IMPLEMENTATION OF THE NIGERIAN AUTOMOTIVE INDUSTRY DEVELOPMENT PLAN, 2014 ON THE DEVELOPMENT OF AUTOMOTIVE CLUSTER PARKS

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Abstract

The study evaluates the implementation of the Nigerian Automotive Industry Development Plan (NAIDP), 2014 on the development of automotive cluster parks by the National Automotive Design and Development Council (NADDC). The study sought specifically to find out the extent NADDC has facilitated the establishment of industrial automotive cluster parks in various states in Nigeria. The study adopted a descriptive survey research design. Primary and secondary data were employed, while frequency and percentage analyses were performed. The study found that the extent National Automotive Design Development Council has facilitated the establishment of industrial automotive cluster parks in the selected zones in Nigeria was low, when judged against the implementation checklist. It was therefore concluded that the implementation of NAIDP,2014 on the development of automotive cluster parks by NADDC was not effective. Based on the findings, it was recommended that NAIDP, 2014 should be reviewed with new and feasible timelines. Furthermore, the federal government should give incentives to private investors to encourage them to develop cluster parks in Nigeria.

Key Words: Automotive Policy, Nigerian Automotive Industry Development Plan 2014, Cluster-Parks, Implementation, Industrialisation

Introduction

Industrialisation is crucial for economic development. Industrialisation positively affects productivity, creates employment, enhances income-generating assets for the poor, and helps to diversify export (Iwuagwu, 2011). In Nigeria, the quest for industrialisation to facilitate economic development has remained a focal issue since independence (Ekpo, 2004; Adamu & Iyoha, 2015), and this is evident in various industrial policies and strategies initiated and implemented by successive regimes and administrations in Nigeria. In the quest to jump-start the process of industrialisation in Nigeria, the Government in early 2007 introduced a new industrial development policy anchored on Cluster Concept (Iwuagwu, 2011). This was embraced as a positive initiative because one of the enduring challenges of sustainable economic development in Nigeria is the state of its infrastructural development. Industrial clusters provide a platform for enterprises to share infrastructure, equipment, and knowledge. Industry cluster (IC) initiatives had led to the economic transformation of many Asian economies, including China, South Korea, and Singapore. The cluster policy adopted in 2007 is not new in Nigeria, with the existence of macro-initiatives like free trade zones, industrial parks, enterprise zones, and business incubators (Kalu, 2009, Iwuagwu, 2011). However, the macroeconomic conditions necessary for policy sustainability were not sufficient for cluster development (Ekesiobi, Kalu, & Nwokolo, 2018).

The cluster model of industrialisation has economic justification both in theory and in practice (Iammarino & McCann, 2006; Raimi, Shokunbi & Peluola, 2017). Hence the relevance of the cluster strategy as a preferred model of industrialisation, particularly for Nigeria. This is because, as other industrialisation efforts faltered, most clusters survived and thrived throughout the country (Oyelaran-Oyeyinka, 2004; Adebowale & Oyelaran-Oyeyinka, 2012). It is on this premise that the National Automotive Design and Development Council (NADDC), under the Federal Ministry of Industry, Trade and Investment, in its Nigerian Automotive Industry Development Plan (NAIDP) 2014 initiated 'Automotive Supplier Parks and Cluster' as a tool for industrial infrastructural development in the automotive industry. The plan stated that automotive supplier parks and clusters are where industries can

share infrastructure, resources, information, knowledge, and technical expertise. It will enhance competitiveness, learning, and technological innovation. It will also reduce production costs due to inadequate infrastructure and high logistics costs and attract investment in local content production (NAIDP, 2014).

National Automotive Design and Development Council (NADDC), in 2014 opened discussions with state governments and various industrial clusters to facilitate the establishment of automotive parks. The three existing auto-clusters in Nigeria, namely Lagos-Ogun-Oyo, Kaduna-Kano, and Enugu-Anambra, were expected to serve as established zones or candidate sites around which NADDC will strategically facilitate more investments by foreign original equipment manufacturers (OEMs), and the strategic global suppliers that are expected to accompany them into Nigeria.

The question which this study poses is: between 2014 and 2022, how far has NADDC progressed in establishing industrial auto-clusters in selected zones in Nigeria? And to what extent has NAIDP provided a structural plan for the establishment of the industrial automotive cluster parks in Nigeria? Answers to the questions is imperative in examining the effectiveness of the implementation of the NAIDP, which is expected to be fully realised within a period of ten years (2014 to 2024). In the search for probable answers, enormous literature was perused. However, a dearth of theoretical and empirical evidence was obvious. The obvious deficit is the central problem of this study. For forms, this study will address two salient questions:

a. to what extent has the National Automotive Design and Development Council (NADDC) facilitated the establishment of industrial automotive cluster parks in the selected zones in Nigeria? and

b. to what extent has the Nigerian Automotive Industry Development Plan, 2014 on the development of automotive cluster parks in the selected zones in Nigeria been implemented by the National Automotive Design and Development Council (NADDC)?

Literature Review
Conceptual Clarifications and Theoretical Framework
Industrial Cluster/Automotive Supplier Park

A cluster is defined as a group of things of the same type that grow or appear close together. The idea of the industrial cluster concept was pioneered by Alfred Marshall, an English economist, who propounded the cluster concept in 1910. He examined the industrial districts found in Europe and explained that the main reasons for the localisation of industries are physical conditions, such as climate and availability of raw materials (Abdin, 2018). These factors, according to Abdin (2018), resulted in benefits of externalities for firms within them such as technology availability, access to skilled labour, access to inputs, and marketing advantages. This formed the foundation of cluster discourse until the emergence of Micheal Porter who polished and popularised the cluster concept in modern economic literature (Raimi, Shokunbi & Peluola, 2017).

Automotive supplier parks /Industrial clusters are groups of automotive industries that are concentrated in one area so they can share resources, infrastructure, information, and technical know-how. This usually facilitates competitiveness, and enhances learning and technical innovation. This is further supported by Holwag, et al (2005), who opined that Automotive Industrial Clusters are groups of specialising and producing firms of a particular component or parts of a vehicle that must ideally be located within a confined industrial area setting or free trade zone but could have customers far beyond the national industrial boundary.

According to Porter (2003), a cluster is a geographically close-knit set of interrelated businesses and related institutions in a certain industry that are bound together by similarities and complementarities, and supported by competitive advantages or agglomeration economies. Porter's work inspired some academics (Schmitz, 1992; Oyelaran-Oyeyinka, 2004 &2005; Rosenfeld, 1997) to describe the cluster concept, which possesses essential characteristics like geographic concentration, the presence of actors (manufacturers, suppliers, users, researchers, policymakers and traders),

collaboration, competition and susceptibility to general cluster internal and external economies and diseconomies (Ekesiobi, Kalu & Nwokolo, 2018).

Abdin (2018) defined an industrial cluster as a concentration of homogeneous interlinked and interdependent manufacturing or service provider organisations in a particular location. United Nations Industrial Development Organisation (UNIDO) defines an industrial cluster as a concentration of micro, small, and medium enterprises in a given geographical location producing the same or a similar type of products or services and these enterprises face similar opportunities and threats. Thus, an industrial cluster is known by the name of the product being produced by principal firms and the place they are located in.

Rosenfeld (1997) defined an industrial cluster as a geographically bounded concentration of similar, related, or complementary businesses, with active channels for business transactions, communications, and dialogue, that share specialised infrastructure, labour markets, and services, and that are faced with common opportunities and threats." In line with the Nigerian Automotive Industry Development Plan (NAIDP), automotive supplier parks and clusters are where industries can share infrastructure, resources, information, knowledge, and technical expertise. This will enhance competitiveness, enhance learning, and technical innovation. This, according to NAIDP, will reduce production costs due to inadequate infrastructure and high logistics costs, and attract investment in local content production.

Automotive Industry

According to the Japanese International Cooperation Agency (2015), the automotive industry comprises a wide range of companies and organisations involved in the design, development, manufacturing, marketing, and selling of motor vehicles, some of them are called automakers. It is one of the world's most important economic sectors in terms of revenue. The automotive industry does not include industries dedicated to the maintenance of automobiles following delivery to the end-user, such as automobile repair shops and motor fuel filling stations (Adedeji, 2015). The term automotive was created from Greek autos (self), and Latin motives (of motion) to represent any form of self-powered vehicle. This term was proposed by Elmer Sperry.

In the world of finance, the automotive industry represents the financial performance and economic variables related to automobile manufacturers, dealerships, original equipment manufacturers, and auto maintenance companies (PWC, 2015). The U.S. Department of Labour recognises the manufacture, sales, servicing, and production of spare parts as part of the automobile industry. This industry includes the wholesale and retail sub-sectors dealing with the sales of vehicles and spare parts.

National Automotive Industrial Development Plan and Industrial Cluster Initiative

Economists agreed that concentrating industries and supporting services in a specific geographical area spurs industrial development and is a key driver of regional and national economic growth. Industrial clusters (ICs) have triggered continuous economic growth across several countries in the last few decades, mainly through industrial technology and financial ICs. By encouraging manufacturers, suppliers, service providers, and firms to co-locate, share common facilities, and build well-developed ICs, these and other industries can reduce overhead costs through economies of scale and raise innovation, productivity, and global competitiveness. This necessitated the idea of automotive industrial parks/clusters as contained in the National Automotive Industry Development Plan, 2014.

The Nigerian Automotive Industry Development Plan, 2014 was prepared by National Automotive Council (NAC) and gazetted in January 2014. The automotive sector was identified as a strategic industry group in the Nigerian Industrial Revolution Plan due to its large domestic market, labour-intensive characteristics, strong industrial linkages, existing installed base, and export potential into the Economic Community of West African States (ECOWAS). National Automotive Industry Development Plan aims to curtail Nigeria's almost total dependence on imports and to meet a significant

proportion of its demand through domestic production. NAIDP was prepared in collaboration with the Federal Ministry of Industry, Trade and Investment and the Federal Ministry of Science and Technology with the cooperation of the Presidential Advisory Committee. A consultant from the Republic of South Africa, who was engaged in the implementation of automotive industry development policy, participated in the committee and advised National Automotive Council (presently known as the National Automotive Design and Development Council) for the preparation of NAIDP. The Nigerian Automotive Industry Development Plan (NAIDP), a main part of the new national automotive industry policy, has five key components which are: Automotive Supplier Parks and Clusters, Skills Development, Standardisation, Investment Promotion, and Market development.

National Automotive Industry Development Plan articulated that the adoption of automotive supplier parks and clusters is key to providing the industrial infrastructure needed by the automotive industry (NAIDP, 2014). Following the successful experience of economies such as Australia, South Africa, and Brazil, NAIDP raised tariffs for vehicles but allowed rebates for those OEMs that produce vehicles in Nigeria. The tariff mechanism is to incentivise local production of vehicles and components.

The development of industrial cities, parks, and clusters to ensure the availability of basic infrastructure, relied on the industrial cluster concept development strategy provided in Nigeria's Industrial Development Strategy, 2007. Its implementation was to be based almost entirely on public-private-partnership (PPP). Thus, the government was expected to identify and locate clusters and provide infrastructures and incentives, while the private sector would locate businesses within the clusters. They would also undertake the physical structures, while banks and other financial institutions would provide the necessary capital both for the construction of structures and for business development. Table 1 presents a checklist for the implementation of the cluster concept, as released by the government.

Table 1: Cluster Concept-Implementation Checklist

S/No	Item	Quantity	To Do
1.	Acquire land (including C of O)	Depending on the size required	Government (Federal and State)
2.	Build structures		Private Sector
3.	Power Supply	50/100MW	IPP/Private Sector/Government
4.	Link roads (including internal network)		Several Governments
5.	Rail link	Depending on the size required	Government
6.	Water Supply		Government
7.	Sewage treatment		Government
8.	Training School/Vocational Centres	1 in every cluster	Government/Private Sector
9.	Airport		Government
10.	Telecommunication	Private sector	
11.	Long term loan		Government (indirect), Private sector
12.	Incentives	Numerous	Government
13.	Mentoring		Government/Multilateral Agencies/Private sector
14.	Microfinance Credit for business development		Banks/Multilateral Agencies
15.	Third-Party linkages (Multilateral Agencies)	Skills technology	Government (National Planning Commission)
16.	Establish Businesses	Numerous	Private sector
17	Security		Government/Private
18.	Baseline Studies (Assessment)	Consultancy Advisory	Government.

Source: Federal Ministry of Commerce and Industry, Nigeria's Industrial Development Strategy: The Cluster Concept (2007), Abuja: Federal Ministry of Commerce and Industry

The Nigerian Automotive Design and Development Council (NADDC) through the 2014 Automotive Policy mapped out three zones for the establishment of automotive industrial parks in Nigeria. They are Kano-Kaduna Zone (Kano State and Kaduna State), Enugu – Anambra Zone and Lagos-Ogun-Osun Zone. The States are expected to streamline land acquisition, but the cost of land will be borne by Nigerian Automotive Design and Development Council. It should be noted that NAIDP is a national plan implemented by the Federal Government. Therefore, States do not play a leading role in the execution, except in the provision of sites for the establishment of parks. Moreover, under the National Automotive Policy Implementation Plan of March 2014, the following are conditions for the establishment of automotive supplier parks and clusters:

i.   The park must be covering areas from 10-50 square kilometres (1,000-5,000 ha) near a major city.

ii.   There must be an independent power unit up to 20-100MW, high-volume gas lines, water source, and sewage treatment plant.

iii.   There must internal road network and major road links to the highways, rail links, nearness to a sea port where possible, and an airport within a 100km radius.

iv.   There must be high-end communication cables, administrative and business centre, and security.

v.   There must be Universities/Polytechnics located within a 200km radius.

Empirical Review

As stated earlier, Automotive supplier parks /Industrial clusters are groups of industries that are concentrated in one area so they can share resources, infrastructure, information, and technical know-how. This usually facilitates competitiveness, and enhances learning and technical innovation. In the effort to diversify the economy of Nigeria, the cluster concept is one area that presents a potential lifeline (Ekesiobi, Kalu & Nwokolo, 2018). Meanwhile, as other industrialisation efforts faltered in the past, clusters seem to have survived and thrived throughout the country. It was against this background that the Federal Government, in early 2007 adopted the Cluster Concept as Nigeria's new Industrial Development Strategy set to operate on five planks namely, Free Trade Zones, Industrial Parks, Industrial Clusters, Enterprise Zones, and Incubators. The cluster concept according to Iwuagwu (2011) is not entirely a change in policy as Nigeria had in the past promoted the setting up of industrial estates, but a refocusing of the country's implementation strategy to achieve rapid take-off and survival of industrial/productive enterprises.

The adoption of the cluster concept as part of the strategic approach to Nigeria's industrial development policy gained considerable attention in the seven-point agenda, Vision 20:2020, and transformation agenda (Ekesiobi, Kalu & Nwokolo, 2018). Furthermore, in 2014 the Nigeria Industrial Revolution Plan (NIRP) was introduced to streamline and provide a comprehensive, strategic, and integrated roadmap to industrialisation anchored (in part) on cluster development. The NIRP aims to develop industrial cities, parks, and clusters while focusing on making hard infrastructure available within these industrial zones. Even though there are some existing cluster locations in Nigeria which include Nnewi (automotive), Otigba (technology), Onitsha (plastics), and Kano (leather) among others, there is a need to examine the Industrial Cluster/ Industrial Infrastructure plan as one of the objectives of National Automotive Industry Development Plan (NAIDP) of the federal government of Nigeria.

Oigiagbe, Olusoji, & Owoyemi (2012) theoretically appraised technological innovation diffusion in the Nigerian automobile industry and put forward that industrial cluster development will increase the engineering, technological, and innovation capability within the Nigerian automobile industry. In line with this, Oluwale, Ilori, & Oyebisi (2013) adopted analysis of variance (ANOVA) to determine the effect of clustering on innovation in the auto-mechanic industry in southwestern Nigeria.

The study involved 13 auto-mechanic villages (clusters) comprising of 237 master mechanics located within Lagos and Ogun states and 145 master mechanics in Osun State stand-alone mechanic

workshops. From the observations, cluster mechanics recorded higher frequencies of modifications and improved working techniques than the stand-alone mechanic workshops. Also, there were significant differences between the standalone and clustered firms in terms of innovations during the study period.

Looking at studies on cluster and inter/intra-firm collaboration, Oyelaran-Oyeyinka (2004) investigated networks and linkages in African manufacturing clusters, with a special focus on industrial clusters in Lagos and Nnewi, Nigeria. The study examined characteristics of clustering in the forms and intensity of inter-firm linkages, including the formation of trade networks, and the role of business associations. The observations from this comparative study indicate a significant level of collaboration among firms in sharing utilities and modest forms of subcontracting non-core activities among Lagos firms, but this is less so at Nnewi.

Oyelaran-Oyeyinka (2005) appraised the dynamics of inter-firm collaboration of two footwear clusters (Aba and Onitsha) in South-eastern Nigeria in response to local and global competition. The study found that collaboration among enterprises grew over time, induced largely by competitive forces. The findings bear some resemblance with Adebowale & Oyelaran-Oyeyinka (2012) who studied the determinants of productivity and inter-firm collaboration in Nigerian clusters, but separately identified education of owners, the skill of workers, and past productivity records as key determinants of firm-level productivity and collaboration. Delgado, Porter, and Stern (2012) evaluated the role of regional cluster composition in the economic performance of industries, clusters, and regions in America. The multivariate analysis shows strong evidence for cluster-driven agglomeration and industries participating in a cluster register higher employment growth, as well as higher growth of wages, number of establishments, and patenting.

From the analyses of the previous studies, it is clear that the clustering of industries usually results in innovation and higher productivity and provides economies of scale, especially where large numbers of buyers are available at a cluster (Abdin, 2018). Enterprises which are located in a cluster usually enjoy higher productivity, the economics of scale, patronage from buyers, availability of raw material, skilled labour, knowledge about new technology, shared visions, competitive tendency, innovation, collective bargaining, and collective action (Abdin, 2018). The review indicated a gap in the literature on the specifics of the subject of this study. Thus, this study would provide an analysis of the extent the NAIDP, 2014 has provided for cluster concept strategic implementation plan and what the NADDC has done in establishing automotive industrial clusters and parks in the various states. It is consequent on this that subsequent studies would now assess the implementation and effects of the NAIDP on automotive innovation and its industrial development in Nigeria.

Theoretical Framework

This study adopted structural functionalism theory as the theoretical framework. Structural functionalism is a theoretical perspective that focuses on the functions performed in society by social structures such as institutions, hierarchies, and norms. It is a macro theory that examines how all structures or institutions in society work together. Within this theory, function refers to the extent to which a given activity promotes or interferes with the maintenance of a system. Emile Durkheim, the proponent of this theory, asserted that individual behaviour was not the same as collective behaviour and that studying collective behaviour was quite different from studying an individual's actions. Durkheim called the communal beliefs, morals, and attitudes of society the collective conscience. A clear understanding of the basic assumptions of structural functionalism theory as well as the theory itself will enable us to understand the complex, yet unavoidable relationships and interactions which exist in the automotive industry and its environment in Nigeria.

It also presents a clearer picture of the activities, functions, and interactions that take place among the players in the automotive industry and the institutional environment they operate. These

activities, amongst other things, comprise the implementation/ development of an automotive industrial cluster as a cardinal objective of a National Automotive Industry Development Plan (NAIDP) 2014, being implemented by an institution of the government, the National Automotive Design and Development Council (NADDC) of Nigeria. It also brings to the picture, the activities of the regulatory institution in the automotive industry- National Automotive Design and Development Council. One of the reasons for applying structural-functionalism to the study is that it examines structures and functions they perform in a system

Methodology

The research design adopted the mixed method, which is a mix of descriptive research design that relies on the use of a survey that utilized a questionnaire, interview, inspection of sites, and analysis of documentary evidence to collect data. The collected data were mainly from primary sources, generated through the use of a semi-structured questionnaire administered to purposively selected members of the National Automotive Design and Development Council. Specifically, a purposeful sampling technique was used to select the senior administrative staff of the Councils who were available and willing to answer the questionnaire and participate in the interview. The rationale for the choice of this category of senior administrative staff was predicated on the nature of their capacity and hierarchy in the implementation of the NAIDP. The questionnaire and interview were derived from the key themes in the implementation of the NAIDP concerning the development of cluster parks.

The data from the responses were collated and analysed using percentages and mean ratings. The findings were gauged with secondary data which were already existing as documentary data, and findings from the inspection visit to the candidate sites. The last reading was to establish emerging themes and to place relevant quotes within the different identified themes. The findings were presented and discussed. Primarily, the NAIDP 2014 document, as well as publications from the National Automotive Design and Development Council (NADDC) were reviewed, in addition to the findings made by the researcher on his visit to the sites. Other sources, like newspaper publications, academic journals, and seminar papers on the subject matter were also obtained and reviewed using simple deductive reasoning based on the relevance and validity of the data collected. The data were further analysed using thematic analysis.

Results and Discussions

Based on the data collected and analysed, the two research questions formulated to guide the study were answered. The summary of the analysis of the collected data is as presented below:

Research Question 1: to what extent has the National Automotive Design and Development Council (NADDC) facilitated the establishment of industrial automotive cluster parks in the selected zones in Nigeria?

Table 2: Analysis of Responses on the Extent National Automotive Design and Development Council (NADDC) has facilitated the establishment of industrial automotive cluster parks in the selected zones in Nigeria?

S/No	Statement Questions	Response Options									
		Yes		No		If **Yes**, to what extent					
						Large Extent		Moderate Extent		Low Extent	
		freq.	%	freq.	%	freq.	%	freq.	%	freq.	%
1.	Has the NADDC facilitated the acquisition of lands (including C of O) for automotive cluster parks in the selected zones in Nigeria?	07	33	14	64	01	14	03	43	03	43
2.	Has the NADDC facilitated the provision of power supply for the automotive cluster parks in various states in Nigeria?	05	24	16	76	00	00	01	20	04	80
3.	Has the NADDC facilitated the provision of link roads (including an internal network) of the automotive cluster parks in the selected zones Nigeria?	14	64	07	33	00	00	06	43	08	57
4.	Has the NADDC facilitated the provision of water supply in the automotive cluster parks in the selected zones in Nigeria?	01	05	20	95	00	00	00	00	01	100
5.	Has the NADDC facilitated the provision of sewage treatment in the automotive cluster parks in the selected in Nigeria?	00	00	21	100	00	00	00	00	00	00
6.	Has the NADDC facilitated the provision of training school/vocational centres in the automotive cluster parks in the selected zones in Nigeria?	00	00	21	100	00	00	00	00	00	00
7.	Has the NADDC facilitated the provision of long-term loans and microfinance credits for the development of businesses in the automotive cluster parks in the selected zones in Nigeria?	03	14	18	86	00	00	01	33	02	67
8.	Has the NADDC facilitated the provision of incentives for the development of businesses in the automotive cluster parks in the selected zones in Nigeria?	14	64	07	33	01	07	05	36	08	57

No.	Question										
9.	Has the NADDC facilitated the provision of mentoring for the development of businesses in the automotive cluster parks in the selected zones in Nigeria?	05	24	16	76	01	20	03	60	01	20
10.	Has the NADDC facilitated third - party linkages (Multilateral Agencies) in the development of businesses in the automotive cluster parks in the selected zones in Nigeria?	07	33	14	64	00	00	02	29	05	71
11.	Has the NADDC facilitated the provision of security in the automotive cluster parks in the selected zones in Nigeria?	01	05	20	95	00	00	00	00	01	100
12.	Has the NADDC facilitated the baseline studies (Assessment s) for the development of automotive cluster parks in the selected zones in Nigeria?	05	24	16	76	00	00	02	40	03	60
	Total Cumulative Average	**05**	**24**	**16**	**76**	**00**	**00**	**2**	**40**	**3**	**60**

Source: Field Survey, (2022)

Research question one (1) addressed the extent National Automotive Council (NADDC) had facilitated the establishment of industrial automotive cluster parks in the selected zones in Nigeria. The analysis of the responses from the questionnaire which examined what NADDC has done in establishing automotive cluster parks, using the checklist for cluster concept development implementation as developed by the Federal Ministry of Commerce and Industry for Nigeria's Industrial Development Strategy (2007). The analysis as shown in Table 2 indicated that in all the 12 questions asked, only two (2) questions, that is questions three (3) and eight (8) have the majority of respondents indicating yes to the questions. The questions were, has the NADDC facilitated the provision of link roads (including an internal network) of the automotive cluster parks in the selected zones in Nigeria, and has the NADDC facilitated the provision of incentives for the development of businesses in the automotive cluster parks in the selected zones in Nigeria? However, when asked to indicate the extent of the facilitation on questions three (3) and eight (8), both showed 57% (representing an absolute majority) of the respondents indicated yes to the questions, indicating to a low extent.

On the remaining ten (10) questions, the analysis in Table 2 indicated that all of them posted an absolute majority of the respondents indicated no to the questions with the least percentage to be 64% in two questions. Furthermore, on the question of whether has NADDC facilitated the provision of sewage treatment in the automotive cluster parks in various states in Nigeria, and has the NADDC facilitated the provision of training school/vocational centres in the automotive cluster parks in various states in Nigeria? Had a perfect score of 100% on the no response. This indicated probably that all the respondents unanimously agreed that nothing of such has been done in any of the possible automotive cluster parks in any part of the country. The total cumulative average analysis of the responses for all the questions pointed out that only 24% of the responses on average accounted for the yes response received in all, and 76% of it accounted for the no response received. The analysis of the extent from the number of respondents that indicated yes to the questions showed that no percentage was recorded for a large extent, 40% was recorded for a moderate extent, and 60% was recorded for a low extent.

Research Question 2: To what extent has the Nigerian Automotive Industry Development Plan, 2014 been implemented by the National Automotive Design and Development Council (NADDC) in the development of industrial automotive cluster parks in the selected zones in Nigeria?

Table 3: Analysis of Responses on Implementation of the Nigerian Automotive Industry Development Plan, 2014 by the National Automotive Design and Development Council (NADDC) for the development of industrial automotive cluster parks in the selected zones in Nigeria.

Statement Questions	Total Cumulative Average of Response Options					
	Yes		No		STD	Mean Score
	freq.	%	*freq.*	%		
Has the Nigerian Automotive Industry Development Plan, 2014 been implemented by the National Automotive Design and Development Council (NADDC) in the development of industrial automotive cluster parks in the selected zones in Nigeria	05	24	16	76	**5.5**	**1.23**

Source: Field Survey (2022)

Table 4: Analysis of Responses on the extent of implementation of the Nigerian Automotive Industry Development Plan, 2014 by the National Automotive Design and Development Council (NADDC) in the development of industrial automotive cluster parks in various states in Nigeria.

Statement Questions	Total Cumulative Average of Response Options						Mean Score
	Large Extent		Moderate Extent		Low Extent		
	freq.	%	*freq.*	%	*freq.*	%	
To what extent has the Nigerian Automotive Industry Development Plan, 2014 been implemented by the National Automotive Design and Development Council (NADDC) in the development of industrial automotive cluster parks in the selected zones in Nigeria	**00**	**00**	2	40	3	60	0.38

Source: Field Survey (2022)

Research question two (2) addressed the extent the Nigerian Automotive Industry Development Plan, 2014 has been implemented by the National Automotive Design and Development Council (NADDC) in the development of industrial automotive cluster parks in the selected zones in Nigeria. The cumulative analysis as shown in Table 2 were further analysed in Table 3 and 4 using standard deviation and mean score to answer the research. The analysis in Table 3 indicated that 76% of the respondents, representing the majority responded no to the questions, and the mean score generated from the distribution of the responses is 1.23, which is below the grand mean of 1.5 taken for the decision rule. The standard deviation further showed that there is a wide dispersion to the mean, affirming that a great number of the respondents were on one side of the response option, in this case, the yes response option.

Also, the cumulative analysis of those who responded to the yes option where further analysed to determine the extent of their agreement with the response using a Likert scale of large extent, moderate extent, and low extent. The analysis as presented in Table 4 showed that 60% of the respondents that responded to the yes option indicated that the extent of agreement is low. The mean score is calculated using the total number of respondents as the number of data points. The result from the mean is 0.38 which is less than 1, and far below the grand mean. Thus, the extent of implementation is taken to be low, in this case very low looking at the mean score.

From the analysis, and in addressing the first research question, it would be stated that the extent National Automotive Design and Development Council (NADDC) has facilitated the establishment of industrial automotive cluster parks in the selected zones in Nigeria is low. This is because the percentage of non-agreement to the questions is absolutely high, judging by the percentage analysis of the responses. This, invariably, addresses the second research question which implies that the implementation of the Nigerian Automotive Industry Development Plan (NAIDP), 2014 on 'Automotive Supplier Parks and Cluster' as a tool for industrial infrastructural development in the automotive industry is not adequate and effective.

Documentary evidence as seen in the final report of Japan International Cooperation Agency (JICA), of the "data collection survey on the automotive sector in the Federal Republic of Nigeria" in 2015, corroborated these findings. It indicated efforts have been made by the "government" in mapping out zones for the development of the automotive cluster parks, and its development; that is Lagos-Ogun-Osun zone, Kaduna-Kano zone, and Enugu-Anambra zone. It pointed out that in some zones, specifically the Enugu-Anambra zone certificate of occupancy of a parcel of land has been granted to the National Automotive Design and Development Council (NADDC) in respect of the establishment of an industrial automotive cluster (JICA, 2020).

Ekesiobi, Kalu, & Nwokolo (2018), stated that for the Lagos-Ogun-Osun automotive industrial cluster park zone, the access road is paved and in good form, however, other infrastructures such as power and water supply have not been developed. There findings is similar to what the researcher saw in other zones he visited for physical inspection. They further stated that this is because the supplier park development is planned to be executed through Public Private Partnership (PPP), and the expected project scheme is Design-Build-Finance-Operate. Therefore, if the supplier park development is to be implemented with PPP, the cost of infrastructure development will obliviously be borne by the private sector potential investor. This may become a huge financial burden for the investor/s and they may hesitate to participate in the project, thus rendering impotent the whole idea of having an automotive supplier/ park cluster.

It was found that the problem of implementation of the NAIDP is still tied to the specific sectorial challenges of Nigeria's automobile sector are as follows:

a. Lack of fiscal measures such as restriction of import of fully built units (FBU)
b. Poor local patronage (lack of adequate patronage by the public and private sectors)
c. Lack of measures to control the importation of used vehicles
d. Unequipped auto clusters and support infrastructure
e. Small-scale operators
f. Other structural barriers such as high cost of power, tough investment climate, high cost of funding, and low finished goods standards (JICA, 2020).

As for the fiscal measures, the Nigerian government has started implementing new duties on the importation of new FBUs. However, the duties on the importation of used vehicles have not been adequately increased. Controlling the importation of used vehicles, smuggling and grey imports is very crucial to foreign manufacturers to decide investment in local assembly plants in the country. Moreover, inadequate infrastructure development, such as power supply and road network, is also one of the big issues from the viewpoint of investors and plant operators. It is also a big challenge for the National Automotive Design and Development Council. However, after a critical look at the policy document and plan, it could be stated that the NAIDP is unclear and abstract. There is no clear policy information and target/goals for automotive supplier and cluster parks. There are no clear and specific strategy and implementation guidelines to develop the automotive supplier and cluster parks as outlined in the policy document. This was corroborated by Ekesiobi, Kalu, & Nwokolo (2018) who assert that the cluster concept is capable of transforming the fortunes of the automotive sector if properly mainstreamed into industrial policy and automotive plan.

Conclusion and Recommendations

The study's conclusions show that the National Automotive Design and Development Council's (NADDC) contribution to the establishment of industrial automotive cluster parks in Nigeria's chosen zones has been minimal. Additionally, the National Automotive Design and construction Council's (NADDC) implementation of the Nigerian Automotive Industry Development Plan, 2014 is insufficient for the construction of industrial automotive cluster parks in Nigeria's chosen zones. The construction of link roads to the purchased land for the development of the clusters and the provision of incentives to create an environment that allows the development of automotive industrial cluster parks, like the levying of duty on car FBU, are the only areas of the numerous areas for implementation that have seen progress, as shown in the cluster-concept implementation checklist. These initiatives, however, fall short of what is required to encourage investment in the establishment of cluster parks and automotive industry supplier parks in Nigeria's selected zones. However, as was noted in the discussion, this policy must not lose sight of the difficult problems that are inherent in the sector and that seriously complicate its implementation. As a result, policies of this kind should be revised and strengthened for the best performance in terms of sustainability.

It is advised that the government implement strict fiscal measures to deter the importation of fully built units (FBU) based on the study's findings and conclusion. The original equipment manufacturers will be encouraged to relocate their facilities to Nigeria as a result. Additionally, the government must put in place a flexible vehicle purchase scheme, and take steps to ensure that it only buys automobiles built in Nigeria, and that organized business sectors exclusively buys locally produced or assembled vehicles. Furthermore, it is advised that the government should impose significant import taxes on second-hand car imports. This will guarantee that local producers receive the most consumer support. Because clusters typically contain large machinery, the government must also guarantee a consistent power supply. Running clusters on generators alone will be ineffective.

Foreign investments are like cowards that won't venture into unprotected surroundings. In other words, an environment that encourages investment is necessary to draw in foreign investment. Original equipment manufacturers shouldn't have any trouble taking their revenues home. Additionally, it is advised that the Federal Ministry of Industry, Trade, and Investment (FMITI), which is in charge of overseeing the NADDC, encourage private investors to fund the development of the cluster by offering incentives like tax exemptions to encourage them to hurry up the process of building infrastructure in the designated cluster parks.

The NADDC and FMITI should be the overseeing ministry and agency with a comprehensive framework for intergovernmental relations for effective coordination of the implementation procedures, while the state governments in the various states should be responsible for carrying out the plan's implementation.

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