Determination of The Major Challenges of Compliance to Set Standards for Establishment of Petroleum Filling Stations in Anambra State

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ABSTRACT
Considering the high level of non-compliance of petroleum filling stations to the set standards by DPR, NESREA and the Anambra State Physical Planning Board/Local Authorities, this study emerged to determine the major challenges of compliance to set standards for establishment of petroleum filling stations by the petroleum filling stations in Anambra State. This study adopted the survey research design. This involved the use of well-structured questionnaire(s) to generate data by ascertaining first-hand information from the general public (non-professionals) and professionals in town planning and development control. 60 professionals and 400 households were sampled. The mean cut-off of 3.0 was calculated from the adopted 5-point likert scale to ascertain the major challenges. After harmonizing the opinion of the Professionals with those of the general public (Non-Professionals), the main challenges to compliance with set standards in the study area were found to include the following: Scarcity of land, Fear of relocation from original business site, Construction or expansion of roads after the petrol station has been constructed, Competition for business sites/spaces, High cost of land, Difficult land acquisition processes, Corruption of law enforcement agents, Improper urban planning, Ignorance of the after effects of activities by the developers, Failure of the Government to properly monitor activities of the filling stations and Godfathering and inequity in enforcing the set standards. The study thus recommended that: there should be strict monitoring of the development control practices and agencies by the government; Scaling down the requirements to be met by developers before land is acquired to aid easy relocation in the case of business expansion will aid compliance; review of standards that are inconsistent with the present day need of urban development will make the present day developers more compliant to these standards. Also ensuring free and fair judgment on all concerned regardless of who owns the petroleum filling station or who is involved (primacy to the rule of law), will restore discipline and enhance compliance.
KEYWORDS: *Challenges of compliance, set standards for establishment of petroleum filling stations.*
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1.0   INTRODUCTION

1.1   BACKGROUND TO THE STUDY

Development control, as defined by various authors, refers generally to the use of legal instruments designed to safeguard, regulate, conserve and disburse land or part thereof in the interest of the community. It is also defined as the regulation of use of land within an area (Thomas 2001; Bogoro and Nghalmi, 2014).

According to Mustapha (2015), the legal provisions and scope for development control practice in Nigeria stem from the Nigerian Urban and Regional Planning Act 1992 that allows for all tiers of government to exercise development control; other sources of control and enforcement include bye-laws, regulations, guidelines, official gazettes, circulars and the National Building Code/Development Control manual specifications for every proposed development. Other urban and regional planning tools were said to include any urban master plan, environmental impact statement and for an approval in most state Urban development agencies, the basic requirements for issuance of permits other than compliance to the land use plan are: availability of genuine land title document, complete set of designs to include site plan, architectural, structural, mechanical and electrical engineering designs,

which must be stamped and sealed by relevant professionals, submission of site analysis report and/or EIA, soil test report depending on the scale and magnitude of the proposed development.

For any type of developmental project, there is an agency or agencies in charge of the control. These agencies have their set standards upon which the specific developmental project can be assessed for compliance. For the Petroleum Filling Stations, the agencies whose standards should be complied with includes: DPR, NESREA and the Anambra State Physical Planning Board/Local Authorities. The non-compliance of petroleum filling stations to the set standards by these agencies, gave rise to the quest for the factors or challenges militating against the compliance to these standards, hence this study.

1.2   STATEMENT OF THE PROBLEM

The loss of lives and properties with their attendant negative socio-economic effects of non-compliance to development control standards in Anambra State cannot be over emphasized. The recent fire incident on Wednesday 15th of February 2017 at DMGS junction Onitsha with great cost being a clear example as the fire outbreak ravaged more than would have been if development control standards had been observed in such area. The situation in Onitsha is also evident in other major cities of Anambra State like Awka and Nnewi with constant population increase. On Friday the 24th of February 2017, a filling station sited adjacent to the tipper park in Eke Nibo Market in Awka South Local Government Area of Anambra State, due to lack of space had an offloading tanker filled with petrol got inflamed while trying to turn and enter the filling station. Thanks to God Almighty for the emergency intervention of the State Fire service, otherwise the entire village and houses around would have been consumed in the flame. It only resulted in the burnt tanker blocking the road for about two days before its removal. The attendant externality was delay in travel time by the road users due to the absence of a major alternative route. This issue of delay in travel time is now normal in our cities within and outside Anambra State as some of these filling stations are sited at locations with limited space such that for them to offload their products the traffic has to be delayed sometimes for hours. The indiscriminate sitting of filling stations and other commercial structures without considering the set standards is the order of the day as some of the enforcement agencies now take bribe for approvals and allow the filling stations to do whatever they wish leaving defaulters to carry on with their activities without any punishment. The implementation of development control standards is thus haphazardly done and only in some cases within the state.

Upon all the dangers of indiscriminate citing of petroleum filling stations without compliance to set standards and the loss of lives and properties evident in Anambra State, some of which were highlighted above, the earlier researchers were unable to tackle this issue within the state. A lot was done on the issue of compliance to set standards by petroleum filling stations, like the works of Murtala (2015); Thomas *et al* (2016); Odipe*et al* (2018); Lekwort*et al* (2013); Bogoro and Nghalmi (2014); Ngetich*et al* (2014); Ogundele (2011); and Kio-Lawson *et al,* (2016) to mention but a few. But they were unable to investigate the major challenges of compliance of these petroleum filling stations in Anambra State to the set standards by ANSPPB, NESREA and DPR being the main regulatory bodies for Petroleum Filling Station establishment within the state.

The big question is what are the major challenges to the full implementation of development control set standards by petroleum filling stations in Anambra State? The answer to this question will be of essence in making recommendations for the improvement of compliance.

1.3   AIM AND OBJECTIVES

The aim of this study is to determine the major challenges of compliance to set standards for establishment of petroleum filling stations by the petroleum filling stations in Anambra State.

To achieve this aim the following objectives were pursued:

1.   to collate the challenges to compliance highlighted by earlier researchers from other areas through literature review,

2.   to ascertain the opinion of the professionals and general public on what the challenges could be in Anambra State,

3.   to analyse for the main challenges to compliance to set standards by the Petroleum Filling Stations in Anambra State.

Hypothesis

Ho: There is no significant relationship between the responses of the professionals and the non-professional / general public on the main challenges to compliance of Petroleum Filling Stations to set standards.

2.0   LITERATURE REVIEW

Sequel to the aim and objectives of this study, relevant works of earlier researchers were reviewed.

Arimah and Adeagbo (2000) investigated the extent to which private residential development complies with urban development and planning regulations in the city of Ibadan, Nigeria. Findings indicate that while the average household is aware of the existence of planning regulations, this does not necessarily translate into compliance with these regulations. The outcome of their analyses further revealed that the most violated aspects of building regulations are plot coverage, setback stipulations, room size, provision of utilities, as well as a change of use from a wholly residential use to the incorporation of home-based enterprises. The factors explaining the relatively low levels of compliance with these regulations include: the institutional context of urban development and planning regulations; the administrative machinery for physical planning implementation which does not make for inter-agency coordination; poverty of the general populace; and the disdain and apathy of the public towards formal planning institutions in the city. They finally recommended reappraisal of urban development and planning regulations in Nigeria. This should entail modification of these regulations to take cognizance of present day realities and local conditions; review of existing land policy in order to remove the bottlenecks that hinder the smooth acquisition of land; improved inter-agency coordination among planning institutions; and public participation in the planning process.

Thomas (2001) in her paper also noted one of the challenges of Development Control to include that there is sometimes political interference in the work of the Development Control Authority and its Inspectors, thus hampering implementation of the standards.

Osibanjo (2004), in his paper titled "Problems and Prospects of Development Control" affirmed that problems of development control could arise in three major ways. First they could be a consequence of insufficient laws or inadequate rules and regulations, which leaves landowners or grantees some room to do with land as they wish. The second possibility is for there to be two different authorities attempting to regulate physical development of land within the same territory. Very easily, the two may be working at cross-purposes, enabling individual landowners or grantees to play one against the other. A third cause of development control problems could *arise* from the non-enforcement of relevant laws. Where, for instance, developers are routinely allowed to flout zoning regulations, it would make little or no difference that the regulations were there at all. The end result would be an apparently unplanned development. This problems surfaces mostly where certain persons are considered to be above the law. It is a problem that plagued Lagos for a long while, especially during the military era; but the FCT Abuja presents perhaps the classic example.

Aluko (2011) in his paper highlighted that In metropolitan Lagos, development control requires special skill as a result of the daily problems the authorities are confronted with, which is attributed to the sheer size and rate of increase of these settlements and the complexities of the tasks involved. The problem ranges from uncontrolled change of use of property, noncompliance with space standards and approved design, unguided and ineffective enforcement of building regulations. Other major factors that affect development control are Increasing Urban Poverty, Procedural delays, Inappropriate Legislation and access to land, Weak enforcement of the law, Inadequate information on land, Poor title registration and tenure security, in-fact he affirmed that despite this public notice against contravention of town planning laws, the regulatory authority has been less aggressive in enforcing its own laws and more often than it is professionally/ethically questionable for some of its actions in the course of its official duties. The enforcement of town planning laws seems to be at the whims and caprices of those saddled with such responsibility. Some of their actions border on high handiness, double standard, delay tactics and selective enforcement.

Ogundele, *et al* (2011), in their study findings also affirmed that despite the importance of development control measures in physical environmental balancing,series of factors still hinder its effectiveness, such as lack of planning tools and equipment, inadequate funding of planning agency, inadequacy of professionally qualified planners in FHA, ineffective development control procedure, lack of organized public enlightenment campaign, and above all, the act of bribery and corruption among development control officers among others. All these have resulted in the existence of series of illegal structures in Festac Town.

Fafioye and Sangodapo (2011) evaluated the level of Non-Compliance of Petroleum Sector to Environmental Regulatory Standards in Nigeria with filling stations in metropolitan Ibadan as a case study. They surveyed 11

Local Governments, sampling 2 petrol stations in each, whichare 22 petrol stations on the whole. They found that the level of compliance with the regulatory standards is very poor, due to corruption and weakness on the side of the enforcement agents, non-observance of protocols and communication gaps.

Kawu, Ahmed, and Usman (2012), studied the Elements and Practice of Urban Development Control in Zaria City, Nigeria. Through physical and social surveys, using instruments of historical and anthropological research like individual discussions, structured questionnaires, interviews, and Focused Group Discussions (FGDs), was able to establish that Pre-modern settlements in developing countries are growing, and like their modern counterparts, there has been increasing call for their proper management and safeguarding of their environment. Monitoring of development and redevelopment is usually a preferred vehicle for control in both old and new settlements which normally coexists alongside emerging metropolis. However, while new settlements met modern rules and regulations; pre-modern cities have long been in existence centuries before European colonizers brought western-style planning regulations to this part of the world. Effective control of developments in pre-modern sectors of emerging metropolis in Nigeria is usually challenged because it lacks suitable rules, guidelines and standards to established adherence or contraventions, this was in consonance with the affirmations in Mabogunje, 2005 & 2008; Kawu, 2005; Afon, 2007 & 2008; Kawu and Shaibu, 2008; and Siemens, 2011. The study also evaluated the standards in use at both settlements to establish the advantages of traditional measures and guidelines over and above modern regulations. Recommendations were on enforcing formal development control activities in traditional communities which were though founded on these rules but due to long neglect now appear alien to many of their inhabitants.

Lekwort*et al* (2013)*,* in their paper stated that in Nigeria, development control requires special skill as a result of the daily problems the authorities are confronted with, which is ascribed to the absolute size and rate of increase of these settlements and the difficulty of the tasks involved. The problem ranges from non-implementation of the Nigerian Urban and Regional Planning Law (Decree No 88 of 1992, amended as No 18 of 1999), inadequate funding of physical planning programs, lack of planning tools, political intervention and manipulation by government officials, lack of public enlightenment on physical planning programs, poor monitoring of planning schemes amongst others.

Bogoro and Nghalmi (2014), conducted an assessment of the knowledge, attitude and practices of development control in Mellennium Quarters Yelwa, Bauchi, Nigeria. They adopted the questionnaire survey and interview methods. They found that there is no significant correlation between the level of education and compliance with development control regulations. In their data presentation, over 75.5% of the household heads covered in the area have attained tertiary education, yet more than 90% of the developments in the area contravened one development control rule or the other. Finally the study suggests strict enforcement of development control regulations and concludes with some planning recommendations that would improve the quality of the living environment.

Ngetich, Opata and Mulongo (2014), used questionnaire survey method, to study the Effectiveness of Urban Development Control Instruments and Practices in Eldoret Municipality in Kenya. They found out that incoherency between the urban planners and the environmental managers, obsolete and irrational development planning laws, lack of adequate public participation and inadequate consultation of the neighbourhood associations in the processes of development control. Also bureaucracy, high cost of processing applications, elimination of inordinate delays, influence of human factors and sometimes disappearance of plans and records are amongst the main challenges to efficient development control practice.

Ngetich*et al* (2014), also affirmed that the challenges which confront almost all development control institutions in executing their mandates resolved around; political interference, niggardly available resources for urban development control, conflicting roles and duplication of efforts, lack of data or records, archaic laws, low fines or charges for defaulters, release of offenders by courts, lack of prosecutorial powers and lack of spatial plans for development control resulting in discretionary decision making. Other works that supported these findings on political challenges to development control are the works of Ogundele (2011) and Philip (2007).

Mustapha (2015) in his paper titled "The Role of Development Control in Housing Development in Nigeria" noted that the difficulties of enforcing development control for sustainable housing development in Nigeria, includes: Delays in approval processes, development without genuine land titles, professional negligence and mediocrity, recalcitrance on the part of the developers, the use of court injunction to prevent enforcement and improved economic base, slow pace of resettlement activities, work hazards, and a general abuse of mass housing objectives.

Gbemre (2016) in his write-up titled "The Observed Increase in the Spring-Up of Filling Stations Across Nigeria: Warri and Environs of Delta State as an Example." Stated that it is increasingly disturbing to observe how Nigerian cities and towns are daily getting congested with every nook and cranny filled with Petroleum Filling Stations. Even in residential areas, petrol stations are built on little available spaces, in-between residential buildings, raising real fears of environmental hazards and fire outbreaks. Delta State, specifically Warri and environs is a very good example of this ridiculous development where many filling stations cluster residential buildings, markets and corporate business areas. What is even appalling in all of these is the fact that the increasing spring up of Petroleum Filling Stations in cities/towns across the country, does not translate to availability of petroleum products. But as the deregulation of the downstream sector of the petroleum industry comes on full steam, it appears independent marketers, private individuals and even politicians have started building many filling stations across the country to take advantage of the policy. And they are doing so with complete disregard to regulations, city master plans and the natural environment.

Kio-Lawson *et al,* (2016) adopted questionnaire survey and personal interviews to study the Challenges of Development Control in Nigerian Capital Cities, with Some Selected Cities in the Niger Delta as a case study. In their findings on Physical Development completed in the last 2years in the sample Cities with approved/without approved building plan; they affirmed that for the planning authorities one of the major problems confronting them is the issue of the involvement of several agencies in the management of the cities without any co-ordination. For instance in the city of Port Harcourt while the Ministry of Urban Development had succeeded in demolishing over 4,000 make shift shops that had defaced the city between 2011 and 2013, more than 1,000 new ones had sprang up in the last twelve months having the approval of the local government councils. For the local government councils, it was another source of revenue generation. The local government councils believed that it is within their statutory power to manage the cities therefore they have the power to approve the erection of make-shift shops for residents.

A lot of studies have been done, with media reports on other countries within and outside Africa with findings in agreement with the works reviewed earlier. Some of these works done outside Nigeria includes:

Okpala (2009), wrote on "Regional Overview of the Status of Urban Planning and Planning Practice in Anglophone (Sub-Saharan) African Countries" and found that the most fundamental and critical challenge faced by urban areas in most developing countries, particularly in Anglophone (Sub-Saharan) African countries is the crippling weakness of institutions of urban development planning and management. Municipal authorities are usually too short of sufficient funds to meet their responsibilities. According to him, the fiscal management problems and financial shortfalls are compounded by the day. The institutional base and infrastructure for effective urban planning and urban development management is still largely weak and in a state of flux – urban local governments with weak and unviable revenue base, with inadequate technical and administrative skills and as yet limited political will and commitment on the part of the central and other higher level governments to let the local institutions and their instruments function. The fact remains however that: "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 complementarities are 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 findings of Cirolia (2014), who conducted a research on escaping the challenges of the city, using the proposed satellite town of Cape Town as a case study; and the review of Fox (2014), on the political economy of slums in Sub-Saharan Africa are in agreement with this findings of Okpala (2009).

AFDB (2005), noted that the majority (between 40% and 80%) of urban population in African towns and cities now lives in slums or in such unplanned and uncontrolled urban settlements, and many are constant victims of actual or threatened evictions by public authorities. Commentaries in some National Newspapers may serve to give a clearer impression of the urban environmental situation of African cities. "… true hope for African cities lies in starting afresh. Nairobi for example is certainly not a city. It is just one huge slum that is so badly mismanaged by people who know next to nothing about town planning (Muluka, 2002. "There is no doubt that Mombasa (Kenya) has in the last few years degenerated into anarchy as hawkers took over the sidewalks, matatus the streets and thugs and drug dealers the slums. The (Mombasa city) Council, devoid of any plan about how to reverse the madness and due to lack of money, has been relegated to a mere spectator" (Mutonya, 2002).

The findings of Goodfellow's comparison of the impacts of planning law in Rwanda and Uganda (Goodfellow, 14) and McAuslan's examination of the impacts of similar urban planning laws in the countries of East Africa

(McAuslan, 2013); shows that Land use regulation, also sometimes referred to as urban development regulations or controls, are rules which indicate how land in particular areas can be used and developed (Goodfellow, 2014). Land use regulations serve the purpose of restricting development in order to give effect to urban plans.

There has been substantial critique of land use regulations. Excessive regulation is seen to constrain development and create market inefficiencies. While regulations serve an important purpose, by their nature they serve to restrict development. They therefore often have negative impacts on the poor by driving up to cost of land and housing (this is buttressed by the works of Quigley and Rosenthal, 2005; Payne, 2001; World Bank, 2013). For example, limiting FAR and enforcing large minimum plot sizes limits densification and drives up the 'per unit' cost of land making it difficult to provide affordable housing (Bertaud, 2010; Berrisford, 2011; 2013).

The findings of Suzuki et al. (2010) cited by Cirolia and Berrisford (2017), shows that in Addis, the minimum plot size of 75 m2 means that 75 per cent of the population cannot afford the minimum standards. Similarly, restrictive zoning may prohibit mixed use spaces, thus limiting the opportunities for poor households to create home-based business. The implications are that the poor have had to "step outside the law to gain access to urban land and housing" (Fernandes, 2001). For example, in South Africa poor households informally subdivide their plots, creating backyard shacks which they rent out (Lund and Skinner, 2004). When land prices are very high and regulations cumbersome, this dynamic also affects middle-class households who may also opt for utilising informal systems or 'down raiding' housing intended for the poor (Roy 2009; Lwasa and Kadilo, 2010).

Cirolia and Berrisford (2017), in their paper titled "Negotiated planning: Diverse trajectories of implementation in Nairobi, Addis Ababa, and Harare" unraveled how plans are implemented in three African cities: Nairobi, Addis Ababa, and Harare. Three planning implementation instruments form the basis of the comparison across cities. These instruments aim to give effect to plans and include development regulation, infrastructure investment, and land allocation. In contrast to reading African planning efforts as a catalogue of failures, this analysis allows us to see the many actors and complex alliances and dissonances which play out through implementation. They propose the concept of 'negotiated planning' as a useful conceptual tool, arguing that the concept is useful for: its departure from normative assumptions about good or proper planning; unpacking the everyday nature of implementation; grounding and contextualising practices; and depathologizing the African city.

3.0   STUDY AREA

Anambra is a State in the southeastern Nigeria it forms boundaries with Delta State to the west, Imo State and Rivers State to the south, Enugu State to the east and Kogi State to the north. The study area lies between latitudes 6^00^1N and 6^05^1N and longitudes 7^00^1E and 7^08^1E.
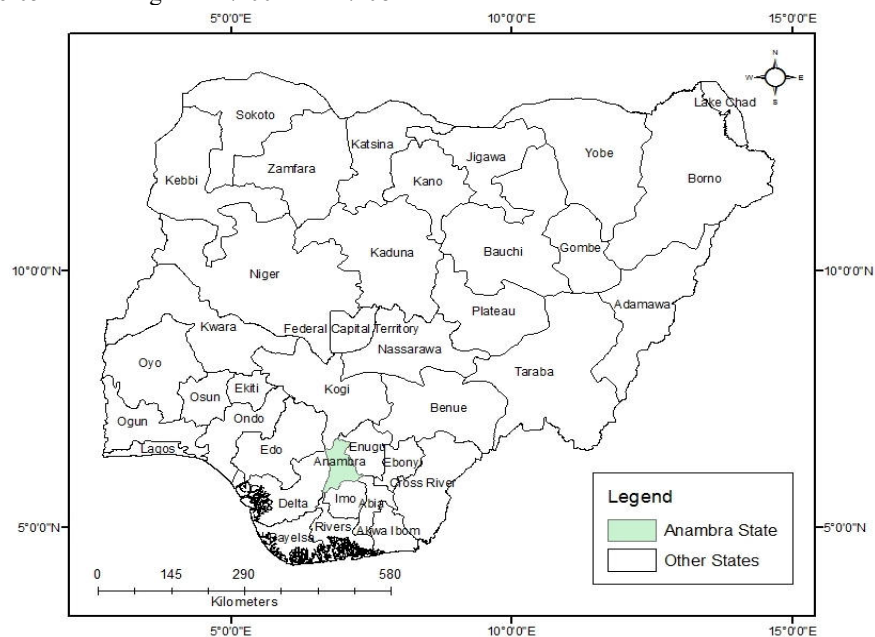

Fig 3.1: Map of Nigeria Showing Anambra State (Source: National Geohazards, Awka, 2017)

Anambra state leads other Nigerian states in the development of commerce and industry, with towns like Nnewi, Awka and Onitsha as the major centres for entrepreneurial activity. The state has the highest level of manpower resources and the lowest level of poverty incidence in the south-east geo-political zone (UN-HABITAT, 2009).

4.0   METHODOLOGY

This study adopted the survey research design. This involved the use of well-structured questionnaire(s) to generate data by ascertaining first-hand information from the general public (non-professionals) and professionals in town planning and development control on the subject matter.The population of the professionals saddled with the responsibility of developmental control as obtained from ANSPPB is 120 (35 Town Planners; 31 from Ministry of Lands, Physical Planning and Rural Development; 5 from ANSPPB and 29 Private Consultants) and for the benefit of accuracy and to avoid being myopic in views, the study purposively chose to sample 60 out of the 120 professionals.

For the general public (non-professionals) the total number of households for the state as projected to 2018 by NPC was utilized. The total number of households in the state as at 2018 is 1,217,290 and this was used as the target population of the general public / non-population. The number of households sampled per LGA were gotten by the percentage of the population of the LGA in the state and the subsequent sample population of the total households is 400.

5.0   DISCUSSION OF RESULTS/FINDINGS

To ascertain the main challenges to compliance to set standards by the Petroleum Filling Stations, the questionnaire was structured on a 5–point likert scale of strongly disagree (SD=1), disagree (D=2), no opinion (NO=3), agree (A=4) and strongly agree (SA=5). With the scales, the mean cut–off point was calculated thus:

$$\bar{x} = \frac{1+2+3+4+5}{5} = \frac{15}{5} = 3.0$$

Where $\bar{x}$ is the mean.

This implies that any responses whose mean is 3.0 and above will be regarded as agree, while less than 3.0 is disagree.

The table shows a summary of the major challenges of compliance of PFSs to set standards by DPR, ANSPPB and NESREA as collated from the responses of the non-professionals/ general public.

From table 1, it can be seen that from the views of the non-professionals that all the issues raised in the questionnaires are the major challenges why the Petroleum Filling Stations were not fully complying with standards set by the regulatory bodies.

The table 2 shows a summary of the major challenges of compliance of PFSs to set standards by DPR, ANSPPB and NESREA as collated from the responses of professionals sampled in the study area.

Table 1: Major Challenges to Compliance of Petrol Filling Stations to set Standards by ANSPPB, DPR and NESREA

Source: Author's Computation (2019).

S/N	Issues raised	Nonprofessionals										Mean	SDev
		SD (1)		D (2)		NO (3)		A (4)		SA (5)			
		F	%	F	%	F	%	F	%	F	%		
1.	Scarcity of land	39	10.5	92	24.7	24	6.4	129	34.6	89	23.9	3.3673	1.35468
2.	Population growth and urbanization	32	8.6	80	21.4	41	11.0	136	36.5	84	22.5	3.4290	1.28198
3.	No master plan for the State	21	5.6	76	20.4	46	12.3	116	31.1	114	30.6	3.6059	1.26477
4.	Fear of relocation from original business site	21	5.6	91	24.4	58	15.5	149	39.9	54	14.5	3.3324	1.15793
5.	Construction or expansion of roads after the petrol station has been constructed	23	6.2	63	16.9	36	9.7	136	36.5	115	30.8	3.6890	1.24210
6.	Competition for business sites / spaces	25	6.7	71	19.0	57	15.3	136	36.5	84	22.5	3.4906	1.21948
7	High cost of land	28	7.5	50	13.4	35	9.4	132	35.4	128	34.3	3.7560	1.26236
8	Difficult land acquisition processes	26	7.0	70	18.8	42	11.3	168	45.0	67	18.0	3.4826	1.18587
9	Corruption of law enforcement agents	7	1.9	37	9.9	45	12.1	153	41.0	131	35.1	3.9759	1.01968
10	Improper urban planning	9	2.4	32	8.6	34	9.1	193	51.7	105	28.2	3.9464	.96571
11	Ignorance of the after effects of activities by the developers	17	4.6	74	19.8	43	11.5	145	38.9	94	25.2	3.6032	1.19055
12	Failure of the Government to properly monitor activities of the filling stations	18	4.8	27	7.2	25	6.7	150	40.2	153	41.0	4.0536	1.09609
13	Godfathering and inequity in enforcing the set standards	23	6.2	55	14.7	51	13.7	147	39.4	97	26.0	3.6434	1.19089

Table 2: Challenges to Compliance of Petrol Filling Stations to set Standards by ANSPPB, DPR and NESREA.

Professionals

S/N	Issues raised	SD (1)		D (2)		NO (3)		A (4)		SA (5)		Mean	SDev
		F	%	F	%	F	%	F	%	F	%		
1.	Scarcity of land	0	0	17	28.8	0	0	28	47.5	14	23.7	3.6610	1.13882
2.	Population growth and urbanization	22	37.3	26	44.1	0	0	11	18.6	0	0	2.0000	1.06674
3.	No master plan for the State	15	25.4	41	69.5	0	0	3	5.1	0	0	1.8475	.66472
4.	Fear of relocation from original business site	0	0	14	23.7	0	0	24	40.7	21	35.6	3.8814	1.14598
5.	Construction or expansion of roads after the petrol station has been constructed	9	15.3	1	1.7	0	0	33	55.9	16	27.1	3.7797	1.30077
6.	Competition for business sites / spaces	1	1.7	8	13.6	0	0	46	78.0	4	6.8	3.7458	.84268
7	High cost of land	4	6.8	16	27.1	0	0	19	32.2	20	33.9	3.5932	1.37864
8	Difficult land acquisition processes	6	10.2	9	15.3	0	0	26	44.1	18	30.5	3.6949	1.32943
9	Corruption of law enforcement agents	12	20.3	13	22.0	0	0	21	35.6	11	18.6	3.1017	1.47034
10	Improper urban planning	6	10.2	19	32.2	0	0	20	33.9	14	23.7	3.2881	1.40259
11	Ignorance of the after effects of activities by the developers	2	3.4	21	35.6	0	0	26	44.1	10	16.9	3.3559	1.22844
12	Failure of the Government to properly monitor activities of the filling stations	14	23.7	1	1.7	0	0	32	54.2	12	20.3	3.7119	1.05129
13	Godfathering and inequity in enforcing the set standards	20	33.9	2	3.4	0	0	31	52.5	6	10.2	3.0169	1.53681

Source: Author's Computation (2019).

From table 2 it is clear that the professionals did not agree to all the issues raised as major challenges. They said that population growth and urbanization together with lack of master plan are not among the major reasons for low compliance levels to set standards.

Due to the closeness of the factor raised (variables) the major challenges were also selected through separating the principal components.

Hypothesis One: The Major Challenges to Compliance of Petrol Filling Stations to set Standards by ANSPPB, DPR and NESREA by the Professionals are significantly the same.

Statistical Tool Used: Principal Component Analysis

Reason for choice of Tool: Variables were categorized.

Degrees of Freedom: 78.

Decision Rule: Accept the null hypothesis if the loadings are the same.

Test Proper: The result (output) of test is presented in tables as shown.

Principal Components Analysis (PCA) of the Major Challenges to Compliance of Petrol Filling Stations to set Standards by ANSPPB, DPR and NESREA by the Professionals.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.909
Bartlett's Test of Sphericity	Approx. Chi-Square	1350.130
	df	78
	Sig.	.000

The table3 of KMO and Bartlett's tests present the preliminary tests necessary for a PCA to be carried out; for the KMO test, 0.50 is minimum while 0.6 and above is better while the Bartlett's test needs a value less than 0.05 for it to be significant. From the table, it can be seen that the minimum values were obtained (KMO is 0.909 and Bartlett's test is 0.000), and as such the test is due to be performed.

Table 4: Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.649	81.918	81.918	10.649	81.918	81.918
2	.876	6.736	88.654			
3	.414	3.184	91.838			
4	.351	2.699	94.538			
5	.244	1.880	96.418			
6	.136	1.043	97.461			
7	.090	.689	98.150			
8	.075	.575	98.724			
9	.055	.419	99.144			
10	.037	.281	99.425			
11	.036	.275	99.701			
12	.022	.169	99.870			
13	.017	.130	100.000			

Extraction Method: Principal Component Analysis.

The table 4 presents the total variance explained by the PCA; that is percentage of information the PCA was able to extract. From the table, it can be seen that 81.918 percent of information were extracted by the PCA of the responses of the professionals.

Table 6: Component Matrix[a]

	Component
	1
Corruption of law enforcement agents	.952
Failure of the Government to properly monitor activities of the filling stations	.948
Difficult land acquisition processes	.948
Scarcity of land	.945
High cost of land	.942
Fear of relocation from original business site	.937
Improper urban planning	.931
Ignorance of the after effects of activities by the developers	.925
Godfathering and inequity in enforcing the set standards	.920
Construction or expansion of roads after the petrol station has been constructed	.870
Population growth and urbanization	.846
No master plan for the State	.805
Competition for business sites / spaces	.774

Extraction Method: Principal Component Analysis.[a]

1 components extracted

The component matrix presents the loadings of the PCA, that is the various values of the issues which have been analyzed. The results will be based on the loadings from the component matrix because only one component was extracted, when there are two or more components extracted, there will be rotated components matrix. Loadings which are below 0.5 are to be ignored, the table shows that only one component was extracted, and all the 13 variables were highly loaded in the component. The order of the loadings is:

a.   Corruption of law enforcement agents

b.   Failure of the Government to properly monitor activities of the filling stations

c.   Difficult land acquisition processes

d.   Scarcity of land

e.   High cost of land

f.   Fear of relocation from original business site

g.   Improper urban planning

h.   Ignorance of the after effects of activities by the developers

i.   Godfathering and inequity in enforcing the set standards

j.   Construction or expansion of roads after the petrol station has been constructed

k.   Population growth and urbanization

l.   No master plan for the State

m.   Competition for business sites/spaces

Therefore, from the loadings, the professionals are of opinion that the major challenge to compliance to set standard by the petrol filing stations is Corruption of law enforcement agents, followed by other factor, while the least of the challenges is competition for business sites/spaces.

Decision and Conclusion: Since from the result as presented and explained, the loadings are not the same, we therefore reject the null hypothesis and accept the alternative hypothesis.

Hypothesis Two: The Major Challenges to Compliance of Petrol Filling Stations to set Standards by ANSPPB, DPR and NESREA by the Non-professionals are significantly the same.

Statistical Tool Used: Principal Component Analysis

Reason for choice of Tool: Variables were categorized.

Degrees of Freedom: 78.

Decision Rule: Accept the null hypothesis if the loadings are the same.

Test Proper: The result (output) of test is presented in tables as shown.

Principal Components Analysis (PCA) of the Major Challenges to Compliance of Petrol Filling Stations to set Standards by ANSPPB, DPR and NESREA by the Non–Professionals

Table 7: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.738
Bartlett's Test of Sphericity	Approx. Chi-Square	768.674
	df	78
	Sig.	.000

From the table7 of the KMO and Bartlett's test, it can be seen that the basic assumption for carrying out PCA was met; KMO has a value of 0.738 while the p – value of the Bartlett's test is 0.000, showing that it is significant.

Table 8: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.016	23.198	23.198	3.016	23.198	23.198	2.413	18.561	18.561
2	1.782	13.706	36.904	1.782	13.706	36.904	1.706	13.125	31.686
3	1.199	9.225	46.129	1.199	9.225	46.129	1.470	11.309	42.995
4	1.060	8.158	54.287	1.060	8.158	54.287	1.468	11.292	54.287
5	.925	7.117	61.403						
6	.828	6.370	67.773						
7	.790	6.080	73.853						
8	.708	5.448	79.301						
9	.657	5.052	84.353						
10	.622	4.784	89.137						
11	.518	3.988	93.124						
12	.485	3.734	96.858						
13	.408	3.142	100.000						

Extraction Method: Principal Component Analysis.

The table8 for the total variance explained shows that four components were extracted with the total variance explained being 54.287. it can be seen that the first component extracted 18.561 percent of the total variance, component two extracted a total of 13.125 percent of the overall variance, while the third and fourth components respectively extracted 11.309 percent and 11.292 percent of the total variance. The loadings of the first component have greater weights than those of the other components, irrespective of the values; the same applies to the loadings of the second component and other components.

Table 9: Rotated Component Matrix[a]

	Component			
	1	2	3	4
High cost of land	.723			
Scarcity of land	.673			
Difficult land acquisition processes	.657			
Population growth and urbanization	.626			
Competition for business sites / spaces	.518			
Improper urban planning		.798		
Corruption of law enforcement agents		.745		
No master plan for the State		.585		
Construction or expansion of roads after the petrol station has been constructed			.734	
Ignorance of the after effects of activities by the developers			.734	
Fear of relocation from original business site				
Godfathering and inequity in enforcing the set standards				.785
Failure of the Government to properly monitor activities of the filling stations				.770

Extraction Method: Principal Component Analysis.

 Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 5 iterations.

From the loadings as contained in the table, the first component had five loadings. These loadings can be seen as issues relating to **land**, they are:

a.   High cost of land

b.   Scarcity of land

c.   Difficult land acquisition processes

d.   Population growth and urbanization

e.   Competition for business sites/spaces

This implies that the non-professionals are of the view that the key challenge to compliance to set standards in siting filling stations is high cost of land, followed by the other factors as can be seen.

The second component had three loadings which centered on **lack of planning and enforcement**, they are:

a.   Improper urban planning

b.   Corruption of law enforcement agents

c.   No master plan for the State

The third component had two loadings which bother mainly on the **fear of risks involved in the business**, the variables are:

a.   Construction or expansion of roads after the petrol station has been constructed and

b.   Ignorance of the after effects of activities by the developers.

Finally, two variables were loaded in the last component, the variables represent **lack of proper monitoring and enforcement**, they are:

a.   Godfathering and inequity in enforcing the set standards and

b.   Failure of the Government to properly monitor activities of the filling stations.

Decision and Conclusion: Since from the result as resented and explained, the loadings are not the same, we therefore reject the null hypothesis and accept the alternative hypothesis.

It thus becomes crystal clear that from the views of the non-professionals all the issues raised in the questionnaires are the major challenges why the Petroleum Filling Stations are not fully complying with standards set by the regulatory bodies (ANSPPB, DPR and NESREA); that is, the following are the challenges to full compliance:

1.   Scarcity of land,

2.   Population growth and urbanization,

3.   No master plan for the State,

4.   Fear of relocation from original business site,

5.   Construction or expansion of roads after the petrol station has been constructed,

6.   Competition for business sites/spaces,

7.   High cost of land,

8.   Difficult land acquisition processes,

9.   Corruption of law enforcement agents,

10.   Improper urban planning,

11.   Ignorance of the after effects of activities by the developers,

12.   Failure of the Government to properly monitor activities of the filling stations and

13.   Godfatherism and inequity in enforcing the set standards.

For the professionals, they did not fully agree, as they said no to two issues raised that is population growth and urbanization together with no master plan for the State. That is, the professionals are suggesting that population growth and urbanization together with lack of master plan are not the reasons for low compliance levels to set standards.

5.1   CONCLUSION AND RECOMMENDATION

After harmonizing the opinion of the Professionals with those of the general public (Non-Professionals) the main challenges to compliance with set standards in the study area were found to include the following:

a. Scarcity of land,

b. Fear of relocation from original business site,

c. Construction or expansion of roads after the petrol station has been constructed,

d. Competition for business sites/spaces,

e. High cost of land,

f. Difficult land acquisition processes,

g. Corruption of law enforcement agents,

h. Improper urban planning,

i. Ignorance of the after effects of activities by the developers,

j. Failure of the Government to properly monitor activities of the filling stations and

k. Godfathering and inequity in enforcing the set standards.

In line with the findings of this study, the following recommendations were made:

1. There should be strict monitoring of the development control practices and agencies by the government.

2. Scaling down the requirements to be met by developers before land is acquired to aid easy relocation in the case of business expansion will aid compliance.

3. Review of standards that are inconsistent with the present day need of urban development will make the present day developers more compliant to these standards.

4. Ensuring free and fair judgment on all concerned regardless of who owns the filling station or who is involved (primacy to the rule of law), will restore discipline and enhance compliance.

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