	17.829	.000
	Within Groups	2326.826	1782	1.306		
	Total	2373.386	1784			
Employment Status	Between Groups	1.091	2	.546	.343	.709
	Within Groups	2831.471	1782	1.589		
	Total	2832.562	1784			
Monthly Income	Between Groups	70.208	2	35.104	34.932	.000
	Within Groups	1790.791	1782	1.005		
	Total	1860.999	1784			



Household Size	Between Groups	17.942	2	8.971	8.701	.000
	Within Groups	1837.316	1782	1.031		
	Total	1855.258	1784			
Household Car Ownership	Between Groups	223.689	2	111.845	88.770	.000
	Within Groups	2245.196	1782	1.260		
	Total	2468.885	1784			
Use of GSM	Between Groups	15.246	2	7.623	14.912	.000
	Within Groups	910.954	1782	.511		
	Total	926.199	1784			

Source: Author's Field Survey, 2007

### 5.1 Trip Frequency of Respondents between Density Areas

Table 11 shows the distribution of respondents' trip frequency across density areas. The proportion of respondents who made an average of one trip is 51.1%. This figure is rose to 53.4% in high density and 54.2% in medium density areas respectively and reduces drastically to 41.5% in the low density areas. The variation is also very evident across density areas among respondents who made three trips. This group constitutes 20.2% in low density area and the figures for medium and high density areas are much lower, 9.6% and 9.8% respectively.

TABLE 11: Trip Frequency of Respondents between Density Areas

Trip Frequency	Residential Density			Total
	Low Density	Medium Density	High Density	
One	41.5%	54.2%	53.4%	51.1%
Two	32.7%	28.7%	32.5%	31.3%
Three	20.2%	9.6%	9.8%	11.9%
Above Three	5.6%	7.5%	4.3%	5.6%
Total	100.0%	100.0%	100.0%	100.0%
Mean Trip per Day	2.9	2.6	2.4	

Source: Author's Field Survey, 2007

Respondents in the low density areas have higher trip rate than those in the medium and high density areas. The mean trip rate per person per day was 2.9, 2.6 and 2.4 in the low, medium and high density areas respectively. This is possible due to the relative higher socio-economic status of the residents in the low density areas.

### 5.2 Analysis of Variance of Households' Trip Frequency between Density Areas

To confirm if the significant variation observed in the socio-economic variables of households

between the three residential density areas would reflect in their trip generation, the observed trip frequency of respondents between the residential density areas was subjected to One Way Analysis of Variance (ANOVA) test. The computed F value of 4.052 was found to be significant at  $p < 0.05$ . This implied that a significant difference existed in the households' trip generation between the three residential density areas.



**TABLE 12: ANALYSIS OF VARIANCE (ANOVA) OF HOUSEHOLDS' TRIP FREQUENCY BETWEEN THE RESIDENTIAL DENSITY AREAS**

HOUSEHOLD VARIABLE		Sum of Squares	Df	Mean Square	F	Sig.
Trip Frequency	Between Groups	11.921	2	5.960	4.052	.018
	Within Groups	2621.071	1782	1.471		
	Total	2632.992	1784			

The socio-economic variables that account for the observed variation in trip generation and their degree of influence in each of the residential density areas are not known and consequently need to be established. This is achieved through multiple regression analysis the results of which are subsequently discussed.

### 5.3 Multivariate Analysis of Factors that Influence Trip Generation of Households in the Residential Areas of Lagos

This section discusses the stepwise multiple linear regression analysis of the eight socio-economic (independent) variables of households against trip

frequency (dependent variable) in each of the three residential density areas. The results of this analysis revealed similarities and differences in the explanation of the household trip generation.

Table 13 shows the regression coefficients of trip frequency in the low density areas. The table shows that usage of GSM has the highest beta value of 0.180 at  $p < 0.05$ . to the variation in trip frequency of households in the low density areas. This was followed by income (.086), education (.085) and employment (-.077). This tends to suggest that the use of GSM by households in the low density areas significantly affects their trip generation more than any other factor.

**Table 13: Regression Model of Trip Frequency in the Low Density Residential Areas**

Model		Unstandardized Coefficients	Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	1.498	.369		4.062	.000
Education	.085	.056	.088	1.525	.128
Employment	-.077	.045	-.099	-1.709	.088
Income	.086	.063	.032	.471	.028
Usage of GSM	.180	.084	.124	2.148	.012

Similarly, the regression coefficients of trip frequency in the medium density areas as presented in table 14 indicates that income has the highest beta value of .365, followed by use of GSM (.306), car-ownership (.104) and education (-.108) at  $p < 0.05$ . The negative regression coefficient of -.108 for

education implies that respondents with lower education status make more trips than those with higher level of education. This indicates that income more than any other factor has significantly affects households' trip generation in the medium density areas.



**Table 14: Regression Model of Trip Frequency in the Medium Density Residential Areas**

Model	Unstandardized Coefficients		Standardized Coefficients	R <sup>2</sup>	T	Sig.
	B	Std. Error	Beta			
Constant	2.207	.202			10.936	.000
Income	.365	.041	.371	.392	8.847	.000
Use of GSM	.306	.026	.392	.528	11.903	.000
Car-Ownership	.104	.034	.128	.612	3.033	.003
Education	-.108	.044	-.083	.684	-2.442	.015

The regression coefficients model for the high density residential areas as presented in table 15 shows that income provides the highest contribution to the explanation of variations in trip frequency of households in the high density areas with a beta value of .229 at  $p < 0.05$ . This is followed by education (.223), household size (.130) and car-ownership (.047).

**Table 15: Regression Model of Trip Frequency in the High Density Residential Areas**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	1.511	.132		11.405	.000
Income	.229	.035	.350	11.382	.000
Education	.223	.020	.239	6.343	.000
Household Size	.130	.026	.183	4.941	.000
Car Ownership	.047	.017	.084	2.813	.005

This suggests that income as observed in the medium density areas is the most significant socioeconomic variable of households that affects households' trip generation in the high density areas.

## 6.0 Conclusion

This study has provided insights into the socio-economic and trip generation attributes of households in the different residential density areas of Lagos Metropolis. It has also established that significant variations existed in the socio-economic

attributes and trip generation of households between the residential density areas. Further, it reveals that the factors that provide explanation for the trip generation of households are both similar and different across residential density areas. In general, the use of GSM, income, education, employment car-ownership and household size were identified as socio-economic that affect trip generation of households in the residential density areas of Lagos.

Consequently, the theory of disaggregating urban households into homogenous socio-economic

groups for the purpose of understanding their travel behaviour was found to be useful. This study therefore concludes that planning decisions and policies directed at meeting the mobility needs in any society should not be generalized. Rather, it should be made to recognize and respond to the travel demand of different socio-economic groups in the society. It should also take cognizance of the identified socio-economic factors in the prediction of households' trip generation.

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## Urban Development Planning: Institutional Imperatives for effective Plan Implementation.

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### Abstract.

*It is becoming increasingly clear that the effective implementation of development plans, particularly urban development plans, depends critically on the quality of the institution responsible for such implementation. The institutional machinery provides the channel through which development plan issues and priorities are articulated, projects planned and implemented and inter-sector complementarity accomplished. Without an effective institutional machinery and process, development plan implementation is largely ineffective. And what use is a good development plan if not effectively implemented?!*

*While continuing to promote and advance the development planning process therefore, much greater attention and emphasis than hitherto needs to be given to the implementation element, considering that the quality and efficiency of the institutions responsible for planning, implementing and managing urban development and its infrastructures have decisive effects on their ensuing outcomes on the urban landscape and its services.*

*In developed countries, local/municipal governments fairly effectively provide the institutional machinery for development plan implementation, administration and management. In several developing countries however, local/municipal governments are still too weakly institutionalized to effectively handle development plan implementation. They do not currently possess the capacity to fulfill these responsibilities.*

*What alternative framework then is possible in the circumstance?*

*Creation of integrated Urban Development and Management Authorities that combine, integrate and systematize the separate responsibilities and efforts of the many agents/actors building the city under one executive head, may be a more effective framework and machinery. This would minimize, if not obviate the disparate, disjointed and distorting activities of the several actors operating in the city.*

*While not necessarily new, this proposition calls for renewed attention and consideration in the light of the serious growth and development management crisis that both the old and the burgeoning African cities find themselves today.*

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### Introduction.

All cities should have an effective Planning system based on national Laws, capable not only of making Plans on paper, but of controlling and guiding development on the Ground. Without this capacity, paper plans are useless.

(Hall, P & Pfeiffer.U:2000:333) A Consortium of Planning Consultants, after submitting the report of the proposals and recommendations of a Government commissioned **Urban Structure Planning/Re-Planning Project** to the responsible

Minister for Lands, Survey and Town Planning, received the following poser from the Minister .

The implementation of the proposals/ recommendations contained in your report would involve, in addition to my Ministry, the Ministries of Works, Environment, Health, Housing, Water Resources, and Commerce, among others. How are these Urban Structure Plan Proposals/ Recommendations going to be effectively implemented considering that each of these other Ministries and Agencies of Government have and



do control their own programmes and budgets and I as the Minister responsible for the Town Planning docket, do not have any authority or controls over them?.

In response, the Consultant Team Leader pontificated and expounded on the necessity for inter-Ministerial and inter-agency cooperation and co-ordination in the implementation process and how important it is for the government to set up an inter-Ministerial Committee to oversee the implementation of the plans.

The Minister was obviously unconvinced about the practical workability and efficacy of this response, knowing that inter-Ministerial or inter-agency coordination is a very problematic and uncomfortable process. It is well known that hardly does any Ministry or Agency of Government ever want to be coordinated by another, certainly not where the deployment of budgets are involved.

While substantial progress has been made over the past forty years or so in the sensitization, advocacy and promotion of the development planning process, much less progress and attention have been recorded on the **how** of the effective practical implementation of such plans.

As acknowledged by the **Nairobi Metro 2030 Plan** (Republic of Kenya 2008:44), **"in many instances, it is not the policies and plans that is a problem, but rather the capacity to implement"**. In the same vein, the "Master Plan for Metropolitan Lagos" (1980) had stressed that, **the Master Plan, "... no matter how logical or technically sound, will fail without adequate levels of enforcement (implementation) on the part of the government.. to (1) protect existing investments; and (2) to control future development patterns..."**

The plans, no matter how well crafted and ingenious they may be however, often tend to fail in their implementation. This is largely because the institutional machinery for implementing them may be largely weak, inadequately targeted and unfocused. Consequently, they often become susceptible to distortions by popular builders or even professional developers.

To be more effective and efficacious, plan implementation authority and responsibility require to be institutionally focused and targeted. Without such an effective institutional framework and machinery, development plan implementation is often ineffective.

This paper briefly reviews and reflects on this aspect of the urban development planning process and revisits the **Integrated Urban Development Authority** mode as potential institutional machinery for developing country cities. Such an institutional framework/machinery is envisaged to combine, integrate and systemitize under one executive authority, the separate responsibilities and efforts of the many actors and agencies building the city, thereby minimizing, if not obviating the disparate, disjointed and often-times distorting activities of the several actors operating in the city, as well as minimizing the necessity for and difficulties of inter-ministerial /inter-agency coordination.

#### **The Challenges of Urban Development Management in African Countries and the current Place of Local/Municipal Governments.**

A paramount challenge for the New Urban Millennium is the effective and sustainable development management of the rapidly expanding cities and towns in African countries. The Habitat Agenda (UNCHS-Habitat 1997:11) had underlined that, **"Urban settlements, properly planned and managed, hold the Promise for human development and the protection of the World's natural resources"**. It has further been underlined that for a city to be livable, productive and sustainable there must be a competent and responsible authority to plan for, manage, maintain and care for its complex infrastructure and their functionality. Without such a management structure, machinery and process, the infrastructure breaks down and the city disintegrates (The Guardian: 2008:14). It is now widely acknowledged that institutional weaknesses constitute serious impediments to the development of developing countries (McGill 1996:3). The seminal question, as had been posed by Beier (1976:377) remains – that of, whether cities in developing countries have the organizational strength and the skills necessary to enforce the right measures.

A common feature still facing almost every town and city in Africa is that of limited or weak institutional capacity for managing urban development in an efficient, effective and sustainable manner (AFDB 2005:13). Specific challenges facing these cities and towns in this regard still include:

Inappropriate legislative frameworks;

Inadequate administrative frameworks;



Restricted political mandates;

Weak management capacity, and

Poor relationships between the cities governments and their citizens. (ibid).

In developed countries, local/municipal governments fairly effectively provide the institutional machinery for development plan implementation, administration and management. In such countries, it is widely accepted that the municipal/local government level is central to the effective management, development and administration of urban services, within an "empowering" and "enabling" framework of support for local action (DPU, 2001:80)

While developing countries have borrowed and adopted several systems and models from the developed countries however, they have not yet been able to successfully emulate developed countries in empowering local/municipal levels of government towards development. This may be accounted for by the prevailing fragility of the developing countries institutions, including the governments themselves!

In several African countries local/municipal governments are still too weakly institutionalized to effectively cope with urban development plan implementation. With very few exceptions, they have generally proved outstandingly incapable of effectively taking on responsibility for and discharging most urban planning, development and management tasks.

They are consequently confined mainly to routine administration of some urban services and maintenance of some local infrastructure. Local/municipal government levels have generally proven to be unaccountable, under-resourced, weakly institutionalized and ineffective. They are generally unable to attract competent professionals and managers to effectively undertake the development and management of essential urban services. They have generally not been able to productively source and manage local revenue bases, nor have they been able to raise much of development finance.

Not many Local/Municipal Governments in the continent are institutionally strong enough to effectively assume such important urban planning, development and management functions as provision of housing, water supply, piped sewerage

systems, sanitation and environmental pollution control services, security, etc. They have in effect not yet demonstrated the capacity to manage the high standard infrastructure (Swilling 1994: 286) required for modern cities owns.

With a few possible exceptions such as in South Africa and in Zimbabwe (until the political and socio-economic crisis of the recent past), most local/municipal governments in Africa have largely proven to be developmentally inept, corrupt and grossly ineffective in the use of resources for the development of their cities, towns or local government areas.

It had been noted in the case of Cote d'Ivoire, for example, that urban Local governments have little or no control over municipal affairs as administrative centralization has weakened them in both procedure and substance (Cohen 1974:33). In most Anglophone countries, the British colonial Administrative maxim that **"the municipality is not a suitable organization for controlling the development of a town, especially so where the expenditure of government grants is involved"** (British Colonial Office, 1954:14) – seems to justifiably persist. This is a maxim said to have been borne out by British colonial administrative experience in India and the Far East. The track record of Local/Municipal Governments in most African countries has in the main proved this maxim too true. It had been noted for Ghana that:

"Local Government system has been ineffective in Ghana Years of neglect has led to its virtual disintegration and This has led, in particular, to the deterioration of urban Institutions and infrastructure to such an extent that Local governments cannot effectively deliver the most Basic services ..." (UNECA 1996:83).

Zambia's Third National Development PLAN (1979-1983: 380) underlined that the Local Authorities have no clearly defined role in the overall development planning and implementation process, noting that,

"The present structure of local administration at provincial, district and local authority levels, show to a large extent, overlapping responsibilities and

they hardly wield any influence on decision-making and project implementation. The control by Central Government through the former Ministry of Local Government and Housing in all budgetary, town-planning and administrative matters, the centralized



control of Land-use and tenure, and the over-riding authority of Local Government Service Commission in all staffing matters, are factors which further inhibit local initiatives”.

This view is reflective and representative of the situation of local/municipal governments in almost all African countries today.

Local/Municipal governments in their current state, are therefore generally not considered “**development institutions**” but rather as only “**by-laws authorities**”, charged only with the routine maintenance and administration of some urban services.

At this local level, hardly does any significant substantive development take place.

It is therefore evident that as currently constituted, local governments in African Countries, including urban local governments, cannot serve as effective institutional and administrative framework for effective urban development plan implementation and management in these developing countries. This situation is as earlier noted, largely because institutionally, they have neither adequate technical nor adequate financial resources nor management competence needed for efficient planning, development and management of the cities and towns, both of which may in part be attributed to some apparent self-fulfilling prophecy actions by the higher levels of government. This apparent incapacity of local/municipal government level tends to give the lie to the much vaunted advocacy for “subsidiarity” – i.e. bringing decision-making, management and governance of community’s or society’s affairs down to the lowest, most immediate and practical levels of where they actually take place and directly touch and affect the lives of ordinary citizens.

#### **Existing Institutional Framework for Urban Development management in African Countries.**

A feature of the institutional and administrative framework for urban development and management in most African countries currently is that the development and governance of cities and towns transcends the local government administration level. Much of the substantive urban development programmes and projects are currently undertaken at the higher governmental levels – Central, state or provincial. Much of the decisions on urban policy, urban planning and development as well as urban

management are made at the central/ state/provincial levels of government and implemented in the field (cities) through various central or state/provincial government Ministries, parastatal agencies or organs. This in itself results in inevitable functional fragmentation, overlaps and conflicts among the concerned Ministries and agencies. ). In this context, it was observed for Nigeria, for example that,

“Urban development function is distributed among three bodies – the

Planning Authority, the Urban Council, and the Health Authority.

Each is controlled by a separate State Ministry and each has separate regulations (in many Instances conflicting ones) to operate. The Planning Authority operates the Town and country Planning Law, the Municipal Council operates the Building Regulations and by-laws, and the Health Authority operates The health regulations. The three bodies are usually in conflict and constitute in themselves, a constraint on efficient urban development”, (Obialo (1977:9).

The high degree of fragmentation and overlapping responsibilities for urban development, management and service delivery among the disparate ministries and agencies breeds disorder and confusion in city development management, makes for inefficiency and ineffectiveness in the provision, delivery and maintenance of good quality urban public services and is certainly very wasteful of resources in funds and human resources. (Okpala, 1986:40)

Besides, when as currently, a central or state/provincial organ has responsibility for all the cities and towns within its territorial jurisdiction, its effectiveness in discharging those responsibilities are naturally bound to be significantly attenuated because its resources ( human, financial and technical) are stretched and dispersed over several cities and towns.

There is evidently a need for a better integrated, focused and targeted city-specific institutional entity for urban development plan implementation and management.

**Integrated Urban Development Authority – A Potent Institutional structure for effective urban development plan implementation and management of African cities.**



As had earlier been noted, substantial progress has been made in urban development planning in African countries over the past four decades. Several African countries have undertaken the planning/re-planning of their cities, towns and villages. No one now seriously doubts that the hitherto dominant patterns of largely uncontrolled and haphazard development and growth of cities and towns in many African countries are inefficient in terms of the existing and potential extra-ordinary demands they make on the resources to be used in providing access roads, water lines, sewerage disposal as well as in terms of energy and fuel consumption in an already built-up settlement. The efficiency, effectiveness and indeed wisdom of forward or advance planning for sustainable human settlements development and management can therefore now be considered axiomatic. Planning and its faithful and effective implementation are now generally acknowledged as indispensable means to ensure safety, comfort and healthy environment for the population.

The hard part now is on the effective implementation of such plans. To close this gap and strengthen the weak-link in development plan implementation, an **Integrated city-specific Urban Development Authority** model is being revisited as a potentially more effective institutional machinery for effective urban development plan implementation in African cities and towns than the extant local/municipal government framework.

Such an integrated Urban Development Authority framework is envisaged to combine the functions and responsibilities of several of the currently existing disparate agencies and actors into a sufficiently limited number of units with responsibility and authority for urban development management consolidated under one executive head. This would permit a more purposeful, effective and orderly planning, coordination, control and supervision of activities within the city plan. It would bring together groups of related functions, under one unit or department, thereby enabling duplicative efforts to be reduced and better resource allocations made. It is suggested that such institutional machinery be created for each major or growing city with a threshold urban population of about 1,000,000 and above.

The purpose of such **Integrated Urban Development Authorities** would be to deal more directly and effectively in each such city, not only

with the problems of urban physical deterioration (upgrading), re-planning, reconstruction and rehabilitation of substandard areas (slums) within their respective cities, but also to undertake holistic, proactive spatial planning or re-planning, development and management of their respective cities, including more emphatically addressing the issues of housing and civic facilities and services.

For such an Authority to be effective requires that it be vested with adequate legal powers to acquire land as required or needed and re-plan and re-allocate as appropriate for development as well as provide necessary site works and utility infrastructures such as for industrial parks, residential, cultural or civic land-use facilities/projects

They should as well be endowed with greater budgetary resources and/or authority to independently generate and harness such required resources. Indeed, experience shows that these kinds of institutions, where they have been adopted, have been able to generate and source a substantial proportion of their operating and capital investment funding and are able to sustain their operations than other categories of actors in the same contexts

It should also be ensured that such an Authority has adequate quality, numbers and mix of the various technical, administrative and managerial skills required to effectively and productively run such an institution. The importance of recruiting and deploying competent managers for such institutions cannot be overstressed. No amount of legislation, regulation or technique could be an adequate substitute for competent management of an institution dealing with such a complex issue as urban development management.

This **Integrated Urban Development Authority** machinery is expected to result in a stronger, more pointed, more purposeful and better directed policy and programme leadership of the city. Without such an integrated institutional set-up, few cities in Africa, and indeed in the developing countries in general, will be able to cope adequately with the urban problems of the coming decades – even if sufficient financial resources were available (Beier, G et al (1976: 392).

As had succinctly been underlined by Cheema (1987:149)



“the impact of programmes aimed at urban shelter, services and infrastructure depends upon the quality of the institutions responsible for planning and implementing these projects. The institutional machinery provides the channel through which the urban sector issues and priorities are articulated, projects are planned and implemented and Inter-sector complementarity is accomplished. Institutions serve as the most critical intervening factors through which economic resources and skills are utilized for, among other things, promoting sustainable urban development”.

The urban Development Authority institutional structure suggested above fits these challenges. Such an institutional machinery is therefore not only crucial in the circumstances of today's developing countries' urban development situation but indeed critical for effective and sustainable urban development management in the longer term future. There have indeed been strong suggestions in some countries for such institutions to replace local/municipal governments, if only for the time being.

It is of course acknowledged that such integrated urban development institutions are not necessarily new instruments in urban development planning and management. They have been used to some positive effects and impact in several developed and developing countries as the individual national urban situations demanded. Examples, even in Africa include the former Lagos Executive Development Board (LEDB 1928 – 1972) which reclaimed, upgraded and developed much of Lagos, and its successor and current institution – the Lagos State Development and Property Corporation (LSDPC) which continues in the same mode. In a number of other African countries and cities, including Ghana, Uganda, Gambia etc, semblance of such supra-local/municipal urban development authorities exist

On the flip side though, it is acknowledged that the mode of operations ascribed to this kind of institution may be less than participatory in the current “popular” or “politically correct” sense of the term. This is a valid issue to address. But considering the serious growth and development management crisis in which both old and burgeoning African cities find themselves today and considering the undeniably real and potential effectiveness and positive impact of this form of Urban Development and management approach,

intervention with it, (if appropriately politically and legally strengthened and supported), ought to be the way forward.

. Indeed, in Nigeria more recently, owing to the depressing incapability of local/municipal governments, it has been suggested that “**State Governments should set up city Authorities to manage the cities in their respective domain**” (The Guardian 2008:14).

### Conclusion.

The point of this contribution is to underline that more targeted and focused institutional machinery requires to be created and empowered for effective implementation of urban development plans in developing countries at this stage of their development.

The awareness creation and adoption of the urban development planning process has made great strides in the developing countries in the past almost half century, but not so the effective implementation of such plans. This lacuna is attributed to the incapacity of local/municipal level governments as the extant framework for such plan implementation, and to the limited effectiveness of the higher levels of government in implementing urban plans from these levels.

Considering the serious urban growth and development management crisis that both the old and the burgeoning new African cities find themselves today, it is important that **Integrated Urban Development Authorities** be created and empowered to serve as a more targeted and focused institutional machinery for urban development plan implementation and management in each major city in developing countries.

All said, the degree of effectiveness and impact of any such institution will ultimately depend on the strength of political support it receives from the Government, the quality, the quantum and mix of the technical skills and financial resources available to it and the overall authority and powers it is allowed to exercise. After all, development planning, implementation and management of the urban system can only be as effective as the administrative system supporting it and the political philosophy and willingness of the State in which it operates allows it to be.



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## GLOBAL CITIES AND THE QUANDARY OF MOBILITY: THE P3 PARADIGM AS PANACEA IN LAGOS MEGACITY.

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### Abstract

*This paper examines the historical processes of mega-cities in a global perspective, and then zeroes in on the mobility problem in Lagos megacity. It examines the critical urban transportation maladies and strategies in global megacities. It also examines the modus operandi of the Public-Private-Partnership (PPP or P3) scheme as a paradigm shift in the provision of urban infrastructural facilities. The example of the public-private-partnership between the Lagos State Government and Lekki Concession Company (LCC) in the provision of road infrastructural facilities in the Lekki-Epe region of Lagos mega city was anatomized. Due to the preliminary nature of the scheme, it was outside the scope of this paper to carry out an evaluation of the LCC project in terms of cost-benefit analysis or goal-achievement matrix, rather, an experiential analysis based on a survey research technique was done. The paper highlights the appropriateness of the involvement of a private agency in the provision of urban technical infrastructural facility and calls for a policy framework to replicate the LCC model in other parts of Lagos mega-city. It also makes an advocacy for the extension of the P3 scheme to other emergent mega-cities in Nigeria.*

### 1. INTRODUCTION

Lagos, by every conceivable standard, is a megacity. According to the census report of the Nigerian National Population Commission, Lagos had a population of nine million in 2006. However, an independent headcount conducted by the Lagos state government in 2006 returned a figure of eighteen million as the population of Lagos state. The population of Lagos is expected to hit the 24 million mark in 2015. As at now, the population of Lagos is growing ten times faster than that of New York and Los Angeles, and is more than the population of 32 African nations combined (Badejo, 2008).

One of the greatest challenges facing Lagos state in the transport sector is how to cater effectively

for the commuting needs of a rabble of commuters who throng Lagos roads on a daily basis. The overbearing pressure on land/road transport has necessitated the development of other means of intra-city transport, like the inland waterways and the rail rapid transport system. The large population of commuters has also necessitated an improvement on existing road transport infrastructure e. g. the introduction of the Bus Rapid Transit (BRT) scheme in 2008. The tremendously large nature of transportation problem in Lagos state has also warranted the involvement of the private sector in public transportation service delivery in the city. The private sector service providers are in partnership with the government in an arrangement known as the Public-Private-Partnership (PPP or P3).



The United Nations defined a mega-city as a continuous urbanized area with a population of at least 10 million people. The prefix 'mega' has an origin in Greek where it means something great or mighty. Rome was probably the first real mega-city in world history, with a population of about 1.5 million. It is claimed that Constantinople equaled ancient Rome in population during the middle ages, and Beijing did the same in the early modern period. About the year 1800 AD, London became indisputably the most populous city that had ever existed in the world. The population of London passed the one million mark by 1811 and had more than doubled by 1851. It had again doubled by 1901 when it reached over 4.5 million. By 1925, however, London had been overtaken by New York as the largest city in the world (Jackson, 1984). Up to 1950, there were only 8 cities in the world with population of 5 million and more (Montgomery et al, 2004). At that time, New York, London and Tokyo were the world's major mega-cities with population of 12.3 million, 8.7 million and 6.9 million respectively. On the basis of the 10 million population benchmark of the United Nations, there are some 28 mega-cities in the world, 21 of them in the developing countries. Out of the 21 mega-cities in the developing world, Asia has 14, Latin America 5, and Africa has 2, *id est*. Cairo and Lagos.

Lagos, as a mega-city, has serious transportation challenges. It has been estimated that the transport demand in metropolitan Lagos in the 1990s ranged from 7 to 10 million passenger trips daily. Over 95% of this are undertaken by road, primarily by car, bus and taxi (Mabogunje, 2008). The attempt by the Lagos state government to engage in the direct provision of public transport (mass transit) has always recorded minimal success. A study carried out by the Lagos State Ministry of Transport in 2008 showed that 800,000 vehicles ply Lagos roads on a daily basis, and out of this, 740,000 (92.50%) are private cars (Afolabi, 2008). The public transport sector that accounts for the remaining 7.5% is characterized by private ownership. The public transport vehicles are known by various names such as molue, danfo, or kabu-kabu. They have been complemented in recent years by commercial motorcycles known in local parlance as okada.

Commuters in Lagos spend 2-3 hours in journey time during peak periods (morning and evening peak hours), resulting to about 6 hours of lost man-hour

per day. A plethora of factors are responsible for the poor state of traffic in Lagos, and they include: the physical terrain of Lagos which is generally marshy and swampy; the lack of co-ordination between public and private agencies, and; the lack of proper planning, construction and maintenance of Federal, State and Local government roads in Lagos metropolis. Attempts by the Lagos State Government to mitigate traffic congestion include widening of roads, construction of fly-over bridges, clover interchanges, bridges, ring roads and expressways. However, despite these measures, the mega-city of Lagos is still characterized by snail-speed traffic.

The hopeless state of urban public transport service delivery and traffic management prompted the emergence of the Lagos Metropolitan Area Transport Authority (LAMATA) in 2002. Its primary mandate was to implement the Lagos Urban Transport Project (LUTP), a project financed by the World Bank, with counterpart funding by the Lagos State Government. LAMATA's primary responsibility was to plan, regulate and develop public transport infrastructure in Lagos. One major and notable urban transportation project that has been executed by LAMATA is the Bus Rapid Transit (BRT) scheme in Lagos.

The BRT is a bus-based transit system that minimizes journey time, and is reliable, comfortable and superior to regular bus services (Mobereola, 2008). It is operated on segregated lanes, and is characterized by high capacity vehicles and regularity of periodicity of arrival. The major utility of the BRT is that it has significantly reduced congestion by reducing the number of danfo and minibuses on Lagos roads.

## 2. MOBILITY STRATEGIES IN GLOBAL MEGACITIES

The term 'mega-city' was coined by Janice Perlman. It was derived from megalopolis, a Greek term for a very big town or urban boosterism. The first Greek megalopolis was founded by Epaminondas of Thebes. Its population at its zenith was about 40,000 in 370 B. C. and it was a concatenation of 40 local villages into a single conurbation (Chandler and Fox, 1974).

The first world class mega-city of antiquity was Athens. With a population of 300,000



in 432 B. C., it was undoubtedly the most populous Greek town, followed closely by Sparta (Kitto, 1961). However, Rome was the first giant city in world history. With a population of about 1.5 million, Rome was, by far, bigger than any city that existed before it (Ehrenberg, 1969). For over seventeen centuries, classical Rome held sway as the sole mega-city in the world until the emergence of Constantinople in the middle ages. Peking followed in the early modern period, and by 1800 AD, London became indisputably the greatest city that had ever existed in the world (Hall, 1997). Its population rose from 959,000 in 1801 to 2,363,000 in 1851, and then to 4,536,000 in 1901.

Unlike Rome, London did not enjoy its pre-eminence for long. It was soon dethroned by New York. In 1898 the population of New York was 3.4 million, but by 1940, it was 7.45 million. In population terms, New York was the third largest city in the world in 1875, second in 1900, and by 1925, it was the first and the most populous in the world (Hammack, 1982). However, in the 1950s, both London and New York were overtaken by other western cities like Los Angeles and some other mega-cities in the developing world (Table 1.0).

As cities grew and became mega-cities, urban transport systems multiplied and became diversified to meet the commuting and business needs of urban dwellers. It ranged from road transportation to railway systems and steamships, to communication systems like letter writing, telegraphy and telephony. Then in between the 1<sup>st</sup> and 2<sup>nd</sup> world war, air transportation emerged. The major innovation in the transport sector that accelerated commuting in the emergent mega-cities was the invention of high-speed trains, first in Japan in 1964, and then in Europe in the 1970s and 1980s.

Transportation in the mega-cities is the most singular problem confronting city planners all over the world. Various mega-cities have evolved

various strategies for combating transportation quagmire. In California mega-city, for example, a strategy called 'Transit Oriented Development' (TOD) was proposed by Calthorpe (1993). This involves developing suburban areas around public transport nodes, clustering some job and service opportunities at the nodes and with high-density single-family housing with street parking. This novel concept has been implemented successfully in San Jose, the capital city of Silicon Valley, and has also found expression in the general plan for Sacramento (Hall, 1997). In the Netherlands, land use planning and transportation planning have been integrated. The essence is to improve the quality of urban life by reducing car traffic in cities. This is achieved by concentrating residences, work areas and amenities so as to produce the shortest possible trip distances and promote the use of public transport.

With regards to the Lagos mega-city transportation problem, Mabogunje (2008) advocated 'Integrated Transportation Management Systems' (ITMS). According to him, 'ITMS is a process of enhancing mobility by making the use of existing facilities more effective through systematic articulating, monitoring, evaluating, prioritizing and implementing the operational management systems of different modes of transportation within mega-cities'. Effective transportation service is that which satisfies the needs of the commuter in terms of safety, convenience, economy and reliability. ITMS also ensure efficiency in transportation service delivery by meeting the transportation needs of commuters at an acceptable cost to users, taxpayers and the environment. It is the consensus of transport experts that efficiency and effectiveness are best achieved when mass-transit modes are in use in mega-cities. These mass-transit modes include high-capacity mass transit buses and rail rapid-transit systems.



Table 1.0: Some Mega-cities of the world.

Serial no.	Mega-city	Population (in millions)
1	Tokyo	26.4
2	Mexico city	18.1
3	Bombay	18.1
4	Sao Paulo	17.8
5	New York	16.6
6	Lagos	13.4
7	Los Angeles	13.1
8	Calcutta	12.9
9	Shanghai	12.9
10	Buenos Aires	12.6
11	Dhaka	12.3
12	Karachi	11.8
13	Delhi	11.7
14	Jakarta	11.0
15	Osaka	11.0
16	Metro manila	10.9
17	Beijing	10.8
18	Rio de Janeiro	10.6
19	Cairo	10.6

Source: UN-HABITAT (2003), New York, USA.

The efficacy of ITMS is predicated on the presence of such transport infrastructure and furniture as highways, pavements and other public transport facilities. In its most comprehensive form, the ITMS is composed of four component parts. These are: the physical dimension; the logistical dimension; the tariff dimension and; the contractual dimension. The physical dimension requires that transport planning should be more broad-based and should include considerations such as those of land use, inter-modal connectivity and methods for enhancing transit service (Mabogunje, 2008).

The logistical dimension is an embodiment of various traffic and transportation management strategies that have been employed to achieve integrated transport services in mega-cities in the developed countries. It includes such strategies as the Transportation Systems Management (TSM), The Congestion Management System (CSM), The Travel Demand Management (TDM), the Transportation Control Measures (TCMs), and the

Intelligent Transport Systems (ITS). TSM measures are familiar techniques (Okoko, 2006), but the CSM and TDM techniques require some exposition. The CSM is a strategy that is capable of monitoring and analyzing the magnitude of congestion on a multi-nodal transportation system while the TDM is a strategy that helps to reduce travel demand by modifying trip-making behavior of commuters. This is achieved by reducing the drive-alone auto-trips in mega-cities.

The tariff dimension is essentially a strategy to enhance mobility in the mega-city by ensuring adequate pricing and financing policy for the integrated transport system. The contractual dimension involves the co-ordination of the operations of the various agencies that provide transport services in the mega-city. This means that there must be an authority to co-ordinate such services as the mass-transit services, mini-buses, taxis, et cetera, in order to ensure an efficient



transport delivery in the mega-city. The transport service providers are expected to keep to their jurisdiction and respect the terms of their contract in service provision. In the case of Lagos mega-city, the Lagos Metropolitan Transport Authority (LAMATA) is well positioned to play the role of the coordinating body to ensure an efficient mobility and transport service delivery.

### 3. THE PUBLIC-PRIVATE-PARTNERSHIP (PPP or P3)

The most unyielding advocate of the P3 scheme is the United Nations. The P3 concept received its widest publicity during the second UN conference on Human Settlements (HABITAT II) in Istanbul in 1996. At that conference, the UN proclaimed in its Global Plan of Action, that: *'partnership...among all sectors within countries from public, private, voluntary and community based organizations, the corporate sector, non-governmental organizations and individuals are essential to the achievement of sustainable human settlement development...'*

The hallmark of P3 is to integrate and support development by forming alliances, pooling resources, sharing knowledge, contributing skills and capitalizing on the comparative advantages of collective actions. The cardinal objective of the P3 arrangement is to tap into the managerial and financial capability in the private sector of the economy and use them to sustain road infrastructure and other assets in the space economy of the nation. Agbola (1997) characterized P3 as 'a mechanism for ensuring that the comparative advantages of different actors in the development process are exploited in a mutually supportive way'. According to him, the P3 ensures that the strengths and weaknesses of the public, commercial, private and non-governmental sectors are harmonized so that maximum use is made of the strengths, while minimizing the potentials for the inefficiency caused by the weaknesses.

The implementation strategies for P3 include building capacities among all partner groups, activating participatory mechanisms, and the application of modern information technologies. The P3 is characterized by the sharing of investment, risk, responsibilities and reward between the partners. It involves the financing, design, construction, operation and maintenance

of public infrastructure and services (Taiwo, 2008). P3 takes various forms, and the roles and responsibilities of the partners vary from one project to the other. The commonest is the type where the government contributes part of the capital requirement, and the remaining part is contributed by the private partner. The other type of partnership is the Private Finance Initiative (PFI) where capital investment is made by the private sector, based on an agreement with the government to provide some services.

The emergence of the P3 concept is traceable to the inability of the government to grapple with every facet of development due to insufficiency of funds. The high points of P3 include proper utilization of private sector skills, greater transparency, innovations and operational efficiency. The demerit is the high cost involved in infrastructural service provision and the issue of cost-recovery. In spite of this, some P3 schemes have found application in the transport sector, especially in road development and maintenance. Some of the P3 schemes include:

- (i). Operate and Maintain (OM);
- (ii). Build - Operate - Transfer (BOT);
- (iii). Develop - Build - Operate - Transfer (DBOT);
- (iv). Build - Transfer - Operate (BTO);
- (v). Design - Build (DB);
- (vi). Build - Own - Operate - Sell (BOO);
- (vii). Build - Lease - Operate (BLO);
- (viii). Build - Lease - Transfer (BLT);
- (ix). Build - Transfer Immediately (BT);
- (x). Rehabilitate - Own - Operate (ROO);
- (xi). Lease - Maintain - Transfer (LMT);
- (xii). Maintain - Modernize - Operate - Own - Transfer (MMOOT).

Out of all the P3 schemes listed above, the commonest or the most widely used option is the Build-Operate-Transfer (BOT) option. Under the BOT arrangement, a private firm is given a franchise to finance, design, build and operate a facility and to charge user fees for a specified period of time. At the expiration of the concession period,



the ownership of the facility is transferred to the public sector or government agency. With regards to transportation infrastructure, the private firm is expected to provide the funding, build and own the road for a period of time after which the facility is transferred back to the government agency. The government is expected to provide an enabling environment and legislation for the execution of the terms of the partnership.

The BOT arrangement is now gaining currency in Nigeria in the road transport sector. Recently, the Federal Government of Nigeria awarded the reconstruction and modernization project of the Lagos – Ibadan expressway to a private consortium, Messrs Bi-Courtney, on a 25 year concession arrangement (The Punch Newspaper, 16<sup>th</sup> April, 2009, p. 2). Under this arrangement, the private entity is to develop, build, operate and transfer the road back to the Federal Government and recoup its investment through toll gates and other charges. The government agency in the partnership is the Federal Ministry of Works, Housing and Urban Development. The concessionaire is expected to provide 100% funding and upgrade the road to international standard. This international standard entails the provision of such facilities as: trailer parks; rest places, eateries and conveniences; overhead pedestrian bridges at designated places; towing services; improved safety and security of motorists; electronic traffic control and management; clinics and emergency ambulances; highway lighting, road signs and lane markings.

Daramola (2007) reports that, improvements in service quality and efficiency of highway operations have been achieved in countries where the P3 schemes have been adopted. The schemes have also ensured cost savings on highway maintenance. Daramola asserted further that 'to ensure successful P3 in highway development and maintenance, priority should be given to road links which serve relatively high demand areas'. In order for the private partners to make profit from the P3 scheme, appropriate mechanism must be put in place to ensure cost-recovery usually, through toll collection.

#### **4. A CASE IN POINT: LEKKI CONCESSION COMPANY (LCC), LAGOS**

The surfeit of mobility quandary in Lagos, in spite of such innovations like the BRT, is still colossal. This has given justification for the

involvement of private sectors in the provision of urban transportation service delivery. The population of motor vehicles in Lagos is estimated to be over one million, with a daily traffic of about 500,000 motor vehicles between Lagos mainland and Lagos Island. Urban roads in Lagos are characterized by crumbling sidewalks, badly potholed surfaces, non-functional traffic lights, poor signage and blocked or non-existent drainage systems. With road-based transportation accounting for approximately 95% of transportation in Lagos state, the need for the rectification of the afore-mentioned problems cannot be gain-said. This scenario warranted the involvement of a private partner in the provision of road infrastructural services in Lagos.

The private firm in this partnership is a company called Lekki Concession Company (LCC). The firm entered the P3 agreement with the Lagos State Government in 2006. The target of this P3 is to provide high quality road infrastructure and related services along the Lekki peninsular in Epe, Lagos. The specific mission of this P3 is to provide easier access and movement along the roads in Lekki peninsula; to improve or shorten journey times; to improve safety through better street lighting; improved law enforcement and reduction of traffic congestion; and to reduce the cost of motoring (LCC Newsletter, 2008).

The scope of the Lekki road concession agreement involves upgrading existing roads, and creating new road infrastructure in the Lekki-Epe axis. The roads are maintained by the LCC and are expected to be handed over to the Lagos State Government after 30 years. The specific rationale of this P3 scheme is to ensure greater ease and convenience in commuting by reducing significantly the encumbrances of traffic congestion and by promoting the level of traffic through-put in the Lekki-Epe transport corridor in Lagos. It also aims at ensuring shorter journey times, reduce wear and tear on motor vehicles, reduce fuel consumption by road users and reduce risk of 'go slow robbery' (<http://www.lcc.com.ng/project-info.asp>).

The P3 option that was adopted in the agreement is the Build-Operate-Transfer (BOT) option. The LCC is to build the roads and operate a concession agreement for a period of 30 years. At the expiration of the 30-year concession period, LCC is expected to transfer the ownership of the road infrastructure back to Lagos State Government.



The Lagos State Ministry of Physical Planning and Urban Development (MPP & UD) is the official representative of the Lagos State Government in this partnership. The partnership between the Lagos State Government and the LCC is aimed at actualizing what has been dubbed 'Lagos Infrastructure Project' (LIP). The LCC is primarily concerned with finding solutions to Lagos state's road infrastructure needs. It is engaged in road construction e. g. the Lekki-Epe expressway and in ensuring a positive behavioral change in the way urban roads are used and managed. It also ensures a strict adherence to relevant traffic safety and environmental regulations. For example, on the newly constructed project road, the Ozumba Mbadiwe Avenue in the Lekki – Epe axis, road markings are painted on the road surface and road signs are put in place to provide road users with guidance on how to use the road infrastructure safely and efficiently, and in accordance with relevant traffic regulations ((LCC Newsletter, 2008).

The P3 model road, Ozumba Mbadiwe Avenue, has been declared a 'zero tolerance zone' for street trading, street begging, littering, dumping of refuse and vagrancy, by the Lagos State Government. Moreover, the 'safety first' policy of the LCC has ensured a safe and responsible use of the road. For example, there are road markings to show where vehicular traffic can safely join the main road from an access road. There are also sign posts, warning motorists of the risk of drunk-driving, and the need to be thoroughly conversant with the Highway Code. The Exxon – Mobil bridge in Lekki has been completed, toll plazas have been constructed, road widening and bridge expansion have been done, drainage channels have been constructed, together with street lighting, and other street furniture items have been provided. Together with the Lagos State Traffic Management Authority, LCC has demolished illegal structures along the right of way of roads in its area of jurisdiction.

It is not within the purview of this paper to carry out an evaluation of the LCC project in terms of cost-benefit analysis or goal-achievement matrix, instead, an empirical analysis of the performance of the LCC in the P3 scheme was done in Victoria Island, Lagos, where the project is domiciled. Due to its large population, and coupled with its large vehicular and human traffic, data

collection was restricted to Ajoose-Adeogun ward/ neighbourhood in Victoria Island, Lagos. A fairly large sample size of 250 was computed from a sample size specification equation, and the sampling procedure was that of systematic sampling where every 5<sup>th</sup> house along the streets in the neighbourhood was chosen. In each house, only one family was selected and the respondents were the heads of household. The research instrument was the structured questionnaire.

The respondents in the survey were mainly the road users who reside or work in the study area. Space and strict relevancy will not permit a low down on the socio-economic status of the respondents here, but it suffices to state that they were all adults and were generally literate. The least level of education of the respondents was the ordinary level school certificate, and in terms of their calling and vocation, they included civil servants, engineers, bankers, lawyers, teachers, professional secretaries et cetera. Out of the 250 respondents, 185 (74%) were male and 65 (26%) were female. The questionnaire analysis showed that the road users were not satisfied with the state of the roads generally in the study area. It was the poor state of the roads in the study area that gave credence and justification for the involvement of a private partner in the improvement of roads. The analysis in Table 2 shows that about 20 % of the respondents stated that the roads were in good condition. About 40% said the roads were in average condition and 41% forthrightly declared that the roads were in bad condition in the study area. A summated rating scale, the Likert scale, was employed as an ordinal scale to investigate the responses using the positive-negative rating scale. The overall summated negative Likert score of -53 shows that the condition of roads in the study area is generally poor.



Table 2: Assessment of roads in the study area

<i>Assessment of roads</i>	<i>Frequency</i>	<i>Percent (%)</i>	<i>Cum. percent</i>	<i>Likert rating</i>	<i>Likert score</i>
Very good	16	6.40	6.40	+2	+32.00
Good	33	13.20	19.60	+1	+33.00
Average	98	39.20	58.80	0	0.00
Poor	88	35.20	94.00	-1	-88.00
Very poor	15	6.00	100.00	-2	-30.00
Total	250	100.00	100.00		-53.00

Source: Field survey, 2008.

The respondents were, however, impressed with the specific LCC project roads on the P3 scheme in the study area. As shown in Table 3, almost 60% of the respondents stated that the roads constructed and managed by LCC under the P3 scheme were in good condition. About 5% stated that the roads were averagely good and about 35%

of the respondents were of the opinion that the roads constructed by the LCC were not of acceptable standard. Again, the responses were subjected to a Likert scale analysis. The overall Likert score of +110.00 is indicative of the fact that the roads constructed by the LCC in the study area are in good condition.

Table 3: Assessment of the P3 project roads in the study area

<i>P3 road assessment</i>	<i>Frequency</i>	<i>Percent (%)</i>	<i>Cum. percent</i>	<i>Likert rating</i>	<i>Likert score</i>
Very good	81	32.40	32.40	+2	+162.00
Good	68	27.20	59.60	+1	+68.00
Average	13	5.20	64.80	0	0.00
Poor	56	22.40	87.20	-1	-56.00
Very poor	32	12.80	100.00	-2	-64.00
Total	250	100.00	100.00		+110.00

Source: Field survey, 2008.

The respondents also provided a wide range of suggestions on how to improve transportation and mobility generally in the study area, as a complement to the efforts of the LCC in the P3 scheme. These suggestions included the provision of alternative modes of transportation such as the urban rapid-rail system and urban inland waterways, the introduction of the mass transportation system, and a strict enforcement of traffic rules and regulations. The construction of more roads to decongest the existing ones,

construction of over head bridges, and the provision of drainage systems and road furniture were also suggested. Importantly, and very germane to this study, was the suggestion that more public-private partnership schemes should be embarked upon by the Lagos state government to ensure efficient traffic through-put along urban roads in Lagos mega-city. These are well thought-out suggestions and *ipso facto*, they constitute part of the recommendations of this study.



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## 5. CONCLUSION

This paper has pored over the appropriateness of the involvement of a private agency, the LCC, in the provision of urban technical infrastructural facility. The specific task of the LCC is to actualize the goal of the Lagos Infrastructure Project (LIP), by providing pioneering solutions to Lagos state's urban infrastructure needs. The most singular objective of LCC is to provide high quality road infrastructure and related services along the Lekki peninsular in Lagos. A major issue for consideration in any P3 arrangement is that of cost-recovery. For the LCC, tolling is the strategy adopted to recoup cost from the end-users of the road infrastructure. There is no gain-saying the fact that the P3 paradigm is a result-oriented strategy for efficient provision of public services. The involvement of the private sector in the provision of public infrastructure is a direct consequence of the incompetence on the part of the public sector to provide public goods and services. Though the LCC project is a newfangled project that is yet to be subjected to a rigorous scientific evaluation in Nigeria, the *prima facie* assessment is a success story.

This paper advocates the need for the scope and a real coverage of this novel project to be extended to other parts of Lagos mega-city. It is also expedient to involve more private firms in this P3 project to take charge of other parts of the megacity. This paper also calls for this unsullied P3 model in the urban transport sector to be replicated in other emergent mega-cities in Nigeria. Such cities like Port Harcourt, Kano and Ibadan should develop a policy framework to involve the private sector in the construction and management of urban roads.

To consolidate the gains of the P3 scheme, the Bus-Rapid-Transit (BRT) scheme of LAMATA must be re-oriented. In order to provide optimum services, reduce waiting time at bus stops, reduce long platoons of cars arising from languorous traffic at road intersections, there is need for articulated mass-transit buses, like the double-decker buses, to be introduced into the BRT fleet. These buses have the advantage of safety and a large capacity to carry many passengers at a time. They also promote efficient traffic management by reducing the number of smaller passenger vehicles on urban roads.

The P3 paradigm has been adopted and implemented with a notable and a laudable quantum of success in many developed countries, *exempli gratia*, Canada, and also in some developing countries like Botswana. These are examples that are worthy of emulation and of exemplification. In Nigeria, the LCC model is a *locus classicus* in public-private-partnership in road construction and management. It is worthy of replication in other parts of Lagos, nay, in other Nigerian mega-cities.

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