The Small Scale Industry Sector in Tanzania

A Review

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INTRODUCTION

Recent concern for the slow growth in industrial employment and the lag in rural development has revived interest in the role of small scale industry in the economic development of Tanzania.

There are a number of reasons why the small scale industry (SSI) sector is considered as a potential force in the economic development of Tanzania. First, from the basic needs point of view, formal and informal small scale production provide a wide range of basic goods and services which are less costly and hence more suited to the needs of the less affluent segments of the population. Second, and closely related to the above point, there is enough evidence suggesting that the majority of the urban poor derive their incomes from such small scale activities, either through the sale of products or by wages (through increased employment). Third, is the wide belief that since small scale industries and more labour intensive and could be more geographically dispersed than large scale industries (LSI), their promotion will induce employment absorption and an improved regional and vertical distribution of income. Fourth, their locational flexibility and bias towards domestic resource needs make them easily accessible to local entrepreneurs and facilitate the development of indigenous technological capabilities. Lastly, in the Tanzanian context and in terms of self-reliance and building from bottom up a SSI strategy contributes to the Ujamaa pattern of socialist development.

The development, therefore, of an SSI sector may be a prerequisite to combating problems arising from rural and urban unemployment, inequality and poverty.

Despite current government initiatives to establish, develop and promote SSI through the Small Scale Industry Organisation (SIDO) very little is known about the size, structure and performance of the SSI sector in Tanzania. This paper views briefly the scanty evidence concerning the size, structure and performance of the SSI sector in Tanzania.

SIZE AND STRUCTURE OF THE SMALL SCALE INDUSTRY SECTOR

The Overall Employment Structure

Estimates of the relative magnitude in terms of employment or output of the SSI sector in Tanzania is made difficult by the general underdeveloped statistics in the country. Small and artisanal firms are largely unregistered and hence not covered in most industrial surveys and other official statistics. Confusion also arises due to the arbitrariness and inconsistent use of cut-off points employed by various official sources. Although the number of persons employed is the most commonly used size criteria, the term 'small scale' is applied variously to establishments with less than 50 or at times, 5 workers.

The National Accounts, for instance, provide a figure for Manufacturing and

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Handicrafts. This is composed of three parts: Manufacturing which covers firms which 10 or more workers; an estimate for small scale production which covers 5-10 workers; and an estimate for handicrafts which covers firms with less than 5 workers. On the other hand the Survey of Industrial Production covers 'Large Scale Firms' employing 10 or more persons. The new SIDO Survey of small industries includes firms with up to 50 workers but seems to partially cover activities with fewer than 10 workers. The following analysis should, therefore be interpreted with caution bearing in mind such inconsistencies, uncomparability and scanty data problems plus other conceptual and measurement difficulties[1].

Table 1 presents estimates of the structure of manufacturing employment for Tanzania. The large scale industry sector is composed of registered firms employing more than 50 persons each. Small scale industry sector firms fall into two categories: registered factory units which employ 10-49 workers and are covered by the Factory Act, and artisanal or non-factory units which employ less than 10 persons. Artisanal establishments are informally organised with heavy reliance on family and apprentice labour input. The Handicraft sector (HS) is composed of traditional craftsmen and operates mainly on self-employment basis.

Employment figures for the artisanal (non-factory) establishments are based on the 1967 artisanal survey and the 1977-78 SIDO small scale industry census. Coverage, particularly at the lower end, is undoubtedly incomplete. This is particularly so with the SIDO census results which show that an average non-factory unit engages 7 persons. This figure compares unfavourably with other previous estimates. In a study of small scale and crafts units in urban Tanzania, Scadler found out that the average small scale unit employed 3.3 persons[3]. Using 1975 data from the Ministry of Labour files, Phillips found that the average artisanal firm in Tanzania engaged 2.6 workers.[4] Other informal sector survey studies reveal that the average artisanal enterprise in Arusha and Dar es Salaam regions engage 3 and 4 persons respectively.[5]

TABLE 1: STRUCTURE OF MANUFACTURING EMPLOYMENT FOR TANZANIA

	1967		1978	
	Employment	% of Total	Employment	% of Total
Large Scale Firms (Over 50 persons)	34,500	36.6	51,185	37.50
Small Scale Factory Units (10-49 persons)	6,200	6.6	30,031	22.00
Small Scale Non-Factory Artisanal Units (1-9 persons)	1,300	1.4	23,253	17.00
Handicrafts	52,200	55.4	31,824	23.50
Total Manufacturing Labour force	94,200	100	136,293	100

SOURCES: (1967 figures): United Republic of Tanzania (URT), Population Census (1967; Survey of Employment and Earnings, 1967.

(1978 figures): URT, The Economic Surveys 1978; SIDO, The 1977/78 Small Scale Industry Census.

The 1967 figure for handicraft is less reliable; it is entered as a residual, the difference between the 1967 population census data and that reported by the manufacturing surveys. The corresponding figure for 1978 is based on the actual SIDO census count. Unfortunately, there are no comparative data for 1974, the year in which SSI are observed to have declined.

The apparent picture emerging from Table 1 is that small scale factory, non-factory artisanal and handicraft units employing less than 50 persons are the largest employers in the manufacturing sector accounting for over 60% of the total manufacturing employment.

However, the prominence of non-factory and handicraft units in small scale enterprise employment and the relatively low share of small factories in the overall registered manufacturing employment suggest that Tanzania is still largely an agrarian economy with an underdeveloped industrial structure. The data is also indicative of the dual character of the economy: small artisanal and traditional (informal) activities coexist with modern large scale (formal) units. Furthermore, as Steel contends, the concentration of employment in the small scale sector may indicate that small firms posses a comparative advantage in the economic environment of most African countries.[6] In the absence of comprehensive income and value added statistics, the employment structure revealed by table 1 indicates that SSI activities are quantitatively an improtant component of the Tanzanian economy.

The shares of small scale factory and artisanal activities in the total employment show significant increases over the decade (from 6.6% and 1.4% in 1967 to 22% and 17% in 1978 respectively). As expected, the size of the handicraft sector declined by 32% over the period in question as Tanzania began to industrialise. The relative deterioration of the handicraft sector is mainly attributed to the rapid increase in the factory and non-factory employment. The simultaneous rapid increase in the small scale factory and artisanal activities indicate that neither is growing at the expense of the other. The possible implication of this is that both subsectors produce goods that do not complete severely but complement each other. The relative slow growth in the share of employment of the scale sector, on the other hand, indicates the limited capacity of this sector to increase substancially labour absorption potential.

Subsectual Distribution of Employment

At the subsectoral level, the employment structure of the small scale sector is consistently dominated by the clothing and wood-based activities (Table 2). Clothing apparel, leather and furniture manufacturing account for over 50% of total small scale employment. Numerically, these light consumers activities account for the bulk (more than 50%) of the total establishments in the SSI sector.

The clothing industry alone seem to predominate and accounts for one-third of the total employment in the SSI sector. The predominant position of the clothing industry is possibly explained by its flexibility characterised by susbtantial ease of entry. This is particularly so with tailoring and shoe-making activities Initial capital investment is relatively low, consisting mainly of a manual sewing machine or rented tailoring equipment. These activities also do not require complicated working premises. Furthermore, the Dar es Salaam informal sector survey revealed that the clothing industry has a high labour turnover which constitute a reserve of potential entrants into the industry. The study attributes this to firstly, the absence of long term employer/employee contractual arrangements.

TABLE 2: SECTORAL DISTRIBUTION OF SMALL SCALE UNITS IN TANZANIA FOR SELECTED YEARS

	1967 % of Total Employment	1975 % of Total Employment	1973 % of Total Establishments	1981 % of Total Employment
Clothing, Appeal Footwear,	35.6	34.3	14	43.4
Wood & Furniture	19.2	27.4	33	35.4
Vehicle Repair	16.9	2.4	—	14.9
Metal Works	8.2	5.4	4.	
Food	9.0	6.4		6.3
Others	13.9	21.3	38	—
Total	100 0	100.0	100.0	100.0

SOURCES:
1967, Schadler (1968);
1975, Tanga Integrated Rural Development Program, Vol, 1, 1975;
1978, SIDO, The 1977-78 Small Industry Census;
1981, Bagachwa (1982)

Secondly, while apprentice labour input was observed to be significant, the apprenticeship period was the lowest. As a result, an exodus of apprentices who leave to establish their own working units was noted.

On the demand side, tailoring and shoe-making activities produce fast moving items, particularly because most of the entreprenuers are also involved in cloth and shoe repair as a secondary occupation.[2] There is also the question of tastes and preferences. By devoting special attention to design and careful selection of high quality material the small scale tailor or shoe maker can always produce a higher grade product than the standardised garments or shoes of the formal manufacturing firms.

Government policy in the form of price control or ready-made formal garments may also have reduced significantly the margins of the formal garments manufacturers. As a result and since tailoring charges are not officially monitored, many formal firms may have switched to informal small scale tailoring activities.

The evidence drawn from Tanzania is consistent with evidence from Ivory Coast and Colombia in which clothing activities appear as the largest small scale industry.[8]

The numerical position and significance of small scale wood based activities as the second largest employer can largely be explained by demand conditions. In particular, the demand for furniture appears to be an expression of a rising standard of living. Such a demand normally calls for diversity and flexibility (in the form of design, decorative value product elaboration etc.) which can be met more easily by specialised small factories.

Thus, despite the fact that ease of entry seems to be limited by such barriers as a lengthy process of skill information and a relatively high initial capital requirements, consumer demand conditions (state and preferences) outweigh such consideration.[3]

Another group of small scale activities consists of metal product manufacturers. This subsector is heterogenous, ranging from traditional blacksmithing to modern welding and fabrication of metal products essentially for household consumption.[10]

Vehicle repair and food manufacturing are the other components of the SSI sector. Food manufacturing is dominated by grain milling and bread baking activities, particularly in the urban areas. The food subsector employs about 6% of the total employment in the SSI sector. As page points out, unlike other small scale manufacturing activities, vehicle repair appear to reflect substantial complementarity between the small scale and large scale sectors of the economy.[11]

Spatial Distribution of SSI

The spatial pattern of industry, and manufacturing in particular, is important for inferences on regional employment and income distribution. Table 3 gives a rough indication of the spatial distribution of small scale non-factory units in different regions of Tanzania. Although the data is not sufficiently comparable due to different sources, coverage, and methodologies, the general trend is obvious.

The general picture emerging from Table 3 is that, over time, there has been a higher degree of small scale industrial spatial concentration in the seven

regions of Tanzania. These regions, Dar es Salaam, Coast, Morogoro, Kilimanjaro, Mwanza, Tanga and Arusha, accounted for 3/5, 4/5 and 2/5 of the total number of scale factories in Tanzania for 1967, 1975 and 1978 respectively The 7 regions (out of a total of 20 regions) account for almost 75% of the total small scale factory employment in Tanzania Mainland.

TABLE 3: REGIONAL DISTRIBUTION OF INDUSTRIES IN TANZANIA

REGION	SMALL SCALE FACTORIES				LARGE SCALE INDUSTRIES	
	1967 % of Establishments	1974 % of Establishments	1978a % of Establishments	1978a % of Employment	1974 % of Establishments	1978b % of Establishments
Dar es Salaam	30.5	32.4	26.3	52.5	39.8	37.1
Coast	n.a.	n.a.	7.4	4.6	1.6	0.6
Morogoro	5.5	9.7	5.9	3.5	4.1	4.9
Kilimanjaro	6.9	8.5	11.4	6.4	6.4	6.3
Mwanza	10.8	3.7	6.0	2.3	11.2	7.7
Tanga	8.3	15.8	5.9	4.3	11.6	12.0
Arusha	4.3	7.7	3.8	1.3	9.2	9.10
Kagera	3.9	2.4	3.2	1.7	2.4	1.1
Mbeya	6.8	2.0	1.7	2.4	0.8	2.9
Shinyanga	—	1.2	3.1	3.6	3.6	4.3
Tabora	5.4	4.4	2.2	0.2	2.0	2.3
Mara	2.8	1.2	4.3	3.3	2.4	2.0
Mtwara	1.6	1.2	3.8	3.0	0.4	1.4
Ruvuma	0.9	0.4	1.0	0.5	0.3	0.3
Lindi	3.0	2.8	5.1	2.7	—	2.0
Dodoma	4.9	0.4	2.0	2.0	0.3	2.0
Kigoma	0.6	0.4	3.3.	1.4	—	—
Singida	0.3	0.8	1.5	1.6	—	0.3
Iringa	3.3	1.6	1.7	0.4	3.6	3.7
Rukwa	n.a.	n.a.	1.4	0.7	—	—
Total	100	100	100	100	100	100

SOURCES:
1967, Schadler (1968);
1974, URT, Survey of Industrial Production (1974)
1978a, SIDO Census (1978);
1978b, Directory of Industries (1979).
n.a. = not available as the region was not yet established.

An interesting feature of the spatial character of industry in Tanzania is that 6 of the 7 regions which are the host centres of the bulk of small factories also account for over 3/4 of the large scale establishments in the country. Moreover, within each of these regions most of the industrial establishments (small and large) are located in the respective regional capitals.[12] Dar es Salaam City alone accounts for almost 50% of the small scale industrial (factory and non-factory) units and 55% of the total SSI employment. At the same time, the city also accounts for more than 1/3 of the LSI establishments.

The urban bias of small scale industries can be attributed to two major factors. First, like their large scale counterparts, SSI appear to be responsiveto the existing or emerging urban agglomeration economies. Urban localities offer a substantial array of infrastructural facilities with easier accessibility to industrial inputs (particularly imports) and more guaranteed markets than rural localities. Furthermore, the relatively higher urban per capita incomes and high urban population density permit a strong force of effective demand

Second is the SIDO industrial promotion policy which favours urban-based small scale establishments. All of the 20 planned SIDO industrial estates (one for each region) are located in the urban centres. The 20 industrial estates are expected to act as growth poles in their respective regions. Thus, despite the emphasis on rural industrialization envisaged by both The Second and Third Five Year Plans, the bulk of the funds earmarked for SSI development have been spent on the urban projects. As the ILO report documents, between 1973 and 1981 SIDO approved loans of more than TSh. 120 million for SSI development throughout the country. The report notes, however, that about 73% of these funds went to urban areas.[13]

Perhaps, the rationale of the urban bias of LSI can be explained by the fact that emphasis on the regional dispersal of industry could impose heavy costs (resulting from absence of significant scale economies in the rural area) on a country with a small industrial base.[14] However, it is difficult to justify the urban bias of SSI.

Unfortunately, data on the structure of rural SSI are severely limited. Generally however the more traditional crafts such as pottery making, weaving, blacksmithing and mat-making assume prominence in the rural Supply based activities, particularly agricultural processing activities, grain milling and small scale brewing, also tend to be rural based. In the urban areas however, relatively more modern factories such as tailoring, vehicle repair furniture and carpentry predominate.[16]

The structure of employment may vary within similar firms in different localities Rweyemamu observes that rural SSI are characterised by a higher proportion of single person firms and predominance of unpaid (family) labour.[17] Urban based small scale firms, on the other hand show a multiple employment structure (except for tailoring) with a high proportion of paid labour and a significant proportion of apprentices[18].

Growth of SSI activities

It is difficult to determine the exact magnitude of the rate of expansion of the SSI sector in Tanzania. At the aggregate level, time series statistical data of changes in the structure of SSI are inconsistent and inadequately comparable. It is also difficult to make inferences of potential growth for each activity because there are no estimates of the income elasticities of demand for

individual or group SSI products. The evidence available is thus based on fragmentary data from different sources.

In brief, the general growth trend of SSI sector in Tanzania indicates a respectable performance between 1961-1966 followed by relative decline and stagnation for a decade therefore and a recovery with growth from 1975 onwards. The relative decline of SSI for the period 1967-75 as indicated by its falling real value added (Table 4) has been attributed largely to two factors: One is the emergence and rapid growth of large scale parastatals at the national level which seem to have pre-empted opportunities for small scale production. That fact is partly supported by the rapid rates of expansion of real value added of the large scale sector alongside declines in the SSI real value added (Table 4). The second reason is the uncertainty and risk elements within the private sector. Private investors might have reduced their investments in certain small scale projects for fear of being nationalised.

TABLE 4: VALUE ADDED AND EMPLOYMENT IN MANUFACTURING INDUSTRY, 1965-1974

Value Added, 1966 prices Tz. Shs. Million	1965	1966	1968	1970	1972	1974
Total Manufacturing	446	525	119	716	850	900
Large scale[1]	227	295	357	485	599	702
Small scale[2]	219	230	254	231	251	198
Growth rates (%)						
Total Manufacturing	—	17.7	6.8	6.5	8.4	1.4
Large scale	—	30.0	11.9	12.8	12.6	9.0
Small scale	—	5.0	0.0	-4.5	-1.0	-18.9

SOURCE: ILO JASPA (1978) Table 3.1, p. 83.
NOTES:
1. Firms employing more than 10 workers.
2. Residual = Total Manufacturing less large scale firms.

There are indications however, that SSI activities have been experiencing an upward trend since 1974. Data from SIDO reveal that the number of factory and non-factory units increased by 23% between 1978 and 1981; while SSI employment and real value added increased by 29% for the same period.[19] The revival of SSI since 1974 can possibly be explained by (a) the severe foreign exchange crisis of 1974 which led to drastic reductions in consumer goods imports; (b) the rapid rate of inflation which reduced the real income of the wage and salary earners and shifted their consumption towards lower quality small scale production; and (c) the promotion activities of SIDO.[20]

Although the available evidence indicates that aggregate employment and output of the SSI sector have been increasing recently, given the heterogenous composition of this sector, it is important to know which activities have been growing fast or less.

Unfortunately, time series data for particular type of SSI activities are hard to find. Thus, the only information available is episodic or anecdotal. Partial evidence is revealed by data on age distribution for a sample of SSI carried out recently in Arusha region. The Arusha survey revealed that rapid expansion in the number of establishments while being of recent origin occured mainly in tailoring, carpentry and metal fabricating industries.[5] Though not conclusive, these trends are reinforced by responses to queries seeking respondents' opinions concerning employment and output expansion of their firms. The responses show that tailoring and furniture manufacturing firms have experienced substancial expansion in output and employment. However, traditional crafts such as blacksmithing and pottery-making, while showing rather stable employment profile, have experienced declines in output.

Linkages and Complimentarity between SSI and LSI

Planned linkages or complimentarity (in which a firm systematically uses the product of another as an input into its manufacturing operation) between small and large scale firms is an essential feature of a well-articulated industrial strategy

However, since none of the input-output studies in Tanzania explicity include small scale non-factory activities the exact magnitude of the linkage effects of SSI cannot be gauged. With respect to forward linkages from SSI to LSI where these activities provide intermediate or capital goods to LSI, the extent of contract sales or subcontracting can be used as a proxy measure for the degree of complimentarity of forward linkages.[22]

Even then the evidence on direct complementarity between SSI and LSI in Tanzania is very sketchy. A few studies and surveys, including those by the World Bank, Phillips, Wangwe and Bagachwa, reveal the absence of substantial sales or subcontracting activities between small and large scale firms.[23] As a result, severe competition and unnecessary product dublication is a common feature between small scale and large industries.

There are indications, however, that backward linkages from SSI to LSI are more extensive than forward sales. Most of the small scale non-factory units covered in the Bagachwa study purchase a high proportion of their intermediate inputs from larger firms.[24] However, the nature direction and exact magnitude of both forward and backward linkages is yet to be established. Indeed, this is one of the areas that need ot be intensively studied.

RESOURCE USE IN THE SSI SECTOR

Employment Requirements

A number of studies have analysed the employment absorption capacity of the industrial sector in Tanzania. Most of these focus on comparison of aggregate capital labour ratio or its reciprocal across all industrial activities. The results of such studies should be interpretedwith caution.[25] The general conclusion is that small scale firms (however defined) are consistently identified as more labour intensive than large.[26] But the diversity and heterogeneity of each industry group suggest that such a simple generalisation about resource use in SSI can be misleading. Within a single large scale industry, for instance, there might be a broader spectrum or products and

factor intensities at different levels of output. It is important therefore, to disaggregate each major industry as far as possible and to analyse resource needs between production units of different scale within the same industry

Capital Requirements

Very little evidence exist on the efficiency (in the use of capital) of the SSI. Some authors, like Phillips and Bagachwa, use the output capital ratio to rank industries by their degree of efficiency.[27] These studies report that SSI not only utilises more labour per unit of capital but also uses less capital per unit output, i.e. they are fairly efficient in their use of capital. Such an analyses however, suffer from the conceptual and other measurement problems associated with capital stock mentioned earlier

The Use of Domestic Inputs

Another important issue centres on the extent to which SSI can utilise domestic resources. A number of studies confirm that a higher proportion of total inputs used by SSI are dometically generated. Wangwe's study reveals that the local input content of rural SSI is on average over 85 per cent. His earlier study however, show that 60% of the large scale establishments sampled have an import input content exceeding 80 per cent.[28] The study also cites SIDO's estimate of the import content of SSI as being 10% of the total raw material purchased; a negligible proportion. Other studies by Rweyemamu, Phillips and Bagachwa corroborate the above proposition that SSI firms tend to use a higher proportion of domestic resources than LSI proportion firms. The implication of this in terms of foreign exchange savings is obvious.[29]

Capacity Utilisation

Underutilisation of capacity raises both the capital labour ratio and the capital output ratios for firms which adjusttheir labour input to changes in output.[30] Idle capacity, therefore, represents wastes in economic resources and may reflect inefficiency in the use of resources. Unfortunately, very little evidence exists on the relative rates of capacity utilisation between large and small firms.

Table 5 presents estimates of the relative rates of capacity utilisation between selected large parastatal (employing more than 50 workers) and small scale (employing less than 50 persons) industrial categories. The data, though covering broad categories of industries indicate that although capacity utilisation levels vary across industries, underutilization of capacity is a rampant problem with both SSI and LSI. Most of the industries appear to be operating below 50% of their planned full capacity levels.

TABLE 5: COMPARATIVE ESTIMATES OF CAPACITY UTILIZATION RATES IN SELECTED INDUSTRIES (1981)

	Large Scale (Parastatals) %	Small Scale %
Wood Products	38	59
Food Manufacturing	52	41
Textile & Clothing	49	45
Metal Fabrication	32	39

SOURCES:
Large Scale: TISCO (1982), Table 3:15, p. 4.
Small Scale: Bagachwa (1981).

In both SSI and LSI excess capacity has been mainly attributed to supply factors (e.g. shortages of raw materials and other intermediate inputs, water and electric interruptions, machine breakdowns etc.). Supply factors affect almost 80% of the LSI firms and 70% of the SSI firms. In both sectors inadequacy of demand is a secondary factor.[31]

Income Generation

In view of the magnitude of the employment generated by SSI and the recent rapid expansion of this sector one would expect that SSI provide an important source of income for both urban and rural households. Most of the studies on income distribution in Tanzania do not explicitly incorporate SSI in analysing the functional distribution of income. SSI are lumped together as 'non-farm' activities in the rural areas or as informal sector activities in urban areas. Both the World Bank Study — based on the 1969 Household Budget Survey and the 1975 Pilot Survey — and the ILO/JASPA study based on National Accounts, indicate that over one-fifth of the total rural household income is accounted by non-farm earnings, while informal sector earnings account for both one-quarter of the total urban household income.[32] These are definitely significant proportions that need careful attention.

In terms of direct remuneration, the evidence available is somewhat limited. Data on wage rages in the factory sector are generally lacking. Data on the non-factory units are also scanty probably relfecting the difficulties involved in estimating returns to factors of production in this sector. Both the SIDO survey and the Dar informal sector survey provide data on earnings of the paid employees only, while earnings of the self employed, unpaid family labour and apprentices are not captured.

The Dar informal sector study records that an average regular worker in the registered non-factory unit receives about TShs. 538 while a casual worker receives Shs. 488 on average per month (exclusive of premiums and other fringe benefits). Even if wage premiums are taken into consideration, it seems

that remuneration in the sector may be a little less or just about the minimum wage of TShs. 600 per month. The ILO report estimates an average monthly remuneration (net value added per labour) of TShs. 586 and TShs. 695 for a worker in the factory unit for 1978 and 1981, respectively. Although this was about 35% higher than minimum wage in 1978, it was just 14% higher in 1981. Since the net value per labour would possibly be distributed among labour capital and entrepreneurship it appears that the self employed may have a remuneration equal or slightly higher than the minimum wage rate.[33] We may conclude tentatively, therefore, that the SSI sector caters essentially for the low income group — those just about or below the minimum wage.

CONCLUSION

The realisation that SSIs might contribute to growth, extended employment and improved equity with the country has revived interest from both individual study groups and the government of Tanzania regarding the future role of this sector. However, as this survey article has indicated, relatively few empirical studies of small scale activities exist. In terms of policy formulation and SSI programme implementation, this has meant that planners and decision makers have been forced 'of necessity, to make decisions based on sketchy and episodic information. We have noted elsewhere in the paper that such prescriptions based on aggregate anecdotal evidence may be misleading.

Consequently, and in order to fill this information gap, it is proposed that sector specific studies be carried out within each broad component of the SSI sector. Indeed, to be of any practical relevance valid comparison between small and large firms should be made within food processing industry (e.g. small firms and large firms within food processing industry; we may even go further, data permitting, and make such analyses at 4 digit ISIC level: say analyse small and large firms within grain milling etc).

Such activity specific focused studies will not only help in data generation but will also policy makers in the formulation of sector specific programmes.

FOOTNOTES

1. ILO/JASPA, 1978. *Towards Self-Reliance Developent Employment and Equity Issues in Tanzania*, Addis Ababa, ILO.
2. It is difficult to define the concept of scale unambiguosly. Stratification by size of firm can be carried out by using different criteria — by the number of workers, the volume of output of value added, the value of assets, employed, the degree of autonomy or barriers to entry. Yet the use of different size criteria may resulting different rankings of firms. A firm classified as "small" under one criterion may appear as "large" when another size criterion is adopted. Even within one size criterion the cut-off point between large and small is normally arbitrality defined. The logic behind stratification of firms by size (however measured) is that there are, perhaps, marked differences in terms of economy in resource and input use, market orientation, product quality and work layout across scale. However as Sam Ho (1980) notes the characteristics of enterprises do not change abruptly and discretely but, rather, gradually and continuously with firm size. Accordingly, any definition of SSI is to some extent arbitrary.
3. Schadler, Karl, 1968. *Crafts, Small Scale Industries and Industrial Education in Tanzania.* Oxford: Welt Forum Verlag.
4. Phillips, David. 1976 "Industrialisation in Tanzania Small Scale Production Decentralisation and Multi-technology Programme for Industrial Development". *Economic Research Bureau Paper 76.5*, University of Dar es Salaam.

5. Bagachwa, M.S.D. 1981. "The Urban Informal Enterprises Sector in Tanzania: A Case Study of Arusha Region". *Economic Research Bureau Paper 81.4.* University of Dar es Salaam.
Bagachwa, M.S.D. 1981. "The Dar es Salaam Urban Informal Sector Survey, In ILO/JASPA, *Basic Needs in Danger* Addis Ababa, pp. 153-185.

6. Steel, William, F. 1977. *Small Scale Employment and Production in Developing Countries: Evidence From Ghana*, New York, Praeger.

7. About 89% of factors and 50% of shoe makers interviewed in the Dar es Salaam informal Study survey were also engaged in cloth and shoe repair.

8. Joshi, Lubell and Moulay 1976. *Abidjan: Urban Development and Employment in the Ivory Coast*, Geneva, ILO. See also Berry, R. Albert 1972. "The Relevance and Prospects of Small Scale Industry in Colombia". New Haven, Ct.: Yale University Economic Growth Centre, Discussion Paper No. 42. and Steel, William, F. 1977, *op. cit.*

9. In the Dar es Salaam informal study survey, it was revealed that carpenters have the longest duration of apprenticeship (1 year) in the sample.

10. ILO/JAPA 1982. *Basic Needs in Danger.*

11. Page, John, Mr. Jr. 1979. "Small Enterprises in African Development: A Survey" Washington D.C.: World Bank (October).

12. Rweyemamu, J.F. 1973a. *Underdevelopment and Industrialisation in* Tanzania. Oxford: Oxford University Press.

13. ILO/JASPA, 1982. *op. cit.*

14. ILO/JASPA 1978. *op. cit.*

15. Rweyemamu, J.F. 1973b. "Rural Industrialisation in the United Republic of Tanzania: A Case Study". Paper Presented at the Expert Group Meeting on Rural Industrialisation, Bucharest (September) and Livingstone Ian 1970. "Results of a Rural Survey. The Ownership of Durable Goods in Tanznaia Households and Some Implications for Rural Industrial". *Economic Research Bureau Paper 70. 1.*, University of Dar es Salaam.

16. Schadler, Karl 1968. *op. cit.* Rweyemamu J.F. 19)3b. *op. cit.*, and Phillips David, 1976. *op cit.*

17. Rweyemamku, J.F. 1973b. *op. cit.*

18. Bagachwa, M.S.D. 1981. *op. cit.*

19. This was based on a sample survey conducted by SIDO in 1977/78 and SIDO estimates of output and employment in 1981.

20. ILO/JASPA 1982. p. 240. *op. cit.*

21. The survey shows that about 80% of the firms in the sample were established after 1975.

22. Liedholm, Carl, and E. Chuta, 1976. "The Economics of Rural and Urban Small Scale Industries in Sierra Leone". EAST Lansing, Michigan: Michigan State University, African Rural Economy Paper No. 14.

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