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Impact of the structural adjustment programme on industrial development in Nigeria

1992

IMPACT OF THE STRUCTURAL ADJUSTMENT PROGRAMME ON
INDUSTRIAL DEVELOPMENT IN NIGERIA

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ABSTRACT

This study aims at providing quantitative analyses of the effects of the various policies in the adjustment programme (interest, exchange and trade policies) on the performance of the industrial sector of the Nigerian economy. The study also verifies whether or not structural shift occurred in the industrial sector as a result of the introduction of structural adjustment programme in mid 1986.

The analytical technique specifics the relationships between the major industrial variables such as output, employment, and profits and the quantifiable aspects of the structural adjustment programme. Primary data were collected from the manufacturing industries by the use of a questionnaire. The secondary data were obtained from the Central Bank of Nigeria and Federal Office of Statistics. Applying the least squares techniques parameter estimates were derived.

The results of the interview show that the adjustment programme adversely affected profitability, output, productive capacity, employment and production costs of all categories of manufacturing industries. However, the effects were more intense in the producer good industries than in the consumer goods ones. The major shocks identified in the study include increased cost of working capital, increased prices of domestic raw materials and changes in tariff system. Manufacturing industries became more cautious in decision making and adopted the following strategies to adapt to the shocks posed by the adjustment

programme. These strategies include prudent financial management, reduction in labour force, increase in the unit price of output, improvement in the quality of their production and reduction in their stock of inventories.

The results equally indicate that exchange and interest rates have adverse effects on the performance of the industrial sector through their effects on the costs of raw materials both imported and locally sourced which in turn adversely affects the level of prices, sales, capacity utilization, employment and profitability. The liberalisation policy instead of enhancing increased production precipitated high cost of production as well as unit price and thus decrease in capacity utilization.

Finally, the structural shift tests show that structural shift occurred in the industrial sector with the introduction of the structural adjustments programme. In all, only few manufacturing industries especially the consumer good ones have benefited marginally from the adjustment programme. Majority of the manufacturing industries were adversely affected by the programme. However, the results may be tentative in view of the duration of the study. A different picture may emerge in the long run.

CHAPTER - ONE

INTRODUCTION

1.1   INTRODUCTION

The main problem confronting the Nigerian economy and those of the other less developed countries (LDCs) is how to break the vicious circle of poverty and to emerge from an almost static and subsistence economy to a dynamic and self reliance industrialized one. Thus, at independence in 1960, Nigeria adopted an industrial strategy based on import substitution.

However, after two and half decades of practicing import substitution strategy, Nigeria remained underdeveloped. The Pre-SAP era, especially the first half of 1980s witnessed deteriorating economic condition. The industrial sector was characterised by high geographical concentration, high production costs, low value added, serious underutilisation of capacity, high import content of industrial output and low level of foreign investment in manufacturing (FRN 1986)[1]. Balance of payments deficit accelerated, per capita income deteriorated, inflation skyrocketed, external indebtedness increased, unemployment mounted, while there were excessive fluctuations in foreign reserves. Table

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[1]   Federal Ministry of Industries, Industrial Policy of Nigeria, Public Printers, Nigeria Ltd., 1989, pp. 46-49.

Table 1.1

Major Economic Indicators (1970-85)

Year	INDEX OF REAL INCOME PER CAPITA 1973=100 (1)	CONSUMER PRICE INDEX 1962= 100(2)	BALANCE OF OF PAYMENT Nm (3)	CUMMULATIVE PUBLIC EXTERNAL DEBIT (Nm) (4)	FOREIGN RESERVES Nm (5)
1970	12.0	134.4	+59	175	158.20
1971	27.0	156.1	+129	215	275.60
1972	29.0	160.6	-40	263	224.60
1973	100.0	169.4	+174	277	370.10
1974	100.3	190.6	+3102	322	3492.30
1975	105.6	255.0	+153	350	3723.30
1976	111.6	316.0	-340	375	3265.80
1977	116.1	367.0	-527	365	3225.90
1978	106.9	425.1	-1294	1252	1453.3
1979	109.5	475.1	+1869	1612	3067.0
1980	108.6	522.2	+2403	1867	5456.4
1981	103.7	631.1	-3021	2331	2427.0
1982	90.1	679.6	-1398	2595	801.0
1983	70.0	837.4	-275	8500	747.7
1984	68.2	11,482.9	+355	14537	1080.0
1985	69.7	1,233.4	+561	17290	1641.1
1986	70.8	1,298.7	+796	41452	3587.4

Sources: (1) Federal Office of Statistics: Annual Abstract of Statistics.

(2) Central Bank of Nigeria, Annual Report and Statement of Accounts, (Various Issues).

1.1 illustrated these deteriorating economic conditions.

Many reasons had been advanced by various authors for these problems and inability of the various governments to ameliorate them. Such reasons include, excessive public sector domination of the economy, poor economic management, misallocation of resources, inappropriate domestic economic policies especially trade and exchange rate policies which over protected industry and constrained agriculture growth[2]. Equally important was the technological backwardness, import oriented consumption habit and profligate lifestyles which are rather incompatible with the economy's productivity level.

While the above enumerated domestic factors contributed to poor economic performance, external factors are equally palpable since the Nigerian economy is highly dependent on the economies of the industrialized world. External factors consist of the adverse effects of the operations of transnational financial institutions, adverse trends in the international economy which include particularly since 1974, stagflation in the industrialized countries, higher energy prices, the relatively low growth of trade in

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[2] United Nations Economic Commission for Africa (ECA), "Accelerated Development in Subsaharan Africa: An Assessment by the OAU, ECA and ADB Secretariats (ECA Edited Version)", _Africa Development_, vol. IX 1984, pp. 112.

primary products and adverse terms of trade.

Indeed, a country may try to eliminate imbalances
and distortions in the economy by introducing orthodox
stabilization policies. A typical stabilisation package
consists of expenditure reduction policies such as
domestic credit restraints and fiscal policies
(Scammell[3], W. W., Polak, J.J.[4], E. Tower and T.D.
Willet[5], R. I. Mckinnon and Wallace E. Oates)[6] and
expenditure switching policies namely devaluation of the
exchange rate.

Theoretically, arguments in support of stabilisation
policy relate to its potency in stimulating economic
activity, enhancing efficiency in the industrial sector,
reducing current account deficits and also contain
inflation. However, early doubts were voiced in the
development literature by some structuralists (see

[3] Scammell, W.W., International Monetary Policy. London, Macmillan, 1975.

[4] Polak, J.J., "Monetary Analysis of Income Formation and Payments", IMF Staff paper, November, 1957.

[5] Tower, E. and T.D. Willet, "The Theory of Optimum Currency areas and Exchange Rate Flexibility," Special Papers in International Economics, Princeton University, No. 11, May, 1976.

[6] Mckinnon, R.I and W.E. Oates, "The Implications of International Economic Integration for Monetary, Fiscal and Exchange-Rate policy", Princeton Studies in International Finance, No. 16, 1966.

Hirschman, A.[7], and especially, Diaz Alenjandro[8]). That strand of literature is lucidly summarized and extended in the works of Cooper, R.[9] and Krugman and Taylor [10]. What all these contributions have in common is that they point out various channels (distributional effects, consequences of initial fiscal or current account deficits and real balance effects) via which contractionary effects on aggregated demand may reverse the expansionary effects of the expenditure switching a devaluation is designed to achieve.

Also very recently S. Van Wijnbergen[11] provided several mechanisms, focussing on the supply side of the economy, through which a restrictive monetary policy and devaluation may precipitate stagflation and reduction in

[7] Hirschman, A., "Devaluation and the Trade Balance: A note", Review of Economics and Statistics, vol. 31, No.1, 1949, pp. 50 - 53.

[8] Diaz - Alenjandro, C., "A note on the impact of devaluation and the redistributive effect", The Journal of Political Economy, vol. 71, 1963.

[9] Cooper, R., "Currency Devaluation in Developing Countries" Essays in International Finance, Princeton University, 1971.

[10] Krugman, P. and L. Taylor, "Contractionary effects of devaluation", Journal of International Economics, vol. 8, No.3, 1978.

[11] Van Wijnbergen, S., Stagflationary effects of Monetary stabilization Policies: A quantitative analysis of South Korea, Journal of Development Economics, vol. 10, No.2, 1982, pp. 133 - 169. Van Wijnbergen, S., "Exchange rate Management and Stabilization Policies in Developing Countries", Journal of Development Economics, vol.23, 1986, pp. 227 - 247.

output. In particular, he stressed the impact of a devaluation on the local currency costs of intermediate inputs, on nominal wages in the presence of wage indexation and its negative effect on the volume of real credit to firms needing funds to finance working capital. Adverse credit conditions occasioned by restrictive monetary policies and or devaluation affects significantly the component of input cost which would generate supply shocks resulting in inflation and a fall in output supply-stagflation.

Though the structuralists did not enunciate an alternative approach to short run economic management, they suggested that the essence of a fundamental stabilisation policy is a long term development programme to achieve the structural changes which are needed (Seer, 1962[12]),[13]. In particular, they stress lessening the vulnerability of the economy to fluctuations in foreign exchange earnings and consequently in public revenue, increasing the elasticity of supply through increased mobility of resources and increasing or at least

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[12] Seers, D., "A Theory of Inflation and Growth in Underdeveloped Economies Based on the Experience of Latin America", Oxford Economic Papers, vol. 14, June 1962, p.192.

[13] For outlines of the kind of programme the structuralists would favour; one may consult Grunwald, J., "The 'Structuralist' School on Price Stabilisation and Eonomic Development: The Chilean Case", in Meier G. M. (ed), Leading Issues in Development Economics, Oxford University Press, New York, 1964, pp.213 - 219.

protecting the real incomes of the masses.

This would involve the use of multiple exchange rate systems to stimulate non traditional exports; land and tax reforms, public investment in transportation, marketing and irrigation as well as income redistribution towards high-productivity activities. They advocated passive monetary policy but quantitative credit could be employed with credit to the private sector restricted whenever government borrowing has to be increased (Mary Sutton, 1984)[14].

However, the noeclassicals criticised the high role ascribed to the government in the structuralist development policy. They contended that over-expansion of the government sector might conceivably suppress latent entrepreneurial sources in the private sector and perpetuate the already existing imbalances and distortions in the economies of the less developed countries. Consequently, they recommend structural adjustment programme which preaches an all - out 'outward orientation' and 'market liberalisation' as the secret of successful development (Balssa[15], IMF conditionality[16]).

[14] Sutton, Mary, "Structuralism: The Lating American Record and the New Critique", in Killick Tony (ed), The IMF and Stabilisation: The Developing Country Experiences, London, Heinemann, 1984.

[15] Balassa, B.A., "Structural Adjustment Policies in Developing Economies", World Development, vol. 10, No. 12, 1982.

Structural adjustment programme unlike the stabilisation policy is designed to simultaneously achieve payment deficits reduction, the resumption of growth, and to achieve structural changes needed to prevent future payments and stabilisation problems. Hence, its approach is not only to manipulate the primary policy instruments, but to undertake other actions to increase the responsivess of the stabilisation objectives to those instruments. As such, structural adjustment policies would include sectoral/micro reforms to increase the responsiveness of exports and imports to devaluation, and budgetary, financial/sectoral reforms to decrease the responsiveness of current account deficits to the growth of output.

Hence, for less developed countries (LDCs) characterised by imbalances and distortions, the basic approach is liberalisation of the various sectors of the economy. Market liberalisation in highly distorted economies will presumably improve existing resource allocation across sectors, across firms in a sector and within firm in a sector. In a dynamic sense, liberalisation is intended to improve the efficiency of investment by allocating it to activities that are profitable under incentives free of distortions (Vittorio

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[16] Guitan Manuel, "Fund Conditionality: Evolution of Principles and Practices", Pamphlet Series, No. 38, IMF Washington D.C., 1981.

Corbo and Jaime de melo)[17]. Willy -nilly, the number of African countries, from Mediterranean to the Cape implementing the standard or variants of the IMF/World Bank formulated adjustment programmes has increased tremendously over the years following the deepening economic crisis since early 1980s.

Specifically, Nigeria adjustment programme tailored along that of IMF/Wold Bank adjustment programme is designed to effectively alter and restructure the consumption, production, exchange and distribution patterns of the Nigerian economy as well as to eliminate price distortions and heavy dependence on exports of crude oil and imports of consumer and producer goods. As indicated in the package, the policy of decontrol and deregulation replace the old philosophy of tariff protection, import restriction and exchange control management while strategy of export promotion is pursued in place of import substitution. Finally and very importantly, the implementation of the structural adjustment programme policies are expected to take place within a new culture, a general culture of maintenance and repair rather than the traditional outright replacement practice.

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[17] Corbo, V. and Melo, de Jaime, "Scrambling for Survival: How firms Adjusted to the Recent Reforms in Argentina, Chile and Ilrueguay; World Bank Staff Working Paper, No. 764, Washington D.C., 1986.

However, as structural adjustment programme constitutes a total break with the past, it generates controversy in its conceptualisation and pains in its implementation. These facts have led to increase and intense criticisms and doubts both within and outside the country of the efficacy of the adjustment programme in solving the various problems that have afflicted the economy in general and the industrial sector in particular in the past years.

Essentially, the continuing implementation of the programme as it affects the industrial sector has raised some fundamental questions among which are the following: Has the implementation of structural adjustment programme produced any significant effect on the industrial development of the country? Specifically, how does the changing economic conditions since 1986 affect the behaviour of firms especially in terms of local sourcing of industrial raw materials? How do the firms judge the adjustment programme? What impact has the structural adjustment programme on the profitability of industrial firms? Has it produced any significant effects in terms of increased capacity utilisation and employment? And finally, what have been the effects of the adjustment programme on industrial output, production costs, and prices?.

Obviously, the state of the literature on those

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issues raised above calls for an empirical work based on specific - country approach, as we cannot say, a priori, whether or not structural adjustment has significant positive or negative effects on these industrial variables mentioned above. Moreover, given the importance of the industrial sector in terms of employment generation, foreign exchange earnings, capital formation and general development of the economy as well as the pervasive nature of the adjustment programme, there is need to study properly and scientifically the effects of the programme on the economy. The objective of this study therefore is to provide answers to questions raised above on the impact of the structural adjustment programme on the Nigerian Industrial sector and hence fill some of the existing gaps in our knowledge.

To accomplish this task, a survey of Nigerian industrial firms is required, with such a survey, we would be able to know the effects of structural adjustment programme from the point of view of the manufacturers. In addition, we try to specify models for some industrial variables; with this models we would be able to know whether or not there has been structural shift in the industrial sector and the effects of the programme on the industrial sector.

1.2   OBJECTIVES OF THE STUDY

Given the above background, the main objective of the study is to examine he impact of the structural adjustment programme on industrial development in the Nigerian economy. The effects of the various policies incorporated in the adjustment programme on the industrial firms need to be studied as this would help to provide empirical bases for evaluating whether or not the structural adjustment programme is producing the expected adjustments in the industrial sector as well as evolve other possible measures necessary for improving the efficiency of the sector.

Specifically, the objectives of this study are:-

1)   to review the performance of the industrial sector of the Nigerian economy before the structural adjustment programme.

2)   to test for structural shift in the industrial sector occasioned by the introduction of the structural adjustment programme in 1986, the existing trend for 1970 to 1985 is compared with the trend in the period 1986 - 90.

3)   to examine the impact of the structural adjustment programme on industrial variables such as profits, capacity utilisation and local sourcing of raw materials.

4)   to suggest policy guidelines that will enhance

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an efficient performance of the industrial sector.

Before the literature review in chapter II, an attempt is made here to show how the present study compared with some previous ones on the same subject. Unlike the studies by Overseas Development Institute[18] (ODI) Kirkpatrick and Onis[19], and United Nations Economic Commission for Africa (ECA)[20], this study is not based only on readily available and observable macro data. This is because this approach could not reveal detailed impact of the adjustment programme on the behaviour of firms in the economy in terms of employment, local sourcing of raw materials, industrial diversification and others. In addition, unlike the present study, ODI[18], Kirkpatrick and Onis[19] as well as the ECA[20] studies were based on cross-country approach which may make detailed country specific analysis rather difficult as peculiar characteristics of

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[18] Killick, Tony (ed), The IMF and Stabilisation: Developing Country Experiences, London, Heinemann Books and Overseas Development Institute, 1984.

[19] Kirkpatrick, C. and Z. Onis, "Industrialisation as a Structural Determinant of Inflation Performance in IMF Stabilisation Programme in Less Developed Countries", The Journal of Development Studies, vol. 21, No. 3, 1985.

[20] United Nations Economic Commission for Africa (ECA), African Alternative Framework to Structural; Adustment {for Socio-Economic Recovery and Transformation (AAF-SAP), Addis-Ababa, 1989 E/ECA/CM. 15/6/Rev.3.

the different countries are not taken into consideration. This study attempts to reflect country peculiar characteristics by adopting a specific country approach based on the Nigerian data.

Although, the present study draws on the earlier studies by Petrei and Melo[21], Corbo and Sanchez[22] and Mezerra and Melo[23], it is more comprehensive in terms of coverage. Apart from this, the present study goes further to make a quantitative estimation of the effect of the programme on the industrial sector. As regards the few reviews and works appearing on the adjustment for Nigeria like Ohiorhenuan[24], Kayode[25], and Phillip[26], the

[21] Petrei, H., and Melo, de J., 'Adjustments by Industrial Firms in Argentina During 1976-81', World Bank Staff Working Paper, No. 764, Washington DC, 1986.

[22] Corbo, V. and M. Sanchez, "Adjustments by Industrial Firms in Chile During 1974-82", World Bank Staff Working Paper, No. 764, Washington DC. 1986.

[23] Mezzera J. and J. de Melo, "Adjustment by Industrial Firms in Uruagway During 1974-82", World Bank Staff Working Paper, No. 764, 1986.

[24] Ohiorhenuan, J.F., "Re-colonising Nigerian Industry: The First Year of the Structural Adjustment Programme in philips and Ndekwu (eds) Structural Adjustment Programme in a Developing Economy: The Case of Nigeria, NISER, Ibadan, Nigeria, 1987.

[25] Kayode, M.O. 'The Structural Adjustment Programme (SAP) and the Industrial sector in Phillips and Ndekwu (eds), Adjustment Programme in a Developing Economy: The Case of Nigeria, NISER, Ibadan, Nigeria, 1987.

[26] Phillips, A.O., 'A General Review of SAP' in Phillips and Ndekwu (eds), Structural Adjustment in a Developing Economy: A Case of Nigeria NISER, Ibadan, 1987.

present study does not rely only on secondary data for analysis but also on primary data obtained through field survey.

This study attempts to enhance existing knowledge in the field by combining the following characteristics:

1. Comprehensive empirical study that involves both cross sectional and time series data for analysing the effect of structural adjustment programme.

2. Rigorous, scientific and quantitative analysis of the impact of the adjustment programme on the industrial sector.

3. Empirical determination of the nature and significance of the various forms of adjustments adopted at the firm level in response to the challenges of the adjustment programme.

It is hoped that the study will enrich our knowledge on the effects of structural adjustment programme on the behaviour of firms in Nigeria and open up new frontiers of research in the adjustment programme.

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CHAPTER TWO

THEORETICAL BACKGROUND AND LITERATURE REVIEW

In this chapter we examine the macroeconomic theories of adjustment programme. The main issue here involves discussing the main elements of the adjustment programme and reviewing the literature on the existing empirical studies on the programme. The macroeconomic theories of adjustment are considered with the relevant issues in the programme explored to gain insight into the economic underpinnings of the conventional wisdom on those issues. Moreover, previous empirical studies are examined to determine their adequacy and to serve as guide to our study. In this respect, this chapter consists of four main sections. Section 2.1 examines the macroeconomic Theories of Adjustment Programme. Section 2.2 analyses Issues in the Adjustment Programmes. Section 2.3 summarises previous empirical studies on Adjustment Programmes and the final section 2.4 is the concluding remarks.

2.1   Macroeconomic Theories of Adjustment

The core of the current adjustment programme is market liberalisation. Liberalisation simply means reliance on market mechanisms as a means of resource allocation in the economy as against administrative

control. This has been the main issue of contention between the classical (neo-classical) and the Keynesian-structuralists[27]. The main premise of the classical economists is that market works and that price signals will bring about the necessary adjustments in the economy in response to an economic change. The classicals argument is premised on the Walras' general equilibrium model built on the assumption of perfect competition, smooth convexities, significant price elasticities and frictionless wage adjustments. Thus, the adjustment to the market clearing position is virtually automatic and instantaneous.

The classical macromodel in its synthesized form can be disaggregated into three subsets. These are the supply side, the aggregate demand side and the monetary sector. The supply part determines the output, employment and real wages. The aggregate demand part which equilibriates the goods sector while the monetary sector determines the price level. Thus, given the characteristic features of the model enumerated above, continuous general equilibrium at full employment (in the classical sense) is guaranteed. The driving force of

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[27] This is not to say that the keynesians and the structuralist schools agreed on all issues relating to the removal of distortions and imbalances in the domestic economy. However, the two schools agreed that distortions and imbalances in the domestic economy result from the excessive degree of openness in the economy.

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adjustment economics is the quantity of money equation which is an identity equating the nominal value of output to the money in circulation in the economy.

A number of assumptions are made on this identity for the purpose of reinterpreting it as a theory. One, that money is a measurable entity with a stable composition over time. Two, aggregate money demand is also a stable measurable function of income and of the expectation of the price level; and lastly that income velocity of circulation is constant or suffers minor variations over a long period of time.

Given these assumptions and the features enumerated above, the fundamental postulates on which the theory rests are:

> One, full employment of labour and productive capacity will be guaranteed so that output in the short run is constant. That is output, employment and real wages are determined independently of the rest of the economic system. In the long run, growth of labour supply, capital accumulation and technological change, all appropriately chosen in a succession of general equilibria will determine the growth in output.

> Two, the supply of money can be controlled with accuracy by the monetary authorities so that by choosing an appropriate rate of growth of money supply, the price level or the rate of inflation can be controlled.

> Three, stable growth of money supply will ensure that price expectations will also be stable and therefore economic growth will be smooth[20].

The policy implication flowing from this theory is

that consistent with the conditions of <u>leissez-faire</u>, with government efforts, if need be, directed towards ensuring stable growth of money supply will eliminate distortions and imbalances in the economy. More than that, government efforts by way of public investment, employment programme, exchange and price controls and the like are superfluous since the self regulatory character of the economy would stimulate both economic efficiency and economic growth[28].

In view of the above, it may be argued that to a large extent, the problems of imbalances and distortions are aberration in the classical sense. Market forces will work to eliminate these imbalances and distortions with little or no government efforts.

In contrast to the classical economists' view on the market mechanism, the keynesians-structuralists[27] believe that market works very imperfectly[29]. A major reason for this is the inflexibility of prices due to institutional arrangement. Thus, the general essence of keynesianism - structuralism is that they seek to enhance the levels of economic performance by eliminating

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[28] Johnson, H.G., "The Market Mechanism as an Instrument of Development" in Meier (ed), Leading Issues in Economic Development, Oxford University press, Oxford, Fourth Edition, 1984.

[29] The keynesian-structuralist concepts derived basically from the negation of the basic assumptions of the classical school.

imbalances and distortions not by trusting in spontaneous price adjustments by the so called 'free market' but rather by relying on fiscal and other actions by the government aimed at influencing the volume of investment and employment. Specifically, the keynesian critique of the classical system is directed at three interrelated assumptions underlying the classical analysis. One, that real wage is always equal to the marginal disutility of the existing employment. Two, is the implicit denial of the involuntary unemployment and three, is the acknowledgement of Says law which states that supply creates its own demand. Arising from this, Keynes posited that there is the need for increased government intervention in the economy through fiscal actions. Fiscal actions are viewed as exerting important influences on economic activity. Increases in the level of government expenditure are directed at aggregate demand while reduction in tax rates will have the effect of increasing disposable income and hence increase aggregate demand. Both actions work thought he multiplier and result in increase in income. Likewise, higher protection, strict exchange control coupled with lower interest rate and the like will neutralize as far as possible the harmful effects of speculative private capital flows.

Worthy of note in the kneynesian and structuralists

remedial policy which necessitated higher protection, controls and further government intervention in the economy is its ability to worsen a depression or an inflation due to the existence of lags in the economy. A lot of time is taken between gathering data to formulate a counter-cyclical policy towards a developing or anticipated position and when the policy is executed. Thus, by the time a particular policy is applied the economy would have shifted to another phase of the cycle in which the policy will produce results opposite to those intended.

Moreover, besides the observation noted above, the practicability of keynesian and structuralist policies in correcting domestic imbalances and distortions is also doubtful in a modern dynamic environment as they were formulated for recovery in a static framework. Toyo[30] has argued that competition, profits, prices and growth are not taken into consideration. Likewise, the question Harrod[31] and Domar[32] addressed themselves to has not been answered: if investment creates not only demand but

[30]. Toyo, Eskor, "Recovery form Economic Decline: Lessons for a Developing Economy', Africa Development, vol. 12, No.3, 1987.

[31]. Harrod, R.F., Towards a Dynamic Economics, Macmillan, London, 1948.

[32]. Domar, E., "Capital Expansion, Rate of Growth and Employment", Econometrica, vol. 14, No. 2, April 1946, pp. 137 - 147.

also capacity, how do we avoid excess capacity, the fall
in the rate of profits consequent on it and the panic
that causes the down-turn. Also contentious is the
argument that the multiplier is at best a tool for
recovery analysis when the economy is depressed which
therefore raises the fundamental question of how to
prevent the economy from being repressed. And in fact,
the main objection of the classical economists that the
structural parameters such as 'multiplier' and
'accelerator' are unreliable given that prices are free
to vary in the course of competition, has not been
addressed. Attempts to resolve this as indicated in the
Sraffer's neo- Ricardian analysis, Kalechi and even in
Marx have not produced any lasting impact in the
literature[33].

The third theory (New classical theory) is
considered antithetic to the keynesian-structuralist[27]
theory of stabilisation. The new classical theory is
highly akin to the classical macromodel except for the
new assumption that aggregate supply depends on relative
prices as against

quantities as postulated by the keynesians, which
nonetheless, is consistent with the results of Walrasian
general - equilibrium models. Essentially, the failure

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[33]. Eichner, Alfred S., A Guide to Post-keynesians Economics,
Mascmillan, London, 1979.

of the keynesian concept of stability through state regulation in the face of stagflation led to the resurgence of the new classical economist focussing on supply side economics. The policy options suggested here are designed to force real wages down, lower production costs, increase real profits, and thus induce investors to invest. They equally advocated tax reduction, a cut in budget deficit, and privatisation[34].

Though the policy failed to account for the large and growing rate of unemployment even in the United States of America (USA) and Britain where it was first applied, the current International Monetary Fund (IMF) and World Bank adjustment programme is highly akin to it. The policy package comprise measures that can be categorized into six: namely, reduction of government expenditure and subsidy, tax reforms, trade liberalisation, currency adjustment (devaluation), more disciplined management of foreign exchange, and privatisation. These, in fact constitute the so called IMF conditionality[16].

By and Large, in contradistinction to the keynesian theory but in support of the classical theory, the neoclassical structural adjustment programme preaches and all out 'outward orientation' and 'market orientation' as

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34. Ballet, Bruce "The Case of Tax Cut", _Economic Impact_, No. 57, January, 1987.

the secret of successful development. This is a
conjecture that will be verified in our study.

2.2   Some Views on Structural Adjustment Programme

        Structural Adjustment Programme (SAP) which became

prominent in the 1980s has become a subject of

controversy in most less developed countries. The

appropriateness of the model and the effects it produces

in most programme countries have continued to tax the

research efforts of many economists all over the world.

While the Fund and the World Bank in their official

publications[35] believe that the model will help in

solving various problems that afflicted the less

developed countries (LDCs), many economists in the

developing countries such as Onimode[36], Obadan and

Ekuerhare[37] and Dell[38] are of the view that considering

the structure and nature of the less

developed countries' economies, SAP will only deepen the

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[35].   Their official Publications include IMF staff papers and
        their joint publication, Finance and Development.

[36].   Onimode, Bade, A Political Economy of the African Crisis,
        Institute for African Alternatives, Zed Books Ltd.,
        London, 1988.

[37].   Obadan, M.I. and Ekuerhare, B.U., "The Theoretical Basis
        of Structural Adjustment Programme: An Appraisal".
        Proceeding of 1988 Annual Conference of Nigeria, Economic
        Society, Ile-Ife, May 3-7.

[38].   Dell, S., "Stabilisation: The Political Economy of Over
        Kill", World Development, vol. 10, No. 8, 1982

economic downturn in the LDCs. This position has also been maintained by the United Nations Economic Commission for Africa (ECA)[20].

The Fund and the Bank in their official publications argue that the basic cause of external imbalances in most less developed countries is excessive monetary expansion. It is this monetary expansion that precipitates changes in relative prices which in turn culminates in high imports demand, low export supply and high capital outflow. They contend further that this excessive monetary expansion has its origin in the large and growing fiscal deficits of the government in the less developed countries. Similarly, they argue that LDCs currencies are over-valued thereby undermining the profitability of the exports and import competing sectors with adverse effects on growth and balance of payments (BOP).

Based on this premise they argue that SAP will achieve the primary objective of realigning and altering domestic expenditure and production pattern by adjusting the relative prices to which consumers will respond, thus adjusting their expenditure pattern by de-emphasizing the relatively more expensive ones. Producers and importers are expected to respond to the new demand structure by reallocating their financial, natural and human resources and combining them in a way that will enable them to

efficiently satisfy the national consumers. This was
perhaps the rationale behind the incorporation of trade
liberalisation, devaluation, domestic credit restraint
and other efficiency improvement policies in the
adjustment package.

However, the antagonists of the model contend that
the problems of the less developed countries are
fundamental and structural in nature. This by
implication, means that the attainment of financial
balances which structural adjustment seeks to achieve
will not solve these problems. As put by Onimode (p.
291)[36]

> the structure SAP seeks to address are the
> ephemeral structures of prices, trade, money
> and foreign exchange. Yet these are at best
> subsidiary or auxiliary structures, and not
> the fundamental structures that generate
> crises in Africa and the rest of the Third
> World. The relevant fundamental structures
> that demand adjustment ar those of the
> capitalist international division of labour,
> of production, consumption, accumulation,
> technology and dependency in the poor
> countries. Clearly, goods and services have
> first to be produced before they can be
> traded, priced, monetised and exported for
> foreign exchange. Hence, SAP and related Fund
> and Bank programmes operate to aggravate,
> rather than ameliorate, this crisis generating
> structures in Africa and other poor countries.

Moreover, since the whole model is anchored on price
mechanisms, that is, deregulation in all markets, it will
not produce the desirable result considering the
imperfections that permeate markets in the less developed
countries. This then raises the issues of effectiveness

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and practicability of liberalisation, devaluation and other SAP policies which we now examine in turn.

2.2.1. Liberalization

Liberalisation which is incorporated as the core of IMF and World Bank adjustment package is expected to enlarge the elasticities of export supply, import demand, and import substituting supply with respect to devaluation as well as to more directly shift resources into tradeable goods sector. As noted by S. Fisher[39], many factors have been advanced for the incorporation of liberalisation in the IMF/World Bank adjustment programme. First, in this Shaw-Mckinnon[40] thesis regarding the positive role of liberalisation in Korea's economic development.

There is also the favourable testimony of extent research notably those of B. Balassa[41] and A. Krueger[42]

[39]. Fisher, S., "Issues in Medium-Term Adjustment", _World Bank Research Observer_, vol. 1 and 2, 1986, pp. 163 - 182.

[40]. See the works of Mckinon, R., Money and Capital in Economic Development, Washington D.C Brooking Institute, 1978 and Shaw, E.S., Financial Deepening in Economic Development, New York, Oxford University Press, 1073.

[41]. Balassa, Bela, "Structural Adjustment Policies in Developing Economies", _World Development_, vol. 10, No.12, 1982 and Balassa, Bela, "Adjustment Policies in Developing Countries: A Reassessment", _World Development_, vol. 12, No. 9 1984.

on trade liberalisation in some less developed countries. Lastly, is the economic case for liberalisation which is premised on the proposition that given certain conditions such as perfect competition and free flow of information, free market equilibrium entails the maximisation of efficiency in the Pareto Optimum sense[43].

With respect to the manufacturing sector, restrictions in the form of made-to-measure protection guarantees the coexistence of firms with a wide dispersion of efficiency within a sector, since the level of protection is chosen to make the least efficient firms profitable. In this circumstance, it is quite conceivable for firms with dated machinery and equipment to operate with high profit level (Corbo and Melo)[17]. In such economies, there are both technical, scale, allocative and price inefficiencies.

Moreover, barriers to entry benefit existing firms as they have more leeway in their pricing policies - a situation which contributes to the coexistence of firms with a wide range of technical efficiency. The net effect of these problems in an economy is the prevalence of idle capacity and productive labour force. Not this

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[42]. Krueger, Anne O., et al (eds), Trade and Employment in Developing Countries, vol. 1, Individual Studies University of Chicago Press, Chicago, 1981.

[43]. Griffin, K.B. and Enos, J.L., Planning Development, Addisson Wasley, London, 1970, p.21.

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alone, the made-to-measure protection which includes quantitative restrictions, often results in exceedingly large rent which induce economic agent to expand much in their efforts appropriating rents rather engaging in activities that would be more socially productive. Thus, resources are badly allocated and underutilized, and the resulting market structures are not competitive.

Furthermore, argument against restrictions relates to its constraints on the input markets of the firms as well as restrictions on adjustments in the firms work force as a result of labour legislation. Moreover, management of inventories become complicated by uncertainty about whether and when the firms will be able to import spare parts and raw materials. Enterprises, are not sure about how much capital they will have access to and the cost. Finally, access to capital tends to be limited as the available pool of capital is parceled out according to long standing ties between existing producers and their creditors [17]. To correct these, the economy should be liberalized so as to reach a new long-run equilibrium in which existing resources and investment are better allocated and better used.

Leaving aside the issues of speed, order and credibility of adjustment which have serious effects on its success, researchers in the structuralist school have criticised the efficiency argument of liberalisation as

unrealistic in most LDCs considering their economic structures. The main thesis here is that economic efficiency in the pareto - optimum sense reflects only static efficiency neglecting both the dynamic and distributional efficiency - static efficiency focuses primarily on the proportions in which the components of a given output are combined while dynamic efficiency relates to changes in the volume of output. Distributional efficiency on the other hand, is concerned with equitable distribution of a given national product among the citizenry. From the definitions above, it is obvious that static efficiency does not always guarantee equity in distribution. Thus, it is quite conceivable for a pareto-optimum to correspond to an inefficient distribution of income. Hence, it is necessary to note that assessment of social welfare should not be made with reference to the production side alone. As pointed out by T. Killick[44], it is dynamic and distributional efficiency that are of importance to the developing countries.

Even more importantly, the conditions necessary for effective operation of market mechanism for attainment of efficiency are not obtained in the less developed countries. This view was corroborated by Obadan and

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[44]. Killick, Tony, Policy Economics, Heinemann, London, 1981, p. 14.

Ekuerhare (p.13)[37] in their statement that:

> ......in many developing countries, Nigeria inclusive, the condition required for the efficiency functioning of the "free" market do not exist. These include perfect competition, availability of correct information about and future price and non-price variables, given and independent consumer tastes, capital divisibility and absence of increasing return to scale etc.

The non workability of the market mechanism is the less developed countries is due to the existence of market imperfections which are given as poorly organised commodity and product markets, rudimentary money and capital markets, inefficient government bureaucracy and high dependence on foreign factors in these economies (M.P. Todaro[45] and A. Phillips[26]). The arguments here are that considering the prevalence of structural rigidities in the less developed economies such as Nigeria, the various markets are not characterised by efficient and elastic demand and supply; wholesale liberalization of prices may not lead to a realistic or optimal price structure required to ensure efficiency in resources allocation. Rather, price liberalisation may distort the price structure to such absurd proportions that relative scarcities are exaggerated[46].

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45. Todaro, M.P., Economics for a Developing World, Longman 1977. p. 364.

46. Soludo, C.S., "Theoretical Basis for Structural Adjustment Programme in Nigeria: Two Alternative Critique" in Proceedings of the 1988 Annual Conference of Nigerian Economic Society, May 3 - 7, 1988, pp. 1 - 24.

Beside the existence of structural imperfections which hamper the effective operation of the market mechanism, there is the distortion caused by the international market system[38]. The argument follows the line that the effort to induce less developed countries to rely on market forces in the adjustment process contrasts oddly with the steady increase in the number of products exported by developing countries that have been removed from the influence of market forces through restrictive measures adopted by the industrialized countries[38].

In any event, the dichotomy between developed and under-developed countries should not have arisen if free market conditions were the key to development considering the fact that government intervention in the less developed economies are quite recent. The fact remains that there is not a single industrial country that had not employed rigorous protection at some stage of its history. It could then be argued that any case against regulation, if at all, should not be premised on any inherent superiority of market forces rather it should be based on the consideration that many developing countries may not possess the administrative manpower required for extensive or detailed controls; and even where such resources do exist, it is often difficult to ensure that regulation and controls are exercised in the interest of

the public at large and not merely in the interest of the regulators and controllers (C.S. Soludo[46]., S. Dell[38]).

However, as noted by Dell[38] this does not amount to suggesting that the less developed countries should d away with all controls rather they should focus mainly on those key controls that they are able to operate efficiently. Given the above arguments, one might suggest that the focus of attention in the less development countries should be on the determination of the particular circumstance and sector when and in which reliance can be placed on market mechanism and also the character of the regulation and controls desired in other cases.

Besides the consideration above, A. Krueger[47], notes that while trade liberalisation may be beneficial in the long run, a decrease in protection may cause transitory losses of activity if newly profitable industries need time to expand output while others lose their viability. Moreover, increases in import may offset the intended trade balance benefits of devaluation if no strong export response is forthcoming while the unification of the tariff rate in liberalisation schemes may involve raising tariffs on imported capital and

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[47]. Krueger, Anne O., "Interactions Between Inflation and Trade Regime Objectives in Stabilisation Programme", in Cline and Wintraub (eds) Economic Stabilisation in Developing Countries, Washington D.C., Brooking Institution, 1981, pp. 83 - 114.

intermediate goods with resultant impact on costs
structure of some industries. Hence, from the arguments
so far, there is no agreement on the wisdom of using
liberalisation for the purpose of increasing efficiency
in domestic firms, increase output, employment, reduce
prices and increase capacity utilisation.

To be able to take a position on these issues as far
as Nigeria adjustment programme is concerned, an
empirical study is required. This therefore constitutes
the rationale for this study.

2.2.2   Devaluation

No other policy in the adjustment package seems to
have had so much discussion of package effects as the
issue of devaluation by primary producing countries[48].
Until quite recently the conventional wisdom was that a
devaluation, if had real effect at all, was expansionary:
the resulting increase in competitiveness would switch
foreign and domestic demand towards home goods, which, in
the presence of idle factors of production, would lead to
an expansion in output, thus supporting one of the aims
of adjustment programme (output and, via output,

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[48]. See the works of Goldstein Morris, "Global Effects of
Fund Supported Programme", Finance and Development, March
1986 and Obadan, M.I. and B.U., ekuerhare, "The
Theoretical Basis of Structural Adjustment Programme: An
Appraisal", Proceeding of 1988 Annual Conference of
Nigerian Economic Society, May 3 - 7, 1988.

employment). Devaluation would eliminate cost-price distortions that have negative effect of the consumption - investment mix as well as on the profitability of exports and income competing activities of the economy.[49]

As expressed by W. Tseng (p.2)[50].

rigidities in exchange rate policy often result in overvalued exchange rate. This undermines the profitability of the export and import competing sectors, with adverse effects on growth and the balance of payments. Overvalued exchange rates also weaken the confidence of holders of the domestic currency, leading to capital flight in various forms, including outflows occurring through under-invoicing exports and overinvoicing imports, that add further to balance of payments pressure. In such circumstance - as exports stagnate, imports rise, international reserves dwindle, and capital flight increases - the authorities are often forced to resort to stringent import and exchange controls that become cumbersome to administer and lead to further distortions in resource allocations. The typical situations is characterised by shrinking imports of vital intermediate and capital goods, faltering domestic production, and rising unemployment.

Thus, to reverse the situation described above, there is need for adjustment and the key antidote should be devaluation. It would occasion increases in producer prices for exports, raise local currency price for import to initial producer, more adequately by reflecting the

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[49]. Zulu, J. B., and S.M. Nsouli, "Adjustment Programme in Africa: The Resent Experience", The IMF, Washington D.C., 1985.

[50]. Tseng W., "The Effects of Adjustment", Finance and Development, December, 1984.

real scarcity of foreign exchange[51]. The incorporation of devaluation in the adjustment package is predicated on the elasticity approach to the balance of payments which is couched in terms of the so called Marchsll-Lerner condition[52]. Briefly stated, this condition that the sum of elasticities of demand for a country's export and of its demand for imports must be greater than unity if the country is to gain from devaluation[53].

Despite the seeming simple logic of the above argument on devaluation, early doubts were voiced in the development literature (A. Hirschman[7], Diaz - Alenjandro[8], H. Singer[54], etc;). that strand of literature is lucidly summarised and extended in the works of R. Cooper [9] and krugman, P. and L. Taylor[10]. What all these contributions have in common is that they point out various channels (distributional effects,

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[51]. Arkadie, B.V., "Some Realities of Adjustment: An Introduction", Journal of Development and Change, vol. 17, No.3, 1986, p.278.

[52]. For classical discussion of the Marshall-Lerner condition, see Kindleberger, C.P., International Economics, Homewood, (III), Irwin, 1968, p.259.

[53]. It needs be pointed out that the Marshall-Lerner condition is a sufficient but not a necessary condition for balance of payments improvement. The Elasticity pessimism of the 1940s throws doubt on the effectiveness of devaluation to correct a balance-of-payments disequilibrium. It is this development that led to the formulation of the absorption approach.

[54]. Singer, H., "The Distribution of Gians between Investing and Borrowing countries", American Economic Review; Papers and Proceedings, vol. III, May, 1956.

consequences of initial fiscal or current account deficits and real balance effects) via which contractionary effects on aggregate demand may reverse the expansionary effects of expenditure switching a devaluation is designed to achieve.

Also, as earlier noted in chapter 1, S. Van Winjnbergen[11] has shown various ways by which devaluation may cause output to decline and thus employment. The importance of Wijnbergen assertion cannot be overemphasized particularly in the less developed countries (LDCs) considering the high dependency nature of the manufacturing industries on imported inputs. For example, in Nigeria up to 66 per cent of all the raw materials and components that local industry used in 1984 were imported[55]. Thus, given this fact, devaluation would only precipitate increase in the cost of raw materials and new capital thereby leading to high production costs. This tends to lead to increase in the price of locally produced manufactures. The consequent fall in their demand will eventually lead to decline in output and capacity utilization and retrenchment of workers in many firms.

Besides this consideration, certain peculiar characteristics of the Nigerian economy tend to rule out

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[55]. MAN-HYER, Manufacturer's Association of Nigeria, Half Yearly Economic Reviews, 1985.

the effective use of devaluation.   In the Nigerian situation, the consumption habit is not only high but also import oriented while the profligate life-styles are more than commensurable with the productivity level. This being the case, the real effects of evaluation would be on domestic price level as imports demand tend to still largely remain insensitive to exchange rate devaluation.

Leaving aside the contractionary and stagflationary effects of devaluation, its potentially 'confidence reduction effect' has been noted.   Whiting, D.P.[56] notes that devaluation could reduce the confidence in a country's currency which may not only result in the withdrawal of 'hot capital' from such country, as well as prevent the future inflow of such capital while it lasts, it will induce a lead and lag in the currency situation of the country.   Leads and lag occur when a currency weakens in the foreign exchange and it is in danger of depreciating further.

Specifically, a lag occurs when exporters who are to receive payments in foreign currencies delay exchanging them for the currency until after the devaluation because when it has occurred, less units of foreign currency will have to be haded over for every unit of the

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[56].   Whiting, D.P., Finance of Foreign Trade and Foreign Exchange, Plymouth, Macdonald and Evans, 1979, pp. 36 - 37.

depreciated currency. As noted by O. Ogun[57] withholding foreign currencies in this way keeps up their value and this prevents any appreciation of the home currency rate. Lead on the other hand depicts a situation where importers obtain the foreign currency they require earlier than they would otherwise thereby forestalling the effect of depreciation. In this way, the currency is made weaker by an accelerated demand for foreign currencies.

Really, empirical studies on the impact of devaluation on exports, imports and the balance of the payments abound (Olayide[58], S.O., Nnana, J. O. [59] Ajakaiye, D.O.[60] etc), Olayide's study show that the supplies of Nigeria's foremost agricultural exports crops are inelastic. This by implication means that devaluation will have no impact on export promotion or even produce negative impact. This situation is further

[57]. Ogun, Oluremi, "Devaluation and the Nigerian Economy: Some Observations", The Nigerian Journal of Economic and Social Studies, vol. 27, No. 2, July, 1985.

[58]. Olayide, S.O., "Some Estimates of Supply Elasticities for Nigeria's Cash Crops", Journal of Agricultural Economics, vol. 23, No.3, 1972.

[59]. Nanana, O.J., "The Elasticity of Demand for Foreign Exchange and Exchange Rate of the Naira", Economic and Financial Review, vol.2, 1985.

[60]. Ajakaiye, D.O., "Short run effects of Devaluation on balance of payments: The influence of import structure", The Nigerian Journal of Economical in Social Studies, vol. 27, No.1, 1985, pp. 1 - 10.

worsened by the increasing and high tariffs wall being erected against most primary commodities by the industrialized countries. Also, very important is the persistent deterioration in the terms of trade of these commodities over the years.

On the import side, Nnana, O.J.[59] and Ajakaiye, D.O.[60] showed that the price elasticities of imports are relatively small and this means that devaluation will not reduce imports substantially. This situation is further worsened by the absence of capital goods industries and the high dependence on imports for the needs of the domestic industries.

Obviously, the findings of these studies and many others as well as some peculiar characteristics of the Nigerian economy seem to provide the background for the recent statement by Obadan, M.I and B.U. Ekuerhare[37] that:

> Considering the structure of Nigeria's production, exports and imports, the confidence so far reposed on the capability of devaluation to stimulate the growth of non oil exports, capital inflow as well as stem capital outflow and curtail imports seem to be over-optimistic. It has not had any significant impact on these flows (p.15).

Essentially, based on the totality of the evidence before us, we have much belief in A. Singh's[61] testimony that:

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[61]. Singh, A., "Tanzania and the IMF: The Analytic of Alternative Adjustment Programmes", Development and Change, vol. 17, No. 3, 1986, pp. 425-454.

> the most recent economic research on devalutaiton is very skeptical of this value as an instrument for correcting a fundamental disequilibrium in the economy (p.432)

But, it is not impossible for devaluation when combined with liberalisation (trade and financial) to foster efficiency in domestic industries, raise output, employment and capacity utilisaiton as contended by the leading financial experts (Balassa, B.[62], Myint, H.[63], Myint, H.[64], Caircross, A.K.[65] etc).

It is this possibility that provides a justification for the empirical study in this research report.

Also pertinent to the issue of devaluation is the aggregation effects of simultaneous exchange rate action by primary producing countries. Really, there are two views here. The first view criticises the World Bank and IMF for taking too 'piecameal' an approach to exchange rate policy and as such recommend collective devaluation by developing countries. In contrast to this view are those who argued that exchange rates induce increases in

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[62]. Balassa, B., Policy Reforms in Developing Countries. New York, Pergamnon Press, 1977.

[63]. Myint, H., "The Classical Theory of International Trade and Underdeveloped Countries", Economic Journal, vol. 68, 1952.

[64]. Myint, H., "The Gain from International Trade and the Backward Countries", Review of Economic Studies, vol. 22, 1954.

[65]. Caircross, A.K., "International Trade and Economic Development", Kyklos, vol. xiii, 1960.

production and in export of primary commodities, thus, if implemented simultaneously by many programme countries, will merely depress the world prices of these commodities and unfavorably affect the instigator's terms of trade. This will bring little benefits since the demand for these commodities is quite price elastic[66].

In any event, if the latter view should be true it could have a very serious effect on the output and employment level in the manufacturing industries as aggregate demand depends largely on exports of the primary commodities in most less developed countries (LDCs).

And in fact, analysis done by Goldestein[66] on this aspect of structural adjustment programme shows that the proposition that simultaneous exchange rate action by programme countries could have serious aggregate effects on the prices of programme countries's exports was applicable mainly to primary commodities. But, the potential for significant aggregate prices consequences depended mainly on the ability of programme countries to affect world supply. And this potential is clearly a function of commodity type and time. As for example, the potential was found to be clearly much higher for cocoa, coffee, etc., than for others such as wheat, citrus,

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[66]. Goldstein, Morris, "Global effects of Fund - supported programmes", <u>Finance and Development</u>, March 1986, pp. 25 - 28.

etc., and in the long run rather than in the short run.

However, as argued by some researchers, the risks of decline in the prices of primary commodities as a result of simultaneous exchange rate action are reduced since 'primary commodities now represent a significantly smaller share of exports by non-oil developing countries than they did two decades ago, and the share of non-oil developing countries in the world exports of primary commodities now is considerably smaller than even in a decade ago. And indeed, not all programme countries change their exchange rate at the same time and those that do usually do export the same products.

Much as one would agree with the reasons advanced above, however, the analysis does not provide a conclusive evidence on the dependence and aggregative effects associated with multilateral exchange rate action. At any rate, this fact was noted by Goldstein[66] in his testimony that:

> still much interdependence and aggregation effects associated with multilateral exchange rate action need to be closely monitored and it is possible to identify the individual non oil developing countries and primary commodities where 'market power' seems to be relatively high.

2.2.3   Expenditure Reduction Policy

In addition to liberalisation and devaluation analysed above, absorption reduction through domestic credit restraint forms an important instrument in the adjustment package. Credit contraction is presumed will lead to a decrease in domestic credit creations with a view to reducing current account deficits and also contain inflation. As noted by Yagci Fahrettin et al.,[67] this monetarist rationale for the effect of domestic credit creation is entirely compatible with a more keynesian or absorption - oriented explanation which contends that a fall in domestic credit creation will culminate in decrease in aggregate demand which will in turn narrow the gap between imports and exports.

However, the idea that current account deficits do not arise merely from a spillover of absorption over supply and into import, but from a mismatch of the structure of demand and supply such that the excess demand for some products especially important intermediate goods, co-exist with excess supplies of others, now form the core of the argument of the structuralists against domestic credit restraint. This being the case, trade deficit rather than being linked with the excess of absorption over aggregate supply, is

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[67].   Yagci, Fahrettin et al., "Structural Adjustment Lending; An Evaluation of Programme Design", World Bank Staff Working Paper, No. 735, Washington D.C. 1985.

linked with the levels of output. Consequently, domestic credit contraction will succeed more in reducing output than absorption.

Though as could be inferred from Keller's[68] absorption based analysis, reductions of credit for fixed investment and consumption, combined with steady or increased financing of working capital requirements, would increase output, the saving rate, and net exports; nonetheless, as pointed out by Dell, S.,[38] this presumption of easy flexible expenditure switching (as declining domestic demand is automatically offset by increased sales for exports) must underlie any exclusively demand focus approach to stabilisation.

The structuralists anchor their arguments against the effective working of expenditure reduction policy on inflexibility of derive demands for imports and short run inability to produce domestic substitutes. In such circumstance, improved current account deficit can only be effected through considerably greater monetary restraint and contraction with potential adverse effects on the output, employment and capacity utilisation in domestic firms. This view has gained a lot of popularity

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[68]. Keller, Peter, "Implication of credit policies for output and the balance of payments", IMF staff papers, vol. 27, No.3, September, 1980.

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among economics, these days (Crockett, A.D.)[69].

Similarly, some authors have raised the issue of target determination and achievement of set targets. For instance, Dell, S.[38] notes that it is not clear what the most appropriate aggregate target is: should it be the central bank domestic credit, narrow or some broad liquidity measure? While conceding the fact that broader liquidity measure will serve best, he however notes that it is less easily controlled. Yagci Fahrettin[67] in his view note that even with the liquidity measure determined, its link with absorption will be dependent upon largely unknown parameters of the money demand function. The discussion above vividly shows the difficulty of determining the appropriate final demand level itself. At any rate, given that the targets are successfully set, hitting them would still be a difficult task in view of the rudimentary capital markets and other distortions that permeate the economies of the less developed countries. This view was corroborated by Dell, S.[38] in his assertion that even developed countries have trouble hitting their target; developing countries should find it even more difficult. In view of this problem, government fiscal deficit has been the major avenue for

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[69]. Crocket, Andrew D., "Stabilisation Policies in Developing Countries: Some policy considerations", IMF Staff Papers, vol. 28, No.1, March 1981, pp. 54 - 79

credit policy implementation.

Another criticism of contractionary monetary policy is its potential stagflationary effects (Bruno, M.,[70] S. Van, Wijnbergen,[11] etc). The main thesis here is that restrictive money policies lead to expensive credit, which leads to an increase in component of input costs, this is turn leads to more inflation and less output than would obtain without the transmission mechanism present. Tight money policies push firms into the unorganised money markets, drive up interest rates there and consequently initiates stagflationary effects.

This assertion may be particularly true of the less developed country (LDCs) considering their stage of development. For one thing, banks play a much more greater role than the stock market in providing funds for firms. Nearly all the working capital of firms are financed by credit from the banking system. These two factors show the vulnerability of business sectors in the less developed countries to adverse credit conditions. Moreover, the virtual non-existence of consumer credit in the bank portfolio and in the unorganised money market further makes the impact of tight money policies to fall on investment rather than curbing consumption.

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[70]. Bruno, M., "Stabilisation and Stagflation in a Semi-Industrialized Economy", in R. Dornbushch and J. Frenkel (ed) _International Economic Policy: Theory and Evidence_, John Hopkins Press, Baltimore, M.D. 1979, pp. 270 - 289.

Lastly, stock of raw materials, semi-finished goods, intermediate imports are financed through credit. This simply means that cost of credit is a component of input cost. Therefore, by mark-up pricing rules, high interest rate will lead to high prices. As put by S. Van Wijnbergen (p.134)[11].

> under monopolistic market structure, a high cost of credit will not only lead to a short-run cost push effect on prices, but lead to a reduction in real output as real input costs have gone up.

The relevance of this assertion to the Nigerian situation cannot be determined a priori. As such, an empirical analysis is required.

Similarly, investment reduction impact of absorption reduction policy has been noted. Investment reduction tends to limit future output growth and hinders attempts to shift relative sectoral capacities towards tradable goods[67]. Many structural rigidities are found to be prevelent in the less developed countries (LDCs) which constrain attempts to reduce the output/absorption gap to rely exclusively upon costly output and investment reduction. Among these are bottlenecks and rigidities inhibiting sectoral shifts, ineffective tax systems and public sector operations which limit savings, and underdeveloped capital markets and financial regulation limiting private savings mobilisation.

Hence, the incorporation of financial sector

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liberalisation in the adjustment package following the works of Mckinnon, R. and Shaw, E.S.[40] is expected to raise the real interest rate, encourage savings, and better select for high return investment. Also, it is expected that it will engender increased competition which will in turn reduce intermediation costs in the banking sector. But the inherent danger here is that increase in lending rate may lead to increased working capital costs, raise prices and decrease some sectoral output in the short run. In any event, as noted by some economists whether or not increases in deposit rates increase private saving rate, they are also likely to divert savings from informal to more formal credit markets, at least temporarily disrupting the flow of working capital, to sectors traditionally dependent upon the unorganised markets for financing and hence causing transitory output loses[71].

Overall, one fact stands out clearly from the above theoretical review and this is the diversity of views on the adjustment programme. There is no consensus as to the desirability or otherwise of the adjustment programme especially in the less developed countries (LDCs) in view of their economic structure. In order to be able to take, a definite position on the issue an empirical analysis

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[71]. Donovan, D.J., "Macroeconomic Performance and Adjustment Under Fund Supported Programme...", IMF Staff Papers, vol.29, No.2, June 1982.

based on specific country approach is required. This, of course, constitute the rationale behind this study.

2.3 Previous Empirical Studies on Structural Adjustment Programme

For pedagogic purpose we group the various empirical studies on adjustment programme into two. These are studies outside Nigeria and those in Nigeria. In the first category are the works of Kirkpatrick and Onis[19], Overseas Development Institute (ODI)[18], Economic Commission for Africa (ECA)[20], Donovan, D.J.[71], Guitan, M. [72], Corbo, V. and M. Sanchez[22], Mezzera, J. and J. de Melo[23] as well as Petrei, H. and J. de Melo[21]. In the second category are studies by Ohiorhenuan, J.F[24], Kayode, M.O[25], Nigeria Economic Society (NES) [73] etc.

Kirkpatrick and Onis[19], Economic Commission for Africa E.C.A[20] and Overseas Development Institute (ODI)[18] in their reviews found that SAP has had very insignificant impact on the main target variables. Specifically, the ODI[18] in a cross-country study using the 'before' and

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[72] Guitan, M., "Economic Management and International Monetary Fund Conditionality", in Adjustment and Financing in the Developing World; IMF Staff Papers, vol. 29, No. 2, June 1982.

[73] Nigerian Economic Society (NES), Structural Adjustment Programme (SAP) and the Nigerian Economy' Proceeding of 1988 Annual Conference of Nigerian Economic Society, Ile - Ife, May 3 - 7, 1988.

'after' test approach found that the overall balance of payments (BoP) has shown some small improvement, but inflation has not been reduced and output growth has declined or remained unchanged. The negative relationship found between adjustment programme and the overall performance of African economies by the ECA[20] led to the formulation of the African Alternative Framework to Structural Adjustment Programme for Socio-Economic Recovery and Transformation (AAF-SAP). AAF-SAP not only takes account of the dynamic relationship existing among all major elements related to adjustment with transformation, but also emphasises full mobilisation and efficient utilisation of domestic resources and the need to establish an enabling environment for sustainable development and to adopt a pragmatic approach between the public and private sectors.

However, Donovan, D.J.[71] and Guitan, M.[72] are of the view that the failure of SAP to achieve its objective arises from inability of the programme implementors in LDCs to implement successfully, and on a sustained basis, the policy prescriptions of the programme. And in spite of these lapses in programme implementation in LDCS, Guitan, M.[72] in a comparative survey involving a sample of several programmed and non programmed LDCs, found that in broad terms, programmed countries recorded significant reduction in their external deficits, while at the same

time, exhibiting only marginal changes in their growth rates of real Gross Domestic Product (GDP) and consumption.

Studies by Petrei, H. and J. de Melo[21], Corbo, V. and M. Sanchez[22], and Mezzera, J. and J. de Melo[23], went further to undertake empirical analysis of the impact of the adjustment programme. Petrei and Melo's[21] study attempted to show how the economy adjusted to the reform package by examining the adjustment experience of nine Argentine firms during 1976-81. The data for the study are the main results of the interviews with nine manufacturing firms in Argentina. The interviews probed how the changing economic conditions during 1976-81 affected the behaviour of firms, how they assessed the reforms, and policies the firms followed to adjust to the reforms.

The results of the interview indicated that managers devoted increasing time to firm financial management and that the managers greeted the reforms with considerable skepticism. Also, the interviews reported that firms adopted a wait - and - see attitude after the announcement of reforms, often delaying action for several months. In spite of this cautious attitude, it was found that adjustment int he form of increase in product quality, often made possible by acquiring foreign know-how in the blue-print for new or existing product

was reported. Moreover, the study suggested that the reforms led to greater industrial concentration. This increase in concentration was precipitated both by foreign competition and by the working of the financial system. Financial groups which controlled some large banks and had an important participation in industrial firms found the resources to purchase additional shares.

Corbo and Sanchez[22] using the same approach as that described above, attempted to analyse the adjustment of industrial firms to the liberalisation and stabilisation reforms in Chile 1974 - 82. The data were elicited from a qualitative questionnaire completed by 10 firms. The main adjustments indicated in the results of the interview were streamlining of the activities of firms, without much investment. The streamlining took the form of reducing production lines, closing inefficient plant, reassigning workers, and changing product quality. As a result of this streamlining, average labour productivity rose substantially. It was found that with the reduction in protection for import - competing firms, there was a substantial release of labour which increased labour productivity in the manufacturing sector, however, that those released were not absorbed by other expanding sectors (non tradeable and export sectors) thereby causing increasing unemployment. Finally, the adjustment precipitated a sharp reduction in the relative prices of

tradeable thereby reversing the positive price signal
given at the beginning of the reforms, to the export
oriented firms.

Mezzera and Melo[23] examined the impact of the
economic reforms between 1974 - 82 in Uruguay and the
industrial firms. For the purpose of the study 11 firms
selected non randomly were interviewed. Of the 11 firms
interviewed, 3 were subsidiaries of large foreign
conglomerates, 3 were locally incorporated firms of
diffuse ownership, one was mostly a family affair and 3
were strictly family affairs. The interviews confirmed
that during 1974 - 78, the policy package that included
incentives for exporters led to a new set of profitable
opportunities. Industrial firms rationalised their
production activities by greater specialization in fewer
product lines and cost reduction. The set of incentives
provided during the reforms were perceived as credible -
a manifestation of which were seen in the strong growth
of manufacturing, and of exports in particular during the
period.

The study also reported that the anti-inflationary
programme was not adjudged credible and that the managers
'retrenched-awaiting-better day' during 1979 - 82. The
study showed that firms benefitted from the combination
of export incentives along with a dismantling of
quantitative controls on exports of capital goods and

non-competitive intermediate products. Apart from the reorientation of sales towards foreign markets, the result of the interviews indicated that firms introduced drastic changes in their production strategy as they modernized their plants to reduce costs and improve quality. Reductions in costs were achieved by quality – improving investment in new vintage machinery rather than by changes in employment practices.

In all the three countries it was found that the level of competition from abroad allows domestic firms to establish dominant market positions and to behave noncompetitively. Pricing to maintain market share and mark up pricing rules prevailed before the reforms with the result that prices were above marginal costs. Interviews in the three countries indicated that managers paid more heed to competitors as import competition intensified. This response supports the import discipline hypothesis which predicts that the threat of entry by foreign competitors will lead domestic firms to adopt entry forestalling prices more closely approximating competitive prices.

The studies reviewed above suffer two main defects. First, the sample sizes for the studies were rather too small. Secondly, the method of selection was non-random thereby crating room for biases. It is therefore impossible to make broad inferences from such limited,

non-random samples.

In Nigeria, studies that focus on detailed analysis of the impact of the current adjustment programme on the industrial sector are very scanty. This lack of detailed and scientific work can be traced to paucity of firm level data on the consequences of each major change in the economic environment which emanates form recentness of the programme in Nigeria.

However, in a review of the impact of SAP on the industrial sector by Ohiorhenuan, J.F.[24], he noted that some manufacturers have begun integrating backwards, establishing large scale industries to support their manufacturing activities. Moreover, he noted that little has been heard about retrenchment in the industrial sector since the introduction of SAP - a development attributed to the massive retrenchment which had occurred in the economy before the adjustment programme. But he pointed out that given the low industrial capacity utilisation despite the flow of foreign exchange through SFEM (now IFEM), import competition and the fact of a decrease in real incomes, the industrial sector is not likely to witness increased employment.

Finally, he argued that the debt-equity swap is likely to raise considerably the degree of direct foreign investment in Nigeria and if the policy is pursued, it would infer the locking in of 'new' foreign investment in

the self-same dependent structure of industries which is not conducive to long term industrial development.

Kayode, M.O.[25] in his own review of SAP effect on the industrial sector found that there was significant increase in prices of manufactured products after the announcement of SAP. According to him, a number of factors are responsible for the increase in prices, the most significant being the proportion of off-shore inputs. On the profitability of the industries, he found some merits in the argument of those who said that the industries are still making huge profits - a situation which led credence to the argument that the falling demand is caused to a large extent by the reluctance on the part of the industries to sacrifice part of their profits by lowering prices. Finally, he noted that the relative effectiveness of controls and market forces depends on the industry in question and in particular the potential for local sourcing. For example, while market forces have been effective in making significant changes in the soap and brewing industries, the same cannot be said of motor assembly plants.

The Nigerian Economic Society (NES)[73] noted the likely positive effect of SAP as including increased production of agricultural output, reduction of foreign exchange wastage an increased government revenue. However, the society also pointed out that the industrial

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sector would find it difficult to continue with the importation of raw materials for production in view of the prohibitive costs of such imports as Naira under SFEM (now IFEM) has seriously depreciated, leading to undervaluation of the Naira. That this undervaluation of the naira coupled with high interest rate will no doubt lead to the collapse of small scale industries, precipitate decrease industrial capacity utilisation and high unemployment.

Essentially, the Nigerian studies reviewed above were not based on adequate and rigorous empirical work as they relied only on aggregate data and casual observation. In addition, none of the studies has attempted a quantitative investigation of the impact of the structural adjustment programme on the industrial sector.

2.4   Concluding Remarks

From the discussions in the various sections of the chapter, we have observed that the diversity of views on the adjustment programme makes it rather difficult to make a priori judgement on its impact on the industrial sector of the economy. Also, very important, we have noted that the existing empirical works on the adjustment programme are based on limited and non-random sample sizes. Much in the same way, the existing studies were

based on limited available macro data which makes it rather difficult to make meaningful generalisation on the impact of the programme on the industrial sector. Hence the need for this fresh attempt at investigating the impact of the adjustment programme on the Nigerian industrial sector based on empirical firm-level survey and adequate statistical analysis.

CHAPTER THREE

A SURVEY OF THE NIGERIAN INDUSTRIAL SECTOR AND THE CURRENT ADJUSTMENT PROGRAMME

3.1   Economy

Nigeria at independence in 1960 opted for a mixed economic system in which the public sector plays a major role as an engine of growth. As such, the economic activities have been carried on by the public sector, the foreign-dominated subsidiaries of multi-national corporations and the indigenous private sector. The public sector accounts for the major share of economic activities. This was a result of historical perception of most developing countries that rapid economic development could come only through a very strong intervention and leadership of the public sector. In view of this historical fact and because of the paternalistic perception of government and leaders, which tradition encouraged, the private individual looked to the government to take initiatives and to lead the way.

The Nigerian subsidiaries of the multinational companies form the link between the Nigerian economy and major center of international capitalism[74]. Besides

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[74]. Eghosa, Osagie, "Nigeria's Economic Development since independence in Iz Osayimwese (ed) Development Economics and Planning, Ibadan University Press, Nigeria, 1983, p. 120.

having their policies determined abroad, they engage in diversity of activities but mainly in commodities whose characteristics are determined abroad. This is made possible by their rapid growth and enormous resources. Thus, given those factors, they tend to accentuate the center-periphery dichotomy and Nigerian dependence on the industrialized home countries of the multinational companies[36]. The indigenous private sector on the other hand is not entirely autonomous of the public sector since it depends on the latter for patronage. Also, its members serve as agents for the foreign dominated subsidiaries of the multinationals.

Apart from the picture of the Nigerian macro-economy discussed above, the economy was agriculture based at independence. With the discovery of petroleum, drilling and mining have become a very important sector of the economy. The discovery of oil has equally produced catalytic effects on theindustrial sector which was relatively insignificant at independence. Hence, the need to increase the importance of the industrial sector and enhance its speedy development necessitated the adoption of import substitution as the industrial development strategy since independence.

This philosophy of development has been pursued relentlessly over the decades but with the industrial sector engulfed with various distortions and crises.

Thus, in what follows, we look at the origins of the modern industrial sector in Nigeria only to be followed by a survey of the Nigeria's industrial development strategy after independence as well as an assessment of the performance of the industrial sector before SAP. Lastly, is the review of the structural adjustment programme.

3.2 The Industrial Sector

The Industrial sector of the Nigerian economy was relatively insignificant in terms of contribution to the Gross Domestic Product (GDP) in the colonial period. Historically, its origins dated back to the late 1930s and early 1940s. This was the period around which the big foreign trading companies which dominated the colonial raw materials economy began to modify the structures of their operations in such a way as to enable them to make a transition away from purely commercial activities into some form of import substitution manufacturing[75].

During this early period, public policy and private foreign investment policy promoted investments in the extractive industries and distributive trade as against manufacturing industries. Invariably, the country had to

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[75]. Kilby, Peter, Industrialisation in an Open Economy: Nigeria, 1945 – 1966, Cambridge University Press, Cambridge, 1966.

specialize in the production of raw materials while the metrolopolitan country - Britain served as a supplier of manufactured goods. As noted by Uzoaga[76], this unfortunate pattern of investment promoted a specialisation based on a static scheme of comparative advantage which diverted the Nigerian economy into activities that offered little or no opportunity for technical progress.

The earliest manufacturing that were established by the foreign trading companies as well as a handful of other international firms that hitherto had no direct links with the Nigerian market but which came to the country during or shortly after the second world war, were concentrated on the production of light industrial commodities such as detergents, soft drinks, leather works, textiles and confectionery among other [77]. The concentration of pioneer industries in Nigeria on light industrial sector had serious implications. It occasioned the neglect of new research as the technology required for the production of the consumer goods they were processing had already been standardised. Most companies only imported 'whole hug' their production

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[76]. Uzoaga, Okefie W., Money and Banking in Nigeria, Fourth Dimension Publishers (FOP) Enugu, 1981, p.11.

[77]. Olukoshi, Adebayo, "The Performance of Nigerian Industry under the Structural Adjustment Programme: A Critical Assessment" in Olukoshi (ed) "Crisis and Adjustment in the Nigerian Economy," JAD Publishers Ltd., Lagos, 1981.

techniques from their parent companies in Europe. This way, as noted by Bangura[78], the companies were not only able to beat the tariffs walls instituted by the state but also take advantage of the various incentives provided by the government to increase the spate of industrial development in the country.

Another feature of early factories established in Nigeria was their high reliance on foreign inputs in order to produce as the primary commodities that were produced in the country were only those needed by the industries of industrialized countries. Indeed, this constituted the earliest form of distortion in the Nigerian industrial sector which continued even after the attainment of independence.

3.3 Nigeria's Industrial Development Strategy after Independence

The attainment of independence and the realisation of the role of industries in economic development led to the shifting of manufacturing industries from periphery of the country's growth mechanism to a prominent position in the development process. Indeed, sequel to the adoption of the mixed economy philosophy at independence in which the public sector plays a major role as an

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[78]. Bangura, Yusuf, 'Structural Adjustment and De-Industrialisation in Nigeria' (Mimeo), 1987, pp.2-5.

engine of growth, the various governments in Nigeria heavily invested in production, distribution and other essential services. The rationale for direct government intervention is predicated on the need to provide basic infrastructures such as roads, seaports, airways, railways and heavy industries that are often shunned by the private investors not only for their high money outlays but for their long gestation period. These infrastructures are necessary to serve as springboard for the development of such industries as iron and steels, petrochemicals and services as communication systems.

In addition, the various distortions which permeate the economies of the less developed countries make it inevitable for government to introduce strict economic regulation, control and monitoring in order to protect industries and to ensure that the private sector activities fall within the provision of the guidelines of the development plans.

The Federal center assumed a stronger position relative to the regions in the 1970s under the military rule. And sequel to the creation of more states which precipitated changes in the system of federal revenue allocation, the distributable pool at the center was enlarged. Likewise, the increased importance of oil as a source of revenue served to ensure the absolute dominance of federal expenditure. Government apart from

participating directly in industry through state corporations and companies (oil production exploration, refining and marketing, iron and steel and others) also has ownership shares in many financial institutions[79]. Between 1970 and 1978 alone, total Federal government expenditure on industry amounted to N2,286.6 million with oil industry accounting for the larges share of N1,321.1 million[80]. This when considered along with indirect forms of investment through industrial development banks such as Nigerian Industrial Development Bank and Nigerian Bank for Commerce and Industry as well as the state level investment corporations demonstrate the dominance of public investment in industry over private investment.

However, in spite of the increased government direct participation in industry, the predominance of foreigners in industrial activities in the country was evident. This , of course, led to the promulgation of the indigenisation decree in 1972 (amended in 1977)[81]. In a nutshell, the decree attempted to involve Nigerians in

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[79]. For details of the ownership structure of Nigerian Banks as at December 1985, one may consult the Research and Data Services Ltd. 1985/86 Banking Almanac, Lagos 1986

[80]. Forest, Tom, Recent Development in Nigerian Industrialisation, in Martin Fransman (ed) Industry and Accumulation in Africa, Heinemann London, 1982, p. 329.

[81]. For details of this indigenisation decree one may consult Federal Military Government Official Gazette, vol. 61, No.13, 26th March 1974, NEPD (Amendement No.2, Decree 1974).

the ownership, control and management of certain enterprises so as to maximize local retention of profits, increase the net industrial contribution to the national economy and avoid unnecessary socio-political problems of absentee control of the nation's industrial sector. As such, the decree reserved exclusively for Nigerians certain types of businesses such as entertainment and media activities, garments, bricks and bread while some others could be jointly owned by both Nigerians and foreigners in the ratio 40 to 60 equity shares[82].

Essentially, as noted by Forest[80], a significant feature of the decree was that higher technology areas were reserved for foreign ownership, though there were exceptions. These exceptions could be found in the commercial activities of the old mercantile monopolies which were specifically exempted from full Nigerian ownership and simply extended Nigerian participation from 40 per cent to 60 per cent. Likewise, certain older established enterprises like tobacco, textiles and pharmaceutical remained with a majority foreign interest. In all eight-one companies went public with shares valued

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[82]. However, under the 1977 decree, all enterprises were covered by three schedules covering full, majority and minority Nigerian ownership. Schedule I contained enterprises reserved exclusively for Nigerians. Schedule II involved enterprises with at least 60 per cent Nigerian participation while schedule III contained enterprises with at least 40 per cent Nigerian participation.

at N2.4 million, while another N117 million worth of equity was transferred privately[83].

Within the framework of the provision of the 1977 indigenisation decree and as a means of coordinating the various industrial development policies, guideline and strategies enshrined in the various budget speeches and development plans, the first industrial policy in Nigeria was launched in 1980. The policy clearly articulated government uneasiness over the poor state of industrialisation in the country and to ameliorate this, it stipulated that all proposal for the establishment of industries in the country had to reflect the following:

1. The maximisation of value-added through (a) utilisation of local resources (b) agro-based industries (c) linkages (d) backward integration (e) manpower development (f) technological development.

2. Research and development;

3. Employment generation;

4. Steady growth of technological and material self reliance;

5. Promotion of export-oriented industries, and;

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[83]. Sanusi, J. O., Reflections on the indigenisation exercise (mimeo) Lagos, 1979.

6.   Industrial dispersal[84].

In addition to the previous package of incentives that have been given to the industrialists since 1970s new ones were added among which were incentives for pioneer industries; accelerated Depreciation of capital Investments, Customs Drawback Regulation, Graduated Excise tax and allowance for research and development. Over all, the main industrial development strategy of the Nigerian government has, since independence, been that of import substitution.

3.4   Analysis of the Performance of the Industrial Sector Before SAP

There are various measures of industry's performance. These include the value-added, the level of employment generated and the percentage of used inputs generated locally, among others. In terms of contribution to the Gross Domestic Product (GDP), the manufacturing sector performed only fairly between 1960 and 1983. Its contribution to the GDP moved from 4.8 per cent in 1960 to 5.4 per cent in 1983 (see table 3.1). A critical look at manufacturing sector's contribution to the GDP (as obtained in table 3.1) shows a rather insignificant effects when compare to the 20 to 40

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[84]. Federal Ministry of Industries: Nigerian Industrial Policy and Strategy: Guidelines to Investors, Public Printers Nigeria Ltd., 1980, p.9.

percentage share that obtains in most industrialized countries (see table 3.2).

The index of manufacturing has shown fluctuating growth rates since 1963. The average annual growth over the periods 1963 - 67, 1967 - 72, 1972 - 78 and 1978 - 85 were 13.6, 10.2, 13.3 and 9.8 per cent respectively. The trend of growth in the manufacturing index is shown in table 3.3. The smaller figure for 1967 - 72 can be explained in terms of the Nigerian civil war which disrupted industrial productive capacity in some areas of the country while that for the period 1978 - 85 could be accounted for by the effects of the reduction in government spending and in bank credit precipitated by the fall in oil revenues following the severe economic recession experience during this period.

On the pattern of value-added growth rate (see table 3.4), the intermediate and capital goods industrial enterprises showed no remarkable contribution rather only the consumer goods industries have consistently witnessed increase value-added. For the period 1965-83, the value-added contribution of capital good industries decline from 12 per cent in 1965 to 6 per cent in 1975 but increased to 17.0 per cent in 1983 while that of the consumer goods increased from 61 per cent in 1965 through 66 per cent in 1970, 65 per cent in 1975 and 56.4 per cent in 1983. The increased value-added in the capital

Table 3.1

Value of GDP, Manufacturing and Percentage of Manufacturing in GDP, in some Selected years

YEAR	GDP Nm	MANUFACTURING Nm	% OF MANUFACTURING IN GDP
1960	2,247.3	107.6	4.8
1965	3,110.0	214.6	6.9
1970	7,203.0	313.0	4.3
1975	21,475.1	1,170.4	5.5
1980	43,280.2	2,354.4	5.4
1981	43,450.0	2,647.5	6.1
1982	46,921.0	2,647.5	5.6
1983	46,672.8	2,520.3	5.4

Sources: (a) World Bank Tables (3rd Edition), Vol.1, 1983. (John Hopkins University Press, Baltimore), pp. 134-135.

(b) Structure of the Nigerian Economy by Olaloku et. al., 1979, pp. 6-7.

(c) Structure of Production in World Development reports, (Various Issues), World Bank publication.

Table 3.2

Nigeria Compared with 6 Industrialized Capitalist Countries: The
Percentage Share of Key Sectors in GDP, 1960 and 1983

Countries	Industry % to GDP		Manufacturing % to GDP		Agriculture % to GDP		Sercices % to GDP	
	1960	1983	1960	1983	1960	1983	1960	1983
U.S.A	38	32	29	21	4	2	58	66
U.K	43	32	32	18	4	2	53	66
W.Germany	53	46	40	36	6	2	41	52
Canada	34	29	23	16	6	3	60	68
Japan	45	42	34	30	13	4	42	55
Sweden	40	31	27	22	7	3	53	66
Nigeria	11	34	5	5	63	26	26	40

NOTE: Averages of all countries are rounded up.

Source: World Development Report, 1980 and 1985, Issues
(World Bank Publication).

Table 3.3

Nigeria: Index of Manufacturing Output, 1972 = 100:

Some Selected Years

Year	Index
1963	40.7
1965	53.2
1967	60.7
1969	79.8
1971	94.0
1972	100.0
1975	147.7
1977	193.5
1979	327.5
1981	394.9
1983	319.0
1985	334.8

Source: Central   Bank   of   Nigeria   Annual   Reports   and
          Statement of Account (Various Issues).

Table 3.4

Establishment, Value-added and Employment Structure in Nigeria manufacturing
Group 1965, 70 75 and 83

| Industry Group | 1965 | | | | | | 1970 | | | | | |
| | Establishment | | Value-added | | Employment | | Establishment | | Value-added | | Employment | |
	Total No	As a % of Total	Total N m	As a % of Total	Total No Employed	As a % of labour force	Total No	As a % of Total	Total N m	As a % of Total	Total No Employed	As a % of Labour force
Consumer goods	411	53	105.5	56.4	116649	0.2	413	60	261	66	92394	0.35
Intermediate good	326	42	46	26.6	35867	0.1	252	37	126	32	34335	0.13
Capital goods	39	5	21	17	2155	0.06	23	3	7.24	2	2393	0.0

Table 3.4   (Contd.)

Industry Group	1975						1983					
	Establishment		Value-added		Employment		Establishment		Value-added		Employment	
	Total No	As a % of Total	Total N m	As a % of Total	Total No Employed	As a % of labour force	Total No	As a % of Total	Total N m	As a % of Total	Total No Employed	As a % of Labour orce
Consumer goods	847	66	776	65	173639	0.59	1417	67.09	2947	56.4	157742	0.52
Intermediate goods	406	31	339	28.6	32835	0.11	631	29.88	1389	26.6	48535	0.16
Capital goods	37	3	70	5.9	37769	0.13	69	3.03	888	17.0	27301	0.09

Source: See Fabayo, A., Two Decades of Import Substitution Industrialisation in Nigeria - Stocktaing, the Social Review, vo. 6, No 1 and 2, 1988, p. 42.

FOS, Annual Abstract of Statistics, Various Years.

good industries from 1983 to 1985 can be attributed to the increased government efforts at developing the capital goods industries through the establishment of the rolling mills and iron and steel industries.

Apart from the anticipitated increased value-added, the import substitution strategy for industrial development in Nigeria is expected to lead to increase employment. This is premised on the view that domestic production of importable can have various effects on employment generation depending on the degree of interdependence within the economy[85]. These effects can be direct employment effect, linkage effect and multiplier effect[86].

An examination of table 3.5 shows that the number of people in the direct wage employment (which is used as a proxy for all other effect because of data limitation) of manufacturing enterprises employing 10 or more, increased from 57,960 in 1962 to 244,242 in 1975 but decreased to 233,578 in 1983 with the consumer good sector accounting for the largest share. The share of consumer goods sector in the total industrial employment increased from

[85]. Meier, Gerald, M., 'Industrialisation via import substitution. Note in leading issues in Economic Development', Meier (ed.), Oxford University Press, Fourth Edition, 1984, p. 388.

[86]. For all full discussion of these effects see Fabayo A., "Two Decade of Import Substitution Industrialisation in Nigeria - Stocktaking", Ife Social Science Review, vol. 6, Nos. 1 & 2, 1983, p.45.

Table 3.5

Employment in Nigerian Manufacturing Industries
(some Selected Year)

Year	1962	1964	1966	1968	1970
Employment	57,960	76,342	63,093	86,721	128,519
% Increase	3.05	31.68	-17.35	37.44	48.20

Year	1972	1974	1976	1977	1978
Employment	168,470	175,299	271,685	334.440	305,495
% Increase	31.09	4.05	54.98	23.09	-8.65

Year	1979	1980	1981	1982	1983	1984
Employment	n.a	453,632	449,093	249,132	233,578	221,232
%Increase		48.49*	-1.00	-44.53	-6.24	-5.29

Source: Federal Office of Statistics Lagos, Industrial Survey, 1962-83.

*This represents percentage increase over the 1978 figure.

Table 3.6

Registered Unemployment and Vacancies
(Lower Grade Workers)

	1982 1	1983 2	1984 3	%Change Between 1&2	%Change Between 2&3
1. Total Registration	106,496	112,588	120,945	5.7	7.4
a. Old Registration	15,688	25,131	30,670	60.2	22.0
b. Fresh Registration	59,259	55,339	50,108	-6.6	-9.5
c. Re-Registration	31,549	32,118	40,167	1.8	25.1
2. Vacancies Declare	19,943	18,310	14,612	-8.2	-20.2
3. Placements	8,276	7,394	3,865	-10.7	-47.7
4. Ratio of Registered Job Seekers to Job Openings.	1:5	1:6	1:8		
5. Placement as a Proportion of Registere Unemployed	7:8	6:6	3:2		

Source: Federal Ministry of Labour, Employment
and Productivity, Lagos.

54 per cent in 1962 to 71 per cent in 1975 but declined to 67.5 pr cent in 1983 (calculated from table 3.4). The high demand for consumer goods and its labour intensive nature justify its dominance in terms of employment creation.

Indeed, this employment generation capacity of the industrial sector when viewed critically is rather insignificant as shown by the percentage increase over the years (see table 3.5). In fact, it has suffered serious reversal since 1978 (see table 3.5).

The number of people in direct wage employment which was 334,440 in 1977 declined to 305,495 in 1978 and 233,578 in 1983 as a result of retrenchment. This was caused by the mild economic recession of 1978 which became intensified since the last quarter of 1980. The rate of unemployment started moving up as oil revenue faltered and government expenditure and bank credit reduced thereby precipitating lull in industrial growth. The decrease in industrial capacity utilisation level led to mass unemployment problem. This is corroborated by the data shown in table 3.6 below, where the number of registered unemployed among the lower grade workers increased from 106,496 in 1982 to 112,588 and 120,945 in 1983 and 1984 respectively. These represented 5.7 per cent change from 1982 to 1983 and 7.4 per cent change between 1983 and 1984. The ratio of job seekers to job-

openings increased from 1:5 in 1982 to 1:6 in 1983 and to 1:8 in 1984. The same situation have been recorded for the higher grade workers. The rate of graduate unemployment since 1982 has been alarming.

Apart from the effects of the economic recession, lack of coordination between the population growth rate, manpower development and the rate of industrial expansion also explain the phenomenal increase in the level of unemployment in Nigeria.

The insignificant proportion of industrial employment in the total labour force in Nigeria has its origin in the adoption of capital intensive production technique which offers limited scope for capital - labour substitution. The adoption of the technique results from the imperfection in the factor market which culminates in high ratio of the price of labour relative to that of capital thereby discouraging the use of labour. Others are the influence of government policies such as low interest rate, overvalued exchange rate, low import duties which tend to encourage import of capital equipment and components.

In terms of local production of industrial products there seems to be little progress as indicated in table 3.3. The index of manufacturing production between 1970-1983 with 1972 as the base increased on the average by 180 per cent. Significant increases were recorded in the

production of such items as soft drinks, paints allied products, soap and detergents. However, increased index of manufacturing production should not veil an important issue namely, that import substitution brought in its wake a rise in the importation of raw materials, machinery, equipment, spare parts and accessories (see table 3.7).

Table 3.7

Imports by Major Groups % Selected Years

	1960	1965	1970	1974	1980	1984	1985
Total Consumer Goods	61.0	45	28.3	29.2	39.6	37.0	22.1
Capital Goods/ Raw Materials	39	55	68.7	70.2	60.3	61.9	76.3
Capital	22	31	37.7	37.2	35.5	22.2	34.9
Raw Material	17	24	31	33	26.8	29.7	41.9
Miscellaneous	-	-	3.5	0.6	0.1	1.1	1.6

Source: Central Bank of Nigeria Annual Reports and Statement of Account (Various Issues).

As shown in table 3.7 the percentage of raw
materials and capital goods in total imports has
consistently been on the increase since 1960.   It
increased from 39 per cent in 1960 to 76.3 per cents in
1985.   The increased share of raw material and capital
goods shows the high dependency nature of Nigerian
manufacturing industries on imported materials which by
implication means little or no local sourcing of raw
materials.   The effects of this high and increasing
dependence on imported raw materials and capital goods
has manifested in high production costs and drains on our
foreign exchange over the years.

The role of import substitution strategy in the
development of local technology has been minimal.   The
imported technology of manufacturing firms has failed to
uplift and transform the domestic technology.   As
succinctly put by Fabayo[86].

> It is sad to note that after two decades of
> ISI experiment Nigeria is not yet in a
> position to generate a local or indigenous
> technology capacity that can produce ordinary
> pins, or the simplest chemical for food
> preservation.   In the instance when the pins
> or chemical have been produced in the domestic
> economy, the plant and equipment used in their
> production processes have been designed and
> manufactured abroad.

The failure of ISI in terms of local technology
development could be attributed to both external and

domestic factors. The external factors relate to the unwillingness on the part of advanced countries to transfer their technology for selfish interest. The domestic constraint include the limited state of the art which constrained the capacity to adapt imported technologies to suit domestic condition and requirements. As noted by Fabayo[86], this limited state of the art in Nigeria is attested to by the acute shortage of science and technical manpower and the limited research and development activities in the country.

The industrial sector was able to survive in the 1970s in spite of general low performance and distortions because of huge revenue form oil. However, this was not the case in the 1980s when the international oil price and thus Nigeria's oil revenue fell drastically. The decreased revenues from oil in the face of high imports precipitated serious balance of payment disequilibrium. Similarly, public finances were thrown into disarray with government accumulating high and growing budget deficit. The immediate impact on the industry was the collapse of many factories in the face of an acute shortage of inputs, particularly spare parts and raw materials. The few industries that survived, produced at low capacity utilisation level. Industrial turn over and value-added came under considerable strain and many workers were retrenched.

As a result of the widespread collapse of factories and also because of the shortage of foreign exchange which made it difficult to import various items, an acute shortage of the consumer goods developed in Nigeria especially since 1983. The net effect of this is high prices of commodities in the economy as demand far exceeded supply. Other sectors such as agriculture, construction and building as well as service were equally seriously affected. The economy was ridden with high debt burden[87]. Nigeria's debt service ratio moved from 8.9 per cent in 1982 to 30.8 percent in 1985 (see table 3.8). Quite clearly, the country's economy was in serious problems and the industrial sector in particular was bedeviled with distortions and crises which necessitated an adjustment programme.

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[87]. For details on the origins, dimension and self-generating mechanism of the Nigeria's external debt, see Akinlo, E.A. "Nigeria's Debt, Structural Adjustment and Growth", National Conference on Debt, Financial and Economic Stability and Public Policy, Bendel State university Ekpoma, Nigeria, 1991.

Table 3.8

Nigeria's Debt Service Ratio, 1960 - 1985

Year	1960	1961	1962	1963	1964	1965	1966	1967	1968
Debt Ratio	1.1	2.7	2.4	6.0	3.5	3.7	7.2	4.4	4.7

Year	1969	1970	1971	1972	1973	1974	1975	1976	1977
Debt Ratio	4.0	3.5	2.3	1.8	1.4	0.5	0.7	2.3	0.8

Year	1978	1979	1980	1981	1982	1983	1984	1985
Debt Ratio	1.2	1.5	1.9	4.6	9.5	17.5	25.0	30.8

Sources: Federal Office of Statistics: Abstract of Statistics, Various Years.

CBN, Annual Reports, Various Years.

World Bank, World Development Reports 1981-1986, Issues.

3.5   The Nigerian Adjustment Programme July
         1986-1988

The Nigeria's adjustment programme is a recovery programme designed in July 1986 to eliminate the various distortions and crises that engulfed the economy and the industrial sector in particular.

3.5.1   Objectives   of   Nigeria's   Structural
              Adjustment Proramme (SAP)

As officially spelt out by the government, the objective of structural adjustment programme include:

    i.   to restructure and diversify the productive base of the economy in order to reduce dependence on the oil sector and on imports;

    ii.   to achieve fiscal and balance of payments viability over the period;

    iii.   to lay the basis for sustainable non-inflationary or minimal inflationary growth; and

    iv.   to reduce the dominance of unproductive investments in the public sector, improve that sectors's efficiency and enhance the growth potential of the private sector.

And with respect to the industrial sector, the objectives of structural adjustment programme are as follows:

i. encouraging the accelerated development and use of local raw materials and intermediate input rather than depend on imported ones;

ii. developments and utilisation of local technology;

iii. maximising growth in value-added of manufacturing production;

iv. promoting export - oriented industries;

v. generating employment through the encouragement of private sector small and medium scale industries;

vi. removing bottlenecks and constraints that hamper industrial development including infrastructural, manpower and administrative deficiencies; and

vii. liberalising controls to facilitate greater indigenous and foreign investment.

In pursuit of the objectives above the main elements of the adjustment programme are:

i. Strengthening of demand management policies;

ii. adoption of measures to stimulate domestic production and broaden the supply base of the economy;

iii. adoption of a realistic exchange rate policy through the establishment of a Second Tier Foreign Exchange Market (SFEM) now Interbank

Foreign Exchange Market (IFEM).

iv.   rationalisation and restructuring of the tarrif regime in order to aid the promotion of industrial diversification;

v.   Progressive trade and payments liberalisation;

vi.   reduction of complex administrative controls and fostering reliance on market forces;

vii.   adoption of appropriate pricing policies for public enterprises; and

viii.   rationalisation and commercialisation and or privatisation for public sector enterprises. The summary of the objectives both final and intermediate and policy instruments of Nigeria's structural adjustment are contained in table 3.9 below.

Table   3.9

Area	Final Objectives	Intermediate Objective	Policy Instruments
Trade	Reduce Balance of Payments deficit	Increase export by increasing relative export prices to suppliers, as well as by improving supporting services by the government	Achievement of realistic exchange rate through the the second tier foreign exchange market (SFEM) now IFEM.
			Improvement in the mechanism for determining agricultural producer price and reversed of historical discrimination in favour of prices for self-sufficiency crops such as maize, rice and garri.
			Increase public investment and recurrent budgetary supports of agricultural research of agricultural resrarch and extension services.
		Diversify exports	Encourage accelerated production on livestock and forestryindustries and agro industries.
		Decrease import reform tariff and	
		Decrease import reform tariff and import licensing regime	Encourage investment in and utilisation of domestic resources.

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Table 3.9 (Contd.)

Area	Final Objectives	Intermediate Objectives	Policy Instruments
Tade	Reduced Balance of Payment deficit	Increase export by increasing relative export prices to suppliers, as well as by improving supporting services by the government	Achievement of realistic exchange rate through the second tier foreign exchange market (SFEM) now IFEM.
			Improvement in the mechanism for determining agricultural producer price and reversed of historical discriminaiton in favour of prices for self-sufficiency crops such as maize, rice and garri.
			Increase public investment and recurrentbudgetary supports of agricultural research and extensionservices.
		Diversify Exports	Encourage accelerated production of livestocks and forestryindustries and agro industries.
		Decreases import reform tarriff and import licensing regime	Encourage investment in and utilisation of domestic resources.

Table 3.9 (Contd.)

Area	Final Objectives	Intermediate Objectives	Policy Instruments
Price Stabi lity	Reduce the the rate of inflation	Reduce domestic demand by curbing monetary expansion through limiting central banks credit to public sectors	Reducepublic investment, reduce the number of public projects, finance only the important projects. Introduce tax reforms. Ensure efficiency in tax administration. Limit employment in the public sector.
Exter nal Debt	Prudent debt Management	Improve maturity and source structure of debt.	Try to reschedule debts. Limit commercial credits. Verification of all external debts.
Res- ource Mobili	Increase private and public investment		Ensure real positive interest rate through sation interest rate deregulation. Reform capital market to attract financialsavings. Increase efficiency and revenue in the public sector.

Table 3.9 (Contd.)

Area	Final Objectives	Intermediate	Policy Instruments
Privatisation and or Commercialisation	Increase the private sector participation in the economy	Increase the share of private investment	Limit Central Bank credit to the public sector to avoid crowding out. Encourage the availability of medium term credit to prospective investors. Elimination of subsides to inculcate the idea of self-sustained and self-reliant development in enterprices. Management of Commercialized enterprises in order to become more cost conscious in thier operations than before.
Efficiency	Increase efficiency in production and investment both in public and private sectors.	Reduce protection on domestic sales. Ensure efficiency in economic mangement.	Liberalize trade, financial market and prices. Limit the scope and extent of of selective credit. Simplify adminstration and procedure through civil service reforms. Reduce direct controls, use policy instruments rely on market forces.

Table 3.9 (Contd.)

Area	Final Objectives	Intermediate	Policy Instruments
Agricultural and rural development	Increase production and exports raise rural employment and income, achieve regional optimal crop plantations	Reduce subsidies and controls. Rely on market forces. Improved agricultural technology.	Let the prices adjust to the trend value of world prices by windning up the commodity boards. Gradually eliminating fertilizers subsidies. Removal of restriction on exports. Improvement in medium term planning and research capabilities. Estabilishment of Directorate of Food, Roads and rural infrastructure. Introduction of more incentives Abolition of import duties on some agricultural inputs.
Industrial reforms	Improve performance of industries through increased growth. Enhance local sourcing of materials. Encourage more efficient use of capital and greater regional dispersion	Reform industrial incentives to increase efficiency.	Introduce higher taxes on luxury goods to discourage non-essential consumption enhance access to foreign exchange by the industrialists through SFEM now IFEM. Amendment of the Nigeria Enterprises promotion Decree 1977 to encourage more foreign participation. privitisation and or commercialisation of some government parastatals. Introduction of a duty draw-back - suspension scheme.

Table 3.9 (Contd.)

Area	Final Objectives	Intermediate	Policy Instruments
Investment Incentives	Rationalisation of investment incentive system	Encourage more industrial activities in the economy. Channel of investments to industrial subsectors where the country has a comparative advantage. Encourage more employment and industry growith outside the major cities. Encourage Manufacturing for exports.	Abolition of import duties on basic of industrial raw materials. Simplification of procedure for capital and dividend repartriation. Establishment of Industrial Development coordination committee (IDCC) Granting of tax reliefs and tax free dividends for some categories of companies for a specified number of years.

3.6   Features of the Nigeria's Structural Adjustment Programme

The key features of Nigeria's structural adjustment programme are with various policies formulated in the programme. These can be grouped into exchange rate policy, trade policy, investment incentives and industrial promotion policy, fiscal and monetary policy; and agricultural and rural development policy.

3.6.1   Exchange Rate Policy

The main exchange rate policy of Nigeria's structural adjustment programme was the introduction of a second Tier Foreign Exchange Market (IFEM)[88] on the 29th September, 1986 to correct the over-valuation of the Naira exchange rate. This over-valuation of Naira was one of the factors identified by the government as aggravating the price distortions in the economy. Thus, the objective of SFEM now IFEM is to evolve a realistic exchange rate for the Naira through the operation of market forces. This is expected to reduce the demand for foreign exchange to available supply and to reduce the pressure on the balance of payments.

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[88]. The liberalisation of Foreign exchange Market (FEM) began as Second Tier Foreign Exchange Market (SFEM) and metamorphosed into today's InterBank Foreign Exchange Market (IFEM).

Moreover, such a realistic rate is hoped to eliminate the distortions in all the major sectors of the economy, reduced imports, stimulate exports, encourage efficient import substitution, dismantle the administrative controls and the import licensing system, attract a higher volume of capital inflow and pave the way for a more self-reliant and sustainable growth.

In determining the SFEM rate, various approaches have been adopted. The Average of successfully Bid Rates was jetissioned on 9th October, 1986 for Marginal Rate approach due to its inappropriateness. Likewise, the unsatisfactory performance of the marginal rate in fostering competence and professionalism in bidding prompted its replacement by the Dutch Auction Pricing System on April 2nd, 1987. Soon after the adoption of the bi-monthly bidding session, specifically 2nd july, 1987, the first and second tier rate converged thus metarmophosing into Foreign Exchange Market (FEM).

However, in an attempt to address the problems associated with FEM the system was re-organised. Both the auction and the autonomous segments of the market were merged resulting in the new system of Interbank Foreign Exchange Market (IFEM). Under the system, the rate of exchange was determined on a daily basis in an interbank system under the supervision of the Central Bank of Nigeria. And in an attempt to reduce the need

for many small buyers and sellers of foreign exchange to go to the parallel market led to the idea of bureaux de change which was operationalized on August, 1989.

The central Bank of Nigeria is charged with the funding of the market. However, this source is expected to be augmented overtime with flows from autonomous sources such as foreign currency domiciliary accounts and capital inflows from corporate and non-corporate bodies. In 1986, the sum of US $452 million was provided as loans by the World Bank for purpose of funding SFEM[89]. Also, part of the foreign exchange in the Escrow accounts from the counter-trade deals have been used to finance the market. The African Development Bank has equally offered loan to the Government for the funding of IFEM under the Export Stimulation Loan Project. In all, a total of $7.3 billion was supplied to the market while total demand amounted to $16.0 billion during the period September, 26, 1986 to August 25, 1989[90], leaving an excess demand of $8.7 billion. This short supply of foreign exchange to the market and because of the pressure on the external sector, the value of Naira has depreciated continuously in the market. From an official exchange rate of N1.5535

[89]. Omoruyi, S.E., 'A review of the Structural Adjustment Programme the Foreign Exchange Market and Trade Policies in Nigeria CBN, Economic and Financial Review, vol. 25, No. 4, December, 1987, p. 31.

[90]. See Business Times, Monday August 28, 1989.

to N1.00 at the inception of SFEM in 1986, the rate declined to the rate of N18.00 to $1.00 in March, 1992, while the rate in the bureaux de change is currently over N19.00 to $1.00.

Another feature of the foreign exchange policy was the abolition of the requirement that Nigerian residents should surrender their foreign exchange earnings to the Central Bank of Nigeria.

3.6.2   Trite Policy: Tarrif Reform and Trade Liberalisation

In addition to the foreign exchange policy is the trade policy reforms. The objectives of the trade policy reforms were three-fold. First, to increase efficiency and international competitiveness of Nigerian industry. Two, to improve the exports regime through export promotion measures. Three, to reduce allocative distortions by lowering the level of protection for non essential goods.

A number of measures were effected to achieve these objectives. An interim review of the Custom and Excise Tariff was undertaking in 1986 in order to protect local industries against undue competition from imports, create more employment, control inflation and encourage utilisation of local raw materials by industries. A comprehensive tariff was however introduced in 1988.

This provides higher degree of protection for local industries. The number of excisable products were reduced from 412 to 182 and a harmonised commodity coding system operationalized. Import duties on battery parts, cold and hot rolled sheets for metal packaging were reduced from 45 per cent to 25 per cent and 10 per cent respectively. However, duties on syringes/needles and enamels wares were increased progressively for the next successive 6 years to protect local industries.

The trade liberalisation policy is reflected in the abolition of import and export licensing and exchange control on all current transactions and the reduction of prohibited imports items from 74 to only 16.

In order to strengthen the export regime, the structural adjustment incorporated a series of measures including broadening fiscal incentives for exports production, simplifying procedures, improving export financing facilities and strengthening institutions. For instance, SFEM Decree allow exporters to retain 100 per cent of their foreign earnings in form of domicilliary accounts and exporters could convert their export proceeds held in such accounts into Naira.

Furthermore, export prohibitions were abolished except for grains, yam and other tubers. A Duty Drawback scheme under which producers and or exporters can import raw materials and intermediate products free of import

duty and other indirect charges and taxes was introduced. Also, an Export Credit Guarantee and Insurance Scheme were established to insure exporters from political and other risks. There were also Export Development and Export Expansion Funds.

3.6.3   Fiscal and Monetary Policies

Fiscal and Monetary policies form another key features of the Nigeira's structural adjustment programme. Its introduction midway in 1986 precipitated the review and rationalisation of the existing fiscal measures[91] with a view to dampening the expected inflationary consequences of SFEM now IFEM. The 30 per cent import levy was abolished and import prohibition list reduced from 74 to 16. Likewise, import and excise duties were proposed to ameliorate the impact of the previous restrictive policy focus of government in 1987. Old personal income tax reliefs increased, and new ones introduced; tax free dividend expanded, and company tax rate reduced from 43 per cent to 40 per cent.

Furthermore, investment tax relief, special tax rebate for small business on additional 5 per cent capital allowance and tax incentive for those engaged in constructions particularly owner-occupied buildings were

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[91]. For details of these measures see CBN, Annual Report and Statement of Account, 1986.

included in the system of tax relief measures in 1988. They were intended to strengthen private sector participation while reducing the size of government participation.

The objective of monetary policy under structural adjustment programme (SAP) are fourfold. One, to moderate the inflationary pressure that are likely to arise from SFEM now IFEM and stimulate rapid financial development and efficient resource allocations. Two, to encourage higher volume of foreign capital inflow. Three, to increase exports earnings from non-oil sources; and four, to stimulate local production of goods and services.

Sequel to the introduction of structural adjustment programme (SAP), the 1986 ceiling of 10 per cent imposed on the rate of credit expansion by big and medium-sized commercial banks was reduced to 8.0 per cent for the rest of 1986 and the whole of 1987[92]. The 9.5 per cent interest rate payable on savings deposit was retained. A floor of 8.5 per cent was fixed in place of former 8.5 to 12 per cent interest payable on time deposits of varying maturities. The ceiling of bank lending rates was raised from 13 to 15 per cent. Other lending rates was raised from 13 to 15 per cent. Other lending rate

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[92]. This figure was further revised to 7.4 per cent with effect from august 1, 1987.

were to adjust upwards accordingly. The banks and their customers were authorized to negotiate deposit and lending rates within the stipulated range which might vary from bank to bank depending on such variables as size and maturities of deposits or loans and the forces of supply of, and demand for, funds.

Further measures incorporated in August 1987 included removal of all controls on interest rate in line with the philosophy of deregulation in the structural adjustment programme (SAP). The treasury bill rate was raised from 10 to 14 per cent to encourage surplus unit investment in government securities. Also, the minimum rediscount ratio for commercial banks was fixed at 15 per cent[93]. The minimum liquidity ration for commercial bank was raised from 25 to 30 per cent.

One important feature of monetary policies under the structural adjustment programme (SAP) is its constant review depending on the dynamics of the economy[94]. Monetary policies took a restrictive stance at the inception of SAP but were relaxed slightly in 1988 following the low aggregate demand precipitated by the liquidity crunch in 1987. The growth rate of aggregate

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[93]. This figure was however reduced to 12.75 per cent in 1988

[94]. Falae, Olu, 'Two Years of Structural Adjustment Programme in Nigeria: Achievements Problems and prospects', Paper Presented at the International Symposium on Development Strategies for Third World Countries in Beijing China, April 18-21, 1989.

money supply was raised from 11.8 per cent in 1987 to 15 per cent in 1988 while credit expansion for commercial and merchant banks revised to 12.5 per cent in 1988 as against 8.1 per cent in August 1987. The liquidity ratio of commercial banks was equally reduced from 30 per cent in 1987 to 27.5 per cent in 1988.

3.6.4   Agricultural   and   Rural   Development
          Policies

Agricultural and rural development policies focus on the need to increase domestic production of food and cash crops and raise rural employment and income. It is equally aimed at achieving regional optimal crop production mix, reflecting the comparative advantage of each agro-ecological zone and transform the rural areas economically, socially and politically.

The measures adopted included the winding up of Commodity Boards, the rationalisation of River Basin Development Authorities and the reduction of their number from 18 to 11, as well as barring them from involvement in direct agricultural production. The Directorate of Food, Roads and Rural Infrastructure (DFRRI) was set up to open up the rural areas and to work in concert with the World Bank Agricultural Development Projects (ADPs) to facilitate increased food production.

In order to attract companies and individuals to

invest funds and management skill in the development of commercial farm, a package of incentives was adopted. Among these are the improved price incentives that will enable farmers to compete effectively in both the factor and product markets. Likewise is the privatisation of some government companies involved in direct agricultural production e.g. Nigerian Daries Limited, Madara Limited, the Nigerian Food Companies Limited and the Bauch Abbatoir.

3.6.5   Investment Incentives and Industrial promotion Policy

In recognition of the noble role of industrial development as a driving force for economic growth and development and the need to correct the structural weaknesses of the manufacturing industries[14], new industrial promotion policies were implemented under the structural adjustment programme. These new industrial promotion policies were aimed at improving investment efficiency, simplify the administration of incentives and strengthen the industrial institutions as a means of reducing the anti-export bias of the trade regime. Reforms in this area focused principally on increasing competitiveness and industrial efficiency through fiscal incentive measures and more rigorous analysis of eligibility for incentive. The Nigerian Enterprises

Promotion Decree 1977 was amended with further innovation in the new investment dispensation[95].

Moreover, repatriation of capital and dividend is made easier through improved and less cumbersome procedures. Also, a new Industrial Development Coordination Committee (IDCC) is established to serve as one step agency for the establishment of new industries. Under this decree responses to application submitted to IDCC must be made within 30 days . Other policy measure is the privatisation and or commercialisation policy and approval of various incentive and simplification of their application.

Finally, in the spirit of SAP and with respect to manufacturing, the new industrial policy was launched in 1989. This is briefly discussed in the next Subsection.

3.7 The New Industrial Policy

The new industrial policy launched in 1989 had privatization and or commercialisation of public enterprises as the main strategy for increasing private participation in the industrial sector. To achieve this, the 1977 Nigeria Enterprises Promotion Decree was amended with all Nigerian enterprises classified under scheduled

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[95]. For details of this amendment and other innovation in the new investment dispensation, one may consult Federal Republic of Nigeria, Structural Adjustment Programme for Nigeria, July 1986 – June 1988: Government Printer. Lagos.

or unscheduled enterprises. The scheduled enterprises are those reserved exclusively for Nigerians but which foreigners are allowed to invest in with a minimum of capitalisation of twenty million Naira (N20,000,000). For the unscheduled enterprises, foreigners and Nigerians are allowed to own up to 100 per cent equity, separately or in partnership.

The new industrial policy emphasises the role of market forces as against tariff protection and other restrictions in the economy. Likewise, it advocated export promotion in place of import substitution as a way of diversifying the sources of foreign exchange earnings which had hitherto been restricted to crude oil. Finally, the implementation of the above policies are expected to take place within a new culture of maintenance and repair rather than the traditional outright replacement practice.

CHAPTER FOUR

RESEARCH METHODS

The methodology of the research is discussed in this chapter with reference to the framework of the study, research instruments, coverage and sampling procedure, data collection and analytical technique.

4.1   Framework of Study

The study focuses on economic development through removal of distortions and imbalances in the domestic economy, that is, the role of liberalisation in enhancing efficient resource use in the economy. The two competing theories in this regard are those of the classical/neoclassical and the keynesian/structuralists[27]. As mentioned in chapter 2, the classical/neoclassical approach is based on the assumptions of perfect competition, smooth convexities, significant price elasticities and frictionless price and wage adjustments. Thus, to them, imbalances, distortions and crises in the less developed economies derived from the excessive government intervention in the economies. Excessive government fiscal deficits precipitate inflationary pressures since it is taken to be a purely monetary phenomenon. Current account disequilibrium has its origin in strong level of demand and overvalued

exchange rate which emanates from the freezing of the exchange rate. Excessive government intervention causes productivity losses and thus threatens further growth. Capital flight reflects the normal response of rational individuals to the crisis and government loss of control over the situation.

Apparently, the way out of the crises lies in liberalisation. Liberalisation in all sectors supported with demand restraint policies will help to eliminate the various distortions and imbalances and therefore bring about rapid growth and development.

But within the keynesian-structuralist tradition, liberalisation is perceived as incapable and ineffective in removing the distortions and imbalances in the domestic economy. This keynesian-structuralist[27] perception of liberalisation derived from the negation of the basic assumptions highlighted above for the classical-neoclassical model. To this school of thought imbalances and distortions and crises emanate from the excessive openness of the economy which on the real side led to current account disequilibrium and on the financial side led to inflation. Capital flight responds primarily to lack of exchange controls. They would then recommend higher protection, strict exchange control, a new freeze of the exchange rate coupled with lower interest rate and price controls, higher government

spending and increase government intervention in order to bolster investment and output. Looking at it from this perspective, adjustment programme would seem to precipitate increased industrial prices, reduction in output and employment level. The same applies to capacity utilisation and the like.

In the context of our study, there is no a priori reason for choosing one approach in preference to the other[96]. However, we recognize the fact that high government intervention in the economy may precipitate serious distortions and imbalances such as obtained in most less developed countries' economies before the adjustment programme. All the same, out-right liberalisation may lad to falling output, falling employment rate, low capacity utilisation and increasing price level among domestic firms especially in a highly dependent economy. This, of course, is a possibility that needs to be examined in our study. And of course, this provides the rationale for our study.

4.2   Research Instruments

The study has adopted the use of structured questionnaire to obtain the necessary information and data from respondents. Specifically, the information

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[96]. This is particularly true when one realizes that the origins of the Nigerian economic crisis is both external and internal. See Akinlo, E.A. "Origins of the Nigerian Economics Crisis: Review of Recent Studies", Ife Journal of History, O.A.U., Ile-Ife (forthcoming).

sought in this questionnaire, can be categorised into five types:

a. Information pertaining to how the changing economic conditions since the formulation and implementation of structural adjustment programme affect the behaviour of firms. In particular, how the firms respond to the various shocks introduced by structural adjustment programme.

b. Information relating to how the firms judge the adjustment programme - especially to determine the speed of response to the previously identified exogenous factors.

c. Information pertaining to the adjustments in the operations of the firms, that is, the major forms of adjustment - production strategy, marketing, pricing, financial and labour adjustment.

d. Information relating to the nature and extent of the impact of the adjustment programme on prices, output, local sourcing of raw materials, capacity utilisation and productive capacity.

e. Information relating to the market characteristics and pricing decisions of the manufacturing industries for the purpose of determining the extent to which the adjustment programme changed the structure of the market in which the industry operated and whether this affected pricing

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decisions.

A copy of this questionnaire is reproduced in full Appendix I.

4.3   Coverage and Sampling Procedure

The study focused on the manufacturing industries in Nigeria. For the purpose of data collection we divided the whole country into three main zones following the old three regional blocks namely Western region, Eastern region and Northern region. Constrained by time and fund, we were unable to cover every state in the regions. Therefore, in each region we picked the town with the highest industrial concentration[97]. Based on the information obtained from Federal Office of Statistics (FOS) and Manufacturers Association of Nigeria (MAN), we picked Lagos, Aba and Kano for Western, Eastern and Northern regions respectively as these three cities have the largest number of industries in each zone. The extension of the survey areas to these three zones derived from the need to achieve a reasonably large and of course, a fairly good representative sample of manufacturing industries located in the country. This

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[97].   The degree of industrial concentration is measured by the location quotient calculated thus:

LQ = Number Employed in Manufacturing in a Town
     Number Employed in Manufacturing in Nigeria

          Town Population
          Population of Nigeria

will therefore enable us to make firm conclusion on the outcome of our survey.

To obtain reasonably large and representative sample of manufacturing in Nigeria under time and fund constraints, we decided to administer questionnaire on three hundred and sixty (360) manufacturing industries allocated to the three zones on equal proportion, that is a hundred and twenty (120) each as the total number of industries in each zone are almost the same.

We decided to adopt stratified random sampling in which the whole manufacturing industries in Nigeria were first divided into two major strata namely consumer good industries and producer good industries. This is done in order to provide basis for comparison on the responses of the two categories of firms to the policies in the adjustment programme. To accomplish this grouping taking account of the need for internal homogeneity of each stratum, information was examined on the composition of output and the final users of the output. Essentially, any industry in which 50 per cent or more of its output was destined as intermediate inputs was classified as a producer good industry. The International Standard Industrial Classification (I.S.I.C) as provided in Industrial Survey of Federation of Nigeria, 1983 was the data base for this classification. The content of the samples were as given in table 4.1.

Table 4.1

Industrial Classification by Output

Consumer		Producer	
I.S.I.C	Product	I.S.I.C	Product
3112	Dairy products	3213	Knitting mills
3115	Oils and fats	3215	Cordage Rope and Twine
		3219	Textile n.e.c.
3116	Grain mill products	3233	Leather Products
3117	Bakery products	3311,3312	Sawmill, Planning mills etc, wooden and cane containers.
3119	Sugar Confectionary		
3122	Animal Feeds	3319	Wood Products n.e.c.
3133	Malt liquiors and Malt	3420	Printing and Publishing
3113	Canned fruits & Juice, soft drinks	3511	Basic Industrial Chemical,
3134	"	3512	Fertilizers and Pesticides
3111,3118	Food products n.e.c	3521	Paints, Vanishes and Cacquers
3121,3131	"		"
3140	"	3529	Chemical Products n.e.c
3211	Spinning Weaving etc/	3540	Petroleum Coal Products
3212	Made-up textiles excluding apparels	3559	Rubber Products n.e.c
3214	Carpets and Rugs	3620	Glass and Glass Products
3231	Tanneries	3691	Structural Clay Products
3240	Footwear	3692	Cement line and Plaster

Table 4.1 (Contd.)

Consumer		Producer	
I.S.I.C	Product	I.S.I.C	Product
3320	Furniture etc. Non-metal	3699	Non-metallic mineral products n.e.c
3412	Containers and boxes of paperboard		
3419	Paper and Paperboard articles n.e.c		
3522	Drugs and Medicines		
3523	Soap, detergents, cosmetics, toilet goods.		
3551	Tyres and tubes		
3560	Plastic Products		
3610	Pottery China and earthern ware		
3220	Wearing apparels		

Furthermore, from each stratum, sixty (60) manufacturing industries were randomly picked from the selected city for each zone. The list of manufacturing industries for each city was obtained from their respective Chamber of commerce and the Manufacturers' Association of Nigeria (MAN) office. In all, 795 manufacturing industries were listed for the three cities Lagos, Kano and Aba. 337 of these industries were classified under producer good industry. Lagos has 312 with 133 and 179 producer and consumer good industries respectively. Kano has 248 manufacturing industries with 107 and 141 producer and consumer good industries respectively while Aba has 235 with 97 and 138 producer and consumer good industries respectively.

With respect to the method of enquiry, the interview method through personal visit to administer questionnaire was used. Our field work on manufacturing industries was restricted to the two classifications made above.

4.4   Data Collection

The data collection exercise took place between January and March 1992. A reasonable number of the managers contacted cooperated with us and supplied the necessary information during the field work. These favourable responses from the interviewees could be attributed to some factors. One, the level of education

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of the respondents. Two, the absence of serious identification probing questions in the questionnaire which might have allayed the fear that the exercise would be used for tax purpose. Lastly, the desire on the part of the managers interviewed to know the impact of the new programme was also an important reason for their cooperation. Many of those interviewed showed their interest in knowing the findings of the study.

In all, three hundred and twenty four manufacturing industries out of the sampled three hundred and sixty (360) were successfully interviewed. This gave an achievement rate of 93 per cent. 173 of the 180 manufacturing industries in the consumer good industries were successfully interviewed. This gave the response rate for consumer good industries as 96 per cent while 151 representing 84 per cent of the 180 producer good industries sampled were successfully interviewed.

4.5   Model Formulation and Analytical Techniques

Besides the use of summary statistics such as percentages, cross tabulation, chi-squares and means, the impact of the adjustment programme on the industrial sector were analysed by specifying and estimating models for some industrial variables namely employment, capacity utilisation, industrial output, industrial prices and production cost. However, our quantitative analysis was

based on two main approaches.

The first quantitative approach consists of an attempt to evaluate the impact of structural adjustment programme on the industrial performance using cross sectional data. The objective is to see how the various quantifiable policies in

the adjustment programme affect the industrial sector. In this respect, we specified models for some industrial variables namely profitability, industrial output, employment, production cost, capacity utilisation and industrial prices. In specifying the models we tried to incorporate the various quantifiable shocks in the adjustment programme and many other variables such as local sourcing of industrial raw materials, accessibility to foreign exchange as well as wages to determine their effects on the dependent variables.

<u>Models</u>

Profitability Equation

$$PCMj = PCMj\ (rj,\ Yj,\ GMj,\ Lsj,\ Afj)\ ..\quad ..\quad ..\quad ..\quad (1)$$

Output equation

$$Yj = Yj\ (Emj,\ Lsj,\ GMj,\ rj,\ AFj)\quad ..\quad ..\quad ..\quad ..\quad (2)$$

Employment Equation

$$Emj = Emj\ (Wj,\ rj,\ Lsj,\ Yj,\ AFj,\ PCMj)\quad ..\quad ..\quad ..\quad (3)$$

Production Cost Equation

$$PCJ = PCj\ (Wj,\ rj,\ Yj,\ GMj,\ Lsj)\quad ..\quad ..\quad ..\quad ..\quad ..\quad (4)$$

Capacity Utilisaion Equation

$$CAPU_j = CAPU_j (r_j, GM_j, Ls_j, Fc_j, AF_j) \quad .. \quad .. \quad .. \quad .. \quad (5)$$

Princing Equation

$$P_j = P_j (FC_j, r_j, W_j, Y_j) \quad .. \quad .. \quad .. \quad .. \quad .. \quad .. \quad (6)$$

Equation (1) relates profitability (PCM_j) to the nominal interest rate (r_j), output measured as value-added (Y_j), changes in prices of output relative to input prices (GM_j), local sourcing variable (Ls_j), and lastly accessibility of industries to foreign exchange (AF_j). In equation (2), output (Y_j) is specified to depend on employment (EM_j) measured by absolute number of labour employed in firmj, local sourcing variable (LS_j), changes in the prices of output relative to input prices (GM_j), nominal interest rate (r_j) and accessibility to foreign exchange (AF_j).

Equation (3) relates employment (EM_j) to wages (W_j), nominal interest rate (r_j), local sourcing variable (LS_j), output (Y_j) measured by value-added by industry j, accessibility to foreign exchange (AF_j) and profitability (PcM_j). Equation (4) related production cost (Pc_j) to wages (W_j), nominal interest rate (r_j), output (Y_j), changes in prices of output relative to input prices (GM_j) and local sourcing variable (LS_j). Eqation (5) makes capacity utilisation ($CAPU_j$) a function of nominal interest rate (r_j), changes in prices of output relative to input price (GM_j), local sourcing variable (LS_j),

measure of foreign competition (FCj) and accessibility to foreign exchange (AFj). Lastly, equation (6) relates domestic unit price of firm j (Pj) to foreign competition (Fcj), nominal interest rate (rj), wages (Wj) and output (Yj).

Secondly, we specified models for industrial variables named above which we used to determined whether or not structural shift occured in the industrial sector during the period of adjustment programme.

Structural shift test was carried out between the restricted model (R) 1970-85 and completed model (C) 1970-90 and the modified complete model (MC) which incorporated a dummy variable to account for the adjustment programme since 1986. The objective is to test for structural shift in the industrial sector occasioned by the introduction of the Structural Adjustment Programme in 1986, the existing trend from 1970 to 1985 is compared with the trend in the period 1986-90. In carrying out the exercise, we used Chow (1960)[98] test given by the following F - statistic:

$$F = \frac{(UU - U_1 U_1 / n_2}{(U_1 U_1)/n_1 - k}$$

where,

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[98]. Chow, C. Gregory, "Tests of Equality Between Sets of Coefficients in Two Linear Regression" _Econometrica_, Vol. 28, No. 3, July 1960, pp. 591-604.

UU   =   sum of squared residuals in the complete model 1970-90.

U_1U_1 =   sum of squared residuals in the restricted model 1970-85

k   =   number of independent variables in either model.

n   =   sample size of the complete model.

n_1 =   sample size of the restricted model

n_2 =   number of omitted observations in the restricted models ($n_2 = n - n_1$)

The Equations:

Industrial Output Equation

$$YN = Y_N (Em, ER, R, Ls, TIME) \quad \quad .. \quad .. \quad .. \quad .. \quad (7)$$

Industrial Price Equation

$$P_t = P_t (W, RP_{int}, R, ER, P_{t-1}) \quad .. \quad .. \quad .. \quad .. \quad (8)$$

Employment Equation

$$Em = Em (W, Y_N, R, ER, Ls) \quad \quad .. \quad .. \quad .. \quad .. \quad (9)$$

Capacity Utilisation Equation

$$U = U (RP_{int}, R, FESV, Ls, P_t) \quad \quad .. \quad .. \quad .. \quad .. \quad (10)$$

Production Cost Equation

$$Pc = Pc (W, R, ER, RP_{int}) \quad \quad .. \quad .. \quad .. \quad .. \quad (11)$$

The equations specified in this aspect of our study considered the key industrisl variables namely industrial output, prices, employment, capacity utilisation and production cost. Through equations 7 to 11, the role of exchange rate as well as interest rate were distinctively

brought out. This was done in view of the fact that foreign exchange and financial sector liberalisation constituted the major instruments in the adjustment programme.

Equation 7 relates industrial output (Y_N) to employment (Em) in the industrial sector, the exchange rate (ER), cost of Credit (R) given as the prime lending rate, real wage (W) relative price of intermediate input (PR_{int}), local sourcing variable (Ls) and trend variable (TIME). The cost of Credit variable was incorporated to ascertain whether restrictive monetary policy was inflationary. Equation 8 relates industrial prices (P_t) to relative price of intermediate inputs (RP_{int}), industrial wages (W), cost of credit (R), exchange rate (ER) and lagged dependent variable (P_{t-1}). Equation 9 explains industrial employment (Em) by industrial wages (W), industrial output (Y_N), cost of credit (R), exchange rate (ER) and local sourcing variable (Ls). Equation 10 considers capacity utilisation (U) as a function of relative price of intermediate inputs (RP_{int}, cost of credit (R), foreign exchange scarcity variable (FESV), local sourcing variable (Ls) and industrial price level (P_t).

Lastly, equation 11 relates production cost (Pc) to industrial wages (W), cost of Credit (R), exchange rate (ER), and relative price of intermediate inputs (RP_{int}).

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4.6   Measurement of Variables

Effective exchange rate and foreign prices of intermediate imports:

In deriving the effective exchange rate and price of intermediate imports we followed the approach of Jimoh[99].

Assuming we have n countries as our major trading partners and D_i is the trade weight with the ith country (weight being measured by the proportion of imports, exports or total trade - exports and imports). Assume further that z_i is the local currency price of the US dollar in the ith country; then, the effective exchange rate of the jth country (ER_j) is given by:

$$ER_J = z_j - \underset{j \neq i}{\overset{n}{\in}} B_i z_i = \underset{(1 \times M)}{(D_j - B^{j)}} \underset{(M \times 1)}{Z_i}, \forall_i; M = n + 1,$$

where $\underset{(1 \times M)}{B^j} = (B_1, \ldots 0, \ldots B_n)$: B_i are the trade

weights with zero in the jth position;

$$Z_i = (z_1, z_2 \ldots z_m)$$

$$D = (0, \ldots 1, \ldots 0): \text{Country Dummy; } (1 \times M) \text{ with}$$

zeroes in n places and 1 in the jth position. If the jth country pegs to the kth country, then,

$$ER_j = z_k - \overset{n}{\in} B_j z_i = (D_k - B_j) Z_i, \forall_i$$

[99]. Jimoh, Ayodele, "The Role of Economic Policies in the Management of the Nigeria Balance of Payments Disequilibrium" An Unpublished Ph.D Thesis Faculty of Social Sciences, Obafemi Awolowo University, Ile-Ife, 1988.

$j \neq i$ (1xM) (Mx1)

where B^j is as defined before; and

$D_k = (o, \ldots 1, \ldots o)$: country dummy with one in the kth position and zeroes elsewhere.

similarly, $\Delta ERj = \Delta zj - \sum\limits_{j \neq i}^{n} Bj \, \Delta zi = (Dj - B^j) \, \Delta Z_i, \, \forall i$

and

$\Delta ERj = \Delta z_k - \sum\limits^{n} Bj \, \Delta zi = (D_k - B^j) \, \Delta Z_i, \, \forall i$

Δ = difference operator: $z_t - z_{t-1}, \, \forall t$

The effective exchange rate (ER) could be normalized, by appropriate choice of units such that the initial value of ER is unity. This normalized value of ER (NER) will be defined as

$$NERj = z_j / z_{j0} - \sum\limits_{j \neq i}^{M} \left[\frac{Bi \, (zi - zio)}{zio} \right]$$

where zi, Bi are as defined before and zjo and zio are the initial local currency price of the US dollar in the jth and ith country respectively.

NERj is then multiplied by zjo to get the exchange rate (ER) used in our study. This (ER) could be interpreted as the domestic currency price of foreign exchange which is simply the number of domestic currency per unit of foreign exchange. The same approach was adopted in deriving the foreign price of intermediate imports.

Profitability: Profitability was measured by cost

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price margin which is the industry profit sales ratio. We adopted this measure of profitability because economic theory predicts that price will exceed marginal cost for firms with monopoly power and because price-cost margin approximates this excess more closely than the rate of returns on assets or equity.

Nominal interest rate: It is impossible to use the real bank rate since we are concerned with cross sectional data. Therefore, we measured our nominal interest rate by the ratio of total financial costs over total debts. This is based on the reasoning that unless an industry is self- financed its net earnings flow are influenced by interest rate flunctuations. But from our knowledge of the economy, most industries finance their working capital through bank credit. The financial costs is defined as financial expenses and exchange rate losses less financial earnings. The movement of the financial costs reflects the movement of the interest rate and monetary as well as the credit policies of the adjustment programme. This actually informed the reasoning for using it as a proxy for interest rate.

Gross Margin: Since exchange rate liberalisation constitutes an important policy in the adjustment programme there is the need to incorporate it in our model so as to know its impact. However, the documented value of the exchange rate could not be used in our model

because it involved the use of cross sectional data. A proxy would have to be constructed. A proxy that readily comes to mind is the gross margin (GM). This is the changes in the prices of output relative to input prices. It was measured by the ratio of gross earnings to sales. Gross margin is closely influenced by exchange rate and its movement vividly shows the trend of exchange rate and credit policies that affect these variables. As such, it is an approximate of exchange rate shock.

Foreign Competition

A core element of the adjustment programme is the liberalisation of the trade sector. Liberalisation of the various sectors is expected to lead to more efficient allocation of resources among the domestic firms. We attempted to capture the effect of foreign competition on the domestic firm during the adjustment by introducing a proxy for it. Foreign competition was measured by the ratio of imports to industry output.

Accessibility to foreign Exchange

In our discussion of structural adjustment programme policies in Nigeria, we recognised that one of the most important tools of the programme was the implementation of the Second Tier Foreign Exchange Market (SFEM) now IFEM. This, as noted in chapter 2, is intended to reduce

the value of Naira relative to other currencies. Besides this consideration, the operation of the market is presumed would enhance liberalized access to foreign exchange for both individuals and companies. More accessibility to foreign exchange is hoped will increase profitability, enhance production, employment and capacity utilisation in manufacturing industries. Hence, its incorporation in our equations.

To measure accessibility to foreign exchange we used the ratio of foreign exchange procured over the total foreign exchange demanded by a particular industry within a reference period. The absolute value of foreign exchange actually procure by a particular industry within a reference period might not be a good measure as it would not show the easiness or otherwise of procuring foreign exchange. Our measure - ratio of foreign exchange actually procured over total foreign exchange demanded will overcome this problem as higher ratio can be interpreted as indicating easy accessibility and vice-versa.

Capacity Utilisation:

There are two possible measures of capacity utilisation. One, is the overhead costs, that is the ratio of administrative and marketing costs to sales revenue since the numerator of this ratio tends to remain

relatively stable in the face of sales fluctuations, it reflects the extent of capacity utilisation. The other one is the asset turnover ratio measured by the ratio of sales to total assets. At any given book value of assets and set of output prices, the asset turnover ratio will move in direct proportion to the physical volume of sales. The higher the ratio, the higher the level of capacity utilisation and vice-versa. For our purpose, we utilized the second measure of capacity utilisation. Apart from the ease of calculation, it provides a better measure of capacity utilisation.

4.7   Estimation Technique

As mentioned under model specification two sets of equations were specified. These were equations 1 - 6 to examine the impact of the structural adjustment programme on the industrial sector using cross sectional data. The second set of equations 7 - 11 fitted to time series data, were used to test for structural shift in the industrial sector. As economic theory has nothing to say with respect to the most appropriate functional form to use, the choices appear to be either linear or logarithmic relationship. However, we adopted logarithmic specification for the following heuristic arguments. One the estimation of a logarithmic function allows the dependent variable to react proportionately to

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a rise or fall in the explanatory variables, implying a constant elasticity for the estimation period. If a linear function is estimated there could be problem of a secular fall in the various elasticities if the dependent variables happen to rise faster than the independent variables one time.

In choosing the estimating technique employed in this study, we took into consideration the nature of the equation and the suitability of the various estimating techniques including ordinary least squares (OLS), the indirect least squares (ILS), the two-stage least squares (2SLS), the method of Instrumental Variables (IV), the three-stage least squares (3SLS) and the Method of Full-Information Maximum likelihood (FIML).

Realistically, for simultaneous and over-identified model the best method of estimation is the Full Information Maximum Likelihood (FIML). FIML being a system-method applied to all the equations of the model often yields estimates of all the structural parameters contemporaneously. Moreover, some difficulties inherent in 3SLS especially those due to the arbitrary nature of the normalization involved when 2SLS is used can be eliminated with the use of FIML. In spite of the immense suitability of this method, it is not often used in econometric research for certain reasons. One, it is quite complex both theoretically and computationally. It

is quite an expensive method in terms of data, time and money. Also, the FIML method is more sensitive to specifications errors than other estimation methods. The greater the incorrectness of the specification of the equations, the greater is the error imparted in the estimates. Finally, the various computer centres to which we have access do not possess software for FIML. In view of these problems we did not employ FIML method in our study.

Following closely to FIML in terms of suitability is the three stage least squares method (3SLS) of estimation. Just like the FIML, the 3SLS method is a system method meaning that it is applied to all the equations of the model at the same time and gives estimates of the parameters simultaneously. 3SLS has almost the same efficiency as the FIML method except in exceptional case where before the estimation, the researcher has information on the variance and covariance of the random variables of the system. These information are better fully exploited by FIML method. This method of estimation could not be employed in our study for the same reasons that precluded our using FIML technique.

Apart from FIML and 3SLS, simultaneous equation models can be solved using instrumental variable(IV) method. The method of instrumental variable (IV) is most appropriate where there is some correlation between a

regressor and the error terms since this is a violation of one of the assumptions of the ordinary least squares (OLS), meaning the lost of some of its desirable statistical properties. Hence, to restore the desirable properties of the OLS estimates, the method of instrumental variables (IV) replaces the offending regressor with an instrument (i.e a proxy) and estimates the re-formulated problem using (OLS).

The method of instrumental variable is not often used in applied econometric research due to various disadvantages involved. One, the choice of most appropriate instrument. The selection of instrumental variable is to some extent arbitrary which makes the values of estimates a function of set of instrument chosen[100]. Also, as a consequence of the inclusion of only certain exogenous variables and the omission of others, the method of instrumental variables (IV) takes into account only part of the influence of the exogenous variables on the dependent variable, while, the true position of thing is that a complete causal chain is inherent in any simultaneous equation model [101]. Lastly, the method of (IV) is more suitable for large models with small numbers of observations in order to

[100]. Koutsoyiannis, A., Theory of Econometrics, Second Edition, Macmillan Publishers Ltd., London, 1976, p. 383.

[101]. See Brennan, P., Preface to Econometrics, South Western Company, Cincinnate, Ohio, 1965, p. 406.

overcome the problem of insufficient degree of freedom. As a result of these problems, the (IV) method was not adopted in our study.

The method of indirect least squares (ILS) could equally be used to estimate simultaneous equation model of our type. However, the method could be tedious computationally. It involves solving for the endogenous variables in the models in terms of the structural parameters and the predetermined variables. This is followed by the estimation of the reduced-form estimates by the OLS method. The reduced - form estimates along with the algebraic solution of the model affords us the opportunity of formulating a new set of simultaneous equations in the structural parameters which when solved yield the structural estimates. This may be tedious especially where the model is very large.

But more important, the ILS is only useful in exceptional cases, that is, where the models are exactly identified. It is not suitable for overidentified models as it will not give unique estimates of the structural parameters. Thus, as our equations were overidentified the method could not be used.

Finally, generally for simultaneous equation the method of OLS cannot be employed. The application of the OLs to an equation belonging to a system of simultaneous equations will yield biased and inconsistent estimates.

This precluded the use of OLs in our study. Consequently, this study employs the Two Stage least Squares estimating technique to estimate models fitted to the cross sectional data.

4.7.1 The Two Stage Least Squares Method (2SLS)

Two stage least square (2SLs) method is a single - equation method being applied to one equation of the system at a time. The method provides a very useful estimation procedure for obtaining the values of structural parameters in overidentified equations. It utilizes the information available from the specification of an equation systems to obtain a unquie estimate for each structural parameter. In a nutshell, two stage least square (2SLS) method involves one, application of least squares to the reduced-form equations in order to obtain an estimate of the exact and the random components of the endogenous variables and two, replacement of the endogenous variables of the equation with their estimated values after which ordinary least squares is applied to the transformed original equation to obtain estimates of the structural parameters.

Essentially, 2SLS eliminates the problem of an oversupply of instruments by using combinations of predetermined variables to create new instruments. Although in small sample, the transformation does not

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eliminate the simultaneous-equation bias, in large sample and as the sample size becomes larger the bias tends towards zero, that is, the 2SLS estimates are assymptotically unbiased. Also, in large sample, the estimates of 2SLS are consistent and asymptotically efficient.

However, as suggested in the literature, the conventional t-test of significance of parameter estimates of a simultaneous model may not be a valid test but can only be taken as suggestive for two main reasons. One, not much is known about the finite sample properties of 2SLS[102]. Two, available evidence tends to suggest that 2SLS yields somewhat conservative t values meaning that, the method tends to understate the significance of a particular coefficient. In view of this then, much emphasis cannot be placed on the notion of significance. Instead greater attention are often attached to the a priori specification such as sign of coefficient in evaluating 2SLS results.

Other statistics that are often utilized in assessing the results of 2SLS are the coefficient of multiple determination (R^2) and the sampling error of estimates. The coefficient of multiple determination (R^2) is a measure of the extent of the movement in the

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[102]. Kmenta, J., Elements of Econometrics, New York, The Macmillan Press, 1971, p. 583.

dependent variable that is explained by the independent variables. The higher the R^2 the more useful the model will be for policy and predictive purposes.

Lastly, multicollinearity can be tested by examining the correlation matrix of the independent variables, a value of one indicates perfect orthogonality while value of zero indicates matrix singularity or perfect multicollinearity. This study utilises most of these tests.

4.8   Notations

Y_N =   non oil industrial output

Em   =   industrial employment

ER   =   Exchange rate (effective)

Time   =   Trend variable

W   =   Industrial Wages as given by the index of wages and salaries in the industrial sector.

RP_{int} = foreign price of intermediate imports.

U   =   Industrial capacity utilisation measured by the radio between the index of industrial production and the index of maximum industrial production – where the later is generated by the peak-to-peak interpolation of the index of industrial production.

FESV   =   The ratio of foreign exchange allocated
            to the industrial sector over the
            available foreign exchange reserves.

LR   =   Local raw materials component of total
            raw materials.

R   =   interest rate in official money market -
            maximum bank lending rates.

Pc   =   industrial production cost

P_t =   industrial price

P_{t-1} = industrial price lagged one year.

PcMj   =   Profitability measured as firm j profit
            sales ratio.

rj   =   nominal interest rate

GMj   =   gross margin

LSj   =   local sourcing given by the percentage of
            raw materials sourced locally.

AFj   =   Accessibility to foreign exchange within
            a reference period.

Emj   =   absolute number of labour employed in a
            firm

Wj   =   the annual money wage rate per employee
            in an industry in Naira.

Pj   =   domestic selling price of an industry's
            most important commodity.

CAPUj =   capacity utilisation level in a
            particular industry given as asset-

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turnover ratio.

F_{cj} = foreign competition variable.

P_{cj} = production cost

Y_j = output in a particular industry

CHAPTER FIVE

ADJUSTMENTS BY MANUFACTURING INDUSTRIES IN NIGERIA
DURING 1986 - 90

This chapter uses firm level data to present an overview of the adjustment programme. Attempt is also made to interprete the various adjustments by industries. In addition, a quantitative assessment of the impact of the adjustment programme on the manufacturing industries is presented. The data were the main results of the interviews with 324 manufacturing industries located in Lagos, Aba and Kano. The interviews looked into how the changing economic conditions during the adjustment period 1986 - 90 affected the behaviour of industries, how the manufacturing industries judged the structural adjustment programme, and the policies that manufacturing industries followed to adapt to the adjustment programme. Finally, the data obtained through these questionnaires couple with those from their profit and loss accounts and balance sheets were utilized in determining the impact of the adjustment programme using 2SLS method of estimation.

The chapter is divided into four sections. Section 5.1 looked at how the major policies of the structural adjustment would be expected to affect the performance of the manufacturing industries in general. Section 5.2

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discussed and analysed the overall adjustment to the policies of the structural adjustment programme. Section 5.3 analysed the various adjustments in the industries' operations. While section 5.4 provided the quantitative assessment of the impact of the structural adjustment programme using cross sectional data.

5.1   The Impact of the Structural Adjustment
        Programme on the Manufacturing Sector

Given the background of the adjustment programme introduced since mid 1986 we discuss the expected adjustments by manufacturing industries to the new environment and assess the impact of the adjustment programme on profitability, local sourcing of raw materials, productive capacity, capacity utilisation, unemployment, industrial production costs and sales.

As clearly summarised in section 3.6 of chapter 3, with the introduction of the structural adjustment programme, government started dismantling quantitative restrictions and introduced tariff reductions. The interest rate was deregulated while attempts were made at opening the capital account for private inflows. Other reforms included the foreign exchange market deregulation through SFEM (now IFEM), privatisation and or commercialisation of some public enterprises.

As a result of the above highlighted adjustment

policies, and many others noted in chapter 3, manufacturing industries have to react to a series of exogenous factors if they were to maintain their profitability and even remain in business. In the manufacturing sector, we would expect the following effects, with differences depending mainly on nature of their output and sources of their raw materials and market orientation of their sales.

One, manufacturing industries generally are likely to raise their unit prices during the adjustment programme so as to offset the increased production costs that are likely to emanate from exchange rate deregulation and interest rate deregulation.

Two, the effect of the deregulation exercise are likely to be felt more by firms producing intermediate and capital goods - all which we classified as producer good industries than those producing household merchandize and other consumer goods. This conjecture is based on the fact that in general, most producer good industries rely more on imported inputs than the consumer good industries.

Three, given the probable impact that the exchange rate deregulation will have on the production costs of all categories of industries we expect them to increase their efforts towards sourcing their raw materials locally.

In general we expect all categories of manufacturing industries to have suffered decreased capacity utilisation and productive capacity. However, those that depend heavily on imported raw materials inputs would tend to have experienced lower capacity utilisation and productive capacity than those whose raw materials inputs were mainly locally sourced.

Output in all categories of manufacturing industries would have suffered serious decline during the adjustment period due to exchange and interest rates deregulation effects on production costs and unit price.

Considering the fact that liberalisation of trade, deregulation of interest rate, exchange rate as well as prices directly and indirectly affect the selling prices of goods, prices of itermediate inputs, cost of production and cost of local sourcing, the reaction of profit-maximizing manufacturing industries should have been to change the structure of goods produced (including their quality) and the structure of input used. However, in a situation where the primary raw materials inputs have low substitution (as often the case in the intermediate and capital good industries) the bulk of the adjustment in inputs would be a change in employment - the man variable input.

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5.1.1 Structural Adjustment and Profitability

As regards the impact of the adjustment policies on the profits of the manufacturing industries, 128 respondents representing 39.75 per cent of the total respondents indicated that the adjustment programme increased their profitability, 9.96 per cent indicated constant profit while 162 representing (50.31) per cent of respondents indicated that adjustment programme had decreased their profitability. What this suggests is that the adjustment programme has reduced the profitability of the majority of the manufacturing industries surveyed.

A much clearer picture emerges when the industries are broken down into consumer good and producer good industries. This is shown in table 5.1. More respondents in the consumer good industries specifically 32 per cent of all industries interviewed indicated that the adjustment programme has caused their profits level to increase. This however contrast with that obtained for the producer good industries where 104 representing 32.3 per cent of all manufacturing industries interviewed affirmed that adjustment programme decreases their profit level. Thes producer good industries include printing and publishing, chemical products, structural clay products and cordage rope and twine. We went further to see whether there is relationship between industries

Table 5.1

Structural Adjustment Programme and Industrial Profitability

	INC	DEC	CON	DON	TOTAL
All firms	128	162	27	5	322
as % of the Total	39.75	50.31	8.39	1.55	
Consumer Good Industries	106	58	7	0	171
as % of the Total	32.92	18.01	2.17	0	
Producer Good Industries	22	104	20	5	151
as % of the Total	6.83	32.20	6.21	1.55	

Source: Author's field survey

Key: INC = Increasing, DEC = Decreasing

CON = Constant,   DON = I don't know

responses on the impact of SAP on their profitability and the nature of firms by calculating the X^2 value. The $X^2_{0.05,3}$ value of 76.51 showed that there is relationship between the category of firms and the impact of SAP on their profitability level. A possible reason for this could be the high inelastic demand (since they are mostly necessaries) for these consumer goods in contrast to that of producer good industries. Thus, with high inelastic demand, the consumer goods industries could easily adjust prices to offset the probable increased production cost emanating from the deregulation experience. Moreover, as most consumer good industries require less capital equipment and imported raw materials than capital good industries, their production cost might not have been seriously affected by the various SAP policies. Moreover, where the SAP policies enhance consumer good industries' effort at sourcing their raw materials locally, it could lead to increased profitability. The relevance of the last point constitutes our next line of discussion.

5.1.2   Structural Adjustment and Local Sourcing

Table 5.2 summarises responses to questions about the impact of SAP on local sourcing of raw materials. The result shows that 168 manufacturing industries representing 52.34 per cent of the total respondents

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indicated that the adjustment programme has enhanced their efforts towards sourcing their raw materials locally. This assertion of the respondents is in fact corroborated by the calculated average percentage values of raw materials sourced locally from our questionnaires (see table 5.3)

Table 5.2

Structural Adjustment Programme and Local Sourcing of Raw Material

	ENH	COR	NEF	CAN	TOTAL
All Industries	168	98	32	23	321
as % of the Total	52.34	30.53	9.97	7.17	
Consumer good Industries	128	12	26	5	171
as % of the Total	39.88	3.74	8.1	1.56	
Producer good Industries	40	86	6	18	150
as % of the Total	12.46	29.79	1.87	5.61	

Source: Author's Field Survey

Key: ENH = Enhanced, COR = Constriant NEF = No Effect,
CAN = I cant say

In all, for all categories of industries the
percentage of raw materials sourced locally increased
from 38 per cent for the period 1984 - 85 to an average
of 58 per cent for the period 1986 - 90. However, local
efforts at sourcing raw materials locally seemed to have
gained more momentum among the consumer good industries
than in the producer good ones.

Table 5.3

Average Percentage Raw Materials Source Locally Before and
After Adjustment Programme

	PRE SAP: 1984-85	POST SAP: 1986-90
All Industries	38	58
Consumers good Industries	42	63
Producer good Industries	30	41

Source: Author's Field Survey

Table 5.2 shows that over 55 per cent of the total
industries successfully interviewed in the producer goods
category indicated that the structural adjustment
constrained their ability to source raw materials
locally. This figure contrasts sharply with less than
7.0 per cent obtained for the consumer good industries.
The calculated $X^2_{0.05,3}$ value of 120.64 vividly confirmed

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that there is relationship between ability to source raw materials locally and the nature of the industries. This development might be attributed to the nature of the raw materials (mostly imported) required for production by most producer goods industries. In fact, as shown in our questionnaires, most respondents that asserted that adjustment programme constrained their efforts toward sourcing raw materials locally attributed this to increased cost of procuring raw materials locally, unavailability of the needed raw materials locally, and low demand for their goods. Essentially, this finding actually supported our earlier claim that adjustment programme might have enhanced the local sourcing efforts of the consumer good industries thereby enhancing their profitability.

5.1.3   <u>Structural Adjustment and Productive Capacity</u>

On the impact of the adjustment programme on the productive capacity of the manufacturing industries, majority indicated that their productive capacity level decreased during the adjustment programme. As shown in table 5.4, 48.44 per cent of all the industries interviewed indicated that their productive capacity level decreased. This is against 34.38 per cent that affirmed the positive effect of SAP on their productive

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capacity level.

Table 5.4

Structural Adjustment Programme and Industrial Profitability

	INC	DEC	CON	FLU	TOTAL
All firms	110	155	24	31	320
as % of the Total	34.38	48.44	7.5	9.69	
Consumer Good Industries	83	67	17	5	172
as % of the Total	25.94	20.94	5.31	1.56	
Producer Good Industries	27	88	7	26	148
as % of the Total	8.44	27.5	2.19	8.13	

Source: Author's field survey

Key: INC = Increasing, DEC = Decreasing

CON = Constant, FLU = Fluctuating

However, when the data was broken down into consumer and capital good industries, a better picture emerged. Majority of the industries that affirmed the positive impact of SAP on their productive capacity level are those manufacturing consumer goods. Our $X^2_{0.05,3}$ value of 49.13 confirmed the existence of a relationship between productive capacity level and the nature of the industries. The positive impact of SAP on the productive capacity level of consumer goods industries corroborated

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our earlier findings that SAP has enhanced local sourcing
of raw materialsamong the consumer good inustries. This
is to suggest that SAP by promoting local sourcing among
consumer good industries has increased their productive
capacity as well as the profitability. The reverse is
however the case with the producer good industries.

Indeed, greater evidence is lent to this by looking
at the average capacity utilisation level of the two
categories of industries shown in table 5.5. Really,
average capacity utilisation level for the whole
industries fell from 59 per cent pre-SAP period (1984-85)
to 44 per cent, post SAP period (1986-90), but producer
good industries seemed to have suffered much more than
the consumer good industries. For example, the average
capacity utilisation level in Producer goods Industries
moved from 38 per cent in 1984-85 to 23 per cent in the
post SAP period (1986-90).

Table 5.5

Structural Adjustment Programme and Capacity Utilization Level

	PRE SAP: 1984-85	POST SAP: 1986-90
All Industries	59	44
Consumers good Industries	72	69
Producer good Industries	38	23

Source: Author's Field Survey

To find out reasons for decreased productive capacity and capacity utilisation level, we asked interviewees to rank some probable factors. As expected, the average scores for the groups indicated that increased cost of production, which limit employment; lack of foreign exchange to procure raw materials and increased cost of borrowing from banks as important with average scores of 3.3, 3.14 and 3.07 respectively out of the maximum 4. Others ranked as somewhat important are general decrease in demand which occasioned accumulation of inventories of finished goods and changes in the tariff system with score 2.21 and 2.02 respectively. All these factors conspired to increase the cost of production leading to prohibitive product prices in the industrial sector especially in the producer goods industries.

5.1.4   Structural Adjustment and Employment

We attempted to ascertain the impact of SAP on employment level in the industrial sector by asking the interviewees to indicate whether or not they have retrenched in their industries since the introduction of SAP. The summary of the responses is as show in table 5.6

Table 5.6

Structural Adjustment Programme and Industrial Employment

	YES	NO	TOTAL
All Industries	243	79	322
as % of Total	75.47	24.53	
Consumer Good Industries	129	42	171
as % of Total	40.06	13.04	
Producer Good Industries	114	37	151
as % of Total	35.4	11.49	

Source: Author's Field Survey

Table 5.6 shows that 243 interviewees affirmed they retrenched between 1986-90. This represented 75.47 per cent of the respondents. The result equally indicates that both consumer and producer good industries retrenched during the adjustment programme. The calculated $X^2_{0.05,1}$ of value 0.00135 actually confirmed that there is no relationship between categories of industries and retrenchment. However, the result from the questionnaire showed that retrenchment occured more with the unskilled workers than skilled workers. In addition, the result equally showed that retrenchment of unskilled workers occurred more in the consumer good industries than the producer good industries. This is vividly

shown in table 5.7. As indicated in table 5.7, 1,729 unskilled workers were retrenched by all the manufacturing industries interviewed as against 298 skilled workers. On breaking the industries into consumer and producer goods categories, the result showed that 1,171 of the total unskilled worker retrenched were in the consumer good industries while the rest 558 were in the producer good industries

Table 5.7

	PRE-SAP 1984-85		POST SAP 1986-90	
	SKILLED	UNSKILLED	SKILLED	UNSKILLED
All Industries	105	336	298	1,729
Consumer Good Industries	46	248	167	1,171
Capital Good Industries	59	88	131	558

Source: Author's Field Survey

This should not come as a surprise, as the unskilled workers are often the most vulnerable in terms of retrenchment since they constitute the majority in most manufacturing industries. This is in addition to the fact that they are easy to train. Also, as most producer good industries require more highly technical workers than consumer good industries, the tendency to lay off workers is very minimal except the situation has reached

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a crisis point.

We went further to ascertain those factors responsible for retrenchment by asking the interviewees to rank some factors. In a nutshell, increased cost of production (borrowing, labour and materials) has an average score of 3.5 out of maximum 4; lack of foreign exchange for raw materials got 3.12, while general decrease in demand which occasioned accumulation of inventories of finished goods and changes in tariff score on the average 2.75 and 2.55 per cent respectively.

5.1.5   Structural Adjustment and Industrial Production
         Cost

In respect of the impact of the adjustment programme on production costs almost all the industries interviewed indicated that the adjustment programme increased their production costs. This actually confirms one of our conjectures at the beginning of this section that the adjustment programme would increase production costs of manufacturing industries. As shown in table 5.8, 286 manufacturing industries representing 88.54 per cent

Table 5.8

	INC	DEC	CON	TOTAL
Industries	286	37	-	323
as % of the Total	88.54	11.46	-	
Consumer good Industries	136	37	-	173
as % of the Total	42.1	11.46		
Producer good Industries	150			150
as % of the Total	46.44			

Source: Author's Field Survey

affirmed that adjustment programme increased their
production costs. All the respondents in the producer
good industries signalled that their production costs
were adversely affected. To probe further into reasons
behind the increased production costs during the
adjustment period, the interviewees were requested to
rank some factors according to their importance. The
result of the ranking showed that on the average high
exchange rate, that is depreciation in the value of Naira
scored an average of 3.56, out of maximum 4. Increased
cost of borrowing and raw materials scarcities scored

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3.18 and 2.10 respectively. Other reasons mentioned by interviewees which were not specified in the questionnaires included withdrawal of petroleum and other petroleum products subsidies as well as changes in the tariff system.

As expected, the increased production cost emanating from the sources ex-rayed above culminated in increased unit prices of all the industries. From the information supplied by the interviewees, unit prices for the two categories of industries increased throughout 1986 - 90.

This is consistent with our initial conjecture that all categories of industries would increase their unit prices in order to offset increased production costs. What this tends to suggest when related to our previous findings is that increased unit price emanating from increased production costs tends to benefit the consumer good industries more than the producer good industries as the former can easily retrench their unskilled workers as well as source their raw materials locally. Increased production costs and thus unit prices in the producer good industries might have led to increased inventory accumulation, thus falling productive capacity and capacity utilisation level and eventually decreased profitability.

5.1.6 Structural Adjustment and Sales

To ascertain the impact of the adjustment programme on the sales of the manufacturing industries, we asked the interviewees to indicate whether or not their sales have been affected during the period of adjustment. The results are as shown in table 5.9 below. The table shows that 196

Table 5.9

Structural Adjustment and Manufacturing Sales

	INC	DEC	CON	DONT	TOTAL
All Industries	123	196	–	3	322
as % of the Total	38.2	60.87	–	0.93	
Consumer Good Industries	70	99	–	2	
as % of the Total	21.74	30.75		0.62	
Producer Good Industries	53	97	–	1	
as % of the Total	16.46	30.12		0.31	

Source: Author's Field Survey

manufacturing industries representing 60.87 per cent indicated that the adjustment programme has caused their sales to decrease. Interestingly, reduction in sales was not peculiar to the producer good industries. The $X^2_{0.05,3}$ value of 1.326 actually confirmed that there is no relationship between sales and the nature of

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manufacturing industries. The percentage of manufacturing industries in consumer and producer good industries that experienced decreased sales during the adjustment period were 30.75 and 30.12 respectively. What this tend to suggest when related to our previous findings is that though, increased production costs precipitated increased unit cost as well as decreased sales in the consumer good industries, the effect of increased unit price might have offset the loss that could have arisen from decrease in sales. This, probably coupled with increased local sourcing efforts explains their profitability during the adjustment period.

The case of producer good industries is highly consistent with our earlier results. Increased production costs and unit price lead to decreased sales and productive capacity and capacity utilisation levels which cannot be offset by increase in unit price thereby precipitating decrease in their profitability.

Finally, we asked the interviewees to assess some of the key SAP policies namely the current tariff structure, interest rate deregulation and exchange rate deregulation. The summary of the respondents' views is presented in table 5.10. From the information provided in table 5.10, 'just fair' had the greatest percentage out of the three SAP policies mentioned above. The percentages for tariff structure, interest rate

deregulation and IFEM were respectively 64.20, 43.21 and 53.09. This was followed by 'bad' with percentages 19.44, 19.75 and 19.75 for tariff structure, interest rate deregulation and IFEM respectively. 'Extremely bad' came third while 'good' scored the least point with percentages 7.41, 13.58 and 14.81 for tariff structure, interest rate deregulation and SFEM now IFEM. It could be inferred from the information provided above that the perception of the interviewees on the adjustment policies named above is far below the average. We went further to see whether there is relationship between SAP policies and industries' assessment by calculating the chi-square. The $X^2_{0.05,3}$ value of 42.39 showed that there is a relationship between SAP policies and its assessment. This implies that the nature of the SAP policies determines the assessment by the manufacturing industries interviewed.

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Table 5.10

Assessment of SAp Policies

	GOOD	JUST FAIR	BAD	EXTRE-MELY BAD	TOTAL
Tariff Structure	24	208	60	32	324
as % of the Total	7.41	64.2	19.44	9.88	
Interest Rate Deregulation	44	140	64	76	324
As % of the Total	13.58	43.21	19.75	23.46	
SFEM (now IFEM)	48	172	64	40	324
as % of the Total	14.81	53.09	19.75	12.35	

Source: Author's field survey

We went further to assess the SAP package itself by asking interviewees to rank the package as Good or Just Fair or Bad or Extremely Bad.   The summary of the responses is as show in table 5.11.   121 manufacturing

Table 5.11

Assessment of Structural Adjustment Package

CATEGORY OF INDUSTRIES/ ASSESSMENT	PRODUCER GOOD INDUSTRIES	CONSUMER GOOD INDUSTRIES	TOTAL
Good	13	88	101
% of the Total	4.04	27.33	31.37
Just Fair	69	52	121
% of the Total	21.43	16.15	37.58
BAD	46	26	72
% of the Total	14.29	8.07	22.36
Extremely Bad	23	5	28
% of the Total	7.14	1.55	8.69
Total	151	171	322

Source: Author's field survey.

industries indicated that the SAP package was 'just fair' while 101 interviewees (about 31 per cent) perceived the package as Good. 72 industries representing 22.36 per cent, ranked SAP package as being 'bad' while the 28 industries indicated 'extremely bad'. We tried to categorised interviewees responses according to nature of industries. From table 5.11 more interviewees in the consumer good industries ranked the SAP package as being 'good' as against what obtained among the producer good industries. Over 20 per cent of all the manufacturing industries ranked the SAP package as 'bad' and 'extremely

bad' among the producer good industries. This is in contrast with less than 10 per cent in the consumer good industries. Our calculated $X^2_{0.05,3}$ value of 77.86 confirmed that their is relationship between the package assessment and the nature of the industries. In all, this confirms our earlier findings that SAP policies tend to have affected the producer good industries more adversely than the consumer good inustries.

5.2 How Industries Assessed the Shocks and Adjusted Their Operations

The analysis of the impact of the adjustment programme on those variables as employment, output industrial prices, profitability and so on suggests that firms have not benefitted immensely from the changes in policies and also had difficulties adjusting to the new environment. One would expect those difficulties to have been mounting from 1987 onwards as a result of increasing financial costs and increasing foreign competition emanating from interest, exchange and trade liberalisation. Also, the magnitude of the perceived impact of the programme on the industrial sector suggests that entrepreneurs must have experimented with various adjustments to cope with the situation.

To determine this, industries were asked to rank 13 shocks (favourable and unfavourable) making 0 if it was

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not relevant, 1 if it was not important, 2 if it was somewhat important, 3 if it was important, 4 if it was very important, and each value prefixed with (-) where the impact is negative. The average score for each shock is summarized in table 5.12. None of the favourable changes was signalled as particularly important by all the industries (see table 5.12). The highest average scores were around the value of 2 that is, 'somewhat important'. The favourable responses related to better opportunities to substitute local raw materials for imported raw material and reductions in restrictions for importing raw materials.

This is not surprising considering the inflationary effects of exchange rate deregulation. Exchange rate deregulation increased the price of imported raw materials which invariably led to increased efforts at local sourcing of raw material (especially in the consumer good industries) in spite of reductions in restrictions for importing raw material precipitated by trade liberalisation.

Table 5.12

Perception for Shocks

FAVOURABLE CHANGES	AVERAGE
01 Better access to working capital financing	1.05
02 Better opportunities to buy foreign machinery and equipment not available before	0.85
03 Better opportunities to substitute local raw materials for imported raw materials	2.24
04 Reductions in restrictions for importing raw materials	2.15
05 Relaxation of price controls over firm production	1.86
06 Increase in export opportunities	1.81
07 Reduction in competition from international product	1.10
08 Increase in earnings resulting from increased exports	1.88
09 Increase in earnings resulting from higher value of export products	1.70
UNFAVOURABLE CHANGES	
10 Increase in the cost of working capital	3.17
11 Unit labour cost rising more rapidly than the prices of the products.	3.15
12 Increase in prices of domestic raw materials greater than the increase in the price of product	2.92
13 Changes in the tariff system	2.30

Source: Author's field survey.

Better access to working capital financing and possibilities of buying foreign machinery and equipment not available before were considered less important. It is also interesting to note that the interviewees did not perceive as significant, increased export opportunities and increase in earnings resulting from higher value of export products, even though that constituted the main objective of the structural adjustment programme and the need to depreciate the value of Naira. What this tends to suggest is that manufacturing industries have not benefitted from the purported earnings from increased exports arising from Naira depreciation. In a nutshell, what emerges from the recorded perception of the interviewees is that the adjustment programme were not viewed as particularly helpful for the operation of the industries because the favourable influences were nullified by unfavourable ones.

A much clearer picture emerges from the responses on unfavourable changes. Scores for them were generally higher and generally subject to less dispersion than as obtained under favourable shocks. The unfavourable rankings showed that increase in the cost of working capital and unit labour cost rising more rapidly than the price of the products were perceived important while increases in prices of domestic raw materials greater than the increase in the price of products and changes in

the tariff system were signalled somewhat important. That increased cost of working capital came as important unfavourable factor should not come as a surprise in view of the massive depreciation of the Naira and the interest rate deregulation exercise. And since most industries finance their production and stock of raw materials as well as semi-finished goods through credits both from organised and unorganised market (as noted in chapter 2) then, high interest and exchange rates lead directly and indirectly to high prices. Indeed, almost all interviewees admitted and emphatically expressed problems created by the exchange and and interest rates policy.

The changes in tariff was signalled unfavourable as it was perceived that it encouraged the dumping of substandard goods into the economy. In fact, government recognised this fact that it has to slam increases ranging from 130 per cent on import duties on commodities such as starch, R. 20 batteries, flourescent tube etc; Really, the reduction in certain import duties on intermediate industrial goods for example dry cell batteries, rolled sheets and commercial vehicle parts have had some positive impact on costs, this however have almost completely wiped off by the depreciation of the Naira exchanged rate. This explains why industries ranked change in tarriff structure as unfavourable shock and their agitation for the complete removal of excise

duties on goods produced by them.

5.3   The Adjustments in Industries Operations

The adjustment programme triggered a series of adjustment by manufacturing industries to the new set of policies. To determine this, we asked the interviewees to rank some adjustment strategies indicating 0 for not applicable, 1 if not important, 2 if somewhat important, 3 if important, 4 if very important and with any of them prefixed (-) where negative. Table 5.13 summarises the forms of adjustments in thre areas of production, prices, marketing, labour policies and financial decision adopted during the adjustment period. Not surprisingly, greater caution in financial management had the highest rank. Industries tried to reduce all unnecessary expenditure so as to enhance their financial viability.

Also ranked important were changes in labour composition as well as price decisions. The most frequent adjustment was a reduction in the labour force. This is in fact, consistent with the assessment that SAP precipitated retrenchment (see tables 5.6 and 5.7). Equally signalled as important was changes in the price decisions. Many industries charged higher unit prices (see table 5.13) so as to offset increased production costs precipitated by exchange and interest rates deregulation. The ability to increase their unit prices

especially the consumer good industries was rather enhanced by increased prices of foreign competing goods occasioned by massive depreciation of Naira. Most interviewees attached importance to changes in marketing strategy too. Majority of the industries interviewed admitted that their advertising expenses increased during the adjustment period.

Table 5.13

Adjustment by Manufacturing Industries

STRATEGY		AVERAGE SCORE
01	Alteration of the package or produced goods	1.44
02	Changes in inventory policy	2.35
03	Changes in product quality	2.35
04	changes in market strategy	2.33
05	Changes in price decisions	3.01
06	Reduction in labour force	3.17
07	Greater caution in financial management	3.62
08	Increase in investment	0.02
09	Plant closing and/Or line consolidation	0.56
10	Changes in the composition of the labour force	1.71
11	Improvement in the selection and training methods for workers of different skill categories	1.93
12	Net changes in Assets and/or liabilities	0.66
13	Competitiveness (internal and external)	2.20

Source: Author's field survey.

Product quality changes was another important adjustment strategy by industries. This was precipitated by increased domestic and foreign competition. The importance attached to changes in inventory management is the consequences of higher financial costs. Under the

administratively controlled often low interest rate regime, industries had easy access to credit at highly subsidized rate. But with the deregulation exercise, the cost of credit soared and hence the need for industries to be cautious in their financial management. And since adopting a careful inventory policy was one way of reducing financial costs the decision among industries was to minimize the financial costsof carrying domestic inventories. Thus drastic measure to reduce inventories to the lowest level was taken.

Also rated somewhat important is competitiveness both internal and external. Almost unanimously, the industries stated that increased foreign competition which arose from trade liberalisation and the need to increase sales precipitated intense domestic and foreign competition. This of course, explains why improved changes in product quality and marketing strategies were widely adopted during the adjustment programme.

Other less important adjustment policies were improvement in the selection and training methods for workers of different skills categories, changes in the composition of the labour force and alteration of the package or produced goods. Manager did not attached much importance to investment, plant closing and/or line consolidation. This might be due to low credibility of the programme which caused many industries to postpone

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investment awaiting better days. Interestingly, most firms did not emphasize plant closing and/or line consolidation as a major adjustment. One would have expected that increased costs of production coupled with increased foreign competition would force domestic industries to close down their plant or some lines of production. This indicates that the unit prices of the manufacturing industries were below the average variable cost (AVC) for the period under review. Our earlier argument that the increase in unit price might have probably offset in a way, the increase production cost especially in the consumer good industries is confirmed here.

To find out more about the evolution of firms decisions, we asked the interviewees to rank the factors that affected market shares and pricing decisions before and after the adjustment programme with 0 for irrelevant, 1 for less competitive, 2 for equal and 3 for more competitive. As expected , the average scores for the industries indicated that almost all the factors as being important (see table 5.14). Competitive pricing, product quality as well as financial management played an increasingly important role through time. The result showed that manufacturing industries became more competitive in relation to their competitors after the adjustment programme in all areas except in terms of

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scales of production.

Table 5.14

Comparison with Competitors

		BEFORE THE REFORM	AVERAGE AFTER THE REFORM
a	Product Prices	1.92	2.87
b	Product Quality	2.02	2.68
c	Quality Control	2.08	2.39
d	Scales of Production	2.03	1.35
e	Marketing and Administration	2.18	2.41
f	Financial Management	1.84	2.42

Source: Author's field survey.

The average score for scales of production given as 1.35 after the adjustment programme as against 2.03 before adjustment showed that manufacturing industries became less competitivein terms of scales of production with their competitors after the reform.   Also, industries were asked to rank some major categories of adjustment policies using 0 for not applicable, 1 if not important, 2 if somewhat important, 3 if important and 4 if very important.   The results as surmarised is table 5.15 indicated that each form of adjustment was more important after the reform than before the reform.

As indicated in table 5.15 before the adjustment

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programme price decisions were mostly influenced by
maintaining market share, fulfillment of salary and
employment rule and cost of capital and raw materials.
The average score of 1.55 and 1.84 for competition among
domestic producers and import competition respectively
vividly indicated that competition (both from domestic
and external) was not perceived as important before
adjustment programme. This should not be difficult to
explain since high protection enjoyed by industries
through tariff protection, overvalued exchange rate as
well as low and often-negative interest rate enable
industries with different productivity levels to co-exist
and in fact behave as oligopoly.

Table 5.15

Manufacturing Industries's Behaviour

ITEM	AVERAGE	
	BEFORE REFORM	AFTER REFORM
a Maintaining market share	2.06	2.36
b Fulfillment of salary and employment rules	2.61	2.89
c Competition among domestic producers	1.55	3.07
d Cost of capital and raw materials.	2.56	3.00
e Import competition	1.84	2.79

Source: Author's field survey.

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However, with the reform, competition among domestic producers and from abroad became important in addition to the other factors. Competition among domestic producers and costs of capital and raw materials were ranked important while import competition and the rests were ranked somewhat important.

Finally, interviewees were asked to rank some factors in relation to their continuing participation in the market using the same codes as in table 5.15. As shown in table 5.16 competitive prices was ranked highest, followed by changes in quality. The last two-credit sales and advertising were ranked equal. However, other reasons stated by interviewees which were not mentioned in the questionnaire included after sales service strategy and goodwill.

Table 5.16

Reasons for Continuing Participating in the Market

	FACTORS	AVERAGE
a.	Sales Credit	2.25
b.	Advertising	2.25
c.	Changes in product quality	2.44
d.	Competitive prices	2.57

Source: Author's field survey

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5.4 Structural Adjustment Programme and Manufacturing Industries: The Empirical Results

Given our findings in the foregoing section, it will be of interest to explore a quantitative assessment of the impact of the quantifiable policies of the adjustment programme. To this end, the regression equations 1- 6 specified in chapter 4 were estimated using the two stage least squares (2SLS) method. The result is as shown in table 5.17.

The results as presented in table 5.17 suggest several findings. From equation 1 - the profitability equation, there is a negative relationship between profitability and gross margins. As the gross margins is a proxy for foreign exchange shock, the results indicate negative relationship between foreign exchange rate and profitability. This is as expected. The depreciation of the exchange rate through the introduction of SFEM (now IFEM) causes the cost of produciton to increase thereby reducing the profit margin of the manufacturing industries. This finding actually confirms the respondents views on the impact of SAP on their profitability.

Also, accessibility to foreign exchange which we used as a measure of foreign exchange scarcity has a significant negative sign. This indcated that foreign exchange availability was restricted during the

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Table 5.17

TWO – STAGE LEAST SQUARES ESTIMATION OF THE IMPACT OF SAP ON INDUSTRIAL DEVELOPMENT

Variable Dependent	Constant	Pcmj	rj	Gmj	Lsj	AFj	Wj	Fcj	Pj	Pcj	Yj	CAPU	Emj	R^2	
PcMj	0.22 (5.01)		−0.021 (−0.87)	−0.029 (−0.45)	−0.062 (−0.45)	−0.17 (−2.35)					0.004 (0.803)			0.55	(1)
Yj	22.59 (4.61)		−2.28 (2.82)	−2.01 (−1.94)	0.12 (0.08)	−4.58 (−1.84)							0.08 (0.52)	0.27	(2)
EMj	53.19 (3.68)	13.47 (0.63)	−0.92 (−2.097)		−3.11 (−0.59)	−1.02 (−3.58)	−0.60 (−0.38)				0.081 (0.43)			0.49	(3)
Pcj	1.46 (3.68)		−0.006 (−0.02)	0.62 (3.48)	0.083 (0.43)		0.17 (2.95)				−0.006 (−0.87)			0.31	(4)
CAPU	6.61 (3.99)		1.76 (0.19)	−1.52 (2.45)	−5.99 (1.17)	−1.08 (0.61)		−1.49 (−5.70)						0.39	(5)
P	25.79 (2.62)		7.47 (2.46)					2.84 (1.18)	1.87 (1.98)		0.04 (0.013)			0.60	(6)

The figures in parenthesis are the t-ratios.

adjustment period which by implicaitons means that SAP has not enhanced the accesibility of entrepreneur to foreign exchange as envisaged in the SAP package.

Other variables except output in equation 1 came out with negative signs though not significant. The negative relationship between nominal interest rates measured as the ratio of total financial costs over total debts and profitability is not unexpected as credit from banks constitutes of major source of finance to the manufacturing industries. Thus, increased cost of credit emanating from the deregulation of the financial sector feeds directly into the costs of production. Increased costs of production reduces the profitability of the industries. This result is quite consistent with the perception of our interviewees in the survey exercise that interest rate deregulation was one of the unfavourable shock that affected their operation.

Local sourcing of raw materials variable has negative sign indicating that the higher the level of raw materials sourced locally, the lower the level of profitability. This seems to contradict one of the objectives of SAP, that is, encouragement of local sourcing of raw materials. The reason for negative relationship between local sourcing and profitability is due to the increased cost of sourcing of local raw materials emanating from foreign exchange and interest

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rates deregulation since the equipment and fund required for the exercise are often imported and obtained from banks respectively. Indeed, this result is confirmed by our interviewees assertion that prices of domestic raw materials increased greater than the increas in the price of products (see table 5.12). Lastly, industrial output has positive sign but the coefficient is not significant.

With regards to output equation, the major significant factors are nominal interest, gross margin and accessibility to foreign exchange. Others, namely local sourcing and employment variables are rather insignificant. Nominal interest rate measure of interest rate shock has negative sign indicating that interest rate deregulation reduces output. This is so because bank credit is a major component of production costs. This result is quite consistent with our result in the survey exercis where we found that interest rate had a negative impact on output.

The ratio of financial cost to total debt called gross margin and used as a measure of exchange rate shock is negatively related to output. The result is compatible with the situation in the economy where production activities are highly related to the foreign exchange rate. The same applies to the availability of foreign exchange measure. The result indicate that foreign exchange inavailability constrained output during the

adjustment period. Domestic manufacturing industries depend largely on imported raw materials thus the availability of foreign exchange is a major determinant of their ability to produce.

The co-efficients of local sourcing and employment variables have positive and negative signs respectively but are not significant at 5% confidence level thereby making it difficult to make conclusive infference from them.

The employment equation shows that interest rate shock measure and employment are negatively related. The coefficient of nominal interest rate is significant at 5 per cent confidence level. Another result of the estimated relationship shows that accessibility to foreign exchange is negatively related to employment. The coefficient is significant at 5 per cent confidence level. This shows that availability of foreign exchange to manufacturers was constrained which invariably limits the level of production since as noted earlier, the latter is highly dependent on the availability of foreign exchange for procuring raw materials and intermediate inputs needed. This result is quite consistent with our survey findings in which lack of foreign exchange for purchasing raw materials and increased costs of production were ranked as the main factors responsible for retrenchment during the adjustment period.

The negative relationship between local sourcing variable and employment though not significant is still consistent with our previous findings. Increased costs of sourcing local raw materials reduces the profitability of manufacturing industries which in turn leads to decreased employment. Other variables profitability, wages and output came out with the expected signs positive, negative and positive respectively but none is significant.

With the exception of local sourcing variable and output, all the coefficients in production cost equation are significant at 5 per cent confidence level. The results show that gross margin, our measure of foreign exchange shock, as well as wages increased the production costs of manufacturing industries. Local sourcing variable has a positive sign though not significant. This result when read with those in equations (1) and (3) means that local sourcing of raw materials caused production costs to increase which in turn affects the profitability of industries and thus their employment level. This view is corroborated by our interviewees perceptions of the adjustment programme summarized in table 5.12 where it was pointed out that one of unfavourable shocks was increase in prices of domestic raw materials greater than the increase in the prices of products.

The negative sign for nominal interest is less easy to explain. With increased costs of credit emanating from interest rate deregulation and the dependence of manufacturing industries for finance from this source, we expect the variable to have positive sign. A possible interpretation of this positive relationship between nominal interest rate and production costs is that a high interest rate forces manufacturing industries to embark on other cost reduction strategies such as labour reduction and others which leads to less recourse to bank credit by industries to finance production. This view is expressed by interviewees in table 5.13 where it was indicated that greater caution in financial management and reduction in labour force were the main strategies adopted by manufacturing industries to cope with the adjustment programme. This assertion is rather inconclusive as the coefficient of nominal interest rate is not significant.

In equation 5 - the capacity utilisation equation, gross margins a measure of foreign exchange shock came out significantly with negative sign. This shows that foreign exchange rate deregulation had decreasing effect on capacity utilisation. This result tallies with our findings using questionnaire approach (see table 5.5). Capacity utilisation fell drastically with the introduction of SAP and the main reason for this as

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indicated by interviewees was increase cost of production due to exchange rate depreciation.

The same goes for accessibility to foreign exchange measure. It has negative sign though not significant. In our survey, respondents ranked lack of foreign exchange as one of the major factors contributing to falling capacity utilisation level. Another finding from equation 5 is the negative and significant relationship between capacity utilisation and foreign competition measure. A priori, a positive relationship would be expected for two main reasons. One, foreign competition is expected to provide an incentive for domestic industries to become more efficient. Two, industries imports are largely of components part which allow domestic production to increase. However, this negative sign should not be difficult to explain. While it is true that industries imports are largely of component parts which allow production to increase, however, the costs of the component parts might have increased phenomenally thereby reducing the level of production and thus the capacity utilisation level of manufacturing industries.

Nominal interest rate a measure of interest rate shock came out with positive sign though not significant. Thus, firm conclusion cannot be based on this. However, where industries reduce their recourse to the bank credit

as suggested earlier, then increased costs of credit may not adversely affect the capacity utilisation level.

Lastly, the price equation (equation 6) shows that nominal interest rate has significant positive effect on prices of the industries. Also foreign competition measure has positive impact on unit price of manufacturing industries. The coefficient is significant at 10 per cent confidence level. This shows that as imports are majorly of compenonent parts, exchange rate depreciation increases the cost of the raw materials which makes it inevitable for industries to increase their unit prices so as to recoup their production costs. Indeed, this result is consistent with the result in our survey where changes in price decision was ranked as one of the main strategies adopted to cope with adjustment programme.

Wages has positive sign though not significant at 5 per cent confidence level. The result is in conformity with our interviewees assertion that one major unfavourable shock was unit labour cost rising more rapidly than the prices of the products. The output variable came out with positive sign but not significant.

In all, the results of the 2SLS estimation shown in table 5.17 are quite consistent with that obtained from our survey exercise. From all the approaches, we observed that exchange and interest rates deregulation

had a pervasive influence on the success or otherwise of the adjustment programme. However, the two policies adversely affected industrial development of the economy through their effects on costs of raw materials both imported and locally sourced. Also, in turn, the adverse effect of exchange and interest rates deregulation on locally sourced raw materials have adverse effect on capacity utilisation level, employment and profitability despite the better opportunities to substitute local raw materials for imported ones provided by the liberalisation policy.

Finally, the deregulation of the exchange and interest rates led to increased cost of production and thus increased unit prices in the manufacturing industries with consequential effects on profitability, capacity utilisation and others. In this way the success of the adjustment programme is constrained. The veracity of the results using the cross sectional data is explored further in the next chapter using time series data.

CHAPTER SIX

ADJUSTMENT PROGRAMME AND STRUCTURAL SHIFT IN THE NIGERIAN INDUSTRIAL SECTOR

This chapter presents the empirical results of estimation of five equations (7-11, in chapter 4) involving time series data, specified for industrial variables namely output, prices, employment, capacity utilisation and production costs. Essentially, the main idea behind the specification and estimation of the five equations is to test for structural shift[103] in the industrial sector of the Nigerian economy.

The purpose is to determine whether structural shift has occurred in the industrial sector after the adjustment programme specifically 1986-90. Identifying structural change and finding its probable cause(s) will help to know the impact of the structural adjustment programme policies on the dependent variables. In view of this, our null hypothesis is that no structural change has occurred over the period covered by our analysis.

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[103]. The basis of the structural shift test is to determine whether an economic relationship remain stable in two periods of time or whether the same relationships hold for two different groups of economic unit.

6.1 The Estimated Equations

The results of the estimated equations are presented in tables 6.1 - 6.5 below. The R^2 is the adjusted value of the coefficients of multiple correlation; DW stands for the Durbin-Wastson statistics; h represents the Durbin h statistics; the F is the conventional F-statistics (that tests jointly for the overall significance of the estimated equations' parameters) while the figures in the parenthesis are the t-ratios.

6.2 Statistical Properties and Inferences of the Equations

From equations (7a) through equation (11c), the information provided by the R^2, DW, h and F - statistics suggest that the equations are adequate representation of the data. The R^2 - adjusted value of the coefficient of multiple correlation ranges between 0.87 (for the complete model of the employment equation) to 0.99 for the restricted model of the industrial capacity utilisation and modified complete for industrial product cost i.e equations (10a) and (11c). In the same way, the F-statistic shown that the estimated parameters are jointly significantly different from zero. Likewise, the DW-Durbin Watson-statistic ranges between 1.654 in equation (7b) - the complete model for industrial output to 2.25 in equation (11a) - the restricted model for

Table 6.1

INDUSTRIAL OUTPUT EQUATION

Dependent Variable (YN)

Equation	Constant	W	ER	R	LS	TIME	SAPD	R^{-2}	F	DW	N	
7a	18.96	0.637	-0.127	-0.103	-0.424	0.053		0.98	171.41	2.180	16	.. (R)
	(2.14)	(3.12)	-(2.17)	-(1.07)	-(0.63)	(0.401)						
7b	0.375	1.093	-0.299	-0.477	3.153	0.143		0.97	166.83	1.654	20	.. (C)
	(2.48)	(6.62)	-(2.03)	-(2.35)	(5.52)	(0.80)						
7c	4.013	1.049	-0.512	-0.472	2.76	0.079	-0.504	0.98	179.54	1.684	20	.. (MC)
	(3.01)	(7.14)	-(2.87)	-(0.93)	(5.18)	(0.49)	-(2.24)					

The figures in parenthesis are the t-ratios

R^{-2} = adjusted value of the coefficient of determination

D-W = Durbin Watson Statistic

R = Restricted Model

C = Complete Model

MC = Modified Complete Model

<u>Table 6.2</u>

THE INDUSTRIAL PRICE EQUATION

Dependent Variable (P_t)

Equation	Constant	W_t	ER	RP_{int}	R	P_{t-1}	SAPD	R^{-2}	F	Dh	N		
8a	4.682 (2.12)	0.011 0.25)	-0.716 -(0.69)	0.37 (3.71)	0.13 (1.07)	0.397 (4.03)		0.94	1043.75	0.081	16	..	(R)
8b	11.37 (2.64)	-0.15 -(0.52)	1.21 (2.93)	1.57 (3.17)	0.9 (2.46)	0.451 (5.15)		0.95	72.83	0.094	20	..	(C)
8c	14.39 (2.14)	-0.25 -(0.84)	1.45 (3.19)	1.85 (3.42)	1.375 (2.56)	0.471 (5.35)	0.54 (1.39)	0.95	62.72	0.12	20	..	(MC)

Table 6.3

THE EMPLOYMENT EQUATION

Dependence Variable (Em)

Equation	Constant	W	ER	R	Y_N	LS	SAPD	R^{-2}	F	DW	N.	
9a	12.51	0.95	0.28	-0.53	0.39	0.64		0.98	125.01	2.147	11	.. (R)
	(4.25)	(7.05)	(1.81)	-(2.78)	(2.48)							
9b	15.49	0.49	-0.19	-0.23	0.25	-0.15		0.87	26.79	1.703	20	.. (M)
	(5.14)	(3.76)	-(0.73)	-(1.05)	(2.09)	-(0.16						
9c	17.18	0.43	-0.31	-0.06	0.19	-0.24	-0.24	0.96	38.85	1.803	20	.. (MC)
	(5.22)	(4.83)	-(1.38)	-(0.23)	(2.49)	-(2.12)	-(2.42)					

Table 6.4

INDUSTRIAL CAPACITY UTILISATION EQUATION

Dependent Variable (CAPU)

Equation	Constant	RP_{int}	RESV	P_t	R	LS	SAPD	R^{-2}	F	DW	N	
10a	8.86	-0.12	-0.92	0.17	-0.07	0.15		0.99	399.41	1.72	16	.. (R)
	(3.18)	-(1.09)	-(4.91)	(2.44)	-(0.82)	(1.79)						
10b	11.65	-1.07	-2.54	0.23	-0.32	-0.54		0.92	45.96	1.76	20	.. (M)
	(2.72)	-(3.48)	-(9.15)	(2.24)	-(1.37)	-(1.99)						
10c	10.62	-1.15	-2.28	0.23	-0.45	-0.42	-0.15	0.94	36.27	1.73	20	.. (MC)
	(3.62)	-(3.48)	-(8.60)	(2.12)	-(0.35)	-(1.28)	-(0.19)					

Table 6.5

INDUSTRIAL PRODUCTION COST EQUATION

Dependent Variable: Industrial Production Cost (C)

Equation	Constant	ER	RP_{int}	R	W	SAPD	R^{-2}	F	DW	N	
11a	13.89	0.08	0.70	0.42	-0.11		0.94	160.39	2.25	16 ..	(R)
	(1.14)	(0.03)	(2.88)	(1.09)	-(0.43)						
11b	1.14	0.21	1.46	0.69	-0.43		0.97	123.83	1.81	20 ..	(M)
	(2.19)	(2.70)	(3.17)	(1.35)	-(1.97)						
11c	2.15	0.14	1.37	0.97	-0.31	0.44	0.99	107.96	1.85	20 ..	(MC)
	(2.01)	(2.11)	(3.03)	(1.19	-(1.35)	(2.27)					

industrial production costs.

Table 6.1 presents the results of the industrial output equation. Equation (7a), (7b) and (7c) give results for restricted, complete and modified complete models respectively. The structural shift test for equations (7a) and (7b) yields 4.577. This shows that the null hypothesis can be rejected at 5 per cent confidence level implying that there is structural shift during the periods being analysed. All estimated parameters of equation (7b) were different from those of equation (7a) in terms of magnitude. However, the structural shift discovered in equation (7b) might not be attributable solely to the factors incorporated in the equations since the economy started an adjustment programme in mid 1986. This adjustment programme as reviewed in chapter 3 consists of policies aimed at reducing the level of importation while encouraging the supply of locally sourced raw materials. To account for the adjustment programme which started since mid 1986, we introduced a dummy variable with value zeros for 1970 - 85 and one for 1986 - 90. The structural change test between equations (7a) and (7c) gives 7.114. This indicates that the null hypothesis can be rejected at 5 per cent confidence level showing that there is structural change between 1970-85 and 1986-90. The inclusion of dummy variable tends to make the

specification far better than equation (7b). This is shown in the adjusted value of the coefficient of multiple correlation ($\bar{R}^2$). A 95 per cent confidence interval for the exchange rate elasticity in 1970 - 85 equation is (-0.769; -0.485) while that for 1970 - 90 with dummy variable is (-0.731; -0.293). A closer comparison of the two intervals shows a marked variation which suggests that equations (7a) and (7c) are not identical.

Through equations (7a) to (7c), industrial wages came out to be a significant determinant of industrial output (Y_N) but the positive sign it came out with is less easy to explain. A priori, a negative coefficient would be expected of wages (W) since increase in wages is expected to increase the cost of production which in turn is expected to reduce the industrial output. Essentially, two explanations for the positive sign suggest themselves here. One, is that high industrial output occasioned by increased revenue enables a general increase in nominal wages such that a positive relationship exists between real industrial output and nominal wages. Two, that wage increase precipitates a more than proportionate increase in unit price which enhances the profitability on the industrial sector and thus the incentive to produce more goods.

The exchange rate variable came out with the right

sign in all the equations (7a to 7c). This shows that devaluation reduces industrial output (Y_N). Equation (7a) suggests that 1 per cent increase in the exchange rate will precipitate 0.13 per cent decrease in industrial output. The corresponding values for complete and modified complete models are 0.299 and 0.512 per cent. One point that is worth noting here is the values of the exchange rate elasticities which increased from 0.13 to 0.299 and 0.512 per cent with the extension of the study period to 1990 together with the incorporation of SAP dummy. This tends to suggest that exchange rate deregulation might have precipitated sharper decline in industrial output through its impact on production cost - an indication of negative shift. This conclusion will be verified in our production cost model.

Interest rate variable (R) reduces industrial output though its effect is significant only in the complete model (equation 7b). As equation (7b) and (7c) show, 1 per cent increase in interest rate reduces industrial output by 0.48 per cent and 0.47 respectively. These figures are far higher than 0.10 obtained in equation (7a) - the restricted model. They all indicate negative shift. The arguments raised in support of the negative effect of exchange rate equally holds here. The non significance of the interest rate variable in the restricted model (equation 7a) is not difficult to

explain. The interest rate during this period (1970 - 85) was administratively fixed. As for its nonsignificance in the modified complete model, a possible reason could be the incorporation of the adjustment dummy which in fact, has a significant negative effect on industrial output. Though tentative, in view of the non-significance of the variable in all the equations except (7b), the result shows that restrictive monetary policy was inflationary.

The local sourcing variable has a negative non-significance effect on industrial output (Y_N), however, the sign became positive in equations (7b) and (7c) - the complete and modified complete models respectively. Specifically, equation (7a) suggests (though tentative as the coefficient is rather insignificant) that 1 per cent increase in local sourcing reduce industrial output by 0.42 per cent while equations (7b) and (7c) indicate that 1 per cent increase in local sourcing increases industrial output by 3.15 and 2.76 per cent respectively. Their values indicate positive shift. A possible explanation of this variance in sign could be that the cost of sourcing local raw materials have been made cheaper relative to imported ones by the exchange rate depreciation occasioned by FEM. In this way, increase local sourcing of raw materials would precipitate a more than proportionate increase in output.

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The trend variable came out with positive sign though not significant at 5 per cent confidence level. Finally, the dummy variable for adjustment programme (SAPD) came out with negative sign and it is significant at 5 per cent confidence level. This tends to suggest that the introduction of the structural adjustment programme (SAP) has precipitated a decline in the industrial output. Interest and exchange rate deregulation among others no doubt provided the various channels through which the adjustment programme can affect the industrial output.

The estimation results for industrial prices is presented in table 6.2. Equations (8a), (8b) and (8c) represent the restricted, complete and modified complete models for industrial prices. The structural change test for equation (8a) and (8b) yields 24.08 which suggests the presence of structural change between the two periods. The evidence of structural shift is present in the alteration of all the estimated parameters in equation (8b). The exchange rate elasticity increased in absolute term by approximately 69 per cent from 0.716 to 1.21. The structural shift test between equation (8a) – the restricted model and (8c) – the modified complete model that incorporates SAP dummy gives 61.102. This shows that there is structural shift between the periods before and after the structural adjustment programme. A

closer examination of the coefficients of equation (8a) vis-a vis those of equations (8b) and (8c) shows significant differences.

All the equations (8a - 8c) suggest that the relative price of intermediate inputs is a major determinant of industrial price level. In equation (8a), 1 per cent rise in the relative price of intermediate input increases industrial prices by 0.37 per cent. The corresponding figures for equations (8b) and (8c) are 1.57 and 1.85 per cent respectively. The increased value of the elasticities for equations (8b) and (8c) is clearly a manifestation of the effect of the introduction of such policies as interest and exchange rates deregulation. In fact, looking at equation (8a) one discovers that exchange rate which tended to moderate (though tentative as the coefficient is not significant) the rate of increase in industrial prices became a significant intensifier of increase in industrial prices as shown in equations (8b) and (8c).

Equations (8b) and (8c) show that 1 per cent increase in exchange rate increases industrial price by 1.21 and 1.45 per cent respectively. This result should not come as a surprise realising the fact that most of the industrial firms in Nigeria rely more on imported raw materials - the price of which are determined by the development in the foreign exchange market. The interest

rate variable apart from having its elasticity increased in equation (8b) and (8c) became a significant determinant of industrial prices. For example, the elasticity increased from 0.13 in the restricted model to 0.90 and 1.375 in the complete and modified complete models respectively.

The lagged industrial price level (P_t-1) has positive and of course significant relationship with present industrial price level (P_t). The coefficient of (P_t-1) is positive, as expected and indicated that the elasticity of industrial prices with respect to lagged industrial prices is positive and inelastic. This tends to support the assumption that price expectation are base on the current prices plus an adjustment base on the trend over last year. The dummy variable came out with the right sign but significant only at 10 per cent confidence level. It indicates that the adjustment programme increases industrial prices.

Table 6.3 presents the results for the employment equation. Equations (9a), (9b) and (9c) stand for restricted, complete and modified complete models respectively. The structural change test between equations (9a) and (9b) yield 18.3 indicating that structural change occurred between the periods being analysed. The coefficients of both equations (9a) and (9b) indicate that they are significantly different.

However, restricted model for employment shows a better specification than the complete model. This is shown in the adjusted value of the coefficient of multiple determination (R^{-2}) which dropped from 0.98 to 0.87. The same applies to the F-statistic. In fact, the restricted equation shows that wages, interest rate and industrial output are major determinants of employment in the industrial sector while industrial output and wages showed up as the major determinants of employment in complete model (equation 9b).

The inclusion of the dummy variable (SAPD) to account for the introduction of the structural adjustment programme improves the equation. The value of the adjusted coefficient of multiple determination (R^{-2} increased from 0.87 to 0.96. Industrial wages, industrial output, local sourcing variable and SAP dummy came out to be significant determinants of industrial employment. The structural shift test between equations (9a) and (9c) yields 19.018. This indicates that the null hypothesis can be rejected at 5-per cent confidence level showing that there is structural change between 1970 - 85 and 1986 - 90.

Some interesting points about the employment equation deserve special note. One, the wage elasticity of employment takes the positive rather than the expected

negative sign. A possible explanation for this could be that the oil boom of the 70s and early 80s which precipitated increased industrial activities created high growth industries whose labour demand seem to be wage inelastic. Indeed, this is consistent with the result obtained in equations 7a - 7c in which positive relationship is found between industrial output and wages. However, the import of the argument tends to be waning with the extension of the study period to 1990 - the period of adjustment programme. This is shown by the decreased value of the wage elasticity of employment in the complete and modified complete models (equations (9b) and (9c) respectively). Except in equation (9a) - the restricted model, where exchange rate elasticity of employment is positive, exchange rate and interest rate came out with expected signs though in most cases not significant. The positive exchange rate elasticity of employment in equation (9c) tends to suggest that the administratively fixed low exchange rate before the introduction of SAP encouraged employment. As shown in equation (9a), 1 per cent increases in exchange rate increase the employment level by 0.28 per cent. The sign for exchange rate however became negative in the complete and modified complete models (i.e equations 9b and 9c), showing that exchange rate has depressing effect on employment. Specifically, as indicated in equations (9b)

and (9c) 1 per cent increase in exchange rate precipitates 0.19 and 0.31 per cent decrease in employment for complete and modified complete models respectively.

Essentially, what this result suggests is that the introduction of SAP through various channels (exchange rate, local sourcing effect, interest rate effect, etc.,), might have escalated the production costs since all these variables constitute major inputs of the industrial sector which in turn discourage employment in the industrial sector. The import of the above assertion is better appreciated when one note that the SAP dummy and local sourcing of raw materials variables are statistically significant at 5 per cent confidence level and the exchange rate at 10 per cent confidence level.

Another important result of the estimation is the positive sign of the output variable. The elasticity of employment with respect to industrial output is positive but inelastic, 0.39, o.25 and 0.19 in equations (9a), (9b) and (9c) respectively. The result suggests that although increase in industrial output leads to increase in employment, this increase is not proportionate. A possible reason for this less than proportionate increase in employment as a result of an increase in industrial output could be the increasing use of capital intensive techniques of production which often increase output in

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significant proportion without increasing employment significantly. Finally, we tried to respecify the employment equation by incorporating lagged employment level just to see the relationship between lagged employment and current employment. The result as shown in the footnote indicates that lagged employment (E_{t-1}) has positive sign. The coefficient actually conforms to a priori expectation that the level of previous year employment increases the level of current employment though the increase is not proportionate. The positive relationship found between lagged employment and current employment might be a reflection of increase profits in the industrial sector and increased domestic demand precipitated by increase oil revenue all which culminated in an increase in output, the latter which led to creation of more jobs in the industrial sector. However, as the respecified equation 9(b') show (see the footnote[104]), the inclusion of SAP dummy and the

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[104]. The regression results is given as:

$EM = 9.26+0.28\ W+0.13\ ER-0.22\ R+0.426Y_N+0.371\ EM_{t-1}\ ....9'a)$
$(2.01)\ (4.12)\ (0.92)-(2.01)\ (2.17)\ (3.20)\ (3.20)$
$\bar{R}^2=0.97;\ F=146.21,\ Dh = 2.210,\ SSE = 0.00526 = 0.00526$

The respecified version of the model for the period 1970-90 with dummy variable SAPD to account for the introduction of SAP is:

$EM=7.2+0.12W-0.29ER-\ 0.14R\ +\ 0.32Y_N\ -\ 0.193E_{t-1}..\ \ (9b')$
$(1.89)\ (3.18)\ -\ (1-12)\ -\ (0.23)\ (2.15\ \ 1.62$
$\bar{R}^2 = 0.97\ \ F = 43.5\ \ Dh = 1.320\ \ SEE = 0.0418$

Figures shown in parentheses beneath the coefficient estimates are the t- values.

extension of the study period to 1990 reversed the sign of the lagged employment (E_{t-1}) to negative. This indicates that the last year employment reduces the present year employment. One might attribute this development to the various effects (exchange rate, interest rate, exchange rate scarcity and relative price of intermediate inputs) which became intensified with the introduction of the structural adjustment programme. But, this result is only suggestive as the coefficient is rather insignificant in the equation.

Table 6.4 shows the results for the capacity utilisation equation. Equation (10a) gives result for restricted model while equations (10b) and (10c) show the results for complete and modified complete models. The calculated structural shift test between equations (10a) and (10b) is 15.0. This shows that the alternative hypothesis can be accepted at 5 per cent confidence level which is indicative of structural shift during the period being analysed. Also, the structural shift test between equations (10a) and (10c) yields 7.231 indicating that structural shift occurred with the introduction of SAP. The foreign exchange scarcity measure and relative price of intermediate inputs (RPint) came out significantly with negative signs in all equations except in the

estimates   are the t-Values.

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restricted model where (RPint) was not significant.

A possible interpretation of this outcome is that increased foreign exchange scarcity in the industrial sector causes the cost of intermediate inputs to increase because the industrial firms concerned would have to meet some of the foreign exchange requirements by means other than buying in the official market, as such, limited supply of foreign exchange to the industrial sector is expected to reduce profitability, other things equal, such that the optimal output falls.

By similar reasoning relative price of intermediate input, and interest rate have negative signs though the coefficient of the latter came out insignificant in all the equations (10a-10c). As shown in equation (10a), 1 per cent increase in relative price of intermediate input reduces capacity utilisation by 0.12 per cent while 1 per cent increase in interest rate reduces capacity utilisation by 0.07 per cent. However, the value changed in equations (10b) and (10c). For example, in equation (10b), 1 per cent increase in relative price of intermediate input reduces capacity utilisation by 1.07 per cent while 1 per cent increase in interest rate reduces capacity utilisation by 0.32 per cent. These values increased further with the incorporation of the dummy variable for SAP. This result tends to suggest that interest rate deregulation and increased price of

intermediate input emanating from exchange rate depreciation have caused the industrial capacity utilisation level to fall.

The sign of the industrial price variable, suggests demand pull pressures on capacity utilisation. An increase in the industrial price level increases capacity utilisation by reducing the high input cost precipitated by exchange rate depreciation and foreign exchange scarcity. The local sourcing variable which came out with positive sign in equation (10a) - the restricted model has its sign reversed in equation (10b) and (10c). As it is, equation (10a) shows that 1 per cent increase in local sourcing variable precipitates 0.15 per cent increase in capacity utilisation though it failed to be statistically significant.

Equations (10b) and (10c) suggest that 1 per cent increase in local sourcing reduces capacity utilisation level by 0.54 and 0.42 per cent respectively. The reversion of the sign in equation (10b) and (10c) seems to suggest that adjustment programme has negatively affected the cost of sourcing raw materials locally. It is possible that the interest and exchange rates deregulation have affected the costs of local inputs which in turn feed into costs of production and thus decrease in output as well as capacity utilisation level. And in fact, the dummy variable in equation (10c) came

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out with negative sign suggesting that adjustment programme has adverse effect on capacity utilisation-an indication of negative shift. However, firm conclusion cannot be based on this as the variable failed to be statistically significant in the equation.

The result for production cost model is presented the table 6.5. Equations (11a), (11b) and (11c) represent the restricted, complete and modified complete models respectively. The structural shift test between equations (11a) and (11b) yields 41.98. This shows that the null hypothesis can be rejected at 5 per cent level. By implication, it means that there is structural change during the period being analysed. All the estimated coefficients of equations (11b) are completely different from those of equation (11a). Likewise, the structural shift test between the restricted model (equation 11a) and modified complete model (equation 11c) yields 7.231. It equally indicates the occurrence of structural shift between the two periods - 1970 - 85 and 1986 - 90. The inclusion of the dummy variable seems to make the specification better than equation (11b). This is, in fact, shown in the adjusted value of coefficient of multiple determination ($\bar{R}^2$). It increased from 0.97 to 0.99. A 95 per cent confidence intervals for the exchange rate and the relative price of intermediate input for equation (11a) - the restricted model are (-

5.5, 5.31) and (1.176, 0.0224) respectively while the values for equation (11c) with dummy variable are (0.27, 0.01) and (2,256, 0.484) respectively. A closer comparison of the intervals for the two periods shows a significant variations which suggests that equations (11a) and (11c) are not identical.

The results suggest several important findings. Exchange rate which performed poorly in equation (11a) - the restricted model, came out to be a significant factor in determining the production cost in both equations (11b) and (11c). This result no doubt confirm our conclusion raised under industrial output equation that exchange and interest rates deregulation caused output to decline through their effect on production costs. From equation (11a), 1 per cent increase in exchange rate leads to 0.08 per cent increase in production cost (though not statistically significant) however, the value changed both in equations (11b) and (11c). In equation (11b), 1 per cent increase in exchange rate leads to 0.21 per cent increase in production cost. The corresponding figure for equation (11c) is 0.14 per cent. The result is not unexpected as the massive depreciation of the Naira precipitated by the introduction of SFEM (now IFEM) is expected to increase production costs given the high dependence of the Nigerian industrial firms on imported raw materials for production.

Relative price of intermediate inputs and interest rate came out with the right signs in all the equations but the latter is not significant in both equations (11a), (11b) and (11c). Equation (11a) indicates that 1 percent rise in the relative price of intermediate inputs induces 0.7 per cent increase in production cost. The corresponding values for equations (11b) and (11c) are 1.46 and 1.37 per cent respectively. This shows that the production cost is highly sensitive to the price of intermediate input which indeed must have been affected by the depreciation of Naira. A variable whose sign is rather difficult to explain is the wage (W). A priori, a negative coefficient would be expected of (W), but our estimation shows wages (W) to be positive though not significantly related to production cost. Really, this result is highly compatible with the results obtained for equations (7a) - (7c) and (9a) - (9c) in which wage increase through its effect raises output which in turn precipitates increase employment and eventually reduction in production cost. This result, however, is only suggestive as the coefficient is statistically insignificant at 5 per cent confidence level.

Lastly, the dummy variable for SAP came out significantly with positive sign indicating that the implementation of SAP has led to increased production cost.

In all the estimated equations, structural shift occurred between the period before and after the structural adjustment programme. There were differences between the estimated parameters of the restricted and complete models in one hand and between the restricted and the modified complete model on the other.

The results equally showed that SAP policies such as exchange and interest rates deregulation produced adverse effects on the various industrial variables used for measuring industrial development in Nigeria. And for most of the estimated equations the SAP dummy came out with signs that were contrary to expectation. All these tend to suggest that the introduction of SAP has adversely affectedthe rate of industrial development in the economy. The results obtained here were quite consistent with those obtained from our survey work and cross sectional estimates.

CHAPTER SEVEN

SUMMARY AND CONCLUSIONS

As noted in the introductory chapter, the objectives of this study are evaluation of the impact of the structural adjustment programme on the industrial development using both firm-level and aggregate data on profitability, output, production cost, price, capacity utilisation and employment as well as the evaluation of the various adjustment strategies adopted by the firms during the adjustment period.

To meet the above stated objectives, we took a critical look at the Nigerian industrial sector and the current adjustment programme. This study vividly showed that the earliest manufacturing industries established in Nigeria were concentrated in the production of light industrial commodities such as detergents, soft drinks, leather works, etc. Also, we observed that most early factories in Nigeria were highly import dependent in terms of their raw materials need. Indeed, these distortions coupled with other imbalances in the economy dictated the adoption of the import substitution strategy at independence and thus the increased government participation in industry.

However, we observed that import substituting

industrialisation rather than actually ameliorating the distortions in the economy aggravated them. We noted in our assessment of the performance of the industrial sector before SAP that the import substitution strategy practiced between 1960-85 did not provide sustained stimulus to growth. Rather, it precipitated serious imbalances and distortions such as overvaluation of Naira exchange rate, high and growing inflation and unemployment, high demand for capital and intermediate imports and shortages of raw materials as well as consumer goods all which make the implementation of adjustment programme an inescapable necessity.

We observed that the Nigerian structural adjustment programme incorporated various policy measures to encourage accelerated development and the use of local materials and intermediate inputs, development and utilization of local technology, maximize growth of value-added and promote export oriented industries among others.

The above features of the industrial sector and the structural adjustment programme constitute the bases for the specification and empirical analyses in the later part of this thesis. For instance, the pervasiveness of the adjustment programme has made it necessary to study its impact on the economy especially on the industrial sector. Also, the objective of SAP in relation to

industrial sector as stipulated in the work had made us
select employment, output profitability, capacity
utilisation, local souring of raw materials among others
as the indices for measuring industrial performance in
the economy. In addition, the emphasis placed on
liberalisation both financial and foreign exchange had
made us to specify them distinctly in our equations.

The macroeconomic theories and issues in the
adjustment programme as well as previous empirical
studies on adjustment programme are reviewed as bases for
the empirical analyses. We observed, that by and large,
the neoclassical structural adjustment which preaches an
all-out 'outward orientation' and 'market orientation' as
the secret of successful development was premised on the
same logic as the classical theory except for its new
assumption that aggregate supply depends on relative
prices as against on quantities as postulated by the
keynesian. This, therefore, makes liberalisation the key
antidote to economic crisis and distortions. We equally
observed that the classical-neoclassical school is
antithetical to the keynesian-structuralists[27] school
which preaches higher protection, controls and further
government intervention in the economy.

We noted that considerable controversy surrounded
the appropriateness or otherwise of adopting
liberalisation and other SAP policies such as

devaluation, financial sector deregulation, absorption reduction policies and so on especially in the less developed countries. While the efficiency argument of liberalisation and other policies might be weighty, nonetheless, the weight of the argument reduces as soon as the issue of domestic structure and market imperfections, especially in the less developed countries, are advanced.

We equally observed that there might be no wisdom in conventional wisdom that devaluation is expansionary especially in LDCs where all economic activities are closely knitted to the exchange rate and where deviant behaviour abound. Thus, increase depreciation of a country currency may lead to inflation, unemployment and fall in output. The same argument went for domestic absorption reduction which could increase the cost of credit thereby ultimately reduce output as well as investment.

Even where each of these policies works as expected when adopted alone, it remains an empirical question whether or not interest and exchange rates deregulation and all other policies when set simultaneously will not have adverse effects on output, employment, production cost, capacity utilisation etc in the industrial sector due to inconsistencies and policy conflicts inherent in their simultaneous operation. It is this empirical

question that this study attempted to answer.

To provide a sound and adequate answer to the above empirical question, a survey of Nigerian manufacturing industries during the adjustment programme period was undertaken. This, is complemented by quantitative estimation of the impact of the programme on industrial sector of the economy.

The analysis of the survey exercise as well as the result of the 2SLS estimation for equations 1-6 are given. Our interviews showed that the managers perceived the adjustment programme as having negative impact on profitability, capacity utilisation, productive capacity, employment, industrial production costs, and sales. However, the degree of the impact of the programme depends on the nature of the industries - consumer good or producer good industries. In all, except one, that is, sales our calculated chi-squares, showed that there was close relationship between the SAP effects and the categories of manufacturing industries. The consumer good industries tend to be less negatively affected by the SAP policies.

Furthermore, our interviews along with scores on our questionnaire suggest that the adjustment programme enhances the opportunities to substitute local raw materials for imported raw materials. Also, that the manufacturing industries became more competitive both

external and internal. The identified unfavourable shocks included increased cost of working capital emanating from interest and exchange rates deregulation, unit labour cost rising more rapidly that the price of the products and changes in tariff system among others.

We observe that the managers greeted the adjustment programme with considerable skepticism. The responses of the managers showed that they did not respond to the adjustment programme instantly. However, despite the cautious attitude of the entrepreneurs, our survey work revealed that important adjustments - some tossing the line intended by the adjustment programme while some the reverse. The major adjustments that followed the line intended were increase in the quality of the produced goods, changes in the inventory decisions, changes in market strategy and greater caution in financial management. Those that worked contrary to expectation included increases in unit price of industries and reduction in labour force and increased cost of sourcing raw materials locally.

Also, from the quantitative estimation of the impact of SAP we found that exchange rate deregulation has negative impact on industrial development through its adverse effects on profitability, output, and capacity utilisation among others. We equally found that interest rate shock measured as the rate of financial cost to

total debts adversely affected industrial variables such as profitability, output, employment and unit prices of domestic manufacturing industries.

We equally discovered that foreign competition rather than serving as incentive to enhance increased production led to increased costs of production and unit price (through its impact of imported raw materials) and thus decrease in capacity utilisation. Lastly, accessibility to foreign exchange which formed the major plank of the adjustment has not be enhanced. This is evidenced in the negative relationship found between our measure of foreign exchange availability and industrial variables such as profitability, output, employment and capacity utilisation.

The structural shift test equations were estimated using the method of ordinary least squares estimation. The estimated equations all showed that there were presence of structural shift between the periods 1970 -85 and 1986 - 90. In all the estimated equations there were differences between the parameters of the restricted and the complete models in one hand and restricted and modified complete models on the other. Also, in almost all the equations, the SAP dummy came out with the wrong sign, that is sign that is contrary to expectationthough not significant in all, at 5 per cent confidence level. This suggests that the introduction of SAP has had a

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negative impact on industrial variables such as output, employment, unit price and the rest, though the result is not sacrosanct. We equally noted that exchange rate and interest rate variables which were distinctly specified in the equations came out with the negative sign suggesting that these variables has had adverse impact on the selected industrial variables used for measuring industrial development.

7.1   Policy Recommendations

From our findings summarized above, it is apparent that interest and exchange rates constitute the major vehicles for implementing the adjustment programme. It shows clearly that the success or otherwise of the programme depends largely on getting the two rates right in the economy.   Given this fact, it is relevant to address the implications of these findings for policy formulation.

One, based on the perception of the interviewees and the sign of the exchange rate variable in our estimated equations, the increased cost effect of exchange rate depreciation far exceeds the efficiency-improvement effect of trade liberalisation. In this regard, efforts should be directed at balancing equitably between the increased-price effect on raw materials of exchange rate

depreciation and efficiency improvement effect of trade liberalisation. To do this government needs to ensure that the realistic exchange rate of the Nigeria Naira is evolved. This means that the current system of exchange rate determination need to be improved upon.

As a way out, government needs to reduce the activities of the financial institutions especially commercial banks as the major actors in the foreign exchange market. This is important moreso that evidences showed that banks inproper bidding accounted for the current low value of Naira. Also, government should increase the supply of foreign exchange to the market so as to reduce the divergence between supply and demand which often cause the value of Naira to fall. However, the use of quantity of foreign exchange supplied to the IFEM should not be the only instrument of intervention. Government should interfere directly in moderating the rate where and when it is found expedient. This is important considering the stage our development and the role of foreign exchange in production activities of the economy.

Moreover, the allocation of foreign exchange through markets forces has not yielded the intended result. Rather, it has made it very costly and scarce especially to the manufacturing sector. In view of this, there is the need to base the allocation of the foreign exchange

on selectivity. This selectivity should be based on a number of criteria such as number of employment provided, the value added, sales etc. However, the successful operation of the system depends on the ability to block all the probable loopholes in the system[105].

To operationalize the system there is need for collaborative efforts between the central Bank of Nigeria (CBN) and the Manufacturers Association of Nigeria (MAN). The two should try to categorized all manufacturing industries according to which make impact on the macroeconomy, viz, export revenue earners, those producing basic consumer goods, employment level, local raw material components and the like. These factors should be ranked and the average found for each manufacturing industry: This will serve as basis for allocating foreign exchange to the manufacturing industries. In this way, the persistent fall in the value of Nigeria with the associated increase in domestic costs of production that results from current auction system will be minimized. However as most of the factors are not static, the calculated average for each manufacturing industry needs to be reviewed constantly to take account of possible growth over the years.

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105. This view has been expressed in our previous work on adjustment programmes see Akinlo, E. A. "African Domestic Structure, Deepning Crisis and the Current Adjustment Programme" African Development, Vol. xvi No. 2 1991 pp. 73-93.

Moreover, as the result shows that exchange rate deregulation increases the cost of sourcing raw materials locally, there is need to deemphasize the use of exchange rate as a measure for enforcing local raw materials sourcing by industries rather they should be encouraged to do so through incentives such as tax holiday, local raw materials sourcing rebate, etc which could reduce their costs of production. But where found expedient, a time table should be drawn for industries within which they should reduce their import content.

Furthermore, the result vividly showed that interest rate deregulation has serious implication for production in the Manufacturing sector. It increased their production costs as their stock of raw materials and intermediate components are financed through bank credit. This tends to suggest that credit policies should complement foreign exchange policy to ensure that allocations can be purchased. Policy makers should always intervene in moderating the high cost of credit precipitated by the financial sector deregulation. Concession should be given to manufacturing sector in the allocation of credit in view of its importance in the economy. However, this does not amount to suggesting that government should administratively fix the rate as was the case before the adjustment programme so as not bring back the culture of inefficient financial management.

7.2 Problem and Limitation of Study

The major problem of the study relates to the duration of the structural adjustment programme when the study took off. The programme was just three and half years old. Many policies and refinements have been introduced into the adjustment programme. However, the key policies still remain as such the various effects highlighted in our analyses will still hold. Moreover, this may not be a serious limitation as our study is a kind of formative research whose outcome is supposed to enhance the fine-tunning of the current programme and also in the formulation of new ones.

Another shortcoming of the study is that sufficient attention has not been paid to the roles of the leadership especially the implementors of the programme on its success or failure. The roles of leaders in the implementation of the programme has not been incorporated distinctly in view of the fact that the entrepreneurs may not want to respond to our questionnaire for the fear of been persecuted moreso that the formulators and implementors of the programme are still in power.

Another limitation of the study is the inability to quantify some of the policies such as DFFRI project and privatization policies in the adjustment programme. Most of the policies incorporated in the adjustment are difficult to quantify thereby making them to be

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unamendable to statistical test. In fact, this study
being one of the pioneer studies in this area, we have to
try with various measures of the relevant policies before
they are used especially in our cross-sectional data.

7.3 Conclusions

The limitation of the study enumerated above do not
in any way affect the veracity of our findings. However,
a study that incorporates the role of leadership and
attempt a statistical measure of more of the SAP policies
than we have done in this work probably offers a good
scope for improving the present study and its reports.
However, such refinements, as noted above, would only
qualify our findings rather than reverse it. Obviously,
these identified gaps provide good areas for future
research work on adjustment and the Nigerian
manufacturing industries.

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APPENDIX 1

QUESTIONNAIRE

STRUCTURAL ADJUSTMENT PROGRAMME (SAP) AND INDUSTRIAL
DEVELOPMENT IN NIGERIA: 1990

Official use only: ....

Date of Interview:...........

Dear Sir,

This research questionnaire aims at obtaining information regarding your firms for the purpose of private academic research in the department of Economics of Obafemi Awolowo University, Ile-Ife.

We appreciate the contributions of business like yours to the development of the Nigerian Economy and as such we intend to research into the impact of the Structural Adjustment Programme (SAP) on your firms with the aim of knowing those SAP policies that need adjustment and to fashion out policy measures that will enhance the survival and growth of such firms especially during the period of depression like this.

We need to assure you that the questionnaire is in no way connected with the government and/or taxation nor any attempt to probe unnecessarily into the operation of your firm. In view of this, your responses to the questionnaire will be treated with strictest confidence.

We sincerely appreciate your cooperation.

Thank you.

Tony Akinlo,

Research Co-ordinator

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PLEASE NOTE:

1. Your responses to the questionnaire will be treated with the strictest confidence.

A. INFORMATION ABOUT COMPANY

01. Year of Establishment...........................

02. What is the total installed capital?...........

03. What is the full capacity level of
    Employment?.....................................

04. What are your manufactured products?
List them according to the following numerical order.

1) ....

2) ....

3) ....

4) ....

5) Others specify

B. SOURCES OF SHOCKS

The structural adjustment programme changed the environment in which your firm operates. Below we consider separately favourable and unfavourable changes. Please evaluate the relative importance of these changes for your firm. In doing so please use the following codes:0 = not relevant;1 = not significant;3 = significant;4 = very significant.

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Favourable changes

    01   Better   access   to   working   capital
        financing........................

02   Better opportunities to buy foreign machinery and
      equipment not available before.................

03   Better opportunities to substitute local raw materials
      for imported raw materials................

04   Reductions in restrictions for importing raw materials
      ....

05   Relaxation of price controls over firm's products
      ....

06   Increase in export opportunities ....

07   Reduction in competition form international products...

08   Increase in earning resulting from increased exports.....

09   Increase in earning resulting from higher dollar value of
      Export Products...........................

10   Others (Please specify)...............................

Unfavourable

11   Increase in the cost of working capital................

12   Unit labour cost rising more rapidly than the price of
      the products...............................

13   Increase in prices of domestic raw materials greater than
      the increase in the price of products................

14   Changes in the tariff system.

C. REACTIONS TO THE SHOCKS

01   From these changes in the economic conditions that you identified as having a very significant impact (favourable or unfavourable) in your firm operation, list those to which you did not react because you thought they were temporary.

....

02   For the changes listed in C.01 above, for how much time starting at the moment of their inception did you think that they were temporary............................

03   If you thought that the shocks were temporary, what decisions were taken at your firm based on this perception.....................................

04   What was the approximate lag (in months) between the moment in which the adjustment policies were announced and/or implemented and the moment in which the main adjustment in your firm's operation began?...........

05   Did you find any ambiguities and/or contradictions in the announcements and/or implementation of the structural adjustment programme? If yes, please give one or two important examples and explain the impact that these ambiguities and/or contradictions had over the selection or implementation of adjustments in your firm's operations..............................

D ADJUSTMENT IN THE OPERATION OF THE FIRM

Please indicate the relative importance of adjustment listed below in terms of their impact on your net revenue using the following codes.

0 =not applicable; 1 =not important; 2 =somewhat important; 3 =important; 4 =very important. (Pleas add (-) if the impact was negative for example; 3-).

01.   Alteration   of   the   package   or   produced goods................

02. Changes in inventory policy................

03. Changes in product quality................

04. Changes in marketing strategy................

05. Changes in price decisions................

06. Reduction in labour force................

07. Greater caution in financial management................

08. Increase in investment................

09. Plant closing and/or line consolidation............

10. Changes in the composition of the labour force......

11. Improvement in the selection and training methods for workers of different skill categories................

12. Net change in Assets and/or liabilities...........

13. Competitiveness (internal and external)..............

14. Others (Please specify)................

E. SOURCES OF RAW MATERIALS

01. What is the source of your raw materials?.........

   i) Local Sourcing........................

  ii) Imported ....

 iii) Both (i) and (ii) ....

02. If (iii) E.01 please state the percentage of raw materials sourced locally in the following years.

   1984 before SAP....,........   1985 before SAP........

   1986 before SAP............   1987...................

   1988.....................   1989...................

   1990......................

03. What impact has SAP on your effort toward sourcing your raw materials locally?

   i.   Enhance

  ii.   Constrain

 iii.   No effect at all

  iv.   I cannot say

04. If constrained, which of these problems are responsible?

   1.   increased cost of procuring raw materials locally.

   2.   Inavailability of raw materials locally.

   3.   Low domestic demand for locally made goods.

   4.   Lack of necessary equipment for sourcing needed raw materials.

   5.   Others (please specify)

F. PRODUCTIVE CAPACITY AND CAPACITY UTILISATION

01. What is the position of your productive capacity level of production) since 1986 (i.e. after SAP)?

    i. increasing

    ii. decreasing

    iii. constant

02. If decreasing, please indicate the relative importance of the problems listed below using the following codes:

O =not applicable; 1= not important; 2 = somewhat important; 3 =important; 4 = very important.

    1. Lack of foreign exchange to procure raw material ....

    2. Increase cost of borrowing from banks ....

    3. Increase production cost which limit employment ....

    4. General decrease in demand which occasioned accumulation of inventories of finished products ....

    5. Changes in the tariff system....................

    6. Others (please specify)........................

03 Please indicate your actual productive capacity level in the following years 1984...... 1985....... 1986.......
1987....... 1988......... 1989...........1990.

G. EMPLOYMENT LEVEL

01. Categories of Actual Persons Employed:

	1985	1986	1987	1988	1989	1990
Employment for actual Production						
a. Production workers on the payroll list						
b. Non Production workers on payroll list						

02. Has there been retrenchment in your firm since the introduction of SAP? Yes...... No........

03. If yes, please indicate the number of people retrenched in the following year for these categories of workers.

1) skilled worker: 1984....... 1985........ 1986.......... 1987........... 1988......... 1989................... 1990.........

2) Unskilled worker: 1984....... 1985........ 1986......... 1987........... 1988......... 1989................... 1990........

04. Please indicate the relative importance of the underlisted reasons for retrenchment using the following codes:

O = not applicable; 1 = not important; 2 =somewhat important; 3 =important; 4 =very important

1. Increased cost of production (borrowing, labour, materials) ....

2. General decrease in demand which occasioned accumulation of inventories of finished goods ....

3. Lack of foreign exchange for raw materials importation ....

4. Changes in the tariff system...........................

5. Others (please specify)...........................

H. INDUSTRIAL PRODUCTION COST AND PRICING DECISIONS

01. What has been the trend of your production cost since 1986 (i.e after SAP)?

    i. increasing ii. decreasing iii. constant

02. Please indicate your total production cost for the following year

    1984 N................... 1985 N...............

    1986 N................... 1987 N...............

    1988 N................... 1989 N...............

03 If total production has been increasing rank the underlisted reasons according to their importance using the following codes:

0 = not applicable; 1 = not important; 2 = somewhat important;

3= important; 4 = very important

1. increased cost of credit

2. the high exchange rate

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3.   raw material scarcities

4.   others (please specify)

04   What impact, if any, has the increased production cost on
     the unit price of your product?

     i) increased   ii) decrease   iii) none   iv) I do not
know

05   Please indicate the unit price(s) of your two main
     products for the following years.

Product	1984	1985	1986	1987	1988	1999	1990

06   What is the impact on your sales?

     i)   increasing

     ii) decreasing

     iii) constant

     iv) I do not know

07   What is the impact on your profit level?

     i)   increasing

     ii) decreasing

     iii) constant

     iv) I do not know

08　Please indicate your after-tax-profit level for the following years: 1984 N....... 1985　N....... 1986 N...... 1987 N.... 1988　N..... 1989　N..... 1990 'N......

09　Please indicate how your firm compares with its competitors in terms of each of the followig items using the appropriate code:

0=irrlevant;　1=less　competitive;　2=equal;　3=more competitive.

		Before the reform 0 1 2 3	After the reform 0 1 2 3
a)	Product prices	0 1 2 3	0 1 2 3
b)	Product quality	0 1 2 3	0 1 2 3
c)	Quality control	0 1 2 3	0 1 2 3
d)	Scales of production	0 1 2 3	0 1 2 3
e)	Marketing and Administration	0 1 2 3	0 1 2 3
f)	Financial Management	0 1 2 3	0 1 2 3

10.　Please rank the following factors according to their importance.

0=not applicable; 1=not important; 2=somewhat important; 3=important; 4=very important.

a)   Maintaining market share

b)   Fulfilment of salary and
     employment rules

c)   Competition among domestic
     producers.

d)   Cost of capital and raw
     materials

e)   Import competition.

11. Using the code as in H.10 above, please rank those
     factors which have contributed to your continuing
     participation in the market.

     a)   Sales   ....

     b)   Advertising   ....

     c)   Changes in quality of products   ....

     d)   Competitive prices   ....

     e)   Any other (please specify)   ....

1. GENERAL

01. What are your views about the following SAP policies as they affect your production activities?

The current tariff structure .   Good.....

Just fair.....

Bad..........

Extremely Bad......

Interest rate deregulation

Good..........

Just fair.....

Bad..........

Extremely Bad......

SFEM (now FEM)

Good..........

Just fair.....

Bad..........

Extremely Bad......

SAP PACKAGE   Good..........

Just fair.....

Bad..........

Extremely Bad......

02. Justify your view(s) in 1.01 (1-4) in the light of
    current industrial development in Nigeria.

1. Concerning current tarrif structure:.................
    ....
    ....

2. Concerning interest rate deregulation:..............
    ....
    ....

3. Concerning SFEM (now FEM):.........................
    ....
    ....

4. Concerning SAP generally:..........................
    ....