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Small and Medium Scale Enterprises Cluster Development in South-Eastern Region of Nigeria

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Andreas Knorr, Alfons Lemper, Axel Sell, Karl Wohlmuth

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IWIW - Institut für Weltwirtschaft und Internationales Management
Universität Bremen
Fachbereich Wirtschaftswissenschaft
Postfach 330440
D-28334 Bremen
Telefon: 0421/218-3429
Telefax: 0421/218-4550
E-mail: iwim@uni-bremen.de
Homepage: http://www.iwim.uni-bremen.de

* Osmund Osinachi Uzor is a doctoral candidate in the Institute for World Economics and International Management at the University of Bremen. The author is grateful to Prof. Dr. Karl Wohlmuth for his comments and suggestions.

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Abbreviations

ASC …	Anaedo Social Club
BMZ …	Bundesministerium für Zusammenarbeit und Entwicklung
CCI …	Chamber of Commerce and Industry
GB …	Great Britain
GTC …	Government Technical College
IDS …	Institute for Development Studies
ILO …	International Labour Organisation
ISO …	International Standard Organisation
MAN …	Manufacturers Association of Nigeria
MTI …	Metallurgical Training Institute
NCFC	Nigeria Construction and Furniture Company
NCI …	Nnewi Chambers of Commerce and Industry
NERFUND …	Nigerian Economic Reconstruction Fund
NMA …	Nnewi Manufacturer Association
SAP …	Structural Adjustment Programme
SE …	South Eastern
SMEs …	Small and Medium Scale Enterprises
SSEs …	Small Scale Enterprises
TFP …	Total Factor Productivity
UNIDO …	United Nation Industrial Development Organisation
UNRISD …	United Nation Research Institute for Social Studies
UNU …	United Nation University

1 Introduction

Recently the debate and relevance of clustering as alternative strategy for industrial development in developing countries have dominated many discussions in economic literature. The constraints faced by SMEs in developing countries are not only accentuated with ineffective policy design, but also by market failures in the region. Experts in development economics and industrial organisation have therefore shown some empirical evidence that small firms in developing countries can grow and be competitive as well, through cluster formations. Schmitz (1995) made an in-depth analysis on gains from clustering through collective efficiency - comprising external economies and joint actions that facilitate growth and competitiveness of small-scale industries. The forms of co-operation between agents within the cluster in terms of sharing of resources, information, technical expertise and knowledge helped to reduce transaction costs. This in turn can strengthen the competitiveness as well as facilitating learning and technical innovation. Furthermore, Sengenberger and Pyke (1992) pointed out that the problem of many small enterprises is not their size, but being isolated. This is because small enterprises individually have little capacity to respond to competitive pressure and to generate factors for expansion. Nadvi and Schmitz (1999) analysed how clustering can help SMEs to mobilise human and financial resources.[1]

On regional comparison, there are many successful empirical reports on SME cluster development emerging from Latin America and Asia, and in different sectors. In Sinos Valley south of Brazil, external influence induced by market led the shoe cluster's production organisation to upgrade from 1960s to the present date in three different forms.[2] In the 1960s, the production system in the cluster changed from import substituting craft production to Fordist mass production. In the 1970s, the production shifted to quality and export oriented system. In recent times, the cluster has moved to high flexibly specialised form of production organisation with more emphases on high quality standard (Schmitz, 1995). In the Indian small town of Tiruppur, the cluster of knitwear producers, consisting of small family-run units emerged in 1980 from single

[1] Using the words of Schmitz: " Indeed, it could be argued that clustering raises the capacity to respond to crisis and opportunities since the capabilities of specialised clustering firms can be combined in many different ways." (Schmitz, 1995: 534)

[2] Market as a function of cluster development begins with the domestic market. Producers turn aggressively to export markets when the domestic market was close to saturation point in order to sustain growth. Export growth is built through the experience gained from quality production for local market and the network built with the foreign buyers (Cawthorne, 1995).

white vest production for men to more diversified high quality products ranging from underwear to T-shirts for exports (Cawthorne, 1995).

There are limited accounts on SMEs cluster development in Africa. Pedersen (1997) gave a detailed analytical break down of four general types of cluster identified in African clusters. These are: (a) diversified industrial cluster; (b) the subcontractor cluster; (c) the market town- distributive cluster and (d) the specialised petty commodity cluster. We are not concerned with analytical examination of typology of African clusters because detailed explanation will go beyond the scope of this paper. However, series of case studies on African clusters have been conducted in recent times. McCormick (1997) made both theoretical and empirical analyses on the typology of Nairobi garment industry cluster in Kenya. Thus, showing the characteristics, benefits of clustering and inter-firms relation in the cluster. Van Dijk (1997) also examined the impact of networks in small enterprises association in Accra, Ghana. The economic activities in the cluster provided an insight on poverty alleviation strategies of small entrepreneurs in Accra. Mitullah (1996) examined the impact of collective efficiency on the Lake Victoria fishing cluster in Kenya. She analysed the various market channels, the challenges fishermen face and their response to quality standard. Oyeyinka (2001) made an empirical enquire into the "process and dynamics" of cluster growth in Nigeria. In his work, he gave a detailed comparative analysis on Lagos and Nnewi manufacturing clusters. McCormick (1998) further examined the ability of clusters to make positive impact in African industrialisation process by making general analyses on the trend and development of African clusters. Generally, in contrast to global trend of cluster development, African clusters have not been able to move beyond producing for local markets. This could be as a result of neglect or ineffective policy design, on one side, or absence of institutional and technological backing on the other.

This paper pursues this line of investigation in seeking to analyse the historical background and economic dynamics of Enugu small-scale furniture enterprises cluster and Nnewi industry cluster. This account is based on the fieldwork carried out in mid-2001 and complimented by Bräutigam (1997) studies on Nnewi industries. This paper is structured in four parts. Following the introduction is the conceptual framework, thereby reviewing some definitions of cluster as well as using analytical approach to explain the determinants of growth-path of SME clusters. Part 3 examines the historical development, the economic implications and the limitation of the cluster in southeastern region of Nigeria. Finally, the conclusion of the work is in part 4 with summary and policy discussions.

2 Conceptual framework of cluster development

2.1 Definitions

Literally, the term cluster has many connotations. In economic literatures, it can be defined in various forms. Porter (1990) defined cluster as a group of firms engaged in similar or related activities within a national economy. Schmitz (1992) on the other hand defined cluster as a group of enterprises belonging to the same sector and operating in close proximity to each other. Schmitz's approach was drawn not only from Marshall's (1890) analysis on economic activities in textile and metalworking districts of England, Germany and France but also from his experience on growth constraints of small industries in developing countries. Porter (1998) further defined clusters as geographically concentration of interconnected firms and institutions in a particular sector. The linkages existing between the firms are very important in strengthening competition.

Complementarity is also used to explain the term cluster. "Clusters are sets of complementary firms (in production and service sectors) public, private and semi-public research and development institutions, which are interconnected by labour market and /or input-output and/or technological links" (Steiner and Hartmann, 1998). Steiner and Hartmann (1998) further argued that such clusters are highly competitive because the links are governed by the advantages of market mechanism and the direct structures of single organisation. Elsner (2000) further defined clusters as groups of firms that are functionally interconnected vertically as well as horizontal. The functionality approach underscores the kind of relationships existing between firms and institutions supporting the cluster and such relationships according to Elsner are determined through the market.

All the definitions with the exception of Schmitz's approach described real economic scenarios in industrialised countries. Adoption of definition depends on the environmental context in which the subject is applied. This paper adopts Schmitz's definition because geographic proximity appears to be important for Nigerian SME clusters. This is because institutions governing economic exchanges are very weak in Nigeria.

Physical infrastructures such as roads and telecommunication are not developed. Furthermore, face-to-face business transactions are much valued because of opportunistic behaviours are common in Nigerian market. Therefore, perceived from Schmitz's background, the author defines cluster as group of small firms operating in a defined geographic location, producing similar products or services, cooperating and competing with one another, learning from each other in order to overcome internal problems, setting common strategies to overcome external challenges, and reaching distance market through developed networks. Defined location is important for African clusters because the location serve as advertisement strategy for the SSEs in the cluster. Mitullah (1996) further argued that concentration of largely homogenous enterprises within relatively defined geographical areas facilitates intervention because of the similarity of needs and support requirements. Moreover, the rate of dissemination of best practices and distribution of the fixed costs of interventions among a large number of beneficiaries are easier. In clusters, enterprise's joint initiatives are stronger because of the vested interest of the parties, more cost-effective due to share fixed costs and easier to coordinate, with proximity fostering mutual knowledge and trust.

2.2 Analytical approach on determinants of the cluster growth-path

The growth path of enterprise clusters is determined by five major factors: (1) Size of the market and nature products. (2) The stock of economies of scale and scope. (3) The rate of upgrading. (4) The nature of the supporting institutions. (5) The form of collective efficiency. This section will try to analyse these factors and will relate each case to the realities of African clusters.

2.2.1 Size of the market and nature of products

The size of market is reflected on the number of participant and its geographical spread. Market size is an important factor for cluster development because the scale of product demand determines the growth rate of the producer[3]. At this end, the impacts of clustering in Africa are limited because of low demand for their products caused by low income. Relative growth in African clusters is due to positive changes in money income, because small enterprises can gain from such changes without increasing their own efficiency (Pederson, 1997: 26). Such growth is related to what Humphery and Schmitz (2000) and also Kaplinsky and Readman (2001) described as "immiserising

[3] "Clustering propagates successive layers of specialisation provided that the overall scale of demand grows" (Schmitz, 1997: 14).

growth" because increase in money income does not mean increase in real income. Policy measures are required to induce the increase on real income in Africa. McCormick (1998) further argued that interregional restrictions on movement of goods and people, and underdeveloped distribution systems undermine market development in Africa.

The quality of the products offered to final consumer plays an important role to the growth of any SME cluster. The traditional quality standard of any product is measured by the value of the products' characteristics. This implies that the durability, the reliability, and the conformity to specification and safety standards of the products are considered as important criteria. In recent times the issue has also shifted not only to ensure the quality of end-product, but also of being able to verify the quality control process that has been used, and the quality values that have been installed at each and every stage of production (Nadvi, 1999; Kaplinsky and Readman, 2001). Product quality is a function of process and functional upgrading. Improved efficiency implies that the product quality has been raised through better application of factors and management on one side, and that the firms can provide documented, verifiable and acceptable quality assurance for their buyers on the other. Some entrepreneurs visited in Enugu still do not engage in intensive learning processes in production engineering and investments. Furthermore, organisational deficiencies observed in the firms are due to what Schmitz (1982) and Hansohm (1992) described as limitation in advanced planning in African production system. This leads to unsystematic production processes and poor product quality standards. The costs and benefit analyses are ignored, therefore, resulting in a high cost of production and waste of scarce resources.

2.2.2 The stock of economies of scale and scope

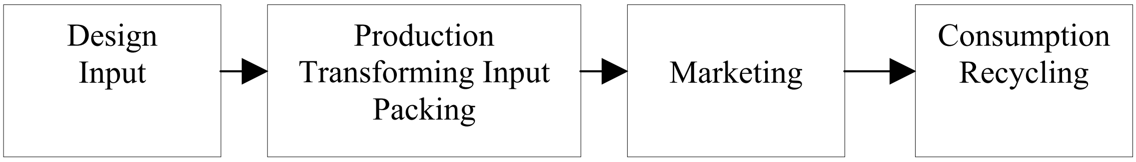
The ability to penetrate larger market is important for SME cluster dynamics. Reaching larger market will not only induce proportionate increase in productivity but also lead to increasing returns. Increasing returns are the by-product of economies of scale. Such returns arise when an increase in all production inputs results to a more than proportionate increase in output (Schmitz, 1997). Stocks of economies of scale that induce increasing returns are measured by the ability of the firms to reach more markets and to acquire more capital goods, effective managerial skills and opportunity to enjoy division of labour in the production. African small enterprises are found to be unorganised in production activities. Low investment on capital goods and lack of division of labour in production make the enterprises to remain weak (Hansohm, 1992; McCormick, 1998).

Economies of scope on the other hand arise due to the efficiency of the firm to engage in more than one activity successively. There are three kinds of economies of scope namely: concurrent scale economies; coordinative scale economies; and technical know-how and working skills sharing economy (McCormick, 1998). Concurrent scale economies are the economies gained by enterprises in diversifying their products with the least possible output costs (e.g. fabricating bakery ovens/palm kernel nut crackers). This aspect of a economy is commonly found in Nigerian machine makers (Oyeyinka, 2001) but generally still very weak in Africa. Coordinative scale economy implies that the enterprise have the organisational ability to integrate factors of production in an effective production system. Sharing of technical know-how and skilled workers are benefits gained by small firms clustering in developing countries because individual firms cannot alone afford the costs of high technical skilled workers or invest in capital goods (Bräutigam, 1997).

2.2.3 The rate of Upgrading

Control over the market only cannot sustain the profitability of SME clusters in the long run. Profitability of the firms in the cluster can be sustained firstly, through the nature of internal process that encourage learning. Secondly, by acquiring specific comparative advantage or competence, this is important in maintaining the firms' competitiveness. The third factor is the path chosen by the firms, because changes in any firm are path-dependent (Kaplinsky and Readman, 2001). Thus, through upgrading these three factors is rapidly identified in order to meet the needs of markets quicker than the rivals. Upgrading is important for firms. The processes are systemic in nature and are achieved effectively when firms are linked together. It is important to understand the concept of value chain in order to get true picture of upgrading. The relationship between value chain and upgrading are based on identifying not only the key problems in entire production organisation but also the methods through which upgrading can occur. An Up-grading can occur at each stage of the chain as shown below in figure 1:

Figure 1 Simple illustration of the value chain



Source: Kaplinsky and Readman, 2001

Value chain is the process which is required to bring a product or service from the conception, through the intermediary phases of production, then delivery to the final consumers and finally disposed off after use (Kaplinsky, 2000).[4] Upgrading can be done in different chains: process upgrading, product upgrading, functional up-grading and chain upgrading Process upgrading occurs when SMEs can improve effectively by organising the internal working process of entire production system better than their local rivals. Product upgrading entails ability to introduce new products or improve old products faster than the local rivals. Functional upgrading takes place in firms where the productivity is increased by improving the quality of the management skills and the organisation of the labour factor. Chain upgrading in turn means moving to new value chains. An example is, moving from household products to industrial input products (for more details see Kaplinsky, 2000; Humphery and Schmitz; 2000 Kaplinsky and Readman, 2001). Kaplinsky and Readman (2001) further warned that rate of upgrading should not be more than the competitors; otherwise, it will lead to immiserising growth. This is an important case particularly for African clusters, because the market in the region is underdeveloped and competition is very low. The policy that aimed at improving quality standard for example, should first consider how to stimulate market competition in the region. SMEs development in the region can be effective only when the market is developed and growth can be sustained in the long run when the capability to upgrade is developed.

2.2.4 The nature of institutions supporting the cluster

It is now generally accepted in economic discussions that institutions are important not only in industrialisation process but also to development in general. Clustering can foster economic exchange quickly. Therefore, it is important that a third party is available in order to support the transactions. Furthermore, the quality of the service

[4] Transaction costs economics give more in dept analyses on the organisation of such transactions.

rendered by the third party should be dynamic and in line with the growth-path of the cluster. To understand the importance of institution in cluster development, it is important to make brief ex-curs on the role of social capital in economic development.

Social capital is defined as a capital jointly owned by the parties in relationship and is not divisible. None of the parties have exclusive right of ownership of the capital. It is the final arbiter of competitive relations, because it generates positive interactions within a firm, among groups of firms, within an industrial district in order to reduce transaction costs and propagate growth. It is a critical variable and has influence on the mobilisation of other factors of production such as financial capital, labour and crucial in producing public goods (Burt, 1992; Putnam, 1993). The voluntary and spontaneous cooperation existing within a given community depends on stock of inherited social capital. It can be referred to as ”moral resources”, which are resources that increase in value when they are frequently used in transactions, but depreciate when they are not applied. This is called social capital of trust (Hirschman, 1985). Trust manifests as a result of the existing cooperation among a set of actors in order to maximise their current desires (Sabel, 1992). The more it is displayed in a relationship, the greater a mutual confidence is developed. Social capital is then classified in two forms – collective and specific social capital.

Collective social capital exists when the cooperative norm is embedded in the production of common goods of various kinds by group of firms or a community[5]. The costs and benefits of deflecting or cooperating are determined by internal and external sanctions existing in the community (Putnam, 1993). Furthermore, it is defined as the mutual cooperation that sustains the survival of economic relations, repeated market transactions and inter-firm transactions in a community or in an industrial cluster (Gambetta, 1988; Barr, 2001). Such capital is open for all members in the community. It is a by-product of common values that allows participants to obtain gains from transactions. The capital possesses considerable value such as trust, which has impact on reducing the need for various forms of monitoring. Monitoring the actors`

[5] Common goods can be referred to as public goods. Public goods are goods that have non-rival and non-excludable characteristics. Non-rival implies that consumption of such goods by one user does not reduce the supply available for others. Non-excludable implies that the users cannot be prevented from consuming the goods. Such goods include national public goods (e.g. National Defence) and local public goods (e.g. local roads). These characteristics suggest that the private supply will lack incentive to supply such goods because it will be difficult to develop modality in establishing charges for such goods (World Bank, 1997: 26).

behaviours and transactions usually implies not only considerable direct costs, but has also the negative effects in generating distrust in business community (Dasgupta, 1988; Dei Ottati, 1994). Social capital can play an important role in integrating the economic policy makers in finding solutions to economic problems in any region and can also induce effective socio-economic problem solving (Putnam, 1993; Brown and Ashman, 1996; Gsänger, 2001). Conflicts between heads of institutions and heads of corporate organisations have led to negative economic growth in Enugu state region. For example, the vegetable oil factory, Nachi in Enugu, was closed down because of management problems on the one side and conflict among the shareholders on the other. Thus, rendering (US$ 40 million) project to be useless as well as making roughly 500 employees to be jobless.

Specific social capital is based on personal reputation necessary to sustain repeated transactions. The effect of reputation is recorded in the economic exchange of self-enforcement agreements that are not backed by explicit contracts. The desire to continue successful business exchanges induces the partners to avoid conducts which might interfere with attending such objective. This implies that the reactions of the other parties are integrated in general business reputation (Raub and Weesie, 1990).[6] Personal reputation is very effective when the economic activities are linked because information about past performances of an actor can be easily accessed. Both collective and specific social capital can then be substituted by institutional trust when the society become more heterogeneous and the volume of business transactions increase and become more complex. Zucker (1986) and North (1990) acknowledged the importance of institution as the third party that can maintain the rules of the game in transactions by enforcing contract agreements and prevent opportunistic behaviours. In Nigeria, such institutions exist, but are very weak, and are, thus, undermining private sector development. Fafchamps (1996) observed that enforcement of commercial contracts is problematic in Ghana due to institutional problem and unstable economic conditions under which the firms operate.

[6] "Not only do the particular business units in a given exchange want to deal with each other again, they also want to deal with other business units in the future. And the way one behaves in a particular transaction, or a series of transactions, will colour his general business reputation" (Macaulay, 1963: 64).

2.2.5 The nature of collective efficiency existing in the cluster

Recent literatures in developed countries have explained how the concept of collective efficiency is being used to the success of exporting cluster concept in developing countries (Schmitz, 1995; Nadvi, 1996; Rabellotti, 1997; Humphrey and Schmitz, 1998 McCormick, 1998; etc). Such efficiencies are likely when enterprises operate in a close proximity. Collective efficiency is defined as the competitive advantages derived by small firms from local external economies and the joint action. There are two sets of benefits believed to arise from clustering of producers. First are the efficiency gains, in other words external economies that firms can reap simply by being located near each other (Marshall, 1890; Mishan, 1971; Nadvi, 1996; McCormick, 1998). The second is the gains for firms acting together to achieve some desired end (Nadvi, 1996; Schmitz, 1997; McCormick, 1998).

External economies are not new in economic discussions. Marshall made a lead way without definition by pointing out the importance of localisation of industries and the significant of concentration of specialised industries in a particular locality. According to Marshall, concentration of small firms of similar character can help to improve efficiency and competitiveness (Schmitz, 1995: 535).[7] The question is what are the gains associated with externality? Krugman (1991) analysed the gains associated with agglomeration of industries in geographical location. Such gains include pooling of labour, quick access to intermediate inputs and technological spillovers. In this context, clustering facilitates easy supply of inputs, pooling of specialised skills workers and rapid diffusion of know-how and ideas (Schmitz, 1995). Further investigations show that externalities alone cannot sustain a cluster growth-path because such gains were incidental by-product of some other firms' legitimate activities. Nadvi (1996) made a distinction between external economies and joint action. He used the term active collective efficiency to emphases on the importance of deliberate actions needed to improve performance.

Joint actions are some deliberate and strategic actions that do not oppose market competition but needed to sustain the growth of the cluster. The actions are deliberately and jointly pursued in order to strengthen the growth, to overcome impeding constraints

[7] "External economies exist when private costs or benefits do not equal social costs. When social costs are higher than private costs, we speak of external diseconomies. When social benefits is higher than private benefits we speak of external economies" (Schmitz; 1997: 15).

or to induce a positive turning point of the cluster. Some empirical results have shown that joint action plays an important role in SME upgrading (Kaplinsky, 2000; Kaplinsky and Readman, 2001); in product quality standard to meet export condition (Nadvi, 1996); in transaction costs reduction (Bräutigam, 1997). The question is, how effective is collective efficiency in African clusters? As Pedersen (1997) stressed the gains from collective efficiency can be achieved through growing market. Expansion requires overall collective efficiency in absolute terms through specialisation and vertical integration. In this context, the growth of the African clusters tends to be limited because of the partial monopoly they enjoy in the local market without increasing their efficiency. Furthermore, collective efficiency in African clusters cannot be effective due to the quality of human capital.

3 Typology of the Clusters in the SE region of Nigeria

3.1 Cluster of small-scale enterprises

In this paper, the forms of interactions identified in the region are not analysed through regression analysis, rather sampled entrepreneurs in the cluster were asked some selected questions in the second quarter of 2001. The questions were related to the kind of growth constraints experienced; and also to the role of the state and of the institutions in SSE development. Personal interviews were also conducted with the chambers of commerce, industries, mines and agriculture in Enugu and Onitsha. In addition, in some supporting institutions training officers were interviewed too. The survey covered small entrepreneurs in both the informal and the formal sector.

3.1.1 Enugu furniture enterprises clusters

The Enugu small-scale enterprises cluster consists of two-major groups, namely the Ogwi carpenters union in Ogwi ward of Enugu and the Asata carpenters in Asata ward of Enugu (see table 1). On arrival at the clusters the first impression that strikes ones mind is the Marshallian concepts on "localisation of industries"- concentration of enterprises of similar character in a defined location. On enquiring further on the activities in the clusters the next impression reflects on Krugman's ideas on "Trade and Geography"-externalities. Further investigations reveal that the two clusters have the same origin, similar history and cultural background.

3.1.1.1 Historical background

Enugu carpenters union was established in 1946 immediately after the Second World War at Ogwi road very close to then Enugu township stadium. The history of the cluster is associated with the return of the retrenched wartime solders at the end of the Second World War. The establishment of the cluster was not born out of the social costs of the retrenchment, rather the idea was conceived and developed by soldiers who received vocational training in modern handcrafts by British colonial Army. This shows the relationship between transfer of knowledge and vocational training on one side (Boehm, 1996) and the origin of the modern vocational training in the region on the other. Though the names of the founding entrepreneurs were not documented, the objectives of the founders were stated in the union's document. First objective was to commercialise the newly acquired knowledge during the military service. Second objective was to provide practical vocational training for the youths in the region and third to promote woodwork handcraft in the region. The cluster however broke up into two groups in 1970. One part moved to Oba Street in Ogwi ward and the other to Ilukwe Street in Asata.

3.1.1.2 Economy of the clusters

Most of the SSEs in both clusters appear to have an informal structure. This is because of the unorganised nature of production system, coupled with absence of division of labour and specialisation. The workshops are divided proportionally, but the working space is crowded. This implies that the production area is very small and expansion cannot take place. All the firms are registered under the union and pay common company dues, thereby reducing unit costs. The economy of the cluster is relatively small but faces no major problem with large producers. This is because there is no large manufacturing sector producing furniture in the region. Furthermore, the economies of scale and scope are difficult for the carpenters in the cluster to be realised because their total factor productivity (TFP) is very low due to the number of workers per unit of enterprises and the nature of technology existing in the cluster.

Table 1 The structure of the cluster

Structure	Ogwi carpenters SSEs cluster	Asata carpenters SSEs cluster
Area coverage	ca. 300sq.m	ca. 100sq.m
Number of Workshop units	60 units	20units
Number of workers per workshop unit	3 – 10	2 – 5
Number of Apprentices per workshop unit	2 – 4	1 – 2
Nature of production system	unsystematic	unsystematic
Nature of capital intensity	hand tools	hand tools

Source: Author's survey 2001

Collective efficiency in the cluster is limited because there are no external challenges. The main external economies for the firms are access to the market. The cluster attracted traders from Enugu city market who supply them the necessary inputs such as bulky planks and working tools. Empirical evidence showing how the clusters affect trade on bulky wood planks and the environmental consequences on such trade are subject to further investigation. Technology used are the basic hand tools, therefore external economies are minimal.

Table 2 Inter-firms relationships in Enugu SSE-furniture cluster Relationships

Cluster	No. of firms	Horizontal	Vertical
Ogwi carpenters Union	60	- sharing central saw machine - sharing hand tools - sharing information on new designs - sharing transportation costs - sharing knowledge on the market situation	subcontracting NCFC
Asata carpenters	40	- sharing equipment - sharing knowledge on designs, market situation	none

Source: Author's survey 2001

The inter-firms relationship in the clusters is mainly horizontal (see table 2). The small firms in the cluster cooperate by sharing hand tools, sharing information on conditions and source of raw material as well as sharing the transport costs on raw materials through joint purchases. The Ogwi carpenters union installed a central saw machine for the enterprises in the cluster. The carpenters can cut the bulky wood-planks to specific sizes at minimal costs. Thus, reducing both transport and production costs of the small enterprises. Vertical cooperation existed only through subcontracting from the then

Nigerian Construction Furniture Company (NCFC) Ltd. The company collapsed in mid-1980s due to management problems and corruption, followed by withdrawal of the foreign technical partner. The productivity of the SSEs in the cluster declined drastically. This supports the arguments of Schmitz (1995) and Nadvi (1999) that productivity of the SSEs clusters can be increased through linkages with medium and large firms.

Table 3 Forms of joint action in the cluster

Cluster	Bilateral (between firms)	Multilateral (firms, inst. & associations)
Ogwi carpenters Union	2 firms buy wood planks in bulk (to reduce unit costs and costs of transport)	SSEs and GTC
Asata carpenters	2 firms buy wood planks in bulk	none

Source: *Author's survey 2001*

Joint action is noticed in the cluster, especially in Ogwi carpenters union (see table 3). These actions are deemed to reduce production costs on the one hand, and to increase learning on the other. The action is not specifically to overcome external challenges or to reach distance market, but to improve learning. The bilateral actions among firms are to reduce unit costs. For example individual small firms cannot bear the transportation cost of bulk wood planks for furniture making. Two firms usually make bulky purchases and share the transportation costs. Multilateral action is very weak. The only multilateral actions are found between GTC Enugu and the cluster. The GTC Enugu provides some technical advice on new production system to the SSEs in the cluster. The SSEs, in turn, provide practical training for the students of the GTC. Furthermore, to what extent the collective efficiency has contributed in product upgrading is not traced in the cluster. The quality of furniture produced in the cluster is below standard because there is low competition. The export possibilities of the products are little because the qualities of furniture products of different designs supplied to the local market are far below ISO 9000 quality standard. Cawthorne (1995) argued that the producer turn to export possibilities when the local market is saturated, and Nadvi (1999) maintained that the quality standard determines the export drive of clusters.

3.1.1.3 Limitations of the SSEs clusters

As Tendler and Amorim (1996) pointed out that successful stories of SSEs growth tend to be derived from demand. This can start from one sector and spillovers to other sectors through cooperation and linkages. Public procurements play a significant role in raising the productivity of SSEs. This might result in an increase in employment generating capabilities of SSEs. Based on this argument, the International Labour Organisation (ILO) has strongly supported direct procurement of government agencies from small firms. The international donors have also supported the social investment funds and continue to stress the need for modification of procurement regulation. The fund was set aside for helping small firms to bid for public contracts. Tendler and Amorim (1996) argued that low-competitive prices offered to SSEs by state agencies in contract bidding do not only reduce competition among firms, but tends also to reduce the efforts on improving productivity. The productivity of the clusters declined drastically not only due to collapse of their major subcontracting large firm NCFC, but also due to absolute decline of direct procurement by the government agencies in the region. My interview with the small entrepreneurs in the cluster revealed that the growth of the cluster in the 1960s and 1970s was due to direct supply of furniture to the primary and secondary schools through state school management board as well as government offices the region with better quality office furniture. The turning point started in mid-1980s when the government agencies turned to contractors with no experience on furniture production to supply low quality products with high price. This resulted to low production and weak expansion of the cluster.

Infrastructure and institutional support play an important role in cluster development. For the access roads leading to both clusters are full with potholes. The roads are partly maintained by the central administration of the clusters. The clusters do not have adequate public utility services. The water supply system does not function rather boreholes were dug in order to collect water. Thus, firms are operating under hazardous health conditions, implying that social costs tend to be higher than social benefits in the clusters. The only educational institution supporting the cluster in passive is the GTC Enugu. There is little or no direct support from Enugu chambers of commerce and industry to the cluster. Furthermore, SME development constraints in Nigeria are not only a case of policy problem, but also a case of non-market order behaviour. It is difficult for the SSEs clusters to grow in an environment where civil and commercial laws are very weak; political instability and ethnic differences have induced corruption in public institutions; and information about firm’s activities and market transactions are not documented.

Banks and formal credit institutions have also problems in giving loans or credit small entrepreneurs in the cluster. For example, obtaining a loan from a commercial bank in Enugu is an uphill task for small entrepreneurs because of asymmetric information problems.[8] Valued securities submitted for credit guarantee by small entrepreneurs are not adequate and sometimes the collateral submitted for loans does not exist.[9] This increases the costs of loan assessment or investigation by the Banks. On the other hand, unconventional banking practices, such as long bureaucratic processes of administering credit applications, tend to create room for manoeuvre and corruption in the system. Consequently, the motivation of entrepreneurs to have transactions with formal credits institutions has been reduced. They rely rather on informal credit financing with high interest rates. Unlike rural loan transactions where collateral is not required, because information flows freely between borrowers and lenders (Udry, 1994). The only valued security in this context is the past performance of the borrower. Some small manufacturers interviewed in Enugu argued that even with high interest rates, the costs of obtaining a loan from informal credit associations are lower than from formal credit institutions. Costs in formal sector arise as a result of different factors namely credit processing and other administrative costs of lobbying for credit approval (contingency costs) and real interest rate costs (inflation costs). Financial institutions in the region offer no direct financial support to the small firms in the cluster. How the SSEs in the cluster mobilise finance is subject to further investigation.

3.2 Organised cluster - Nnewi industries

Entrepreneurship development in Nnewi has four main development trajectories. Consecutively, these are trading, private savings, private investment, and manufacturing. Further investigation revealed that specialisation in specific branches of trade has played an important role in the SMEs development in the town. Moreover, related to the industrial development in Nnewi it was tried to answer some questions,

[8] Asymmetric information occur when the supplier knows more than the consumer about the quality of goods and services or vice versa. This is common in insurance business and is classified in two forms: (a) moral hazard (b) adverse selection. Moral hazard is the situation in which the insurer is less informed on either the underlying state of nature or the precaution taken by the individual to prevent the accident. The insurer can observe only the outcome of an accident Adverse selection occur when buyers of a service tend to impose higher costs than the average costs on the insurance provider or when the insurer are not able to exclude such high cost consumers (World Bank, 1997).

[9] Collateral is a security pledged for the payment of a loan, e.g. stocks, bonds or certificates of a landed property.

based on empirical enquiries advanced by Komlosy et al. (1997) and Dike (1997), on the relationship between capital accumulation and the informal sector. Further enquiries show that the Nnewi cluster has been identified with diverse forms of social networks, which is associated with kinship, personal ties, culture, trust and reciprocity, and competitive behaviours (Bräutigam, 1997; Oyelaran-Oyeyinka, 2001).

3.2.1 Historical background

With a population of more than 120,000 people, Nnewi is a Town located about 50 km southeast of Onitsha,. The development of the town is identified with long history based on trade due to poor fertility of land for agriculture and population density. Trading and market played an important role in industrialisation process in Nnewi. The trading ability of Nnewi merchants dates back to 19th century mainly on palm oil and salt. A closed analysis of an Nnewi trader shows that management skills are acquired through both formal education and an endowment of talent and tradition. Nnewi entrepreneurship management skill is a case of talent and culture that has been transformed from trading into industry.

The economic development in Nnewi town started in 1960s but became active through trading activities in Nkwo-market place in 1970 after the Nigerian civil war. The growth of Nkwo-market can be analysed as specialisation effects on trading in different specialised branches of motor spare parts. This developed to an agglomeration of similar trading merchants at Nkwo-market place. The basic agglomeration effects are information-sharing, learning and rise of support institutions such as different banks on the one side, and specialisation effects leading to network building on the other (Bräutigam, 1997). In each branch of motor spare parts began an evolutionary process in network development; ranging from formation of social grouping, trading norms, trading rules to cooperation. Control system was developed based on sanctions in the distribution system in order to maintain positive competition as well as competitive position in every branch of motor spare parts.

3.2.2 Economy

The major cost concept that was acknowledged by the traders was the "transaction costs". Reducing the costs of information about the market, contract negotiations and enforcement with the distributors were effective through distributive network system

(Bräutigam, 1997). Hence the period between 1970 and 1980 was classified as the capital accumulation period through private savings induced by reduced transaction costs. This supports the argument of neo-classical on growth theory in recognising the importance private savings in accumulation of production capital (Utecht, 1996). Transformation from trading to production started in 1982 with marketing of products with their brand name but produced in Taiwan. Bräutigam (1997) pointed out that the success in this form of marketing strategy motivated the traders to venture into actual production in Nnewi. On the other hand, one can also argue that Nnewi cluster development is a case of gains from externalities. The factors responsible for efficient performance or best practices by one entrepreneur can spread easily in a cluster of specialised and similar entrepreneurs. Industrial revolution began in 1983 in Nnewi as a result of the competitive nature of the entrepreneurs. Despite Structural Adjustment Programmes (SAP) going on in Nigeria, a reasonable investment was made with the number of SMEs rising between 1983 -1994 from 1 to 23. In order to reduce all kinds of transaction cost, most firms distribute their product through pre-existing distribution networks. Since then most of the firms in Nnewi have gone through different stages of development, from using hand-tools to modern technology in production and gradually adopting working culture similar to the western system in production.

Table 4 below shows the kind of relationship that exists among the firms in the cluster in order to reduce their development constraints. The table indicates that firms build a learning network mainly to improve their performance through sharing of tools, cost of transporting raw materials, and information. They collaborate in different forms, ranging from sharing information to relatively close cooperation of sharing common services. Sharing information on product design and sourcing of technology input implies that firms operate on market conditions and consumers demand. Reduction of transaction costs due to cooperation implies strong comparative advantage on production cost over other isolated firms. The table indicates also a relative absence of collaboration in the supply chain.

Table 4 Inter-firm relationships and joint actions in the Nnewi SMEs cluster

	Inter-firms relationships in the cluster	
Number of SMEs	**Horizontal**	**Vertical**
23	-sharing technicians and equipment -sharing transportation costs -sharing information on production techniques and technology inputs[10]	none
	Joint actions in the cluster	
	Bilateral action	**Multilateral action**
	-joint import of raw materials -joint financing of infrastructure -joint advertisement through sponsoring[11]	none

Source: Bräutigam, 1997

Table 4 further explains the different strategies adopted specifically to reduce production costs and foster growth among the firms. The multilateral actions among institutions and organisations are long-term strategies deemed to maintain competition and foster local economic growth. The Chambers of Commerce and Industry (CCI) provide business information for the firms and work with local manufacturers association to organise local trade fairs. Local and international trade fairs are organised by the CCI and MAN annually in order to promote local products. Recently the rates of product advertisement and number of advertising agencies have been on increase. The MTI supports the firms by providing training for new technician. The institute also tends to be innovative by restructuring its training services in order to support youths for self-employment in handcraft training especially in metalwork. The effects of the networks are not only measured by increased technology transfer and improved method of production, but also by the impact on productivity and the increased rate of wage employment in the region. The table further shows self-financing of infrastructure by the private sector. This has negative impact on production investment and can be taken as an example of state failure in provision of infrastructure. Joint actions in the cluster however have some limits because of low income and little access to global market.

[10] Cento Ltd. and John White Ltd are firms in the same lineage, they compete, but they assist each other by giving information on the source of new technology and new methods of production (Bräutigam, 1997).

[11] In 1994 five firms in the Nnewi industries namely Rmico, Ibeto, Cutix, G.O.D and John White pooled resources together to sponsor a local radio program in order to reduce advertisement costs (Bräutigam, 1997).

Table 5 below shows international linkages of the enterprises in Nnewi cluster. The linkages were in two forms; first, as technical co-operation in order to overcome the technological gap in production- and management capabilities. The second is in form of outright purchase of entire factory from foreign partners after repeated trade transactions with the partners. The linkages are developed through long-term trade relation aimed at exploiting market conditions.

Table 5 International industrial linkages in Nnewi

Industrial Groups and Firms	**Products**	**International technology linkages**
Jimex Groups	plating, alum casting, household utensils, spray guns, heavy pots and flood lights	USA, GB, Poland and Germany
Ibeto Groups	photo processing, synthetic marble brake pads and linings, clutch facings, batteries, front grills, PVC Conduit fittings and fan blades.	GB, Taiwan and Germany
Atuchukwu & Sons Ltd	engineering services, auto parts, electroplating small metals	USA and Germany
Centro Groups	plastic auto & motorcycle parts, Travel and school bags	Korea, Taiwan and Germany
Ejiamatu Osita Igbokwe Groups	bottle liquors	GB
Sampson & Mbaebies Ltd	bleach, petroleum jelly, tale and tinned custard	Germany
Mebros Ind. Ltd.	pressed auto. panels and file cabinets	Taiwan, Denmark and France
John White Ind. Ltd	power rode fan belts	Taiwan, Japan and Germany
Chicason Groups	vegetable palm oil and soap	Belgium, Taiwan and Malaysia
Christomex Ind. Ltd	mechanised cement blocks, Motorcycle seats and aluminium window louvers	Taiwan
Edison Auto Ind. Ltd	brake linings, brake pads and brake fluid	Taiwan, Korea and Japan
OTC Ltd	automotive cable and spare parts	Taiwan and Korea
Odiofele Groups	pressed aluminium kitchen items, head pan handles and rivets	GB and Germany
G.O.D Brothers Group	rubber auto parts, motor cycle tires and tubes crumb rubber	Taiwan
Omatha Holding Ltd	oil filter and auto exhaust systems	Malaysia and Singapore
Armak	grain maize milling	GB, Italy and Germany
John Ray Ltd.	engineering services, industrial mold and gas stoves	GB
Gabros Groups	industrial moulds	Taiwan
Silver sun paper Ind	toilet paper, photocopy paper and labels	Italy
PMS Groups	moulded plastic electrical items	Hong Kong
Isiah-Nwafor Groups	motorcycle pistons and rings	Taiwan

Source: Bräutigam (1997: 1075)

The advantages gained through technology links can be observed based on employment changes in the SME cluster as revealed in table 6. This is because purchasing new machines implies that there will be a need to employ new workers due to increased productivity. Furthermore, local new technicians will be trained to operate the machines.

Table 6 Employment creation by SMEs in Nnewi

Industrial Groups and Firms	Start Year	Initial No. of Workers	No. of Workers in 1991	No. of Workers in 1994
Jimex Groups	1967	20	250	220
Atuchukwu &Sons Ltd	1983	4	15	12
Cento Groups	1984	65	120	165
Adtec. Ltd.	1984	30	-	-
Aswitch Plc	1984		45	45
Ebunso	1985	3	20	20
Ejiamatu Igbokwe Groups	1986	20	100	50
S&M Ind.	1986	80	23	82
Mebros Ind. Ltd.	1986	12	70	
John White Ind. Ltd	1987	56	80	198
Christomex Industries	1987	30	55	71
Edison Auto Ind. Ltd	1987	23	295	330
OTC Ltd	1988	40	65	75
Ekwulumili Ind. & Co	1987	15	75	40
G.O.D Brothers Group	1988	24	120	200
John Ray Ltd	1988	7	10	10
Silver sun Ind Ltd.	1990	8	58	65
PMS Groups	1991		14	15
Isiah-Nwafor Groups	1994			120
Total No. of workers		437	1415	1718

Source: Bräutigam (1997: 1075)

3.2.3 Limitations of the cluster

One can acknowledge Oyeyinka's (2001) argument that most of the entrepreneurs in Nnewi cluster have little knowledge of production skills. On the other hand this does not mean that production activities cannot be effective because technical skill is a necessary condition but not sufficient factor in production organisation. The managerial competence and organisation ability plays an important role in production function. The managerial and natural organisational ability of an Nnewi entrepreneur demands socio-logical enquires. This is also applicable to "Igebu" entrepreneurs in western Nigeria. The question then is if this can sustain the dynamism of the Nnewi cluster in the long run. Upgrading of management skills is imperative in modern production system because natural talent has limitations as production system becomes complex and competitive pressure increases. This implies that the level of education and the quality of skilled workers will be the problems that will confront the Nnewi cluster in the near feature.

Table 4 shows the absence of vertical integration of firms along the production stages. This implies that there is a vacuum along the industrial structure. This shows also that SMEs in the cluster are mainly producing directly for the local market. Though there are indications of output and employment growth, the firms are still faced with an increasing competition on the one side and a reduction in economic returns due to continued devaluation of local currency (Naira) on the other side. There is no evidence showing positive changes in real income of the firms and the individual workers. One of the major consequences of this is an event that produces "immiserising growth"[12]. For example, the producers can only be competitive through continual devaluation of the local currency without increasing their efficiency; this reduces the international purchasing power of their domestic incomes (Kaplinsky and Readman, 2001).

Recently, UNIDO has been actively stressing the importance of SMEs in developing countries to participate in global income by calling for the need to integrate them in global value chain. In this context, the role of large firms in inter-firm cooperation is needed in the Nnewi cluster. Such cooperation induces growth as well as inserting them appropriately in a global value chain.[13] Furthermore, such cooperation facilitates upgrading in SMEs' production capabilities and product quality standard, at the same time restructure the firms and economies on a learning process (Nadvi, 1995; Gereffi, 1999). Humphrey and Schmitz (2002) further argued that such integration depends on the capacity of the firms to innovate and their ability to generate continuous improvement in product and production processes what the global value chain demands.

A further problem confronting the cluster is the exploitation of comparative advantage of local raw materials. Most of the firms in the cluster continue to undertake joint

[12] "Immiserising growth is defined as an outcome when overall economic activity increases, but return to the economic activity falls" (Kaplinsky and Readman, 2001: 24).

[13] Value chain is the process that is required to bring a product or service from the conception, through the intermediary phases of production and delivery to final consumers (Kaplinsky, 2000). The global value chain analysis is concerned with how global productions and distribution systems are organised which involves recurrent transactions between various firms locally and international (Humphrey and Schmitz, 2002).

importation of raw materials. The degree of local content in their production input remains minimal. This implies that there are little sectoral linkages in the cluster on the one side and absence of institutional linkages on the other. This poses the question to what extent the Nigerian Economic Reconstruction Fund (NERFUND), established in mid-1980s in order to provide incentives to substitute local material for imports, has performed its function.

4 Conclusion

4.1 Summary

In this paper we have examined the cluster concept and its impact on private sector development in Africa in general and on SME development in Nigeria in particular. The first step was to make broad analyses on the definition of cluster from different perspectives. Based on the African contest, where institutional framework and infrastructure are poorly developed, we adopted Schmitz's approach that considers geographical proximity as being an important factor for cluster development in developing countries. In making our own deductions, we further considered competition and learning as two important elements needed in African clusters because they are the benchmark for the private sector development in the region. Furthermore, the analytical approach was also used to make an in-depth explanation on cluster concepts and these were further related to the scenarios in African clusters. In this context, however, it was analysed how the size of the market and the quality of their products play an important role in cluster development. The relationship between the stocks of economies of scale and scope within the cluster and the growth rate of the cluster was also discussed. This was followed by the discussions on why upgrading is important for the cluster and the role of value chain in SMEs upgrading. The role of institutions in cluster development was extensively analysed. Part 2 was concluded with a discussion on the concept of collective efficiency and its components.

In Part 3, we have been able to build-up the historical background of the clusters in the South Eastern region of Nigeria. Enugu SSEs furniture enterprises comprise Ogwi Carpenters Union and Asata Carpenters. Both clusters have the same origin and development path, but have differences in organisational structure and the nature of linkages. On the other hand the clusters are informal in nature. The networks in the clusters are learning networks deemed to reduce growth constraints through sharing knowledge, information and hand-tools in order to improve performance and reduce costs. However, to what extent these constraints have been reduced through cluster formation requires further empirical evidence.

The growth-path of Nnewi SMEs cluster was also analysed in Part 3. Thus, showing the relationship between private savings and accumulation of production capital on the one hand and the transformation process from trading to manufacturing in industrial development on the other. We have also shown the international linkages of the enterprises in the Nnewi cluster. The linkages were developed through long term trade transactions that were transformed to manufacturing. The linkages are not limited to Taiwan but also diversified to Western Europe. This paper further analysed the multilateral actions among institutions and organisations deemed to maintain competition and improve performance in the cluster. Limitations of the clusters in the region were also examined. The limitations were classified in forms: one is level of education of the entrepreneurs. The second is weak government, institutional support and market development. This followed by financial constraints of the SMEs needed for expansion.

4.2 Policy discussions

In this paper we have tried to analyse why clustering is important in SME development in Africa. We have put some theoretical argument about how social interactions can induce confidence in entrepreneurship development. The result of the findings however indicates that there are no effective institutions supporting the cluster development in African in general and in Nigeria in particular. There is need for partnership building between state, institutions and the private sectors for SME development. Such relationship plays an important role in economic development generally, especially in infrastructure and in capacity building.

Furthermore, incentives should be made in order to motivate the growth of African SME clusters. Opening new markets opportunities and dismantling some trade barriers that affects SMEs development negatively is imperative in current wave of globalisation of the world economy. In this context, policies should be directed on overall production efficiency of the SMEs. This will in turn lower costs at the same time increase the purchasing power of the consumers, when the prises are reduced. Besides reducing costs, increasing the efficiency will also position the SSEs in the cluster to compete effectively in an open economy. The efficiency gained in local market will project them as well towards an export oriented production system and possibly help to integrate them effectively into the global economy.

Policy objective for the support of technical education and training is imperative in the South Eastern region and in Nigeria generally. The dynamism of any cluster depends on the availability of skilled workers. This is because the growth of SME is not only induced by the technological innovation but also by the quality of skilled workers within the enterprise. In this context, besides providing technical training for middle level manpower in the Nigerian steel industry, MTI technical training scheme should be expanded to cover the grassroots level. This will help to strengthen the effectiveness of the lower skilled workers in the region.

Moreover, SME upgrading requires enormous funding which includes research funding, implementing technical agreements, outsourcing, purchase of needed equipment and capacity building. These require multilateral intervention and bilateral cooperation strategies. Multilateral intervention suggests the intervention of international multi-lateral finance institutions and industrial development organisation such as UNIDO in funding and supporting the development of core industry that will stimulate SMEs upgrading through value chain in the region. Bilateral intervention is directed to Nigerian economic policy objectives that will tend to exploit opportunities to encourage Nigerian SMEs to engage effectively in joint venture activities with foreign SMEs. Furthermore, incentives that tend to stimulate foreign direct investment in Nigeria need to be pursued. Such incentives include the stability of macroeconomic variables and none-discrimination in investment opportunities.

Chambers of commerce and industry in Nigeria seem to be very weak in offering SMEs essential services such as information on the current market and issues related to industrial development. This is not only as a result of poor financing of the organisation, but also due to non-effective recognition of their role in private sector development by the government. The role of Chambers of Commerce and industry in SME development should move from supportive role to a functional one that will involve integration of economic actors into interactive learning. Furthermore, in order to restore confidence in Nigerian economic transactions, effective legal institution is important because contract relations can only be maintained and opportunistic behaviours can as well be reduced when the laws governing economic transactions are effective and stable.

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