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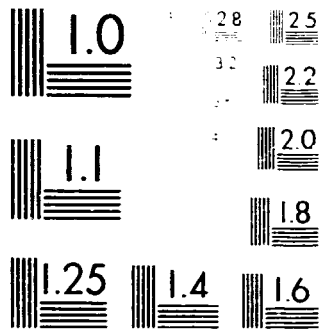
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**STUDY OF THE AUTOMOTIVE
INDUSTRY SECTOR IN ZAMBIA**

BY

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November, 1995

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LIST OF ACRONYMS

CKD	-	Completely Knocked Down
CBU	-	Completely Built Up
M/V	-	Motor Vehicle(s)
MTA	-	Motor Trade Association
TAZ	-	Trucker Association of Zambia
FED HAUL	-	Federation of Road Hauliers
UTTA	-	United Transport and Taxis Association
LMA	-	Livingstone Motor Assemblers
INDECO	-	Industrial Development Corporation
ZIMCO	-	Zambia Industrial and Mining Corporation
LENCO	-	Lusaka Engineering Company Limited
TDAU	-	Technology Development Advisory Unit
NCSR	-	National Council for Scientific Research
DBZ	-	Development Bank of Zambia
PTA	-	Preferential Trade Area (New COMESA)
COMESA	-	Common Market for Eastern and Southern Africa
GDP	-	Gross Domestic Product
ECZ	-	Environmental Council of Zambia

EXECUTIVE SUMMARY

1.0 Introduction

An evaluation of the current status of the automotive industry in Zambia was undertaken with a view to advance recommendations as to what its future role should be in the industrialization strategy of the country. On the basis of this evaluation, this summary presents the following findings and recommendations, of the study.

2.0 Role in Industrialization Strategy

Presently the automotive industry, dominated by imports, is only likely to play a marginal supporting role in the industrialization of Zambia.

Its role will be limited to providing supporting transport infrastructure to the other productive sectors of the economy.

In the long term, the sector can become a meaningful contributor to industrial output through manufacture of simple spare parts and components. For this to happen however, will require deliberate stimulation through appropriate Government policies and actions.

3.0 The present Government laissez-faire attitude towards industry may mean very little investment in manufacturing. Government will need to vigorously promote manufacturing as source of economic growth.

4.0 The automotive industry is presently dominated by imports of both vehicles, as well as components and parts. Franchising is the basis of motor trade, with Japanese automakers dominating the market.

5.0 Given the new liberal economic climate, motor vehicle assembly has become untenable, due to its low value addition and high cost production structure on account of differential tariff structure. A fresh reassessment of the sector is due.

6.0 Zambia has very little automotive component manufacture both for the original equipment and after market. This is due to various constraints including limited market size, market fragmentation, restrictive franchise agreements, as well as deficient facilities and technologies.

In spite of the foregoing some component manufacture covering automotive batteries, tyres, tubes, radiators, exhaust systems is taking place. Potential production of other simple spare parts such as shafts, pins, bolts, nuts, brackets, springs gears, and so on is available for the after market.

Some facilities including casting, machining, forging, metal fabrication exist. Additional facilities for steel casting would however be required.

7.0 A review of current Government policies show that they are very liberal, but are not especially supportive of automotive manufacture. Government policies aim to encourage an efficient private sector driven economy that will promote efficient substitutes and exports.

These policies provide an enabling investment climate that guarantees against expropriation or nationalization of private business.

8.0 Zambia's automotive institutional framework is biased towards motor trade and thus repair and maintenance. There is very little R.&D, while training is to cater for operative personnel.

The physical infrastructure while adequate is especially depreciated where roads are concerned. Government has embarked on a programme to rehabilitate the road infrastructure. On the other hand service centres are adequately provided for.

9.0 Probably due to the low level of manufacturing little technological transfer in the automotive industry has occurred in Zambia. Other constraints to technology

transfer include restrictive clauses in agreements, and an unclear Government position on the matter.

10. Finance is likely to be a constraint in the development of the automotive sector. However given Zambia's economic reforms, the country may attract some inflows of private capital. On the other hand local commercial banks provide short term financing only, such that investment into plants can only be financed by the Development Bank of Zambia. While the Bank receives substantial credit lines, the performance of its foreign exchange loan portfolio is poor, and this limits available investible resources.

11. The total market for motor vehicles in Zambia is estimated at 10,000 units per annum. In value terms, this is about \$60 million annually. The market is declining, and this will continue in the foreseeable future.

The Common Market for East and Southern Africa (COMESA) is a potential export market for Zambia. The South African car industry would be the biggest competitor.

12. Pollution is as yet not a major issue in Zambia. However, a good amount of vehicle scraps litters the country side, and could form a basis for scrap processing industry. A study to this effect was done by INDECO Limited for its abortive Steel Re-rolling Mill. The issue of exhaust fumes is being tackled by environmental authorities.

13. In conclusion, it may be noted that the automotive industry's future will firmly lie into component manufacture for the after market. However, this will need a deliberate stimulation.

A more detailed techno-economic survey to assess the products, markets, facilities and investment requirements is recommended.

CHAPTER I

STRUCTURE OF THE AUTOMOTIVE INDUSTRY IN ZAMBIA

1.0 Introduction

The automotive industry in Zambia is made up largely of imports of Passengers vehicles, Goods vehicles and Public transport vehicles. The sector also imports Completely Knocked Down (CKD) kits for final assembly, as well as components and spare parts for the after market. The industry is organised mainly along motor vehicle dealers who hold franchises to import and exclusively deal in specific vehicle makes. These dealers also import the necessary parts and components to service the market.

In the area of manufacturing, there a few motor vehicle assemblers, who also hold exclusive licences for the brands they manufacture. An analysis of available statistics shows that Passenger vehicles, Goods vehicles and Public Transport vehicles are the most important products in the market in that order. At the margin are specialised vehicles such as fire fighting units, tractors, derrick trucks etc. Import statistics of motor vehicles for the period 1991 - 1994 give the following proportions:

Table I: Proportion of Imports of M/V by major categories into Zambia 1991-94

Category	1991	1992	1993	1994	Average
PASSENGER	52	55	77	37	55
COMMERCIAL	41	25	17	25	27
PUBLIC TRANSPORT	4	18	6	30	15
OTHER	3	2	-	8	3
TOTAL	100	100	100	100	100

Source: Based on Annex 1

However analysis of import values for the period 1989 - 1993, gives 42 percent to commercial vehicles, 32 percent to passenger vehicles, with buses accounting for 12 percent of imports. This analysis further gives some weight to trailers, and other specialised vehicles which together account for 15 percent of imports.

The analysis based on values however should be understood from the price point of view. To the extent that commercial vehicles, buses etc command a much higher price than passenger vehicles, it is inevitable that they should dominate the value structure. Notwithstanding the foregoing, the analysis based on values, comes quite close to that based on motor vehicle registrations in Zambia over the same period. As the table below shows Station wagons, Pick ups, Vans and Trucks, account for about 50 percent of all vehicles registered in Zambia in 1994.

Table II: Proportion of Vehicles Registration by Category in Zambia - 1994

TYPE	SALOON SEDAN	STATION WAGONS	LIGHT TRUCKS, VANS	TRUCKS TIPPERS	MINI BUSES	BUSES	TANKERS HORSES TRAILERS	TOTAL
QUANTITY	1520	488	1527	185	167	47	90	45044
PROPORTION %	34	11	34	4	14	1	2	100

Source: Based on Table III

As indicated above, there is some local assembly of passenger, goods vehicles and public transport vehicles. However this only forms a small proportion of the industry, with total output estimated at less than 10 percent of the total market. A more significant part of the industry is imports of components and parts for the after market. For the period 1989 - 1993, imports of spare parts were about 35 per cent of motor vehicle imports. This is an unusually high figure, but given the state of Zambia's economy, and road infrastructure, the spare parts business is extremely lucrative.

This is especially so given the absence of local manufacture of components and parts in Zambia. Organisationally, the automotive industry is structured basically along dealerships. The players in the industry are the trade associations, which include the Motor Trade Association, (MTA) comprising of motor vehicles importers and dealers; the trucking industry represented by the Truckers Association of Zambia (TAZ), and Federation of Hauliers (FEDHAUL). The United Transport and Taxis Association (UTTA) represent the passenger transport sector. The various associations are considered elsewhere in this report - However below is an assessment of the key automotive dealers in Zambia.

1.1 Motor Vehicles Dealers. There are altogether more than 10 major dealers in the market as follows:

I.1.1 Toyota (Zambia) Limited

Toyota Zambia Limited is the leading motor vehicle dealer in the country and hold the Franchise for Toyota vehicles in the country. The company has its head office located in the prime area of the capital city Lusaka. The head office has well designed showroom and well equipped mechanical workshops. The company also has branches in Lusaka and the Copperbelt, which areas form about 80 percent of the automotive market in Zambia..

Toyota Zambia imports and sells the Toyota range of passenger, light Commercial and Station Wagon models imported from both Japan and South Africa.

I.1.2 Sundat Motors - is located in the capital city Lusaka and hold the franchise for Nissan vehicles in the country. Nissan is the second leading brand in the country. They have showroom and workshop facilities and also branches on the Copperbelt and tourist town of Livingstone in the Southern Province of the country.

I.1.3 Marounuchi Motors - are the franchise holder for Mitsubishi vehicles in the country. The Head office is situated in Lusaka, together with sales and showroom facilities. The company has has an assembly plant on the Copperbelt town in Chingola nearly 400km, North of Lusaka, adjacent to the big mining industry market.

I.1.4 Motor Holdings (Zambia Limited) - Are responsible for the importation of Land Rover and Volks Wagen vehicles in the country. Like the other dealers they are both in Lusaka, the Copperbelt, and Livingstone, all with showroom and workshop facilities. Imports are from United Kingdom for the Land Rover and South Africa for the Volks Wagen models respectively.

I.1.5 Honda Zambia Limited

Honda Zambia Limited hold the franchise for Honda vehicles in the country. Imports are

mainly from Japan and South Africa. Honda have equipped showroom and mechanical workshops and spare parts outlet, in Lusaka.

1.1.6 Duly Motors (Z) Limited

Duly Motors hold the franchise for Ford and Mazda vehicles in Zambia. Imports are from Japan and South Africa. The company has assembly equipment for the Mazda cars situated at the Livingstone Motor Assemblers Plant in Livingstone. It has its head offices in the capital city Lusaka with branches on the Copperbelt towns in Ndola and Kitwe and Livingstone in the Southern Province. The company has showroom, mechanical workshop and panel beating and spray painting facilities.

1.1.7 Commercial Motors/Star Commercial

These are LONHRO Group Companies which hold franchise for Peugeot and Mercedes Benz vehicles respectively. They are responsible for the importation into the country of Peugeot and Benz vehicles. Imports are mainly from France for the Peugeot and Germany and South Africa for the Mercedes Benz vehicles. They also have assembly equipment for Peugeot Saloon and Pick Up and Benz trucks, Lusaka the Copperbelt towns of Ndola and Kitwe.

1.1.8 Tata Zambia Limited

Tata Zambia is a subsidiary of the TATA Group in India and they import the Tata range of vehicles into Zambia. Tata Zambia are based in Lusaka with branches and assembly facilities in Ndola, on the Copperbelt. Tata Zambia are also agents for distribution of MARUTI vehicles in the country. The automotive industry employs approximately 3000 people. Table 4 shows the major motor vehicles dealers and their performance in various categories of motor vehicles.

Conclusion

The prevailing status quo in the industry is likely to be maintained in the future and the

industry will continue to be dominated by imports and merchandising of vehicles and components.

CHAPTER II VEHICLE ASSEMBLY PLANTS

II.0 Introduction

Zambia has had final assembly plants for various types of automotive vehicles since 1972 when Livingstone Motor Assemblers was commissioned as a joint venture between Fiat Auto of Italy and INDECO Limited, a parastatal company, that has since been closed.

Livingstone Motor Assemblers (LMA) is situated in the Southern part of Zambia, over 500km away from the major car markets. The Company, which has since been closed, was the biggest passenger car assembler, with a work force of 130 persons, and an installed capacity to assemble 4500 units on a single shift basis. The company's product range encompassed Fiat saloons, Peugeot saloon and Pick up, Mazda saloon, and assembly of Mercedes Benz truck cab. Among available facilities, the company still has the following:-

- Resistance Welding equipment (spot welding guns) of various shapes and sizes to meet various car body specifications.
- Body shell treatment plant
- A manual spray painting plant.
- Baking facilities
- Various Assembly lines and
- A Mechanical Assembly line

II.1 Assembly Plants

The major assembly plants apart from LMA include:-

MAROUNOUCHI MOTORS - situated in Chingola on the Copperbelt, the Plant has capacity to assembly 100 units per year of 1 ton capacity, mainly light trucks. of the Mitsubishi range.

LEYLAND DAF - situated in Lusaka with facilities to assemble 260 heavy commercial trucks, per annum.

LUSAKA ENGINEERING COMPANY (LENCO) - situated in the heavy industrial area of the capital city Lusaka, is a parastatal organisation in the process of being privatised. It has capacity to manufacture 250 units per year of truck bodies bus bodies and trailers. LENCO has the capacity to manufacture spare parts/components, including fuel tanks, seat frames, exhaust systems and air tanks.

COMMERCIAL MOTORS, have facilities situated in Ndola on the Copperbelt to assemble Peugeot 504 Saloons and Pick Ups with an annual capacity of 1000 units.

Other Assembly plants belong to TATA Zambia Limited, who manufacture trucks and buses, and Star Commercial who assemble Mercedes Benz trucks. No data was available on their installed capacities and utilization. However, overall it is estimated that Zambia has a total assembly capacity of about 700 units per annum on a single shift basis. Table 5 gives a breakdown of this capacity.

II.2 Assembly Output

Initially, production output of these assembly plants was high, since foreign exchange to import components was readily available. This was especially true for the 1970's, when output was in the range of 70 to 80 per cent.

Since 1975, however, output has continued to decline steadily, in the face of scarce foreign exchange. It is noteworthy to observe that as the assembly subsector was confined to final assembly, it has been highly import dependent, and as such been subject to the vagaries of the country's Balance of Payments situation. In the face of foreign exchange rationing, the sector, has been considered a 'luxury' and has faced the brunt of the economic hardships the country has gone through.

In the last three years local assembly output has not gone beyond 1000 units per annum. In fact currently most assembly plants have closed or are simply idle, despite reasonable

availability of foreign exchange.

II.3 Vertical Integration

This import intensity has contributed to very poor vertical integration of the industry. The assembly sub sector's value added is less than five percent and comprises only local labour, electricity, water, automotive paints, tyres and batteries.

Labour aside, the other local inputs also exhibit a very high import intensity, at well over 60 percent of inputs. The major factors militating against vertical integration are the small market size of the automotive industry, as well as the insistence of technology licensors, for licensees to use genuine parts only. In order to avoid compromising quality, licensors have put restrictive clauses, that force the local assemblers to use imported components.

The situation is further aggravated by lack of reliable local suppliers, who are also affected by the low assembly volumes; and thereby can not produce low cost but high volume parts.

II.4 Current Status

Whereas in the past scarcity of foreign exchange was the major constraint facing the sector, the new economic policies being implemented by the MMD Government has hastened the assembly sectors demise.

As noted elsewhere in this report, the current Government, has liberalised interest and exchange rates and tightened money supply in order to combat inflation. The action has resulted in very high interest rates of up to 150 percent, while the Kwacha has depreciated sharply to about K950/dollar currently. On the other hand availability of credit to the productive sector has also been very tight. Tariffs have also been reduced, and protection is denied local producers, in order to encourage efficient and competitive production.

The combination of the above factors has forced most assembly plants to close as it is not longer viable to carry out assembly operations. Consequently most assemblers have shifted their resources into imports of CBU's and components to circumvent the long lead cycles of assembly, which may be as long as six months.

This long lead cycle, when coupled with the distant location of suppliers (Europe, Japan) has meant concepts such as "Just in time" are alien in the automotive industry in Zambia. The low production volumes also mean that imports of right hand models cause suppliers, scheduling problems, that result in the observed long supply delays.

Finally it may be noted that no assembly of engines takes place at all, while transmission and suspension parts may come sub-assembled for final assembly at the local plants in Zambia.

II.5 Assembly Costs

Assembly costs have increased astronomically over the last three years or so owing to the high escalation of the exchange rate which rose from K300.00 to 1 U.S. Dollar in 1992 to the present K950 to the U.S. Dollar currently. As CKD costs comprise about 60 to 70 percent of production costs, this rise has had a tremendous impact on local assembly costs. This is worsened by the low volumes leading to very poor overhead recovery.

As a result of the foregoing local assembly has become uncompetitive, and has led to the demise of the sector.

CHAPTER III - COMPETITION

III.0 Introduction

Prior to 1991, Competition in the automotive industry was somewhat prescribed by the high level of protection accorded local manufacturers. For example Assembly plants enjoyed waiver of duty on CKD imports, that was not enjoyed by importers of CBU. Further institutions like LA and LENO enjoyed preferential treatment by both Government and ZIMCO/INDECO who controlled about 80 percent of the economy. Notwithstanding the foregoing, there existed some internal competition among the franchise dealers of the various models. This competition has increased sharply following the liberalisation of imports and general reduction of tariffs.

III.1 Local Competition

The major competitors in the market are the franchise holder of Japanese models. Toyota Zambia Limited with an estimated market share of 24 percent is the market leader. The company, a subsidiary of the LONHRO group has well equipped showrooms and workshop facilities to service their customers vehicles and supply the necessary spare parts. Toyota Zambia major customers comprise Government and other institutional buyers. SUNDAT Motors who deal in Nissan vehicles are the second, and offer competition to Toyota both on quality and price. South Korea, has also entered the market with their Hyundai and Daewoo models and although they are still small, they are growing quite vigorously.

III.2 Regional Competition

From a regional perspective, the major source of competition is South Africa, who have superior manufacturing facilities for virtually all the major models such as Toyota, Nissan, Fiat, BMW etc. Zimbabwe and Kenya also produce vehicles but these do not reach the Zambian market for various reasons. Used vehicles, from Japan and "hot cars" from South Africa however pose the biggest headache to the local industry. Competition in this

regard is on price. Most reconditioned vehicles from Japan are available for as low as \$2500 ex Tanzania. Similarly "hot" cars from South Africa may sell for between \$4000 - \$8000 for a Mercedes Benz, for example. Most of these vehicles are brought into the country by individuals and some companies dealing in second hand vehicles and have hurt sales of new cars. New vehicle dealers wish the Government to limit indiscriminate imports of vehicles, but Government believes the market will resolve this issue. An indication of the level of competition is the extent to which some companies were fearful of divulging their sales quantities, price levels etc for fear this might be used against them.

III.3 Official Corruption

There is one factor that however should not be overlooked in the marketing of new cars in Zambia. This is the aspect of official corruption. Although nothing concrete has been forthcoming one vehicle franchise was accused of bribing Government officials to secure purchases of this company's products.

Given the tight monetary stance taken by the Governments, as it attempts to cut its expenditure, and the low performance of the economy, competition is likely to be extremely keen, and, it is possible unethical marketing practices may arise.

Table 6 shows that, Toyota Zambia Limited is the price leader in passenger vehicles sector, closely followed by Sundat Motors, dealing in Nissan models.

Other dealers are not keen to provide their price levels but it is known that South Korean franchise holders are charging market penetration prices.

India, is another producer trying to enter the Zambian market very aggressively and its competition strategy has been price.

CHAPTER IV - CAR COMPONENT MANUFACTURE

IV.0 Introduction

There is very little manufacture of car components and spare parts both for the original equipment market and the after market. The main reason for this position are as follows:-
Limited market size. Zambia is a low income country, which has been declining for the past twenty or so years. With virtually no income growth, the market for automotive vehicles has shrunk, if not stagnant.

Multiplicity of Models - Given this Limited market, the multiplicity of vehicles models has negated the growth of component manufacture, as the low model volumes make local production of components uneconomic.

Restrictive Agreements - Most franchise agreements specify use of genuine parts in both the OEM and after market, thereby reducing the scope for local component manufacture.

Insufficient Facilities/Technologies. The development of the Zambian manufacturing sector has been conditioned by the mining industry. Import substitution has mainly been in light consumer goods, and spare parts geared to the mining industry. While some of these industries may have the capacity to produce motor vehicle components, the other factors above militate against them doing so. It is also important to note that Research and Development has been very nascent in Zambia; and has tended towards agricultural implements. Consequent to the above automotive companies have focused on repair work.

IV.2 Local Component Manufacture:

Having made the following observation, it is also true that some components are being produced locally, and there is potential for some parts being made locally. Among the components being produced locally include car batteries, tyres and tubes, exhaust pipes, rubber linings and hoses, grilles, oil filters, leaf springs, nuts and bolts, fuel tanks, radiators and so on.

However, production of highly sophisticated components such as steering systems, engine blocks and parts, transmission systems, body parts, interior trim etc is non existent.

Again the small market size, limited technologies, skills and facilities, and lack of investible resources, prevent the emergence of such industries.

There is however potential for local manufacture of simple components, especially for the after market. A recent study of the market for components in Zambia identified under chassis components comprising shackle pins/spring pins, king pin and king pin kits, wheel studs, centre bolts, u-bolts, shackles and shackle brackets as well as exhaustpipes and oil filters as having a potential for local manufacture. The production at this stage would be for replacement demand, for approximately a hundred thousand vehicles or so. Secondly it was noted that export potential existed, although this was not quantified.

Table 7: gives estimated production quantities for the above mentioned items, as well as the other locally produced items and the manufacturers.

IV.3 Facilities

Research by this study has also identified available facilities, that could further move forward the automotive industry in Zambia. Zambia Railways and Tanzania Zambia Authority (TAZARA) both possess well equipped workshop facilities, that could form a basis for the expansion of the automotive industry. Zambia Railways in particular has the following facilities.

- Cast Iron and Non Ferrous Foundry with a rated output of 2500 tonnes. Capacity utilization is at 60 percent.
- Forging and Smithy Shop with heat treatment facilities. Installed capacity of 300 tonnes with capacity utilization at 70 percent.
- Fabrication Shop, rated at 2000 hours and utilization at 70 percent.
- Machine Shop, rated at 6000 hours and whose utilization is reckoned at 90 percent.
- Laboratory facilities for Chemical, Mechanical and Metallographic tests.

Zambia Railways are able to undertake metal fabrications, machine components (shafts, nuts, bolts, gears etc) forged components (hammers, leaf springs) castings (Ferrous and Non Ferrous eg brake blocks, gears pulleys etc). The Company is also capable of undertaking body work. To effectively service the automotive industry, Zambia Railways would need to install an electric arc steel furnace or an induction furnace to make steel castings. Other companies having similar facilities include Boart Long Year who produce both mining and industrial spare parts. An evaluation of the potential for local manufacture shows that opportunities exist with regard to available spare capacity and infrastructure, while potential also exist for utilization of local materials. The major constraint is capital outlay to purchase additional specialised equipment.

- Manufacturers believe the Zambian Government policy is liberal, and not restrictive to encourage local manufacturing. It is however not seen to be supportive, especially with regard to financial support.
- Given the above scenario, the Industry believe the strategy should be to continue imports coupled with local assembly, eventually graduating into local manufacturing of components for both the local and export market. However, there will be need for a comprehensive technical survey of both potential parts and facilities to determine precisely what will be possible.

CHAPTER V - GOVERNMENT POLICIES

V.0 Introduction

Government Policies operate at both the macro-economic, sectoral and micro level to influence the direction of the development of a given sector.

Past macro-economic policies in Zambia have tended to be dominated by public enterprises, commanding about 80 percent of the economy, giving little incentive to private sector initiative. The allocation of resources in the economy was achieved through administered prices, such as fixed (and negative) interest rates, overvalued exchange rates and highly protectionist tariff structure. Despite the foregoing the automotive industry in Zambia has failed to make a significant contribution to the economy due to its failure to integrate with the rest of the economy. This failure to integrate local automotive manufacture with the rest of the economy has been attributed to various causes.

However, the macro-economic policies have contributed to the inefficiency of the sector, and its lack of development.

Since 1991, when the new Movement for Multiparty Democracy (MMD) Government took power, it has introduced new economic policies that include economic stabilization to pave way for private sector led growth. The economic liberalization of the economy, includes privatization of the huge parastatal sector, market determined exchange and interest rates as well as reduced tariffs.

The new government has embarked on major reform of all policies. A review of key relevant policy reforms is given below.

V.1 Industrial Policy - The major focus of the new industrial policy is development of an open, competitive, dynamic and sustainable industrial sector, led by private enterprise. Its key components include:-

- Removal of protectionism to foster efficient import substitutes and provide incentives for exports.
- Utilization of local raw materials by maximizing value-added linkages.
- Employment generation resulting from a proper balance between capital and labour.
- In order for the policy to be effective, it seeks to promote acquisition of appropriate technology, enforcement of quality standards, observance of industrial property rights, and provision of adequate human resource development.

V.2 Investment Climate

In order for private enterprise to flourish, an appropriate, enabling investment regime is required. In this regard the Government has passed the Investment Act of 1991 which provides among others.

- Tax incentives
- Repatriation of profits and capital.
- Guarantees against expropriation/or nationalization of private business.

V.3 Transport Policy

The Government's transport policy recognizes the crucial role of road transport both for freight and passenger transportation. Government Policy aims to put into place an efficient transport network. In order to achieve the foregoing Government intends to concentrate on the maintenance and rehabilitation of infrastructure, concern itself with the regulatory framework and encourage private sector based market development of the transport sector.

Specifically Government intends to divest its transport companies through privatization. It also intends to restrict its purview to ensuring access to quality transport and issues of safety and reliability.

V.4 Policy overview

An overview of Government Policies shows that it is liberal. However, it does not at the same time provide any special assistance especially to the development of the local automotive manufacturing industry per se. This is an area, that Government may need to be sensitised if the industry is to be revived. Copies of both the Industrial Policy and Investment Act are annexed to this report. Government transport policy is not yet published.

CHAPTER VI - INSTITUTIONAL INFRASTRUCTURE

VI.0 Introduction

The necessary institutional infrastructure for the automotive industry in Zambia is weak due to its focus on merchandising operations. There is virtually no research and development, while training is limited to craft and technician level, required for operational purposes. Further, Government Policy on Science and Technology is yet to take shape, such that, there is a lack of direction in this respect.

However, there are four trade associations namely the Motor Trade Association(MTA), grouping automotive dealers, the United Taxis and Transport Association (UTTA) for Bus and Taxi Operators. Truckers Association of Zambia (TAZ) and Federation of Road Hauliers (Fed Haul) grouping road freight transporters. These associations are primarily concerned with consultative, advisory and liaison contacts with the Government on matters that affect them such as fuel prices, passenger transport and trucking rates and issues of customs duty on vehicle imports. Generally speaking, these associations have been quite successful in negotiating with Government on the various issues mentioned above.

VI.1 Research and Development

Regarding Research and Development, there are two major relevant research institutes, these being the Technology Development Advisory Unit (TDAU), which is part of the University of Zambia, and the National Council for Scientific Research (NCSR) a Government scientific research institution. Both Institutions suffer from inadequate funding, and their level of utilization by industry is extremely low. Their research on the automotive sector is barely non-existent. In part this reflects the absence of an automotive engineering faculty at the University and the absence of any meaningful manufacturing of automotive components in the country.

VI.2 Trade Associations

2.1 MTA group's the key automotive traders, assemblers, and others, who lobby the Government on such issues that may negatively affect their businesses including import duties. MTA wish the Government to limit the number of models imported into the country in order to consolidate the industry. Government is unlikely to oblige on this matter.

2.2 UTTA represent taxi and bus operators. The major focus in their discussions with Government has been on fuel prices, which are likely to escalate their running costs, and fares, which if they do not reflect running costs affect profitability. Petrol currently costs about 60 cents a litre.

2.3 TAZ and Fed Haul also negotiate with Government on haulage rates, but in addition Fed Haul has pressured Government to ensure the maintenance of physical infrastructure, and most of their members act as Honorary Traffic Inspectors.

VI.3 Consumer Credit

There is little Consumer Credit available in the automotive industry as is the case in most developed countries. Leasing is only starting and is being hampered by high interest rates. Occasionally automotive traders provide 60-90 days credit, in order to secure sales. However by and large vehicle sales are on cash basis.

VI.4 Training

As noted above training in the automotive industry is made at diploma technician and craft levels. The Department of Vocational Education and Vocational (DTEVT) runs 14 colleges which offer relevant training in motor mechanics, auto-electrics, machining, fitting, metal fabrication and mechanical Engineering; among others. In 1994, the combined output of these colleges was 291, craft certificates, 49 technician certificates

and 19 diplomas certificate holders. These institutions are supplemented by private colleges, the most important of which is the Industrial Training Centre. No data is available on the quality and quantity of private colleges. The University of Zambia provides higher education in Mechanical Engineering, at Bachelors level producing 15 - 20 graduates a year. There is no specialized automotive engineering degree at this level.

VI.5 Conclusion

To summarize, the Institutional Infrastructure encompassing automotive trade is biased towards the motor trade and transporters who negotiate with government on tariffs and rates. There is virtually no Research and Development, or any credit facilities. Low level training is available, and supplies personnel suitable for repair and maintenance work.

CHAPTER VII - TRANSFER OF TECHNOLOGY

VII.0 Introduction

The existence of Assembly Plants was supposed to facilitate the transfer and adaptation of technology. This has however been limited to transfer of assembly skills, repair and maintenance capability and little else.

Technological absorption has been hindered by an equivocal Government policy, restrictive licensing agreements, low Research and Development linkages, as well as insufficient technological diffusion in the society and insufficient facilities. As a result no local supplier capability has been developed, whilst the question of quality standards has been tied to those available from suppliers. If technological transfer and adaptation is to occur Government needs to be clear about the role of technology in the development effort and provide unambiguous policy direction. Presently Government says it will encourage acquisition of technology to improve production efficiency and productivity. However, there is need to go beyond this and provide incentives for technological adaptation. The issue of local content in this regard is very important since it will influence the development of locally manufactured components and spare parts. Zambia presently lacks any clear local content policy.

CHAPTER VIII - PHYSICAL INFRASTRUCTURE

VIII.0 Introduction

The physical infrastructure comprising dealers, service centres, roads, etc have been already been mentioned in this report. Apart from the official dealers representing the major automotive companies; there are scores of independent dealers selling second hand vehicles and providing repair and maintenance facilities. This factor is seen to be favourable to the development of the automotive industry generally.

VIII.1 Road Infrastructure

The Road Network in Zambia is quite extensive, covering a total of 37,000km, broken down as follows:

Class I, Paved/Tarred Roads	-	6,576Km
Class II, Gravel Roads	-	8,220km
Class III, Earth roads	-	21,967km

- As of 1991, most roads were badly damaged due to long neglect. Government's immediate objective is to rehabilitate the road infrastructure. In the long term Government intends to upgrade Class III and Class II roads to Class I and Class II respectively.

To finance the road rehabilitation programme Government has instituted a fuel levy of about a cent per litre towards road reconstruction. This is likely to increase in future, and the World Bank has promised substantial resources (about \$800 million) in this area.

VIII.2 Service Centres

The major motor vehicle dealers in the country have over the years established necessary physical infrastructure in the automotive industry in the form of showrooms, mechanical workshops, training school facilities and spare parts outlets to support their respective

business in the car industry. This infrastructure is mainly located in major economic activity areas of the Copperbelt, Lusaka and provincial centres of Central and Southern parts of the country.

The dealers through this network of workshop and spares outlet provide the following services to their respective customers.

- Marketing of motor vehicles
- Mechanical repair and maintenance of vehicles
- After sales service
- Panel beating and spray painting
- Spare parts sales
- Training of customers technical personnel.

Table 5 indicate selected motor vehicle dealers and types of activities they are engaged in, relative to customer service. It should be noted however that, besides the major dealers, there also exist independent dealers who provide and participate in the provision of services to the automotive industry. These mainly deal in non-genuine spare parts.

Conclusion

Zambias road infrastructure is extensive but in very bad repair. Government, with the help of the World Bank have embarked on a rehabilitation programme. Vehicles Repair facilities are adequately provided by both automotive dealers and independents, and could thus form a basis for future industry development.

CHAPTER IX

TECHNOLOGY (IMPLICATIONS FOR DEVELOPMENT COUNTRIES)

IX.0 Introduction

As mentioned earlier, all local vehicles assemblers have gone into joint ventures and/or licensing agreements, covering the products and process technologies. However, these arrangements have not resulted into technological development of the host country. With regard to dealers, franchises have been the norm. The implications of these relationships have had little impact on the country, probably because the issues of the role of technologies have not been dealt with sufficiently. Issue of out sourcing, strategic alliances, value added etc have not arisen due to the excessive orientation with imports. Similarly no questions of specifications have taken place, as the role of the automotive industry in the development process has been marginal. However Government Policy now emphasizes the need to access and acquire appropriate technology through purchases licensing and so on.

Government also intends to form a strong foundation for reliable and quality information on technology selection, acquisition as well as technology policy and planning. In this regard the Government intends to strengthen Public Research Institutions such as the TDAU and NCSR to undertake technological development, adaptation, choice and selection of equipment, provision of information and quality assessment. Further Government intends to link the Public Research Institutions to the private sector; so that industry may utilize Public Research Institutions on a commercial basis. In order to encourage Research and Development, Government aims to encourage investment into R & D through financial incentives, including making R & D expenditure tax deductible. However, apart from these general policies, there is no focus on the development of indigenous technologies; or adaptation of foreign technologies to suit the local conditions.

CHAPTER X - FINANCE

IX.0 Introduction

Zambia's fixed investment as a percentage of the Gross Domestic product has declined from 52 percent in 1975 to 10 percent by 1994. Equally savings have fallen sharply over the same period and now are below 5 percent of GDP. The reason for this fall in investment has primarily been the fall in both copper prices and output over the years. Secondly Government has tended to emphasize consumption at the expense of Investment. Thirdly, up to 1991 economic policies favoured Public Investments at the expense of private investment.

Since 1991, however Government has withdrawn from the market and is currently privatizing Parastatal Companies. Government is however, also constrained to provide any investible funds as it is running a "Cash Budget". Finance is therefore expected to come from the private sector, which is also facing a liquidity crunch. In terms of long term finance, the Development Bank of Zambia (DBZ) is the major source of finance, as local commercial banks prefer to provide working capital resources only. The Development Bank of Zambia has total assets of \$50 million but available investible resources are low. The Bank from time to time receives lines of credit from various institutions such as the African Development Bank, European Investment Fund, OPEC Fund, PTA Bank to onlend to its customers. To date the Bank has received credit lines worth about \$75 million.

The Bank is however affected by the steep exchange rates which have forced their customer with foreign exchange loans to default on their loans thus affecting the Bank's liquidity. As of 1995, the Bank's cash flow was a negative \$3.7 million.

Until Zambia's credit rating improves significantly there will be little long term International finance available to the country on commercial terms. On the other hand,

such International Institutions as the World Bank. IMF tend to finance public sector projects. However, given Zambia's high and positive interest rates of about 18 percent in real terms, private inflows into the country are likely. The only danger is that this money may enter the speculative market, where these high rates are found.

CHAPTER XI - MARKET

XI.0. Introduction

The total Zambian market for all types of automotive vehicles is estimated at about 10,000 new vehicles per annum. In value terms this is estimated at an average of US \$60 million per annum. The Zambian automotive market has been declining, in line with the poor economic performance of the economy. As Annexe II show, vehicle imports have declined from \$ 89.million in 1989 to \$46 million by 1993. This a decline of about 50 percent in value terms. This trend matches that of vehicle registration that have been showing a downward trend since 1980.

XI.1 Imports

Inexplicably however, import statics of motor vehicles for the period 1991 to 1994, although showing a declining trend give exaggerated figures of import volumes and values. For example these statistics show that in 1991, Zambia with a Current Account Deficit of \$513 million imported 536,000 vehicles. This figure declines to 160,00 units in 1992 before rising to 265,000 in 1994.

The above figures are most improbable given the state of the economy. In our view the figures would need to be deflated by a factor of 10 to come anywhere near reality. Annexe II gives the statistics on the import statistics referred to above. As indicated, the Zambian market for, Motor vehicle has been declining. On the basis of motor vehicle registrations, the market fell by about 20% from 1980 - 1990.

Since 1990, the market seems to have fluctuated between 6,000 and 10,000 units per annum. This position is unlikely to change in the next five to 10 years, until a significant improvement occurs in the Zambian economy. As Zambia is a low income economy, purchases of new motor vehicles are severely limited to the institutional market. In the short term this market is depressed, and it is difficult to predict its future. However, the

Zambian Government is receiving substantial external financial assistance from Donors. Part of the resources will be used to procure automotive vehicles for the various projects. It is not possible to quantify the types and volumes of vehicles to be bought using donor resources.

XI.2 Selling Prices

The selling prices of imported vehicles in Zambia ranges from about \$12,000 for 1300 cc capacity unit to around \$30,000 for a four wheel drive unit. These prices are before import duty, excise duty and value added tax. For the smaller vehicles the effect of taxation is to raise the selling price by about 85 - 90 percent of import cost, whereas the bigger model's effective protection is 101 percent.

Table 6 gives some selected prices for Passenger vehicles. Prices for trucks and buses are much higher and may reach \$60 - \$70,000.00 before tax.

XI.3 After Market

The after market in Zambia has not been established with precision. Available statistics on car registration from 1980 - to date would put the vehicle population at around 100,000 units or so. However, this market is highly fragmented, although, at first approximation the Toyota range will dominate.

In terms of local manufacturer of components for the after market, these could be limited to generic items such as oil filters etc which can be standardized on most vehicles. Government attitude towards growth and nature of the market is non-interventionist. However, government does give preferential treatment to Commercial vehicles and Public Transport vehicles through preferential tariffs.

In 1995, duty was waived on buses with a minimum seating capacity of 15 persons in order to enable the private sector fill the vacuum left by the liquidation of the United Bus

Company of Zambia, a former parastatal transporter.

In Conclusion we note that the market for motor vehicles in Zambia has been declining in line with the poor performance of the economy. The market is likely to remain depressed until the economy improves, which is not expected in the short term.

XI.4 Regional Market

Zambia is a member of Common Market for East and Central Africa (COMESA). This market has a total population of 240 million, and imports worth about US \$15 billion, while exports stand at US \$11 billion. Annexe ... gives some key statistics of the member countries of COMESA.

An analysis of this market for automotive products shows imports valued at about \$900 million in 1993. Of this Passenger vehicles accounted for 43 percent Goods vehicles, 38 percent, Buses 10 percent with the balance representing other vehicles.

The COMESA countries exhibit varied economic states, but most of them are low income countries. Some like Angola, Mozambique and Ethiopia are emerging from civil strife. Taken individually these markets are too small to support a significant automotive industry. However when viewed collectively they represent a viable market.

With regard to Zambia the most potential market are those closest to it namely Tanzania, Malawi, Angola, Mozambique, Namibia, Rwanda and Zimbabwe. Zambia could also export to Botswana, a Southern Africa Development Community (SADC) member to which Zambia also belongs. COMESA aims to encourage Intra-COMESA trade, by reduction of tariffs among member states with a view to their elimination by the year 2000. However, exports among COMESA countries will only benefit if they meet local content rules that stipulate that the "value added" should as a minimum be 45 percent or more of the ex factory cost. Alternatively inputs imported outside COMESA should not

exceed 60 percent of the total cost of production.

XI.5 Tariffs

Zambia's tariffs on imported automotive vehicles and components is 40 percent import duty, 10 percent excise duty on vehicles with an engine capacity of 1500 cc or more plus value added tax (VAT) of 20 percent. Components attract only import duty of 40 percent and value added tax of 20 percent. These tariffs are still high, although it is Government's intention to gradually lower them to promote efficient production. Further these rates have come down from when nominal rates were as high as 100 percent on imported motor vehicles a few years ago.

XI.6 Components

Zambian automotive dealers import components from suppliers overseas. These components are easily available and are only subject to availability of foreign exchange, since Zambia's economic reform, availability of foreign exchange has been relatively good on account of donor assistance to the country. Further copper prices have improved lately thus improving the flow of foreign exchange. Zambia only gives rebates to exporters who use imported inputs, but as there are no automotive manufacturers who export this is not relevant at the moment. The issue of trade barriers is being tackled by the Government which for a start has eliminated both import and export controls and taxes. Imports are now subject to market regulation since the Kwacha is now fully convertible.

CHAPTER XII - ENVIRONMENTAL CONSIDERATION

XII.0 Introduction

(i) Waste Reduction Opportunities

Motor vehicles and their components are designed for use for a certain period of time at a predetermined usage rate, after which failure will occur.

In Zambia usage of vehicles as a means of transport has been adopted seriously since the end of the Second World War. Hence the towns and countryside are littered with abandoned vehicle body shells and components. At present there are private business concerns which go about collecting these pieces as scrap metal for export to the Republic of South Africa. However, serious collection and vehicle scrap can be achieved by installing a scrap recovery plant in Zambia in future. Currently only Scaw Tawd in Kitwe on the Copperbelt and Vulcan Foundry in Lusaka process a small amount of iron and steel scrap locally.

(ii) Pollution Prevention

The role of overseeing pollution control and prevention in Zambia rest with the Environmental Council of Zambia (ECZ). At present E.C.Z. is in the process of formulating air pollution control measures and a detailed proposal on the legal framework for air pollution regulation and control in Zambia. These draft proposals will specify the limits for ambient and point of source pollution limits. It is planned that these proposals should be studied by government for possible legislation into law in 1996.

The E.C.Z. intends to develop local air pollution control standards to meet the needs of Zambia, taking into account the objective of limiting air pollution and the actualities of the local environment.

ANNEX I: ZAMBIA - KEY ECONOMIC INDICATORS 1970 - 1994

	Unit	1970	1975	1980	1985	1990	1991	1992	1993	1994
Real GDP At 1977 Prices	K Mill	1743	1960	1996	2045	2214	2209	2094	2287	2116
Per Capita GDP	Kwacha	419	404	353	303	273	265	248	264	237
GDP Growth%	%	3.3	7.6	5.1	5.4	(0.5)	0.0	(3.4)	9.7	(7.5)
Fixed Investment GDP	%	49	52	22	13	15	13	14	15	10
Copper Production	000's (TMT)	683	640	607	479	426	375	409	393	370
Copper Prices/L.B	US \$/L.B	0.69	-	1.0	0.65	1.21	1.07	1.04	0.87	1.01
Copper As % of Exports		92	91	76	88	85	82	78	77	72
Current A/C Balance (USD Millions)	U.S. \$ Millions	107	(726)	(538)	(324)	(388)	(513)	(753)	(472)	(389)
Terms of Trade 1977	1977 = 100	257	112	102	89	98	84	-	77	-
Debt Stock	U.S. \$ Billion	-	1684	3261	4576	7237	7041	6943	6788	6375
Debt Stock/GDP	%	-	69	84	203	193	214	193	214	182
Debt Service/ Exports	%	-	14	22	7	60	67	61	60	51
Real Exch Rate	-	4.29	(2.54)	(1.88)	-	(35.90)	-	(46.93)	(25.76)	18.49

Source: World Bank

ANNEXE II

ZAMBIA - IMPORTS OF MOTOR VEHICLES IN 000 DOLLARS 1989 - 1993

EAR CATEGORY	1989	1990	1991	1992	1993	5 YEAR AVERAGE
PASSENGER MOTOR VEHICLES	28,662	25,431	17,097	15,996	17,222	20,870 32%
GOODS TRANSPORT VEHICLES	40,397	39,014	23,062	17,264	15,953	27,138 42%
BUSES ETC.	9880	7318	7653	6655	5868	7,475 12%
SEMI TRAILERS, TRACTORS	6039	5138	7539	5,881	4460	5,811 9%
GOODS TRACKS TRACTORS, ETC.	361	1140	864	449	931	74997
SPECIAL PURPOSE VEHICLES	3528	8848	1804	3044	1740	3,793
TOTALS	88867	86889	58019	44289	46174	64848

Source: COMESA

ANNEX III

IMPORTS OF MOTOR VEHICLES, 1991 - 1994..

MOTOR VEHICLE DESCRIPTION	1991		1992		1993		1994	
	QUANTITY	VALUE (K'000)	QUANTITY	VALUE (K'000)	QUANTITY	VALUE (K'000)	QUANTITY	VALUE (K'000)
1. MOTOR VEHICLES OF CYLINDER NOT > 1000 CC	12,590	36,379	7,254	333,299	49,706	549,311	25,319	490,459
2. MOTOR VEHICLES OF CYLINDER > 1000 CC BUT < 1500CC	139,442	242,493	27,404	462,222	34,653	1,463,409	35,503	1,462,130
3. MOTOR VEHICLES CYLINDER >1500 CC BUT < 1300 CC	64,560	390,221	22,670	821,507	25,957	1,937,172	23,550	3,392,624
4. MOTOR VEHICLES OF CYLINDER > 1300 CC	14,141	49,772	207	81,440	27	216,457	5,104	527,501
5. OTHER DIESEL VEHICLES OF CYLINDER > 1500 CC	6,429	10,460	9,042	32,069	35	49,353	90	80,352
6. DIESEL VEHICLES OF CYLINDER > 1500 CC BUT < 2500CC	7,294	42,166	5,749	140,107	5,013	659,024	1,105	1,134,294
7. DIESEL VEHICLES OF CYLINDER CAPACITY > 2500 CC	3,031	60,003	10,045	65,510	933	197,075	2,055	720,300
8. OTHER DIESEL OR SEMI DIESEL MOTOR VEHICLES	20,356	66,001	4,331	124,220	4,274	449,143	3,951	1,072,692
9. COMMERCIAL MOTOR VEHICLES OF GROSS VEHICLE WEIGHT (GVW) NOT <5 TONNAGE	174,217	605,027	13,509	1,429,920	24,327	5,68,940	60,702	7,512,536

10. COMMERCIAL VEHICLE OF GROSS VEHICLE WEIGHT > 20 TONNES	35,150	310,264	20,950	972,853	137	155,241	10	541,095
11. OTHER SPARE IGNITION VEHICLES WITH GVM NOT MORE THAN 5 TONNES	3,730	156,034	5,700	406,814	2,761	899,194	4,111	777,984
12. OTHER SPARE IGNITION VEHICLES MOTOR VEHICLES GVM > 5 TONNES	8,040	54,120	47	69,681	31	54,952	10	553,094
13. OTHER MOTOR VEHICLES	14,789	66,903	3,337	128,250	533	241,429	23,992	212,234
14. PUBLIC TRANSPORT PASSENGER MOTOR VEHICLES	5,455	26,151	102	213,009	3,597	1,003,992	41,854	3,937,009
15. VEHICLES	17,292	313,692	28,829	322,414	3,597	1,201,427	37,467	2,247,751
TOTAL	535,974	2528920	159,204	5903491	140,757	9689019	265,099	24410867

Source: Central Statistical Office

ANNEXE IV**ZAMBIA - IMPORTS OF MOTOR VEHICLE PARTS/ACCESSORIES
IN 000 US DOLLARS 1989 - 1993**

	1889	1990		1992	1993	TOTAL	ANNUAL AVERAGE
	17,618	22,956	19,761	23,758	27,133		

ANNEXE V**ZAMBIA - IMPORTS OF M.V. BODIES, CHASSIS AND ENGINES
IN 000 US DOLLORS 1989 - 1993**

	1989	1990	1991	1992	1993	AVERAGE
M.V. BODIES	81	97	60	555	23	
M.V. CHASIS/ ENGINES	5,491	4,394	939	1,307	395	

SOURCE - COMESA

ANNEXE VI

ZAMBIA - IMPORTS OF MOTORCYCLES IN 000

US DOLLARS - 1989 - 1993

	1989	1990	1991	1992	1993	AVERAGE
	799	834	634	587	631	

ANNEXE VII

ZAMBIA - IMPORTS OF BATTERIES/ACCUMULATORS

IN 000 US DOLLARS 1989 - 1993

	1989	1990	1991	1992	1993	AVERAGE
	600	468	2,585	1,076	811	

ANNEXE VIII

ZAMBIA - IMPORTS OF NEW TYRES, RETREADS, FLAPS

IN 000 US DOLLARS 1989 - 1993

	1989	1990	1991	1992	1993	AVERAG E
NEW TYRES FOR M.V.	895	807	1,457	1,045	3,770	
NEW TYRES FOR LORRY ETC.	5,141	4,545	1,206	2,693	3,286	
RETREADS/ TUBES	292	266	505	2,226	412	
PNEUMATIC TYRES	6,989	7,553	7,882	7,190	6,648	

ANNEXE IX

**COMESA - SUMMARY IMPORTS OF MOTOR VEHICLES
IN MILLION US DOLLARS 1989 - 1993**

YEAR	1989	1990	1991	1992	1993
CATEGORY					
PASSENGER	420	430	398	472	394
GOODS TRANSPORT	484	454	366	474	344
BUSES	89	70	69	92	77
SEMI TRAILER					
TRACTORS	35	49	68	51	37
GOODS TRUKS, TRACTORS, ETC.	23	34	25	26	15
SPECIAL USE	71	969	50	35	31
TOTAL	1,122	1,133	976	1,150	899

SOURCE- ADAPTED FROM COMESA

IMPORT - EXPORT DATABASE

ANNEXE X

**COMESA: SUMMARY IMPORTS OF VEHICLE PARTS/
ACCESSORIES IN MILLION US DOLLARS 1989 - 1993**

YEAR	1989	1990	1991	1992	1993
IMPORT VALUE TOTAL	297	300	309	271	233
VEHICLE CHASSIS	33	43	24	32	14
VEHICLE BODIES	5	2	3	3	1

ANNEX XI

ECONOMIC INDICATORS OF COMESA COUNTRIES

Country	Total area (Km ²)	Popul. ('000) 1990	Urban Popul. 1989	Per Capita GNP '90 (US\$)	International Reserves (US \$) Million	External Public Debt Outstanding 1990	Life Expectancy (Years) 1990	School Enrolment Ratio in % 1988
ANGOLA	1,246,700	10,011	28	652	-	7,152	46	49
BURUNDI	25,834	5,470	5	210	105	850	50	33
COMOROS	2,171	475	27	478	30	177	55	56
DJIBOUTI	22,100	427	-	1,016	91	145	49	31
ETHIOPIA	1,221,900	51,183	13	118	24	3,116	48	28
KENYA	582,646	24,368	23	368	289	4,810	60	73
LESOTHO	30,355	1,771	20	470	73	372	57	80
MADAG.	587,041	11,600	24	226	92	1,195	51	55
MALAWI	118,484	8,504	12	195	138	1,366	48	48
MAURITIUS	2,045	1,074	41	2,255	741	799	70	79
MOZAMBIQ.	301,590	15,784	26	77	-	4,053	49	34
NAMIBIA	823,100	1,400	19	1,460	-	252	57	-
RWANDA	26,338	7,113	7	311	44	592	49	45
SEYCH	280	68	58	3,180	17	153	71	
SOMALIA	637,657	6,284	36	151	-	1,922	48	14
SUDAN	2,505,813	25,191	22	437	11	9,155	51	36
SWAZILAND	17,363	789	32	817	216	251	57	82
TANZANIA	945,087	27,300	31	86	193	5,294	50	42
UGANDA	236,036	17,358	10	220	44	2,301	49	47
ZAMBIA	752,614	8,122	49	418	193	4,784	54	69
ZIMBABWE	390,580	9,809	27	644	168	4,419	64	93

ANNEX XII

LIST OF PERSONS MET/SOURCES OF INFORMATION

- 1) Prof. F.D. Yamba Coolwell Systems Ltd (Formerly Managing Director - Engineering Services Corporation).
- 2) Mr. Evans Makosa General Manager - Commercial Motors Ltd.
- 3) Mr. B. Kaibele General Manager - LENCO Ltd.
- 4) Mr. Arola General Manager, Luangwa Industries Ltd.
- 5) Mr. F. Aongola Senior Manager - Development Bank of Zambia.
- 6) Mr. S. Daha Technical Manager - Vitretex Paints
- 7) Managing Director Chloride Zambia Limited
- 8) Dr. Kwenda Kwema Manager - TDAU
- 9) Mr. D.K. Mendamenda Director, Planning, Ministry of Commerce and Industry.
- 10) Mr. Mbumba Transport Economist, Ministry of Transport and Communications
- 11) Director Department of Technical Education and Vocational Training.
- 12) Mr. Lungu General manager - Zambia Railways Workshops.
- 13) Mr. Z. Zungu Ex Technical Manager - LMA
- 14) Director Environmental Council of Zambia
- 15) General Manager Toyota Zambia Ltd.
- 16) General Manager Sundat Motors Zambia Ltd.
- 17) General Manager Leyland Zambia Ltd.
- 18) Mr. H. Sikoma Zambia Bureau of Standards
- 19) B. Whifte General Manager - Marunouch Motors Corporation.
- 20) Director Central Statistical Office.
- 21) Director Roads and Road Traffic Board.
- 22) Mr. Madondo Chairman, Truckers Association of Zambia

TABLE III

NEW REGISTRATION OF MOTOR VEHICLES - 1980 - 1990

Year/ Quarter	NEW VEHICLES							Vehicles used elsewhere
	Vehicles for Passenger Transport				Vehicles for Goods Transport			
	Total New Vehicles	Passenger Cars	Omini Buses	Van, Vanettes & Ambulances	Trucks & Mechanical Horses	Construction Vehicles, Tractors etc	Motor Cycles & Scooters	
1980	9284	3155	386	3152	904	909	778	1098
1981	7080	2280	344	2002	863	762	829	1166
1982	8321	2783	381	2990	801	623	743	1350
1983	5401	2229	180	1755	514	317	406	708
1984	4963	1905	186	1750	460	204	458	797
1985	4747	1732	284	1528	475	245	488	322
1986	5772	2172	193	1893	589	207	718	1553
1987	3360	1203	112	984	433	151	477	1141
1988	4947	2032	293	1584	333	228	477	1356
1989	6902	3306	336	2106	451	190	513	1623
1990	7447	2924	362	2120	980	399	662	1693

Source: Central Statistical Office

TABLE III A

NEW REGISTRATION OF MOTOR VEHICLES 1991 - 1995

Year	Quarter	Total	Saloon Sedan & Coupe	Station Wagons	Pickups Vans & Pantenicor	Trucks Tippers & Fiats	Mini Buses	Buses	Tunkers & M/ Horses	Tactors	Traillers & Tonner Travellers	Motor Cycles	Ambulances	Other Vehicles
1991		6693	2322	-	1542	661	-	388	-	202	-	576	-	-
1992		8,457	2,383	675	2,669	817	178	84	186	308	351	618	6	182
1993		6,876	2,476	663	1,828	341	324	61	205	57	374	377	-	170
1994		10,116	3,373	883	2,493	574	978	138	246	81	113	995	13	229
1994	Q1	3,749	1,366	287	978	224	268	32	112	51	74	239	10	108
	Q2	3,389	1,035	327	936	201	356	89	85	19	23	239	1	78
	Q3	1,747	586	159	349	88	188	7	28	3	-	317	1	21
	Q4	1,231	386	110	230	61	166	10	21	8	16	200	1	22
1995	Q1	2,390	832	329	508	123	319	24	20	18	2	125	13	77
-	Q2	1,884	646	173	413	95	263	108	34	20	4	90	3	35

Source: Central Statistical Office

TABLE NO. IV MAJOR MOTOR VEHICLE DEALERS

ORGANISATION	NATURE OF VEHICLES	MODEL OF VEHICLES	CAPACITY RANGE	SOURCE OF SUPPLY	MAJOR CUSTOMERS	MAJOR COMPETITORS	ESTIMATED SHARE OF MARKET %	PROTECTED SALES FOR NEXT 3-5 YRS (ANNUALLY)
Toyota (Z) Ltd	Trading in Motor Vehicles	Motor Vehicles Corollar, Camry, Hilux	1300CC to 3000CC	Japan and South Africa	Government Embassies Fleet Owners Institutions	Nissan Mitsubishi	24%	1200 Units
Commercial Motors	Motor Vehicle Dealers	Peugeot Saloon & Pick-Ups 504,405 &305	1400CC to 3000CC	France	Government & Private Sector	Toyota Nissan Hyundai	7%	200 Units
Honda (Z) Ltd	Motor Vehicle Dealer	Honda Accord & Honda Civic	1300CC to	Japan and South Africa	Private Sector, Government & Institutions	Nissan Toyota Mazda	12%	150 Units
Duly Motors	Trading in Motor Vehicles and Spare Parts	Mazda and Ford Saloon/Pick-Up	1300CC to 2500CC	South Africa Japan	Private Sector and Institutions	Toyota Nissan	10%	200 Units
Motor Holdings	Motor Vehicle Trader /Spare Parts	Land-Rover VW, Aurk	1300CC	U.K.	Government Farmers	Toyota Mitsubishi	12%	250 Units
Marounuchi Motors	Motor Vehicle Trader/Spare Parts	Gallant, Pick-up Pajero	1300CC to 3000CC	Japan	Private Sector Government	Toyota Mitsubishi	15%	300 Units
Nissan	Motor Vehicle Trader/ Spare Parts	Nissan Mazma, Sunny, Sentra Nissan Patrol, Nissan Hilux	1300CC to 4200CC	Japan, South Africa	Government, Parastatals & NGOs	Toyota Mitsubishi Mazda	20%	600 Units

TABLE NO. V

ASSEMBLY PLANTS AND AVAILABLE CAPACITY

ORGANISATION	LOCATION	ANNUAL CAPACITY	TYPE OF PRODUCTS	CURRENT STATUS	SUPPLIER
LIVINGSTONE MOTOR ASSEMBLERS LIMITED	LIVINGSTONE	4500 UNITS	SALOON CARS. PICK UPS TRUCKS	NOT OPERATIONAL	FIAT AUTO ITALY
LUSAKA ENGINEERING COMPANY LIMITED (LENCO)	LUSAKA	250 UNITS	BUS BODIES TRUCK BODIES TRAILERS	OPERATIONAL	VARIOUS, PIACENZA ITALY
LEYLAND	LUSAKA	260 UNITS	LEYLAND TRUCKS	OPERATIONAL	LEYLAND U.K.
COMMERCIAL MOTORS	NDOLA	1000 UNITS	PEUGEOT 504 (1800cc) SALOON AND PICK-UP (ITON)	OPERATIONAL	TALBOT MOTORS FRANCE
MAROUNOUCHI MOTORS	CHINGOLA	1000 UNITS	mitsubishi PICK-UP (ITON CAPACITY)	IDLE	JAPAN
TOTAL					

TABLE VI

PRICE STRUCTURE FOR COMPETING MODELS

VEHICLE MAKE	CAPACITY	PRICE US \$	DUTY STRUCTURE:		
			CUSTOMS	EXCISE	VAT
TOYOTA COROLLA	1300cc	12,050	40%	10%	20%
NISSAN SUNNY	1300cc	14,000	40%	10%	20%
TOYOTA COROLLA	1600cc	14,950	40%	10%	20%
NISSAN SUNNY	1600cc	16,000	40%	10%	20%
TOYOTA CAMRY	2200cc	26,370	40%	10%	20%
NISSAN BLUE BIRD	1800cc	20,000	40%	10%	20%
NISSAN MAXIMA	3000cc	24,000	40%	10%	20%
TOYOTA HILUX 4X4	2400cc	23,660	40%	10%	20%
NISSAN HILUX 4X4	2400cc	25,000	40%	10%	20%
LAND ROVER 4X4	3000cc	36,000	40%	10%	20%
MAZDA ETUDE	1600cc	15,000	40%	10%	20%
MAZDA ETUDE	1300cc	12,060	40%	10%	20%

TABLE VII

LIST OF LOCAL COMPONENT/PARTS MANUFACTURE/POTENTIAL

<u>COMPONENT/PART</u>	<u>QUANTITY/OUTPUT</u>	<u>PRODUCER</u>	<u>REMARKS</u>
1. Automotive Batteries	38,000	Chloride (Z) Ltd	100,000
2. Battery Terminals	-	Chloride (Z) Ltd	Capacity Potential
3. Bumpers Metal	-	Leyland DAF	N/A
4. Bumpers Metal	-	Lenco Ltd	N/A
5. Body Panels	-	Lenco Ltd	
6. Bults/Nuts	-	Zambia Railways	Potential
7. Grilles (Metal)	-	Alro Engineering	Potential
	-	Lenco Limited	Potential
	-	Turning & Metals	Potential
8. Exhaust Pipes	-	Speedy Exhaust Ltd.	N/A
	-	Galco Zambia Ltd.	N/A
9. Fuel Filters	-	Umfechma Ltd.	
	-	Zam Capital Enterprises	
	-	Lenco Ltd.	
10. Fuel Tanks	-	Lenco Ltd.	
11. Tyres & Tubes	?	Dunlop Zambia Ltd.	
12. Rubber Moldings	-	Consolidated Tyre Services.	
13. Vehicle Springs	-	Universal Springs	
14. Leaf Springs	-	Zambia Railways	
15. Pins Wheel Studs	-	Luangwa Industries	

U Bolts, Centre bolts etc		Limited	10,000 Maximum per Annum
Other Studs, Pins, Bolts,		Luangwa Industries	30,000 Max.
Exhaust Systems		Luangwa Automotive Radiators	
16. Radiators	-	Kitwe Radiator Works	-
17. PVC Pipes		Plastico (Z) Ltd.	
18. Asbestos		Asbestos Enterprises Limited.	

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