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**STUDY ON THE AUTOMOTIVE
INDUSTRY SECTOR IN NIGERIA**

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CONTENTS

Introduction	5
Chapters	
I. CURRENT STRUCTURE OF THE AUTOMOTIVE INDUSTRY	6
II. VEHICLE ASSEMBLY PLANTS	8
A. Equipment Installed	8
B. Material Input	8
C. Quality Control	8
D. Production	8
E. Distribution	9
F. Management	9
III. COMPETITORS	10
A. Local Assembly Plants	10
B. Independent Vehicle Distributors	10
C. Spare Parts Dealers	10
IV. CAR COMPONENT MANUFACTURE	11
A. Foundry and Forge Shops	11
B. Press and Body Work	11
C. Petro-chemical Plants/Aluminium Smelter	11
D. List of Components Manufactured in Nigeria	11
V. GOVERNMENT POLICY	12
A. Concession/Protection	12
B. Incentives	12
C. Local Content Programme	12
D. Investment Climate	12
VI. INSTITUTIONAL INFRASTRUCTURE	13
A. National Automotive Council	13
B. Centre for Automotive Design & Development	13
C. NASENI	13
D. RMRDC	13
E. Federal Urban Mass Transit Agency	13
VII. TRANSFER OF TECHNOLOGY	14
A. Import Deletion Programme	14
B. Standardization and Rationalization	14
C. Nigerianization Programme	14

D.	Low Cost Vehicle Project	14
VIII.	PHYSICAL INFRASTRUCTURE	15
A.	Transport System	15
B.	Distribution Channel	15
IX.	TECHNOLOGY	16
A.	Assembly Plants' Activities	16
B.	Component Parts Manufacture	17
C.	Opportunities	17
X.	FINANCE	18
A.	Public Funds	18
B.	Stock Exchange	18
C.	Development Finance Institutions	18
D.	Other Sources	18
XI.	MARKET	19
A.	Automotive Vehicle Market	19
B.	Replacement Market	19
C.	Market Growth and Expansion	19
XII.	ENVIRONMENTAL CONSIDERATION	20
A.	Waste Control Activities in the APs	20
B.	Waste Recycling	20
C.	Vehicle and Engine Emission Control	20
	RECOMMENDATION	21-23
	ANNEXES	24
I.	Current structure of the Automotive Industry in Nigeria.	24-25
II.	Table of Industries Structure	26
III.	Auto Parts Produced Locally	27
IV.	Production Trends of Passenger Cars Assembly Plants	28
V.	Production Trends of Commercial Vehicle Assembly Plants	29
VI.	New Tariff Regime (1995-2001)	30
VII.	Vehicles Imported Statistics (1993-94)	31
VIII.	Money Supply, Interest Rates & Exchange Rates in Nigeria (1995-92)	32

IX.	Proposed Import Deletion Programme	33
X.	Total Vehicle Inflow into the Nigerian Market	34
XI.	Expatriate as par end of year 1994	35
	LIST OF REFERENCES	36
	ABBREVIATIONS	37

INTRODUCTION

In the period leading up to, and shortly after independence (1960), there was scarcely any modern industrial enterprise in Nigeria. Increasing import bills strained the nation's foreign exchange reserve and denied it the benefit of industrialization. It was against this background that import substitution became the cornerstone of the nation's maiden industrial strategy. Implementation of this strategy was initiated by the establishment of an automotive industry because of its extensive linkages to other industries or overall development potential.

Given these considerations, the Nigerian government under its Second (1970-75) and Third (1975-80) National Development Plan, established six assembly plants under licence agreement and with emphasis on a local content programme. This represented the second phase of development after the first phase which was characterized by assembling of "semi-knocked down (SKD) units.

Today, however, after the expiration of all initial local content accomplishment dates, only an average of 15% local content have been attained. The end of the boom years (1970-80) and the consequent adoption of strict monetary policies revealed the structural weakness of the industry. Heavy reliance on foreign inputs in the form of CKD and a largely unrealized local content programme made the industry vulnerable to the severe shortfall in foreign exchange supply, inflation and an attendant pressure on working capital. Consequently, the industry's overall capacity utilization collapsed to a mere 5%. Two plants came under liquidation, while the growth of the emerging component industry became understandably stunted.

I. CURRENT STRUCTURE OF THE AUTOMOBILE INDUSTRY IN NIGERIA

There is widespread manufacturing and assembling activities in the industry but the latter is dominant because of the initial top-down approach to development (assembly of imported CKD kits of foreign brands) which has been unduly prolonged. Activities are in the following categories (annex I & II).

(1) Passenger Cars Group (Annex IV)

There are two passenger car assembly plants in Nigeria with a combined installed capacity for assembling 108,000 cars annually. (VWON, and PAN). VWON annual output rose to a maximum 23,000 cars or 53% capacity utilization in 1978 but steadily declined to 385 cars or less than 1% of capacity by 1994 and eventually closed down operation in 1995. While PAN's capacity peaked in 1981 at 93% or 54,490 cars and declined thereafter to only 4,781 cars or less than 1% by 1994.

(2) Light Commercial Vehicles (Annex V)

Three companies were established to produce these category of vehicles (LEYLAND, SCOA AND GM). In 1994 General Motors and SCOA recorded an output of 1,093 units or 5% capacity utilization. Leyland Nigeria Limited came under receivership in 1986 although it produced at near maximum capacity in 1980 (7,280 vehicles or 95% utilization rate).

(3) Medium and Heavy Commercial Vehicles (Annex V)

Five companies have facilities to assemble heavy commercial vehicles and carry out refurbishing work. These are Steyr, Anammco, and NTM.

NTM closed down since 1987 and went under receivership. It however gained maximum capacity utilization in 1981 at 35.4% or 2,124 vehicles but produced only 97 vehicles in 1986.

Steyr's highest output was recorded in 1979 at 1,965 vehicles or 24% capacity utilization but produced only 58 units in 1994.

Anammco's capacity peaked in 1981 when it reached 5,147 units or 65% capacity utilization. It recorded only 3% by 1994.

(4) Agricultural Tractors/Earth Moving Equipments,

Generators

Companies engaged in the assembly and refurbishing of these products are NTM and Steyr but this activity has since been suspended.

(5) Bodies (Glass Fibre Reinforce Plastic - GFRP, and Metal Work)

Anammco has facilities for building metal bus bodies on chassis assembled locally while NTM and Steyr have installed modern equipment for building fibre bodies, car fenders, etc. Other companies include Arewa Metals, Neptune, and Leventis

(6) Component (Annex V)

Thirty-three (33) companies are officially recorded as suppliers of components for original equipment but over 184 companies including those serving the replacement market alone have so far been recorded by National Automotive Council (NAC).

II. VEHICLE ASSEMBLY PLANTS

Of the eight assembly plants in Nigeria, two are privately owned with relative autonomy in production decisions while the rest have 40% government equity interest and operate under licenced agreement with European technical partners. (Annex I)

A. Equipment installed

All equipment installed were comparable to the most modern lines in Europe at dates of installation. Apart from the conventional tools, NTM, PAN, STEYR and LEYLAND have installed engine test beds for partial assembly of engines. Steyr and NTM also have plants for the production of cabs from fibre glass. All plants have installed limited number of high precision machine tools including facilities for complex physical, analytical and chemical tests.

B. Material Input

Material utilization in all plants is composed of imported CKD kits, and limited local parts which must meet standards and specification of technical partners. Delays inherent in the import channels have caused plants to stock-pile CKD material in order to avoid interrupted supply to assembly lines.

C. Quality Control

Independent audits from parent companies frequently verify quality of items produced in-house and those through independent local sources, and final assembly. Samples of part made locally are even sent abroad for certification. R & D departments are virtually none existent in any of the plants.

D. Production

The dominant production flow in all plants is unidirectional. The process is based on a time spaced conveyor-driven multi-component assembly line. It is a combination of manual and machine intensive operation organized in teams and balanced for a uniform output using group balancing and work dynamic techniques.

The following sections summarize what obtains in nearly all assembly plants.

(1) Body Shop

Various body panels from the CKD kit and the local content development section are welded together to form the shell of the car. Hang-on parts like doors are also sub-assembled here.

(2) The Paint Shop

Phosphating, thermic treatment surface (TTS) and painting are done with locally produced material.

(3) Machine Shop

High precision operations include the machining of blanks supplied locally to make piston sleeves, engine flywheel, brake drum/discs, rear axles and front transmission. As part of vertical integration, engines are also assembled and tested.

(4) Others are Trim and Chassis lines.

E. Distribution

All plants sell about 17% of output directly to government department, reputable corporate firms, and the rest through a network of distributors who must have certain service facilities. Only SCOA and GM have their distribution and service network.

F. Management

The Managing Director are on permanent quotas but production, quality control and other sensitive departments are usually manned by technical partners with provisions for indigenizations through a 'Nigerialization' programme (See annex XI).

Observed increase in the number of Nigeria is partly due to low production capacity which has caused the recall of expatriate technicians to their home bases.

III. COMPETITORS

The stock of vehicles plying Nigeria roads and corresponding components and parts are sourced from (1) local assembly plants, (2) independent vehicle dealers (3) spare parts dealers.

A. Local Assembly Plants

Assembly plants sell vehicles of European origin (mercedez lorries and buses, steyr and fiat trucks, peugeot and volkswagen cars) and also distribute imported spare parts to a network of their own bonafide distributors. This category of dealers may also source parts from APs' approved local component manufacturers. Imported FBUs are cheaper because of price advantage as local production cost is relatively high. While APs enjoy official government patronage, there is observed preference for cars of Asian origin especially 'used' ones.

B. Independent Vehicle Distributors

This category import both new and used FBUs of varying models including new parts for sale in their fairly organised sales outlets. Vehicles and parts of Asian origin are dominant because of fuel efficiency and price advantage but most parts are clever imitations and low in quality.

C. Spare Part Dealers

The market scope for locally produced quality component is extensive because only very few local manufacturers with limited output meet prescribed standards and specifications. Their poorly produced component have found acceptance in Nigerian and West African market because of relatively low prices when compared to imported genuine parts. A large proportion of imports are mostly clever imitations produced on contract for major spare parts dealers, those refurbished locally, or already used parts imported directly from the scrap yard of Europe and elsewhere. In all cases, it is a seller's market.

IV. CAR COMPONENT MANUFACTURE

In more than 20 years after the first vehicle was assembled at PAN, only 30% local content is recorded and this is the highest in the industry. Basic support industries necessary for increased component production have developed rather slowly. Please see annex III.

A. Foundry and Forge Shops

There are over 80 foundries in Nigeria but only a very few are capable of producing the high quality castings required in the auto industry. A modern Machine Tools Company (NMT) was however, commissioned in 1992. There are also facilities in two Steel Complexes (DSC and ASCL). ASCL is over 90% complete but it has a capacity for 155,000 metric tonnes of pig iron per annum and a potential for die making.

B. Press and Body Work

Only small parts requiring between 2-6 tonnes presses could be carried out until Udofe Metals Company installed presses of between 200 - 300 tonnes. Dies are still imported but there are facilities for fibre glass, metal bodies and glass.

C. Petro-chemical Plant/Aluminum Smelter

A modern petro-chemical complex and Aluminum Smelting plant are scheduled for commissioning soon.

D. List of Components Manufactured in Nigeria

Achievements in the manufacture of component parts have been limited. (Annex III). This is partly due to marginal foreign investment in component parts manufacture as a result of restrictive policies and fluctuating foreign exchange values which have prevailed till now. The potential for local demand and export especially to ECOWAS sub-region is extensive.

V. GOVERNMENT POLICY

Nigeria found lessons from the largely unfulfilled aims and objectives of the 'first' IDDA (1980-90) useful in fashioning out a perspective plan (15-20 years) launched in 1990. The plan recognises the automotive industry as an engine of growth likely to internalize the multiplier effect of development. A national automotive policy was therefore launched in 1992 with a wide range of incentive and protective measures.

A. Concession/Protection

The establishment of a 7-year (1995-2001) tariff regime which encourages local components parts production.

B. Incentives

Government patronage of local assembly plants and provision of soft loans and research support to the industry through an auto development fund. (Annex VI)

C. Local Content Programme

All protection and incentives are to facilitate an import deletion programme which has the year 2017 as the target date for achieving 100% local component parts incorporation.

D. Investment Climate

The enactment of Nigerian Investment Commission Decree No. 16 and the Foreign Exchange Decree No. 17 of 1995 opens up the Nigerian economy to foreign investment and unrestricted limit to transfer of dividends, profits, etc. There are also a host of other incentives that support Nigeria's determination to develop the "Nigerian Car" through the Centre for Automotive Design and Development (CADD), and encourage wide scale production of other international models for varying local needs and for export market.

VI. INSTITUTIONAL INFRASTRUCTURE

In recognition of the need for adequate planning, efficient execution of approved policy, and relentless invigilation of progress to pre-empt opportunity and prevent obstruction, the Federal Government established the National Automotive Council (NAC). Some other relevant institutions are already in place.

A. NATIONAL AUTOMOTIVE COUNCIL (NAC)

Membership of the National Automotive Council is broad based and sufficiently representative of various sectors of this industry. They are drawn from - NAMA, ALCMAN, MAN, CADD, SON, NSB, FMI, PMF and RMRDC.

NAC regularly study the automotive industry and supervise overall strategies for technology acquisition.

B. Centre for Automotive Design and Development

CADD pioneers and coordinates the activities of other research centres and component parts manufacturers on the design and development of a low cost and truly made in Nigeria vehicle.

C. National Agency for Science and Engineering Infrastructure (NASENI)

NASENI is the executing agency of all the elements of the Federal Government sponsored Science and Engineering Infrastructure Development Programme (SEIDP).

D. Raw Materials Reserach and Development Council (RMRDC)

RMRDC is a parastatal of the Federal Government that has the responsibility of financing R&D activities in a number of sectors including the automotive industrial sector.

E. Federal Urban Mass Transit Agency

In the absence of any meaningful consumer credit institution, Government has established the Federal Urban Mass Transit Agency to extend hire purchase (of commercial vehicles) facilitie to reputable transport operators.

VII. TRANSFER OF TECHNOLOGY

One of the thrusts of the Nigerian National automotive policy is to develop capability to engineer, produce and assemble automotive vehicles and components, and also to develop managerial and technical skills for designing constructing, operating and maintaining automotive manufacturing plants. To achieve this, it has adopted the following strategies.

A. CKD Import Deletion Programme

Technical Partners are committed by agreements to a progressive replacement of imported CKD components with locally produced ones which must meet international standards and specifications. The NAC is to supervise this process which aims at a 50% deletion in 1999, 75% in 2005 and 100% by the year 2017. Technical Partners are expected to develop a percentage of local content in-house and encourage their traditional part suppliers in Europe to set up manufacturing facilities in Nigeria.

B. Standardization of Parts and Model Rationalization

The industry is expected to standardise parts and rationalise models because observed frequency in model changes limits efforts in technology transfer and deny component parts manufacturers the benefit of large scale production which includes increased proficiency and low production cost.

C. "Nigerianization" Programme

All joint ventures provide for an indigenization programme which involves gradual replacement of expatriate personnel with Nigerians. See Annex XI.

D. Low Cost Vehicle Project

Most inputs to the low cost vehicle project on-going at CADD are sourced locally. Emerging results may be made available to local and foreign investors for commercialization.

VIII. PHYSICAL INFRASTRUCTURE

Transportation by road has remained the most dominant in Nigeria. Consequently, as the stock of vehicles increased, government at various levels has extended the road network. Today, Nigeria has a modern road network although poorly maintained.

A. Transport System

Waterways and rail systems are poorly developed in Nigeria but there is evidence of considerable government investment in road network development especially under the present dispensation. Possible private investment on road construction and maintenance is now being contemplated by government.

B. Distribution Channels

All assembly plants have appointed (at least three each) major distributors who have installed sales and service centres in various regions of the country. Some are long established automotive dealers who stock good quality but highly priced parts. Assembly plants do however sell a certain percentage of their products (17% in the case of PAN) at a discount, directly to Government agencies and large corporate organizations. GM and SCOA, own their own distribution channels. There are also a great number of single sales point for used cars dealers and vehicle repair sites.

Over 70% of vehicle maintenance work is carried out by ill-equipped and mostly unskilled mechanics in sprawling sites designated as "Mechanic Villages". These sites are in virtually every urban city in Nigeria. They source their parts from small independence spare part shops (on site) whose stock are largely made up of poor quality Asian products and a few locally made parts including used and refurbished parts from abroad.

IX. TECHNOLOGY

The Nigerian automotive industry has developed largely in the form of several joint ventures with traditional vehicle manufacturers in Europe. Six of the eight assembly plants in Nigeria are committed by technical agreement to a local content programme. The programme is anchored on the capabilities of local component manufactures to meet the increasingly complex standards of a fast growing high-tech auto industry in Europe. Thus, local content manufacturers have been understandably overwhelmed by the level of specifications and standard required.

The assembly plants and local component manufacturer have made very little effort to form alliances with the auto industry in other developing countries who have competitive advantages in supplying the same type of process, product or service supplied by developed countries. These include successful adaptation of other process, product, or service more appropriate to Nigerian needs, or a head start in experience which may be reflected in lower costs or even technological break through.

A. Assembly Plants Activities

Technological activities in Nigerian Assembly Plants have been mainly limited to in-house local content development although some plants have had cause to liaise with each other and with components part manufacturers. Steyr Nigeria produces fibre glass body component parts for PAN while PAN and other companies have actually sent skilled technical personnel to factories of some local parts producers to supervise production processes. PAN and a few other assemblers have recorded limited export to some ECOWAS States. ANAMMCO sources its replacement parts from Mercedes of Brazil while Steyr Nigeria have assembled CKD kits for a Chinese Jeep on behalf of an independent private interest. Level of value added has remained limited because the industry is bordered by high production cost and poor financial capital base.

B. Component Parts Manufacturers

A great number of component parts manufacturers have sourced their equipments mainly from the newly developed economies of Asia although refurbished machines from Europe are well represented. Indeed, the only modern machine tool company, NTM, was installed and for a while operated by Hindustan Machine Tools of India.

Most of the components rejected by local assembly plants have found acceptance in the replacement market of Nigeria and several ECOWAS States. They are usually smuggled out by independent parts dealers.

C. Opportunities

ECOWAS aim to promote cooperation and development in industry is an opportunity for Nigeria automotive industry to form strategic alliances with industries in other member countries. Presently, the economic sub-region has not succeeded in most of its aims because of the existence of numerous other inter-governmental organizations (e.g. Francophone CEA0), and lack of commitment by several government members. Nigeria presently imports iron ore from Guinea and the community's Bank is poised to help the auto industry among others.

X. FINANCE

1994 official statistic based on 28 companies' submissions in 1985, put total industrial costs (motor manufacturing, bodies and parts) at \$1.17 billion (at 1985 exchange rate - annex VIII) with a gross output of \$1.8 billion. Value of machineries installed in current terms is estimated at \$400 million.

A. Public Funds

Government investment in the industry is in the form of equity in six assembly plants (see annex I) although it provides unconditional guarantee for various short term loans. Assembly plants have also received direct government loans when in distress. Some of these have been capitalized.

B. Stock Exchange

The presence of the industry in the Nigerian capital market is insignificant. Only SCOA is quoted. It is expected that the new international status of the exchange will invite new funds (local and foreign) to the industry.

C. Development Financial Institutions

The National Automotive Council plans to establish an auto development fund in 1995. Other possible sources of funds include RMRDC Risk Fund, Petroleum Trust Fund and NERFUND.

D. Other Sources

Technical partners and local banks have extended many financial facilities but the spate of recorded liquidation is indicative of the industry's low credit rating. For instance, Volkswagen AG of Germany granted Volkswagen of Nigeria a revolving credit of DM 7.0 million. It has threatened not to reopen the closed (1995) plant until such debt is made good.

XI. MARKET

Road transport is dominant in Nigeria because the rail and Water systems are poorly developed. Demand for automotive vehicles has consequently increased over the years.

A. Automotive Vehicle Market

Addition to existing vehicle stock during the year ending December, 1993 is 164,508 units (see annex X) including 48,000 units recorded as newly registered. This represents 93% import (154,554 new and used vehicles), and 7% (9,954 units) local production. (Annex VII). Combined installed capacity well over 170,000 units is enough to meet local demand and leave extra room for export but the plants suffer low capacity utilization and therefore are unable to take advantage of observed market size in spite of an elaborate protection package and extensive export incentives. High production cost place them at a competitive disadvantage with imported vehicles. Used vehicles are particularly attractive to Nigerians because of their eroded real income following high inflation. (Annex VII). In an effort to alleviate the plight of Nigerians, government has embarked on mass transit programme which encourages the building of commercial vehicles.

B. Replacement Market

Local capability in component production is limit to a few service parts. A bulk of the requirement is met through import. Official statistics published in 1995, put value of vehicle parts import in 1991 at \$333 million from \$25 million in 1990, and \$13.6 million in 1987. This is over 470% increase within a period of five years.

C. Market Growth and Expansion

The launching of an Automotive Policy in 1992 and subsequent fiscal incentive are supportive of market growth and expansion. It is yet too early to assess level of impact.

XII. ENVIRONMENTAL CONSIDERATION

The establishment of Federal Environmental Protection Agency in 1989, marked the beginning of government determination to clean and maintain a clean environment. Uptill then, very limited environmental standards that were hardly enforced, prevailed. Plants were installed with modern waste control devices only because they formed part of a standard package. Leaded petrol is still in use and there are yet no emission control standards.

A. Waste Control Activities in the Assembly Plants

The main waste from the assembly plants is the effluent water from the paint shop. All plants have facilities and stock necessary material for neutralization. The resultant mud cake is taken away to city dump sites. Metal scrap from limited in-house manufacturing activity is collected and sent to local foundries.

B. Waste Recycling

Nearly all the plants engage in extensive vehicle refurbishing activities especially since the collapse of their capacity utilization rate but a bulk of vehicle scrap in Nigeria litter widely dispersed mechanic, and abandoned construction sites. There is no private nor public facilities installed solely to take advantage of this metal scrap opportunity which has been resently consolidated by government outright ban on iron and metal scrap export. A few steel plants including ASCL and DSCL have carried out limited metal scrap collection and use. Used engine-oil and old tyres are thrown away. Tyre retreading activity is negligible.

C. Vehicle and Engine Emission Control

Nigeria has no exhaust emission control standards yet but discussion is ongoing between FEPA, NAC, MAN and CADD on appropriate standards. The aim is to prescribe standards that take Nigeria situation into consideration. A gradual approach to attaining world standards is to be adopted wherever immediate enforcement is considered unrealistic.

RECOMMENDATION

The Nigerian automotive industry has a full complement of the usual sectors but such sectors, wherever they function at all, do so inefficiently. Observed high capacity utilization of the assembly plants (some have sought official recognition as manufacturers following some level of local parts incorporation) in the late 70s to early 80s was sustained by unrestrained access to foreign currencies. The drastic shortfall in foreign exchange and subsequent devaluation of the Naira revealed the plants' undue dependence on imported components and their weak capital bases. Commitment to local parts manufacturing and incorporation was marginal but even then, capacity utilization of the emerging component parts producers have understandably crashed along with that of the assembly plants. Failure to accomplish the local content programme on target has been ascribed to inefficiencies in the technology transfer process due to lapses in both technical agreements and institutional inadequacies. Core support industries like iron and steel, have remained under construction for a long time but expectations are rife that an Aluminum Smelting Plant and a petrochemical complex might be commissioned soon.

In order to reverse this trend and bring about a self sustained automotive industry in Nigeria the following are recommended:-

- (i) The six assembly plants with government interest should be privatized and listed on the stock exchange. Government can provide support through soft loan and fiscal incentives but it should continue to pursue the "Nigerianization" policy.
- (ii) The assembly plants and component parts manufacturers should adopt buy-back arrangement as a means of incorporating export requirements. This means that technical partners of such plants buys (in foreign

currencies) and undertakes to market such products in their traditional foreign markets.

- (iii) Motor assemblers should encourage their traditional parts suppliers abroad to set up manufacturing basis in Nigeria. They may form joint partnership with existing local manufacturers who presently operate inefficiently.
- (iv) Technical agreements of automotive plants should provide for partial acquisition of design rights and manufacturing tooling of certain models. Brand names should be substituted with local ones, while industry wide Research and Development activities are encouraged within the scope of Nigeria standards.
- (v) Models of vehicles assembled and imported to Nigeria should be rationalized to encourage parts standardization and therefore create opportunity for optimum capacity utilization by assemblers and component parts producers.
- (vi) Provision should be made for central infrastructural facilities like body parts press shops, and test centres. Investment in metal scrap collection and processing should also be encouraged.
- (vii) The auto development fund as proposed by NAC, the Petroleum Trust Fund and other Development Finance Institutions should consider the sector a priority and extend soft loans as appropriate. Some forms of consumer credit schemes should be established. There are virtually none at the moment.

- (viii) In order to dodge bureaucratic delays, plants have had to stock materials. This tends to absorb working capital. Government should eradicate observed delays.

- (ix) The proper calibre of personnel required to work in the industry are in short supply. Training requirement and institutional lapses should be assessed by NAC. Presently, only a few polytechnics offer courses related to automobile design and engineering. None of the universities does.

- (xi) Government should consider the commissioning of core industry as a priority but until then importation of their product range should attract very marginal duties.

- (xii) NAC should carry out complete survey of the industry and install an information technology system that links with practitioners in the industry and research centres. This should facilitate the development of a comprehensive data base to support government and private decision.

CURRENT STRUCTURE OF THE AUTOMOTIVE INDUSTRY IN NIGERIA

ANNEX 1

S/N	NAME OF COMPANY/TECHNICAL PARTNER	PRODUCT TYPE	ANNUAL/INSTALLED CAPACITY	DATE OF COMMISSION	EQUITY OWNERSHIP STRUCTURE	MODELS
1.	PAN/PEUGEOT AUTOMOBILE OF FRANCE	Assembly: Passenger Car, Vans from CDK.	50,000	1972	Peugeot Automobile 40% Federal Government of Nigeria 31% Kaduna State Govt 10% Others 19%	9
2	VWON	Assembly: Passenger Cars and Vans from CKD	50,000	1973	Federal Govt of Nig. 35% Lagos State Govt 4% Nigeria Distributors 10% BHF-Ban Frankfurt 11% Volkswagen of Germany 40%	9
3.	LEYLAND (NIG) LTD/BRITISH LEYLAND	Assembly: Light Commercial Vehicle and Buses from CKD	13,000	1979	Federal Govt 31% British Leyland 40% Oyo/Ogun/Ondo State 15% NIDB 7.5% Other Nigerians 2.5%	10
4.	NATIONAL TRUCK MANUFACTURING LIMITED KANO/FIAT OF ITALY	Assembly: Trucks, Buses Vans, Road tractors, agricultural tractors, Agric. implements earth moving equipment, Power generators, pumping equipments. *Build Carbs.	7,000 Vehicles 3,000 (Agric tractors related equipment).	1981	Federal Govt 31% IVECO Fiat SPA 40% Kano State Govt 10% Sokoto State Govt 2.5% NNDC - Kaduna 2.5% UICT other Nigerians 1.0%	8

5.	ANAMCO/DAIMLER BENZ AG	Assembly: Heavy & Medium sized Mercedes Bens trucks and buses *Build vehicles bodies.	7,850	1975	Federal Government 35% Daimler Bens 40% Anambra State Govt 12.5% River State Govt 3.4% Imo State Govt 2.5% Leventis Motors 3.0%	6
6.	STEYR NIGERIA LTD/STEYR - DAIMLER - PUCH AG OF AUSTRIA/ SUPP. TECH. AGREEMENT VOLKS OF BRAZIL	Assembly: Heavy trucks, light commercial vehicles trucks, Agric. tractors impliments, gen set and buses. CKD kits.	Trucks 8000 Agric tractors 5000 Gen set 500 Buses 500 Impliments 20,000	1979	Federal Govt. 35% Steyr Daimler-Puch 40% NIDB 3.00% Bauchi/Plateau 2.5% Gongola & Others 7	6
7.	GM/GM (FMI)	Assembly	10,500 units	1959	Limited Liability (Private)	Izuzu Brands
8.	SCOA NIGERIA/SCOA SA PARIS	Assembly Automotive Components/vehicles	12,750 units		SA Paris Nigeria Public	Bedford Brands
9.	COMPONENT PARTS MANUFACTURERS (184 IN NUMBER)	AS IN ANNEX IX			Private	

ANNEX II

TABLE OF INDUSTRY STRUCTURE

Company	Passenger Car	Light Commercial Vehicles	Heavy Commercial Vehicles	Tractors Engines	Bodies	Components and Parts
PAN	x					x
VWON	x					x
ANAMCO			x		x	x
NTM			x	x	x	
LEYLAND		x				
STEYR			x	x	x	
SCOA		x			x	x
GM		x			x	x
COMPONENTS AND PARTS MANUFACTURERS						x

ANNEX III

AUTO PARTS PRODUCED LOCALLY

- | | |
|--|---|
| (a) <u>ELECTRICAL PARTS</u> | (b) <u>TYRES, PLASTIC & EXTRUDED PARTS, FOAMS</u> |
| (i) Batteries | (i) Seat foam, paddings |
| (ii) Electrical harnesses | (ii) Engine mountings |
| (iii) Starter Motor | (iii) A/C hoses |
| (iv) Alternator | (iv) Winscreen washer tubes, reservoir |
| | (v) Seat I |
| | (vi) Propeller fan |
| | (vii) Front grill |
| | (viii) Side linings, bumpers |
| | (ix) PVC for seat covers. |
| (c) <u>CAST, MACHINED AND SUB-ASSEMBLED MECHANICAL PARTS</u> | (d) <u>OTHERS</u> |
| (i) Pedal | (i) Automotive paints |
| (ii) Fuel tanks | (ii) Seat belts |
| (iii) Cover plate | (iii) Fuel, air & oil filters |
| (iv) Spare wheel carrier | (iv) Glues and mastic |
| (v) Engine flywheel | (v) A/C Condensers, Compressors |
| (vi) Brake disc and drum | (vi) Floor carpets |
| (vii) Balancing weights | (vii) Sound proofing parts |
| (viii) Small stamped parts | (viii) Thinner and rust-proof products |
| (ix) Radiators | (ix) Greases and oils |
| (x) Exhaust pipe | (x) Winscreens and side glass |
| (xi) Seat frames | (xi) Fibre cabs and bus bodies |

SOURCE: National Automotive Council

ANNEX IV

PRODUCTION TREND OF PASSENGER CARS ASSEMBLY PLANTS

YEAR/COMPANY		1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
PAN	P	36,574	27,024	6,286	9,840	5,209	8,773	13,806	12,609	6,807	4,781
	%	57.1	42.2	9.8	15.6	8.3	14.0	22.0	20.0	11.0	7.5
VWON	P	20,829	3,747	2,123	946	1,686	1,466	1,115	1,238	708	385
	%	46.3	8.3	4.7	2.1	3.7	3.2	2.5	2.7	1.6	0.85
TOTAL	P	57,403	30,771	8,409	10,786	6,895	10,239	14,921	13,847	7,515	5,166
	%	53.1	28.5	7.8	10.0	6.4	9.5	14.0	13.0	7.0	4.80

SOURCE: (i) NAMA OFFICIAL STATISTICS 1987 - 94

(ii) REPORT OF THE DIAGNOSTIC SURVEY OF PARASTATALS AND COMPANIES UNDER THE FEDERAL MINISTRY OF INDUSTRIES. (1989)

ANNEX V

PRODUCTION TREND OF THE COMMERCIAL VEHICLE ASSEMBLY PLANTS

- (i) ANAMMO: 7,850 Vehicles per annum
(ii) STEYR: 8,000 Vehicles per annum
5,000 Tractors per annum
3,000 Gen set per annum
(iii) NMT: 6,000 Vehicles per annum
3,000 Tractors per annum
(iv) LEYLAND: 7,695 Vehicles per annum

YEAR	COMPANY	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
ANAMMO	P	705	5,147	3,657	2,551	1,958	2,097	250	336	181	220	367	711	782	316	243
	%	10.10	65.56	46.58	32.49	24.94	26.71	3.18	4.28	2.30	2.80	4.67	9.05	9.96	4.02	3.00
STEYR	P	1,471	1,965	1,149	388	504	287	307	51	46	870	-	304	472	33	58
	%	18.33	24.56	14.36	4.84	6.30	3.58	3.83	0.63	0.57	10.87	-	3.80	5.90	0.41	0.72
NMT	P	304	2,124	1,539	1,315	1,054	1,250	97	-	-	-	-	-	-	-	-
	%	5.1	35.4	25.65	21.91	17.56	20.85	1.61	-	-	-	-	-	-	-	-
LEYLAND	P	3,072	7,280	3,945	3,222	1,909	2,639	153	-	-	-	-	-	-	-	-
	%	39.92	94.60	51.26	41.87	24.80	34.29	1.98	-	-	-	-	-	-	-	-
TOTAL	P	5,642	16516	6,346	7,476	5,425	6,273	807	387	227	1090	367	1015	1254	349	301
	%	19.10	55.90	21.5	25.21	18.36	21.23	2.73	2.44	1.43	6.88	4.67	6.4	7.91	2.2	2.00

SOURCE: (i) NAMA Official Statistics - 1980 - 94
(ii) Federal Ministry of Industry

NEW TARIFF REGIME (1995 - 2001)

S/N	ITEM	1995 1996	1997 1998	1999 2000	2001 2001
1.	TRACTORS PUBLIC TRANSPORT VEHICLES AND GOODS TRANSPORT VEHICLES				
	CKD imported by established APs	5	5	10	10
	FBU	25	25	30	30
	Parts and accessories	15	15	20	20
2.	VEHICLES FOR PRIVATE USE				
	CKD imported by established APs of cylinder capacity up to 2000 cc	10	10	15	15
	FBU of cylinder capacity up to 2000 cc	40	40	35	35
	Parts and accessories	20	20	25	25
3.	Raw materials and semi-finished components (The higher tariffs are for items obtainable locally)	5-45	5-45	10-40	10-40

SOURCE: Federal Ministry of Finance.

VEHICLES IMPORTED STATISTICS - 1993 - 94NEW AND USED

YEAR	CARS					BUSES					TRUCKS					GRAND	
	NEW	%	USED	%	TOTAL	NEW	%	USED	%	TOTAL	NEW	%	USED	%	TOTAL	TOTAL	
1993	5,877	5.05	110563	94.95	116440	3,906	13.60	24,799	86.40	28,700	1,135	12.06	8,279	87.94	9,414	154560	
*1994	3,048	6.70	42,495	93.30	45,543	601	4.11	14,001	95.89	14,605	792	10.17	6,993	89.83	7,785	67,930	

1993 New = 10,919 units
Used = 143,641

1994 New = 4,441
Used = 63,489

*Incomplete Data i.e. January - August.

Source: MB ANAMCO

ANNEX VIII

TABLE

Money Supply, Interest Rates and Exchange Rates in Nigeria
1985 - 1992

Year	Money Supply (M ₁ , N billion)	Interest Rate (%) (Prime, Commercial Bank)	Exchange Rate (Average Official) \$/N
1985	13.3	10.00	1.018
1986	12.7	11.00	0.252
1987	14.7	11.5	0.220
1988	21.1	16.3	0.136
1989	25.7	25.5	0.124
1990	37.2	26.0	0.120
1991	49.4	20.2	1.102
1992 (Jan to Jun)	62.5	28.1	0.051

SOURCE: CBN Annual Reports (Various Years), and CBN First Half 1992 Economic Report.

NOTE: M₁ and interest rate figures are as at December of year.

1995 autonomous rate is .012 to \$1 while official rate is .045 to \$1. Interest rate = 22%.

ANNEX IX

PROPOSED IMPORT DELETION PROGRAMME

PHASE I (1995 - 1996)	PHASE II (1995 - 2000)		PHASE III (2000 - 2010) ENGINES
	MECHANICAL COMPONENTS	ELECTRICAL COMPONENTS	
Tyre Battery Seat frame Seat foam Roof lining Radio & Cassette player Bumpers Paints Car mat	Clutch system Brake system Water pump Cooling fan Carburettor Fuel pump Tail pipes Hinges Door locks and window winding mechanisms. Arms & blades	Generator Induction coil Starter motor Shaft & link Distributor Horn Spark plug Breaker point Wire harnessing switch Head & Other lamps	Cylinder block Cylinder head Crankshaft Camshaft Connecting rod Piston, piston pins and piston rings. Valve Cylinder liner Oil pump
Rubber moulds Safety Belt Body seal and adhesive Sound-deadening materials Windshield and Window glass Door & Window	Springs blades Shock-absorbers Air-conditioning equipment Wheel rim, hubs Steering mechanisms	Relay system Dashboard - instrument Alternators Flash units	Timing gears (chains) <u>Transmission</u> Propeller - shaft Gear box
Rubber seal Plastic parts Seat coverings Inside linings Seating cushions Pipes and tubes Trims and Protectors Single colour Various pipe- connectors	Flywheel Pressed parts - Simple body & chassis compo- nent. - Cross Members (Trucks) Break drum-hub Small pressed- parts Jacks.		- Gear box casting - Gear wheels - Bearings Front Axle Rear Axle

SOURCE: National Automotive Council

TOTAL VEHICULAR INFLOW INTO THE NIGERIAN MARKET

YEAR	CARS					COMMERCIAL VEHICLES							GRAND
						STEYR, ANANIMCO		GM, SOCA		IMPORT	PERCENT	TOTAL	TOTAL
	PROD.	%	IMPORT	%	TOTAL	PRODUCTION	PERCENT	PROD.	PERCENT				
1989	6,895	34	13,401	66	20,296	1,050	13.26	2,097	26.52	4,765	60.22	7,912	28,208
1990	10,239	39	16,301	61	26,540	631	5.01	1,429	11.37	10,523	83.62	12,583	39,123
1991	14,921	70	6,246	30	21,167	1,198	12.26	3,316	33.97	5,252	53.77	9,766	30,933
1992	13,847	15	77,306	85	91,153	989	3.32	2,807	9.46	25,911	87.22	29,707	120,860
1993	7,515	6.1	116,440	93.9	123,955	365	0.89	2,444	5.98	38,114	93.13	40,923	164,878
1994 JAN-AUG	4,938	10	45,543	90	50,481	475	1.98	1,093	4.57	22,387	93.45	23,955	74,436
TOTAL	58,355	18	275,237	82	333,592	4,708	8.78	13,185	10.56	106,952	85.66	124,846	458,438

% of Vehicles produced to total production and importation 1989-94 = 16.6%

SOURCE: NATIONAL AUTOMOTIVE COUNCIL (NAC)

ANNEX XI
EXPATRIATES AS PER END OF YEAR 1994

	COMPANY	YEAR	1987	1988	1989	1990	1991	1992	1993	1994
1	ANAMMO		23	18	15	13	12	13	14	12
2	GM		3	3	2	2	1	3	3	2
3	SCOA		4	5	3	2	2	1	1	1
4	STEYR		10	6	6	6	5	5	6	5
5	PAN		23	24	17	16	15	15	17	17
6	VWON		23	16	12	10	4	3	4	4
7	NTM		-	-	-	-	-	-	-	-
	TOTAL		86	72	55	49	39	44	45	41

SOURCE: 1. NAMA

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ABREVIATIONS

ASCL	-	Ajaokuta Steel Company Limited
ALCMAN	-	Association of Local Content Manufacturers of Nigeria
APs	-	Assembly Plant
ANAMMCO	-	Anambra Motor Manufacturing Company
CKD	-	Completely Knocked Down
CADD	-	Centre for Automotive Design and Development
DSC	-	Delta Steel Company
ECOWAS	-	Economic Community of West African States
FMF	-	Federal Ministry of Finance
FEPA	-	Federal Environmental Protection Authority
FMI	-	Federal Ministry of Industry
GM	-	General Motors Limited
LEYLAND	-	LEYLAND Nigeria Limited
MAN	-	Manufacturers Association of Nigeria
NASBNI	-	National Agency for Science and Engineering Infrastructure
NTM	-	Nigerian Truck Manufacturing Company
NMT	-	Nigerian Machine Tools, Oshogbo
NAC	-	National Automotive Council
NAMA	-	Nigerian Automotive Manufacturers Association
NERPUND	-	National Economic Reconstruction Fund
NSE	-	Nigerian Stock Exchange
PAN	-	Peugeot Automobile Nigeria Limited
RMRDC	-	Raw Material Research & Development Council
SCOA	-	SCOA SA of France
SON	-	Standards Organization of Nigeria
STEYR	-	Steyr Nigeria Limited, Bauchi
VWON	-	Volkswagen of Nigeria Limited