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Substituting for the State: Institutions and Industrial Development in Eastern Nigeria

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Table 1. *Selected economic indicators, Nigeria, 1974—94*

Indicator	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Ratio, parallel to official exchange rate	1.59	1.62	1.60	1.55	1.57	1.66	1.83	1.57	1.49	1.34	4.17	4.25	2.34	1.67	1.48	1.45	1.16	1.33	1.06	1.70	2.85
Annual rate of growth of money supply %	45	84	50	46	15	12	23	20	4	13	8	8	−4	18	44	24	30	41	59	52	37
Annual inflation %	13	34	23	11	22	12	10	21	8	23	40	6	6	11	55	50	7	13	45	57	57
Real interest rates %	−8.5	−31	−20	−17	−17	−7	−4	−15	0	−15	−21	2	4	1	−27	−21	10	2	−19	−32	−43
Manufacturing growth %	−2	25	20	7	9	56	5	15	10	−26	−12	20	−22	67	3	14	6	9	−5	−4	−5

Note: Real interest rates are nominal discount rates deflated by the annual change in CPI.
Sources: World Bank (various years) *African Development Indicators*; Central Bank of Nigeria (various years) *Annual Report and Statement of Accounts*; World Bank (1994); World Bank (1995); International Monetary Fund (various years) *International Financial Statistics*.

Table 2. *Geographical distribution of Nigerian industrial establishments by size, 1992*

Regions	West*	East	North-west	North-east	Total
Micro-enterprises (5–9)	20,594	9,960	4,992	4,584	40,310
Small-scale enterprises (10–49)	7,075	6,924	2,142	1,989	18,130
Medium-scale enterprises (50–99)	608	415	226	252	1,501
Large-scale Enterprises (100+)	831	318	168	211	1,528
TOTAL	29,108	17,617	7,528	7,036	61,289

Source: Federal Office of Statistics, Report of the Register of Establishments, Lagos, Nigeria, 1992, cited in World Bank (1995), "Nigeria: A diagnostic review of the small and medium scale enterprise sector" (p. 86)
* Includes Lagos.

states establish a prosperous manufacturing sector, and some do not. Most frameworks for understanding industrial development focus on the state level. Yet, as Porter has argued, "efforts to explain the competitiveness of *an entire nation* have been unconvincing," adding that "attempting to do so is tackling the wrong question" (1990, p. 3). Economic indicators on the national level may conceal important developments on a local level. This paper, based on surveys and fieldwork in Nnewi in 1991 and 1994, uses some of the insights from institutional economics to explain this case of regional industrial development. The paper argues 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, through embeddedness — personal relations and culturally-grounded institutions that act as sophisticated networks, reduce information uncertainties and agency problems, and enhance trust — they have reduced the high transaction costs typically faced by African entrepreneurs seeking to enter industry.[3] This embeddedness has both local and international dimensions.

Section 2 introduces the policy context within which Nnewi entrepreneurs began their industrialization. Section 3 introduces the case of Nnewi Township and section 4 offers three alternative explanations for the apparently successful industrialization in eastern Nigeria. Section 5 introduces the concept of transaction costs and outlines the local and international factors that served to reduce the costs of industrialization for Nnewi traders. Section 6 concludes with some suggestions for the literature on comparative industrialization in Africa.

2. NIGERIAN ECONOMIC POLICY AND INDUSTRIALIZATION

Nigerian industrial promotion policies in the first few postindependence decades 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, while quantitative restrictions and import licensing requirements proliferated after 1967 (Robertson, 1992, p. 177). As Nigeria became a major oil producer and OPEC member, net foreign exchange receipts began to flucutate dramatically depending on the prevailing price of oil. The government responded by periodically raising barriers to imports and attempting brief austerity programs. During the decade of the 1970s, manufacturing grew at an average annual rate of 11%, although the sector was heavily import-dependent (World Bank, 1983, pp. ii, 5). Meanwhile, with the flush of oil revenues, the naira experienced a real appreciation of 80% (World Bank, 1983, p. 35).

Through the late 1970s and early 1980s the Nigerian economy began to unravel in the face of the contradictions caused by heavy external borrowing during downturns in world oil prices, an increasingly overvalued naira, and negative real interest rates (Table 1). In April 1982, with the balance of payments in crisis, the government implemented a new austerity program, dramatically tightening import restrictions. The federal deficit dropped from 10% of GDP in 1983 to 3% in 1985. But, the margin between the official and parallel foreign exchange rates reached 250% in 1985, and manufacturing went into a steep decline, falling by 26% during 1982–86 (Table 1). The government instituted a 30% surcharge on imports in January, but although imports shrank, world oil prices dropped even more dramatically, worsening the balance of payments. As it fell further behind in debt service, the government lost access to international market financing for its payments gap. In July 1986, Nigeria began a structural adjustment program which eventually received World Bank financing and an International Monetary Fund (IMF) stamp of approval.

As part of the structural adjustment program, Nigeria devalued the naira by 66% and eliminated import licenses and the import surcharge. Foreign exchange became relatively easier to obtain, although the auctioning system created premia for

the banks, leading to massive financial speculation (Lewis and Stein, 1997). In 1986–87 manufacturing began a weak recovery, growing by 5%, increasing to 8% in 1988, but public sector wage renegotiations in 1988 and unrestrained government spending financed by expansion of the money supply led to inflation rates of 50% toward the end of 1988. In 1989, the government moved to combat inflation. Aggregate industrial output experienced virtually zero growth as credit was tightened, foreign exchange became more difficult to obtain, and domestic demand plummeted. 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. By 1992, inflation was back up to 45%. Growth rates in manufacturing dropped by 5% in 1992 and a further four percent in 1993 (Table 1). 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. Although the 1995 and 1996 budgets offered some promise that fiscal discipline and realistic pricing of the naira would be maintained, in practice the budgets have borne little reality to expenditures or policies as actually implemented.

This brief picture leaves out many details but the overall impression of considerable 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.

3. INDUSTRY IN NNEWI TOWNSHIP

The dense population of eastern Nigeria (before their recent splits, Anambra and Imo states had populations of around seven and nine million, respectively, larger than many African countries) long ago created pressures for income earning activities outside of agriculture. Communal property rights associated with traditional land tenure systems prevented land and property investments, and as population density increased, many Igbos left eastern Nigeria and established trading outlets in other parts of West Africa. The poor economic prospects may have made Igbo families more receptive to the foreign missionaries who arrived in eastern Nigeria in the 1880s, and many gained a primary education. The Igbo were also receptive to the European traders who came to eastern Nigeria in search of tropical commodities such as palm oil. At the turn of the century, Nnewi entrepreneurs entered the palm oil market, producing, collecting and transporting palm oil. The first car in the region was brought in by a Nnewi notable in 1916, and Nnewi residents were among to first to invest in vehicles for general transport: first bicycles, and later, buses and trucks.[4]

The Biafra war that divided Nigeria during 1967–70 forced an accelerated industrialization on eastern Nigeria, cut off by blockade from the outside world. As home to one of the leaders of the independence movement, Nnewi became a center for the Biafran struggle. Nnewi's first factory, an 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. 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.

The early lead Nnewi indigenes had in the transport business had expanded into the marketing of spare parts, and after the civil war, local traders established the Nkwo motor spare parts market in Nnewi, a market that grew to become one of the country's biggest for motor parts (Silverstein, 1984, p. 193). In 1983, a relatively sustained industrial boom began in Nnewi (Forrest, 1994, pp. 159–169).

During 1983–94, 22 firms launched significant manufacturing ventures, sometimes more than one per firm (Table 3). Almost half of the factories produced some kind of motor part (brake pads and linings, rubber fan belts, automotive cables, oil filters, assorted clear and colored plastic auto parts, brake fluid, car batteries, Peugeot front grills, hub caps, rear view mirrors, plastic motorcycle fenders, wheel block sleeves, bolts and coupling pins, motorcycle pistons and seats, etc.), often along with other, non-automotive items. The others produced items ranging across the spectrum: photo processing, synthetic marble, electrical wires and cables, switchgears and electrical fittings, bottled liquor, plastic electrical accessories, toilet paper, refined palm kernel oil, aluminum pots, tableware, and dies, cleaning and personal care products, rolled steel filing cabinets, cement blocks, industrial moulds, aluminum window louvres, milled maize and rice, and mineral processing and road construction equipment, etc. Additionally, dozens of motor parts traders in Nnewi and Lagos had commissioned feasibility studies for future factories of their own in Nnewi and elsewhere in the East.[5]

Many Nnewi firms started manufacturing on a smaller scale: almost half of the factories had 20 workers or fewer at start-up. By 1994, the average number of workers was close to 125 per factory, with the exception of the three engineering firms which were run on flexible production, workshop lines,

only one of the factories in operation by 1991 still had 20 or fewer workers in 1994. Although small at the start, Nnewi manufacturing ventures invariably began in the formal sector, with firms sometimes registering their manufacturing businesses several years before beginning production. More than half of the firms saw their manufacturing businesses grow significantly since being established (Table 3), and even in the grim economic environment of 1994, almost half of the industrialists had expanded their product lines or had commissioned formal feasibility studies for expansion.

Surprisingly, given the economic crisis in Nigeria, only one medium-sized manufacturer in Nnewi had gone out of business during 1991–94, a modern, agroindustrial grain-milling venture whose owner had died. This contrasts sharply with the experience in other parts of Nigeria. For example, in Lagos and Oyo State, 10 out of 150 small and medium-sized enterprises surveyed by Ekpenyong and Nyong between July and September 1990 failed during the study period alone.[6] Likewise, although Kano, a long-established, major industrial center, experienced a boom in numbers of registered, large-scale industries during 1984–93, eight out of 47 large Kano firms in Frishman's 1993 survey closed over the course of that year, and out of 256 industries registered by the Kano Manufacturers Association of Nigeria, only 104 were operating in 1993.[7]

Clearly this is a picture of a dynamic cluster of manufacturing enterprises in Nnewi Township. Yet this brief portrait leaves many puzzles. Why did Nigeria's new industrial axis arise in Nnewi and a few other towns in Eastern Nigeria, and not elsewhere? Why during the 1980s? Before addressing those questions, the next section examines alternative explanations for the development of industry in this region of eastern Nigeria.

4. ALTERNATIVE EXPLANATIONS

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

(a) *Political economy explanations*

Frameworks that emphasize political economy all consider the role of the state to be critical in understanding and explaining industrial development (or its absence). Two different ideal types of states dominate the literature: the "developmental state" and the "captured state" and they differ according to their internal organization and structural characteristics as well as in the goals they pursue.

The developmental state is a critical actor in establishing an "enabling environment" for industrialization. The developmental state enforces stability in important macroeconomic parameters, provides critical public goods: roads, power supply, security, and skills-based education, and possesses the policy instruments to channel private sector activity in accordance with national economic goals. Research on East Asia privileges the role of the developmental state in explaining dynamic industrial growth on a national level (Amsden, 1989; Wade, 1990). Other work has stressed that the developmental state might appear primarily on a regional and local level, and that differences in industrialization success may be partly to do with supportive regional and local governments (Weiss, 1988; Putnam, 1993).

On the other hand, the state can be "captured" by favored groups, classes, and individuals. Both public choice and Marxist frameworks tend to interpret regional development differences as due in part to differential access to the rewards controlled by the state. Public choice theory might assume that accelerated development in the East is due to the success of its particular interest groups in capturing special advantages or rents through lobbying, bribery, and votes. Alternatively, dependent development approaches might suppose that significant industrialization in eastern Nigeria would only result through a "triple alliance" of foreign, state, and local capital (Evans, 1979), giving the East favorable access to resources and protection.

Collins (1983) 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" (p. 424). Schatz (1977) description of Nigerian policy during 1949–74 as "nurture capitalism" also suggests that direct government promotion of industry during that period may have had a developmental impact. British colonialism had predisposed Nigerians to regard government service as the occupation of choice for educated youth. The postcolonial federal government attempted however, to create a policy and incentive environment that would stimulate indigenous interest in manufacturing. 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 (Biersteker, 1987, p. 275). Finally, both the federal and the state government have located several of their industrial support organizations in this region. Some Nnewi industrialists pointed out that they had received assistance from these government-supported research and development institutes, most notably the Onitsha Metallurgical Institute of Technology, only 15 miles from Nnewi.

Yet despite these actions by the state, state-dominated approaches fail to adequately explain industrial development in eastern Nigeria. First, despite Collin's encouraging analysis and Schatz's focus on the "nurturing" role of the state, most observers would agree that Nigeria is far from being a developmental state. The wide swings in key macroeconomic parameters, the unreliable electricity supply, the frustrations of the telecommunications system, and the remarkable levels of official corruption were reflected in the unstable growth rates of manufacturing. Schatz's later indictment of Nigeria as shifting from "nurture" to "pirate" capitalism better describes the government's role (Schatz, 1984).

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.[8] Is it possible that state governments in the East, dominated by members of the local ethnic group, were able to offer support where the federal government did not? Here, again, the answer is negative. Although the state government did 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 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 might lie with the private sector.

(b) *Neoclassical economic explanations*

If state-oriented explanations do not explain the rapid and sustained industrialization in Nnewi, a logical alternative is the market. To what extent were Nnewi's entrepreneurs simply responding rationally to improved market incentives? Was Nnewi's industrialization perhaps the elusive supply response to the structural adjustment program of economic liberalization and deregulation implemented in July, 1986? Or were Nnewi entrepreneurs perhaps shifting into import-substitution industrialization because of a noticeable improvement in levels of protection for these products?

A closer look suggests that the structural adjustment program (SAP) and economic liberalization *per se* does not adequately explain the Nnewi industrialization. Most importantly, the timing of the SAP does not correspond to the timing of the start of the boom. Five of the factories and two engineering firms had started operations *before* the government announced its structural adjustment program. Another six firms began production in the first year after the implementation of the SAP, but all six had been planning or actively constructing factories for at least two years before 1986.

If the liberalization accompanying the SAP does not explain the surge in industrial production in Nnewi, perhaps local entrepreneurs were instead responding to increased protection. Because of data limitations, it is difficult if not impossible to accurately gauge changes in the effective (real) levels of protection on goods made in Nigeria. We can however, sketch the broad trade policy shifts that began in the 1970s and continued through the next two decades, and roughly estimate their impact on the decision-making of Nnewi traders.

Trade policy became an important instrument of the Nigerian government's attempts to adjust to the highly volatile price of oil in the mid- to late 1970s and its impact on Nigeria's foreign exchange receipts and balance of payments. During this period, the government tried to limit demand for imports by raising the number of nontariff barriers: an increased number of goods became subject to import licenses, quantitative restrictions, or outright bans. In 1977, 22 classifications of goods were subject to import licenses; by 1979, the total had more than tripled, to 77 classifications (World Bank, 1983, p. 33). In 1982, these restrictions were significantly increased yet again, and the average nominal tariff raised to

35%. The license restrictions had the effect of restricting supply of imports, thus pushing effective rates of protection above the nominal tariff level.[9] Yet at the same time, the overvalued exchange rate undermined that protection by allowing licensed imports in at a below-market (subsidized) rate.

In 1986, under the structural adjustment program, all import licenses were eliminated and the naira was devalued, easing access to foreign exchange. After an interim review of customs and excise tariffs carried out in September 1986, the average nominal tariff fell from 35 to 25%, affecting many of the goods that would be produced in Nnewi.[10] The generalized drop in nominal tariff protection at the time many Nnewi firms were in the planning stage makes it unlikely that Nnewi manufacturers were simply responding to changing levels of nominal tariff protection. Nominal protection on many of the items produced in Nnewi was generally less than the average and with very few exceptions, batteries being one, nominal rates of protection did not change dramatically in favor of local production at any point in the 1980s or 1990s.[11] In fact, in 1987 the government reduced the duty on parts and accessories of commercial motor vehicles from 10% to 5%, and in 1990, decree No. 7 reduced the duty on automobile parts for established vehicle assemblers to zero, and 5% for other importers.[12] In addition, from the data available, it appears likely that effective protection differs dramatically for goods produced in Nnewi, with some being highly protected, and some only marginally, thus giving no consistent overall story on the impact of protection on manufacturers' decision-making.[13]

There were many countervailing currents however, affecting the ground-level impact of these policy changes. Most importantly, the 1986 devaluation meant that imports suddenly became far more expensive, by a factor of four, and this had a considerable impact on levels of protection actually realized by domestic manufacturers. Products made in Nigeria using primarily local inputs enjoyed a quick boost in competitiveness, but those relying on imported inputs found their costs sharply increasing. Over time, the naira's overvaluation returned, effectively subsidizing imports again (Table 1). Finally, vigorous unofficial crossborder trade further undermined the stability of the price signals facing manufacturers.

Most analysts contend that the policy changes were not strong or consistent enough to shift Nigerian entrepreneurs decisively in the direction of manufacturing. By the late 1980s and early 1990s, many analysts argued that trade was still relatively profitable compared with manufacturing. Government officials stated in a 1992 interview with the *Financial Times* that finance and trade were earning higher returns than industry, and that Nigerian businessmen were "not yet ready to invest in manufacturing."[14] A World Bank (1993) report echoed this in its confirmation that industry "lags far behind profitability in trade" (p. 7). Yet through the feasibility studies they conducted, entrepreneurs in Nnewi were finding that local production could be competitive with imports, even at low tariff levels and the overvalued naira. The competitive advantage lay primarily in low labor costs.[15] For example, one trader turned industrialist explained that even though she could import finished motorcycle pistons duty-free and she had to pay 15% duty on imported raw materials (aluminum ingots) to make pistons locally, it was still profitable to produce locally instead of importing because "labor is very cheap."

At this point, it is tempting to conclude that a simple neoclassical explanation of increasingly unfettered markets working steadily to allocate resources to their best use has some merit in explaining Nnewi's industrial boom. Yet the many "fetters" that remained in Nigerian markets make a simple neoclassical explanation difficult to sustain. Even with reforms, the exchange rate has been highly unstable, and Nigeria's tariff policy remains a constantly changing and frequently bypassed (via smuggling) tangle of bans and nominal tariff levels that make it hard for entrepreneurs to figure out just what effective incentives they really face. In an important sense, this tangle, rather than the freer market, was critical in pushing Nnewi traders toward industry. Many traders who are now Nnewi industrialists cited the late 1970s-early 1980s period of frequently changing quotas and import license requirements, which raised their costs of business and increased uncertainty in trade of finished goods, as their primary motive for exploring the possibilities of going into production themselves.[16] But if an illiberal policy environment did, for a time, stimulate industrialization, why did it happen so dramatically in Nnewi? What is different about Nnewi? Cultural explanations attempt to address just these questions.

(c) *Cultural explanations*

For the most part, current discussions of industrialization eschew discussions of cultural variables. As Dore notes: "The dominant neoclassical paradigm of the economist... rests on the assumption that in all respects relevant to the issues discussed in this book, [*Manufacturing Miracles*] human beings are alike everywhere" (1990, p. 363). Yet cultural explanations have a long history of use in explaining "extreme instances" of dynamic entrepreneurship. Cultural approaches argue that entrepreneurs' decisions are shaped not by price incentives and purposive state action alone, but by cultural characteristics: ideology, values, motivations,

taboos, customs and beliefs. These approaches have distinguished roots in Max Weber's effort to explain the original emergence of capitalism in Western Europe in *The Protestant Ethic and the Spirit of Capitalism*. A strong current in the early modernization literature invoked cultural factors in its explanations of the alchemy of development. More recently, analysts have turned to variations on cultural themes to explain manufacturing prowess in East Asia (Dore, 1990). Moreover, many 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 government employment. While this might explain the dynamism of Nnewi indigenes located in other parts of Nigeria or elsewhere in West Africa, it does not directly explain dynamism in Nnewi, whose manufacturers are almost without exception native sons.

Conventional wisdom in Nigeria attributes certain advantages to Igbo culture. Chinua Achebe noted these stereotypes in his book *The Trouble With Nigeria*:

> the Igbo culture, being receptive to change, individualistic and highly competitive, gave the Igbo man an unquestioned advantage over his compatriots in securing advancement in Nigerian colonial society. Unlike the Hausa/Fulani, he was unhindered by a wary religion, and, unlike the Yoruba, unhampered by traditional hierarchies (Achebe, 1983, p. 46).

Some observers have noted that Igbos tend to invest more in education for their children and relatives (Nafziger, 1969, p. 32). In Nnewi, families practice unequal inheritance with male seniority, a pattern that assists capital accumulation (Silverstein, 1984, p. 195), but so do many other Nigerian ethnic groups. The Igbo have long been known for their commercial dynamism, translated into close-knit trading networks that extend to all parts of Nigeria and into neighboring countries. Yet this is not a unique feature of Igbo society; other groups in Nigeria, for example the Hausa, are also known for their extensive trading diaspora.

Igbos are also singled out for their somewhat unusual tradition of socially mobile, acephalous (leaderless) societies, compared with more rigidly hierarchical groups such as the Yoruba. Consequently, cultural patterns for many Igbo groups emphasize the importance of individual achievement, as shown through the continued significance among Igbo men in the Onitsha region (but not everywhere in Igboland) of the "Ozo" title, an earned title that reflects "a relatively high degree of individual eminence" (Martin, 1988, p. 18). This value orientation might underpin the interest of local entrepreneurs in being among the first to industrialize, once conditions seemed ripe. Certainly, as ground is broken for each new Nnewi 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 seek achievement by investing in manufacturing, as one entrepreneur told me with a laugh.

While these cultural characteristics are suggestive and intriguing, they fall short of offering a complete explanation of the Nnewi case. The major problem with cultural frameworks is that they are unable to explain change. Cultural characteristics are "sticky"; they do not change quickly. Culture may explain why and how over time Igbos became better educated than other Nigerian groups, or how they developed vast trading networks over the past, but they do not easily explain why successful traders made the transition to industrial production during the 1980s. Nor, if we focus on cultural characteristics shared by Igbos across the East, do they explain why this industrial transition happened specifically in Nnewi, not in many other Igbo towns and cities, or the cities in other areas of Nigeria and abroad where the Igbo were making their trading fortunes. This is not to deny the power of a cultural explanation. As will become clear below, when cultural approaches are combined with economic approaches in the new institutional economics, the answers to these questions begin to take shape.

5. AN INSTITUTIONAL EXPLANATION

The explanation advanced in this paper relies on insights offered by the new institutional economics, which provides a way to weave cultural factors together with incentives in explaining patterns of development. Neoclassical approaches focus on the impact of price incentives on behavior, assuming that providing the response is itself "costless": access to information is perfect, as is enforcement of contracts and protection of property rights. The new institutional economics differs from neoclassical economics in its explicit recognition that economic production and exchange do not happen with the smoothness of the curves drawn in textbooks; rather, they are characterized by frictions that standard frameworks assume away.[17] In an exchange, costs incurred in "providing the response" include the time required to gather information about the quality of the product that is offered and the reliability of the seller or buyer; negotiation costs; insurance against risk; explicit fees that may be involved; and enforcement costs if necessary to ensure that the other party lives up to the bargain. In

production, these costs include those involved in supervising worker output; bribing government officials to provide services such as telephone lines; monitoring the use of inputs and the destination of outputs and ensuring low levels of pilferage; controlling quality; and the costs of protecting property rights: brandnames, for example (North, 1990, pp. 64–65).

Institutionalist approaches focus on the ways in which formal and informal institutions — rules and regulations, patterns of behavior, the sinews of a culture — affect these costs, and thus entrepreneurs' production and marketing decisions. Over time, a society's pattern of formal and informal institutional rules and regulations channels entrepreneurial energies in distinct growth paths. 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, transaction 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. But societies can substitute their own institutions when states fail to provide them.

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 the costs of monitoring and quality control. Below, we consider how transaction costs were reduced in Nnewi.

(a) *Reducing transaction costs in Nnewi*

Nnewi people, as pointed out above, were earlier than other groups to see the importance of private transport as an area for investment. Over the years, transport networks formed by Nnewi indigenes branched into the distribution arena. Already by the 1930s, Nnewi entrepreneurs had established a tightly controlled national network of spare parts distribution and sales along lineage lines, with relatives clustered at the center of each web of distribution, and nonrelatives at the borders (Silverstein, 1983). Each extended family in these networks specialized in a particular brand and sector: Peugeot automobile parts, or Mercedes-Benz truck parts. During and after the civil war, many Nnewi entrepreneurs joined the mass exodus back to Eastern Nigeria, giving the area a high concentration of transport and imported spare parts businesses. After the war, these entrepreneurs established the famous Nkwo spare parts market. Although at first spare parts were imported primarily from Europe, Asian entrepreneurs soon penetrated the market, offering to produce copies of the European "original" brand name parts. The Nkwo market's first Asian contacts were with Japan, but Taiwan came to dominate the supply of motor vehicle spare parts. As a modern 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" (Alutu, 1986, p. 221). Gradually Nnewi motor parts traders began marketing their own brand name products instead of the reproductions of "original" parts. These, too, were generally made in Taiwan.

For the most part, then, Nnewi industrialists began their businesses as traders with shops in the extraordinarily vibrant Nkwo spare parts market. Of 22 owners interviewed in 1991, only four were not maintaining an active trading business (generally, but not always, in spare parts), and they were all atypical in other ways as well: one was the owner of the original foundry (Jimex), one had a Ph.D. in engineering and was a university professor (Ebunso), one had an M.B.A. from Harvard (Adtec), and one had studied at a British polytechnic (John Ray).

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 businesses 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 (usually motor vehicle parts), and most began by distributing their products through their preexisting distribution networks. 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 were in an excellent position to uncover and take advantage of new opportunities.

Coase (1937) suggested that firms will evolve in specific patterns depending on the internal and external transaction costs they face. The "business groups" comprised of a number of sometimes seemingly unrelated companies under one man's control so common in Nnewi and in other developing countries are formed in part because entrepreneurs do not want to risk putting all of their eggs in one basket, as they would if they simply worked to increase the size of a single company. Cultural characteristics affect these patterns as well. Silverstein noted that informal institutional constraints regulating marriage among Nnewi indigenes encouraged a "relatively higher" frequency of endogamy (marriage within the group) compared with other Igbo, which served to concentrate and "enhance control over flows of information, goods, skills, wealth, and connections" (Silverstein, 1983, p. 144). In their attempt to reduce internal and external transaction costs, Nnewi traders opted for tightly controlled but decentralized lineage-based distribution networks that ensured that relatives were in charge of the central parts of the business groups, although non-kin were also widely brought in, particularly in areas far from Nnewi. These networks were so powerful that they enabled Nnewi indigenes to mount a significant challenge to Hausa spare parts traders in the Kano spare parts market in Hausaland.[18] More than half of the Nnewi manufacturers started their careers as young apprentices to successful Nnewi motor parts traders, where they learned the fine points of business skills and started to build the ties that would later stretch across their networks (Table 4).

The family connections established under trading regimes continued at a lower level in industry, where they mixed with more "modern" forms of personnel recruitment: most firms obtained their top-level engineers and other skilled positions via newspaper advertisements, although some paid to have family members sent to university for industrial skills training. Although none of the industrialists reproduced the apprenticeship system in manufacturing, family networks remained a factor. At a minimum level, half of the Nnewi owners were closely related to other industrialists (Table 4). Although weaker in manufacturing than in trade, these family connections enhanced access to the information needed for many decisions and reduced principal-agent problems of monitoring and enforcement, reinforcing business viability, enhancing trust, reducing risk, and helping ensure that training, skills, and experience would stay within the firm. Nnewi manufacturers were able to overcome some of the common information problems connected with applying for bank credit by using capital accumulated through trade to start their manufacturing businesses and by continuing to use their trading businesses as sources of working capital, when necessary. By locating their factories in Nnewi, even when their trading business might have been headquartered in Lagos, entrepreneurs were able to strengthen their ability to protect their property rights, something many felt they could not rely on the government to do.[19]

There are many examples of cultural practices that underpin the lower transaction costs Nnewi manufacturing firms are likely to have enjoyed in comparison with other Nigerian entrepreneurs. For example, 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. In some cases, distributors deposit up to N 300,000 for a year, interest-free, for the privilege of distributing goods made in Nnewi. Producers are then able to make use of this money immediately, and it contributes to easing working capital problems. Furthermore, people in eastern Nigeria practice a type of informal venture capitalism whereby wealthy friends and associates are invited to buy informal shares in the new company. With few alternative vehicles for savings, and a small formal capital market, many were interested in investing their funds in a successful trader's effort to launch a manufacturing concern. Six of the 23 owners interviewed had obtained capital through this source, with "silent partners." As one firm described the process, an entrepreneur will generate a prospectus, circulating it among friends and family. The prospectus will give a projected return, generally at least 10% higher than that offered by local banks. When someone decides to invest, a promissory note is drawn up. No lawyers are used: "it's done on trust with people who know you." In some cases, these silent partners sit on the board of directors of the firm.

In addition, trading networks in this area have engendered a particular form of cooperative competition. Traders 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. In 1994, five local firms (Rimco, Ibeto, Cutix, G.O.D., and John White) pooled resources to

Table 4. *Industrial linkages in Nnewi*

	Industrial Groups and Firms	Owner Has Or Had Own Trading Company	Owner Served as Trade Apprentice	Owner Has Kin in Other Industry	Foreign Sources of Factory Technology
1.	Jimex Group	no	no	yes	USA, UK, Germany, Poland
2.	Ibeto Group	yes	yes	yes	UK, Taiwan, Germany
3.	Atuchukwo & Sons Ltd.	yes	yes	no	US, Germany
4.	Centro Group	yes	no	yes	Korea, Taiwan, Germany
5.	Adtec. Ltd.	no	no	yes	USA, UK, France
6.	Ebunso (Nig.) Ltd.	no	no	no	Various (locally purchased)
7.	Ejiamatu Osita Igbokwe Group	yes	no	yes	UK
8.	Sampson & Mbaebies Ind.	yes	yes	yes	Germany
9.	Mebros Ind. Ltd.	yes	no	yes	Taiwan, Denmark, France
10.	John White Industries Ltd.	yes	yes	yes	Taiwan, Japan. Germany
11.	Chicason Group of Companies	yes	yes	no	Belgium, Malaysia, Taiwan
12.	Christomex Industries Ltd.	yes	yes	yes	Taiwan
13.	Edison Auto Industries Ltd.	yes	yes	no	Taiwan, Korea, Japan
14.	OTC Group	yes	yes	yes	Taiwan, Korea
15.	Odiofele Group	yes	yes	no	UK, Germany
16.	G.O.D. Brothers Group	yes	yes		Taiwan
17.	Omatha Holdings, Ltd.	yes	yes	yes	Malaysia, Singapore
18.	Armak	yes	yes	no	UK, Italy, Germany
19.	John Ray, Ltd.	no	no	yes	UK
20.	Gabros Group	yes	yes	no	Taiwan
21.	Silver Sun Paper Ind.	yes	yes	no	Italy
22.	PMS Group	yes	yes	no	Hong Kong
23.	Isiah-Nwafor Group	yes	no		Taiwan

Sources: Survey interview 1991, 1994.

sponsor a local radio program. Their catchy advertising jingles could frequently be heard in the streets of Nnewi. In other cases, manufacturers in the same lineage cooperated to share the costs of building access roads to their factory sites: Cento and John White, for example. Firms compete, but they also assist each other. The owner of Iju Industries in nearby Onitsha, related to Ibeto and like him, a producer of rubber-based spare parts, gave Ibeto a new formula for dissolving rubber. Jimex, already equipped to produce aluminum motorcycle pistons, decided against it when Isaho began to set up a factory to produce that item: "let her do it."

Embeddedness means that information travels more quickly through networks not only of producers, but the interconnected networks of distributors and also of ethnicity and family. Geography also matters. Proximity considerably lowers the costs of information: information networks are more densely compacted, and neighbors' decisions to shift into manufacturing are highly visible. Social and professional organizations in Nnewi also contribute to the fluidity of information dissemination and informal assistance: all of the manufacturers surveyed belonged to the Nnewi chapters of both the Manufacturers Association of Nigeria (MAN) and the Chamber of Commerce (NACCIMA); the Enugu-Anambra branch of MAN covering two states was headed in 1994 by a Nnewi industrialist. Most of the local social clubs, including the Nnewi Sports Club, ANAEDO, the Peoples' Club, and the Nnewi Improvement Union, had four or more manufacturers as members. Both private and professional associations provide opportunities for information exchange and for collective action. For example, the local Chamber of Commerce had 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 creates social capital as it helps to circulate information about government policies, sources of technology and technical assistance (Putnam, 1993).

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. Exporters and importers in relatively open economies are particularly likely to form significant international connections (Stallings, 1992). 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 international product cycle, greatly facilitating the eventual importation of the technology to make the same product domestically.[20]

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 related 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, 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 with the help of international contacts until he was able to find a good deal. The technology was sometimes outdated in international terms, but the Nigerians deliberately chose this level of technology (in so doing, they were following the experience of Taiwan and Korea, who learned from Japan's slightly outdated production practices). 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.

In addition, 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. Generally, the technical advisers who were contracted to come to Nigeria to install the factories, test run them, and train local people were recommended by Asian trading companies with whom the Nigerians had long experience. Trust was also important for the Taiwanese firms facilitating international linkages with firms from a country that does not have a sterling reputation in international business. As one Taiwanese businesswoman noted, her firm and the Nigerian manufacturer they were assisting, "started business long ago, so we are very close. We trust each other already. We feel more confident." But, this confidence had its limits: "earlier we would ship on a contract basis, but now we wait until we have been wired the money."[21]

In some ways, the development of dynamic industrialization that has its roots in distribution of the same items is not unique to Nnewi. In Nigeria, well-known cases of industrial clusters combined with active distribution systems include the footwear and leather industry of Aba and Onitsha. For many decades, Aba and Onitsha have been centers for the production of footwear and other leathergoods. These firms are also tied to Aba and Onitsha-dominated distribution systems for footwear. Nafziger's 1977 study described the Igbo footwear distribution system as "especially prominent, (compared with Yoruba and Hausa footwear distribution systems) reflecting the significance of the East in the output of indigenous firms" (Nafziger, 1977, p. 207). That Aba and Onitsha have dynamic clusters of footwear industries linked to prominent Aba and Onitsha-based footwear distribution systems, however, is less surprising than the modern spare parts firms and other factories one finds in Nnewi. First, leather and footwear are precisely the sorts of cottage industries one expects to find in countries at an early stage of industrialization. In Aba, footwear production is still largely done on a workshop basis, using simple technology and considerable manual labor. A typical Aba footwear workshop is far different from

a typical Nnewi factory. Second, although both cases reflect the basic pattern of regional agglomeration — a dynamic local market, and dense, ethnically-defined distribution networks linked to a local cluster of producers — Nnewi traders began by distributing sophisticated, imported products. Their extensive international ties gave them access to information that simply did not exist inside Nigeria: information on modern, medium-scale production technologies that Asian firms were beginning to outgrow. These contacts, combined with the advantages of the strong distribution system and the access to credit facilitated by ethnic ties, underpinned the lower transaction costs enjoyed by Nnewi entrepreneurs seeking to enter industry.

(b) *Bringing the state back in*

How sustainable is the 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 Porter (1990) notes.

The primary problem these industrialists perceive is the deteriorating macroeconomic environment, and here the state is largely to blame. After 1988, the implementation of the SAP grew more erratic, with increased macroeconomic instability and consequent uncertainty. The surge of new industries levelled off in Nnewi by 1990. During 1991–94, only two new entrepreneurs opened factories. Although a number of trading entrepreneurs had factories at the blueprint stage, new construction was sharply down and the uncertainty appeared to be taking a toll. Interested traders were hampered by fluctuations in the value of the naira, which made planning a large investment based on imported capital goods very difficult. In addition, many firms were finding it difficult to finance working capital. Because financial deregulation had opened up a number of more lucrative options, including foreign exchange speculation, most banks were ignoring the applications of industrialists. Finally, the ever-present inflation cut into the value of savings, and impeded domestic capital accumulation.

The state will also be important in order for 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 do not 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 makes it hard for Nnewi firms to capture the rents from innovation. Studying the Taiwanese and Korean examples might provide some guidance here.

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. Most had to construct an access road, and maintain it; during the rainy season, some factory workers added pothole filling to their tasks. The shortage of telephone lines meant that although the official price for a line was N 5000, those who had access to lines could sell them to manufacturers for N 100,000.

6. CONCLUSION AND RELEVANCE OF THE NNEWI CASE

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.

In many ways, Nnewi Township is an authentic "manufacturing miracle" to borrow the title of a recent book on the newly industrialized countries (NICs) (Gereffi and Wyman, 1990). Because we tend to measure manufacturing miracles by national level production, however, 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 and world systems 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. I have argued that the organization of firms in Nnewi, the presence of a cluster of dynamic traders, and 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. Although Nnewi is an outlier in the current statistics of industrial development in Africa, it may yet be relevant. As Williamson notes, "the study of extreme instances often provides important leads to the essentials of the situation" (1985, p. 120). It is perhaps now time for those concerned with African development to shift away from the pessimism and concern with failure that has dominated African studies since the 1980s, and to look instead for other examples of dynamism. With more cases, the general relevance of the explanations advanced in this paper can be further tested.

NOTES

1. Federal Office of Statistics, "Report of the Register of Establishments," Lagos, Nigeria, 1992, cited in World Bank (1995), p. 86. Here, the "East" is assumed to include the population of the states of Abia, Akwa Ibom, Anambra, Cross River, Enugu, Imo, and Rivers.

2. See, for example, Obi Nwakanma, "Industrial revolution in the East," *The Sunday Magazine* (Nigeria), (March 6, 1994); "Made in Nnewi," *This Week* (Nigeria) Special Report (October 22, 1990) pp. 38–41; "Beyond the flashy facade of a fair: Second Enugu International Trade Fair," *Guardian* (Nigeria) (April 13, 1991); "Nigeria's industrial axis: A survey of Nnewi-Onitsha area," *Africa Concord* (Nigeria), Special Report (April 8, 1991); "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. On embeddedness, see Granovetter (1985).

4. Silverstein (1984). The reference to the first car is from "Made in Nnewi," *This Week* Special Report (October 22, 1990), p. 40.

5. Author's interviews. See also the interviews with prominent Lagos spare parts dealers in the maiden edition of *Automobile*, A Publication of Auto Spare Parts and Machinery Dealers Association, Lagos (1993). Almost all of them mention plans to establish factories in Nnewi and Onitsha.

6. The study included both manufacturing and service enterprises (Ekpenyong and Nyong, 1992, p. 16).

7. Frishman (1993), pp. 10–11 and personal communication, January 1994. Preliminary results of a 1991 survey conducted by Peter Kilby, following up on small and medium-scale industries he first surveyed in 1961 show astonishingly high rates of survival. But, employment in these firms declined, on the average, and more than half of the larger firms (those employing over 50) had closed, also confirming the difficulties faced by medium-size industrial enterprises in Nigeria (Kilby, 1993 p. 5).