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INDIGENOUS INSTITUTIONS AND INDUSTRIAL DEVELOPMENT IN EASTERN NIGERIA

April, 1995

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INDIGENOUS INSTITUTIONS AND INDUSTRIAL DEVELOPMENT IN EASTERN NIGERIA

IRIS SUMMARY

Over the past decade, global recession, regional economic crisis and the widespread imposition of austerity policies made the environment for industrial development in most of Sub-Saharan Africa quite bleak. Yet during the same period, in Nnewi, the rural town where I did fieldwork in late 1991 and again in 1994, twenty-three modern, medium-sized factories went into production between 1983 and 1991, creating more than 2500 new jobs. Nigerians now call this and other clusters of vibrant new industries in eastern Nigeria "the Taiwan of Africa."

Where governments are unable to offer the supportive environment usually deemed necessary for domestic industrial development, the case of Nnewi Township shows that alternative possibilities exist for local regions to reduce the comparatively high costs created by market *and* government failures, costs that make African production prohibitively expensive. Entrepreneurs in Nnewi have reduced the transaction costs faced by other entrepreneurs in Nigeria, through alternative, culturally-based institutions that act as sophisticated networks that reduced information uncertainties and agency problems. Making the transition from trade to production meant that all kinds of costs were lower for Nnewi entrepreneurs than for first time businesspeople. They brought into manufacturing business skills, resources, and even personnel accumulated in trade, and this lowered the risks. Many of the traders owned their own transport, and this reduced transaction costs associated with shipping. A third of these entrepreneurs decided to produce one of the primary products they had specialized in as traders, and they continued to distribute their product through their

preexisting distribution network. This was an exceptional boon, for it reduced all kinds of transaction costs other industrialists would face: lack of information about markets, contract negotiations and enforcement with distributors. These industrialists knew the market intimately and are in an excellent position to uncover and take advantage of new opportunities.

Furthermore, by locating their factories not in the industrial centers of Nigeria, but on family-owned land in a remote township, they have avoided the property rights insecurities that have plagued Nigerian investors. They have also undertaken the private provision of many of the public goods Nigeria's government fails to provide: water, power supply, and telecommunications.

What are the possible policy implications for Nigeria and for AID? In part, the study suggests that conditions do not need to be ideal for traders who have accumulated capital through trade to move into industry, as long as the would-be industrialists (1) feel secure about their property rights; (2) have access through fairly trusted sources to reliable information about intermediate level foreign production technologies and ways to obtain them; and (3) have reasonable macroeconomic stability (new investments declined sharply when the government proved unable to keep to strict fiscal and monetary targets). Entrepreneurs interviewed for this study stressed that regional clusters of industry such as theirs in Nnewi could also be supported by policy shifts such as the recent encouragement of universities and research institutes to earn funding through local consulting, through the maintenance of existing infrastructure (roads and electricity), and through continued government support of skill-building primary education.

C

I. INTRODUCTION

Over the past decade, global recession, regional economic crisis and the widespread imposition of austerity policies made the environment for industrial development in most of Sub-Saharan Africa quite bleak. Between 1980 and 1987, for example, manufacturing output fell in Nigeria by an average 4.4 percent per year, real output dropped by 25 percent from 1982-1986 alone.[1]

Yet during the same period, in the eastern region of Nigeria, an industrial boom was underway. In Nnewi, the rural town where I did fieldwork in late 1991 and again in 1994, thirteen medium-sized factories went into production between 1983 and 1987, and a further ten between 1988 and 1991, creating more than 2500 new jobs. Nigerians now call this and other clusters of vibrant new industries in eastern Nigeria "the Taiwan of Africa;" some are confident enough to call the area Nigeria's Japan.[2] What explains this growth? Why here, why now? Will it last?

The timing, scope, and sustainability of industrialization are critical issues for development theory and practice, and yet there is little agreement on the reasons why some groups, some regions and some states establish a prosperous manufacturing sector, and some do not. The development of an apparently healthy cluster of factories and related services in eastern Nigeria presents some puzzles. Although this area is an outlier in the current statistics of industrial development in Africa, I offer it as a relevant case, drawing on Oliver Williamson's reasoning that "the study of extreme instances often provides important leads to the essentials of the situation."[3]

This paper uses some of the insights from institutional economics to explain the case

of industrial development in eastern Nigeria. I argue in this paper that this cluster of capitalists in eastern Nigeria has "substituted for the state," i.e. they have successfully filled the gaps left by failures of both the market and the state. In particular, they have reduced the transaction costs faced by other entrepreneurs in Nigeria, through alternative, culturally-based institutions that act as sophisticated networks that reduce information uncertainties and agency problems. They have also undertaken the private provision of many of the public goods Nigeria's government fails to provide: water, power supply, and telecommunications. Furthermore, eastern Nigeria's capitalists have reduced the costs of learning to industrialize, relative to other regions. They have done this both through their own local institutions and organizations, and their own international linkages.

In the next section I introduce the case of Nnewi Township in eastern Nigeria. I then explore three alternative explanations for the apparently successful industrialization in eastern Nigeria, concluding that none of these approaches is sufficient to explain how industry developed in eastern Nigeria. I then introduce the concept of transaction costs and outline the local and international factors that served to reduce the costs of industrialization for Nnewi traders. I conclude with some suggestions for the literature on comparative industrialization in Africa.

II. THE CASE OF NNEWI TOWNSHIP

A. Context of Nigerian Policy at the Time

During the 1970s, using windfall revenues from the OPEC oil boom, the federal government of Nigeria stepped up its promotion of indigenous, import substitution

industrialization. Industrial promotion policies were dominated by two main strategies: the promotion of local participation (state and private) in previously foreign-dominated industries, and the general protection of industries through trade policies.

Promotion of local participation relied mainly on the two indigenization decrees of 1972 and 1977.[4] The 1972 Enterprise Promotion Decree divided Nigerian economic activities into three sectors: Schedule I activities (retail trade, small-scale manufacturing and service activities) were henceforth reserved for Nigerians; Schedule II activities (intermediate scale) required a minimum of 40 percent Nigerian equity participation; all remaining economic activities (generally, those with large scale, higher risk, and greater technology and management requirements) were unaffected by the first decree.[5] The 1977 Enterprise Promotion Decree almost doubled the number of activities covered by Schedules I and II, raised the minimum equity participation to 60 percent in Schedule II firms, and extended requirements for a minimum of 40 percent local equity participation to all remaining foreign firms in Nigeria.

To protect new and existing industries, the government strengthened tariff and nontariff barriers. Quotas were established for many goods, and import licenses made it difficult for those without political connections to gain access to foreign exchange. Many traders who are now industrialists indicated that they first began to think about going into production themselves when the system of import licenses raised their costs of business and increased uncertainty. Between 1965 and 1980, manufacturing grew at an average annual rate of 15 percent, although much of this was capital intensive.[6] Capital was cheap, the naira increasingly overvalued, and most of this industrial development was heavily dependent

on imported inputs.

In the early 1980s, oil prices slumped, and the Nigerian government began borrowing on a massive scale to maintain its level of public infrastructure investment. In 1982, the civilian government implemented an austerity program. Tariffs were increased, and quotas extended to a wide range of imports, while the increasingly overvalued naira became more and more difficult to obtain for importers without special contacts. As one manufacturer described it, under the import license system, "someone with connections would get the import license and then sell it to someone else. It would turn over past five or six people before you could purchase it." Another added: "the fate of a company before depended on the man in the government office. Import licenses were vital. It was death not to have it, but it was costly to hang around to obtain it." The margin between the official and parallel foreign exchange rates reached 250 percent in 1985, and manufacturing went into a steep decline, dropping by 26 percent between 1982 and 1986.[7]

The austerity program had some effect: the federal deficit dropped from 10% of GDP in 1983 to 3% in 1985, but in 1986, world oil prices dropped to half their former level. The balance of payments worsened, and the government was no longer able to finance its payments gap on the international market. In July 1986, Nigeria began a structural adjustment program which eventually received World Bank financing, and an IMF stamp of approval which reopened international lines of credit.

As part of the structural adjustment program, Nigeria devalued the naira by 66 percent and liberalized imports, eliminating import licenses. Foreign exchange became relatively easier to obtain, although the auctioning system created premia for the banks.

leading to massive financial speculation. In 1986/87 manufacturing began a weak recovery, growing by 5 percent, increasing to 8 percent in 1988, but public sector wage renegotiations in 1988 and unrestrained government spending coupled with expansion of the money supply led to inflation rates of 50 percent toward the end of 1988.[8] By 1989, aggregate industrial output experienced virtually zero growth as credit was tightened, foreign exchange became more difficult to obtain, and domestic demand plummeted even further. After improving briefly in 1990, conditions worsened later in the year and in 1991, as the higher oil prices accompanying the Gulf war coupled with political imperatives related to the transition to civilian rule led to yet another collapse of fiscal and monetary discipline. Nigeria's structural adjustment program remained off-track through the failed political transition and the internal coup that brought General Sani Abacha to power in 1993.

This brief picture leaves out many details but the overall impression of wild swings and instability in government policy and the macroeconomic environment is accurate. In the face of this environment, the sustained industrial development in Nnewi is all the more striking.[9]

B. Industry in Nnewi Township

The dense population of eastern Nigeria (Anambra and Imo states have populations of around 7 and 9 million, respectively --larger than many African countries) created pressures for income earning activities outside of agriculture. Communal property rights associated with traditional land tenure systems prevented land and property investments, and so many Igbos ventured into trade. The poor economic prospects may have made Igbo families more

receptive to the foreign missionaries who arrived in eastern Nigeria in the 19th century, and many gained a primary education.[10] The Igbo were also receptive to the European traders who came to eastern Nigeria in search of tropical commodities such as palm oil.[11] During the colonial period, many Igbos left eastern Nigeria and established shops and trading outlets in other parts of West Africa. Informal institutional constraints regulating marriage among the Igbo strongly encourage endogamy (marriage within the group), which served to concentrate information, skills, and wealth, and "enhanced control over flows of information, goods, skills, wealth, and connections essential for a viable business community."[12] At the turn of the century, Nnewi entrepreneurs entered the palm oil market, collecting and transporting palm oil, and later, once motor transport reached Nigeria, they invested in vehicles for general transport.[13] Over the next few decades, Nnewi indigenes came to dominate the private transport market.

The initial investment in transport vehicles made later decisions to import and market spare parts a logical next step. Although at first spare parts were imported primarily from Europe, soon Asian entrepreneurs had penetrated the market and were offering to produce copies, counterfeit and other, of the brand name parts. As a history of Nnewi described it, "People from Taiwan come to Nnewi to buy motor parts which, on return, they reproduce, though their reproductions have been generally of quality lesser than the original.[14] These "people from Taiwan" gave their Nigerian distributors helpful advice on strengthening their distribution systems. Over the years, Nnewi entrepreneurs established a national network of spare parts distribution and sales along lineage lines, with relatives clustered at the center of each web of distribution, and non-relatives at the borders.

The Biafra war that divided Nigeria between 1966 and 1970, forced an accelerated industrialization on eastern Nigeria, cut off by blockades and embargoes from the outside world. Nnewi was home to one of the leaders of the independence movement, and Nnewi's first factory, the aluminum foundry, served the war effort. The war was a major historical event in eastern Nigeria. Many Igbo at the time likened their region to Israel, a David under siege by Goliath. After the war ended, the federal government invested oil revenues in eastern Nigeria, in attempts at reconciliation. Like some other losers of wars -- Germany, Italy, and Japan -- and like some other regions that remained under explicit or implicit threat from larger, more powerful neighbors -- Taiwan, South Korea, Hong Kong, Singapore -- the defeated easterners channelled their energies in economic directions.

During and after the civil war, many of these Igbo entrepreneurs returned to Eastern Nigeria, giving the area a high concentration of transport and imported spare parts businesses. After 1970, Nnewi motor parts traders began marketing their own brand name products, generally made in Taiwan. Until 1983, Nnewi remained known primarily for its extraordinarily active and extensive motor parts market, where entrepreneurs were organized into associations representing sellers of "new" and "old" (used) motor parts. Small-scale, informal enterprises, primarily service-oriented, dotted the urban streets and one large factory, an aluminum foundry, provided additional employment. In 1983, however, a relatively sustained industrial boom began in Nnewi.[15] By the time the structural adjustment program was implemented in 1986, a number of Nnewi traders had shifted into manufacturing (Table 1). In some cases, these were people who had already outgrown the motor parts market in Nnewi, and had shifted their main offices to Lagos. When they began

manufacturing, however, they came home and established their factories in the heart of Igboland, in an environment where they felt they had more control over the many unknowns involved in the transition.

Table 1: Date of production start-up, Nnewi LGA Factories

Date	Before 1983	1983-1984	1985-1986	1987-1988	1989-1990	After 1990
Spare parts factories	0	0	2	6	0	1
Total factories	1	4	4	12	3	3

Between 1983 and 1987, Nnewi entrepreneurs established eleven separate factories, producing primarily motor parts: brake pads and linings, rubber fan belts, automotive cables, automotive oil filters, and assorted clear and colored plastic auto parts. Two small engineering firms and a cement factory were also established, in part to provide services and inputs to the growing industrial sector. By 1991, twenty-one factories were in operation, and an additional engineering shop had joined the first two. Almost half of the factories continued to produce motor parts (now expanded into brake fluid, car batteries, Peugeot front grills, hub caps, rear view mirrors, plastic motorcycle fenders, wheel block sleeves, bolts and coupling pins). The others produced primarily non-automotive items.[16]

Few of the manufacturers had any technical expertise, and they have relied on contracted technical assistance, generally from the manufacturers of the equipment and machinery they import. In addition, many had sent workers to Taiwan or other Asian

countries for on-the-job training (apprenticeships) while their Nigerian factories were being built. The technical assistance received from external and internal sources seems adequate. None of the factories were currently employing foreign experts when I visited; many had hired Nigerian engineers. Together with the local engineering firms, these manufacturers have moved beyond merely being able to run the plant; they can repair and maintain it locally, in some cases they are able to reproduce the technology (reverse engineering) and in a few cases, to adapt and improve it. Many of these enterprises started quite small. Of twenty-one factories and three engineering firms, almost half had 20 workers or fewer at start-up.[17] By the time of my visit, the average number of workers was close to 100 per factory; with the exception of the three engineering firms, only one factory, a traditional agroindustrial venture, still had 20 or fewer workers. These factories almost always began formally, sometimes registering their businesses several years before beginning production. More than half of these firms have grown significantly since being established, and many of the industrialists described additional product lines they planned to expand into, pointing to formal feasibility studies or the ongoing construction of a new factory site.

Although on the whole these firms are import-substituting rather than export-oriented, fourteen of the entrepreneurs remarked that their products are exported (unofficially) by local traders. One of these mentioned that he advertised his products in the Abidjan telephone book, although he claimed not to be exporting. Official exports are discouraged within the region by high protective tariffs in neighboring countries and the high costs and risks involved in financing exports to countries with nonconvertible currencies. Some firms in attempting to promote official exports in other West African countries find they are in

competition with their own products, which can be smuggled in much more cheaply. Three factories were exporting officially, and had sent brake linings, brake pads, front grills, hubcaps and autolamp lenses to Egypt, Kenya, Dubai, and the U.K, and palm oil cake to the EEC.[18]

Clearly this is a picture of a dynamic cluster of manufacturing enterprises in Nnewi Township. But this brief portrait leaves many puzzles. In the next section I examine alternative explanations for the development of industry in this region of eastern Nigeria.

III. ALTERNATIVE EXPLANATIONS

The literature on comparative industrialization generally stresses one or another of three typical explanations for industrial growth and performance. In this section I explore the neoclassical approach, which locates explanations at the level of the market and price incentives; political economy approaches, which currently ascribe Africa's economic failures (and successes) to state action; socio-cultural approaches, which consider the norms and values of different ethnic groups.

A. Neoclassical explanation

When I first heard about the rapid industrialization of Nnewi and the surrounding area of eastern Nigeria I wondered if this was the elusive supply response to the program of economic liberalization and deregulation implemented in Nigeria after the July 1986 adoption of SAP, the structural adjustment program. Nigeria had devalued the naira, liberalized the trading system, and generally unleashed the "magic of the market." In principle, prices were

more "right" after the adoption of SAP. Could economic adjustment and liberalization be responsible for this surge of new investment? Had SAP changed the incentives so that industry was now more attractive, relative to trade?

A closer look suggests that economic liberalization does not adequately explain the Nnewi industrialization. It is particular problematic with regards to timing. Eight of the 23 factories I visited had gone into production *before* the government announced its structural adjustment program. Another six began production in the first year after the implementation of SAP, but all six factories had been planned or actively in construction at least two years before the implementation of SAP. Furthermore, the progress of Nigeria's SAP has been uneven at best, with government deficits pushing spirals of inflation, and sporadic efforts to control the downward march of the naira that have led to significantly overvalued exchange rates. The liberalization of trade, combined with the overvalued exchange rate ought to encourage expanded trade rather than production. Indeed, a World Bank report stated in 1990 that "little investment has actually taken place in the last three years" in Nigeria,[19] and another report stated in 1993 that "industry lags far behind profitability in trade."[20] Government officials concurred, stating in a 1992 interview with the Financial Times that Nigerian businessmen were "not yet ready to invest in manufacturing; they prefer fast-moving, high-return activities" such as finance and trade.[21]

At most, one can point to the "unbalanced development" impact of alternating periods of foreign exchange and import controls with periods of import and foreign exchange liberalization. Albert Hirschman described this phenomenon in his classic 1968 article:

> As is the case for the start of late industrialization, so will the continuation of the process through backward linkage be strongly influenced by the industrializing country's balance of payments. The opposition of the initial industrialists to backward linkage investments is likely to be considerably reduced if they occasionally experience curtailments, due to foreign exchange shortages, in the flow of imported inputs; on the other hand, the backward linkage investments require availability of foreign exchange for the importation of machinery. Consequently it is likely that some alternation of foreign exchange stringency and abundance would be optimal from the point of view of generating both the motivation and the resources required for the process.[22]

In this rationale, the periods of foreign exchange stringency (in particular, the austerity period preceding the 1986 devaluation) and the post-1986 liberalization's relative abundance would complement each other in stimulating the development of backward linkages such as Nnewi's motor spare parts industry. In addition, the devaluation of the naira under the SAP made imports more expensive and local demand for Nnewi's products rose as customers shifted to lower cost, lower quality, locally-available products. These incentives were undoubtably important. Yet if industrialization in the East is in fact a response to this pattern of incentives provided through stringency, and then liberalization and adjustment, why is it happening there and not in most other areas of Nigeria?

B. Political Economy Explanations: Developmental and Captured States

Given the constraints to manufacturing present in Nigeria: an unpredictable and unstable macroeconomic environment, insecure property rights and a weak rule of law, conventional wisdom suggests that trade is indeed likely to be more profitable than industry. Douglass North suggests that under these conditions, only firms directly "under the umbrella

of government protection" will invest to any significant degree in fixed capital.[23] Frameworks that emphasize the state all consider domestic economic policy and state intervention to be critical in understanding and explaining transitions from trade or other economic activities to industry. There are two dominant views of the state and its role in industrialization, and they differ according to the presence or absence of state autonomy, and the role given to state capacity. I group these as (1) the developmental state, and (2) the captured state.

(1) The Developmental State. Developmental state approaches introduce the state as a critical actor in establishing an "enabling environment" for industrialization. The developmental state enforces stability in important macroeconomic parameters. It provides the roads, power supply, and skills-based education that underpin private sector productivity. It has clear goals, and possesses the policy instruments to channel private sector activity in accordance with national economic goals. The institutional arrangements of the state: an autonomous technocracy, a capable trade administration, solve collective action problems, allowing win-win solutions to the gnarly problems of economic restructuring. Wade, Amsden and others have made a strong case for the developmental state as a critical factor in the impressive performance of the East Asian NICs.[24]

Paul Collins alluded to a developmental state explanation when he suggested in 1984 that the renewed interest in industrialization evident in Nigeria during the early 1980s was due to "the more decisive and meaningful state indicative planning that has emerged of late."[25] During the 1970s, the federal government did create a policy and incentive

environment that stimulated interest in manufacturing. British colonialism had predisposed Nigerians to regard government service as the occupation of choice for educated youth. However, during the 1970s the federal government began pushing for the growth of indigenous industry. The two indigenization decrees symbolized this objective. They were followed by a government media campaign encouraging Nigerians to invest in domestic manufacturing. By the start of the 1980s, manufacturing had noticeably gained in prestige.[26] At the same time, incentives were changing. The imposition of import licenses and the increased difficulty Igbo traders faced gaining access to foreign exchange as the government tried to limit demand through its austerity programs of the late 1970s and early 1980s gave many traders reason to think seriously about manufacturing.[27]

(2) The Captured State. Public choice theory, pluralist theories, and neo-Marxists all consider the state primarily as a source of support and succor for favored groups and classes within society. Pluralist theories might suggest that accelerated industrialization in eastern Nigeria is due to the capture of the state by interests that favored eastern Nigeria's growth over that of other areas of Nigeria, and that gave it favorable access to resources and protection. Instrumentalist or neo-Marxist theories also assume that the state is captured, but in this case an entire class exercises hegemony through the state.[28] While state policy may appear to undermine or support particular fractions of the capitalist class such as those in eastern Nigeria, this may be necessary to preserve the long-term interests of the class as a whole. Public choice theory also might assume that accelerated development in one area is due to the success of its particular interest groups in capturing special advantages or rents

through lobbying, bribery, and votes. However, neither the developmental state, nor the captured state explains industrial development in eastern Nigeria. First, despite Paul Collin's encouraging analysis, Nigeria is far from being a developmental state. Sayre Schatz's 1977 indictment of the Nigerian style of capitalism as "pirate" rather than "nurture" capitalism is closer to the truth. The wide swings in key macroeconomic parameters, the corruption, and the statistics of overall manufacturing output, as it declined by 4% per year from 1980 to 1987 do not support a view of policies favoring general industrial development.

It is equally unlikely that groups or classes from eastern Nigeria captured the Nigerian state for their own ends. Eastern Nigeria, known for four brief years as Biafra, is the home of one of Nigeria's dominant ethnic groups, the Igbo, and relations between a succession of northern-dominated governments and eastern Igbo businessmen have a history of tension and distance. The explanation of industrial development in eastern Nigeria cannot be traced directly to the federal government.

Within the state-oriented approach, however, there is another alternative. Recent work on industrial clusters, districts, and regions such as Baden Würtenberg in Germany, Sakaki Township in Japan, and Emilia Romagna in Italy point to the important influence of regional and municipal governments, in addition to, or instead of, national governments, in providing an enabling environment, establishing supportive institutions and public goods, and encouraging industrialization.[29] It is possible that the state governments of Anambra, Imo and Abia states, dominated by members of the local ethnic group, are able to offer support where the federal government does not. Yet although the state government does offer some services to industrialists in eastern Nigeria, few if any were directly helpful to Nnewi

industries. States control loan funds from the Fund for Small-Scale Industries (FUSSI), yet none of the entrepreneurs had received a FUSSI loan. When I asked what assistance the Anambra state government had given to medium and large-scale industries, a representative of the state ministry of industry answered: "the state assists them by investing in them, for example, the flour mill at Emene, Niger gas, and the aluminum factory near Nsukka." These three examples are all state-owned enterprises, and it appears that state officials had yet to be completely convinced that the future for industry in their area lies with the private sector.

C. Socio-cultural Explanation

A third general set of explanations draws on socio-cultural variables. Societal approaches argue that decisions to invest for production and not only exchange are shaped not by price incentives and purposive state action alone, but by social values, taboos, customs and beliefs. Variations on the socio-cultural theme have been invoked to explain manufacturing prowess in East Asia on the basis of alleged differences in management that reduce "x-inefficiencies," and to explain the original emergence of capitalism in Western Europe, as Max Weber contended in *The Protestant Ethic and the Spirit of Capitalism*. Some scholars have attributed the commercial success of outsider ethnic groups -- Mauritanians in Senegal, Asians in East Africa, Lebanese in West Africa, as well as the Chinese in Southeast Asia and the Jews in Europe -- to social factors engendered in the process of economic migration, or exclusion from other activities such as farming or crafts.

Frameworks that purport to explain capitalism and the transition to industry through

the cultural dynamics of religion, minority status or the particular properties of an ethnic group have intuitive appeal, yet in the case of Nnewi, they fall short of explaining some of the puzzles of the case. For example, cultural frameworks may help to explain the entry into trade, but they don't explain why successful traders made the transition to industrial production. Nor do they explain why this industrial transition happened specifically in Nnewi, in the ancestral homeland of the Nnewi Igbo people, not in many other Igbo cities, or the cities in other areas of Nigeria and abroad where the Igbo were making their trading fortunes. All of these wrinkles make it difficult to rely on sociocultural frameworks alone for explanatory power in cases such as eastern Nigeria. Why in Nnewi Township did a significant number of traders begin moving into industrial production? And why did Nnewi motor parts traders begin to make the industrial transition during Nigeria's worst economic crisis since independence?

III. AN INSTITUTIONAL EXPLANATION

The explanation advanced in this paper relies on insights offered by the "new institutional economics," recent work in competitive advantage, and the idea of the international product cycle. Let me outline some of those insights as they shape the argument of this paper.

First, institutional economics, in particular, the work of Douglass North, Ronald Coase, and Oliver Williamson recognizes that the costs of both production and exchange are affected by the asymmetries of information held by buyers and sellers, or by bosses (principals) and their employees (agents), as well as by unspecified property rights. Two

particular problems: adverse selection and moral hazard typify these information asymmetries. Adverse selection describes a transaction involving items that may vary widely in quality, where the seller has better information than the buyer regarding the quality of a particular good or service. In some types of markets, such as that for health insurance, if premiums are set based on the actual risk, than those individuals who are particularly unhealthy will have a greater incentive to buy insurance than those who are particularly healthy, a situation which the insurance company wants to avoid. Moral hazard is a parallel problem of information uncertainty. As Oliver Williamson has suggested, moral hazard is equivalent to opportunism.[30] It arises when one party to a contract, such as an employer is unable fully to monitor or control the actions of the second party, an employee, who can take advantage of the other party by acting in ways that reduce the first party's returns from their agreement. In an exchange, costs incurred to overcome adverse selection and moral hazard involve the time required to gather information about the quality of the product that is offered, the reliability of the seller or buyer; negotiation costs, as well as insurance against risk, fees that may be involved, and enforcement costs. In production, these costs include supervising workers, monitoring inputs and outputs, and controlling quality.[31]

To the degree that formal and informal rules (institutions), other intangibles such as morale or ideology; school, family or ethnic group ties, or trust-enhancing repetitions of an exchange over time reduce risk and uncertainty, or reduce the need for monitoring, research and information gathering, these transaction and transformation costs will be lowered. Governments can raise or lower these costs through the choice of labor laws and the enforcement of property rights, through telecommunications and roads that affect queuing

and waiting time, through public power supply and its effect on production downtime, and through business regulations and the customary level of bribery or the time consuming number of visits they entail. This web of institutional constraints and transaction costs shapes the kinds of economic and political organizations that ensue. In particular, they shape the boundaries of the firm, and as we shall see in a moment, they shaped the firms of Nnewi.

In addition, recent work on competitive advantage, in particular, the work of Michael Porter, points to the importance of geographically-based "clusters" of firms in related and different industries.[32] Porter's explanation of competitive advantage highlights the role of domestic rivalry and geographic industry concentration, arguing that these networks or clusters of new and traditional industries create a local synergy, which may translate into shared provision of infrastructure, or multiple "vertical (buyer/supplier) or horizontal (common customers, technology, channels, etc.) relationships."[33]

These clusters of industries facilitate the exchange of ideas and information, and the diffusion of innovations, while proximity also supports the active rivalry that goads firms into keeping up with their neighbors. "Efforts to explain the competitiveness of *an entire nation* have been unconvincing," he states, adding that "attempting to do so is tackling the wrong question."[34] Economic indicators on the national level may conceal important developments on a local level. These aspects of Porter's work fit into a transaction costs framework; geographic proximity clearly reduces information costs of all kinds. Information travels more quickly through networks not only of producers, but the interconnected networks of distributors and also of ethnicity and family.

Finally, international contracts and relationships also served to reduce transaction costs for Nnewi industrialists. Institutional linkages have an international dimension in Nnewi, particularly the ties established and channels formed through long-standing exchange relationships between business groups in Asia and in West Africa.[35] Exporters and importers in relatively open economies are particularly likely to form significant international connections. The long-term, personal relationships these linkages represent can significantly affect the cost of transactions involved in the import of technology from abroad, and repeated visits to trading partners' home factories can provide importers with considerable familiarity with production at the current stage of the product cycle, greatly facilitating the eventual importation of the technology to make the same product domestically.[36]

V. SUBSTITUTING FOR THE STATE: REDUCING TRANSACTION AND LEARNING COSTS

The high transaction costs and uncertainty of property rights typical in Africa exist in part because the state has not provided the kinds of public goods that would reduce them. Communications facilities and roads are often extremely poor, which adds time to both exchange and production activities. Many kinds of property rights are poorly specified; for example, courts do not protect investment in trademarks and copyrights, and seizures and expropriation of land and assets are common enough to retard investment in fixed capital. Extensive regulations pertaining to registration, licenses, and other requirements impose further costs, both in bribes and in time.

Transaction costs are also high for many would-be industrialists because of

information uncertainties regarding markets for their goods, availability of transportation facilities, and reliable sources of production equipment. High transaction costs in credit markets increase the cost of credit for new investment, or make it unavailable without special connections. Finally, a general lack of standard operating procedures and the unfamiliarity or resistance on the part of many rural Nigerians with the kind of work habits required by modern factory production, exacerbate moral hazard or principal-agent problems that add to the costs of monitoring and quality control. How were transaction costs reduced in Nnewi?

A. Trade, Transaction Costs and Organization of the Firm

Their origins in trade set this group of entrepreneurs off from those who have entered industry with capital gained through access to political resources, through capital accumulated in agriculture, or with capital amassed during a government career. Of the twenty-two manufacturers I interviewed in 1991, only three were not currently maintaining an active trading business, and they were all atypical in other ways as well: one was the owner of the original foundry, one had a Ph.D. in engineering and was a university professor, and one had an M.B.A. from Harvard. Trade influenced the transaction costs and the organization of these firms, and eased the transition into industry, but its function as a springboard may be temporary. When I returned in 1994, at least one additional active manufacturer had shifted completely out of trade.

Ronald Coase suggested that firms will evolve in specific patterns depending on the internal and external transaction costs they face.[37] In their attempt to reduce internal transaction costs, Nnewi traders opted for lineage-based distribution networks that ensured

that relatives were in charge of the most important parts of the business. Presumably this strategy would reduce risk and would help ensure that training, skills, and experience would stay within the firm. The family connections established under trading regimes continued in industry. Many of the entrepreneurs in this study have relatives involved in their businesses, a choice that presumably reduces principal-agent problems.

Nnewi traders were able to overcome some of the common information problems connected with credit by using capital accumulated through trade to start their businesses and by continuing to use their trading businesses as sources of working capital, when necessary (Table 2). In addition, it is common practice in eastern Nigeria for traders to leave a cash deposit with producers when they pick up goods to sell in their shops, rather than being allowed to have goods on credit. Producers are then able to make use of this money immediately, and it contributes to easing working capital problems. Finally, people in eastern Nigeria practice a type of fund raising whereby wealthy friends and associates are invited to buy informal shares in the new company to help provide capital. With few alternative vehicles for savings, and a small formal capital market, many were interested in investing their funds in a successful trader's efforts to launch a manufacturing concern. Six of the 22 firms interviewed had obtained capital through this source, with silent "partners".

Table 2: Initial Capital Source	
Capital Source:	Number of Firms
Own/family Savings	11
Own Savings and Bank Loan	4
Own Savings, Bank Loan and "Partners"	2
Own Savings and "Partners"	4
Own Savings and supplier credits	1
Total	22

Making the transition from trade to production meant that all kinds of costs were lower for Nnewi entrepreneurs than for first time investors. They brought into manufacturing business skills, resources, and even personnel accumulated in trade, and this lowered the risks. Many of the traders owned their own transport, and this reduced transaction costs associated with shipping. A third of these entrepreneurs decided to produce one of the primary products they had specialized in as traders, and they continued to distribute their product through their preexisting distribution network. This was an exceptional boon, for it reduced all kinds of transaction costs other industrialists would face: lack of information about markets, contract negotiations and enforcement with distributors. These industrialists know the market intimately and are in an excellent position to uncover and take advantage of new opportunities. Vertical expansion such as this may also provide less tangible motivational benefits: Porter suggests that suppliers who integrate downstream "view the new industry as strategic because it is interrelated with their base business, and

their brand reputations may well be at stake."[38]

B. Clusters, Rivalry, and Risk

The geographic concentration of this cluster of dynamic trading businesses also appears to have affected the transition into industry. Clusters, Porter suggests, always contain both traditional and modern industries.[39] The cluster in Nnewi is somewhat different in that it contains traditional trading activities and modern industries. However, the synergistic effect is similar. Social relationships provide a kind of insurance that extends somewhat into production activities as well as reproduction. Proximity considerably lowers the costs of information. Information networks are more densely compacted. Finally, the competition that boosts domestic rivalry is highly visible, and the industrial fever in Nnewi is a contagious one. As ground is broken for each new factory, and as domestic production of yet another neighbor's own brandname product begins, the temptation for those who remain in trade rises, as the risks seem to diminish. It has become "fashionable" to invest in manufacturing, as one entrepreneur told me with a laugh.

In addition, the trading networks in this area have engendered a particular form of cooperative competition. Traders, I was told, often share physical facilities, and offer credit on easy terms to each other. Some of this culture appears to have transferred to manufacturing. Manufacturers, particularly those who share family ties, commonly share equipment (generally forklifts), or lend technicians and engineers when needed.[40] Businesses also cooperate in the many local associations, for example the local Chamber of Commerce has committees organized to lobby the government to improve communications.

roads, and electricity. The decision to install a NITEL telephone exchange in Nnewi was a result of collective action and lobbying by the Chamber. Working together in local organizations such as the Enugu-Anambra Manufacturers' Association of Nigeria branch (headed in 1994 by a Nnewi industrialist) creates social capital as it helps to circulate information about government policies, sources of technology and technical assistance.

C. Reducing the Costs of Learning to Industrialize: International Linkages

The final ingredient can be found in the international linkages connecting eastern Nigeria to Asia. These international linkages are characterized by autonomy, not dependency, and they served to substantially reduce transaction costs for Nigerian entrepreneurs. Local industry developed outside of the direct protection of the state because local capitalists developed both local networks and international linkages.

Nigerian traders received extensive exposure to production in Asia once their businesses grew large enough for the traders to make the trip to Asia for goods instead of waiting at home for Asian traders. One medium-sized manufacturer of plastic auto parts and batteries told me how in the early 1980s his trading business had grown large enough for him to travel to the Far East to meet with his suppliers in Japan: "I saw their plant and how they produced, and I felt if I could produce these items at home, I could give people jobs, transfer technology to Nigeria, and make more profit." Another manufacturer commented, "For eight years I imported these things and saw how simple they were to make. So I decided to start manufacturing them."

Nnewi industrialists generally used imported machinery (sometimes second-hand) one

step down the product cycle, at the technical level now being outgrown in the East Asian NICs. In some cases, these entrepreneurs purchased the entire machinery contents of an Asian trading partner; for example, an oil filter manufacturer bought out the Singapore firm who used to supply his business. In other cases, the Nigerian manufacturer decided what machinery he wanted by prolonged observation (sometimes surreptitious) at Asian factories, and then shopped around internationally until he was able to find a good deal. The technology is sometimes outdated in international terms, and the Asian manufacturers are selling off their used machinery in order to purchase new machines, but the Nigerians realize this and have deliberately chosen this level of technology (in so doing, they are following the experience of Taiwan and Korea, who learned from Japan's slightly outdated production practices).[41] Often, their extensive international travel through their trading activities had given them exposure to a range of technology options, and the risks and information costs of their search for technology were reduced by this familiarity.

Additionally, as clients of fairly long standing with their Asian counterparts, and who continued, in their trading businesses, to import other product lines from Asia, they had established business relationships that seemed to ensure that neither side was out to simply "make a quick buck" off the other. When one manufacturer decided to begin producing auto parts, he solicited bids from a number of Taiwanese companies he knew from his travels, and then sent a team of people to visit all the companies, test the machinery, and become familiar with its operation. Often, the technical advisers who were contracted to come to Nigeria to install the factories, test run them, and train local people were recommended by well-known Asian exporters, or even came from the same factories. These-long term,

bilateral ties reduced moral hazard. Hiring Asian technicians, incidentally, was far less expensive than hiring Europeans.

The cluster and the dynamic rivalry Porter describes extend in the case of Nnewi beyond the geographic concentration in eastern Nigeria, into the exposure these traders have had to their counterparts in Asia, to the example they have set, particularly the example of industrialization by copying.[42] As the owner of a new electrical accessory factory explained: "The market is open. We've registered all the major foreign brand names. We know how to do the moulds for each country's products. We don't want to remain little. We want to be bigger than Ming Kee (a major Hong Kong firm). We want to be the greatest as far as electronic accessories go."[43]

D. Public Goods

Finally, in substituting for the state, Nnewi entrepreneurs provided many of their own public goods. Although this reduced their transaction costs over the long run, it was a socially inefficient and costly short-run investment. Most had to install a borehole or alternatively, purchase water. Most were forced to buy transformers and wire connections to hook up to the public grid, but the poor performance of NEPA (Nigeria Electrical Power Authority) made it necessary to also purchase generators. In addition, often after installing a transformer, factories had to wait six months or longer to be linked up to the national grid.[44] Most had to construct an access road, and maintain it; several times I saw factory employees filling in potholes on the road outside the factory. In some cases, manufacturers had cooperated to share the costs of building access roads to their factory sites.[45]

While providing public goods for themselves, some of these firms made them available to their neighbors as well. It is not unusual for a line of local villagers to be waiting near a factory's borehole and water pump, buckets ready to take water back to their compound.[46] One factory supplies the local hospital and several secondary schools with water from its borehole. Other factories have extended electricity lines from their factories into nearby settlements. Generally, these are considered "public relations" expenses and recipients are not charged. Manufacturers in Nnewi also sometimes supply dormitory accommodation for workers, to substitute for missing public transportation services. Finally, given the cutbacks in federal government spending, industrialists are more frequently called on for donations for local schools: I witnessed several such requests during meetings and interviews I held at the offices and factories of Nnewi's industrialists. In this way as well Nnewi industrialists are substituting for the state, providing the investment that will eventually translate into stronger underpinnings for industrial development in the region.

In Nnewi, motor parts traders developed rules and institutions to organize their trade. Close, ethnic-based networks reduced transaction costs associated with exchange and with expansion, leading to highly successful distribution systems. Over time, these networks expanded to include an international dimension, through trading relations with exporters from Taiwan and other Asian nations.

Entrepreneurs in Africa, as elsewhere, can profit from the sunk cost of advances made elsewhere in the world. Nnewi entrepreneurs became familiar with small and medium-scale production technologies through many years of importing motor parts and other goods from Taiwan and other Asian countries. The international product cycle works on a

continuous basis, and as Asian manufacturers were moving on to more sophisticated technologies, taking into account their increasingly expensive labor, they were selling the machines that had taken them through the first phases of their own industrialization.

The risks and costs associated with technology transfer were lower for Nnewi entrepreneurs than for many other Nigerians. At a minimum, business trips to Asia provided opportunities for visits to numerous working factories. The long-standing, personal ties many Nnewi businessmen had formed with Asian producers created greater trust when it came to advice about industrialization, contract arrangements for technical assistance, and negotiations over imported inputs. Through their intimate familiarity with the Nigerian market, Nnewi traders were less likely to make mistakes in calculating the demand for their products; they had better information. Being able to draw on their own trading businesses for investment and working capital also reduced transaction costs associated with credit. In an environment of uncertainty and risk, with imperfect information and positive transaction costs, Nnewi traders had a number of institutional advantages.

E. Bringing the State Back In: Regulations, Formality, Sustainability

Were the federal and regional governments totally absent from this growing industrial cluster in Eastern Nigeria? Both have in fact located several of their industrial support organizations in this region. Although most industrialists did not regard these as useful, some did point out that they had received assistance from government-supported research and development institutes, notably the Onitsha Metallurgical Institute of Technology and PRODA, the Project Development Authority, a government-sponsored appropriate

technology institute in Enugu. In its recent budget problems, the federal government has encouraged its universities and institutes to earn additional revenues through consulting assignments. The more that the work of these two agencies becomes demand driven, the more useful they will be for local industry. This kind of evolution is characteristic of successful industrial clusters, and though embryonic now, there is potential for synergy.

Government can also act to increase transaction costs, through the imposition of regulations or time-consuming taxation procedures. However, few of the manufacturers in this study regarded regulations or taxation as much of a problem, and all were registered as formal sector companies, some for several years before beginning production. Unlike most "informal enterprises," these factories almost always began formally, registering their businesses sometimes several years before beginning production. Delays are generally due to difficulties in constructing necessary infrastructure such as access roads, or in being connected to the national electricity grid rather than with registration formalities. "Right now," went a typical comment, "the regulations are not excessively burdensome. But when you meet officials that are not prepared to work, it can be a problem. In the past few years the dialogue between government and the private sector has been very positive on dealing with regulations."

As one example of this, the procedures for registration are now much simpler. Businesses can simply register their name (which is faster), or they can register as a limited liability company. All of the companies interviewed for this study were registered as limited liability companies. Registration is now computerized which considerably speeds the search to make sure a name is not already in use.

Nnewi firms are registered for the same reason formal sector firms are registered all over the world. They need registration to have a bank account for the firm, and to apply for loans (which most have done). They are large enough and visible enough to suffer harassment from officials if they cannot provide a registration certificate. They are formal enough and forward looking enough to want to obtain trademarks and patents for their products, which requires registration. None of the firms complained about the cost or the time required for registration. Unlike the example provided by countries like Peru, registration seems fairly simple, and can be accomplished by a consultant for minimal cost.

Banking regulations and excessive paperwork do still appear to create burdens for many businesses. One business complained that "the money one wastes to process documents for government loan programs like NERFUND can be 30% of the project, including the cost of delays."

Those that did regard regulations as a problem focused on their implementation by local officials. A small cement block manufacturer who felt strongly about regulations complained that officials abused their power. "The aims and objectives of the regulations are all right, but the people who carry them out are not. There is a lot of corruption. For instance, we normally pay N 500 for our business premise license. All of a sudden, this year, they raised it to N 1000. When we protested this, they raised it to N 2000. We spent a lot of energy on this, lots of letters and visits to Enugu, including paying the transport to bring a ministry official to our factory from Enugu." Finally, they were able to have their fee reduced back to N 500.

Other manufacturers commented that the regulations and the tariff system change too

often, making it hard to plan. In addition, some felt, specific import duties and tariffs were inconsistent with the government's objective of promoting local industry. For example, commented an oil filter manufacturer, imported oil filters have a duty of 10%, while the raw materials they import to manufacture oil filters locally have a 25% (filter paper) and 45% (electrogalvanized steel) duty, respectively.

Safety and health regulations protecting workers are not generally felt to be burdensome. For example, a palm oil producer commented that meeting safety standards was very expensive, but worth it: "It's costly to lose a worker; the liability is high." Likewise, few industrialists complained about their tax burden, although only a small minority had tax holidays. One commented that the "billboard tax" was too high. The largest business group interviewed for this study listed taxes and import clearance regulations and procedures as the two most burdensome government regulatory areas, with many forms still required to bring in imports. Again, local government's revenue generation efforts were roundly criticized: "You pay so much, but the local government provides nothing. Then they stop you on the road and harass you to see your tax receipt."

How sustainable is this industrialization experienced in eastern Nigeria? To speculate on this, we have to "bring the state back in." Through investments in education, from the primary to the university level, the state affects the breadth and depth of human resources available. It affects the environment for continued capital accumulation. It sets the parameters for competition, and it adds to or subtracts from private costs by the presence or absence of infrastructure. And it can serve as a "pusher and challenger", as Michael Porter notes.[47]

The primary problem these industrialists face now is the deteriorating macroeconomic environment. After 1988, the implementation of SAP grew more erratic, with increased macroeconomic instability and consequent uncertainty. The surge of new industries levelled off in Nnewi. By 1991, although a number of entrepreneurs had factories at the blueprint stage, new construction was down and the uncertainty appeared to be taking a toll. Many were interested, but were hampered by the fluctuations in the value of the naira, which made planning a large investment based on imported capital goods very difficult. Indeed, by my return visit in 1994, only one new factory had opened. In addition, many firms were finding it difficult to finance working capital, which the banks are not presently willing to do. Inflation cuts into the value of savings, and impedes domestic capital accumulation.

The state will also be important in order for the industrialization in Nigeria to become truly competitive. Industrialists will have to upgrade their technology beyond the level of the product cycle they inherited from Asia. They will have to improve their productivity growth. This improvement will be a function of domestic and international competition. In a way, because these industries are too small to receive much government attention (they don't offer much scope for bribes) they may also be too small to lobby effectively for rents, and this might keep the competition intense. To safeguard their headstart, these industrialists will need court protection of their domestic brands, against others who would use the famous Nnewi tactics of counterfeiting against them. At present there exists little or no protection of these property rights, which also works to keep domestic competition intense.

VI. CONCLUSION AND RELEVANCE OF THE NNEWI CASE

In many ways, Nnewi Township is an authentic "manufacturing miracle" to borrow the title of a recent book on the NICs. However, because we tend to measure manufacturing miracles by national level production, Nnewi and other areas like it are probably doomed to pass unnoticed by those who are trying to understand the reasons why some nations grow, others stagnate, and yet others decline.

The current domination of state-centered models in comparative studies of industrialization is an understandable reaction to alternative frameworks such as dependency or structuralist explanations of underdevelopment, with their emphasis on the distortions created by the collaboration of international and domestic capital, or on structural factors in the international system that inhibit independent domestic development. Yet frameworks that begin and end with the state have significant limits. The greatest of these are perhaps the neglect of significant differences at the level of society, and in the international arena that may support, not impede, industrialization.

This paper suggests that local industrialists in one part of Nigeria have substituted for the absence of a developmental state by themselves filling in the gaps left by market failures, particularly of information and of public goods. The case of Nnewi links local and international levels of explanation. The organization of firms in Nnewi, the presence of a cluster of dynamic traders, the international linkages with Taiwan and other Asian producers all served to reduce the high transaction costs faced by would-be industrialists in Nigeria, and contribute to explaining industrial development in eastern Nigeria.

NOTES

1.World Bank, From Crisis to Sustainable Growth (Washington, DC: The World Bank, 1989), p. 222; World Bank, Nigeria: Industrial Sector Review Washington, DC, 1990, p. 2.

2."Beyond the Flashy Facade of a Fair: Second Enugu International Trade Fair," Guardian (Nigeria) April 13, 1991. See also "Managing Nigeria's Own Taiwan," Tell (Nigeria) May 4, 1992, and "Building a New Japan: Governor Ogbonnaya Onu says his ambition is to make Abia State the Japan of Africa," Newswatch (Nigeria) August 31, 1992.

3.Oliver Williamson, The Economic Institutions of Capitalism (New York: The Free Press, 1985), p. 120.

4.The 1963 Immigration Act and the 1966 Expatriate Quota Allocation Board were intended to create a system of quotas to regularize expatriate applications for residence permits, but the system was managed fairly leniently.

5.Thomas J. Biersteker, Multinationals, The State, and Control of the Nigerian Economy Princeton, NJ: Princeton University Press, 1987, pp. 52-96 and 159-198.

6.Labor productivity during roughly the same period declined by an average .8 percent per year. World Bank, World Development Report 1992 (New York: Oxford University Press for the World Bank, 1992), p. 230.

7.World Bank, Nigeria: Industrial Sector Review, Western Africa Department, Washington, D.C., 1990.World Bank, p. 22.

8.Ibid, p. 22.

9.See Dani Rodrik, "How Should Structural Adjustment Programs be Designed?" World Development, vol. 18, no. 7, July 1990.

10.Observers of Nigeria have noted how the Igbo, like Asians, value education quite highly. Wayne Nafziger, "The Effect of the Nigerian Extended Family on Entrepreneurial Activity," Economic Development and Cultural Change, v. 18, n. 1 Part I (October 1969) notes the widespread opinion that Igbo families invest more in physical and human capital formation than others (p. 32).

11.Anthropologists have noted a "hedonistic pragmatism" allegedly characteristic of Igbo villagers, "where a man who had gained the coveted Ozo title by displaying his wealth was accompanied through the streets by people chanting, 'Has money, Has money.'" Richard N. Henderson, The King in Everyman: Evolutionary Trends in Onitsha Ibo Society and Culture (New Haven: Yale University Press, 1972), p. 260. cited in John Iliffe, The Emergence of African Capitalism London: Macmillan Press, 1983.

12.Stella Silverstein, "Socio-Cultural Organization and Locational Strategies of Transport Enterprise: An Ethno-Economic History of Nnewi Igbo of Nigeria," unpublished Ph.D. dissertation, Boston University, 1983, p. 144.

13.Stella Silverstein, "Igbo Kinship and Modern Entrepreneurial Organization: The Transport and Spare Parts Business," Studies in Third World Societies No. 28, June 1984.

14.John Okonkwo Alutu, Nnewi History: From the Earliest Times to 1980/82 (Enugu, Nigeria: Fourth Dimension Publishers, 1986), p. 221.

15.I believe Tom Forrest was the first to bring the Nnewi industrial transition to the attention of scholars outside of Nigeria. See the mention of Nnewi in his 1990 working paper, "The Advance of African Capital: The Growth of Nigerian Private Enterprises," later published as a chapter in Frances Stewart, Sanjaya Lall and Samuel Wangwe, eds. Alternative Development Strategies in Africa (London: St. Martin's Press, 1992).

16.Synthetic marble, electrical wires and cables, switchgears and electrical fittings, plastic electrical accessories, toilet paper, refined palm kernel oil, aluminum pots, tableware, and dies, cleaning and personal care products, rolled steel filing cabinets, cement, industrial moulds, milled maize and rice, and mineral processing and road construction equipment.

17.Deborah Brautigam, "Regional Industrialization in Eastern Nigeria," paper prepared for the World Bank, Africa Region, July 1992.

18.Others mentioned that their investigations showed that exporting was too troublesome for small companies to do on their own, but that they would be happy to contract with a larger organization to facilitate exports for them, a practice that is common in Taiwan.

19.World Bank, Nigeria: Industrial Sector, p. 21.

20.World Bank, Nigerian Industry, p. 7.

21."Financial Times Survey: Nigeria," Financial Times (London) March 16, 1992.

22.Albert O. Hirschman, "The Political Economy of Import-Substituting Industrialization in Latin America," The Quarterly Journal of Economics vol. 82, no. 1 (February 1968), p. 20.

23.Douglass North, Institutions, Institutional Change, and Economic Performance (New York: Cambridge University Press, 1990), p. 67.

24.Robert Wade, Governing the Market (Princeton: Princeton University Press, 1990); Alice Amsden, Asia's Next Giant (New York: Oxford University Press, 1989).

25.Paul Collins. "The State and Industrial Capitalism in West Africa," Development and Change v. 14 (1983), p. 424.

26.Biersteker, p. 275. Manufacturers in operation for more than four years remembered the positive programs of an earlier Anambra State military governor who had instituted fairly symbolic but still important programs to promote industry. In 1987, Governor Emeka Omerua launched an "Industrial Revolution in Anambra State" campaign, sponsored a major seminar, and established a governor's award and the governor's cup for the outstanding industrialists in Anambra State. Several manufacturers I visited had plaques and awards from this campaign displayed in the chairman's office. When he left office, manufacturers said, support died down, and many spoke nostalgically of the level of "moral" support industrialists enjoyed in that brief period.

27.Biersteker, pp. 253-275, passim.

28.See Merilee Grindle and John Thomas, Public Choices and Policy Change: The Political Economy of Reform in Developing Countries (Baltimore, MD: Johns Hopkins University Press, 1991), p. 21.

29.On Emilia Romagna and central northeastern Italy, see Robert Putnam, Making Democracy Work: Civic Traditions in Modern Italy (Princeton: Princeton University Press, 1993); Linda Weiss, Creating Capitalism: The State and Small Business since 1945 (New York: Basil Blackwell, 1988) and Vittorio Capecchi, "The Informal Economy and the Development of Flexible Specialization in Emilia-Romagna." in Portes, Castells and Benton, eds. The Informal Economy (Baltimore, MD: Johns Hopkins University Press, 1989), and Michael J. Piore and Charles F. Sabel, The Second Industrial Divide: Possibilities for Prosperity (New York: Basic Books, Inc., 1984). On Sakaki Township, see David Friedman, The Misunderstood Miracle: Industrial Development and Political Change in Japan (Cornell: Cornell University Press, 1988).

30.Williamson, Institutions of Capitalism, p. 3.

31.North, Institutions, pp. 64-65.

32.Michael Porter. The Competitive Advantage of Nations (New York: The Free Press, 1990). Porter's work acknowledges earlier work on growth poles, and other studies stressing economies of regional concentration.

33.Porter, Competitive Advantage, p. 149.

34.Porter, Competitive Advantage, p. 3.

35.On international linkages and exchange relationships, see Barbara Stallings, "International Influence on Economic Policy: Debt, Stabilization and Structural Reform," in Stephan Haggard and Robert Kaufman, eds. The Politics of Economic Reform (Princeton: Princeton University Press, 1992), pp. 52-55.

36.Raymond Vernon's concept of the international product cycle explains the transfer of production from the country of origin, to other countries, in successive waves. Automobiles, for example, were first produced in the United States, and exported primarily to Europe. After

some time, automobile exporters began production of parts and then complete vehicles in Europe for the European market, and ultimately those automobiles began to be exported back to the United States. By the 1970s and 1980s, the production of automobiles had expanded out to the developing countries, where South Korea, for example, has now successfully penetrated the U.S. market with its Hyundai model. The international product cycle explains how technology and production knowledge makes its way around the world in a more or less natural progression from higher to lower skill and from higher to lower wage countries. See Raymond Vernon, [cite].

37.Ronald Coase, "The Nature of the Firm," Economica (November 1937).

38.Porter, Competitive Advantage, p. 142

39.Porter, Competitive Advantage, p. 656.

40.The kind of cooperative subcontracting common in areas like north-central Italy, however does not seem to exist in this region of Nigeria.

41.A palm oil producer had purchased his first set of machinery new from a European supplier, and had a great deal of difficulty with it. When he decided to integrate backwards into palm kernel cracking, he purchased a lower technology, used, from Malaysia and has been very satisfied with it.

42.Taiwan has been famous as a center for counterfeiting, given the poorly enforced or nonexistent copyright and trademark protection available there.

43.He knew a great deal about Ming Kee's business, having imported goods from Ming Kee for several years, and then having sent his chief operating officers (a brother and another kinsman) to Hong Kong and then Shenzhen for a year and a half "apprenticeship" with Ming Kee.

44.A World Bank survey in Nigeria found that on average, firms with fewer than 50 employees spent 25% of their initial capital investment on power generating facilities. World Bank, Nigeria: Industrial Sector Report, p. 97.

45.Several manufacturers noted in frustration that after paying to construct a road, they then had to pay the local government $300 simply to give the street an official name.

46.Private water markets are extensive in the nearby city of Onitsha. Vendors there provide twice the volume of water provided by the public utility, at a charge considerably above the subsidized price of public water. The coverage of public water is inadequate both in reach and in level of service. Dale Wittington, Donald T. Lauria and Xinming Mu, "Paying for Urban Services: A Study of Water Vending and Willingness to Pay for Water in Onitsha, Nigeria," World Development v. 19 (Feb./Mar. 1991).

47.Porter, Competitive Advantage.

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