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Development financing and small scale industries in Nigeria

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DEVELOPMENT FINANCING AND SMALL SCALE INDUSTRIES IN NIGERIA

BY

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A THESIS IN THE DEPARTMENT OF ECONOMICS SUBMITTED TO THE FACULTY OF THE SOCIAL SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY OF THE UNIVERSITY OF IBADAN.

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DEDICATION

This study is dedicated to my family, especially my children, Yemi, Femi and Kemi who bore the brunt of my absence from home for most of the time since I started the programme.

ABSTRACT

Previous studies by eminent scholars have shown the significant contributions and potentials of Small Scale Industries (SSI's) in the economic development efforts of Nigeria. These studies have also shown that, among other limiting factors, shortage of funds has been critical.

However, the emphasis of these studies has been on the availability of funds for the aggregate Investment Expenditure of Small Scale Industries. Other empirical works showed that Small Scale Industries require funds for start-up (Fixed Asset) Investment, Working Capital and expansion of existing facilities. These studies have also shown that these Small Scale Industries obtain financial assistance from the formal financial institutions including Development finance Institution, mostly for expansion of existing facilities and working capital, while they obtain their initial start-up funds from personal savings, loans from friends and relatives and other informal institutional lenders.

Given that prospective Small Scale Industrialists have little or no collaterals as security for obtaining finance for start-up of the business, the current study tries to find out the extent to which Development Finance Institutions have funded SSI's especially with regards to start-up (Fixed Assets), Working Capital and Capital for Expansion; while also determining the contribution of other credit sources e.g. commercial banks, non-bank financial institution and other informal sources to the above enumerated investment expenditure of Small Scale Industries.

In effect, my study tested the significance of each of these credit sources and their substitutability for development finance institutions in the finance of fixed asset investment, Working Capital, expansion of facilities and total Investment Expenditure of Small Scale Industries. Finally, the study tried to determine and assess other factors that could bring about improved funding of Small Scale Industries in Nigeria.

To achieve the objectives, the study explored and appraised the role of development finance institution in Nigeria's industrial development with emphasis on

their sources and uses of funds, credit policies, operations and existing activities.

Specifically, the study using three hundred and eightly-two (382) Small Scale firms from Bendel, Lagos, Ogun, Ondo and Oyo States and an econometric model, tested the significances of the parameters, IT (Investment in fixed Assets, INV (Changes in Inventories), EX (Capital for Expansion), TGI (Total Investment Expenditure), R (Interest Cost of Debt), S (Gross Sales Turnover), KE (Equity Capital), D (Debt Capital and M (Maturity of loan) and C (Credit variables) in each of the component Investment Expenditure of Small Scale Industries. In addition, the study tried to examine the substitutability of each of the Credit variables C(representing total accummulated debts, liabilities to bank and non-bank financial Institution (BNF), liabilities to banks (TLB), liabilities to Development Finance Institutions (TDFI), liabilities to Non-Bank Financial Institutions (TNP) and Net Trade Credit (NTC) in the investment expenditure of Small Scale Industries in Nigeria.

Evidence that emerged from the study however revealed that Small Scale Industries require funds mostly for fixed asset investments and expansion of their existing facilities; which implied that appropriate policies must be designed to cater for the individual component of Small Scale Industries Investment expenditure viz: fixed asset investment, working capital and expansion capital. Furthermore, the study revealed that credit sources other than Development Finance Institutions are significant sources of funds to Small Scale Industries in one or two of the investment expenditures and therefore could be substituted for Development Finance Institutions. The implication of this finding is that government policies designed to enhance finance and development of Small Scale Industries in Nigeria should involve all the credit sources identified, while existing Development Finance Institutions should be reorganised to perform more efficiently their development financing roles.

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E.O. George

November, 1990.

CERTIFICATION

We certify that this work was carried out by Emmanuel Oladapo George in the Department of Economics, University of Ibadan.

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LIST OF ABBREVIATIONS

DFI - Development Finance Institution

F.M.I. - Federal Ministry of Industries

F.O.S. - Federal Office of Statistics

I.C.O.N - Investment Corporation of Nigeria

G.D.P. - Gross Domestic Product

G.N.P. - Gross National Product

I.R.U. - Industrial Research Unit

I.S.I. - Import Substitution Industrialization

I.S.I.C. - International Standard Industrial Classification

M.E.C. - Marginal Efficiency of Capital

M.E.I. - Marginal Efficiency of Investment

N.A.S.S.I.- National Association of Small Scale Industrialists

N.B.C.I. - Nigerian Bank for Commerce and Industry

N.I.D.B. - Nigerian Industrial Development Bank

NERFUND-SME - National Economic Reconstruction Fund - for Small and Medium Enterprises

N.I.S.E.R.- Nigerian Institute for Social and Economic Research

SSI - Small Scale Industry

SSICS - Small Scale Industrial Credit Scheme

UNIDO - United Nations Industrial Development Organisation

CHAPTER ONE

Introduction

Development financing and Industrial development

Mobilising domestic financial resources for rapid industrialization have been curtailed by certain factors like low income and savings, common in the less developed countries, the liquidity preference of the people, and the conservation of the financial system as reflected in the operational policies of the commercial and merchant banks. Such conservatism however could be explained if one considers the sourcing of their financial resources. Their resources consist of customer's demand deposits. Banks therefore prefer to grant short term self-liquidating loans such as bank overdrafts, and are unable to participate in funding of industrial projects which are often of long gestation periods.

Hence most governments in the developing countries have set up specialised institutions to fund these vital sectors of the economy in order to accelerate the pace of industrial and consequently economic development. Other factors that have necessitated their establishments in

the developing world, including Nigeria, include the problem of low income, low savings, inadequate investment further complicated by the lack of entrepreneurial skills and the need to develop viable industrial projects into which any investible funds could be put. Development finance Institutions (DFIs) have thus be found indispensable as institutional devices designed not only for the promotion and finance of industrial or other economic development projects, but also for the provisions of technical skills and advice needed to get such projects off the ground.

Development finance Institutions are to be found today in almost all countries of Africa, Latin America, Asia, the middle East and even in some of the developed countries. The governments of these countries have either set up the institutions directly or played a key role in their establishments. In addition to National DFI's, regional DFI's and International DFI's have also been established in the respective regions of the developing and developed world. Examples are African Development Bank, the Asian Development Bank, the European Investment Bank, The OPEC fund, The Arab Bank for Economic Development (BADEA) and the World Bank Group consisting

of the International Bank for Reconstruction and Development (IBRD), The International Development Association (IDA) and the International Finance Corporation (IFC).

Though DFI's are expected to pay their way, they are essentially not for profit. This is one feature that distinguished DFIs from commercial banks and other financial institutions. They extend long term loans sometimes up to 15 years maturity, to relatively risky development and industrial projects with long gestation periods. They also often participate in the equity capital without which scarcely any project could survive.

With the aftermaths of the two world wars 1919 and 1945, there were great needs for reconstruction, rehabilitation and economic development. This led to the evolution of most of the International Development Finance Institutions each playing designed roles based on its charter and objectives.

International Bank for Reconstruction and Development was established in 1945 for the reconstruction of the damages of the World War. The bank assists in the economic development of many developing countries. If often

acts as a direct contributor of fund, a resource catalyser and a financial disseminator. The Bank has helped at least 42 African countries, 24 Asia countries and at least 43 countries in the Western Hemisphere to date. Its operating capital is often raised through the sale of bonds and subscriptions. In its lendings, it deals directly with government or with projects for which the government acts as guarantor. Subscriptions by members are determined by quota system with about 146 members with headquarters in Washington, U.S.A.

Other such institutions include the IFC and the IDA. The International Finance Corporation (IFC) an affiliated of the IBRD with about 125 members, though raises funds from sales of bonds or borrowing, it invests directly in private companies, or grant loans to private investors or guarantees such loans. Usually, its equity participation must not be more than 25%. It has granted a lot of low interest off-shore investment funds to many companies in Nigeria and other developing countries. Similarly International Development Association (IDA) also affiliated to the World Bank supplies low interest long term loans to developing countries. It was originally set up to grant international finance to agricul-

tural projects. Its funds come mostly from members subscriptions, funds from developed members of the World Bank and transfers from net-earnings of the bank.

Part of the loans could also be paid in local currency but mainly for development of infrastructural and agricultural projects. Only members of the World Bank (IBRD) can become members of the IDA. World Bank Report (1988) showed that as at 1988 the bank had provided loans totalling $255 million to three Nigerian Development Banks, with the NIDB receiving $6 million, $10 million, $60 million and $120 million in 1969, 1971, 1978 and 1983 respectively. The World Bank had also provided a loan of $41 million to NBCI in 1984 and a sub-loan of $24 million to NACB for its Livestock Project.

African Development Bank (ADB) was established in 1963 with Abidjan as headquarters. The bank as at 1987 had 50 independent African members and 25 non-African States. The bank had granted loans to several African States for Infrastructure, transport, public utilities industries, education etc. The cumulative disbursements of the Bank group as at the end of 1988 was $6 billion

representing 47% of cumulative lendings. The bank is also involved in co-financing of projects and as at 1988 it had co-financed a total of 90 projects for a cumulative committment of $25.2 billion with about $5 billion from the ADB group.

In Nigeria, ADB has provided a line of credit to NIDB, NBCI, Ogun, Ondo, Bauchi, and Anambra states for several projects.

DFI's in Nigeria: With establishment of regional governments about 1949, came the emergence of Eastern Nigeria Development Corporation (ENDC), Western Nigeria Development Corporation (WNDC) and Northern Nigeria Development Corporation (N.N.D.C.) The early DFI's in Nigeria were saddled with a lot of problems. These problems include too wide and ill-defined functions, political interference, favouritism and corruption in the allocation of financing particularly from politically influential individuals, together with poor management practices. After independence, Investment Company of Nigeria Ltd (ICON) was established with the objective of assisting industrial, commercial and agricultural enterprises by furnishing managerial, technical and administrative

advice and services to Nigerian industry, commerce and agriculture, providing both long and medium term loans, equity participation and sponsoring of viable projects and syndication of loans for investment projects.

Nigerian Industrial Development Bank (NIDB) - was established in 1964 to take over the functions of ICON Ltd. with 74% foreign participation and 26% local participation until the indigenisation decree which reversed the trend to 59% Federal and 40% Central Bank and 1% private Nigerians.

The main objective and functions of NIDB were to

(i) finance enterprises which are deemed risky and unattractive for private financing;

(ii) provide some facilities for Small Scale Industries through other expanded credit institutions;

(iii) mobilise domestic and foreign skills, experience and foreign capital in the development of new industries and expansion of new ones, among others.

Its loans normally grant 2 years moratorium and repayment of between 5 to 15 years.

Nigerian Bank for Commerce and Industry (NBCI) - was established in 1983 to provide equity capital and loans

to indigenous persons, institutions and organisations for medium and long-term investments in industry and commerce at such rates and terms as may be determined by the board in accordance with government industrial policies.

The Bank has received assistance from the ADB, other International finance agencies, income from investments etc.

Nigerian Agricultural and Cooperative Bank (NACB) - The bank was incorporated in 1973 to create a viable agricultural banking institution that will assist in implementing its long-term objectives which is to enhance the level and quantity of agricultural production within the frame work of the approved plan of the Federal government. Among others the bank was supposed to grant loans for agricultural production, grant direct loans to individual farmers, cooperative societies. To do this it is empowered to go on out-lending schemes or wholesale credit and Direct lending scheme or Credit Retailing.

Its main sources of funds include loans and advances from government, the World Bank group, share capital, ADB loan, etc.

Federal Mortgage Bank of Nigeria (FMBN) - was an offspring of the Nigerian Building Society established in 1956. The NBS became the FMBN in 1977 absorbing the assets and liabilities of NBS which was formally owned by the Commonwealth Development Corporation with 60%, Federal Government 31% and the Eastern Nigerian Government 9%. Later in 1972, The Federal Government increased its share capital by purchasing the 60% owned by the CDC. The main objectives of the bank were to provide long term credit to Mortgage Institutions, provide long-term credit facilities to Nigerians at cost and terms established by the board, provide credit facilities at competitive commercial rates to commercial property developers and execution of Federal Government housing programmes among others.

It operates three types of mortgage loans, Social, Economic and Commercial loans, Social loans are owner/occupier loans in which 90% of the loan is granted; economic loans are granted with higher interest rates and with a maximum of 15 years while repayment for Commercial loans is set at 7 - 10 years.

Other development finance Institutions owned and controlled by the States are listed in Appendix 31.

Objectives of the Study

Previous studies by eminent scholars have provided insights into the structure, location, and size of small scale industrial Enterprises in Nigeria. Nation-wide surveys have been conducted by the FMI on the impact of existing Small Scale Enterprises on the economies of each state, and have examined their linkage effects and performance of established industrial development centres. Based on the foundations of such surveys, a more detailed and comprehensive survey was undertaken by NISER co-ordinated Research between 1982 and 1985 dealing with (1) the assessment of the contributions of SSI to the development of the economy, particularly to employment, value added, development of local technology, development of local sources of raw materials, sources of capital as well as the consumption and generation of energy. (2) an examination of the problems and constraints (e.g. finance, energy, location and government regulations inhibiting their rapid development and growth as well as the factors that motivate them. (3) A study of the relationships between financial Institution and Small Scale Industries and (4) A thorough investigation of the prospect for the development of Small Scale Industries.

The main findings of this detailed study are worth noting. (1) Small Scale Industry have contributed and would continue to contribute positively to the development of Nigerian Economy in terms of value added, employment generation etc.

(2) Ownership structure is basically simple proprietorship with personal savings being the main source of investment funds.

(3) That Small Scale Industry continues to produce traditional commodities with concentration into tailoring, bakery as against machine tools or steel products manufacturing.

4. Constraints identified include shortage of raw materials, patronage and funds for operation and expansion.

An examination of these studies have shown the potentials of the small scale industries in the development of the Nigerian Economy. Past efforts of the government have responded to the findings of these reports and surveys especially in the establishment of industrial extension centres, Small Scale Credit Schemes, establishment of NBCI, NIDB specifically for providing funds to these vital sectors of the Nigerian economy. However these studies have shown that shortage of funds has been

a critical factor in the development of Small Scale Industries, despite the fact that government has established DFI's to provide such funds. The NISER (1987) study have shown that these DFI's have contributed only 27% of the total loan requirements of the Small Scale Industries. The emphasis of the study has been on the total availability of funds to Small Scale Industries. But practical evidence abound that, Small Scale Industries require funds for start-up of Investments, working capital and capital for Expansion or for Total Investment. The existing DFI's have often been known to provide basically finance for expansion mostly while Small Scale Industry obtain their initial start-up funds from personal savings, loan from friends and relations mainly. The assistance obtained (if any) from DFI's have only been mainly for Expansion of existing facilities, while the working capital have been obtained from commercial banks.

Hence the objectives of this study are:

(1) to determine and assess the levels of availability of and requirement for funds in Small Scale Industries in Nigeria;

(2) to assess the impact of DFI's on

(a) the growth of Small Scale Industry in Nigeria.

(b) the flow of credit to Small Scale Industries especially in the provision of

(i) Start-up Capital (Fixed Asset) Investment)

(ii) Working Capital (Changes in Inventories)

(iii) Capital for Expansion

(iv) Total Investment.

(3) to determine and assess the significance and substitutability of other sources of finance for fixed asset Investments, Changes in Inventory, Capital for Expansion and total Gross Investment in Small Scale Industries in Nigeria.

(4) to determine and assess other factors that could bring about improved funding of Small Scale Industries in Nigeria.

Hence the study would be testing the Null hypothesis that

(1) DFI's do not contribute significantly to funds for Start-up Investments.

(2) DFI's do not contribute significantly to working capital Requirements of Small Scale Industries.

(3) DFI's do not contribute significantly to Capital for Expansion of activities of existing Small Scale Industries.

Scope and Limitations of the Survey

This study in view of the above objectives deals with the problems of capital shortage and then determine the most significant factor limiting the fund supply ments of Small Scale Industries in Nigeria. As highlighted earlier, previous studies have shown that the growth of Small Scale Industry has not been encouraging, with finance being one of the major limiting factors. Given that prospective Small Scale Industries enterprises have no collaterals as security for obtaining finance for start-up; working capital or Expansion of existing capacities, one can then infer that the most limiting factor to the growth of Small Scale Industry in Nigeria is the availability of Capital for initial or start-up of the business. Hence given that DFI's give assistance to these Small Scale Industry (even though) inadequate), the study hopes to find out to what extent these DFI's have funded Small Scale Industries especially with regards to Start-up Capital, Working Capital or Capital for Expansion. The study also hopes to determine the contributions of other credit sources e.g. Commercial Banks, Merchant Banks, State Credit Loans informal sources in the finance of these initial finance requirements areas

of Small Scale Industry in Nigeria. In effect the study hopes to test the significance of each of these credit variables in the finance of Small Scale Industries in Nigeria expecially DFI's with the hope of suggesting improvements or alternative financing strategies for start-up, working capital or expansion capital.

Given the huge fund requirements and the time constraint in carrying out a study of this magnitude, the study has been limited to the South Western Zone of Nigeria incorporating, Lagos, Ogun, Ondo, Oyo and Bendel States. It is expected that evidence that emerges from this study may be of more general relevance to Small Scale Industry in Nigeria as a whole. The Researcher also hopes to follow-up this Research study into the other states and countries as a Post-doctoral Research when funds are available to carry out a larger-scale research.

Plan of the Study

To achieve the objectives, the study was treated under seven chapters, with chapter one, evaluating the role of Development Finance Institutions in industrial development, statement of the objectives, scope and plan of the study.

Chapter two discussed extensively literature on Industrialization and Industrial development in Nigeria; the impact of Small Scale Industries in selected sample economies; strategies and options for the development and finance of Small Scale Industries in the world and Nigeria in particular and the problems and constraints in development financing of small scale industries.

The third chapter focussed on the theoretical basis of the study, the methodology, description of the model and the parameters estimated together with data requirements and collection procedure. While chapter four, tried to determine and assess the availability of Money Capital funds to Small Scale Industries and the Requirement for Money Capital by Small Scale Industries.

Chapter five, evaluated the impact of Development Finance Institutions and other credit sources on the finance of Fixed Asset (Start-up) Investments, Working Capital, Expansion programmes and total Investment expenditure of Small Scale Industries with particular emphasis on the substitutability of these other credit sources for those of Development Finance Institutions in the component investment expenditure of Small Scale

industries enumerated above. The sixth chapter on the other hand, explored and appraised the role of development finance institutions in Nigeria's industrial development with emphasis on their sources and uses of funds, credit policies operations and existing activities.

Finally, chapter seven summarized the major findings while policy options and recommendations were made together with suggestions for further research.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Industrialization and Industrial Development in Nigeria and Experience from Proximate Economies

UNIDO (1969) defined industrialisation as a process which entails a noticeable increase in number and rate of capacity utilisation of manufacturing plants and productive enterprises aided by increased productivity of labour to produce more consumer manufactured goods, intermediate supplies and capital equipments. UNIDO's socialist definition maintained that the increased tempo of industrial activities associated with industrialisation is sequel to an economic and social evolution taking place in the country concerned.

Given that Nigeria was a predominantly agricultural economy (before the discovery of petroleum resources in the late 1960's), the foundations of industrial development in Nigeria were laid by the export processing of raw materials and the substitution of imported goods. After the Second World War, the share of export processing industries in Nigeria's industrial growth increased tremendously. Aboyade (1968) found that by the 1960's, indications of stagnation were observed in this sector

while the growth impulse shifted to import substitution. Hence the share of raw materials processing industry in industrial value added for the country increased from 25% (1950) to 50% (in the late 1950's) and fell back to 25% (in 1965).

This was because, for production or transportation reasons, a certain degree of processing were necessary in case of several raw materials which include palm oil, rubber, cotton, cocoa etc. For timber logs however, the processing into plywood and saw wood was to forestall the usual high loss of weight in the logs. However the development of the export processing industry was impeded by various government economic policies e.g. the Nigerian Government had earlier imposed tax on exports both for raw materials and processed goods to prevent a decline in government revenue generated from exports, through the various marketing boards.

Protected by duties, legal incentives and quantitative restrictions in the 1970's, the domestic production of previously imported goods led to a transformation of the structure of Nigeria's industry and particularly led to changes in the import structure. Whereas

the import structure in the 1950's changed slightly, Aboyade (1968) also found out that domestic manufacturing contributed to a reduction in the share of consumer goods in Nigeria's total imports between 1960 and 1970 from 57% to 30%, while on the other hand, led to an increase in the share of raw materials and intermediate goods from 20% to 28% and of capital Goods from 24% to 42%.

Hence Industrial development in Nigeria after the second world war (1939 - 1945) was initially sustained by the primary export industry which processed domestic raw materials and later by import substitution characterised by an extensive input of imported raw materials and intermediate goods. With the oil boom of the 1970's, Import substitution Industrialization (ISI) as a strategy was pursued with vigour.

Though the development of ISI can be traced to the earlier periods for e.g. Latin American economies e.g. Argentina, Brazil, Mexico in the 1950's, the early 1960's saw the large scale conscious pursuance of ISI policies in a number of other developing economies such as India, Pakistan, Phillipines, Colombia, Chile, Peru

and countries from the African subcontinent including Nigeria, Ghana, Kenya, Zambia etc.

Hirschman (1968) categorised industrialization into three main tightly separated stages which was perceived as a sequential process whereby countries begin with domestic production of consumer goods and then move to intermediate goods and finally to capital Goods. Raj and Sen (1961) made a more elaborate classification of these stages which were essentially options within the ISI strategies e.g.:-

(i) that a developing economy can use its Foreign Exchange to import investment goods (e.g. machineries and equipments), raw materials fuels etc to manufacture consumer goods e.g. textiles, household utencils etc.

OR

(ii) it can use its foreign Exchange to import Capital Goods which in turn produce consumer goods e.g. steel and then develop domestic raw material supplies

OR

(iii) Use its foreigh Exchange to import Capital goods to make capital goods which in turn make other capital goods and investment goods.

Raj and Sen (1961) believed most developing countries including Nigeria have taken the first option and have tended to get stuck at that stage. The more advanced Semi-industrialized countries e.g. Brazil, Mexico have moved to option (ii) while others such as India, Taiwan, South Korea, Singapore are already operating option (iii)

Many studies have been made to find out the causes of the difficulties in the transition process from consumer to intermediate to capital goods by a number of developing countries, but the most obvious problem which is easily discernible is the indisputable fact that intermediate investment and capital goods industries will place greater financial, technological and organisational demands on the developing economies.

The ISI process begins with the domestic manufacture of consumer goods and thus the commodity composition of imports changes. Consumer goods imports become relatively less important and imports of intermediate goods, fuels, machinery and equipments etc. become of

greater significance. Thus the ISI process increases the proportion of domestic value added dependent on imports and under these conditions a decline in the availability of foreign Exchange will lead to forced import curtailment and industrial recession.

Syrquin and Chenery (1989) following their earlier work in 1986 also constructed a table of typology of industrial development in about 100 economies.

The typology included developing countries that are far enough into the transition to identify the strategy being followed and that have the data required for classification.

The economies were classified into four general types according to their structural features and trend policies.

The main features of the strategies and structures of the classifications include:-

(a) Outward, Primary Oriented economies which include countries that have very high export shares made up almost completely of primary commodities. The strong primary specialisation, they contended appeared to originate more in resource endowment than in a deliberate policy choice. Among this group are three large economies

including Indonesia and Nigeria. The study contended that at low income levels, of GNP per capita of $470 for Indonesia and $990 for Nigeria in 1980, the abundance of mineral resources dominates the effect of large size which would normally lead to low shares of trade and high shares of manufactures in exports. The cases of Indonesia and Nigeria they contended illustrated well, the importance of Structural characteristics for determining a development strategy. In a study of large countries, (Perkins and Syrquin 1989), Indonesia and Nigeria were treated seperately. The study showed that their patterns of development resembled more of small economies than those of large ones.

World Development Report (1987) also classified Indonesia as "moderately inward" during 1973-85 and Nigeria as "moderately inward" in the first period and then "strongly inward" in the second. What all these reports and studies suggest is that Nigeria and Indonesia are best classified as "outward, primary oriented.

"Other classifications include:

(b) Inward - Oriented Economies - Among the large members of this class, two groups can be identified.

The first include large countries of Asia with substantially lower incomes and poorer endowment of natural resources, reflected in their much higher population density. The second include the large countries of Latin America. The main difference between them is in their orientations. The large Asian countries were known to be manufacturing oriented while the Latin American countries started with a primary orientation. However, by 1980 the manufacturing exports of Latin American countries had risen appreciably. This was hastened by the debt crisis of the 1980's and could be linked to the earlier phase of inward - looking industrialization during which their economies acquired basic technological mastery which then facilitated the exports of manufactured goods on a large scale.

Teitel and Thoumi (1986) contended that Import Substitution Industrialization provided the impetus to the export stage in these Latin American countries, while Bruton (1989) also called for a more balanced appraisal of the import substitution strategy.

(c) Balanced Economies - in which the countries in the group have shifted from primary to manufacturing specialization in trade. This group of economies make extensive

use of protection, even during the opening periods. Countries in this group include Egypt, Thailand, Phillipines, Brazil, Spain etc.

(d) Industry-Oriented Economies - the trade policy here has been mostly outward - oriented, particularly in the Asian economies in the group (Republic of Korea, Taiwan, Hongkong and Singapore) In most of these countries, the rapid rise in manufactured exports followed an earlier phase of import substitution behind high protection. The state of Israel supplemented this strategy with export promotion policies.

The comparative performance of each of these economies in relation to their GNP per capita, 1980, Relative export levels in 1965 and 1980, Trade orientation index, share of manufactured exports in GDP in 1962 and 1980, share of manufacturing value added in GDP (1960 and 1981) and share of manufacturing in commodity growth (1960 and 1980) are contained in Table 1 .

Table 1: A Typology of Industrial Development

Economy	GNP per capita 1980	Relative export level 1965	Relative export level 1980	Trade Orientation Index[a] 1965	Trade Orientation Index[a] 1980	Share of manufactured exports in GDP 1962	Share of manufactured exports in GDP 1980	Share of manufacturing valued-added in GDP 1960	Share of manufacturing valued-added in GDP 1981	Share of manufacturing in commodity Growth 1960-1980
Large				**Outward, primary-oriented**						
Indonesia	470	80	270	7	22	0	1	9	12	30
Nigeria	990	207	171[c]	24	49[c]	1	0	5	6	28
Iran, I.R.	2,270	129	210[c]	35	89	1	0	11	11	42
Small										
Sri Lanka[a]	270	309	216	-2	-37	1	5	15	16	38
Liberia	520	151	155	12	24	2	2	4	8	17
Honduras[d]	640	109	143	21	20	0	4	12	16	40
Cameroon[d]	740	124	141	17	29	1	1	10	8	40
Papua New Guinea[d]	820	57	109[c]	14	33[c]	1	4	4	9	-
Cote d'Ivoire[d]	1,200	147	141[c]	32	1[c]	0	3	7	12	47
Ecuador	1,470	77	95	34	54	0	1	16	11	46
Malaysia[d]	1,650	211	217	17	2	2	10	9	21	48
Algeria	2,100	90	118	24	31	1	0	8	11	38
Iraq	3,000	155	208[c]	50	62	0	0	10	6	26
Venezuela	-3,800	134	122	39	33	2	1	11	15	80
				Inward-Oriented						
Large manufacturing										
India	240	62	120	-115	-118	2	3	14	17	37
China	290	-	-	-	-	-	-	26	37	72
Pakistan	310	70	82	-54	-69	2	5	12	17	41
Large, primary										
Colombia	1,280	53	72	11	23	0	3	17	21	49
Turkey	1,310	40	37	25	8	0	2	13	22	55
Argentina	1,980	46	32	33	29	0	1	32	25	79
Mexico	2,620	50	22[c]	25	14[c]	1	2	19	22	75

Table 1 contd.

Small										
Bolivia	760	85	88[c]	26	43[c]	1	1	15	14	46
Nicaragua	790	80	67	24	17	1	3	16	26	53
Quatemala	1,080	77	88	10	5	1	5	13	18	47
Peru	1,120	62	84	28	-15	0	3	24	28	67
Dominican Republic	1,160	56	61	31	12	0	3	17	16	51
Paraguay	1,360	43	35[c]	16	27	1	1	17	17	41
Syria	1,510	54	67[c]	20	43[c]	1	1	21	12	36
Chile	2,400	57	69	46	40	0	2	21	22	60
Uruqua	3,540	53	28	47	-4	0	4	21	22	71
				Balanced						
Large										
Egypt, A.R.	580	105	138	-25	22	2	2	18	8	48
Thailand	710	90	132	7	-11	1	6	16	20	53
Philippines	730	103	111	8	-27	1	6	20	25	52
Brazil	2,000	120	58	30	-6	0	5	26	27	82
Spain	5,600	40	57	4	-29	1	7	26	24	85
Small										
El Salvador	740	112	137	2	-21	2	11	14	14	53
Morocco	950	70	57	1	-42	1	3	16	18	59
Tunisia	1,370	62	105	-1	-10	1	9	8	14	41
Costa Rica	2,050	59	56	6	-11	2	8	14	19	63
Greece	4,300	22	35	27	-16	1	5	16	19	71
Ireland	5,100	96	125	1	-33	7	27	17	23	66

Table 1 contd.

Large					Industry-oriented					
Korea, Rep.	1,600	39	157	-96	-112	1	23	14	29	79
South Africa	2,670	135	186	-18	-71	7	26	21	23	-
Yugoslavia	3,050	94	75	-74	-57	6	10	29	25	63
Small, outward										
Kenya	410	148	108	-20	-30	2	3	9	13	48
Taiwan	2,270	-	-	-	-	-	-	22	40	90
Singapore	4,500	314	378	-26	-36	-	-	12	30	96
Hong Kong	5,470	218	220	-113	-94	49	66	22	23	100
Small, inward										
Jordan	1,140	50[c]	55	-21[c]	-18	1	6	12	14	46
Portugal	2,460	85	76	-84	-78	7	14	22	30	95
Israel	4,750	41	82	-66	-80	8	23	23	23	77

- Not available

a. Indicates the predominance of primary of manufactured goods in merchandise exports, with positive values reflecting a primary and negative manufacturing orientation.

b. Termed "industry index" in our earlier works.

c. 1975

d. Agircultural exporters.

Sources: Moshe Syrquin and Hollis Chenery (1989) - "Three Decades of Industrialization" in The World Bank Economic Review Vol. 3, No. 2, May 1989.

Calculations based on data from the World Bank.

UNIDO (1985) reports on Industrialization and development estimated the share of manufacturing (in terms of value added) in the GDP of several countries for 1975, 1980 and 1981. The reports showed that Nigeria experienced a decline in GDP arising from a weak manufacturing base which was not export oriented and was dependent on external influence. Though there were remarkable increases in contributions of manufacturing to GDP, it was found less than significant when compared with other advanced countries. For instance, the share of manufacturing in the GDP for 1975, 1980 and 1981 were 5.4%, 5.4% and 6.1% respectively. Comparatively, the share of manufacturing in GDP for Singapore for 1975, 1980, 1981 were 24.5%, 31.1% and 31.9% respectively and for India in 1975, 1980 and 1981 was 15.6% 17.2% and 17.3% respectively.

FOS (1987) showed that from 1983 to 1988 in Nigeria, there were noticeable declines in % contribution of manufacturing to GDP showing 6.3%, 4.86%, 5.3%, 5.6%, 4.7% in 1983, 1984, 1985, 1986 and 1987 respectively (Table 2).

TABLE 2: GDP AT CURRENT FACTOR 1978-1987 PERCENTAGE DISTRIBUTION

		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1.	Agriculture	15.00	13.60	13.30	13.70	14.00	17.20	23.20	23.80	25.88	21.12	20.01
2.	Livestock	4.00	3.50	3.60	3.90	4.30	6.92	8.05	7.58	9.43	7.85	8.13
3.	Forestry	0.90	0.80	0.70	0.70	0.70	3.48	3.28	3.29	3.67	3.01	2.93
4.	Fishing	5.90	4.50	4.60	5.00	5.50	4.17	3.41	2.13	2.31	1.96	2.00
5.	Crude Petroleum	22.50	26.20	24.80	18.60	14.90	15.17	15.63	15.97	11.19	28.14	22.29
6.	Mining and Quarrying	2.50	2.20	2.00	2.10	2.50	0.69	0.32	0.36	0.34	0.28	0.31
7.	Manufacturing	5.30	5.10	5.40	6.10	6.50	6.26	4.06	5.36	5.60	4.70	6.23
8.	Utilities	0.40	0.40	0.50	0.60	0.60	0.63	0.54	0.53	0.52	0.41	0.71
9.	Building & Construction	9.10	8.00	8.50	9.20	8.40	3.06	1.33	1.60	1.59	1.28	1.44
10.	Transport	3.40	3.50	3.90	4.70	4.60	3.82	3.45	4.15	4.24	4.34	5.63
11.	Communications	0.20	0.20	0.20	0.20	0.20	0.16	0.15	0.14	0.14	0.10	0.14
12.	Wholesale & Retail Trade	20.90	21.90	22.20	24.10	26.00	28.45	27.41	26.51	25.72	19.74	22.01
13.	Hotels & Restaurants	0.20	0.20	0.20	0.30	0.30	0.38	0.29	0.29	0.28	0.22	0.22
14.	Finance & Insurance	2.40	2.20	2.20	2.40	2.70	2.04	1.79	1.74	1.92	1.55	2.40
15.	Real Estates and Business Services	0.30	0.30	0.30	0.30	0.30	0.30	0.28	0.28	0.28	0.22	0.25
16.	Housing	3.30	3.00	3.00	3.20	3.30	2.47	2.46	3.16	3.22	2.16	2.43
17.	Producer of Government Services	4.60	4.40	4.60	4.90	5.20	4.79	4.31	3.72	3.67	2.92	2.87
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Federal Office of Statistics, Lagos Economic and Statistical Reviews 1982-1988.

Leff and Neto (1966) also constructed a sequential model to show the National Income and Balance of Payments effects of an ISI programme. This was applied to Brazil and results showed that at the end of the sequences despite massive ISI policies and foreign capital inflows, the Balance of Payments (B.C.P) deficits was larger than at the begining of the sequence i.e. the very success of ISI in creating National Income aggravates the foreign Exchange constraint. This observations could be likened to the Nigerian situation whose Balance of Payments crises which had started and persisted in 1976 deteriorated from 1977 - 78 onwards. This was because Nigeria's agriculture and industry had weak foundations and hence were vulnerable to debilitating external impulses. During the oil boom, inflation was high and fuelled by a number of factors. Similarly because of the strong Balance of Payments position during this oil boom period inflation was accompanied by a gradual appreciation of the Naira resulting in

(a) higher cost of production in ISI sectors relative to foreign goods

(b) problem of Excess Demand over supply manifested itself in imports of Raw materials e.g. 1976, imports of raw materials stood at ₦1,094.1 million and by 1982 increased to ₦2,536 million, an over 1,000% increase within a five year period.

The failure of the ISI process in Nigeria is further buttressed by the fact that the share of expenditure on imports of capital goods and Raw materials has not been rising as the value of consumer imports declines.

Central Bank Economic and Financial Review (1982) revealed that, in 1974, total import of consumer goods, capital goods plus raw materials amounted to ₦492.2 million and ₦1,205.5 million respectively, a ratio of 2:5 in favour of capital goods plus Raw materials. By 1981, the gap narrowed down to 4:5 that is ₦5555.9 million was spent on consumer goods while ₦6,667.3 million financed import of capital goods plus raw materials, implying increased dependence on consumer imports and lack of progress towards self reliance.

The failure of ISI as an industrialisation strategy has led Nigeria and many other developing countries to explore new methods of industrialization which would be

more inward looking, self-reliant and appropriate to the technological, financial, human and natural resource endowments of their respective countries. Hence the strategy in the '80's changed from ISI to Export-led industrialization techniques. Small Scale Industrialization alternatives as practised in India, Singapore, South Korea, Taiwan, China etc. These forms of Small Scale Industries usually start with the development and upgrading of such technologists as pre-harvest technologies (e.g. tools and equipments), post harvest technologies for processing, preservation storage and low cost transport for marketing of agricultural produce and Small to Medium scale enterprises for producing consumer goods.

2.2 Small Scale Industries: Some conceptual Clarifications

The diversity in concept of SSI is exemplified by a study carried out on Small Scale Industries in 75 countries by the Georgia Institute of Technology, in which over 5 different definitions were compiled. Thus there is no universally accepted definition of Small Scale Industries. The problem with most of the single variable definition is that they are inflexible and

arbitrary in classifying these enterprises. If project cost, cost of capital or turnover is used, the definition may become irrelevant in later years due to global inflation.

Some definitions appear accepted for some countries. For, Egypt, Israel and Italy, the United Nations report on the development of producing industries in these countries defined Small Scale Industries as organisations employing ten or more persons.

In Great Britain, Small Scale Industries include those with an annual turnover of 2 million or less and with less than 200 paid employees. This definition makes no reference to capital Investment.

In Indonesia, they refer to those employing less than 10 full-time workers while to the Japanese and Americans, they are those industries employing between 300 and 500 workers. For countries like Japan, India, Phillipines, Korea etc there are really no distinctions between a Small and a Medium sized industry. The Small Business Administration (SBA) in the U.S.A. defines Small Scale Industries by its loan purpose and nature of services. For the purpose of assistance from the

Small Business Investment Companies (SBICS), an enterprise must have assets not in excess of $9 million, networth of not more than $4 million and Net Profit after Tax not exceeding $400,000.

The definition of Small Scale Industry in Nigeria are as varied as they are Internationally. According to the Central Bank of Nigeria's (CBN) Credit Guidelines, a Small Scale Industry is any manufacturing or service enterprise whose annual business turnover, does not exceed ₦500,000. By March 1985 the CBN adopted another credit ceiling which was imposed on the Agricultural Credit Guarantee Scheme (ACGS) at not more than ₦1 million (One million Naira).

In another redefinition, for Merchant Bank lendings, the CBN defined SSI as those with capital investment not more than ₦2 million (excluding cost of land) or maximum turnover of ₦5 million.

On the other hand, the Lagos State Ministry of Trade and Industry and most state Governments in Nigeria define Small Scale Industries as manufacturing industries with a total capital investment of up to ₦150,000 (excluding the cost of land and buildings and paid employees of up to 10 persons. Such enterprises are

expected to be wholly Nigerian. The Federal Minsitry of Industries on the other hand adopted a definition of value of installed fixed capital. Such values are not static but subject to the prevailing objectives of government public policy. In 1972, it was fixed at ₦60,000, 1975 ₦100,000 and by 1979 it has increased to ₦200,000. By 1989, the figure had reached ₦500,000 (exclusive of buildings).

NISER (1987) study defined Small Scale Industries as those establishments engaged in production (manufacturing) or semi-production or repair - type activities employing a maximum of 50 persons or with a maximum capital of ₦150,000. However, we will adopt both the Federal Minsitry of Industries (1989) and NISER (1987) definitions as a working definition in this study. Small Scale Industries would then include those industries with installed fixed capital of not more than ₦500,000 and engaged in production (manufacturing) or semi-production or repair type activities employing a maximum of 50 persons.

2.3 Strategies and Options for the Development and Finance of Small Scale Industries

Strategies for the accelerated growth and finance of Small Scale Industries are multi-varied, but could be broadly grouped (1) Employment - oriented Model and (2) Laissez-faire models.

These two models underline the success or failure of Small Scale Industries in the countries of Asia, e.g. India, Phillipines, Indonesia, Malaysia, Bangladesh, Thailand, South Korea and Hong Kong.

Employment-Oriented Model: In this model , Small Scale Industries are usually bestowed with Institutional favours in Marketing, Financing, Technical Training and supply of Raw Materials and certain basic facilities up to factory accommodation. Most of these assistances and services are free or heavily subsidised.

According to World Bank report (1979), the government of India believed that Small Scale Industries provide immediate large scale employment, offer a method of more equitable distribution of National Income and facilitate an effective mobilisation of resources of capital and skill which might otherwise remain unutilised. India regarded promotion of Small Scale Industries as a significant component of its industrial policy to develop the country and to promote employment. The main features of this model include:-

(i) The establishment of a special organisation with a Development commission to advise, coordinate and implement Government Schemes towards the development of Small Scale Industries. This special organisation include sixty (60) industrial extension centres, sixteen (16) small Industry Institutes. Some of the free services provided by this organisation include improvements in product quality, cost reduction, diversification of production and management and new methods of sales promotion.

In areas of financing, special funds for the medium and long term loan for small scale industries were established through the state Finance Corporation, State Small Industry Corporation and National Small Industries Corporation. A credit Guarantee Scheme was also established through the Reserve bank to provide the sharing of possible losses between private lending institutions and the government. The government also set up a list of items for the exclusive procurement from small scale industries. By 1977 the list reached about two hundred and forty one (241) items.

- The Government of India also embarked on massive Industrial Estate programmes which include the provision of electricity to small factories at subsidised rates.

Hamzir Yunniz (1979) revealed that in Indonesia the main focus is financial and technical assistance.

BIPIK is the code name of principal activities which implies Guidance and development of Small Scale Industries. Some of these activities include - training of small scale entrepreneurs, supplying of raw materials and machinery; provision of product design and quality control, technical and management assistance, marketing and promotion and the encouragement of sub-contracting with larger factories.

The major financial assistance programmes include - Scheme for loans for plant and Equipment; Loan Scheme for working Capital; programme for financing requirement and working capital with a ceiling of US $160 only. A working capital programme with a lending ceiling of US $24 for tiny businesses. Indonesia Development Fund Corporation also provides development loan for projects up to $160,000 plus

technical assistance. Clients with successful records with previous loans are often given priority considerations.

The Institute of Small Scale Industries, Manilla (1979) also revealed that medium and Small Scale Industries could also provide one of the answers to economic development and full employment in the Phillipines. The report stated that the main features of the promotional efforts of the Phillipines could be found in (i) Commission on Small and Medium industries (CSMI) created under the Ministry of Industries in 1984. The CSMI coordinates the existing twleve (12) organisations connected with the promotion of Small Scale Industries. It has four major divisions finance assistance, marketing technical assistances and manpower training. It also has a Regional consultancy centre (ORCC) with twelve (12) Business Advisory centres. Also the Indonesian Industrial Guarantee and Loan Fund - provides eighty percent (80%) debit guarantee to finance Institute for encouraging loans to small and medium industries. In depressed areas of the country, this is raised to ninety percent (90%). It stipulates a loan period of 3 years

for working capital 10 years for fixed capital and simple interest rate of 12%. (iii) Institute of Small Scale Industries established in 1969 to provide consultancy, training sessions etc.

Cheng Peng et al (1978) enumerated that the promotional efforts of the Malaysian government was through a coordinating council for development established with eleven (11) agency members viz:-

- Federal Industrial Development Authority (FIDA)
- Majlis Amanah Rakyat (MARA)
- National Productivity Centre (NPC)
- Standards and Industrial Research Corporation (CGC)
- Economic Planning Institute (EPI)
- Treasury, Executive Division of Prime Minister's Office
- Malaysian Industrial Development Finance (MIDF) and three Commercial Banks.

Terms of MARA's loans are often very favourable for example, Small loans attracts 5.5% interest rate while large loans attracts 7%.

Furthermore, 60% MARA's loans are granted without collateral and by 1976, three thousand and twenty-seven, (3,027) Small Scale Industries loans were granted by MARA with this accounting for 92.9% of total number of loans advanced by this agency.

Bureau of Business Research (1978) showed that the main features of activities in Bangladesh is the establishment of both (i) Bangladesh Small and Cottage Industries Corporation (BSCIC) in the Department of Industry and (ii) Bangladesh Shilpa Bank (BSB).

LAISSEZ-FAIRE MODEL

This model is based on the belief of the efficiency of the market forces. Under this model, countries that applied them have specific measures regarding the promotion of the small scale sector, though these measures are less "progressive when compared to our earlier models".

Experiences from other countries have shown that by and large, market forces of supply and demand and competition between enterprieses are the stronger forces affecting the development of small scale industries in in those countries adopting this model, but the model seems to thrive in South Korea and Hong Kong.

Recent strategy of South Korea has been clearly one of selective promotion. With the exception of those favoured Small Scale Industries, Small Scale Industries have to pay market costs of finance and other services.

Korean Federation of Small Business (1983) reported that from 1968 up to the present, the emphasis of the government programmes is on the so called Structural Modernisation designed to encourage specialisation of the small scale sector and sub-contracting between the small and large sectors.

The report revealed that other features include the establishment of specialised industrial estates, Industrial Cooperatives, council on promotion or procurement of small industry products by Government departments, public utilities, Government Investment Corporations. The Government annually selects hundred (100) small factories with good export growth potentials for intensive promotion.

Each factory is given US $400,000 financial assistance to help them to grow into sizeable export units. Given the above, the growth of Small Scale Industries has been phenomenal. According to the Bureau, by (1982), the Small Scale Industries contributed about 37.4% of

total export value of South Korea and between 1963 - 1976, export value of the sector jumped from US $16 million to $2,924 million, yet the number of Small factories increased by 21.5% only.

Impact of Small Scale Industries in Selected Sample Economies

As highlighted earlier in this study, Small Scale Industries play important roles in the Economic development efforts of most developing countries including Nigeria.

Surveys and researches in both developed and developing economies have generally confirmed that Small Scale Industries have a substantial potential for generation of employment opportunities, enhancing the effective mobilisation of capital and ensuring a more equitable distribution of income while engendering economic growth.

The Impact of Small Scale Industries in Nigeria had been well documented by surveys and researches by UNIFE (now OAU) Industrial Research and Development Unit (IRU) 1972 and Nigerian Institute for Social and Economic Research (NISER, 1984, 1986).

University of Ife (1972) estimated that over 70% of the industrial labour in Nigeria was employed in the Small Scale Industries (SSI). And the Federal Office of Statistics (1984) put the contribution of Small Scale Industries (SSI) in Manufacturing at about 0.55% of Gross Domestic Product (GDP) per year during the 1973 to 1984 period. Moreover Small Scale Industries were found to have contributed 12.5% of aggregate contribution of the manufacturing industries between 1973 and 1984.

In terms of value-added NISER (1987) found that the ratio of value-added to Gross Output is generally higher in Small Scale Industries than in Large Scale Industries (LSI) reflecting a higher degree of raw material processing contrasting with "finishing touches" industries prevalent in LSI. Moreover, value added as percentage of Gross Output in the Small Scale Industries was 70.4% in Textiles, 96% in furniture. For large Scale Industries the comparative estimates was 46% for Textiles, 42% for Rubber and Plastics and 54% for furniture.

Output per capita was also found to be lower in SSI's than Large Scale Industries. From the survey of

calculated output per persons in food manufacturing industries for Small Scale Industries, NISER (1987) reported, ₦2,142 for SSI's compared to ₦5,566 in LSI. In textiles, output per person was ₦6,902 in SSI and ₦28.909 for LSI. The lower Output/Capita in Small Scale Industries perhaps reflect the existing lower capital/person or the labour intensive methods. Since most of the LSI's use capital intensive technology it implies that, while Small Scale Industries promote employment, LSI appear to aggravate unemployment. A Federal Ministry of Industries (1984/85) nation wide SSI survey, further revealed the economic potentials of the various states in the federation. The survey found out that the scope and effectiveness of these SSI's have been inhibited by a number of factors which include the incentive systems, structure and level of trade protection, export promotion efforts, exchange rate policies, financial and credit policies and consequently inadequate capital.

A World Bank Study on Industrial System (1983) in Nigeria suggested there was an urgent need for a restructuring of the incentive system to improve the economic efficiency of industrial production and invest-

ment. It also suggested that intensified efforts would be needed to streamline the regulatory frame work governing industrial investment and systematically address the sectors supply-side constraints. The World Bank study revealed that the coordinating mechanisms have been weak, granted that there are Federal Ministries viz, Industrial Finance and Trade involved in the policy process. Hence the study claimed that no single agency of the government had the analytical capability to monitor the overall impact of the incentive system as it affects the long term pattern of sector development and resource allocation and efficiency in different productive activities.

Chibundu (1987) revealed that in Pakistan, on the other hand, the Small Scale Industries sector accounts for 4.4% of the country's Gross National Product in (1982/83) at constant factor cost and 30% of the manufacturing value.

Chibundu (1987) further reported that the Small Scale Sector in Pakistan from the 1970's had annual production grow rate of 7.3% higher than those of Large Scale Industries which ranged between 2.2% and 3.7% within the same period.

Chibundu in a comparative analysis also showed that Small and Medium scale Industries in Thailand contribute about 52% of industrial output, 80% of employment in Thailand and had 48% value - added contributions.

They produce such goods as processed foods, garments, furniture, construction materials tools and equipment. They have also contributed strongly to the exports of processed foods, metal products, wood products, plastics and leather goods.

In Japan, Small and medium scale enterprises account for about 50% of Japan's exports and constitute the bedrock of large assembling industries to which they act as a subcontractors. They also contribute positively to improvements in standard of living by producing cheap and high quality goods.

Problems and Constraints in Developing Financing of Small Scale Industries in Nigeria

NISER (1987) study on Small Scale Industries showed that 70% of Small Scale Industries obtain their investment funds from personal savings. However the structure of financing have gradually been changing in the light of present economic situation. Personal savings and loans or gifts which hitherto in NISER (1984) survey

accounted for about 73% of total sources of capital to Small Scale Industries have continued to fall, with the marginal propensity to consume out of private income going higher and marginal propensity to save lower due to a number of fiscal, monetary and trade policies instituted by the Federal Government to improve the depressed economy.

It is in realisation of these difficulties that the Federal Government established a number of institutions and schemes including the establishment of the Nigerian Bank for Commerce and Industry (NBCI), the Small Scale Industries Credit Scheme (SSICS), Nigerian Industrial Development Bank (N.I.D.B), and a host of individual States' Development Finance Institutions all designed to provide soft loans to Small Scale Industrialists for the improvement, expansion and modernisation of existing Small Scale Industries and for the development of new viable Small Scale Industries.

Development financing however takes various forms, equity capital, medium and long term loans as well as short term funding (working capital). While short term funds are used to meet the variable operational needs,

namely raw materials, labour, utilities, the other funds go into the making of fixed assets such as buildings, machinery and equipments etc.

Given that the primary objective of development finance Institutions is the promotion of economic development, the factors necessitating their establishment in Nigeria are quite obvious.

These include the problem of low income, low savings and hence in adequate investment further complicated by lack of entrepreneurial skills and the inability to develop viable projects into which any available investible funds could be put. However, DFI's basically provide the necessary long term finance for development in a situation of acute shortage of capital while in developed countries, they are mainly to broaden the existing sources of funds.

DFI s therefore emerged in Nigeria and other developing countries to fill a gap in the Financial system and act as catalyst in the development process. Apart from their inability to provide long term finance needed for development projects, none of the other sources of funds could afford the risk of taking equity interest in such projects. None of them could also provide the

the non-financial, technical and managerial assistance which is equally indispensable to the success of the project. DFI s have therefore been very significant in the existing sources of funds to Small Scale Industries.

NISER (1987) studies showed that in terms of volume of loans, received Commercial/Development banks accounted for 78.64% of total amount of funds to SSI.

FMI (1982) and NISER (1987) also showed that these contributions were not more than 27% of the volume of loans required by Small Scale Industries. Hence these contributions have remained very low for a number of institutional factors. Amao (1987) found that most lending institutions fail to adhere to government directives as regards assistance to Small Scale Industries. He also revealed that the performance of Commercial banks with respect to Central Banks of Nigeria's Credit guidelines for lending to Small Scale Industries have been dismal. For example he found that from 1983 to 1985, the CBN directed the Commercial Banks to grant 16% of their total loans and advances to Small Scale Enterprises but they could only grant 3.1%, 3.1% and 3.8% in 1983, 1984 and 1985 respectively.

This negates the trend in all these countries that have succeeded in harnessing the immense potentials offered for growth and development in Small Scale Industries in e.g. South Korea, Hongkong, Pakinstan, Indonesia, Thailand, India etc. with a battery of financial measures desinged to make funds available to small businesses including the establishment of special small scale Industries banks. In Nigeria, no specific bank is designated Small Scale Industries Bank, Assistance to Small Scale Industries is made only through the N.B.C.I. by the Federal Government and also through the Small Scale Industrial Credit Schemes (SSICS). Other Small Scale Industries obtain assistance from NIDB, Investment Houses, Merchant Banks, Commercial Banks, Non-institutional lenders and the recently World Bank assisted NERFUND-SME funds. The extent to which the existing DFI s have been able to deal with the financial problems of SSI's are subjects of this study.

The more formal sources of finance especially the Commercial and Merchant Banks have been unable to meet the credit needs of SSI's because these industries often cannot meet the stipulated conditions.

These banks also contend that these enterprises refuse to explore these formalised sources of credit owing to the high interest rate applied. However information on non-institutional lending sectors reflect that interest rates are even higher than the formal sectors, reflecting the real costs of providing credit in small amounts.

Given that the conditions stipulated by the formal institutions for Small Scale Industries to fulfil are more stringent e.g. these financial institutions want the Small Scale Industries to show they possess management, technical and commercial acumen with adequate records and even provide some security for the credit facilities required, only a few of the Small Scale Industries can meet these requirements. Hence there is a need for a more detailed analysis of the modalities for the finance of Small Scale Industries to make these formal sources of capital, easy and attractive. Where these formal sources cannot be relied upon, it raises another policy issue of government establishing more effective and appropriate institutions and schemes or restructuring the existing DFI s.

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CHAPTER THREE

THEORETICAL FRAMEWORK AND METHODOLOGY

In the literature on Microeconomics, the theory of production and theory of capital have been loosely linked. Recent moves have been made towards gradual integration of these bodies of theories, especially the incorporation of theories of finance and money capital usage into the theory of production and investment.

Earlier works in this regard especially in linking production - capital analysis include those of Smithies (1935), Lange (1936), Carlson (1939), Makower and Baumol (1950) Gabor and Pearce (1952 and 1958), Lachman (1956), Smith (1959) and 1961) and Douglas Vickers (1968). However, the works of Smith (1959, 1961) and Vickers, D (1968) provided modalities for the confluence of the theories of production and capital.

The traditional economists production function has been known to describe the technological relationships existing between different amounts and combinations of factor inputs per unit of time and the possible output of production during the same time period.

This production function can be expressed as

$Q = f(x, Y.....)$ where Q is the quantity of output

X_1 Y = indicate different factor inputs

Arguments or attacks on this traditional production function include the following:

that the definition of the production function given that X, Y indicating different factor inputs could also be interpreted as units of factor services;

whether money capital is to be regarded as a factor of production. Various attempts at integrating capital theory and production theory have floundered wherever the approach attempts to recognise money capital as a factor of production. Infact all that capital theory does is to add capital funds to the list of productive factors, and interests and dividend payments to the list of cost items.

The third argument is in the interpretation of the concept of capital. Should capital be regarded as a sum of money or the total value of assets?

According to Vickers (1968), the terms on which sources of capital funds are available at the margin of requirements will depend on the structure of sources already in use and it is therefore preferable to

consider the Total Investment of capital particularly the owners equity and the returns available to it depending on the total structure and income generating ability of the business. Rather than regard money capital as a factor of production, he argued the availability of money capital should be regarded as a constraint within the context of which the firms real resources are acquired and optimisation decisions made.

Further arguments noted that the earlier Neo-classical theories did not specify clearly the differentials between the fixed services and the variable services of input. Solutions to such arguments were provided by Smith (1959, 1961) and Vickers (1968). In the works by Vickers, he employed the production function.

$Q = f(X_1 Y....)$ where X refers to a variable or low durability input and Y_1 unit of durable fixed input capacity.

The use of a unit of capacity here recognises the fact that a unit of capacity may infact be provided in more than one physical form associated with actual durable equipments of different expected

economic lives and capital outlay costs. He also contended that the transformation from the production to the cost function can be made by taking the flow cost of units of X and Y and X_1 and Y_2 respectively.

From all these relationships, economic theory became integrated with the financial statements concepts by specifying the flow costs of units of factors X and Y as in the production function, specifying money capital requirements function and the associated money capital supply function.

Given the production function

$Q = f(X_1 Y \ldots$ and money capital requirements coefficients of α_1 β relative to the employment of a unit of X_1, Y_1, a Partial Money capital requirement function can be specified as $K_1 = \alpha X_1 + \beta Y_1 \ldots$. (2) This does not take account of what is net working capital requirement.

$W = f(\Sigma Pi\ Qi)$ where the index represents a summation over all products or

$W = g\ (Q) \ldots\ldots$ (3)

A more complete money requirements can then be specified as:

$$K_2 = g(f(X_1\ Y) + \alpha X + \beta Y \ldots . \quad (4)$$

From the money capital requirements, we can say that

$$M = \bar{K} + D \ldots \quad (5)$$

where $\bar{K}$ is the equity capital and D the debt capital.

i.e. Money Capital = Equity Capital + Debt Capital

From here, Vicker's specified the Money capital availability constraints as:

$$g(Q) + \alpha X + \beta Y \leq \bar{K} + D \ldots . \quad (6)$$

Therefore for maximisation of profit, he derived the profit function of the form:

$$\Psi = p\ (Q)\ Q - \gamma_1 X - \gamma_2 Y - r(D)\ D \ldots . \quad (7)$$

From the above relationship, the money capital requirement function and Money Capital availability constraint can be combined to specify a fuller form of the Money Capital availability constraint incorporated in the model i.e.

$$g(Q) + \alpha X + \beta Y \leq \bar{K} + D$$

Using the Lagrangian multiplier method a CONSTRAINED OPTIMISATION MODEL with a constrained objective function

was specified as below:-

$$\Psi = P(Q)\ f(X_1 Y) - \gamma_1 X - \gamma_2 Y - r\ (D)\ \ D$$

$$+ \mu(\bar{K} + D - g(Q) - \alpha X - \beta Y)$$

Given that the money capital requirement and money capital supply functions have been specified as constraints in a constrained optimisation model as enumerated by Vickers (1968), there is a need to incorporate or link the theory of capital with decision and investment expenditure at the microeconomic level given the control role of investment decisions in determinining a firm's success or failure, growth and general development.

At the macroeconomic level, the determinants of investment expenditure have been thoroughly studied but much less at the level of individual firms or industries. This arose probably because of earlier emphasis placed in the early theory of the firm on the determination of prices, the role of market structure and the price mechanism in determining the allocation of resources. Hence, investment expenditure was only used where it was desirable to establish

a particular short-run average cost curve in order to attain the profit maximising point on the long run average cost curves.

This situation is gradually changing with more emphasis being placed on the determinants of investment at a more micro-economic level, the nature of investment decision process, and the impact of government policy on investment. This has arisen for two reasons, (1) the understanding and requirement for a long-term balanced growth through a firm's investment expenditure and (2) the difficulties and inconclusiveness of empirical tests of macroeconomic investment function.

Given the above, it is pertinent to look at the various theoretical positions adduced for the determinants of investment expenditure especially with regards to demand and supply condition

Demand and Supply Factors

The Neoclassical Approach to Investment Expenditure Demand exemplified by Jorgenson's theory which presumes that factors prices and ratios are flexible

while all markets are measured perfect. Therefore the necessary condition for an optimum capital stock is that the additional cost of increasing the capital stock must equal the additional revenue generated.

i.e. $cdk = pdQ$

$$\frac{dQ}{dk} = \frac{c}{P}$$

Introducing a Cobb-Douglas production function

$$Q = Ak^{\alpha} L^{\beta}$$

$$\frac{d\partial}{dk} = \alpha A K^{\alpha-1} L^{\beta}$$

$$= \alpha Q/K$$

$$\frac{c}{p} = \alpha \frac{Q}{k} =$$

$$\text{Derived Capital Stock} = K = \alpha \frac{Qp}{c} \quad \ldots\ldots \quad (2)$$

This theory therefore indicate output, Q, and P/C; the relative price of output to capital services.

This model of investment expenditure determinant has been modified into a general neoclassical approach as:

$$K^* = f(Q, P/C) \ldots \quad (3)$$

which may in some cases include the price of labour relative to capital and output prices.

This approach suffers some defect which are discussed below:

Firstly it ignored the timing relationships in investment expenditure given that investment is an extended process, in which case there could be time lags between periods of decisions to invest and actual investment; and commencement of investment and its completion. It is also conceivable that desired capital stock often has some relationships with past investment decision capital stock. Hence, the desired capital stock becomes a function of one or more past value of independent variables as shown below:

$$K_t^* = x(\lambda_1 Q_t + \lambda_2 Q_{t-1} + X_3 Q_{t-2} \ldots \quad (4)$$

which may be constrained to be a geometric progression

$$K_t^* = \alpha(\lambda Q_t + \lambda^2 Q_{t-1} + \lambda^3 Q_{t-2} \ldots \quad (5)$$

In order to reduce the problems of multicollinearity or inappropriate weightings, the equation can be subjected to Koyck transformation in which case it becomes:

$$K_t^* = \alpha(1 - \lambda)\ (Q_t + \lambda Q_{t-1} + \lambda^2 Q_{t-2}) \quad \ldots\ (6)$$

which becomes:

$$\lambda K_{t-1} = \alpha(1 - \lambda)\ (\lambda Q_{t-1} + \lambda^2 Q_{t-2} \quad \ldots\ (7)$$

for period t-1, and multiplying by λ

Substracting equ. (7) from (6) we have

$$K_t^* = \alpha(1 - \lambda)\ Q_t + \lambda K_{t-1}^* \quad \ldots\ (8)$$

Applying greater weights to one or more terms; the above Koyck formulation becomes:

$$K_t^* = \alpha(a\ Q_{t-1} + (1-a)\ (1-\lambda)\ (Q_{t-2} + \lambda Q_{t-3} + \lambda^2 Q_{t-4})$$

Determinant of Investment Expenditure supply models often concentrated on the role of interest rate ignoring the significance of equity financing and infact the availability of funds. Greater consideration is however being focused on equity yield as a component of the cost of funds, valuation of companies and profits, and the flow of internally generated revenue.

Capital Stock Adjustment Model of Investment

The basis of most works is the flexible accelerator model $It = \beta(K - K_{t-1})$ while β = speed of adjustment coefficient also introduces the fact that capacity utilisation is one of the significant determinants of investment expenditure and the basic model is given as

$$It = \beta(\alpha Q_t - K_{t-1})$$

If α is constant over time, capital in time t-1, was optimal and full adjustment occurs in one period

i.e.$\beta = 1$ giving us the crude Accelerator Model of Investment.

$$K_{t-1} = K^{*}_{t-1} = \alpha Q_{t-1}$$

and

$$It = \alpha(Q_t - Q_{t-1})$$

From the above a lot of difficulties would be encountered in specifying determinants of investments since the above models are not exhaustive in themselves while some are practically deficient. The situation is further compounded by the complexity of the investment process, the multiplicity of potential determinants, the significance of expectations and timing of the adjustment process. All the above theoretical models have tried to explain the determinants of Net Investment. To obtain Gross or Total Investment expenditure requires the incorporation of replacement investment, which allow the basic accelerator model.

$$It = \beta(K^{*}_t - K_{t-1}) + \Sigma K_{t-1}$$

and with provision for depreciation

$$It = \beta K_t^* + (\delta - 1) K_{t.1}$$

Evidence from empirical studies on which of these determinants is most important in explaining investment behaviour cut across the world, from the U.K. to the U.S.A. some of which are highlighted below. As enumerated above, early theories viewed interest rates as prime determinants of investment expenditure. However by 1950's and 1960's the emphasis changed from interest rates to (a) changes in demand and (b) changes in capacity utilisation since empirical studies showed that interest rates were less significant.

According to P.W.S. Andrews (1940), the Oxford Economists Research Group in late 1930's did some empirical work in the U.K. and found that short-term interest rates were unimportant in influencing fixed or stock investments. This was confirmed by Radcliffe (1959).

Andrews and Burner (1952) working on U.S. investments found that cost of funds had little impact but the availability was potentially important.

Empirical studies by Mack (1941), Heller et. al. (1950) de-Chazeau (1954) and Eisner (1957) found depreciation, cash flow or liquidity consideration to have an impact,further emphasising the effects of funds availability. They nearly all found support for a sales or capacity based model.

In summary, there was considerable support for the view that expected demand was crucial, availability of finance of some significance, while cost of funds was virtually insignificant. Further Econometric Studies by Manner (1954), Kisselgorf and Modigliani (1957), R. Gordon (1955) found strong sales effect, with the capacity utilisation effect,stronger than the pure sales effect. The general lack of significance of interest rates variables were also noticed.

Conflicting evidence also occured with respect to availability of funds particularly, internal funds with Klein (1950), Meyer and Kuh (1966) finding

Internal Cash flow important, while others such as Grunfeld (1960), Taitel (1941) rejecting such correlations.

A lot of explanations have been adduced for the smaller or insignificant impact of interest rates some of which include the problems of uncertainty about the future which makes the internal rate of return highly uncertain and thereby making small fluctuations in interest rates have little impact; use of unsophisticated investment decision procedures which often makes comparisons of project returns with cost of fund impossible etc. The reasons are not exhaustive. What all the above reasons suggest is that enterpreneurs simply ignore the cost of funds for one reason or the other.

Some other economists and researchers like Richardson (1964) and Yarrow (1976) still argued that the cost of funds is important but for various reasons, its impact is particularly hard to isolate.

Eisner (1957) also believed that, all other variables which are taken into consideration when

investment decisions are taken themselves often reflect the cost of funds. He contended that higher interest rates may well squeeze cash-flow and lower net profits, and if these (cash flow and net-profits) influence investment decisions, then the cost of funds may also have an impact. Other objections raised to these earlier studies include that:

(1) Econometric tests do not recognise the fact that investment being a function of change in demand would also in theory be dependent on changes in rather than levels of, the cost of funds either measured in interest rates, equity yields etc.

(2) the use of different sources of funds at different times is likely to make the investment-interest rate relation vary over time and hence difficult to identify econometrically; giving rise to a "bifurcation" hypothesis that the cost of funds might be important in the boom when external funds are used but not in the recession.

(3) that as the economy expands, investment rises because of demand effects which ultimately leads to a

high demand for investment funds and consequently will cause interest rates to rise.

Further studies by Kuh (1967) on electric models in which both supply and demand aspects were incorporated, found that both capacity and cost of funds variables were simultaneously important while in general, liquidity and interest rate variables were less significant than capacity and sales variables in Evans (1967) study. Anderson (1964) and Resek R.W. (1966) econometric studies revealed that in so far as data permits, demand variables, cost of funds variables, expectational and adjustment factors are all significant. Latest efforts at resolving these problems and contradictions was again spearheaded by Jorgensen, using his neo-classical approach, which by ignoring taxation, the price of capital services, is the cost of depreciation and the cost of capital funds appropriate to the capital goods supplying these services.

$$IC^{x} = \alpha \frac{QP}{c}$$

where $C = q(\delta + r)$ q = price of capital good s.

rewritten as $C = q(\delta + r - \frac{\dot{q}}{q})\delta$ = rate of depreciation

r = cost of capital measured by rate of return.

where

there are capital gains

∴ Gross Investment function $I_t = \beta(K_t^* = K_{t-1}) + \delta K_{t-1}$

where

$$K_t^* = \alpha \frac{Q_t P_t}{qt(\delta + r_t - \frac{\dot{qt}}{qt})}$$

This model incorporates the measure of the cost of funds, the price and volumes of output, price of capital goods. The cost of other inputs is indirectly included in that a change in them changes the factor-price ratio. This model has been tested by Jorgensen and Siebert (1968), Jorgensen and Stephenson (1967) Elliot (1973), Coen (1969), Elliot and Coen reworking Jorgensen's analysis criticised the neoclassical approach for restricting the elasticity of demand for capital with respect to its price to equal the elasticity of substitution, implying unitary elasticity, inconsistencies and the fact that using a CES production function would give better results. Despite these

large amounts of research on the determinants of investment expenditure, the results have not been entirely satisfactory giving the arguments and counter arguments based on empirical evidences. Evidence of impact of different determinants vary considerably, predictions much weaker than data fitting, while expectations are difficult to incorporate, the lags involved complicated estimation, while econometric problems abound. However, reasonable evidence abound that expected capacity utilisation, cost and availability of different sources of funds, sales and price of output all have identifiable effects on investments.

Methodology

The theoretical debates on the determinants of investment expenditure decision have shown that other factors besides the cost of funds have identifiable effects on investment decisions. Hence, the basis of this thesis is to test the validity of these hypothesis especially with regards to Small Scale Industries in Nigeria.

More specifically, this thesis tries to analyse

the impact of development finance institutions on start-up capital, working capital, capital for Expansion and Total Gross Investments expenditure of Small Scale Industries in Nigeria.

The present study however deviates from existing empirical work on Small Scale Industries in Nigeria, by concentrating on the structure of finance to Small Scale Industries, given that earlier studies and surveys had concentrated on shortage of capital per se and as a component of their investigation, without breaking it down into its component parts. The believe in this study is that apart from knowing which of the determinants are significant in investment expenditure, it is also concerned with which determinant is significant in the constituent investment expenditure viz- start-up, working capital, expansion, and total Gross Investment as well as finding out the significant determinants of availability of funds and requirement for funds.

The study was conceived to make a distinction between periods when there were no DFI's and periods

when they came into existence. However, data collection problems necessitated a reconsideration and use of a cross-sectional analysis. However, the present study permits an analysis of the substitutability between DFI's, Bank and Non-Bank Financial Institutions, and other Credit Variables.

For the purpose of this study, in order to examine the determinants of investment expenditures, start-up costs, working capital, Expansion costs and Total Gross Investments have been chosen for analysis.

Similarly, based on the empirical findings of earlier economists as enumerated in the theoretical framework, the analysis also included the examination of the determinants of availability of funds and the requirement for funds.

All these variables have been specified in order to enable us to capture the simultaneity of these decisions. The methodology employed in this thesis is based on the interactions of credit variables and real expenditure variables and hence the following tests are carried out:

(1) The first test examined the significance of the determinants of investment expenditure on start-up, working capital, expansion and Total Gross Investments as well as that of the availability of and requirement for funds.

(2) The second test, examines substitutability between various sources of finance for each investment expenditure. For example a firm may use its retained profits rather than borrowing from banks or may make arrangements for trade credits instead of going for overdrafts for working capital.

The methodology employed for this test is similar to that of Cohen (1968). It consists of gradually broadening the definition of the financial variables in the investment equations by substitution of key credit variable to see whether the significance of the coefficient and the explanatory power of the equation improves. An improvement when substituted would imply that Small Scale Industries make use of alternative sources of credit from the DFI's. A deterioration would imply that the new, broader

variables includes a type of credit variable which is not closely related to the investment variable in question. This approach has the advantage of permitting an analysis of the substitutability between all forms of credit, without the loss of degrees of freedom that would be entailed in the simultaneous introduction of several credit variables in the estimating equation.

(3) The same test as above is carried out for the total Gross Investments. If total investment shows a clear relationship with a particular credit source (as indicated by t-values) than do its component categories, this can be interpreted as indicating that Small Scale Industries depend on a given credit variable to finance more than one type of investment.

Description of the Model and Parameters Estimated

In order to determine the significance of the explanatory variables in the investment expenditure four types of investment expenditure have been chosen

for analysis. These are investments in fixed Assets, working capital (changes in Inventories), capital for Expansion and Total Gross Investments. They were all chosen for analysis as decisions to invest in either of them are interdependent and hence it may be necessary to capture the simultaneity of these investment decisions.

The Basic Model, which is econometric consists of six equations, the first two explaining the determinants of the availability and requirement for funds by Small Scale Industries, and the remaining four explaining investments in fixed assets (I_t), changes in Inventories(INV_t), Capital for Expansion (Ex_t) and Total Gross Investments (TGI_t).

1. Money Capital Requirement

$$M.C.R_t = F_1(IT_t, INV_t, Ex_t, TGI_t, R_t, S_t, G_t)$$

2. Money Capital Availability

$$M.C.A_t = F_2(KE_t, D_t, M_t, C_t..)$$

3. Investment in Fixed Assets

$$IT_t = F\Delta_3 (INV_t, Ex_t, TGI_t, R_t, M_t, S_t, C_t)$$

4. Changes in Inventories

$$INV_t = F_4(IT_t, EX_t, TGI_t, R_t, M_t, S_t, C_t)$$

5. Capital for Expansion

$$EX = F5(IT_t, \Delta INV_t, TGI_t, R_t, M_t, S_t, C_t)$$

6. Total Gross Investment

$$TGI_t = F_6(It_t, \Delta INV_t, Ex_t, R_t, M_t, S_t, C_t)$$

where

IT_t = Investments in fixed Assets

ΔINV_t = Changes in Inventories

Ex_t = Capital for Expansion

TGI_t = Total Gross Investment

Rt = Interest Cost of Debt

St = Gross Sales Turnover

KE_t = Equity Capital

D_t = Debt Capital

M_t = Maturity of Loan

The variable Ct represents one of the following parameters which are substituted one at a time.

TAD = Total Stock of Accumulated Debts

BNF = Total Liabilities to Bank and Non-Bank Financial Institutions

TLB = Total Liabilities to Banks (Commercial)

TDFI = Total Liabilities to Development Finance Institutions

TNF = Total Liabilities to Non-Bank Financial Institutions (Informal Sources)

NTC = Net Trade Credit.

Formally, the relationships between parameters are rendered in the following set of equations:

1. Money Capital Requirement

$$M.C.R. \; a_o + a_1 IT_t + a_2 \Delta INV_t + a_3 Ex_t + a_4 TGI_t + a_5 R_t + a_6 S_t + a_7 Ct. + E_t.$$

$$\ln ACR = b_o + b_1 \ln(IT_t) + b_2 \ln \Delta(INV_t) + b_3 \ln (Ex)_t + b_4 \ln (TGI)_t + b_5 \ln (R)_t + b_6 \ln (S)_t + b_7 \ln (C)_t + E_t$$

2. Money Capital Availability

$$M.C.A. = C_o + C_1 KE_t + C_2 D_t + C_3 M_t + C_4 C_t + E_t$$

$$\ln (MCA) = d_o + d_1 \ln (K_{E_t}) + d_2 \ln (D_t) + d_3 \ln (M_t + d_4 \ln C_t \ldots + E_t.$$

3. Investments in Fixed Assets

$$IT = g_o + g_1 \Delta INV_t + g_2 Ex_t + g_3 TGI_t + g_4 R_t + g_5 M_t + g_6 S_t + g_7 C_t + E_t$$

$$\ln (IT) = h_o + h_1 \ln \Delta(INV_t) + h_2 \ln Ex_t + h_3 \ln (TGI_t + h_4 \ln R_t + h_5 \ln M_t + h_6 \ln S_t + h_7 \ln C_t + E_t.$$

4. Changes in Inventories

$$\Delta INV = j_o + j_1 IT_t + j_2 Ex_t + J_3 TGI_t + j_4 R_t + j_5 M_t + j_6 S_t + j_7 C_t + E_t$$

$$\ln \Delta(INV) = k_o + k_1 \ln (IT_t) + k_2 \ln Ex_t + k_3 \ln TGI_t + k_4 \ln R_t + k_5 \ln M_t + k_6 \ln S_t + k_7 \ln C_t + E_t$$

5. Capital for Expansion (Ex)

$$Cx = m_o + m_1 IT_t + m_2 \Delta INV_t + m_3 KE_t + m_4 TGI_t + m_5 R_t + m_6 M_t + M_7 S_t + m_8 C_t + E_t.$$

$$\ln ke = n_o + n_1 \ln IT_t + n_2 \ln \Delta INV_t + n_3 \ln KE_t + n_4 \ln TGI_t + n_5 \ln R_t + n_6 \ln M_t + n_7 \ln S_t + n_8 \ln C_t.$$

6. Total Gross Investment (TGI)

$$TGI = p_o + p_1 IT_t + p_2 \Delta INV_t + p_3 EX_t + p_4 R_t + p_5 M_t + p_6 S + p_7 C_t + E_t$$

$$\ln TGI = q_o + q_1 \ln (IT_t) + q_2 \ln \Delta (INV_t) + q_3 \ln Ex_t + q_4 \ln R_t + q_5 \ln M_t + q_6 \ln S_t + q_7 \ln C_t + E_t$$

Expected Relationship Between Parameters in the Model

It is expected that at least one of the credit variables would be significant factors in each of the equations estimated.

It is expected that equations on Money Capital Requirements, would have closer relationships with investment expenditures in fixed assets, working capital and Total Gross Investments while the Credit variables would be significant factors in the money capital availability equations.

KE, D, M are expected to have positive relationship with the availability of capital (MCA), to Small Scale Industries.

Among the credit variables, it is expected that TAD (proxy for total debt), TLB (Banks) and TDFI would

contribute significantly to the availability of credit, with TDFI having the highest significance. This is in conformity with the fact that the sampled area have branches of some DFI's e.g. NIDB, NBCI, and State Development Finance Institutions.

For the demand for funds, (MCR) it is expected that Expansion Capital (EX), Fixed Assets (IT), Working Capital (INV), Total Investment (TGI) and Interest Rate (R), would be significant determinants of the requirements for funds. Most Small Scale Industries according to empirical evidence from NISER (1987) study, require funds for acquisition of fixed assets, expansion of existing capacities and working capital. This implicity indicate that TGI, Total Investment expenditure would also be significant.

It is also expected that R would have a negative sign in the requirement for funds since the higher the interest rates, the lower would be the demand for funds by Small Scale Industries.

It is also expected that Total Gross Investment would show a closer relationship with a particular credit variable as will be indicated by the t-ratio

which may imply that Small Scale Industries depend on DFI's or other credit variables to finance their investment expenditures.

However, if the credit variables are significant in the investment equations, it may imply that DFI's Credit can be substituted for other types of financing institutions' rendering such institutional credit favours ineffective as a Small Scale Industrial policy.

Among the credit variables, it is expected that Small Scale Industries would source their funds mainly from TDFI's since these (Development Finance Institutions) by their charter, have concessional terms of loans. NTC(Net Trade Credit) is also expected to be positively related to the requirement for funds.

For investments in fixed assets, it is expected that Expansion Capital (EX), Gross Sales (S), Total Gross Investment (TGI), Inventory changes (INV) would have positive signs while the Interest R would be negatively signed.

Investment in fixed assets could be for expansion

of existing facilities and hence the expected close relationships between IT and Ex. It is also expected that Gross Sales and working capital would increase as Fixed Asset Investment (IT) is increased, since it would definitely necessitate increases in capacity utilisation and output.

Given that investment in fixed assets is a medium to long term investment, it is expected that the rate of interest (R) (interest cost of debt) would be a significant determinant of Investment in fixed assets. Among the credit variables, it is expected that medium to Long Term investments would be undertaken by DFI's and hence it is expected that there will be a positive relationship between TDFI and investments in fixed assets. Others such as commercial banks are expected to be negatively related since they often lend on short term basis; while Non-Financial Institution (TNF) and Net Trade Credit (NTC) are unlikely to be able to provide adequate funds for acquisition of such assets.

For changes in inventories (working capital) it

is expected Gross Sales (S), Fixed Asset Investment (IT), Interest (R) and Expansion Capital (Ex) would be positively related for obvious theoretical reasons. Any increase in working capital may be related to improvement in capacity utilisation or expansion of capacity or investments in fixed assets. While the interest cost of debt is expected to be a significant determinant of working capital requirement from financial institutions, hence it is expected that R would be negatively signed.

Empirical evidence have often shown that because of high interest rates, small scale industries often source their working capital from Net Trade Credit sources or through ploughed-back profits. Hence it is expected that Non-Financial Institution and Net Trade Credit would have positive relationships. Given that banks prefer short-term loans, it is expected that Banks (TLB) would be significant as well as Development Financial Institutions (TDFI's).

In the case of capital for Expansion, (Ex), it is expected that Total Gross Investment (TGI), Investment in Fixed Assets (IT), Working Capital (INV) would

be significant for the same reasons as for the fixed asset investments. Hence it is expected that TGI, IT, INV and S would be positively signed while R would be negatively signed and significant in the estimated equations.

It is also expected that among the credit variables, Development Finance Institutions (TDFI) would be the most significant, contributing more to the finance of expansion programmes of Small Scale Industries.

Finally, for the total Investment Expenditure it is expected that maturity of loan, Gross Sales, Expansion, Fixed Asset Investments, Working Capital and Interest would be significant determinants, all but interest rate, being positively signed. Furthermore, it is expected that all credit variables would be significant credit variables in the total investment expenditure of Small Scale Industries, with Development Finance Institutions (TDFI) being expected as the most significant.

Analytical Proceedure

The equations in the model have been estimated using the Ordinary Least Square regression technique and the performance of each of the equations have been evaluated statistically and economically. The t-ratio's Durbin-Watson Statistics, F-ratios and $\bar{R}^2$ (coefficient of goodness of fit corrected for degrees of freedom) have been presented in the Results.

Data Requirements and Collection

The model has been estimated from data obtained from a field survey and interviews conducted between December 1989 and May 1990 in the South Western Nigeria.

Relevant data were obtained during the field surveys covering Small Scale Industries within the armbit of a pre-determined definition of Small Scale Industries. Data was also collected by interviews on the sources and uses of funds: Credit Policies and Operations of Development Finance Institutions operating in this zone particularly the NIDB and the NBCI.

The emphasis here was on actual requests for loans, disbursements and repayments.

Definition of Small Scale Industries

In the case of the field survey of Small Scale Industries for this study only those that met the following criteria were enumerated:- These include those industries:

(a) involved in direct production and semi-production of goods or repair-types or service activities;

(b) employing less than fifty employees;

(c) without a well defined management structure and/or specialisation in its management especially in Administration,finance, production, maintenance and other key functional specialised departments. This was used because previous studies had shown that generally Small Scale Industries in developing countries, including Nigeria, do not have the capabilities for such specialised management in their operations;

(d) with maximum capitalisation of ₦500,000 and may be registered or unregistered.

Survey Design and Data Collection

The survey covered those establishments defined above within the delimited zone (Lagos, Ogun, Ondo, Oyo and Bendel States).

Description of Frames

The study followed the selection frame adopted by A.M. Osoba et. al. NISER (1987) in which case two types of frames were used for the study: the list frame and area frame. The list frame was obtained from sources which included State Ministries of Industries, States' Industrial Finance Corporations, Investment Corporations (within the states in this zone) Federal Office of Statistics, NISER Small Scale Research Units. The Area frame was obtained from selections from a sample of urban towns within these zones. Each zone had two towns with high industrial concentration ratios selected and within these towns, areas were selected for sampling. Total updating processes were then carried in consonance with the pre-determined definition above. Hence, the sample frame include samples

from the list and area frames with proper scrutiny to ensure there were no duplications.

Furthermore, the selection procedure were based on the International Standard Industrial Classification groupings as the basis for stratification.

The selection strategy was therefore designed to allocate the sample size proportionally to the groups or sub-groups and across each state within the zone. Proportionality rather than optimum were made in realisation of the obvious advantages that would be obtained from the several variables of interest with almost equal importance.

The sample size was then determined based on what could be achieved within the limits of time, financial and human resources for this study. The anticipated level of non-response was also considered. Hence, 120 firms in the samples for each state was thought adequate such that in the final analysis at least about 500 firms samples would have been obtained in the zone for the whole analysis.

Survey Instruments

A questionnaire was drawn up based on the parameters to be estimated, ensuring that information required for a detailed analysis are incorporated in the questions on the questionnaire. The questionnaire was then pretested and necessary amendments made before the data collection commenced.

Data Collection

The field work took place in December 1989/May 1990 covering Lagos, Ogun, Oyo, Ondo and Bendel States respectively in that order. A research assistant coordinated the field work in each state with a team of enumerators. The enumerators and research assistants were given induction sessions and training on madalities for obtaining information on the questionnaire and general interpretations. The researcher, coordinated all activities by supervising each state as often as possible within the enumeration period. All these were done to ensure the quality of data obtained. In most cases, the questionnaires were filled by the enumerators on

behalf of the entrepreneurs who in some cases were not literate enough to comprehend some of the questions or those who had no time in filling the question, but prefered oral interview. Errors detected were corrected or the enumerators sent back for repeated exercises. The data for the Development Finance Institutions in this state were obtained by the researcher personally, and information obtained were designed to answer the questions on supply and demand for funds within this zone.

Problems Encountered

(1) Most of the samples obtained from the list frames have become non-existent within the period of enumeration. Some had packed up due to inadequate raw materials while others have shifted bases. For example, information on some bakeries in the list frame revealed that they have shifted production to the border towns of Ilara, in Egbado Division of Ogun State and other border towns in order to obtain cheaper sources of flour whose importation into Nigeria had been banned.

Hence only few samples from the list frames were

used. Infact, the enumerators had to go street by street before locating most of the enterprises, necessitating increased costs in time and money especially since repeated visits had to be made for most of the exercises.

(2) For one reason or other, most proprietors were never around and this greatly reduced the level of responses. Enumerators were often encouraged to leave the questionnaires with a promise to send to them as soon as practicable. Some were never returned.

(3) Given that the project emphasised the requirement for funds and availability of funds to Small Scale Industries the enumeration suffered two major problems, the proprietors often miscontrued the true intentions of the study, perceiving it to be a ploy for tax assessment. Others felt if they said they did not enjoy any financial assistance, they would stand better chances if the exercise was aimed at providing finance to the Small Scale Industries.

(4) Some establishments refused bluntly to answer some questions in the questionnaire for no discernible

reason, rendering such questionnaires unusable for analysis.

(5) Most of the enumerators had to go back to some of these enterprises to authenticate certain statements made or to obtain the cooperation of the proprietors. In some cases the research assistants were mandated to actually confirm the obstinacy of some of these proprietors.

(6) Most of the Small Scale Industries enumerated did not keep proper records and hence divergencies often occured between their stated investment expenditures and the total sourcing of their funds, necessitating certain amendments and assumptions. For example, figures on sales turnover, working capital and how their initial investments were financed gave serious concern for some of the small scale industries.

Quality of Data Obtained

Within the available human and financial resources and within the time limit for this study, all questionnaires were given both field scrutiny and

office editing to improve the quality of data obtained. In all, the quality of the data obtained is quite high.

Responses

The response patterns in respect of the field survey are summarized below with indications of percentage response by States and industrial activities (International Standard Industrial classicication (ISIC) and by sectoral industrial groupings.

For the five states sampled, 540 Small Scale Industries were contacted with 120 each in Bendel and Lagos States based on the industrial location quotients obtained from NISER report, and 100 each from Ogun, Ondo and Oyo States. The response rates were high for nearly all the states ranged from 52% - 78% with Bendel, Lagos, Ogun, Ondo, and Oyo States having 85%, 87%, 70%, 52% and 62% responses respectively. However, in numerical terms the number of valid responses were 102, 104, 72, 52 and 52 in Bendel, Lagos, Ogun, Ondo and Oyo States respectively.

The total valid responses used in the regression analysis was 392 samples which represented about 73% of Small Scale Industries contacted (Table 3).

The response rate was encouraging inspite of the difficulties I enumerated earlier in obtaining information from Small Scale Industries in the states covered. Overall, the response rate has been significantly good, taking cognisance of time and data limitations. It has also enhanced the quality of data obtained. The distribution of the valid responses by International Standard Industrial Classifications (ISIC) are as shown in Table (4) while Table (5) presented the distribution of valid responses by individual subsector or industrial grouping.

Limitations of Data

Since some of the entrepreneurs did not keep adequate records, some of the information obtained were based on their memory recall, which would definitely affect the reliability of data and problems of internal inconsistency may arise.

TABLE 3

ALL SAMPLES: RESPONSE RATES BY STATES

	No of SSI Contacted	No. of Valid Respondents	Percentage of Valid Respondents to Total No. of valid Responses
Bendel	120	102	85%
Lagos	120	104	87%
Ogun	100	72	70%
Ondo	100	52	52%
Oyo	100	62	62%
All States	540	392	73%

TABLE 4

DISTRIBUTION OF VALID CASES SAMPLED BY INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION (ISIC)

Industrial Activity	No. of Valid Responses	% of Valid Respondents to total Valid Responses	Cumulative % of Valid Responses
1.. Food, Beverage & Tobacco	39	10.0	10.0
2. Textile and Wearing Apparel	44	11.2	21.1
3. Footwear & Leather Products	16	4.1	25.3
4. Paper & Paper Products	48	12.2	37.5
5. Rubber Products & Plastics	24	6.1	43.6
6. Petroleum Products	16	4.1	47.7
7. Pottery and China Ware	7	1.8	49.5
8. Furniture	44	11.2	60.7
9. Non-Electrical Household Appliances	11	2.8	63.5
10. Radio (Electrical)	6	1.5	65.0
11. General Household Appliances	10	2.6	67.6
12. Basic Metal Products	24	6.1	73.7
13. Fabricated Metal Products	12	3.1	76.8
14. Machinery and Equipments	15	3.8	80.6
15. Transport	7	1.8	82.4
16. Others	69	17.6	100.0
TOTAL	392	100	100

TABLE 5

DISTRIBUTION OF VALID SAMPLE RESPONSES BY INDUSTRIAL SECTORAL GROUPINGS.**

Industrial Groupings	No. of Valid Responses	% of Total Valid Responses	Cumulative % of Valid Responses
1. Non-Durable Consumer goods	194	49.5	49.5
2. Durable Consumer goods	71	18.1	67.6
3. Capital goods	58	14.8	82.4
4. Others	69	17.6	100.0
Total	392	100	

** Notes:

Items 1-7 on Table 4 Constitute the Non-Durable Consumer Goods Sector

8-11 On Table Constitute the Durable Consumer Goods Sector

12-15 On Table Constitute the Capital Goods Sector

16 On Table Constitute other (Services and Repairs).

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CHAPTER 4

SUPPLY AND DEMAND FOR FUNDS BY SMALL SCALE INDUSTRIES IN NIGERIA: EMPIRICAL RESULTS

4.1 Availability of Money Capital Funds to Small Scale Industries in Nigeria

Regression Results

For the total sample, the results with reference to availability of funds are presented in both linear log-linear specifications of regression equations. The results are presented for the industrial sub-sectors and for the five states.

For the whole sample, equity capital (KE) and debt capital (D) and maturity of loan (M) provided explanations for the determinants of the availability of funds. While Development Finance Institutions (DFI) are the only significant credit variable, Equity Capital (KE) and Debt Capital (D) were significant in all the equations, with Equation 4 providing the best fit linking money capital availability with the explanatory varaible. In the equation, the regressors explain 99.8% of variations in money capital availability (Table 6A & Equation 4). This result showed clearly that the existing sources of funds to SSI in the sampled area are equity capital and debt capital in conformity with a priori expectations while Loan Maturity is also a significant determinant of availability of funds.

Table 6

REGRESSION RESULT FOR M.C.A.(MONEY CAPITAL AVAILABILITY)

EQUATION	1	2	3	4	5	6
CONSTANT	12411 (0.729)	12344 (0.710)	16955 (0.798)	-8586 (-2.199)	49468 (-0.809)	60092.77 (-0.535)
19. M	262.57 (0.050)	433.39 (0.079)	347.85 (0.054)	3629.5** (2.845)	-3197.46 (-0.133)	1669.79 (0.040)
17. KE	0.98798** (20.729)	0.99155** (20.826)	0.98710** (18.491)	0.98995** (120.869)	1.00520** (8.124)	0.99575** (3.381)
18. D	0.91685** (6.329)	0.91982** (5.744)	0.91477** (4.712)	0.84753** (26.366)	0.89784 (1.365)	1.00697 (1.632)
10. TAD	0.01544 (0.197)					
11. BNF		3.80E-03 (0.046)				
12. TLB			-6.11E-03 (-0.047)			
13. TDFI				0.16483** (4.105)		
14. TNF					-0.54400 (-0.502)	
15. NTC						-0.84438 (-0.465)
R^2	0.87146	0.86820	0.85346	0.99848	0.62478	0.53274
D.W. TEST	2.068	2.062	2.0577	1.89144	2.08334	1.9263
F-VALUE	243.37**	229.9**	166.99**	6574.94**	21.39**	8.98**
S.E.	77530	78664	86935	9025.3	131945	177822

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Loan maturity as a significant determinant of availability of funds suggests that credit agencies preferred short term lending as against long-term lendings required by SSI's. The significance of DFI's is also in conformity with a priori expectations most of them were specifically set up to offer long-term financial assistance to the Industrial sector.

Equation 4

$$M.C.A = -8588 + \underset{(2.845)}{3629.5^{**}}M + \underset{(120.869)}{0.98995^{**}}KE + \underset{(26.366)}{0.84753^{**}}D + \underset{(4.105)}{0.16483}TDFI$$

$R^2 = 0.99848$

$DW = 1.89144$

$SEE = 9025.3$

Both the linear and log-linear specifications of the regression results were also obtained for the sectors. However, the linear specifications of the regression equations provided the best fit for the Non-Durable Consumer Goods and the Capital Goods Sector, while the log-linear specifications fitted the Durable Goods and services sectors.

The regression results showed that all the variables examined were correctly signed with the $\bar{R}2$ (adjusted coefficient of Determination) ranging from 83-99% in all the equations. The regression results also showed that Equity Capital (KE), Debt Capital (D) and Maturity of loan (M) were important determinants of the availability of funds to SSI's in all the sectors. Equity Capital was however the most important as reflected by the high significance of the t-values (Appendix 2 and Appendices 1-3). Also TDFI (Development Finance Institutions) as credit variable was significant in at least two of the sectors, (Non-Durable and Capital Goods) while Non Institutional financial sources (TNF) was also significant in the other two sectors.

These results are also in conformity with a priori expectations suggesting that Small Scale Industries relied much more on their equity capital and where available debt capital for their investment expenditures. The negative signs obtained for maturity of loans, M, implied that the longer the maturity of the loan, the less willing are the formal institutional sources of funds in granting loans to SSI's in contrast to the long term loan requirements of SSI's.

The significance of TDFI (Development Finance Institutions) and TNF suggests that while some of these sectors especially the Non-Durable Consumer Goods and the Capital Goods sectors enjoy some financial assistance from Development Finance institutions, the others including Durable Goods and service sectors source their funds mainly from Equity and Non- Institutional financial sources. The implication of these findings is that the formal financial institutions, except Development Finance Institutions are unwilling to lend for long terms to industrial projects, thereby reducing the accessibility of these groups of industries to formal financial sources. This has a lot of implication for government financial policies towards the SSI's. It provides a basis for the exploration of capital market avenues for long term funding of industrial projects in Nigeria.

In the analysis by states, the results also showed the same sequence with the sectors, with estimated parameters conforming to a priori expectations. Regression results of both the linear and log-linear specifications showed the significance of Equity Capital

and Debt Capital in all the states viz, Bendel, Lagos, Ogun, Ondo and Oyo State. However, the linear specifications of the results gave better explanations of the variations in Money Capital availability in Bendel, Lagos and Ondo States while the log-linear specifications gave better explanations to results from Ogun and Oyo States. The adjusted $\bar{R}2$ for all the regression equations ranged from 93-99% with high F-values (Appendices 3-8). The regression results of the states also showed Banks and Non-Institutional financial sources represented by BNF were significant determinants of availability of funds in at least three of the five states (Bendel, Ogun and Oyo) while the explanatory powers of the regression equations improved in the other two states (Lagos and Ondo) when TNF (Non-Institutional financial sources) were substituted as the credit variables.

The results obtained above suggests that the significance of Equity Capital and Debt Capital conform to the earlier findings and a priori expectations, however the results also suggest changes in the composition of the Debt Capital. The result showed that in Bendel Ogun and Oyo States, Banks and Non-Institutional financial

sources are important sources of funds to Small Scale Industries in contrast to a priori expectations in which the DFI's were supposed to be significant sources of funds. However the insignificance of DFI's may not be unconnected with the cessation in activities of the Small Scale Industrial Credit Schemes in the states considered.

The significance of Non-Institutional sources of funds in Lagos and Ondo States showed the inadequacies of the existing DFI's in meeting the credit needs of the numerous SSI's in Nigeria. This has serious implications for government credit policies.

4.2 Demand for Funds by Small Scale Industries

The regression results with credit variables substituted in each equation are presented in Table 7. The properties of the estimates meet the standard statistical criteria with varying degrees of success. As the t-statistics underneath the estimated coefficients reveal, the variable, capital for Expansion (EX) met the five percent two-tailed tests. The signs of the coefficients about which a priori expectations exist,

are also consistent in most of the equations.

For the total samples, both the linear and log-linear specifications were attempted. Evidence from the table suggests that the log-linear specifications provided the better fit for the regression analysis with adjusted $\bar{R}2$ ranging from 73.08% to 95.98% showing impressive explanatory powers of the equations. Furthermore, money capital Requirement equations compare well with previous empirical results. They provided strong evidence that Small Scale Industries require funds mostly for Expansion of capacity (EX). Gross Sales (S), Total Gross Investment (TGI) also appear as significant determinants of money capital Requirements by Small Scale Industries.

Equation 66A

$$\ln(MCR) = 3.55052 + \underset{(2.346)}{0.21637^{**}}\ln(S) + \underset{(11.104)}{0.75038^{**}}\ln(Ex) + 0.12742\ln(T$$

$$0.12742\ln(TGI) - \underset{(-1.383)}{0.11788}\ln(IT) - \underset{(-3.440)}{0.47803^{**}}\ln(INN)$$

$$+ \underset{(0.724)}{0.0755}\ln(R) + \underset{(5.566)}{0.17998^{**}}\ln(NTC)$$

$R^2 = 0.95980$

$DW = 1.22693$

$SEE = 0.19820$

Table 7

NATURAL LOG REGRESSION RESULT FOR M.C.R.(MONEY CAPITAL REQUIREMENT)

UATION	61A	62A	63A	64A	65A	66A
CONSTANT	0.83479 (0.816)	0.74702 (0.743)	0.86740 (0.855)	2.12481 (0.962)	3.30957 (1.126)	3.55052* (1.991)
9. S	-0.17536** (-2.158)	-0.17817** (-2.202)	-0.17928** (-2.217)	-0.03823 (-0.192)	-0.08588 (-0.261)	0.21637** (2.346)
6. EX	0.85544** (14.318)	0.85658** (14.384)	0.85400** (14.279)	0.93149** (8.162)	0.91773** (4.155)	0.75038** (11.104)
7. TGI	0.23098** (2.933)	0.22639** (2.842)	0.23930** (2.925)	0.11000 (0.508)	0.05596 (0.180)	0.12742 (1.710)
4. IT	-0.049743 (-0.643)	-0.04088 (-0.508)	-0.04074 (-0.535)	-0.05515 (-0.319)	-0.5300 (-0.241)	-0.11788 (-1.383)
5. INV	0.11959 (1.113)	0.11180 (1.037)	0.10994 (1.033)	-0.05965 (-0.264)	0.10002 (0.287)	-0.47803** (-3.440)
8. R	0.04356 (0.202)	-0.03424 (-0.195)	0.07883 (0.385)	-0.07837 (-0.398)	0.08405 (0.296)	0.07555 (0.724)
10. TAD	-0.05054 (-0.243)					
11. BNF		0.02745 (0.166)				
12. TLB			-0.08664 (-0.435)			
13. TDFI				0.03050 (0.153)		

However in examining the question of the most important sources of funds by Small Scale Industries and from which sources they required funds, it was observed that the Net Trade Credit variable was significant both in the linear and log-linear specifications of the regression results. This suggests that Small Scale Industries rely much more on Net Trade Credit for improving their capacities or expansion. From the equations only NTC (Net Trade Credit) was significant as a credit variable.

The results for the total samples is also replicated in the sectoral analysis with log-linear specifications of the regression equations giving better fits. Results obtained showed that capital for Expansion (Ex), Gross Sales (S) and Total Investment Expenditure (TGI) were important determinants of demand for funds by SSI's. The analysis also revealed that all the credit variables except Banks (TLB and BNF) were insignificant, suggesting that they are unreliable sources of funds for SSI's capacity expansion expenditures. The significance of TLB (Banks) and BNF (Banks and Non-Financial Sources) in one of the sectors, the Capital Goods, suggest that

some of the SSI's rely on Banks and Non-Institutional sources of funds (Appendix 9). In the case of the Capital Goods Sector, Working Capital (INV) was also a significant determinant of Investment expenditure of SSI's for expansion purposes. This conforms with empirical observations that working capital has a positive relationship with expansion activities of business enterprises. Hence the significance of Banks as sources of funds to the capital goods sector conforms to a priori expectations that Banks usually provide funds for working capital. Such funds by Banks are usually short-term and hence the significance of Interest Cost of Debt (R) in the money capital requirement of SSI's. The implication of the above is that, interest cost of debt, R, determine significantly the demand for funds by SSI's conforming to a priori expectations.

For the states, the analysis showed that all the variables considered were correctly signed and conformed to a priori expectations. The explanatory powers of the variables were high with adjusted $\bar{R}2$ ranging from 61-99.9%. The study showed that all the SSI's required funds for expansion of capacities as shown by the signi-

ficance of variable, Ex, in all the states considered. Other variables like Investment in fixed assets (IT), Working Capital (INV) Gross Sales (S) and Interest Cost of Debt (R) were significant determinants of SSI's demand for funds in one or two states (Tables 4 and 5) and (Appendices 11-14).

For Bendel and Oyo States however the study revealed that Small Scale Industries require funds both for expansion of capacities and investment in fixed assets implying that funds for expansion of capacities could be meant for acquiring fixed assets. Similarly the significance of working capital requirements (INV) in Bendel and Ondo States suggest that investments in expansion of capacities could be in the form of expanding the capacity utilisation of the enterprise thus necessitating increases in working capital requirements.

The significance of Gross Sales, (S), Capital for Expansion (Ex), Interest Cost of Debt (R) and working capital in at least one of the estimated equations have different explanations. Gross Sales and Interest variables provide evidence that Gross Sales Expectations and Interest Cost of Debt are important parameters

determining requirement for funds by Small Scale Industries especially in Ondo State.

TNF (Non-financial Institutional sources) and Net Trade Credit (NTC) variables were the only significant credit variables in one of the states, Ondo. All the other states had no significant credit variables suggesting that none of the other credit variables was relied upon as a veritable source of funds by SSI's. However the results obtained for Ogun State showed that the explanatory powers of the equations improved when Development Finance Institutions (DFIs), BNF Bank and Non-Bank Financial Institutions (NTF) and Net Trade Credit (NTC) variables were substituted into the equations. These observations from the individual states suggest that SSI's relied to some extent on DFI's for expansion, working capital, but more on Banks and Non-financial Institutional sources, especially, Net Trade Credits. These conforms with a priori expectations since banks often provide short-term funds for working capital and interest cost of debt is likely to affect the demand for such funds. The revelations in the analysis that Net Trade Credit is the most significant of the credit

variables is not surprising since empirical evidence have shown that most Small Scale Industries rely much on non-institutional sources for their funds especially for expansion and start-up expenditure. The relevant regression results are contained in Appendices 10-14.

CHAPTER 5

IMPACT OF DEVELOPMENT FINANCE INSTITUTIONS AND OTHER CREDIT VARIABLES ON SMALL SCALE INDUSTRIES FINANCE: EMPIRICAL RESULTS

5.1 Finance of Fixed Aset Investment (IT)

For the total samples (all states and all sectors), the results obtained in both the linear and log-linear specifications showed the significance of Expansion (EX), Gross Sales (S), Total Gross Investment (TGI), Working Capital (INV), Interest Cost of Debt (R). This conforms with a priori expectations since empirical evidences have often shown that Investment in Fixed Assets is related to expansion of capacities, and ultimately affects turnover of gross sales, as well as changes in inventories. The significance of Interest Cost of Debt also confirms to earlier predictions that investors decisions on investments are affected by the existing rates of interest. Each of these variables were significant in at least four of the six equations at the 5% level of significance. The adjusted $\bar{R}^2$ for the linear specification ranged from 51.48% to 91.40% (Table 8).

With regards to the Credit variables, Debt Capital was significant at the 10% level, while Banks and Non-Financial Institutions (TLB, and TNF) were significant at the 5% levels.

This results clearly showed that while Banks were particularly important for financing working capital, they could also be substituted for funding investment in Fixed Assets as well as Total Gross Investments. The results also showed that Non-Institutional financial sources are also important in the finance of Small Scale Industries' Investments in fixed assets.

The implication of this finding is that any policy aimed at improving fundings of fixed assets investments should involve both the banks and Non-Institutional financial sources; since each type of credit variable can be used for different purposes by Small Scale Industries.

The study further showed that Development finance Institutions are not effective or significant credit institutions for the funding of Investments in Fixed Assets. This negates the expectations that they would be more significant than Banks and Non-Financial sources,

Table 8.1 REGRESSION RESULT FOR IT.( ) TOTAL)

EQUATION	121	122	123	124	125	126
CONSTANT	-79533.9** (-2.928)	-86632.3** (-3.243)	-83470.8** (-3.070)	-60067* (-1.797)	-18917.68 (-1.375)	65050** (2.988)
6. EX	-0.06028 (-1.381)	-0.05896 (-1.382)	-0.05391 (-1.237)	0.02187 (0.550)	0.03024* (2.077)	0.10193** (2.416)
9. S	-0.11376** (-2.421)	-0.11522** (-2.509)	-0.09494** (-2.006)	-0.13067** (-3.324)	-0.12731** (-5.418)	-9.58E-03 (-0.331)
7. TGI	0.45976** (9.282)	0.45946** (9.517)	0.45571** (9.217)	0.48979** (3.753)	0.27040** (3.382)	-0.11461* (-1.808)
5. INV	0.96417** (4.206)	1.00664** (4.486)	0.93290** (4.123)	0.72024** (3.135)	0.65357** (4.783)	-0.09319 (-0.461)
8. R	9.69350** (2.843)	12.08554** (4.116)	-3.00334 (-0.992)	1.57966 (1.333)	-1.41191** (-2.900)	2.64192** (2.497)
10. TAD	-0.89963* (-1.896)					
11. BNF		-1.26850** (-3.059)				
12. TLB			1.08320** (2.177)			
13. TDFI				0.11639 (0.251)		
14. TNF					1.57002 (2.121)	
15. NTC						-0.12581 (-0.283)
$\bar{R}^2$	0.77059	0.78081	0.77269	0.88950	0.91409	0.51489
D.W. TEST	1.8758	1.86526	1.82974	1.48411	2.22616	2.12209
F-VALUE	71.53	75.806	72.38	38.56	41.78	42.64
S.E.	187086	182871	186227	85080	23323	36714

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

since they were mostly designed to serve such purposes.

In the analysis by sectors, both the linear and log-linear specifications were also estimated and of the results showed similar relationship between total Gross-Investment, Expansion of Capacities, working Capital requirements and fixed asset investments. Again the credit variables, Bank and Non-Financial Institutional sources (BNF) and Banks (TLB) have closer relationship and impact on investment in fixed assets as shown by their significant t-values in three of the four sectors analysed. (Tables 8 and 9). None of the other credit variables including Development Finance Institutions is significant against a priori expectations.

As stated earlier, the significance of Banks (TLB) also suggest that Bank funds could also be substituted for the finance of expansion of capacities, total gross Investment, as well as investment in fixed assets. The non-significance of Development Finance Institutions (DFI's) also suggest that the DFI's are not having any significant impact in providing funds for this vital requirements of SSI's. Hence for greater funding of this sector, all the financial sources should be encouraged

or mobilised especially the Development Finance Institutions (DFI's) that are known to be present in the sampled areas. Details of the results are contained in Tables 8 and 9 and Appendix 3.

For the states, the linear and log-linear specifications of the regression results also showed close relationship between Investment in fixed assets, (IT), Capital for Expansion, Changes in Inventory and Total Gross Investments. Specifically, Lagos and Ondo States had closer relationship between Investment in fixed assets, Capital for Expansion and Total Gross Investment (Appendices 15-20) while Bendel and Ogun States have considerable relationship between Investments in fixed assets and changes in Inventories. The above relationships followed the trends observed in the analysis of the total samples. The relationship between Investment in fixed assets and changes in inventories conforms to a priori expectations since any increase in fixed assets is likely to lead to changes in inventories.

With regards to the credit variables, the results showed that Non-Institutional financial sources especially Net Trade Credit have significant impact in the

fundings of investments in fixed assets ofSSIs especially in Bendel, Lagos and Ogun States. The significance of non-institutional financial sources is supported by empirical evidence from studies by A.M. Osoba (1986), FMI (1984) and NISER (1985). In contrast, however Banks as a component of BNF (Bank and Non-Financial Institutional) credit variable, was significant at 5% in Lagos and Ogun States, showing that Banks in these states provide some assistance to SSIs to finance their fixed asset investments. The case of banks as significant sources of finance in Lagos state may be due to the fact that the state has the greatest concentration of Banks among the states sampled, being the seat of government and commercial nerve-centre of the country. The significance of Non-Institutional financial sources conforms to a priori expectations since previous studies have shown them to be significant sources of funds to SSIs in Nigeria.

However, it is interesting to note that Development Finance Institution (DFIs) were the only credit variable that had any significant impact on the supply of funds for Investment in fixed assets in Ondo State. This suggests that Development Finance Institutions (DFIs) are more active

in this state, while Banks and other Non-Institutional source have insignificant impact on the fixed asset investments expenditure of SSIs. DFI was not significant in fixed asset investment expenditure in any of the other states sampled.

In the sectoral analysis, the study revealed that most of the variables did not explain explicitly the variations observed in Changes in Inventories within the sectors. However Investment in Fixed Assets, (IT), Gross Sales (S) and Total Gross Investment (TGI) were significant determinants of inventory expenditure in one or two of the sectors suggesting close relationships between investment expenditure in fixed assets and inventory changes.

For all the sectors, BNF (Bank and Non-Financial Institutional Sources) was the only significant credit variable, conforming to a priori expectations. Empirical evidences have shown that most SSI's obtain their working capital requirements either from ploughed-back profits, non-institutional sources or in some lucky cases, banks. This finding suggests therefore that policies designed

to enhance inventory financing in Small Scale Industries should include Banks and Non-Institutional sources. Banks would definitely be willing to assist in this type of investment expenditure since it falls within the armbit of their short-term lending activities. Details of relevant regression results are contained in Appendices 21-28.

With respect to the states, the regression results revealed the same trend with Investment in fixed assets (IT), Expansion of Capacities and Gross Sales (S) variables determining significantly inventory changes in at least two of the states. Only Lagos State had any significant credit variable, represented by BNF (Banks and Non-institutional financial sources). This is expected as enumerated earlier, given the high concentration of banking institutions in Lagos and its environs. The significance of Non-Institutional sources conforms with a priori expectations and empirical findings that SSI's relied much more on Non-Institutional credit for their expenditures.

The above findings revealed that SSI's have a lot of problems in obtaining funds for their working capital

requirements from formal financial Institutions. Particularly, the insignificance of DFI's in any of the states and sectors highlighted earlier, suggest that DFI's have no significant impact on the inventory financing of SSI's. Details of relevant regression results are contained on Appendices 24-28.

For the States, the regression results showed the same significant variables IT, (Investment in fixed assets), S, Gross Sales and R (Interest Cost of Debt) as determinant of investment expenditure on expansion programmes for the same reasons highlighted earlier.

Similarly, the findings with respect to credit variables corroborated earlier findings with TLB (Banks) and BNF (Banks & Non-Financial Institution) having significant impact on the finance of expansion programmes of SSI's on Bendel and Ogun State. While none of the credit variables was significant in the other states. (see Table 8) and Appendices 33-35. The implications of this findings are three fold: (a) that any policy designed to provide funds for expansion programmes of SSI's should involve Banks and non-institutional sources and (b) need for re-examination of the implementation

of existing government policies and credit guidelines especially in Lagos, Ondo and Oyo States and (c) re-evaluation of the activities of DFI's in all the states of the federation.

For the sectors, both the linear and log-linear specifications of the regression results were also obtained but most of them gave poor explanations of the determinants of the capital for expansion variable, with relatively lower adjusted $\bar{R}2$.

The sectoral regression results followed the same trend with the total samples, with Gross Sales (S), Investment in fixed assets (IT) and Interest Cost of Debt (R) being significant variables in at least one of the sectors, the Non-Durable Consumer Goods Sector. The significance of fixed asset investment variable (IT) suggest the expansion programmes of SSI's have close relationships with investment in fixed assets. This implies that SSI's expansion programmes may be in the acquisition of more fixed assets. The significance of Gross Sales (S) is also in conformity with a priori expectations while significance of the Interest Cost of Debt suggests that such funds for expansion programmes are interest sensitive.

The regression results also showed that BNF (Bank and Non-Institutional sources) and TLB (Banks) are the only credit variables with significant impact on the fundings of expansion programmes of SSI's as was the case with the total samples especially in the Non-Durable Consumer Goods and the Capital Goods Sectors (see Table 10 and Appendices 30-31). These findings have serious implications for the credit policies of government especially those for the provision of funds to SSI's in Nigeria. The insignificance of DFI's in any of the sectors does not provide enough justifications for the existence of DFI's in all the states sampled.

5.2 FINANCE OF WORKING CAPITAL (Changes In Inventories)

The properties of the estimates also met the standard statistical criteria with varying degrees of success. The regression equations however showed greater reliability than the others previously performed.

As the t-statistics underneath the estimated coefficients reveal, most of the parameters estimated met the five-percent two-tailed tests. The signs of the coefficients of all variables estimated and the credit

variables, about which a priori expectations exists are consistent in most of the equations. For the total sample, the adjusted $\bar{R}^2$ ranged from 70 - 96%, hence the explanatory powers of the equations are very impressive. Furthermore, the inventory equations compare well with the previous empirical results as highlighted earlier in the theoretical framework. The regression analysis also tried to estimate the relationship between inventory financing and the independent variables as well as the relationship between inventory financing and each of the credit variables in order to assess their impact.

The analysis was done in both linear and log-linear specifications. From the analysis, the linear specifications provided greater explanations about the variations in changes in Inventories with variables Gross Sales (S), Total Gross Investment (TGI), Investment in fixed assets since any acquisition of fixed assets would necessitate increases in working capital. It is also expected that interest rate would be a significant factor in the demand for working capital. Empirical results as highlighted in the theoretical framework have

shown that high interest rate could be a disincentive to borrowing by investors especially for working capital and other investments in fixed assets. The insignificant impact of DFI's also has an implication for the examination of the objectives and activities of DFI's and government credit guidelines. In financing their working capital, the study showed that SSI's relied on Banks and Non-Institutional financial sources (BNF) for their working capital. Banks individually as represented by (TLB) were not particularly significant, but interestingly Net Trade Credit was the most significant of the credit variables. This result implied the Small Scale Industries in this sector relied much more on Net Trade Credit as a source of Inventory financing as against a priori expectation of banks as a major source. This has considerable policy implications for government selective credit controls aimed at directing financial resources to the Small Scale Industrial sector. It shows the ineffectiveness of existing government policies especially, with regards to Central Bank's Credit guidelines to banks, Merchant Banks and the Financial Institutions. Details of the regression results and relevant equations are contained on Table 9.

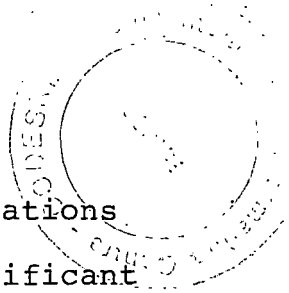
Table 9

REGRESSION RESULT FOR INV(INVENTORIES)

EQUATION	181	182	183	184	185	186
CONSTANT	41281** (-2.28)	42773** (2.385)	40332.17** (2.202)	75091.68 (1.659)	27515.25 (1.121)	24622.07 (0.626)
6. EX	2.518E-03 (0.143)	2.614E-03 (0.150)	3.642E-04 (0.020)	1.152E-03 (0.035)	-0.02308 (-1.121)	0.11104 (-1.539)
9. S	0.13330** (9.806)	0.13218** (9.808)	0.13060** (9.178)	0.15902** (10.177)	0.17912** (16.824)	0.10476** (5.469)
7. TGI	0.04451* (1.793)	0.03729 (1.499)	0.04640* (1.851)	-0.22219 (-1.694)	-0.20742 (-1.720)	0.01017 (0.117)
4. IT	0.13195** (3.984)	0.14131** (4.252)	0.13151** (3.902)	0.43351 (2.981)	0.83238** (3.899)	-0.49123 (-1.451)
5. INV						
8. R	-2.60989* (-1.939)	-2.88110** (-2.398)	1.68684 (1.425)	0.02484 (0.020)	1.09186 (1.392)	-3.01550* (-1.830)
10. TAD	0.38331** (2.098)					
11. BNF		0.42477** (2.600)				
12. TLB			-0.27265 -1.369)			
13. TDFI				0.04186 (0.110)		
14. TNF					-1.46134 (-1.507)	

5.3 FINANCE OF EXPANSION OF CAPACITIES (Capital For Expansion) Ex

As the t-statistics underneath the estimated coefficients of significant variables reveal, the parameters estimated also met the five percent two-tailed test. The signs of the coefficients were also comformable and consistent with a priori expectations in some of the equations, for the analysis of all samples. The properties of the estimates thereby met the standard statistical criteria. However, the log-linear specification provided better explanation with adjusted $\bar{R}^2$ ranging from 41.08% to 72.6%. Given the significances of the variables Fixed Asset Investment (IT), Working Capital (INV), Total Gross Investment (TGI), Gross Sales (S) and Interest (R) in the regression results, the analysis showed that there are some relationship between the financing of capacity expansions by Small Scale Industries and the specified variables. This is expected because any increase in capacity expansion would necessarily involve some changes in fixed assets, inventories and gross sales, while interest cost of debt (R), would determine the requirement for such funds (Table 10).



In both the linear and log-linear specifications all the credit variables, appeared to have significant impact on the financing of capacity expansions of the Small Scale Industries. This result suggest that nearly all the financial and Non-Financial Institutions including DFI's are involved mainly in the provision of capital for Expansion. This conforms to a priori expectations since evidence from previous empirical studies have proved that the formal Institutions provide capital for Expansion rather than for initial Investments of these Small Scale Industries. Previous regression analysis in this study on Investment in fixed assets corroborated this assertions, since each of these credit variables were not independently significant to have impact on the availability of funds to Small Scale Industries for finance of fixed asset Investment.

Table 10
NATURAL LOG REGRESSION RESULT FOR EX.

EQUATION	241A	242A	243A	244A	245A	246A
CONSTANT	-1.46323 (-1.070)	-1.26176 (-0.925)	-1.10038 (-0.803)	-3.74475 (-1.444)	4.71884 (1.627)	-0.77445 (-0.143)
9. S	0.40203** (3.374)	0.40957 (3.420)	0.43093** (3.543)	0.37488** (1.827)	1.20610** (3.707)	0.36089 (1.292)
7. TGI	0.01290 (0.123)	0.01075 (0.101)	0.01071 (0.096)	0.77949** (3.313)	0.25524 (0.833)	0.34624 (1.487)
4. IT	0.23994** (2.186)	0.23733** (2.125)	0.18439* (1.678)	0.22319 (1.154)	0.54260** (2.497)	0.10168 (0.394)
5. INV	0.14810 (0.906)	0.16447 (1.003)	0.20180 (1.240)	0.06286 (0.267)	-0.85533** (-2.484)	0.06923 (0.164)
8. R	-0.24257 (-0.859)	-0.16205 -0.542	0.03414 (0.123)	0.25963 (1.264)	0.71916 (2.568)	-9.602E-03 (0.030)
10. TAD	0.47303 (1.744)					
11. BNF		0.38572 (1.358)				
12. TLB			0.194969 (0.731)			
13. TDFI				-0.42581* (-1.957)		
14. TNF					-1.25881** (-2.542)	
15. NTC						0.24061 (1.129)
$\bar{R}^2$	0.54163	0.53546	0.52851	0.72638	0.72182	0.41082
D.W. TEST	1.83884	1.81685	1.88302	3.01537	1.87365	2.45368
F-VALUE	16.86776	16.47870	16.05274	9.72238	9.52563	3.09179
S.E.	1/83884	1.81685	1.88302	3.01537	1.87365	2.45368

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Equation 244A

$$\ln (Ex) = -3.74475 + \underset{(1.827)}{0.37488^{**}}\ln(s) + \underset{3.313}{0.77949^{**}}\ln(TGI)$$

$$+ \underset{(1.154)}{0.22319}\ln(IT) + \underset{(0.267)}{0.06288}\ln(IT) -$$

$$\underset{(1.264)}{0.25963}\ln(INV) - \underset{(-1.957)}{0.42581^{*}}$$

$R^2 = 0.72638$

D.W = 3.01537

S.E.E. = 3.01537

Previous empirical studies by NISER (1987), Osoba (1986) have proved that to obtain assistance from the formal Institutions including DFI's, collaterals are often requested, and where the investor does not have adequate collaterals these institutions often take a lien on the machineries and equipments available or purchased.

The significance of other variables implied that they are important determinants of expansion of capacities which conform to a priori expectations. As stated earlier Interest Cost of Debt (R) empirically has been found to be a significant factor in the demand for money capital, hence a high interest rate could affect the investors urge for expansion if it will be financed

through debt capital while conversely would be the case for a lower interest rate. The variable S, (Gross Sales), also had the expected close relationships because when capacities are expanded, output is increased and consequently gross sales figures would be altered.

Details of the relevant regression results are contained in Tables 10 and Appendix 29.

Similarly, the findings with respect to credit variables corroborated earlier findings with TLB (Banks) and BNF (Banks & Non-Financial Institution) having significant impact on the finance of expansion programmes of SSI's on Bendel and Ogun State. While none of the credit variables was significant in the other states. (See Appendices 32 and 34) and Appendices 33 & 35. The implications of these findings are three fold: (a) that any policy designed to provide funds for expansion programmes of SSI's should involve Banks and non-institutional sources and (b) need for re-examination of the implementation of existing government policies and credit guidelines expecially in Lagos, Ondo and Oyo States and (c) re-evaluation of the activities of DFI's in all the states of the federation.

5.4 FINANCE OF TOTAL INVESTMENT EXPENDITURE OF SMALL SCALE INDUSTRIES

For the total samples, the properties of the estimates also met the standard statistical criteria with varying degrees of success. This analysis is based on the total investment equations. In the analysis, the relationship between Total Gross Investment (TGI) and other independent variables and credit variables were estimated in order to assess their individual and overall impact on the total investment expenditure of Small Scale Industries in the sampled areas. The relationship with the credit variables were estimated in particular to assess the adequacy of existing credit policies on total investment expenditure of Small Scale Industries.

The t-statistics underneath the estimated coefficients of Fixed Asset Investment (IT) and Capital for Expansion (EX) revealed that the these parameters met the five percent two-tailed tests. The signs of the coefficients listed above, about which a priori expectations exist are consistent in most of the equations. Both the linear and log-linear specifications of the regression results were obtained, but the linear specifications had better explanatory powers than the log-linear. The adjusted $\bar{R}^2$ ranged between 68.6% and highest 89.3%.

The regression results obtained especially in the linear specification showed closer relationship between Total Investment Expenditure and Fixed Asset Investment. This conforms with a priori expectations since Investment in fixed assets is a component of total Investment Expenditure. Expansion Capital and Working Capital were also significant showing some relationships with total Investment expenditure since they are also components of total investment Expenditure.

In examining and assessing the impact of each of the credit variables, the results revealed that only TDFI's (i.e. Development Finance Institutions) have significant

impact on the total investment Expenditure of Small Scale Industries. This is in conformity with a priori expectations since these DFI's were set up basically to provide Investment funds for industries especially, the states' Small Scale Industries Scheme, the NBCI, NIDB and NERFUND-SME Schemes and State Finance Corporations.

The insignificance of Banks in the total Investment Expenditure has serious implciations for effectiveness of government policies and credit guidelines to Banks and other formal financial Institutions. Similarly, the insignificance of non-Institutional Informal sources suggest the reduced dependence on these sources which hitherto ccntributed immensely to Small Scale Industries Investment expenditure as recorded by empirical studies. Details of the regression results are contained in Table 11.

Equation 304

$$TGI = \underset{}{15.2229^{**}} + \underset{(1.838)}{0.1027^{**}}Ex - \underset{(0.546)}{0.02825}S - \underset{(-1.482)}{32357.79}M + \underset{(3.814)}{0.80838^{**}}IT - \underset{(-1.694)}{0.56455}INV + \underset{(0.677)}{1.32513}R + \underset{(1.812)}{1.01950^{*}}TDFI$$

$\bar{R}^2 = 0.89375$

D.W = 1.86795

S.E.E. = 1077.24

For the sectors both the linear and log-linear specifications of the regression results were obtained with the linear specifications providing better explanations for the variations in Total Gross Investment in most of the sectors. As observed with the total samples, Fixed Asset Investment and Inventory changes showed closer relationships with Total Investment Expenditure in conformity with a priori expectations since both are components of total Investment Expenditure.

Table 11 143

REGRESSION RESULT FOR TGI(TOTAL GROSS INVESTMENT)

EQUATION	301	302	303	304	305	306
CONSTANT	88861.69 (1.282)	94602.38 (1.373)	87709.14 (1.266)	15,2229** (2.205)	28036.07 (0.567)	305236.23** (3.220)
6. EX	0.09374 (1.425)	0.09274 (1.420)	0.09214 (1.394)	0.10527* (1.838)	0.05054 (1.267)	0.50044** (2.412)
9. S	-0.05186 (-0.743)	-0.04462 (-0.642)	-0:05586 (-0.796)	-0.02825 (-0.546)	0.14233 (1.669)	-0.02855 (-0.258)
19 M	-16209.46 (-0.865)	-15242.42 (-0.819)	-15701.20 (-0.831)	-32357.79 (-1.482)	-21024.88 (-1.264)	-95550.06 (-1.593)
4. IT	0.91361** (9.001)	0.94032** (9.231)	0.91292** (8.933)	0.80838** (3.814)	1.41189** (3.021)	-0.89212 (-0.759)
5. INV	0.63228* (1.793)	0.53237 (1.499)	0.64500* (1.851)	-0.56455 (-1.694)	-0.79422 (-1.720)	0.10295 (0.117)
8. R	-2.27718 (-0.442)	-6.49819 (-1.408)	0.67504 (0.152)	1.32513 (0.677)	1.39919 (0.880)	10.88780* (2.158)
10. TAD	0.24997 (0.356)					
11. BNF		0.85018 (1.348)				
12. TLB			-0.20443 (-0.273)			
13. TDFI				1.01950* (1.812)		
14. TNF					1.73829 (0.875)	
15. NTC						-0.52898 (-0.298)
R^2	0.68675	0.69145	0.68660	0.89375	0.88778	0.23992
D.W. TEST	1.98895	1.97810	1.99324	1.86795	2.55723	2.0939
F-VALUE	37.95	38.77560	37.93	33.4443	25.86380	1:90186
S.E.	271722.65	269678.97	271786.60	107724.433	55357.85	130753.72

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

However only TNF (Non-Institutional) sources i.e., Informal sources, and NTC (Net Trade Credit) have significant impact on the total Investment expenditure of Small Scale Industries in one of the sectors, the Non-Durable Consumer Goods Sector, while no credit variable was significant in other sectors. This suggests that DFI's and Banks have not contributed significantly despite government efforts and controls particularly on these formal sources of finance. However, the significance of F-values for all the equations showed that together the independent variables including the credit variables have some impact on the total Investment Expenditure of these Small Scale Industries. All these have some implications for existing government policies and controls.

Details of the regression results are contained on Appendix 36.

For the states' both the linear and log-linear specifications of the regression results were also undertaken. The log-linear specifications gave better explanations of variations in the total investment expenditure, suggesting that the relationship is non-linear in most of the states. The adjusted $\bar{R}^2$ for the linear specification ranged from 68% to 92% in the equations that had significant F-values. For the same reasons given earlier, Gross Sales (S), Expansion Capital (EX), Working Capital and Interest (R) had some relationships with the Total Investment Expenditure in conformity with a priori expectations as explained with the Total Samples.

The regression results however revealed that TLB (Banks) and BNF (Non-Institutional sources) have significant impact on the total investment expenditure of Small Scale Industries in Bendel and Lagos State only and this probably explains the significance of variable R (interest cost of debt) in the regression equation and Appendices 37 - 38.

The DFI's were however not significant in any of the states. This result has implications for industrial

policies relating to fundings by DFI's. It also revealed the influence of private informal sources as significant determinants of total investment expenditure of Small Scale Industries in Bendel and Lagos State. Details of the regression results are contained in Appendices 37 - 38.

The insignificance of any of the credit variables in the total Investments expenditure of SSI's in Ogun, Ondo, and Oyo states has serious policy implications for Small Scale Industrial Finance. It succintly suggests a need for a more appropriate credit organisation and policies.

CHAPTER SIX

DEVELOPMENT FINANCE INSTITUTIONS AND INDUSTRIAL DEVELOPMENT IN NIGERIA

Development Finance Institutions have played and continue to play significant roles in the provision of necessary capital for start-up of expansion of existing facilities. However, empirical evidence is yet to confirm their efficacy in providing required industrial finance in Nigeria.

In order to fully examine the roles of the DFI's in Nigeria, the thesis would evaluate the roles of the main DFI's, N.I.D.B., N.B.C.I., State-owned Development Finance Institutions and the Small Scale Industrial Credit Scheme operated by some State Ministries or Parastatals. The choice of NIDB and NBCI as the main DFI's considered in this chapter is based on their involvement in industrial development and financing as well as the availability of necessary and reliable data.

The role of DFI's include financing of industrial projects, provision of technical assistance, co-financing of projects, promotional programmes, equipment leasing,

advisory services and enhancement of the development of capital market. Individual DFI's however provide specialised services and hence played different roles in industrial finance.

The NIDB finance roles is expected to cover the provision of finance in the form of long or medium term or in form of equity share participation. The bank is also expected to sponsor, and underwrite any issue or conversion of shares and securities. It is also expected to make funds available for re-investment by causing the transfer of shares and securities, and by revolving investments, as rapidly as prudent.

In the attainment of all the set objectives it is expected to supply one or more of the essential ingredients of effective investment, long and medium term capital usually in short supply in Nigeria. In performing these roles, it is empowered to join foreign skills and experience and foreign capital in the development of new industries and the expansion of existing ones.

Other roles include:-

(a) Evaluating proposals on commercial basis and financing such projects that cannot get funds from regular

commercial channels either because such channels do not exist or because the risks are too high for private financing.

(b) It is also expected to provide some facilities for small scale industries through other expanded credit institutions. NIDB finance enterprises that are privately owned and managed and hence public corporations and Government projects are excluded. As a matter of policy, it does not finance cottage or small scale industries. Its financial participation in any one project is limited to a minimum of ₦50,000 and a maximum not exceeding 10% of its paid-up capital and reserves. Loan repayments has two years moratorium and 5 to 15 years amortisation. Its major clients are corporate bodies. As at 1987, NIDB has sanctioned 529 industrial projects and disbursed over ₦511.4 million.

NBCI - was established in 1973 and played a major role in the implementation of government indigenisation policy by providing Nigerians with the much needed funds for the acquisition of the foreign-owned businesses in Nigeria.

The bank in this process, warehoused more than ₦5 million worth of shares of some foreign companies that could not be immediately bought over by Nigerians. However, the bank is expected to provide among others, equity capital and funds by ways of loans to indigenous persons, institutions, organisations, medium and long-term investments in industry and commerce, at such rates and terms as may be determined by the Board in accordance with government policies. It is also expected to participate in such other banking and commercial businesses as may be directed by the Board. Hence the bank is often involved in transactions involving letters of credit, bills of exchange, loan syndication, equipment leasing, etc.

Limitations to the industrial financing roles include the fact that the bank cannot give financial assistance of less hthan ₦20,000 to a new project or give financial assistance to any single company in excess of 10% of its paid-up share capital and reserves. It cannot also make investments in the shares of any company (other than companies promoted by NBCI) in excess of 40% of that company's paid-up capital, while it cannot also

provide loans in excess of the projects acceptable mortgageable fixed assets unless other collaterals are available.

The impact of the Bank is most felt however in Small Scale Industrial financing. As at June 1988, the Bank had sanctioned a total of 640 Small Scale Industries projects valued at ₦596 million throughout Nigeria.

State-Owned Development Finance Corporation/Investment Companies

Some states within the Federation also established DFI's or Investment Companies to promote industrial growth in their respective states. Some of these have been listed earlier in Chapter I. However, some of the DFI's and state-owned Investment Companies were involved in the administration of the Federal Government sponsored Small Scale Industrial Credit Schemes which was initiated in 1974.

The scheme was designed to make credit available to the Small Scale Industrialists in the improvement, expansion and modernisation of existing industries and facilities and in the establishment of new Small Scale

Industries. The Scheme was initially co-financed by both the States and the Federal Government. The Scheme in Ogun State was operated by the Ogun State Industrial and Finance Corporation, while the Industrial Investments and Credit Corporation (I.I.C.C.) and the Oyo State Ministry of Commerce and Industry operated the Scheme in Oyo State. Bendel, Lagos and Ondo States also operated the Scheme through their respective Ministries of Industires. Since the Federal Government laid off the Scheme some years ago, the scheme had almost collapsed in most of the States of the Federation. Information from the States suggests poor repayment performances. Studies by Olaniyan (1985), George (1986), Omoniyi (1985), confirmed these observations.

For example, George (1986) found that in Ogun State between 1974 and 1976 a total of 246 applications were approved throughout the former Western State (comprising Ondo, Ogun and Oyo States) out of which only thirty-six (36) were approved. In a related analysis for Ogun State between 1975 and 1985 only 64 applications were approved of a total of 1,081 applications received for

assistance. This represented just about 6% of total requests made.

6.2 Sources and Uses of Funds By DFI's

Most of the DFI's obtain their funds from various sources. Loans and advances from government, loans from international bodies, e.g. IBRD (World Bank, IDA, IFC (International Finance Corporation), Loans from the domestic money market and repayment made by previous beneficiaries.

As enumerated earlier these funds are used for those purposes defined in the enabling acts establishing each DFI, details of which are contained earlier in this chapter.

6.3 Credit Policies and Operations

The credit policies are different for each of the DFI's. In the case of the NIDB, it finances and invests only in medium to long term bases to industrial establishments either for expansion or start-up of projects. Its minimum investment in any one project is ₦50,000 and a maximum of ₦15 million. It can finance between 75-80%

of the entire project cost, in terms of both equity and loans. The bank cannot grant financial assistance more than 15% of its paid-up share capital and free reserves to any single project.

The client company is expected to pay interest charges at the ruling rate and is expected pay appraisal and negotiation fees of ¼% of total loan sanctioned, and a legal and commitment fee of ¾%.

As a matter of policy, the bank takes a first charge on the company's present and future fixed assets and a second on the floating assets as security for its loans. The value of such security must be at least 1½ times the proposed loan because in the event of possible liquidation the intrinsic value of the company's assets may be less than the book-value, and hence the bank can be covered.

For whatever reason if a company defaults in the repayment of its instalmental loan or seeks for a capital repayment deferment, a penal rate of 2% is chargeable on the outstanding balance on its loan account.

The bank also reserves the right to appoint a director on the board of any company it finances until such loans

is fully amortised. Also, before the bank disburses any part of its loans sanctioned the promoter must have paid up to 40% of his equity contribution or be able to show evidence that the amount had been expended on verifiable items.

To discourage diversions, the banks' loans are usually tied to the procurement of some specific capital items of plants and Machineries and in most cases, payments are made directly to the suppliers by the bank.

However because of these stringent credit policies, many projects have not been able to take-off because the promoters have been unable to meet some of the conditionalities. For example, the process of obtaining loans appeared unnecessarily too long with financial commitments along the way. Some other promoters have not been able to meet up their own equity contribution and hence approved funds could not be obtained from the bank.

The bank may have to relax some of these conditions in order to stimulate greater interests in their loans.

N.B.C.I.

The credit policies of NBCI are similar to those of

the NIDB except for size and volumes of loans and the maturity of loans. Among others, NBCI would accept any asset of lawful and commercial value as security for its loans. The bank charges interest generally lower than commercial rates to its clients. Such rates are subject to revision from time to time but usually in reference to prevailing commercial rate. The Bank also imposes penalties for delayed interest payments and charges interest on arrears remaining unpaid until the next interest due to date.

The bank require a minimum equity contribution of 10% of total estimated investment in the project from its clients and where the total capital cost is over ₦1,000,000 (One million Naira) the equity contribution is expected to be at least 15%.

The bank may also provide equity finance in advance before all the requisite preconditions are fulfilled. Such equity advance are ultimately converted into shares after all the other conditions have been fulfilled.

NBCI also give guarantees to other banks to secure financial commitments by third parties. It charges commission for this service at not more than 2% per annum.

NBCI's normal repayment period is seven years with two years moratorium after the commissioning of the project.

Up to 15 years repayment period can also be allowed. NBCI charges commitment fees only on the undrawn balance of the sum approved for the project.

In all, the credit policies of the NBCI appear more relaxed than that of the NIDB. Most of the state owned DFI's and Investment Companies especially in Lagos, Ogun, Oyo, Ondo and Bendel States, adopt wholesale, the credit policies of either of the NIDB or NBCI;

6.4 Appraisal of Existing Activities

In appraising the existing activities of DFI's, emphasis would be laid on the performances of NIDB and NBCI. Other DFI's especially those owned by the States have been inhibited in their activities by the dwindling financial fortunes of their respective state governments and the low repayments on pre viously sanctioned loans. For this appraisal, reliable data were obtained for the period 1978 to 1987 for both banks chosen, NIDB and NBCI.

According to NIDB Annual Reports (several years) NIDB sanctioned a total of 753 projects within the period.

Since 1983, there were reductions in the number of sanctions. Total amount sanctioned was ₦1144.4 million out of which ₦638.8 million was disbursed between 1964 and 1987. (Table 12). From the table of NIDB sanctions, the highest disbursement was recorded in 1987. This may not be unconnected with fact that project costs had to be revised in the light of rising prices associated with the effects of the Structural Adjustment Programme. This is especially true for projects with high import content. From the table, there were some years in which actual disbursements were greater than the amount approved. This is as a result of the financing of unfinished projects carried over from previous years. Since inception the bank had approved an average of about 31 projects annually. This performance looks like a tip of the iceberg considering the investment potentialities in the country and the need for development finance by various investors.

Table (13) also showed NIDB's project sanctions, approvals and disbursements by States between 1964 and 1985. In all the states of the Federation, Lagos had the highest sanctions of 173 projects with NIDB's

TABLE 12

NIDB SANCTIONS AND DISBURSEMENTS (1964-1987)

Years	No. of Projects Sanctioned	Total Amount Approved ₦'000,000	Total Amount Disbursed (₦'000,000
1964	26	3.4	2.8
1965	18	2.7	1.9
1966	7	0.7	0.5
1967	9	2.0	1.3
1968	8	1.4	1.1
1969	20	4.8	2.3
1970	28	6.4	2.2
1971	40	11.4	4.2
1972	14	4.1	5.1
1973	32	17.8	3.9
1974	22	19.3	7.1
1975	40	59.8	13.4
1976	27	51.4	31.4
1977	27	74.3	42.1
1978	24	34.7	45.8
1979	30	43.8	46.9
1980	49	56.9	47.6
1981	73	93.2	44.5
1982	52	47.9	54.7
1983	45	35.7	39,8
1984	32	19.0	17.5
1985	47	66.8	22.9
1986	30	58.3	81.7
1987	53	397.8	109.9
1988	n.a	n.a	n.a
1989	16	123.6	91.9
1990	63	649.8	218.38
Total	753	₦1144.4	₦638.8

Source: Compiled from NIDB Annual Report (1964 - 1990)

TABLE 13

COMPARATIVE PERFORMANCE OF NIDB SANCTIONS BY STATES (1964 - 1985)

States	No. of Sanctions	Total NIDB participation ₦'000,000	NIDB Participation as % of Total Cost of Project	% of total sanctions
Abuja	5	18.5	8.9	2.8
Anambra	47	31.7	33.4	4.8
Bauchi	24	32.3	22.7	4.9
Bendel	36	22.7	32.7	3.4
Benue	9	18.3	13.1	2.8
Borno	12	13.7	8.4	2.1
Cross Rivers	21	26.7	26.3	4.1
Gongola	8	11.3	8.0	1.7
Imo	53	36.4	41.8	5.5
Kaduna	52	61.3	31.3	9.3
Kano	21	25.3	21.6	3.9
Kwara	33	17.5	35.1	2.1
Lagos	173	140.9	29.0	21.4
Niger	15	20.9	15.6	3.2
Ogun	48	61.3	25.2	9.3
Ondo	30	22.4	21.4	3.4
Oyo	41	59.1	30.8	9.0
Plateau	14	9.6	39.4	1.5
River	11	7.7	25.6	1.2
Sokoto	16	19.6	8.4	3.0

Source: Compiled from NIDB Annual Reports (1964 - 1985).

participation valued at ₦140.9 million representing 29% of the total project costs. Infact, this sanction represents about 21.4% of total sanctions in all the states of the Federation. Bendel, Ogun, Ondo and Oyo States (constituting) this study's sample area) had 36, 48, 30 and 41 projects sanctioned within the period representing 3.4%, 9.3%, 3.4% and 9.0% of total sanctions in all the states of the Federation. Hence, Lagos, Bendel, Ogun, Ondo and Oyo States had a total of 46.5% of total NIDB sanctions between 1964 and 1985. This is an impressive performance compared to other parts of the country.

TABLE 14

NBCI SANCTIONS AND DISBURSEMENT (1978-1987)

Years	No. of Projects sanctioned	Amount Approved ₦'000,000	Amount Disbursed ₦'000,000
1978	119	146	44.6
1979	142	176.15	79.27
1980	157	189.6	98.08
1981	250	267.5	132.68
1982	52(885)*	70.26	23.93
1984	24	0.80	6.80
1985	10	3.70	9.95
1986	40	25.40	41.10
1987	173	133.6	51.60
Total	1,890	1,035.11	522.41

Source: Compiled from NBCI Annual Reports (1978 - 1988).

NBCI:

Between 1978 and 1987 NBCI had sanctioned a total of 1,890 projects. This figure was particularly high because of the inclusion of Federal Ministry of Industries, Small Scale Industrial Credit Schemes which was operated through the NBCI. Total annual approved for NBCI assisted projects were ₦1035.11 million during the period while actual disbursements were 522.41 million (Table 14).

The projects sanctioned were spread over all the states of the Federation. However details of the spread were unavailable for this study. NBCI's portfolio were spread over fourteen economic subsectors, with the Food and Beverage subsector constituting the largest, followed by non-metallic mineral products such as granite quarrying and crushing, cement, block-making, etc. Others include, leather products, foot wears. Details of the NBCI's sanction, approvals and disbursements are contained in Table (14).

The performances of NIDB and NBCI in their loan portfolio discussed above revealed that not much has been achieved in terms of financing of industrial

development in Nigeria through these DFI's

Among the problems identified which militate against these organisations include:-

(1) The conflict between their social objectives and economic realities. These DFI's were supposed to lend out to prospective investors at socially desirable rates which are usually lower than the prevailing market rates of interest. Hence, it becomes particularly difficult for them to raise funds from the domestic capital markets, since such markets have no concessional interest rates.

(2) Given the inabilities of these DFI's to raise funds from the capital market and other commercial financial institution, there is a greater dependence on government subventions and grants. Government funding of these DFI's have been found inadequate in meeting the finance requirements of investors in Nigeria, due to the changing economic fortunes of Nigeria in recent years. Hence, the Government had to look beyond the country's shores for international financing from the World Bank, Economic Commission for Africa (ECA), IDA, IFC, etc. Other domestic sources of finance are yet to be exploited as the

household sector continues to remain essentially outside the formal financial markets. Because of lack of adequate financial services at the household level, the Non-Institutional financial sources e.g. Money Lenders dominate the main source of investment funds to the numerous industrialists as found out in this study.

(3) Government credit policies especially to the DFI's have inhibited their profitabilities. Infact, some have found it difficult to break-even since their lending rates were usually lower that the commercial rates.

Hence, from the above, their roles as prime movers and catalysts for industrial and economic development is often stultified by government control. During the period (1978-1987) both the NIDB and NBCI encountered different problems which militated against their effective performances.

The austerity measures of 1978 and other belt-tightening" measures up to the Structural Adjustment Programme initiated in 1986 curtailed economic activities within the National Economy. Particularly significant were government monetary and fiscal policies to stem the tide of inflation, These policies affected the DFI's and the

Commercial and Merchant Banks.

Infact, some of the major casualities of the SAP policies were the small and medium scale enterprises who experienced poor sales, poor profits, underutilisation of capacities (usually between 30-40%). All these resulted in poor repayments to these DFI's, hence curtailing their lending activities.

Infact, the introduction of the Foreign Exchange Market (floating exchange rate system) necessitated the review of the capital costs and financial projections of a lot of already approved projects. The Annual Reports of NBCI (several years) revealed that as at 1985 many of the assisted projects not only operated below capacity, but some of them actually closed down, while some projects could not take-off because of failure or delays in obtaining import licences and because of insufficient credit lines for the confirmation of the needed letters of credit.

The above led to serious repayment consequences with some beneficiaries deliberately ignoring their financial obligations to the banks.

However, there are brighter prospects for DFI's

in financing industrial development in Nigeria.

Over the years, the tight economic measures introduced have led to the current liquidity squeeze, high interest rates and strict credit guidelines which are likely to continue until the economy improves. This would definitely pose greater challenges to DFI's since these policies are likely to lead to increasing costs of projects and probably a reduction in the number of sanctions and consequently a reduction in the level of performance.

In realisation of the roles of DFI's in the promotion of small and medium scale enterprises, the Federal Government has improved its attitude towards the funding of these agencies. Hence the banks are expected to register further progress in the years ahead as the government has started creating the base of industrial finance. With the aid of the Federal Government the NBCI was able to secure $40 million from the ADB to meet the foreign exchange requirements of small and medium enterprises in Nigeria. The NIDB and NBCI also receive assistances from other international financial institutions such as IDA, IFC, ECA, ECOWAS, OPEC, ADB etc.

To supplement the efforts of these DFI's and solve the perennial problems of scarcity and high cost of loanable funds to enable the small and medium scale enterprises play their expected roles in economic growth and technological advancement, the Federal Government established the National Economic Reconstruction Fund (NERFUND) in 1989. The scheme was designed to provide medium to long term loans to participating banks for on-lending to small and medium scale industries. The funds have 5 to 10 years maturity with moratorium of one to three years and concessional interest rates of between 8% and 14% for dollar denominated funds and an extra 1 - 5% for naira denominated funds. Initial capital is 5.6 billion Naira, out of which loans totalling N314.6 million had been approved for 64 projects in its first years of operation.

Several arguments have been made against the operation of the funds some of which will be discussed later in this study.

REFERENCE TO CHAPTER SIX

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CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 Summary of Findings

This thesis has discussed and assessed the determinants of and levels of availability and requirement of funds by Small Scale Industries. Additionally, it focused on the impact of development finance institutions on the growth and flow of credit to Small Scale Industries and the significance and substitutability of the different sources of finance in SSI's capital expenditures. It therefore indicates vividly the considerations that lead to the substitution of different sources of funds for each of the investment expenditure of the SSI's.

The analysis of data obtained on Small Scale Industries in the sampled area revealed the obvious fact that the major sources of funds to Small Scale Industries are Equity Capital and Debt Capital. This is in conformity with a priori expectations. For the total samples, only (TDFI) Development Finance Institutions appeared as significant credit variable implying that DFI's contribute significantly to the

supply of loanable funds. This finding, is corroborated with the sectoral analysis in which TDFI was significant in two of the four sectors. However, the analysis on the states revealed that individually, the Banks and Non-Institutional financial (BNF) sources are significant sources of funds in Bendel, Lagos and Oyo States while Ogun and Ondo States Small Scale Industries had little or no access to credit facilities either from Institutional or non-Institutional sources. This is without prejudice to the fact that each of these states (Ogun and Ondo) has several Commercial Banks and at least a branch of a DFI (e.g. Nigerian Bank for Commerce and Industry) or a state Development Finance Corporation. The significance of BNF (Bank and Non-Institutional) sources of funds to Small Scale Industries in Bendel, Lagos and Oyo States and the insignificance of Net Trade Credit and DFI's in the regression equations, suggest that Small Scale Industries in this state have some accessibility to bank loans, while also relying on non-Institutional financial sources which may be money leaders, loans from friends and relatives or even equity capital as

empirical evidences from NISER (1987) studies have shown.

Findings on the determinants of demand of funds (i.e. fund requirements) showed clearly that nearly all the small scale industries required funds for expansion of existing facilities. This is evidenced from the analysis of the total samples, the four sectors and the five states which revealed that they all required funds for expansion purposes. The analysis further revealed that in addition one of the sectors (III) and one of the states (Ondo), showed the significance of working capital requirements, while Bendel and Oyo States SSI's required funds for Investments in fixed assets in addition to the requirement for expansion programme. The findings above are in conformity with a priori expectations in which Capital for Expansion (EX), Fixed Asset Investment (IT), Working Capital (INV), Total Gross Investment (TGI) and Interest (R) were expected to be significant in the equations.

With respect to the credit variables, the findings appeared to be against a priori expectations that

TDFI (Development Finance Institutions) would be significant. This is because the DFIs especially NBCI are expected that given the concessional terms of some loans and the fact they were set up principally to provide funds to such industries, one would expect some reliance on them as reliable sources of funds. What the analysis showed was that small scale industries relied much on Net Trade Credits, Banks and Non-financial Institutions. This revealed that the DFI's are probably inaccessible to some of these small scale industries within the sectors and the states, respectively. The significance of Net Trade Credit (NTC) is consistent with a priori expectations since it is expected that NTC would be more significant in inventory financing, of small scale industries by SSI's. The present levels of interest rate could have been responsible for such reliance. Bigger commercial enterprises have been known to source their funds internally rather than obtain the exhorbitant loan from formal sources.

In the evaluation of the significance and

substitutability of the different credit variables, in this analysis, it was found that Banks and Non-financial sources (BNF, TNF and TLB) were the main significant credit variables suggesting that credit for fixed assets, investments were often sourced from Non-Institutional sources, while some were sourced from Banks. The significance of Banks in fixed Asset Investments of some SSI's and the apparent insignificance of DFI's in the equations showed that Bank credit sources could be substituted for DFI's finance in the acquisition of fixed assets. This therefore raises some policy implications especially for government selective credit policies in favour of SSI's. This result suggests that any government policy directed towards the acquisition of fixed asset should necessarily involve Banks and other Non-Institutional sources. DFI's were found significant in Ondo State in conformity with a priori expectations. The study further showed that Banks (which were supposed to lend on short-term basis are probably restructuring the credit programmes to include support for some medium term investments.

In the analysis of the significance and substitutability of other sources of finance for working capital, it was observed that Net Trade Credit (NTC) and Banks and Non-Financial (BNF) were the only significant credit variables. TDFI was not significant in any of the equations which is in contrast to a priori expectations. The significance of NTC (Net Trade Credit) and BNF (Bank and Non-Financial Institutional) sources revealed that these sources could be substituted for DFI's in the finance of the working capital requirements of Small Scale Industries. This however raises some issues for credit policy formulation for finance of inventory changes of Small Scale Industries in Nigeria. In the analysis of all samples for determinants of expansion expenditure of Small Scale Industries, the results showed that all variables estimated were significant determinants in conformity with a priori expectations. The negative signs of R suggests as previously explained the disincentive nature of Interests cost of debt in the demand for loanable funds in Nigeria. In the analysis of the significance

and substitutability of the different sources of funds for expansion programmes of Small Scale Industries, the study revealed the significances of all the Credit variables in all the samples taken together. However, in the individual analysis of states and the sectors, TLB (Banks) and (BNF) (Banks and Non-financial Institutions) were found more significant as sources of funds to Small Scale Industries in the sampled area. This has some serious policy implications which are discussed later in this study.

Among the credit variables, TDFI (Development Finance Institutions) was the only significant source of funds for the total Gross Investment. However the analysis of the sectors and states revealed that the other credit variables were also significant in one or two equations involving states or sectors. This result is conformity with a priori expectations in which they were all expected to be significant sources of funds.

This corroborates the earlier findings on fixed assets, inventory and expansion financing. The insignificance of Development Finance Institutions (TDFI) in any of the sectors and states individually however revealed that, DFI's contribution as a major source of funds in the total investment expenditure would be better enhanced by improvements in their contributions to individual states and sectors. Infact the study revealed that none of the states had DFI's significant, with Bendel, Lagos and Oyo having banks as major sources of total investment expenditure. Ogun and Ondo SSI's had no significant access to any loanable funds either from Banks, or even Non-Institutional Sources. This result has a lot of policy implications.

7.2 Policy Implications and Options

In the summary of findings, it was revealed that SSI's require funds mostly for expansion of their capacities and investments in fixed assets. This indicates that the most limiting factor to the growth and development of Small Scale Industries is Expansion

of Existing Capacities and Investment in Fixed Assets (start-up capital). The implication of these findings is that appropriate policies must now be designed to cater for this basic requirement as against existing policies which concentrates most on working capital and total Investment Expenditure of SSI's.

The significance of DFI's in the Money Capital availability equations suggests that in addition to Equity Capital of SSI's, DFI's contribute to the supply of loanable funds to some extent. The relative insignificance of DFI's in the states and among the sectors, and the significance of Banks and Non-Financial Institutions (BNF) in some of these states suggests that bank credit and Non-Financial Institutional sources could be substituted for DFI's credit in the availability of funds to SSI's. However, the significance of Development Financial Institutions (TDFI) in the total sample indicate that they could still contribute more effectively to SSI's financing if the scope of their activities, coverage and operational policies are improved within the states. These findings further indicated that DFI's could have been

more significant if the SSI's in the states sampled have significant accessibility to DFI's credit. This may not be unconnected with the fact that the scope of coverage of DFI's are often limited in Nigeria, e.g. NBCI which is a major DFI serving each of these states has only a single branch, often situated in the capitals and apparently inaccessible to SSI's in various parts of the states. Based on the apparent inaccessibility of the DFI's to these SSI's, most of them would want to source their funds mostly from Net Trade Credit as revealed in the Money Capital Requirement equation. This showed that they have less confidence in DFI's, Banks and other Institutional finance sources either because of unawareness of their facilities or in reaction to their "unfavourable" credit policies and requirements. The study also revealed that the interest cost of debt, in contrast to a priori expectations is not a disincentive to borrowing by Small Scale Industries. Empirical evidence from studies on Small Scale Industries (O.A.U) (1972), NISER 1987 studies showed that these SSI's, source most of their funds needs fron Non-Institutional

Credit sources e.g., money lenders at exhorbitant interest rates. The significance of Banks and Non-Financial Institutions in financing fixed asset Investment, working capital (changes in inventories), capital for expansion, suggest the possibilities of substituting Bank Credit and Non-Institutional sources of finance for DFI's credit for the specified investment expenditure.

The relative insignificance of DFI's in fixed asset investments (start-up capital), Inventory financing and capital for expansion further suggests that despite their presence in each of the states in the sampled areas their contributions to the specified investment expenditure of SSI's have not been encouraging because, the significance in the overall sample has indicated they could be a more reliable source of funds than Banks. By their objectives, they are expected to provide the required funds at more concessional terms than the Banks. Infact the significance of DFI's in the total Investment Expenditure equations (TGI) lend credence to this assertions.

In the case of the existing DFI's, discussions on

their roles were concentrated on the studies made on NIDB, NBCI and State owned DFI's. The studies revealed that they were all set up to provide medium to long-term finance to industrial projects, while some could take up equity shares, depending on the stated objectives of the establishment. However, only the NBCI and some state-owned DFI's provide any finance to SSI's. In the case of NIDB, SSI's are excluded from their scope of activities. The NIDB and NBCI, often act as apex institutions with provisions for on-lending to state DFI's, associations, groups etc. Their credit policies differ a lot with NBCI and state DFI's having better concessional terms of loans. Both the NIDB and NBCI source their funds from domestic and foreign sources. State DFI's often obtain their funds from their state governments. Domestic sources of funds to NIDB and NBCI are often subventions and loans from the Federal Government and repayments from previous beneficiaries. Foreign sources are often from International Finance Institutions, e.g. the World Bank, IDA, I.F.C. and A.D.B. etc.

In the appraisal of their existing activities it

was revealed that between 1964 and 1987, NIDB sanctioned a total of 735 loans amounting to about ₦1.14 billion. However, total disbursement was about ₦0.64 billion representing 56% of the amount approved. The study further revealed that NIDB sanctioned an average of 31 loans annually over the 24 year period. Infact data compiled from the Research Department of NIDB showed that Lagos had 173 projects sanctioned. Bendel 36, Ogun 48, Ondo 30 and Oyo 41 between 1964 and 1985. This appeared to be a tip of the ice-berg when compared to the annual applications from each state.

For NBCI, the situation is not different with a total of 1,890 projects sanctioned between 1978 and 1987 giving average of 189 projects sanctioned by NBCI per year throughout the 21 states in Nigeria. The recent NERFUND scheme do not appear to be any better, with only 64 projects sanctioned nationwide in its first year. The inadequacies of the DFI's and the recent NERFUND scheme calls for an urgent review of government policies and guidelines. The inclusion of Commercial and Merchant Banks in the administration of the NERFUND Scheme appears fraught with danger.

Past activities and responses of these Banking institutions to government credit guidelines as it relates to industry and particularly SSI's have not been encouraging as enumerated in Chapter Two of this study. Therefore, it was observed that between 1983 and 1985, CBN targets of 16% to Commercial and Merchant banks with respect to total loan and advances to Small Scale Enterprises, were not met. Indeed, they could only grant 3.8% in each of the years. Hence, there is a need for a reconsideration of their involvement in any scheme such as NERFUND, that calls for concessional terms of loans to Small Scale Industries.

Policy Recommendation

From the summary of findings and policy implication arising therefrom, the overall conclusions that can be drawn from the determinants of money capital requirement and the assessments of the degree of substitutability among the credit variables are many. I highlighted some of these:

(1) There is need to know the financial decision making processes of the numerous Small Scale Industries.

This would ensure that only the desirable Investment Expenditures are supported. For example, any policy designed to provide only working capital to SSI's would not be effective in the development of SSI's as would that designed to provide start-up capital or capital for expansion. Such tests similar to that on Money Capital Requirement equations in this thesis would provide an adequate basis of knowing some of the determinants of the financial decisions of SSI's.

(2) Government credit policies to favour SSI's should be directed to the total sources of available credit to SSI's. The study has revealed the possibilities of substitution between the different sources of finance, especially the possibilities of substitution between Bank Credits, Non-financial Institutional Credits, Net Trade Credit, and Development Finance Institutions.

(3) That the existing DFI's have no significant impact on each of the component investment expenditure of Small Scale Industries while other credit variables are significant in one or two of the investment

expenditures. Hence any government policy aimed at improving the financing of Small Scale Industries is likely to be more effective if DFI's operations and loans are improved and increased to cater for the total investment Expenditure of Small Scale Industries, while specialised institutions like Banks, and Non-financial Institution should be encouraged to provide those investment expenditure in which they have the best comparative advantage.

In view of the main conclusions above, the following recommendations which would ensure that loans are adequately available to SSI's, the DFI's contribution to SSI's finance are improved and effective mechanisms are designed to improve on the existing funding avenues of SSI's:-

(1) Commercial Banks should be included in any government credit policies in favour of SSI's since they have been found as significant sources of funds to Small Scale Industries in some states for start-up, working capital, expansion investment expenditure. As enumerated earlier, their inclusion is fraught with danger, if government credit guidelines are not

effectively enforced on them. Their profit motives would definitely overshadow any social responsibilities that may be entrusted to them.

(2) The Government should initiate distinct credit policies for Small Scale Industries in Nigeria. This should include the establishment of a specialised Banking Institution for the finance of each of the Investment Expenditure of Small Scale Industries, viz: Fixed Assets Acquisition (start-up capital), Working Capital and Capital for Expansion. Such institutional arrangements would be similar to the Indonesian experience where there were separate loan schemes for Fixed Asset Investments; Working Capital and Expansion Capital.

Interest rates for each of these investment expenditure of Small Scale Industries are differentiated in terms of size and purpose. Such schemes could be effectively initiated in Nigeria if the National Association of Small Scale Industries (NASSI) are involved, since they could take such loans and on-lend to their members without collaterals.

It is therefore suggested that the Nigerian Bank for Commerce and Industry be reorganised and turned into Small Scale Industries Bank of Nigeria (SSIBN) mainly to finance the investment expenditures on start-up, changes in Inventories, Expansion and even Total Investment Expenditure. The present banking activities of NBCI are diversionary. They would contribute more effectively to the Small Scale Industries finance if they specialised mainly on Small Scale Industries without duplicating the activities of the N.I.D.B.

(3) Development Finance Institutions in Nigeria should be encouraged or mandated to cover more effectively their locations; through establishment of more branches to improve their accessibilities to Small Scale Industries in their locations. The situations in which they have a single branch, and located in the State capitals is not good enough.

(4) As an alternative financing strategy, it is suggested that a selective financing policy be initiated. This would entail differentiating between Export-oriented Industries and Inward-oriented industries. This differentiation is particularly necessary for

Nigeria to enhance improvements in hitherto unfavourable balance of payments. The strategy should be so designed to encourage those Small Scale Industries that are export-oriented with large size loans at more concessional terms than the Small Scale Inward Industries. The experience of South Korea is a lesson to Nigeria.

5. Finally, it is suggested that the Government should set up as a matter of urgency a list of items for the exclusive procurement by government. This would ensure that the linkage effects in the industrial process are effective. It would also enhance the growth and development of the numerous Small Scale Industries.

7.3 Limitation of The Study

A major problem encountered was in the quality of data obtained; the study was expected to cover certain periods necessitating the use of time series data, originally, however over 90% or these Small Scale Industries did not keep records of past activities. Some had folded up some years back and just resuscitating the business. Given that most of the listed industries were no more in existence, some of the interviewed industries were only few years old and hence there was limited data to be collected from them. All these necessitated the change from a time-series analysis to a cross sectional analysis. Finally majority of the Small entrepreneurs did not keep adequate records. Some of the information obtained from them were of memory recall which may not be too reliable, and problems of internal inconsistency may arise. However, the research did all humanly possible to improve the quality of the data by pre-testing the questionnaires and making repeated visits to clarify points or inconsistent information with the interviewees.

7.4 Suggestions for Further Research

Empirical studies and surveys by researchers and Institutions have proved conclusively that Small Scale Industries contribute immensely to the national product, value-added, employment generation etc. in Nigeria and other developing economies. Infact earlier studies proved conclusively that Small Scale Industries are the key to industrial development in Nigeria and other developing countries. However, the scope of their contributions have been limited by inadequate finance and other institutional and non-institutional factors. This thesis was designed to cover the South-western zone of Nigeria and it was envisaged that findings from this study would have similar implications for Small Scale Industries in Nigeria. However, for further empirical validity, it is expected that this study be extended to the other parts of the country, the North-Eastern, North-Western, South-Eastern and Middle-belt zones of Nigeria, so that a coherent, nation-wide financing policy can be made for Small Scale Industries in Nigeria.

Reference to Chapter Seven

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NATURAL LOG REGRESSION RESULT FOR M.C.A.(MONEY CAPITAL AVAILABILITY)

EQUATION	1A	2A	3A	4A	5A	6A
CONSTANT	1.07410 (3.253)	1.07577 (3.066)	1.38078 (3.154)	0.51039 (1.392)	1.30380 (1.120)	1.74721 (1.087)
19. M	-6.46E-03 (-0.104)	-0.01032 (-0.159)	0.01381 (0.182)	0.01784 (0.286)	5.18E-03 (0.026)	-0.01513 (-0.042)
17. KE	0.58972** (24.036)	0.61417** (24.818)	6153410** (21.366)	0.63769** (24.752)	0.66226** (11.984)	0.72184** (5.565)
18. D	0.26542** (5.606)	0.33651** (6.048)	0.36263** (5.405)	0.35229** (7.807)	0.37534** (3.154)	0.17509 (0.929)
10. TAD	0.12027 (2.847)					
11. BNF		0.02630 (0.546)				
12. TLB			-0.0902 (-0.467)			
13. TDFI				0.035766 (0.703)		
14. TNF					-0.09034 (-0.853)	
15. NTC						0.01523 (0.119)
$\bar{R}^2$	0.90982	0.90336	0.87582	0.97290	0.86165	0.70655
D.W. TEST	1.82267	1.81848	1.85914	1.96184	2.18244	2.09507
F-VALUE	361.6896**	325.8271*	202.0097**	359.9360**	77.29123**	17.85417**
S.E.	0.27357	0.28450	0.30617	0.16819	0.35829	0.45940

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

NATURAL LOG REGRESSION RESULT FOR M.C.A.(MONEY CAPITAL AVAILABILITY) FOR SECTOR I

EQUATION	7A	8A	9A	10A	11A	12A
CONSTANT	0.95565** (2.001)	0.79040 (1.577)	0.81961 (1.163)	0.39308 (-0.871)	2.56910 (-1.493)	6.70057* (-1.856)
19. M	-0.10044 (-0.948)	-0.12965 (-1.167)	-0.11372 (-0.788)	0.07736 (0.548)	0.07772 (0.278)	0.13963 (0.177)
17. KE	0.59273** (15.017)	0.63175** (16.906)	0.65819** (13.119)	0.55496** (14.660)	0.69696** (7.731)	0.84893** (3.283)
18. D	0.21853** (2.679)	0.33239** (3.619)	0.42338** (3.366)	0.44420** (6.886)	0.40702** (2.634)	-8.84770E-03 (-0.021)
10. TAD	0.18204** (2.518)					
11. BNF		0.04991 (0.046)				
12. TLB			-0.07013 (-0.610)			
13. TDFI				0.03483** (0.474)		
14. TNF					-0.29031 (-1.405)	
15. NTC						-0.41198 (-1.203)
R^2	0.89798	0.88963	0.84360	0.98087	0.80644	0.47994
D.W. TEST	1.78196	1.80799	1.82788	1.99036	2.07214	1.32548
F-VALUE	172.6986**	154.14103**	79.21204**	257.3936**	35.37160**	3.99932**
S.E.	0.29237	0.30723	0.34437	0.14247	0.42353	0.57714

NOTE: () : T-STATISTICS
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Appendix 3

NATURAL LOG REGRESSION RESULT FOR M.C.A.(MONEY CAPITAL AVAILABILITY) FOR SECTOR III

EQUATION	19A	20A	21A	22A	23A	24A
CONSTANT	2.09049 (2.065)	2.10424* (2.081)	2.43425* (2.070)	0.39871 (1.480)		
19. M	0.17723 (0.856)	0.17367 (0.840)	0.14946 (0.694)	0.09955 (-2.280)		
17. KE	0.48531** (25.904)	0.48861** (5.983)	0.48579** (5.545)	0.77741** (31.480)		
18. D	0.37510** (2.658)	0.38323** (2.636)	0.40776** (2.582)	0.19542** (4.682)		
10. TAD	0.01538 (0.131)				Multiple R = 1.0 No variance remains in dependent variable	
11. BNF		3.42E-03 (0.028)				
12. TLB			-0.042333 (-0.268)			Proportion of Unexplained variance is less than 1.0E-30
13. TDFI				0.05222 (0.955)		
14. TNF						
15. NTC						
R^2	0.88200	0.88186	0.86129	0.99775		
D.W. TEST	2.31213	2.32536	2.34438	2.86432		
F-VALUE	34.63409**	34.58979**	25.83657**	778.19106		
S.E.	0.33496	0.33515	0.35071	0.05038		

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

NATURAL LOG REGRESSION RESULT FOR M.C.A.(MONEY CAPITAL AVAILABILITY) FOR BENDEL STATE

EQUATION	31A	32A	33A	34A	35A	36A
CONSTANT	1.08356** (5.570)	1.10480** (5.432)	1.01515** (3.714)	0.73422 (1.819)	0.49740 (0.699)	1.35842* (2.146)
19. M	-0.070773 (-1.483)	-0.06512 (-1.247)	-0.08989 (-1.306)	7.86E-03 (0.118)	-0.16460* (-1.829)	-0.07750 (-0.462)
17. KE	0.56756 (31.324)	0.56791** (30.565)	0.58794** (21.038)	0.44791** (20.513)	0.52839** (17.466)	0.49172** (4.602)
18. D	0.38724 (10.223)	0.38117** (6.702)	0.42509 (4.730)	0.55131 (9.126)	0.42362 (7.196)	0.40572 (4.219)
10. TAD	0.02222 (0.661)					
11. BNF		0.02543 (0.519)				
12. TLB			-0.02836 (-0.326)			
13. TDFI				V.A.		
14. TNF					0.095894 (1.339)	
15. NTC						0.06450 (0.524)
R^2	0.98914	0.98810	0.98793	0.99939	0.97536	0.98430
D.W. TEST	2.02937	2.06083	1.97115	1.44119	2.77959	1.55074
F-VALUE	1025.934**	893.8025**	594.2155**	2191.050**	169.2221	126.351**
S.E.	0.08513	0.08710	0.08502	0.02153	0.09563	0.10948

NOTE: () : T-STATISTICS
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NATURAL LOG REGRESSION RESULT FOR M.C.A.(MONEY CAPITAL AVAILABILITY) FOR LAGOS STATE

EQUATION	37A	38A	39A	40A	41A	42A
CONSTANT	0.75461 (1.460)	0.50907 (0.844)	0.55542 (0.901)	-1.31302 (-1.454)	-1.40136 (-0.844)	-0.10441 (0.000)
19. M	-0.10792 (-1.106)	-0.22304* (-1.806)	-0.21262* (-1.712)	-0.72109 (-.1.800)	-0.69482 (-0.887)	0.59032 (0.000)
17. KE	0.57068** (19.251)	0.60932** (18.673)	0.61543** (19.226)	0.67352** (13.760)	0.65306** (7.853)	0.60962 (0.000)
18. D	0.15435* (1.737)	0.29054 (2.733)	0.22787 (1.471)	0.48106** (3.709)	0.51875* (2.617)	V.A.
10. TAD	0.29728 (3.886)					
11. BNF		0.16110 (1.676)				
12. TLB			0.21362 (1.473)			
13. TDFI				0.138416 (1.608)		
14. TNF					0.13454 (0.764)	
15. NTC						0.48307 (0.000)
$\bar{R}^2$	0.96239	0.94785	0.94678	0.97263	0.94799	1.00000
D.W. TEST	2.19912	2.08757	2.06466	2.69969	2.63660	N.A.
F-VALUE	212.0819**	150.9471	147.7613**	89.85082**	32.90042**	UNDEFINED
S.E.	0.18495	0.21778	0.22001	0.17030	0.23679	

NOTE: () : T-STATISTICS
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Appendix 6

REGRESSION RESULT FOR M.C.A.(MONEY CAPITAL AVAILABILITY) FOR OGUN STATE

EQUATION	43	44	45	46	47	48
CONSTANT	38851.52 (0.446)	36009.34 (0.411)	4575.51 (0.427)	13096.94** (8.692)	-138544.6 (-0.239)	-160077.2 (-0.176)
19. M	5340.55 (0.155)	7286.78 (0.207)	13554.24 (0.318)	-5207.73** (-8.739)	202501.59 (0.631)	202834.10 (0.481)
17. KE	1.06081** (3.053)	1.08097** (3.143)	1.06226** (2.545)	1.11438** (80.243)	2.39775 (0.893)	0.45732 (0.096)
18. D	0.54933 (0.4378)	0.57725 (0.829)	0.51197 (0.648)	0.83323** (37.859)	-17.31196 (-0.557)	-4.45634 (-0.401)
10. TAD	2.56E-03 (0.008)					
11. BNF		-0.04140 (-0.132)				
12. TLB			-0.10322 (-0.189)			
13. TDFI				-0.09466 (-1.830)		
14. TNF					8.20987 (0.352)	
15. NTC						7.14115 (0.178)
R^2	0.60788	0.03334	0.52915	0.99997	0.31270	0.24524
D.W. TEST	1.87808	1.91362	1.93259	2.87301	2.04696	1.76194
F-VALUE	11.46433**	10.88679**	6.90001	64827.38**	0.64676	-1.101276
S.E.	182541.18	186344	209312	1786	446171	534186

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 7 NATURAL LOG REGRESSION RESULT FOR M.C.A.(MONEY CAPITAL AVAILABILITY) FOR ONDO STATE

EQUATION	49A	50A	51A	52A	53A	54A
CONSTANT	-0.49119 (-0.258)	-0.30369 (-0.162)	9.87E-03 (0.005)	-1.48514 (-0.951)	2.09027* (2.580)	-2.97710** (-4.800)
19. M	-0.55600 (-1.385)	-0.53434 (-1.396)	-0.52357 (-1.389)	-0.57839 (-1.437)	0.49104 (2.188)	-0.82667** (-7.082)
17. KE	0.56323** (7.596)	0.57618** (8.305)	0.56243** (8.505)	0.69048** (15.894)	0.57288** (22.684)	0.78883** (38.797)
18. D	0.64672** (2.621)	0.68963** (2.996)	0.71568** (3.134)	0.64108** (3.016)	0.29935** (3.243)	0.66438** (9.003)
10. TAD	-0.01245 (-0.118)					
11. BNF		-0.08561 (-0.937)				
12. TLB			-0.12760 (-1.261)			
13. TDFI				-0.05787 (-0.718)		
14. TNF					-0.05431 (-1.987)	
15. NTC						-0.02946 (-0.805)
R^2	0.79806	0.80604	0.81215	0.97355	0.99727	0.99717
D.W. TEST	1.77399	1.75323	1.68938	2.37509	2.69878	2.37277
F-VALUE	25.69930	26.97299**	28.02184**	102.2352**	640.7287**	529.78380**
S.E.	0.33986	0.33308	0.32779	0.13868	0.04923	0.03706

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

REGRESSION RESULT FOR M.C.A.(MONEY CAPITAL AVAILABILITY) FOR OYO STATE

EQUATION	55	56	57	58	59	60
CONSTANT	2345.10 (0.239)	-4891.135 (-0.746)	320000.00 (2.195)	-10714.29 (-0.048)	19981.91 (1.372)	63333.33 (0.000)
19. M	-1964.03 (-0.244)	4460.738 (0.854)	-55000.00 (-1.270)	414128.57 (0.540)	-17703.52 (-1.465)	V.A.
17. KE	1.00202** (24.010)	1.02101** (27.367)	V.A.	V.A.	1.00665** (22.317)	0.8333 (0.000)
18. D	1.14957* (2.341)	1.35076** (4.672)	V.A.	V.A.	2.17355* (2.751)	V.A.
10. TAD	-0.03110 (-0.058)					
11. BNF		-0.58001* (-2.507)				
12. TLB			V.A.			
13. TDFI				V.A.		
14. TNF					-0.30486 (-1.329)	
15. NTC						V.A.
R^2	0.99266	0.99563	0.23469	0.54834	0.99097	1.00000
D.W. TEST	2.22147	2.82931	1.41008	1.09684	2.43764	N.A.
F-VALUE	305.3783**	456.1690**	1.61333	0.29171	192.978	UNDEFINED
S.E.	4158.476	2827.732	35355.34	82850.99	4000.223	

NOTE: () : T-STATISTICS
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endix 9 NATURAL LOG REGRESSION RESULT FOR M.C.R.(MONEY CAPITAL REQUIREMENT)
SECTOR III

EQUATION	79A	80A	81A	82A	83A	84A
CONSTANT	2.90614 (1.584)	1.77315 (1.338)	1.18240 (1.576)	V.A.	V.A.	V.A.
9. S	0.306314 (2.109)	0.36530** (3.706)	0.25206** (5.253)	V.A	V.A.	V.A.
6. EX	0.55964* (2.295)	0.57843** (3.867)	0.71779** (8.887)	V.A.	V.A.	V.A.
7. TGI	0.27834 (1.043)	0.27813 (1.897)	0.31579 (3.913)	V.A.	V.A.	V.A.
4. IT	0.02095 (0.161)	0.03719 (0.482)	0.04126 (0.987)	V.A.	V.A.	V.A.
5. INV	-0.43495* (-2.422)	-0.41684** (-3.608)	-0.48658** (-7.444)	V.A.	V.A.	V.A.
8. R	0.63116 (1.011)	1.04116 (2.735)	1.16739 (5.892)	V.A.	V.A.	V.A.
10. TAD	-0.46392 (-0.903)					
11. BNF		-0.83345 (-2.586)				
12. TLB			-0.89827** (-5.630)			
13. TDFI				V.A.		
14. TNF					V.A.	
15. NTC						V.A.
R^2	0.87598	0.94411	0.98327	V.A.	V.A.	V.A.
D.W. TEST	2.05416	1.34945	2.43837	V.A.	V.A.	V.A.
F-VALUE	12.09947	27.54437**	93.35804	V.A.	V.A.	V.A.
S.E.	0.22214	0.14913	0.08159	V.A.	V.A.	V.A.

NOTE: () : T-STATISTICS
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ppendix 10

REGRESSION RESULT FOR M.C.R.(MONEY CAPITAL REQUIREMENT) FOR BENDEL STATE

EQUATION	91	92	93	94	95	96
CONSTANT	-27447.73 (-0.953	-33865.22 (1.144)	-34022.63 (-1.109)		-163599.67 (-27.252)	108265.73 (1.893)
9. S	0.30967 (1.528)	0.27102 (1.276)	0.35274 (1.674)		-0.31629 (4.350)	0.01333 (0.078)
6. EX	1.12982** (8.131)	1.10115** (7.496)	1.15994** (7.944)		-0.13733 (0.0)	0.1945 (0.0)
7. TGI	0.02639 (0.165)	-292E-03 (-0.018)	0.06422 (-0.385)		2.17481** (20.227)	-0.42108 (-1.038)
4. IT	0.85972** (3.393)	0.83140** (3.175)	0.80365** (2.968)		0.19979 (0.0)	3.10025 (0.0)
5. INV	0.93250** (-2.121)	-0.82237* (-1.841)	-0.8915* (-1.908)		-034034 (-4.265)	-0.51665 (-2.143)
8. R	-10.14338 (-1.458)	V.A.	V.A.		3.40748 (0.0)	-2116085 (-2.862)
10. TAD	1.52523* (1.7805)					
11. BNF		0.34319* (1.841)				
12. TLB			0.24108 (1.303)			
13. TDFI						
14. TNF					7.00883* (20.385)	
15. NTC						6.65339** (14.715)
$\bar{R}^2$	0.94792	0.94415	0.93999		0.99949	0.99672
D.W. TEST	2.37371	2.25701	2.07062		2.33473	2.40174
F-VALUE	71.20394**	77.07090**	71.48421**		2436.13694	365.21954**
S.E.	58982.01	61079.98	63314.49		3882.90	10999.08

NOTE: () : T-STATISTICS
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* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 11

NATURAL LOG REGRESSION RESULT FOR M.C.R.(MONEY CAPITAL REQUIREMENT) FOR LAGOS STATE

EQUATION	97A	98A	99A	100A	101A	102A
CONSTANT	1.18717 (0.758)	1.09828 (0.746)	1.20352 (0.801)	-0.40056 (-0.138)	0.66357 (0.512)	9.93996 (0.0)
9. S	-0.14849 (-0.490)	-0.13717 (-1.380)	-0.14293 (-0.408)	-0.19927 (-0.940)	-0.15555 (-2.129)	V.A.
6. EX	0.78154** (10.471)	0.79422** (10.827)	0.77833** (11.004)	0.87718* (6.760)	1.06741** (14.277)	V.A.
7. TGI	3.690E-30 0.303	-0.02960 (-0.244)	-9.730E-04 (-0.008)	0.18663 (0.643)	V.A.	1.22664 (0.0)
4. IT	-0.16233 (1.327)	0.16543 1.426	0.15900 (1.353)	0.06191 (0.181)	V.A.	0.73213 (0.0)
5. INV	0.99876 (1.684)	0.28107 (1.593)	0.29665 (1.672)	0.27540 (0.957)	0.32341 (3.214)	V.A.
8. R	-0.22538 (-0.737)	-0.45191 (-1.159)	-0.23111 (-0.942)	-0.03598 (-0.130)	V.A.	V.A.
10. TAD	0.05930 (0.202)					
11. BNF		0.28038 (0.754)				
12. TLB			0.07227 (0.285)			
13. TDFI				-0.08837 (-0.426)		
14. TNF					-0.30516 (-2.526)	
15. NTC						-2.38098 (0.0)
$\bar{R}^2$	0.87108	0.87475	0.87137	0.91673	0.97870	1.000
D.W. TEST	1.94467	2.15915	1.89283	2.98957	1.34247	N.A.
F-VALUE	25.13142**	25.9420**	25.19372**	13.58154	58.44076	UNDEFINED
S.E.	0.34302	0.33810	0.34263	0.28722	0.12160	N.A.

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

NATURAL LOG REGRESSION RESULT FOR M.C.R.(MONEY CAPITAL REQUIREMENT) FOR OGUN STATE

Appendix 12

EQUATION	103A	104A	105A	106A	107A	108A
CONSTANT	3.92040 (1.168)	3.92793 (1.171)	3.08429 (0.824)	8.74962 (0.0)	-4.48271 (-0.632)	11.3995 (-0.0)
9. S	-0.53853** (-2.178)	-0.53797** (-2.178)	-0.54098** (-2149)	-0.49101 (0.0)	V.A.	-0.86212 (0.0)
6. EX	0.93658** (6.016)	0.93638** (6.014)	0.94937** (5.957)	1.26056** (0.0)	V.A.	V.A.
7. TGI	0.13625 (0.560)	0.13424 (0.552)	0.10550 (0.420)	V.A.	V.A.	0.20906 (0.0)
4. IT	0.09511 (0.318)	0.09537 (0.319)	4.846E-03 (0.015)	V.A.	V.A.	V.A.
5. INV	0.01239 (0.036)	0.01333 (0.039)	0.08660 (0.239)	-0.26953 (0.0)	V.A.	V.A. (0.0)
8. R	V.A	V.A.	-0.43687 (-0.531)	0.44936 (0.0)	V.A.	V.A.
10. TAD	0.08196 (0.502)					
11. BNF		0.08207 (0.505)				
12. TLB			0.56517 (0.6577)			
13. TDFI				1.61930 (2.320)		
14. TNF					1.60179 (2.320)	
15. NTC						0.97503 (0.0)
$\bar{R}^2$	0.69167	0.69171	0.68056	1.000	0.68666	1.000
D.W. TEST	1.79687	1.64792	1.59899	UNAVAILAB.	1.73529	UNAVAILABLE
F-VALUE	8.85131**	8.85299**	7.39135	UNDEFINED	5.38291	UNDEFINED
S.E.	0.74449	0.74443	0.75778	0.0	0.99233	0.00

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL

endix 13

REGRESSION RESULT FOR M.C.R.(MONEY CAPITAL REQUIREMENT) FOR ONDO STATE

EQUATION	109	110	111	112	113	114
CONSTANT	180284.60* (1.845)	185542.26* (1.816)	98739.80 (0.895)	-626457.8 (-0.603)	100326.69 (0.167)	323003.04 (22.040)
9. S	0.74620** (3.259)	0.71510** (3.020)	0.26295 (1.556)	-0.084682 (-0.159)	V.A.	V.A.
6. EX	1.12355** (7.980)	1.11531** (7.658)	0.93254** (5.971)	-0.17316 (-0.105)	1.08043 (2.433)	1.15528** (28.116)
7. TGI	0.34504 (1.242)	0.35167 (1.242)	0.53602 (1.644)	-2.82316 (-0.498)	0.63765 (0.144)	V.A.
4. IT	0.24465 (0.320)	0.20587 (0.260)	0.37795 (0.413)	17.49964 (0.723)	V.A.	V.A.
5. INV	-4.86083** (-3.318)	-4.66298** (-3.080)	-1.81851* (-1.860)	0.56555 (0.139)	-3.04748 (-0.424)	V.A.
8. R	-14.746** (-2.413)	-13.864** (-2.192)	26.72121 (1.436)	-19.85083 (0.823)	V.A.	-4.25656** (-14.930)
10. TAD	2.65604** (2.672)					
11. BNF		2.47589** (2.428)				
12. TLB			-4.62604 (-1.454)			
13. TDFI				23.24270 (0.817)		
14. TNF					5.27983 (0.331)	
15. NTC						-2.23462** (-21.042)
R^2	0.86157	0.85194	0.81277	0.61078	0.63955	0.99716
D.W. TEST	2.59341	2.61335	3.12632	3.00193	1.40988	
F-VALUE	17.89405**	16.61770**	12.74449**	2.79341	3.21788	469.91141**
S.E.	173706	179652	202288	356031	424624	5636.1848

NOTE: ( ) - T-STATISTICS

Appendix 14

REGRESSION RESULT FOR M.C.R.(MONEY CAPITAL REQUIREMENT) FOR OYO STATE

EQUATION	115	116	117	118	119	120
CONSTANT	589515.68 (1.396)	845228.65 (1.372)	83034.27 (0.243)		13140.00 (0.000)	10000.00 (0.000)
9. S	6.34257 (1.261)	5.59734 (0.967)	11.00126 (1.782)		V.A.	0.66667 (0.000)
6. EX	-1.58150 (-2.402)	-1.74644 (-1.841)	-1.50463* (-2.986)		V.A.	V.A.
7. TGI	2.27048 (1.280)	2.56345 (1.208)	1.21816 (0.635)		1.20000 (0.000)	V.A.
4. IT	-0.92511 (-2.645)	-0.24452 (-0.594)	-1.16132 (-3.113)		V.A.	V.A.
5. INV	-12.98420 (-1.911)	-14.33884 (-1.486)	-14.92306 (-2.334)		V.A.	V.A.
8. R	V.A.	V.A.	V.A.		V.A.	V.A.
10. TAD	2.04316 (1.658)					
11. BNF		1.78965 (1.291)				
12. TLB			2.41779 (2.065)			
13. TDFI						
14. TNF					1.42867 (0.000)	
15. NTC						V.A.
R^2	0.89171	0.85976	0.91791		1.00000	1.00000
D.W. TEST	2.15987	1.90798	2.86562		N.A.	N.A.
F-VALUE	11.97891**	9.17391*	15.90952*		UNDEFINED	UNDEFINED
S.E.	157131.35	178815.11	136804.50			

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL

Appendix 15

REGRESSION RESULT FOR IT.C
FOR SECTOR I

EQUATION	127	128	129	130	131	132
CONSTANT	-60996.91 (-1.427)	-71976.95* (-1.742)	-61721.50 (-1.463)	-45520.15 (-0.805)	-5789.14 (-0.261)	111591.35** (5.882)
6. EX	-0.06211 (-0.855)	-0.05820 (-0.836)	-0.05570 (-0.774)	-0.03127 (-0.308)	-0.01906 (-0.491)	0.41587 (2.100)
9. S	-0.06109 (-0.822)	-0.06603 (-0.925)	-0.02178 (-0.288)	-0.13507** (-2.641)	-0.12449** (-4.423)	-0.28939* (-2.138)
7. TGI	0.67058** (8.664)	0.66273** (8.946)	0.67067** (8.801)	0.40661* (2.079)	0.48422** (2.698)	-0.24394** (-4.131)
5. INV	0.47855 (1.373)	0.54994 (1.644)	0.39447 (1.164)	0.73006 (2.574)	0.66370** (4.094)	-0.04435 (-0.334)
8. R	7.79485 (1.981)	10.80238** (3.304)	-4.19945 (-1.197)	1.13578 (0.593)	-1.07769 (-1.354)	2.60522 (0.999)
10. TAD	-0.78981 (-1.443)					
11. BNF		-1.23541** (-2.713)				
12. TLB			1.09489* (1.883)			
13. TDFI				0.46095 (0.666)		
14. TNF					0.58542 (0.444)	
15. NTC						-0.64921 (-1.654)
$\bar{R}^2$	0.84744	0.85939	0.85095	0.90920	0.92255	0.94332
D.W. TEST	1.93524	1.88082	1.83971	1.63369	2.83229	2.19823
F-VALUE	62.10441**	68.23320**	63.80103**	27.70047**	34.7422**	2873950
S.E.	205843	197616	203463	96008	24650	12409.88

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

REGRESSION RESULT FOR IT. FOR BENDEL STATE

Appendix 16

EQUATION	151	152	153	154	155	156
CONSTANT	-41731.59 (-1.809)	-40789.96* (-1.814)	-41087.18* (-1.824)		-52949.10 (-6.335)	27962.2550 (7.433)
6. EX	-0.10328 (-0.879)	-0.09929 (-0.843)	-0.11014 (-0.979)		V.A.	V.A.
9. S	0.24430 (1.470)	0.25328 (1.541)	0.22861 (1.442)		-0.03495	0.03559
7. TGI	0.07816 (0.571)	0.08450 (0.635)	0.09358 (0.721)		-0.64555 (-4.449)	-0.68636** (-25.736)
5. INV	1.01194** (3.290)	0.99724** (3.276)	1.02686** (3.445)		0.97190 (9.025)	0.65636** (41.395)
8. R	1.92740 (0.311)	V.A.	V.A.		V.A.	1.55833** (31.390)
10. TAD	-0.27167 (-0.369)					
11. BNF		-0.04504 (-0.297)				
12. TLB			-5.92E-03 (-0.041)			
13. TDFI						
14. TNF					3.39096* (7.307)	
15. NTC						0.79236** (26.649)
$\bar{R}^2$	0.67477	0.68793	0.68670		0.98715	0.99966
D.W. TEST	1.76095	2.01932	1.74998		1.99757	2.40174
F-VALUE	10.33654**	12.90382**	12.83596**		96.99769*	3512.74457**
S.E.	50795.96	49757.96	49855.81		5420.63	723.32834

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 17

REGRESSION RESULT FOR IT.( ) FOR LAGOS STATE

EQUATION	157	158	159	160	161	162
CONSTANT	-87784.1** (-2.146)	-86400.1** (-2.113)	-87917.8** (-2.146)	15870.86 (0.621)	39579.260 (2.099)	-90418.62 (-1.397)
6. EX	-0.16792** (-2.707)	-0.16815** (-2.710)	0.149544** (-2.314)	0.03073 (0.992)	-0.01766 (-0.492)	V.A.
9. S	-0.12969 (-1.359)	-0.12922 (-1.351)	-0.104231 (-1.050)	-8.72E-03 (-0.983)	V.A.	V.A.
7. TGI	0.66611** (7.610)	0.66695** (7.627)	0.61650** (5.912)	0.32735* (2.282)	0.586895 (2.850)	V.A.
5. INV	0.80047 (1.408)	0.79672 (1.398)	0.67763 (1.158)	V.A.	V.A.	2.19301 (3.539)
8. R	V.A.	V.A.	0.38100 (0.052)	-0.25316 (-0.232)	0.36866 (0.645)	V.A.
10. TAD	0.88084** (2.213)					
11. ENF		0.87777** (2.207)				
12. TLB			1.13256 (0.861)			
13. TDFI				-0.10432 (-0.363)		
14. TNF					-1.88541 (-2.709)	
15. NTC						-4.20261 (-0.475)
$\bar{R}^2$	0.95010	0.95006	0.94994	0.29750	0.87252	0.77888
D.W. TEST	1.58513	1.61468	1.80688	1.95739	2.86239	1.41521
F-VALUE	134.2706**	134.1589**	111.6927**	1.76228	9.55553	6.28359
S.E.	149620.317	149679.921	149855.18	31516.23	13580.696	26290.667

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 18

REGRESSION RESULT FOR IT.(FOR OGUN STATE

EQUATION	163	164	165	166	167	168
CONSTANT	-28645.11 (-0.806)	-27944.98 (-0.793)	-26225.54 (-0.733)	-150652.78 (-0.395)	-31307.95 (-0.647)	32950.05 (0.000)
6. EX	0.05095 (1.169)	0.05072 (1.172)	0.03579 (0.736)	-0.10848 (-0.301)	V.A.	V.A.
9. S	-0.01020 (-0.173)	-9.94E-03 (-0.170)	-8.82E-03 (-0.149)	0.25960 (0.127)	V.A.	0.83262 (0.000)
7. TGI	0.04652 (1.019)	0.04723 (1.041)	0.05581 (1.176)	V.A.	V.A.	-0.38739 (-0.000)
5. INV	0.98776** (5.474)	0.98166** (5.466)	0.93236** (4.789)	1.21208 (0.959)	V.A.	-0.91737 (-0.000)
8. R	V.A.	V.A.	6.78659 (1.223)	V.A.	V.A.	V.A.
10. TAD	0.28460** (2.854)					
11. ENF		0.29198** (2.919)				
12. TLB			-0.74091 (-0.881)			
13. TDFI				1.44584 (0.528)		
14. TNF					4.84317 (5.352)	
15. NTC						0.93981 (0.000)
$\bar{R}^2$	0.74229	0.74570	0.73912	0.02636	0.93254	1.00000
D.W. TEST	2.09976	2.11900	2.07083	2.02838	1.88903	N.A.
F-VALUE	15.402**	15.66151**	12.80502**	0.96790	28.6464	UNDEFINED
S.E.	104816.99	104122	105460	241242	55047	

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 19

NATURAL LOG REGRESSION RESULT FOR IT.( )
FOR ONDO STATE

EQUATION	169A	170A	171A	172A	173A	174A
CONSTANT	-2.16602 (-0.803)	-2.14885 (-0.774)	-1.13199 (-0.382)	7.36317** (6.433)	2.82461 (1.616)	-9.32249 (-0.000)
6. EX	0.78683** (4.047)	0.79171** (3.979)	0.83162** (3.805)	0.51193** (7.189)	0.38663 (2.880)	1.59265 (0.000)
9. S	0.08812 (0.438)	0.09029 (0.438)	0.12773 (0.562)	0.13338 (1.111)	V.A.	V.A.
7. TGI	0.33107* (2.005)	0.32203* (1.908)	0.26675 (1.384)	0.28004* (3.497)	0.18292 (1.163)	-0.21596 (-0.000)
5. INV	-0.23766 (-0.807)	-0.25622 (-0.848)	-0.44622 (-1.388)	-0.49678* (-3.063)	-0.15041 (0.597)	V.A.
8. R	0.68545** (2.248)	0.63948* (2.034)	0.26394 (0.455)	0.46997** (6.759)	V.A.	1.27807 (0.000)
10. TAD	-0.47754 (-1.741)					
11. BNF		-0.42142 (-1.516)				
12. TLB			-0.03380 (-0.069)			
13. TDFI				-0.63044** (-4.884)		
14. TNF					-0.03087 (-0.213)	
15. NTC						-0.85919 (-0.000)
$\bar{R}^2$	0.65300	0.63637	0.57222	0.97432	0.90670	1.00000
D.W. TEST	2.28612	2.46406	2.70191	1.09619	1.89481	N.A.
F-VALUE	6.95915	6.54188**	5.23588	51.57994**	13.14699	UNDEFINED
S.E.	0.44518	0.45572	0.49429	0.10176	0.15867	

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 20

REGRESSION RESULT FOR IT.3 FOR OYO STATE

EQUATION	175	176	177	178	179	180
CONSTANT	16480.178 (0.152)	-31682.33 (-0.595)	10536.364 (0.100)	13421.622 (0.000)	90000.00 (3.000)	-140000.00 (-0.000)
6. EX	0.01794 (0.093)	-0.01270 (-0.134)	3.88E-03 (0.020)	0.22599 (0.000)	V.A.	V.A.
9. S	0.62177 (0.781)	0.99206** (2.463)	1.04672 (1.206)	V.A.	V.A.	1.33333 (0.000)
7. TGI	-0.46744 (-0.723)	-0.35008 (-1.095)	-0.57011 (-0.866)	V.A.	V.A.	V.A.
5. INV	0.34176 (0.249)	-0.22078 (-0.317)	-0.07159 (-0.049)	V.A.	V.A.	V.A.
8. R	V.A.	18.91348** (7.179)	V.A.	V.A.	V.A.	V.A.
10. TAD	0.67292* (2.024)					
11. BNF		-2.17545** (-5.968)				
12. TLB			0.72647* (2.102)			
13. TDFI				2.13110 (0.000)		
14. TNF					0.66667 (0.577)	
15. NTC						V.A.
R^2	0.74300	0.93847	0.74834	1.00000	0.50000	1.00000
D.W. TEST	1.98950	2.35531	2.03322	N.A.	1.77030	N.A.
F-VALUE	10.25150**	41.67177**	10.51567**	UNDEFINED	0.33333	UNDEFINED
S.E.	171646.39	83988.20	169854.05		14142.14	

NOTE: ( ) : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 21

REGRESSION RESULT FOR INV(INVENTORIES) FOR SECTOR I

EQUATION	187	188	189	190	191	192
CONSTANT	26233.98 (0.822)	26919.17 (0.851)	26535.62 (0.814)	-18227.89 (-1.649)	-8724.93 (-0.236)	-12328.43 (-0.047)
6. EX	-0.04407 (-1.568)	-0.04259 (-1.530)	-0.04346 (-1.508)	-0.14780 (-1.538)	-0.01096 (-0.214)	-0.12520 (-0.101)
9. S	0.15049** (7.660)	0.14962** (7.679)	0.15110** (7.079)	0.14354** (6.859)	0.17184** (13.424)	0.47985 (0.517)
7. TGI	0.10963** (2.619)	0.09665** (2.262)	0.11566** (2.701)	-0.11901 (-0.740)	-0.24067 (-0.857)	0.05042 (0.118)
4. IT	0.05740 (1.176)	0.07295 (1.459)	0.05018 (0.991)	0.47606** (2.701)	0.72329** (2.796)	-0.68930 (-0.332)
5. INV						
8. R	-2.50444 (-1.647)	-2.64874* (-1.931)	0.31607 (0.222)	-4.91857* (-1.964)	0.46097 (0.409)	-4.47971 (-0.717)
10. TAD	0.32392 (1.562)					
11. BNF		0.34226* (-0.386)				
12. TLB			-0.9135 (-0.386)			
13. TDFI				0.62824 (1.046)		
14. TNF					-0.73081 (-0.419)	
15. NTC						-0.56851 (-0.289)
19 M	12473.97 (1.324)	13080.47 (1.399)	12428.89 (1.289)	103412.78** (2.468)	16323.00 (1.420)	42009 (0.766)
R^2	0.78687	0.79064	0.77769	0.88171	0.96626	0.30010
D.W. TEST	1.60932	1.66059	1.68054	1.69699	2.62752	2.49274
F-VALUE	32.6458**	33.36981**	30.98455**	16.97271**	66.45291**	1.64316
S.E.	782363	77541	79904	67736	28762	55355

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

ppendix 22

REGRESSION RESULT FOR INV(INVENTORIES)
FOR SECTOR II

EQUATION	193	194	195	196	197	198
CONSTANT	99536.22** (4.694)	99899.59** (4.712)	101392.72** (4.881)			70852.54 (0.598)
6. EX	0.06233 (1.686)	0.06270 (1.698)	0.04921 (1.309)			V.A.
9. S	-0.01550 (0.745)	-0.01550 (0.747)	-0.02796 (1.249)			V.A.
7. TGI	0.06070 (-0.652)	-0.06087 (-0.654)	-0.07804 (-0.849)			-0.06086 (0.348)
4. IT	0.6761 (0.499)	0.06630 (0.490)	0.03997 (0.298)			V.A.
5. INV						
8. R	V.A.	V.A.	10.43435 (1.051)			
10. TAD	0.53250** (2.416)					
11. BNF		0.53001** (2.418)				
12. TLB			-1.19038 (-0.680			
13. TDFI						
14. TNF						
15. NTC						
19. M	-15919.32** (-3.139)	-15967.13** (-3.151)	-12367.74** (-2.179)			-29206.87 (-0.758)
R^2	0.37661	0.37856	0.40470	1.00000	1.00000	-0.07726
D.W. TEST	2.20962	2.20261	1.88393	N.A.	N.A.	2.19373
F-VALUE	3.21515	3.23363**	3.13662**	UNDEFINED	UNDEFINED	0.91035
S.E.	40155.29	40092.35	39240.04			54668.88

NOTE: () - T-STATISTICS

Appendix 23

REGRESSION RESULT FOR INV(INVENTORIES) FOR SECTOR II

EQUATION	199	200	201	202	203	204
CONSTANT	-386.86 (-0.009)	20235.29 (0.529)	20235.29 (0.529)			
6. EX	0.10174 (1.442)	0.11050 (1.578)	0.11050 (1.578)			
9. S	0.15342** (6.829)	0.14814** (6.781)	0.14814** (6.781)			
7. TGI	0.01681 (0.500)	6.306E-03 (0.197)	6.306E-03 (0.197)			
4. IT	-0.08124 (-0.471)	-0.03302 (-0.199)	-0.03302 (0.199)			
5. INV						
8. R	10.47200 (1.442)	1.39607 (1.578)	1.39607 (1.578)			
10. TAD	-1.11576 (-1.003)					
11. BNF		-3.08384 (1.500)				
12. TLB			-1.39936 (-0.951)			
13. TDFI						
14. TNF						
15. NTC						
19. M	-257.67 (-0.020)	-1851.74 (-0.146)	-1851.74 (-0.146)			
$\bar{R}^2$	0.75786	0.75773	0.7577	1.000		1.00
D.W. TEST	3.05376**	9.34025**	9.34025**	UNDEFINED		0.00
F-VALUE	8.15376**	9.34025**	9.34025**	N.A.		N.A.
S.E.	0.45638	0.45606	0.42527			0.18359

Appendix 24

REGRESSION RESULT FOR INV(INVENTORIES) FOR BENDEL STATE

EQUATION	211	212	213	214	215	216
CONSTANT	15244.65 (0.505)	12720.80 (0.451)	19828.31 (0.679)		56754.47 (7.446)	
6. EX	0.22030** (3.728)	0.22893** (4.211)	0.20936** (3.334)		V.A.	
9. S	0.11968 (0.957)	0.13203 (1.124)	0.09282 (0.806)		V.A.	
7. TGI	-0.13065 (-1.698)	-0.14169* (-1.982)	-0.11242 (-1.494)		0.68632 (4.675)	
4. IT	0.32379** (3.186)	0.31406** (3.201)	0.33681** (3.400)		1.08677** (9.186)	
5. INV						
8. R	-1.9562 (-0.337)	V.A.	V.A.			
10. TAD	7.258E-03 (0.002)					
11. BNF		-0.19586 (-1.567)				
12. TLB			-0.14869 (-1.169)			
13. TDFI						
14. TNF					-3.40209 (-6.689)	
15. NTC						
R^2	0.81192	0.82685	0.81760		0.99093	1.00000
D.W. TEST	2.27770	1.82971	2.25098		1.97078	N.A.
F-VALUE	16.41755**	20.89713**	19.6734**		137.56742**	UNDEFINED
S.E.	28979.36	27805.53	28538.84		563.57	

NOTE: () : T-STATISTICS

Appendix 25

REGRESSION RESULT FOR INV(INVENTORIES) FOR LAGOS STATE

EQUATION	217	218	219	220	221	222
CONSTANT	-11792.46 (-0.479)	-11575.52 (-0.471)	-6563.31 (0.257)	201040.45 (3.230)	-75929.68 (-0.499)	38750.00 (1.799)
6. EX	0.01500 (0.648)	0.01501 (0.649)	0.01872 (0.791)	-0.01523 (0.891)	-4.410-03 (-0.028)	V.A.
9. S	0.15339** (12.444)	0.15340** (12.459)	0.15451** (11.818)	0.17588* (26.524)	0.15866* (6.446)	V.A.
7. TGI	0.02036 (0.414)	0.02020 (0.411)	0.01168 (0.227)	-0.30714 (-1.926)	0.12177 (0.134)	V.A.
4. IT	0.07122 (1.193)	0.07111 (1.194)	0.05144 (0.805)	1.02696 (3.044)	V.A.	V.A.
5. INV						
8. R	V.A.	V.A.	0.61388 (0.249)	6.62959 (4.215)	V.A.	V.A.
10. TAD	0.26891* (1.824)					
11. BNF		0.27024* (1.839)				
12. TLB			0.31689 (0.627)			
13. TDFI				-0.18973 (-1.285)		
14. TNF					V.A.	
15. NTC						V.A.
19. M.	7815.09 (1.225)	7771.52 (1.219)	5513.60 (0.792)	-72410.17 (-3.049)	31416.52 (0.887)	14250.00 (2.194)
$\bar{R}^2$	0.93055	0.93069	0.93037	0.99479	0.93964	0.65596
D.W. TEST	2.37512	2.35523	2.416108	2.98712	1.77910	1.77910
F-VALUE	70.23044**	70.38043**	60.17561**	219.15651*	20.45759	4.81333
S.E.	48286.24	48237.64	48348.74	15247.73	63436.82	15909.90

Appendix 26

REGRESSION RESULT FOR INV(INVENTORIES) FOR OGUN STATE

EQUATION	223	224	225	226	227	228
CONSTANT	31638.03 (0.759)	31638.03 (0.759)	31069.19 (0.727)	-188155.29 (-0.377)	-7750.00 (-0.171)	-290.75043 (0.0)
6. EX	-0.04155 (-1.171)	-0.04155 (-1.171)	-0.04790 (-1.216)	-0.07542 (0.196)	V.A.	
9. S	3.530E-03	3.560E-03	3.530E-03 (0.064)	1.02381 (0.790)	V.A.	0.73784 (0.0)
7. TGI	0.020988 (0.774)	0.02998 (0.774)	0.03487 (0.843)	V.A.	V.A.	-0.30110 (0.0)
4. IT	0.58338** (4.691)	0.58338** (4.691)	0.56131** (4.071)	V.A.	V.A.	-08.1974 (0.0)
5. INV						
8. R	-0.96279 (-1.421)	-0.96279 (-1.425)	1.01600 (0.212)	V.A.	V.A.	V.A.
10. TAD	0.17522 (0.127)					
11. ENF		0.87197 (0.391)				
12. TLB			-0.29663 (-0.417)			
13. TDFI				-0.83614 (-0.392)		
14. TNF					V.A.	
15. NTC						V.A.
19. M	8454.63 (0.501)	8454.63 (0.501)	8634.61 (0.500)	42953.38 (0.558)	39833.3 (2.449)	21161.83 (0.0)
R^2	0.64033	0.64033	0.62303	-1.35168	0.71428	1.000
D.W. TEST	1.87862	1.87862	1.88387	2.04094	1.71231	UNAVAILABLE
F-VALUE	1.12120	8.12120**	6.66652**	0.28154	5.99989	UNDEFINED
S.E.	85734	85734	87772	166720	34496	0.00

Appendix 27

REGRESSION RESULT FOR INV(INVENTORIES) FOR ONDO STATE

EQUATION	229	230	231	232	233	234
CONSTANT	25674.41 (0.877)	33084.19 (1.131)	21852.91 (0.398)	83678.76 (0.801)	-48151.42 (1.194)	-11676.97 (0.0)
6. EX	0.04839* (2.017)	0.04826* (2.012)	0.05199 (1.197)	0.30459 (2.502)	4.039E-03 (0.149)	V.A.
9. S	0.15083** (12.242)	0.15054** (12.216)	0.15293** (6.713)	0.10823 (4.819)	V.A.	0.11485 (0.0)
7. TGI	-0.01571 (-0.285)	-0.0176 (-0.319)	0.03201 (0.326)	1.02081 (2.234)	-0.05233 (-0.184)	0.06005 (0.0)
4. IT	-0.02015 (-0.121)	-0.01024 (-0.061)	-0.17567 -0.618	-5.03572 -2.548	V.A.	V.A.
5. INV						
8. R	-2.93499** (-3.390)	-2.91634** (-3.382)	3.50824 (0.614)	1.65948 (0.679)	V.A.	V.A.
10. TAD	0.55797** (5.007)					
11. BNF		0.55567** (5.010)				
12. TLB			-0.53169 (-0.532)			
13. TDFI				-3.68168 (-1.182)		
14. TNF					-1.26023 (-0.826)	
15. NTC						4.25419 (0.0)
19. M	375.09699 (0.050)	-1330.77 (0.176)	4700.33 (0.334)	53569.06 (1.920)	49696.09 (2.078)	-51422.63 (0.0)
R^2	0.90948	0.90956	0.72682	0.92787	0.74839	1.000
D.W. TEST	2.86206	2.79495	2.35903	2.97295	1.89408	UNVAILABLE
F-VALUE	28.27236**	2829613**	8.22166**	15.70083	4.71797	UNDEFINED
S.E.	34224.69	34211.13	59456.44	40501.30	25649.16	0.0

Appendix 28

REGRESSION RESULT FOR INV(INVENTORIES) FOR OYO STATE

EQUATION	235	236	237	238	239	240
CONSTANT	50853.17 (1.198)	50853.17 (1.198)	45053.37 (1.109)	83980.66 (0.0)	184000.00 (0.0)	
6. EX	-0.02554 (0.554)	-0.02554 (-0.554)	-0.02869 (-0.642)	V.A.	V.A.	
9. S	0.37878** (2.371)	0.37878** (2.371)	0.43001** (2.665)	0.24427 (0.0)	V.A.	
7. TGI	-0.18174 (1.196)	-0.18174 (-1.196)	-0.20228 (-1.356)	V.A.	V.A.	
4. IT	8.948E-03 (0.126)	8.948E-03 (0.126)	-7.424E-04 (-0.011)	V.A.	V.A.	
5. INV						
8. R	0.858219 (1.514)	0.85819 (1.514)	V.A.	V.A.	V.A.	
10. TAD	V.A.					
11. BNF		V.A.				
12. TLB			0.14149 (1.756)			
13. TDFI				V.A.		
14. TNF					V.A.	
15. NTC						
19. M.	-570.09 (0.059)	-570.09 (0.050)	346.63** (0.037)	094.55 (0.0)	-16000.00 (0.0)	
R^2	0.89395	0.89395	0.90091	1.000	1.000	
D.W. TEST	1.28999	1.28999	1.33366	N.A.	N.A.	
F-VALUE	22.07352**	22.07382**	23.73889	UNDEFINED	UNDEFINED	2.57399*
S.E.	40048.26	40048.26	38712.35			

Appendix 29

NATURAL LOG REGRESSION RESULT FOR EX. FOR SECTOR I

EQUATION	247A	248A	249A	250A	251A	252A
CONSTANT	-2.29643 (-0.196)	-0.20166 (-0.133)	-3.675E-03 (-0.002)	-4.92992 (-0.943)	3.61294 (0.747)	-10.11171 (-0.990)
9. S	0.43872** (3.222)	0.44826** (3.293)	0.50565** (3.374)	0.44161 (1.380)	1.10319** (2.777)	1.82562* (3.669)
7. TGI	0.09582 (0.704)	0.07336 (0.531)	0.09515 (0.635)	0.74370 (1.693)	0.15175 (0.246)	0.78368 (2.409)
4. IT	0.30822** (2.468)	0.34188** (2.622)	0.22186* (1.726)	0.24379 (0.777)	0.53127* (2.004)	-033539 (-0.684)
5. INV	-0.06127 (-0.339)	-0.05015 (-0.278)	-7.951E-03 (-0.042)	0.088481 (0.233)	-0.82194* (-1.976)	-0.73472 (-1.098)
8. R	-0.36834 (-1.317)	-0.37109 (-1.295)	-0.04014 (-0.126)	0.18006 (0.481)	0.56524 (1.210)	-0.53028 (-1.344)
10. TAD	0.56918** (2.155)					
11. BNF		0.56277** (2.107)				
12. TLB			0.24008 (0.774)			
13. TDFI				-4.7505 (-1.090)		
14. TNF					-0.79221 (-0.762)	
15. NTC						-0.37993 (-1.073)
$\bar{R}^2$	0.65538	0.65385	0.62266	0.53511	0.60825	0.89101
D.W. TEST	1.96464	1.93080	2.15873	3.16166	2.31265	2.28567
F-VALUE	14.31250**	14.22259**	12.55092**	2.97321	4.77065**	11.51060*
S.E.	0.56551	0.56676	0.59175	0.68944	0.59615	0.29087

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 30

NATURAL LOG REGRESSION RESULT FOR EX.
FOR SECTOR III

EQUATION	259A	260A	261A	262A	263A	264A
CONSTANT	-10.23424 (-1.747)	-13.61532* (-2.476)	-10.85106 (-1.727)	-8.35372 (3.292)		
9. S	0.28985 (-0.530)	-0.01690 (-0.035)	-0.28945 (-0.613)	N.A.		
7. TGI	-0.10104 (-0.214)	0.18768 (0.476)	-0.03697 (-0.074)	N.A.		
4. IT	0.16189 (0.362)	0.07601 (0.205)	0.14941 (0.361)	0.15510 (1.367)		
5. INV	1.13601 (1.682)	1.06123 (1.851)	1.10354 (1.658)	N.A.		
8. R	0.65529 (0.301)	2.81347 (1.486)	1.00692 (0.498)	N.A.		
10. TAD	-4.362E-03 (-0.003)					
11. BNF		-1.85785 (-1.164)				
12. TLB			-0.29399 (-0.180)			
13. TDFI				1.73678* (6.850)		
14. TNF						
15. NTC						
$\bar{R}^2$	0.59561	0.68188	0.59822	0.95149		1.000
D.W. TEST	1.73397	1.80267	1.71630	1.30067		UNAVAILABLE
F-VALUE	3.52492*	4.67457*	3.55246*	30.41975		UNDEFINED
S.E.	0.83680	0.74219	0.83409	0.23749		0.00

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 31

REGRESSION RESULT FOR EX.
FOR SECTOR IV

EQUATION	265	266	267	268	269	270
CONSTANT	-23595.51 (-0.355)	-19101.77 (-0.289)	32719.30 (0.638)			
9. S	0.37356 (1.223)	0.38152 (1.268)	0.47683* (2.125)			
7. TGI	-0.06621 (-0.388)	-0.06795 (-0.400)	0.03490 (0.270)			
4. IT	0.56665 (1.303)	0.54153 (1.268)	0.02580 (0.073)			
5. INV	0.09450 (0.123)	0.06956 (0.091)	-0.03482 (-0.062)			
8. R	-2.00121 (-0.855)	-9.71473 (-3.056)	32.70171** (3.119)			
10. TAD	0.37437 (1.217)					
11. BNF		0.37084 (1.237)				
12. TLB			-5.52865** (2.938)			
13. TDFI						
14. TNF						
15. NTC						
R^2	0.48537	0.48805	0.72893	0.52102	1.00000	1.00000
D.W. TEST	1.60947	1.60179	1.45497	2.96863	N.A.	N.A.
F-VALUE	3.20069	3.22440*	6.37803**	2.63166	UNDEFINED	UNDEFINED
S.E.	83683.01	83465.04	60734.49	52403.69		

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 32

REGRESSION RESULT FOR EX. FOR BENDEL STATE

EQUATION	271	272	273	274	275	276
CONSTANT	-37282.94 (-1.883)	-31206.76 (-1.440)	-32670.18 (-1.471)		-68987.87 (-0.889)	-53949.28 (-0.635)
9. S	0.24138 (1.733)	0.23003 (1.479)	0.30651* (2.011)		-0.44992 (-0.479)	-0.04820 (-0.191)
7. TGI	0.77035 (6.997)	0.86495** (7.159	0.73327** (6.076)		1.02305 (0.736)	1.54113 (2.558)
4. IT	-0.02929 (-0.168)	0.01617 (0.084)	-0.04249 (-0.217)		V.A.	V.A.
5. INV	-0.13719 (-0.454)	-0.16315 (-0.489)	-0.21439 (-0.631)		0.11809 (0.115)	0.01099 (0.031)
8. R	16.39650 (3.428)	V.A.	V.A.		V.A.	1.60137 (1.428)
10. TAD	-1.42008 (-2.411)					
11. BNF		0.76375** (5.593)				
12. TLB			0.71927** (5.371)			
13. TDFI						
14. TNF					5.91146 (1.331)	
15. NTC						0.64642 (0.962)
$\overline{R2}$	0.91924	0.90168	0.89689		0.52771	0.98512
D.W. TEST	2.51999	2.02640	2.46137		1.75589	2.40174
F-VALUE	44.90583**	42.26749**	40.14095		2.39669	80.42848*
S.E.	40540.97	44733.68	45810.61		50170.35	16340.46

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 33

NATURAL LOG REGRESSION RESULT FOR EX. FOR LAGOS STATE

EQUATION	277A	278A	279A	280A	281A	282A
CONSTANT	-4.59570 (-1.438)	-0.74812 (-1.197)	-2.74963 (-1.901)	-7.40419** (13.228)	6.05686 (0.0)	6.40308 (0.0)
9. S	0.34545 (1.687)	0.34302 (1.618)	0.28583 (1.399)	0.82151** (25.911)	0.27931 (0.0)	0.32971 (0.0)
7. TGI	0.05332 (0.214)	0.14936 (0.587)	0.32181 (1.282)	V.A.	1.59400 (0.0)	V.A.
4. IT	0.53942** (2.138)	0.48518* (1.937)	0.44250* (1.844)	1.33134** (42.370)	V.A.	V.A.
5. INV	0.45009 (1.197)	0.46360 (1.196)	0.50275 (1.369)	-0.31760 (-6.250)	-0.20548 (0.0)	V.A.
8. R	-0.72024 (-1.156)	-0.25023 (-0.287)	0.36889 (0.738)	0.25992 (5.399)	V.A.	V.A.
10. TAD	0.51607 (0.858)					
11. BNF		0.03424 (0.041)				
12. TLB			-0.66444 (-1.276)			
13. TDFI				-0.17512 (-4.715)		
14. TNF					-0.55731 (0.0)	
15. NTC						0.12195 (0.0)
$\bar{R}^2$	0.64162	0.62516	0.66530	0.16124	0.27796	0.49946
D.W. TEST	2.04826	2.01100	1.74501	2.86504	N.A.	N.A.
F-VALUE	6.88249**	6.47984**	7.37058**	460.75484**	UNDEFINED	UNDEFINED
S.E.	0.69278	0.70851	0.67505	0.05066		

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 34

REGRESSION RESULT FOR EX. FOR OGUN STATE

EQUATION	283	284	285	286	287	288
CONSTANT	-38671.21 (-0.611)	-4589.63 (-0.704)	-10518.02 (-0.274)	1.84295 (2.903)	-41413.43 (0.0)	-57276.22 (0.0)
9. S	0.72818** (2.264)	0.81498** (2.548)	0.52701** (2.717)	-0.28523 (-1.493)	V.A.	
7. TGI	-0.02299 (-0.462)	-0.02323 (-0.451)	-0.03281 (-1.097)	V.A.	V.A.	0.19013 (0.0)
4. IT	0.03264 (0.101)	0.03888 (0.125)	-0.21745 (0.2709)	0.49413* (9.670)	V.A.	0.36366 (0.0)
5. INV	-0.44241 (-1.003)	-0.47051 (-1.037)	-0.22188 (-0.829)	V.A.	0.66449 (0.0)	0.52072 (0.0)
8. R	1.65601 (0.151)	V.A.	-19.37853** (-3.224)	V.A.	V.A.	V.A.
10. TAD	0.66018 (0.488)					
11. BNF		0.86975** (2.443)				
12. TLB			4.41232** (4.506)			
13. TDFI				-0.78557 (-2.516)		
14. TNF					2.77828 (0.0)	
15. NTC						3.64758 (0.0)
$\bar{R}^2$	0.57213	0.54192	0.84638	0.96491	1.00	1.00
D.W. TEST	1.29526	1.24554	2.08777	1.06481	UNAVAILAB.	UNVAILABLE
F-VALUE	4.43834**	4.54902**	15.16769**	37.66480	UNDEFINED	UNDEFINED
S.E.	99127	102536	59395	17070	0.00	0.00

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 35

REGRESSION RESULT FOR EX. FOR ONDO STATE

EQUATION	289	290	291	292	293	294
CONSTANT	-3913.20 (-0.106)	-2355.98 (-0.063)	-21345.84 (-0.580)	-109861.05 (-0.942)	-076651.98 (-1.128)	-185895.63 (-0.553)
9. S	-0.12320 (-1.416)	-0.12655 (-1.452)	-0.22186** (-3.933)	-0.28683 (-4.795)	V.A.	V.A.
7. TGI	-0.16001 (-1.521)	-0.15931 (-1.507)	-0.11563 (-1.063)	-0.14511 (0.228)	-0.21294 (-0.425)	V.A.
4. IT	0.05943 (0.205)	0.05254 (0.181)	0.10683 (0.350)	1.54776 (0.569)	V.A.	V.A.
5. INV	0.97688 (1.760)	0.99687* (1.789)	1.58365** (4.854)	2.11951 (4.652)	2.89763 (3.559)	V.A.
8. R	-0.19577 (-0.085)	-0.10932 (-0.047)	9.92363 (1.598)	2.61329 (0.966)	V.A.	-6.72472 (-1.030)
10. TAD	0.53959 (1.433)					
11. BNF		0.51955 (1.384)				
12. TLB			-1.23355 (-1.161)			
13. TDFI				0.47188 (0.148)		
14. TNF					0.73106 (0.404)	
15. NTC						4.70959 (1.937)
R^2	0.74292	0.74037	0.72935	0.93244	0.789759	0.35755
D.W. TEST	1.56738	1.57159	1.60734	3.00193	0.94754	2.48629
F-VALUE	8.84400**	8.74030**	8.31445**	16.77232**	11.95542	1.74204
S.E.	65796.83	66122.35	67511.61	39953.26	48152.98	129069.04

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 36

REGRESSION RESULT FOR TGI(TOTAL GROSS INVESTMENT) FOR SECTOR I

EQUATION	307	308	309	310	311	312
CONSTANT	-873.63 (0.009)	2742.62 (0.028)	-1836.33 (-0.019)	159818.83 (0.600)	-36431.69 (-.898)	192164** (3.596)
6. EX	0.10558 (1.205)	0.09873 (1.144)	0.09896 (1.131)	-0.12168 (-0.532)	0.14537** (4.442)	-0.32910 (-0.424)
9. S	-0.13003 (-1.508)	-0.11757 (-1.376)	-0.14709* (-1.686)	0.10197 (0.918)	0.04492 (0.688)	-0.48116 (-2.017)
19 M	-9022.54 (-0.305)	-5686.26 (-0.195)	-7531.04 (-0.256)	-28016.57 (-0.238)	-10059.58 (-0.212)	68821.71 (2.327)
4. IT	0.83097** (8.202)	0.86381** (8.455)	0.84328**	0.70985 (1.564)	0.67250* (2.003)	-3.70322** (-7.731)
5. INV	1.04542** (2.619)	0.91115** (2.262)	1.04593** (2.701)	-0.53886 (-0.740)	-0.31367 (-0.857)	0.21936 (0.760)
8. R	-1.37905 (-0.287)	-5.17285 (-1.203)	3.59761 (0.847)	1.85990 (-.288)	-0.79014 (-0.621)	22.85910** (1-.141)
10. TAD	0.22247 (0.340)					
11. BNF		0.74975 (1.302)				
12. TLB			-0.59030 (-0.833)			
13. TDFI				1.10835 (0.850)		
14. TNF					3.85385** (2.495)	
15. NTC						-2.53660* (-2.585)
R^2	0.84303	0.84756	0.84472	0.88943	0.97053	0.97599
D.W. TEST	1.85102	1.83498	1.86619	2.45671	2.54931	2.01628
F-VALUE	47.03356**	48.650**	47.6288**	18.23659**	72.28116**	61.98254**
S.E.	241593	238078	240287	144134	32836.75	27720

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL
* : T-STATISTICS SIGNIFICANT AT THE 10% LEVEL

Appendix 37

REGRESSION RESULT FOR TGI(TOTAL GROSS INVESTMENT) FOR BENDEL STATE

EQUATION	331	332	333	334	335	336
CONSTANT	24383.74 (0.283)	30638.24 (0.355)	849.75094 (0.017)		14767.83 (1.069)	
6. EX	0.54800** (2.999)	0.56103** (3.070)	0.74747** (6.703)		0.59858 (3.577)	
9. S	0.11968 (1.180)	0.13203 (1.277)	0.48725** (2.407)		-0.09669 (-0.745)	
19 M	623.47397 (0.025)	-400.32682 (-0.016)	6191.82844 (0.429)		-4829.74897 (-1.169)	
4. IT	0.22627 (0.633)	0.25646 (0.718)	-0.15672 (-0.711)		V.A.	
5. INV	-1.05684 (-1.698)	-1.12175 (-1.807)	-0.70502* (-1.902)		V.A.	
8. R	8.91937 (0.901)	-1.08755 (-0.407)	-35.366554** (-6.056)		V.A.	
10. TAD	-1.25211 (-1.049)					
11. BNF		V.A.				
12. TLB			5.03294** (6.097)			
13. TDFI						
14. TNF					0.31002 (0.480)	
15. NTC						
R^2	0.53621	0.53375	0.83945		0.95773	1.00000
D.W. TEST	2.14791	2.13039	1.95813		2.40228	N.A.
F-VALUE	5.12903**	5.76983**	19.67287**		29.32229	UNDEFINED
S.E.	8.2420.56	82638.71	48493.59		9022.19906	

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL

ppendix 38

NATURAL LOG REGRESSION RESULT FOR TGI(TOTAL GROSS INVESTMENT) FOR LAGOS STATE

EQUATION	337A	338A	339A	340A	341A	342A
CONSTANT	-0.41191 (-0.182)	-0.04298 (-0.020)	0.09108 (0.042)	-3.94169 (0.599)	-7.39563 (0.0)	11.02511 (10.213)
6. EX	0.11222 (0.002)	0.07251 (0.682)	0.07329 (0.675)	-0.01562 (-0.051)	0.09440 (0.0)	V.A.
9. S	0.17764 (1.169)	0.18021 (1.205)	0.23237 (1.511)	0.43028 (1.070)	0.46843 (0.0)	V.A.
19 M	0.06818 (0.189)	0.08433 (0.237)	-0.18232 (-0.487)	-3.04415 (-1.170)	1.38316 (0.0)	0.94649 (0.954)
4. IT	0.52658** (4.539)	0.52163** (4.567)	0.44966** (3.663)	0.83276 (1.960)	1.06577 (0.0)	V.A.
5. INV	-0.01225 (-0.048)	-3.542E-03 (-0.014)	3.487E-03 (0.014)	-0.24752 (-0.372)	-0.11358 (0.0)	V.A.
8. R	-1.10970* (-2.004)	-1.29483** (-2.271)	-0.67891* (-1.773)	0.96374 (1.053)	V.A.	V.A.
10. TAD	1.21024** (2.256)					
11. BNF		1.36857** (2.461)				
12. TLB			0.89865** (2.214)			
13. TDFI				-0.06388 (-0.137)		
14. TNF					V.A.	
15. NTC						V.A.
R^2	0.64585	0.65724	0.64353	0.25852	1.000	-0.04716
D.W. TEST	1.61708	1.57570	1.82458	2.61789	N.A.	1.73636
F-VALUE	9.07624**	9.49157**	8.99487**	1.39845	UNDEFINED	0.90992
S.E.	0.61081	0.60091	0.61281	0.64255		0.74234

NOTE: () : T-STATISTICS
** : T-STATISTICS SIGNIFICANT AT THE 5% LEVEL

APPENDIX 39

Other Development finance Institutions owned and controlled by the states in Nigeria.

Bauchi State Investment and Property Development Company Ltd.

Benue Investment Company Ltd.

Central Investment Company Ltd.

Investment and Credit Corporation of Oyo State (IICC)

Kaduna Investment Company Ltd.

Kano State Investment and Properties Ltd.

Kwara State Agric Development Corporation

Kwara State Investment Company Ltd.

Lagos Building and Investment Corporation

New Nigeria Development Co. Ltd.

Niger State Development Co. Ltd.

Odua Investment Company Ltd.

Ogun State Industrial Finance Corporation.

Ondo State Investment Corporation

Sokoto State Investment Co. Ltd.

All these perform the basic functions of providing funds for industrial projects and economic development in general.

APPENDIX 40

QUESTIONNAIRE FOR SMALL SCALE INDUSTRIES

1. Name of Organisation: ----------

2. Date of Registration/Incorporation: ----------

3. Location and Site: ----------

4. Name of Promoter/Shareholders/Directors: ---------

---

5. Educational Background of Promoter(s):
Degree; WASCE; PRY.

6. Age of Promoter(s): ----------

7. Experience of the Promoters/Working: ----------

---

8. Partners/Directors: ----------

---

9. Date of Commencement of Business: ----------

---

10. Items of Manufacturing/Nature of Business:

(a) Existing: ----------

(b) Proposed: ----------

	Annual Production Quantity Valeu (₦)	% of Capacity Utilised
(a) Existing ------	----------	----------
(b) Proposed ------	----------	----------

11. Factory and Buildings

As at ----------	Existing	Date	Proposed	Date
Area of the Plot (Sq. m/hectares)	-------	-----	--------	------
Covered Area Value/Annual Rent	-------	----	--------	-------
Accommodation)sq.m)				
(a) Office	------	----	--------	--------
(b)	------	------	--------	--------
(c)	------	------	--------	--------
(d)	-------	------	--------	--------
(e)	--------	-------	-------	--------
(f)	--------	-------	-------	--------

* Delete if factory is not going to be considered as security.

Estimated Cost of:

(a) Land	₦	-------	-------	-------	----------
(b) Buildings	₦	-------	-------	-------	----------

Owner	Existing	Date	Proposed	Date
If rented, annual rental value	₦------	-------	--------	--------

12. Machienery and Equipments

Equipments	Sources	Purchase Price	Present Value	Date
1.				
2.				
3.				
4.				
5.				
etc.				

13.

Vehicles	Make	Purchase Price	Present Value	Date
1.				
2.				
3.				
4.				

14.

Sources of Financing	Existing Interest rate (3)	Date Obtained	Int. Payment Proposed (₦)	Date Obtained
a. Total Equity Capital	-------	--------	----------	--------
b. Total Loan Capital	-------	--------	----------	--------
c. Medium term Loan	-------	--------	----------	--------
d. Short Term Loan (O/D)	-------	--------	----------	--------

e. Total Loans from Commercial Banks ---------- ---------- ---------- ---------

f. Loans from Development Finance Institutions e.g.

NIDB ---------- ---------- ---------- ---------

NBCI ---------- ---------- ---------- ---------

State Finance Corp. ---------- ---------- ---------- ----------

g. Loans from Non-Bank Financial Institutions ---------- ---------- ---------- ----------

h. Borrowing from relations and friends ---------- ---------- ---------- ----------

i. Credit from the Market (Trade Credit) ---------- ---------- ---------- ----------

j. Other sources of financing ---------- ---------- ---------- ----------

15. Interest Cost of Debt

	Interest Payments (₦)	Maturity of Loan (₦)	Collaterals (₦)	Date
Loans from Commercial Banks:				
(a)				
(b)				
(c)				
Loans from Development Finance Institutions				
NIDB				
NBCI				
States				

Loans from Non-Bank Financial Institutions	----------	----------	----------	---------
Borrowing from relations/ friends	----------	---------	----------	--------
Trade Credit	---------	----------	---------	---------
Others	---------	----------	---------	----------
Total	--------	----------	--------	----------

16. Uses of Loans	Fixed Asset Investment	Changes in Inventories (Working Capital)	Total Investment	Date Obtained
Loans from Commercial Banks	-	-	-	-
Loans from Development Finance Inst.	-	-	-	-
NIDB	-	-	-	-
NBCI	-	-	-	-
State Fin. Corp.	-	-	-	-
Others	-	-	-	-
Loans from Non-Bank Financial Institutions	-	-	-	-
Net Trade Credit	-	-	-	-

17. Uses of Loans (Breakdowns)

Loan Requirements			Sources				
Nature and Amount	Date	Value (₦)	1	2	3	4	5
(a) Machinery Loan							
New Project	-	-	-	-	-	-	-
Expansion	-	-	-	-	-	-	-
Modernisation	-	-	-	-	-	-	-
Balancing of Capacity	-	-	-	-	-	-	-
Replacement	-	-	-	-	-	-	-
(b) Equipment Loan							
New Project	-	-	-	-	-	-	-
Expansion	-	-	-	-	-	-	-
Modernisation	-	-	-	-	-	-	-
Balancing of Capacity	-	-	-	-	-	-	-
Replacements	-	-	-	-	-	-	-
(c) Building Loan							
New Project	-	-	-	-	-	-	-
Expansion	-	-	-	-	-	-	-
Repairs and alteration	-	-	-	-	-	-	-
Replacements	-	-	-	-	-	-	-

(d) Working Capital	Date	Value (₦)	1	2	3	4	5
New Project Supplementary requirement for existing industries	-	-	-	-	-	-	-

Working Capital Production Capacity ----------%

(i) Stock of Raw Materials ₦---- for---- months requirement

(ii) Work in Progress ₦---- for --- months "

(iii) Stock of finished goods ₦--- for --- " "

(iv) Accounts Receivables ₦---- for ---- " "

(v) Less Accounts Payable ₦---- for ---- " "

(vi) Total Working Capital = ----------

18. Annual Production/Sales (since inception)

(a) Existing

Year	Quantity/Number	Rate	*Net Ed-Factory Sales/Prices (₦)	Total Value Sales Turnover
19...	-	-	-	-
19...	-	-	-	-
19...	-	-	-	-
19...	-	-	-	-
19...	-	-	-	-

As After Expansion

Year	Quantity/Number	Rate	*Net Ex-Factory Sales/Price (₦)	Total Sales Turnover
19...	-	-	-	-
19...	-	-	-	-
19...	-	-	-	-
19...	-	-	-	-
19...	-	-	-	-

19. Changes in *Inventories

Year	Quantity	Value (₦)
19...	-	-
19...	-	-
19...	-	-
19...	-	-

* Net Ex-factory Sales Price (₦) includes excise duty of trade commissions.

20. Inventory of finished and Intermediate products and Raw Materials

Year	Quantity	Value (₦)
19...	-	-
19...	-	-
19...	-	-
19...	-	-

21. Total Gross Investment

Year	Total Value
19...	-
19...	-
19...	-
19...	-
19...	-
etc.	

(b) (i) Machinery	Existing	Proposed
Present Value	₦....	₦.....
Sources of Procurement	₦....	₦.....

22. Raw Materials, Labour and Utilities (based on 100% Capacity)p.a.

	Existing	Proposed
(a) Raw Materials	-	-
(b) Labour	-	-
(c) Electricity	-	-
(d) Fuel	-	-
(e) Water	-	-

Employment Potential (for each year)

	No.	Res.	No.	Rem.	No.	Rem.	No.	Rem.	No.	Res.
Skilled Labour	-	-	-	-	-	-	-	-	-	-
Semi-skilled Labour	-	-	-	-	-	-	-	-	-	-
Unskilled Labour	-	-	-	-	-	-	-	-	-	-
Temporary Staff	-	-	-	-	-	-	-	-	-	-

Main Problems of the Business/Solutions Offered

(a) -

(b) -

(c) -

(d) -

23. Contribution to Internal Revenue (Tax)

	Value
19...	-
19...	-
19...	-
19...	-
19...	-
19...	-

24. Contribution to Employment Generation

	Total Number	Total Remuneration
19...	-	-
19...	-	-
19...	-	-
19...	-	-
19...	-	-

25. Contribution to GDP/Local Value Added

	Value Added
19...	
19...	-
19...	-
19...	-

26. Incentive Enjoyed/Disincentives

e.g. Tax, Interest Rate

27. Reasons for failure to expand.

28. Expected Role of Government to Enhance SSI Development

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