

THE RELEVANCE OF THE FLEXIBLE SPECIALISATION PARADIGM FOR SMALL-SCALE INDUSTRIAL RESTRUCTURING IN GHANA

Jonathan Dawson

1 INTRODUCTION

Today, perhaps more than ever before, attention is being focused on the small enterprise sector as a potential source of dynamic growth in sub-Saharan Africa (SSA). This follows several decades of relative neglect of the sector during which large-scale industries, heavily supported and often partly or wholly owned by the state, came to dominate most SSA economies.

As the level of protection enjoyed by large-scale industry has fallen with the adoption of structural adjustment programmes in the 1980s, and in the face of the growing economic crisis during that decade, the importance of large firms in many SSA economies has been declining. The response of the small- and medium-scale sectors to the opportunities which are arising as a result, however, appears to have been uneven. While some experience of strong growth in these sectors is reported, evidence to the contrary is also available. Indeed, different studies within the same countries at similar periods have come to different conclusions about the performance of small firms while even within individual studies, different types of small firms have been found to be performing quite differently.¹

The interpretation of the confused and uncertain picture is hampered by the weak conceptual understanding of the small firm sector and its potential for growth. It is a decade since Schmitz concluded a review of the literature on the small enterprise sector — examining the ideas and the findings of those who were optimistic and those who were pessimistic about its growth potential — by declaring that: 'the issue is not whether small enterprises have growth and employment potential, but under what conditions' (Schmitz 1982:445). In the intervening years, there has been a relative dearth of studies aimed at identifying what those conditions might be. Something of a vacuum has resulted with no emergent broadly accepted conceptual paradigm within which small enterprise studies can be located.

The object of this article is to examine — on the basis of a study of small enterprises in Ghana conducted by the author in 1988 — the strengths and weaknesses of a

paradigm which, it has recently been suggested, may go some way towards filling this vacuum. The next section will be given over to a brief description of the central tenets of this paradigm — flexible specialisation. Section 3 will describe and discuss the findings of the above-mentioned study of small enterprises in Ghana's second city, Kumasi. The degree to which these findings confirm or contradict the value of the flexible specialisation paradigm will be the subject of Section 4. The final section examines some of the theoretical issues raised and explores the degree to which the conceptual construct of flexible specialisation contributes to our understanding of the small enterprise sector in SSA.

2 THE FLEXIBLE SPECIALISATION PARADIGM

The flexible specialisation paradigm has been set out elsewhere in this Bulletin. It is intended here only to describe its central characteristics against which the findings of the Ghana case study can be measured. Based on empirical evidence drawn from studies in industrialised countries, it is suggested that small firms appear, under certain circumstances, to have important advantages over larger-scale competitors. Principal among these is their use of broadly skilled labour and multi purpose technologies which contrasts with the traditional mass production techniques using narrowly skilled workers and highly specialised equipment commonly associated with large-scale producers. This, it is argued, enables smaller firms to switch production quickly and easily among a wide range of goods. It is suggested that this advantage has proved particularly important during times of market saturation and fragmentation such as that experienced in recent years in Northern economies. Flexible specialisation has not, however, been seen as synonymous with small enterprise development. The degree to which small firms are capable of dynamic and innovative endogenous growth is seen as being primarily dependent on clustering. The complementarity between the activities of small firms located in close proximity facilitates combined efficiency and output greater than had they been operating independently of each other.

Towards the end of understanding the conditions

¹ Both Steel and Webster (1991) and Dawson (1991) found a high degree of heterogeneity within the small firm sector in Ghana in this respect.

under which the small firm sector in SSA may experience growth, it has recently been proposed that the flexible specialisation paradigm may offer some important insights.² It has been argued that the small size of domestic markets in most of the continent offers immediate advantages to flexible, relatively small-batch production. The advantages of clusters of small firms are hypothesised to be further increased during times of crisis and restructuring — such as those currently prevailing in SSA — characterised by interruptions in the supply of equipment, materials and power and rapidly changing patterns of demand. The degree to which these hypotheses are valid in the case of Ghana will be explored following a summary of the case study.³

3 THE FINDINGS OF THE KUMASI CASE STUDY

Kumasi is Ghana's second city, with a population of around 500,000. Lying at the heart of the cocoa and timber growing areas, it is a commercial and marketing centre for a large hinterland as well as being an important transport nodal point. Its industrial landscape includes large factories active in the timber, leatherware, drinks, cigarettes and food-processing sectors. Kumasi has also long had an active small enterprise sector, being particularly renowned for its small-scale vehicle repair workshops. The Kumasi City Council has pursued a policy of clustering its small enterprises, most of which are now located in the vast industrial shanty town of Suame, a northern suburb of Kumasi.

Kumasi's industrial structure has experienced a substantial transformation over the last decade and a half. Up until the mid-1970s large-scale private and public enterprises were in a dominant position. However, in the succeeding years they faced increasingly serious problems. Heavily import-dependent and in many cases having few linkages with other sectors of the economy they proved ill-equipped to respond to the progressively tighter foreign exchange squeeze experienced in the late 1970s and early 1980s. Equipment fell into disrepair and capacity utilisation declined sharply. Meanwhile spiralling inflation ate into the purchasing power of salaried workers.

As the output of the large workshops began to decline, so the number of small enterprises grew. The trickle of formally-trained workers into self-employment, which had always existed, developed into a substantial exodus. Being beyond the control of the state — as well as by virtue of the flexibility of operations afforded by their smallness of scale — these small enterprises were

able to gain access to the thriving black market in imported components and materials which was developing. Increasingly, those seeking scarce parts were directed to Suame rather than to the established enterprises in town.

A large variety of machine tools found their way into the small enterprise sector, both by way of the purchase and renovation of equipment from large domestic factories and in the form of remittances from the many Ghanaians living overseas. There was also a plentiful supply of scrap metal and timber.

By 1986, Suame was estimated to have grown eightfold over the preceding decade and to be playing home to around 40,000 craftsmen operating out of about 5,000 workshops. Nor was the development of the small enterprise sector purely quantitative in nature. In each of the four branches studied — the survey of 672 entrepreneurs in the carpentry, vehicle repair, blacksmithing and engineering branches — small firms had conquered new markets and had, to varying degrees, succeeded in diversifying and upgrading production.

Small-scale carpenters won contracts from three local breweries for the provision of crates. They were also commissioned to produce much of the furniture required by schools and public sector establishments and were often sub-contracted to work for small construction companies, which were taking a progressively large share of the house-building market.

In the vehicle repair sector, state corporations, schools, sawmills and other large firms were increasingly sending their vehicles to the only place in the region where parts could generally be found — Suame. Blacksmiths increased their production of bolts and nuts, vehicle body brackets and springs. With the falling output from the agricultural implement factories, the production of hoes, cutlasses, wheelbarrows and other tools also increasingly shifted to small blacksmiths.

However, the branch in which small firms were most conspicuously successful in expanding and enhancing their production was light engineering. Increased demand came from a variety of sources. Large local companies in many sectors — including mining, saw milling and transport — contracted small firms to manufacture various vehicle and machine parts. One was sub-contracted by a local Yugoslav-owned motorcycle assembly plant to manufacture gears and sprockets. Small enterprises were also called on to rehabilitate and maintain the machinery of large industrial concerns.

² See particularly Schmitz (1990) and Streeten (1991).

³ For details see Dawson (1988) and (1991).

Increased demand for small-scale engineering products also came from the agricultural sector in the form of implements such as ploughs, ridgers and planters and a wide variety of food-processing and oil-extracting machinery and animal feed-mills. The final source of demand came from the local small-scale industrial sector itself. Small machine shops manufactured some of the simple machines employed in Suame — such as electric and acetylene welders, compressors, wood-turning lathes and saw-benches — while maintaining in working order almost all equipment including relatively sophisticated machine tools.

Demand from neighbouring countries was an important source of work for small firms in each of the branches studied. 17 per cent of the sample reported sales to foreign clients.

The adoption of the Economic Recovery Programme (ERP), an IMF-supported structural adjustment programme starting in 1983, radically transformed the economic environment in which small enterprises had thrived. Imports once again flooded into the country through official channels while the black market was suppressed. This threatened to undercut small enterprises which were either playing an import-substituting function or which had moved into markets that were in danger of being recaptured by larger firms.

The impact of the ERP on the small enterprise sector has been both complex and multi-dimensional with different types of small firm being affected differently, but some main trends can be discerned. Firstly, small firms which had succeeded in the years before the adoption of the ERP in significantly enhancing their technological base and the quality of their products tended to hold their markets and/or to diversify into other markets where they had a comparative advantage. Conversely, those which achieved only modest upgrading were more easily displaced. In broad terms, engineering and, to a lesser degree, vehicle repair enterprises tended to fall into the first category while blacksmiths and carpenters fell into the second.

Secondly, small firms which had succeeded in developing linkages with those sectors of the economy which were targeted for investment under the ERP — manufacturing, cash crop agriculture, transport and infrastructure — benefited from the growth in the economy. Conversely, those enterprises which sold predominantly to individuals or to the public sector saw a reduction in demand as the purchasing power of both categories of clients declined. Once again, the vehicle repair and engineering branches did rather better in this respect than carpenters and blacksmiths.

Finally, the severity of the devaluations imposed between 1983 and 1988 had two quite different effects.

On the one hand, it offered significant opportunities for firms serving an import-substituting function. On the other, it heavily penalised those which have relatively high import-dependencies. Engineering workshops have been particularly well favoured as a result of the opening up of new import-substitution markets.

In brief, the small firm sector in Kumasi has proved rather more resilient to the reopening of the economy to imports after 1983 than had been feared in many quarters. While small-scale carpenters have experienced a reduction in aggregate demand and blacksmiths have in many cases been displaced both by imports and by the products of small engineering firms, the vehicle repair and engineering branches continue to be dominated by small enterprises.

One final feature of the ERP, however, has had the effect of significantly undermining the small firm sector's growth potential. A major programme of retrenchment in the public sector together with the closing of many black market income-earning opportunities has substantially swelled the ranks of the underemployed. The relatively low barriers to entry into most small enterprise activities — in terms of both the cost of the equipment and the level of skill required to operate it — has left them poorly protected against the flood of new entrants and employment within the sector has mushroomed. The apprenticeship system, while providing effective low cost training, exacerbates this problem because it has provided a steady flow of skilled labour.

The result has been a proliferation of small firms and fierce competition among them which has driven down profits to such an extent that innovation has become difficult. Even in the vehicle repair branch, where the size of the cake in terms of the total volume of work undertaken by small enterprises in Suame appears to have grown significantly since 1983, the size of the slices earned by most firms has declined. Only among small engineering firms are the barriers to entry high enough to offer some protection from the flood of new entrants and product diversification, enhancement and innovation continue, in some measure, to be in evidence.

4 SMALL ENTERPRISE IN KUMASI AND FLEXIBLE SPECIALISATION

In order to gauge the degree to which the recent development of the small enterprise sector in Ghana ties in with and validates the flexible specialisation paradigm, it is proposed to seek answers to two questions: firstly, to what degree have small firms demonstrated an ability to out-compete larger firms by virtue of their superior flexibility; and secondly, to what extent has the clustering of small firms in Suame

enhanced their 'collective efficiency' (Schmitz 1990)?

In answer to the first question, there is substantial evidence to suggest that in certain product markets and under certain conditions, the superior operational flexibility of small firms may enable them to out-compete both larger firms and imports. Even after the re-routing of imports through official channels, which led several of the large garages and machine shops in Kumasi to refurbish and restock their facilities, small workshops continued to dominate many product and service markets. They were able to do so for two key reasons.

The first relates to the size and nature of those markets. Where markets are small and relatively specialised — and where small firms had significantly enhanced the quality of their products in advance of the re-opening of the economy — they have continued to be competitive. The individual service which they provide, tailoring their work to the exact specifications of the client, has proved to be more appropriate in such markets than the more standardised production processes, generally geared to large-batch production, employed by larger firms.

The fact that capacity utilisation is considerably higher in small engineering workshops and garages than in large ones suggests that most of the product and service markets in these branches are, in fact, relatively small. A list of the types of job undertaken by small firms illustrates this point: the rebuilding or conversion of vehicles; the building of saw mills (generally in batches of no more than two or three); the manufacture of key components for water systems equipment run by the water authorities; the production of various spares for an oil refinery, harbour facilities and for ships, etc. In each of these cases, a relatively small number of highly individual and specialised goods was required.

This issue of market size is also central to an understanding of the relative competitiveness of imports and local small-scale products in different product markets. Once again, it can be said that the smaller and more specialised the market, the stronger has been the performance of small firms (provided that the quality of their products was significantly enhanced prior to the reappearance of the imported goods). An additional qualifying factor to this general rule is that the bulkier and heavier the product — and thus its related transport costs — the greater appears to be the comparative advantage for local, small-scale producers.

The market for nuts and bolts can be used to illustrate these points. After 1983, imported standard hexagonal bolts, commonly used in all sorts of machinery, flooded onto the local market, undercutting small machine

shops which had previously been manufacturing them. Many of these workshops, however, diversified into the manufacture of less common and generally more bulky bolts — such as U-bolts and centre bolts — driving imports off the market. There was also a significant degree of diversification into the manufacture of agricultural processing equipment, which also tends to be bulky, of variable sizes and shapes depending on the requirements of the client and characterised by relatively low and sporadic demand. The ability of small firms to switch production rapidly between different products and to identify new niches in which they have a comparative advantage has been a key factor in explaining the prominent role which they continue to play.

The second factor in explaining the continued competitiveness of small firms in the face of renewed competition from imports and larger domestic manufacturers is the relatively low cost of their goods and services. This is due, on the one hand, to the expertise which they have developed in the use of locally available materials, reducing the need for expensive imports, and, on the other, to their avoidance of many labour regulations. While most of the entrepreneurs sampled paid some level of taxation, generally little attention is paid to safety and welfare considerations and the use of cheap family and apprentice labour is widespread.

The competitiveness of small firms is further enhanced by their clustering.⁴ There are two respects in which the clustering of small firms appears to have enhanced their collective efficiency. First, a significant degree of cooperation in the production process has developed. This has enabled small workshops with only limited equipment and staff to take on substantial pieces of work, parts of which are shared with or sub-contracted out to neighbouring enterprises.

This is most evident in the case of major repairs to vehicles where one entrepreneur will sub-contract various specialist workshops — panel-beaters, electricians, sprayers, etc. — to undertake various parts of the job which he has taken on. The presence of workshops specialising in the production of parts such as grinding mill plates, bushings and gear wheels has also greatly increased the range of products which can be manufactured by small firms in Suame.

The second respect in which the collective efficiency of the sector has been enhanced relates to the role of small engineering workshops in the manufacture and maintenance of the equipment employed by other small firms. This factor was found to have contributed substantially to the technological capability of small firms in each of the branches studied. The ability of

⁴ See also Riedel and Schmitz (1989).

small machine shops to make capital and intermediate goods of precise specifications has enabled many other small enterprises using those goods to occupy niches which would otherwise not have been accessible to them.

5 LIMITS TO FLEXIBLE SPECIALISATION IN KUMASI

Thus far, it has been established that in certain respects the experience of the small enterprise sector in Kumasi over the last decade and a half has validated the central tenets of flexible specialisation. Under certain circumstances — small, specialised markets, a significant enhancement of the quality of small firm products and services, and access to enhanced technology — small firms' superior flexibility has enabled them to out-compete larger firms and imports. Similarly, in several respects, the concept of collective efficiency appears to be of value in explaining the strong performance of the sector.

It is, however, important to put these findings into context. While encouraging trends can be identified, there is also evidence of stagnation and displacement in the small firm sector. Of the 672 firms sampled in the Kumasi study, 58 per cent reported a fall in demand over the five years since the introduction of the ERP while only 14 per cent reported a rise in demand. There was also substantial evidence that the rate of increase in small firm mortality had increased sharply over the same period.

Several factors account for this. First, in some lines of production small firms were out-competed by larger firms and imports. In a number of cases — certain types of nuts and bolts, as we have already seen, and beer crates, for example — the economies of scale employed gave large firms the upper hand. This was also the case with some product markets not covered in the study, such as soap and clothing.

Second, many small firms achieved little or no enhancement in the quality or range of their products

or in the technology which they employed. Blacksmiths and artisanal metal-workers, for example, while occasionally making use of some products made by local machine shops, were on the whole little affected by the technological upgrading occurring around them. Similarly, while a number of modern and sophisticated machines found their way into small garages, the great majority continued to use the same hand tools as before.

Third, many small firms could not escape negative developments in the economic environment in which they operated. The most significant of these developments were cutbacks in public sector spending and a reduction in the purchasing power of relatively low-income segments of the population — traditionally an important source of demand for small firms. On the supply side, a depressed labour market meant that many tried to set up their own business. Indeed, retrenched workers and new market entrants were flooding into small-scale economic activities, resulting in cut-throat competition and falling returns.

The conclusion to be drawn from this is that the flexible specialisation paradigm only helps to explain the growth of some of the small enterprises in Suame. The hard core of innovating firms is restricted to 31 engineering workshops. However, as seen before, due to deep inter-firm division of labour, their innovation has also raised the capacity of other small firms in the cluster to improve their equipment and their output. Nevertheless, in spite of such emerging collective efficiency, the majority of Suame producers have done more to swell the number of firms than to raise overall quantity or quality of output.

The flexible specialisation paradigm, then, appears to offer a number of useful insights into small enterprise conditions. Until more answers are found to the problems associated with large labour surpluses, however, the flexible specialisation paradigm appears to be of greater relevance to an understanding of the small-scale engineering branch than to the small firm sector as a whole.

REFERENCES

Dawson, J., 1988, 'Small-scale industry development in Ghana: a case study of Kumasi', mimeo. Report submitted to ESCOR/ODA, Brunel University, September

—1991, 'The development of small-scale industry in Ghana: a case study of Kumasi', in H. Thomas *et al* (eds.), *Small-Scale Strategies for Industrial Restructuring*, I.T. Publications, London

Riedel, J. and Schmitz, H., 1989, *Grass-Root Industrialisation in a Ghanaian Town*, Weltforum Verlag, München, Köln, London

Schmitz, H., 1982, 'Growth constraints on small-scale manufacturing in developing countries: a critical review', *World Development*, Vol 10 No 6

—1990, 'Small firms and flexible specialisation in developing countries', *Labour and Society*, Vol 15 No 3

Steel, W. F. and Webster, L., 1991, 'Small enterprises in Ghana: responses to adjustment', *Industry Series Paper No 33*, World Bank, Washington

Streeten, P., 1991, 'The judo trick, or crowding in', *Small Enterprise Development*, Vol 2 No 2, I.T. Publications, London