International Labour Review, Vol. 121, No. 4, July-August 1982

Employment in rural industries in eastern Upper Volta

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This article describes the findings of a survey of rural small-scale manufacturing, retail and service enterprises in the Eastern Region of Upper Volta.[1] The survey, undertaken in April-May 1980 by personnel of the Government's Eastern Region Development Organisation[2] (ORDE) under the authors' guidance, collected census information on the number of enterprises in 637 villages and more detailed industry characteristics in a sample of 121 villages.[3]

The study was sponsored by the ORDE and by a rural enterprise development project active in this part of Upper Volta funded by the United States Agency for International Development (USAID). The ORDE, which incorporated this inquiry into its 1979-81 regional planning programme, was particularly interested in a non-farm employment complement to detailed surveys of farm production already undertaken,[4] with a view to determining opportunities for expanding rural employment and retaining within the region a greater proportion of the value added to locally produced crops through improvements in agricultural processing industries. Other retail and service businesses, such as grain milling, pharmacies and village stores, were of interest as providing credit investment opportunities for village pre-cooperatives sponsored by the ORDE. Finally, blacksmithing and wood-working industries were to receive priority attention because of their importance as the local link in a nation-wide system to manufacture, distribute and repair animal-drawn agricultural implements.[5] The USAID rural enterprise project needed information on the extent and nature of various small-scale businesses to help it plan an expansion of its activities which are largely devoted to providing investment and operating credit and management advice to private entrepreneurs.[6]

The Eastern Region covers about 20 per cent of the land area of Upper Volta but contains only about 8 per cent of the national population (estimated at a little over 6 million in 1975). It is an area of generally low but highly variable population density; major portions of the population are

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quite isolated from centres of economic activity by long distances and extremely poor road infrastructure. When the survey was conducted there were no paved roads, public electricity or running water systems in the entire region, even in Fada N'Gourma, the regional capital, with a population of about 15,000. A further indicator of the general level of economic development was that there was no private enterprise which could be considered large-scale by any definition commonly used.

This is an area which was virtually ignored by colonial and, until very recently, post-independence development programmes. Almost the entire population engages in agricultural production on a full-time or part-time basis, but there has been very little development of cash crops. Since only 10 to 15 per cent of crop production is marketed, rural households have extremely low levels of cash income. This increases the relative importance of earnings derived from agricultural processing and non-farm occupations. Thus the Eastern Region is typical of those areas of West Africa which are highly rural, subsistence-oriented and not heavily engaged in cash crop production.[7]

This is the first systematic study of rural industries to be made in this region of Upper Volta and one of the few to be undertaken in the country as a whole.[8] It provides a complement to similar investigations of informal-sector enterprises in the capital city, Ouagadougou, and in other urban areas of French-speaking West Africa.[9] As evidence of the dubious economic performance of many sophisticated, import-substitution, large-scale industries increases,[10] documenting patterns of existing rural crafts and businesses is the necessary first step in assessing the contribution that rural industrialisation can make to meeting national development objectives.[11] This is the subject of the first section of the present article. In the second section these study findings are used to draw implications for practical strategies to promote rural small enterprise development and determine the need for further applied field research and experimentation.

1. The findings of the study

An analysis of survey data enables us to identify some of the major characteristics of the small-scale sector in terms of over-all and industry-specific employment patterns, the types of technologies at present in use, and the training and management practices of enterprise owners, and to make a preliminary assessment of problems and constraints facing the sector in general and various industry types in particular.[12] Since these data were usually obtained in one visit to each surveyed enterprise, precise income and input/output data could not be collected. As will be stressed in the final section, the collection of such information by means of multiple interviews is part of the applied research which should follow the initial survey.

Significant differences will be noted among three groups of industries: older craft manufacturing enterprises which are part of the traditional

organisation of labour at village level, agricultural processing industries which are almost exclusively the domain of women, and other small manufacturing, retail and service trades which are of more recent origin and tend to be linked to traditional trading groups or to persons from outside the region.

It should be noted that the first two groups–the male-dominated traditional craft industries and the female-dominated agricultural processing industries–together constitute 85 per cent of employment recorded in this study and are almost all stagnant or declining. It is these industries–central to the economic and social life of a subsistence-oriented, largely closed[13] economy–which are all facing severe competition from goods either imported from abroad or manufactured by large-scale, import-substitution industries elsewhere in the country. As we shall see, most of the firms in the third group–the "modern" informal sector–do not face these problems because they are already either retailing imported manufactured goods or engaged in repair or manufacturing using equipment and raw materials imported from outside the region. The causes and implications of the decline and stagnation will be discussed further in the final section.

A. Employment

Twenty-five industry or business types made up the predetermined list which was used in counting and surveying enterprises in the Eastern Region. These types were aggregated into eight industry groups: metalwork, non-metal crafts, clothing, food processing, agricultural processing, repairs, retail distribution and other services. Data on employment in these industry types and groups are presented in table 1.

Over-all we see that more than 21,000 persons in the region were employed, at least part time, in these 25 industries. These persons represented approximately 5 per cent of the total population and 10 per cent of the active adult population. Furthermore, this figure implies that about 20 per cent of the households of the region had a member working in one of these industries.[14] Thus the over-all employment effect of these rural industries is significant, particularly since the list of industry types is far from exhaustive.

Looking more closely at table 1 we see that a total of nearly 12,000 enterprises (or firms) were counted. Nearly 50 per cent of them were engaged in four types of agricultural processing: traditional beer *(dolo)* making,[15] shea butter and peanut oil extraction and the production of *soumbala,* a condiment used frequently in cooking and prepared from fermented locust beans or soybeans. Traditional narrow-loom weaving and pottery make up another 30 per cent of the total.

The profile of employment in these small craft and trade occupations is one of small size and dominance of family labour, as shown in table 1, which indicates that over half of all enterprises surveyed (56 per cent) employed

Table 1. Employment in 25 rural industries, Eastern Region, Upper Volta, May 1980

Industry group	Industry			Average number employed				Total employed	
	Type	No. of enterprises	One-person enterprises %	Owner and family	Hired workers	Apprentices	Total	No.	%
A. Metalwork	1. Blacksmithing	407	3	3.44	0.03	0.11	3.58	1 457	6.8
	2. Welding	14[1]	21	1.93	0.00	0.43	2.36	33[2]	0.1
B. Non-metal crafts	3. Carpentry	35	14	1.86	0.57	1.14	3.57	125	0.6
	4. Pottery	1 126	61	1.75	0.00	0.04	1.79	2 016	9.4
	5. Leatherwork	45[1]	69	1.51	0.00	0.04	1.55	70[2]	0.3
C. Clothing	6. Tailoring	428	56	1.40	0.01	0.20	1.61	689	3.2
	7. Weaving	2 499	85	1.15	0.00	0.04	1.19	2 974	13.9
	8. Cloth dyeing	599	59	1.92	0.00	0.07	1.99	1 192	5.6
D. Food processing	9. Grain milling	105	12	1.72	0.51	0.16	2.39	251	1.2
	10. Baking	68	16	2.28	0.16	0.08	2.52	171	0.8
E. Agricultural processing	11. *Dolo* making	1 581	18	2.47	0.03	0.07	2.57	4 063	19.0
	12. Peanut oil	428	50	1.68	0.00	0.03	1.71	732	3.4
	13. Shea butter	2 212	52	1.74	0.00	0.00	1.74	3 849	18.0
	14 *Soumbala*	1 560	86	1.22	0.00	0.03	1.25	1 950	9.1
F. Repairs	15. Motorcycle	89	18	1.61	0.00	0.96	2.57	229	1.1
	16. Radio	14[1]	50	1.25	0.00	0.25	1.50	21[2]	0.1
G. Retail distribution	17. Petrol stations	3[1]	33	1.33	1.00	0.67	3.00	9[2]	–[3]
	18. Petroleum product selling	46[1]	24	2.03	0.15	0.00	2.18	100[2]	0.5
	19. Pharmacies	33	0	2.15	0.14	0.14	2.43	80	0.4
	20. General stores	208	30	1.94	0.15	0.07	2.16	449	2.1
H. Other services	21. Bars	181	20	1.84	0.37	0.10	2.31	418	1.9
	22. Restaurants	165	33	2.45	0.13	0.02	2.60	429	2.0
	23. Coffee stands	42	74	1.16	0.06	0.06	1.28	54	0.2
	24. Photographers	11	67	1.33	0.00	0.33	1.66	18	0.1
	25. Barbers	46	83	1.17	0.00	0.00	1.17	54	0.2
Totals		**11 945**	**56**	**1.70**	**0.03**	**0.06**	**1.79**	**21 433**	**100.0**

[1] Sample figures only, not total census count. [2] Total employment based on sample only. Only leatherwork is probably substantially undercounted. [3] Less than 0.1 per cent.
Source: Survey data.

only one person. While the average enterprise employed 1.79 persons,[16] there was a substantial variation in this pattern, with the highest averages recorded in blacksmithing and carpentry, both with approximately 3.6 persons employed per enterprise. The labour of the owner and other family members accounted for nearly 95 per cent of employment. The remainder was made up of hired labour and non-family apprentices, with the latter nearly twice as numerous in total. Hired labour was relatively more important in some of the most modern or recently introduced industry types: carpentry, grain milling, wheat bread baking, all categories of retail distribution, bars and small restaurants. Apprentice labour was also used most frequently in these less traditional industries but to the types listed above we must also add metalwork, tailoring, and repairs–here composed of motorcycle and radio repair. The average apprentice had an apprenticeship lasting about a year and a half, although this was usually longer for the large number of apprentices working in the areas of motorcycle repair, welding and tailoring.

A closer examination of total employment figures reveals that the four agricultural processing industries plus four traditional village-level craft manufacturing industries (weaving, pottery, blacksmithing and indigo cloth dyeing) together account for a full 85 per cent of total employment. The role of women in the composition of this rural workforce is critical. As is typical in this part of West Africa, women perform much of the agricultural field work but also have a key role in other cash-generating activities. The four agricultural processing industries accounted for 50 per cent of total employment recorded in this survey, and these transformation tasks were carried out almost exclusively by women. Thus, even though women were much less frequently represented in employment in the other 21 enterprise types, it is clear that they made up more than one-half of the total rural small-scale workforce counted in this study.

The part-time and seasonal nature of much of this employment is illustrated by the fact that three-quarters of enterprise owners had another occupation. For the majority (77 per cent) the other occupation was agriculture, although this was more true for the small manufacturing enterprises (89 per cent) than it was for the non-manufacturing group (59 per cent). Owners in the latter group were much more likely to own a second enterprise (27 per cent) than those in craft manufacturing (5 per cent). Thus we have proprietors of local shops who may also own grain mills and bars.

B. Levels of rural technology

The technologies used in the surveyed industries tend to be of the most rudimentary nature and, with few exceptions, hand methods predominate. A number of types of data, collected for all enterprise groups, give some systematic indication of the level of technology. First, the type of workshop or workplace was identified. Not surprisingly we found that 47 per cent of all

activities were conducted in the home or the open air. Another 36 per cent of entrepreneurs conducted their businesses under specially constructed straw-roofed sheds, while only 17 per cent report using metal-roofed sheds or separate walled buildings (whether roofed in straw or metal). Of the 2,000 or so enterprises in the latter category 51 per cent were composed of four types of retailers (general stores, pharmacies, petroleum product sellers, and bars) and 37 per cent were accounted for by four of the more modern small manufacturing categories (milling, welding, carpentry and tailoring). Very few of these rural enterprises have enough fixed assets for use as collateral to enable them to seek loans from conventional credit institutions.

Very few of the enterprises studied made any use of machinery. Adoption of improved technologies using more machinery was hampered by a number of inter-related factors: low levels of income and product demand, extremely poor infrastructure, lack of trained personnel[17] and the cost of more sophisticated techniques.

Another indicator of the level of technology is the cost of purchasing needed equipment and getting the enterprise under way. For a subsample of 640 small enterprises (in all groups except agricultural processing) these levels of initial or start-up capital were ascertained.[18] The average firm required approximately 86,000 CFA francs (or US$430 at prevailing exchange rates) of start-up capital but this figure is sharply skewed upwards by the relatively high initial costs involved in a few industry types. This is clearly demonstrated in table 2, which classifies the initial capital requirements of 21 industry types into high-capital (38,000 CFA francs and above) and low-capital (less than 19,000 CFA francs) categories. The average capital required for the nine industry types in the former category was almost 200,000 CFA francs or about $1,000; in the latter category 12 industry types required an average of less than 10,000 CFA francs or $50. It should be noted that all of the traditional craft manufacturing enterprises were in the low-capital category, which as a whole provided 81 per cent of small-scale sector employment outside the agricultural processing industries.

C. Detailed enterprise characteristics

A variety of different types of information were collected which we use to round out our descriptive picture of the industries making up eastern Upper Volta's small-scale sector. These focus on individual characteristics of enterprise owners and some of their organisational and management practices.

Almost all enterprises (99 per cent of sampled firms) were held in individual or family title. One per cent of firms were owned in non-family partnerships or as village-level co-operatives. Although the distinction between individual and family ownership was imprecise, certain enterprise types were more frequently classified as family enterprises than others: 13 per cent of traditional craft manufacturing versus 2 per cent for all other

Table 2. Average initial capital by enterprise type in low- and high-capital categories

Industry group	Low-capital enterprises			High-capital enterprises		
	Type	No.[1]	Average start-up[2] Capital CFA	Type	No.[1]	Average start-up[2] Capital CFA
A. Metalwork	Blacksmithing	74	13 767	Welding	13	408 077
B. Crafts	Pottery	12	3 392	Carpentry	6	85 833
	Leatherwork	30	607			
C. Clothing	Weaving	21	1 203	Tailoring	91	38 125
	Cloth dyeing	62	5 898			
D. Food processing	Baking	21	17 673	Grain milling	38	675 544
E. Repairs	Motorcycle	24	18 440			
	Radio	14	9 029			
F. Retail distribution	Petroleum product selling	42	12 385	Petrol stations	3	1 000 000
				Pharmacies	7	302 857
				General stores	52	104 254
G. Other services	Restaurants	50	9 696	Bars	46	116 865
	Coffee stands	26	4 889	Photography	3	196 667
	Barbers	5	4 200			
All groups		**381**	**9 349**		**259**	**198 714**

[1] This table excludes 19 per cent of the sample: 52 missing observations and 101 cases where start-up capital was zero. [2] 200 CFA francs = US$1.00.

Source: Phase II survey data.

industry types. These were also older enterprises with an average "age" of 17.4 years versus 6.6 years for all other firm types. Over-all the average firm (excluding the agricultural processing group) had been in operation for 11 years.

Given the essentially rural character of the region, the very small scale of operations and the part-time nature of many firms, one sees a somewhat different set of motivational factors in operation than one would find in more developed urban settings. In other words one finds more enterprise owners who report that they engage in their trade because it was passed down to them or that their family had always engaged in this activity. We can also distinguish many owners who are *enterprising* in terms of physical production but not really *entrepreneurial* in the sense that their firm's short-term behaviour is guided primarily by market factors. Even so, when a sample of all enterprise owners were asked why they engaged in their particular activity, 55 per cent stated that their principal motivation was financial gain. Another 27 per cent stressed that their main motives were to help family members or the village where they lived and to provide alternative

employment opportunities. Finally, 16 per cent stated that the primary reason was that they had inherited the enterprise or the necessary tools. This again was particularly true of the traditional craft manufacturing industries (35 per cent).

In Upper Volta over-all rates of schooling and literacy are extremely low. In 1975, 7.5 per cent of the total national population were classified as being literate.[19] In the Eastern Region these rates were higher, on the average, for the owners of small enterprises. Again excluding agricultural processing, 15 per cent of owners had received some formal schooling (11 per cent had had some primary school education; 4 per cent had received primary school diplomas or had gone beyond this level). These rates were lowest in traditional craft manufacturing and highest in the more modern industries such as welding, carpentry, tailoring, grain milling and all categories of repair, retail distribution and service firms. In very few instances does this formal education include any technical training appropriate for rural industrialisation. In fact, except for a few blacksmiths, carpenters and motorcycle repairmen who had received some training in a centre in Ouagadougou assisted by the ILO,[20] we could find no enterprise owner with any formal technical training. All training was provided on the job, either in the enterprise itself or, fairly frequently, in a similar enterprise in the informal sector in a larger urban centre. The more academic nature of available formal education is of some use, however, in general writing and mathematical skills which can be used in firm record keeping and profit determination. We found owners in the "modern" small-scale manufacturing, retail distribution and service trades more than twice as likely as traditional craftsmen to keep written records and to make entrepreneurial profit and management calculations.[21] Almost no firms employed any modern accounting methods.

Other aspects of management were also examined. A majority of enterprise owners (66 per cent) reported daily management of business activities. This, of course, tended to be highest in enterprise types where there were daily cash transactions and lowest in those that stored up manufactured production for periodic sale. Owners were also asked if they took advantage of the banking and postal savings opportunities open to them in the region. Over-all only 5 per cent of owners reported that they maintained a current or savings account in a bank or post office. This was partially due to the very sparse coverage provided by these two institutions: at the time the survey was conducted the region had only one bank branch office and five post offices where postal account transactions could be carried out.

Finally, enterprise owners were asked to describe the problems or constraints they perceived most acutely in the operation of their business. Many of the answers were highly specific and related to the technologies used by the particular industry type.[22] For example, most pottery industry owners cited specific problems having to do with the shaping and firing of clay ware;

many mill owners and tailors complained of machinery breakdown or of excessive wear of machine parts. Some general problems were, however, frequently mentioned. Forty per cent of owners said that the supply of raw materials or marketable goods for retailing was their major problem. Within this general category respondents specifically mentioned price of inputs, availability and quality. Much of this is due to the relative isolation of the region and the very poor road infrastructure; an additional 9 per cent of owners specifically mentioned this point. It is of interest to note that lack of operating capital was relatively infrequently mentioned (8 per cent of all answers).

2. Implications for policy

The implications one draws from an essentially descriptive study of rural industries such as this depend on the nature of the national development objectives pursued and on their translation into promotional policies specific to particular types of rural occupations. In Upper Volta national objectives often mentioned include the meeting of basic needs combined with a strategy of autonomous economic development. The latter implies utilising the country's human and material resource base as fully as possible. In addition, stress is often laid on the promotion of remunerative rural employment which can increase income levels and improve the quality of life in rural areas and help stem the flow of migration to urban areas and adjoining countries.[23] To the authors' knowledge no specific rural industrialisation policy has been formulated; some past policy decisions have, in fact, worked to undermine non-farm growth in the rural sector.

It is easiest to assess the development prospects of the rural small-scale industry sector if we subdivide the total of 25 industry types (shown in table 1) into two major groups according to characteristics revealed in survey data analysis. This assessment is highly preliminary owing to lack of data on production levels and incomes and is largely meant to offer ideas on the directions future applied research and experimentation might take.

In the first group we can include 16 industry types which all provide relatively low levels of employment (fewer than 700 workers per type, with an average of about 200 workers) and are all of fairly recent origin and not indigenous to the area. These are listed in table 3, which also differentiates them according to the level of start-up capital required and the use of imported machinery or tools.

Group I as a whole provides only 15 per cent of total employment but it is likely that this share will increase since these industries are all growing, and their expansion is largely linked to levels of disposable income. In the first two subgroups–industries with low capital requirements and distribution industries with high capital requirements–there are fewer opportunities for technological innovation (except in wheat bread baking) since most firms are involved in services or distributional activities. Industries in the third

Table 3. Rural small-scale industries by characteristics affecting development prospects

Group I			Group II
Low capital requirements	High capital requirements		Traditional crafts
	Distribution	Using imported machines, tools	
1. Restaurants	1. General stores	1. Tailoring	1. Weaving
2. Motorcycle repair	2. Bars	2. Grain milling	2. Pottery
3. Wheat bread baking	3. Pharmacies	3. Carpentry	3. Blacksmithing
4. Petroleum product selling	4. Petrol stations	4. Welding	4. Cloth dyeing
5. Coffee stands		5. Photography	5. Leatherwork
6. Barbering			6. Agricultural processing:
7. Radio repair			– *dolo*
			– shea butter
			– *soumbala*
			– peanut oil

subgroup–using imported machinery or tools–are generally using technologies widely regarded as appropriate. It is clear that all industries in Group I (except perhaps the simplest services such as coffee stands and barbering) could benefit from improved firm organisation, business management, and accounting practices. Other assistance which could be provided includes credit services for firm expansion, modernisation or routine operations. We must stress, however, that other studies of the informal sector in West Africa[24] have cautioned that large capital infusions may have unexpected negative consequences (such as lower capital productivity and over-investment in machinery) which may change the basic character of the small-scale sector. Further, in Upper Volta as elsewhere, there is a strong inclination on the part of private sector firms to mistrust and avoid government-sponsored assistance efforts.

Group II is more complex and difficult to assess; it is made up of traditional craft manufacturing industries (in order of employment levels: weaving, pottery, blacksmithing, cloth dyeing and leatherwork) and the four agricultural processing industries (production of *dolo,* shea butter, *soumbala* and peanut oil). This group constitutes 85 per cent of total recorded small-scale sector employment, and all industry types (except leatherworking) employ over 700 persons, the average being over 2,000 persons. This is ten times the average in the "modern" group. With the technologies at present in use, all of these industries require low levels of start-up capital and production is highly divisible. All of these industries traditionally produced for the local maket in a more closed economy. There is much greater scope for exploration of technological and marketing alternatives for this group than for the more modern rural informal sector. Many alternatives can be

explored which may be appropriate either to individual ownership or to village-level pre-cooperative movements.[25]

The fundamental problem with the traditional manufacturing and processing group is that most of these high-employment industries are stagnant or declining in importance, a phenomenon that is not unusual for peasant industries in areas which are undergoing incorporation into a more highly specialised world economy. What is dramatic is the speed at which this change is taking place and the lack of development of alternative employment opportunities in the Eastern Region or the country as a whole. This is partially explained by the fact that the West African Sahel is, and is likely to remain, one of the materially poorest areas of the world. Drought conditions in recent years which have heightened Upper Volta's dependence on financial and food aid[26] have aggravated this poverty. Furthermore, government policies for the promotion of certain import-substitution industries have often led to the erosion of local markets for the goods produced by traditional industries. A number of examples will illustrate this process:

1. *Blacksmithing:* This industry has declined from a position where it smelted its own iron, and now largely produces certain types of hand implements for agriculture from scrap industrial steel; these, however, face increasing competition from cheap imports.

2. *Weaving and cloth dyeing:* Traditional local cloth weaving and dyeing are rapidly declining under competition from both factory-woven cloth (there is one modern capital-intensive cloth factory in Upper Volta) and imported used clothing.

3. *Pottery:* This industry suffers from increasing competition from a wide range of metal and plastic containers, either imported or made in Ouagadougou.

4. *Leatherwork:* In a region with an abundance of animal hides, it is ironic that this industry has almost disappeared. The making of leather footwear–an important activity of the old industry–was virtually destroyed following the installation of a modern foreign-owned shoe factory which is making plastic shoes from imported petroleum.[27]

5. *Dolo:* This industry, the largest employer in the region, faces increasingly strong competition from two modern breweries in the country. These companies, licensees of foreign firms, also use substantial amounts of imported ingredients as well as imported machinery.

There are, of course, many different points of view on the wisdom of alternative development strategies. It is of crucial importance, however, that the consequences of investment decisions and legislation providing for domestic and import tax relief should be fully explored, particularly when they concern import-substitution industries which are in direct competition with local small-scale industries. The return on investments by a few wealthy persons in the capital city must be balanced against the employment consequences in rural areas. We certainly do not want to argue that all traditional rural industries should be maintained at any cost or that

appropriate advances in production technology should be ignored. Rather, a balanced approach should be taken, allowing a number of rural industries to ultimately disappear while others survive or are transformed with a reorientation of production and/or marketing to new or expanded market opportunities.

3. The need for further research

A study such as this cannot, of course, adequately address these complex trade-offs for specific rural industries in Upper Volta. We have explored the structure of the current small-scale sector and have offered observations designed to help guide additional work in this area. In our view there is a pressing need for further applied research work focused on specific industry groups or types. The exact nature of the work to be conducted will be determined by the technological and economic characteristics of the industries under review but should incorporate elements of the following four types of inter-related applied studies:

1. *Costs and returns to production under existing technologies:* Basic input/output data to determine returns to factors, rates of profit and constraints on industry expansion must be collected over time at the firm level.[28]

2. *Technology assessments:* Particularly for those groups of industries which are using a standard technology, alternatives need to be explored and estimates made of the potential impact on net returns and factor productivity. This is especially true for Upper Volta in the case of agricultural processing and traditional craft manufacturing.

3. *Market assessments:* The third aspect, which must be explored concurrently, is the depth of potential local markets and the potential to expand exports to larger urban centres or foreign markets. This is particularly true where substitute products exist (all the agricultural processing industries studied) or where traditional industries are in decline (weaving, pottery, cloth dyeing, etc.). This may also involve the introduction of new lines (e.g. tie-and-dye cloth and batiks) to complement the traditional products of rural cloth dyers.

4. *Rural industrialisation policy studies:* The national policy environment affecting the development of rural industries must be carefully explored, particularly in regard to domestic and import taxation, investment credit and government involvement in product promotion and marketing.

Notes

[1] This research was undertaken as part of a technical assistance contract between the United States Agency for International Development and the Department of Agricultural Economics, Michigan State University, East Lansing, Michigan.

[2] The ORDE, which depends on the Ministry of Rural Development, is responsible for agricultural extension as part of a broader programme of rural development in the Eastern Region.

[3] Two separate surveys were undertaken. First, as part of the ORDE's regional planning programme, a seven-part socio-economic inventory was conducted in 637 of the 645 "official villages" listed in the population census of 1975. (Eight villages had disappeared or could not be located.) One part of this inventory recorded for each village the presence and absolute numbers of enterprises for a predetermined list of industry types. Next a sample of villages was selected for administration of small-scale industry questionnaires. This sample consisted of all villages with a population of over 2,000 (40) and a random 25 per cent of those with a population of under 2,000 (152). Valid interviews were conducted in 121 of these villages (i.e. 63 per cent of sample villages containing one or more of the predetermined list of industry types) in two phases. In the first phase basic enterprise characteristics (number of employees, type of workshop and use of machinery) were collected for a total of 1,358 different enterprises. Then, in a second phase, more detailed "one-shot" interviews were conducted with 793 enterprise owners.

[4] An exhaustive year-long farm management survey of 480 farm households was conducted in 1978-79. Detailed labour allocation and farm enterprise input-output data were collected to provide a baseline description of the region's varied agricultural production systems and to evaluate a major attempt to introduce and expand the use of animal traction in agricultural production. See, for example, G. C. Lassiter: *Cropping enterprises in eastern Upper Volta,* African Rural Economy Program Working Paper No. 35 (East Lansing, Michigan State University, 1981).

[5] This nation-wide animal implement manufacturing system is described in J. Trouvé: *Rural industrialisation in French-speaking Black Africa: Policies, achievements and problems* (Geneva, ILO, 1980; mimeographed World Employment Programme research working paper; restricted).

[6] For a description of this project see Partnership for Productivity *(Upper Volta Monthly Reports)* (Ouagadougou, USAID, various dates).

[7] In fact the major agricultural exports from the region are shea nuts, the oleaginous fruit of a wild tree, and sorghum and millet when there are subregional surplus production conditions. Both of these exports are highly variable at the village level, largely because of harsh and unpredictable climatic conditions causing variations in their availability.

[8] The following studies contain at least some information on rural small-scale industry or crafts: S. A. Kambou et al.: *L'artisanat féminin en Haute-Volta* (Ouagadougou, Centre voltaïque de la recherche scientifique, 1978); and D. Fiedler et al.: *Structure et perspectives de l'artisanat et de la petite industrie du Sud-Ouest de la Haute-Volta: éléments d'un programme de promotion* (Berlin, Institut allemand de développement, 1978).

[9] See M. P. van Dijk: *Analyse et diagnostic du secteur non structuré à Ouagadougou,* résultats d'une enquête demandée par l'Office national de la promotion de l'emploi, Vol. I (Dakar, ILO, 1977); G. Nihan and R. Jourdain: "The modern informal sector in Nouakchott", in *International Labour Review,* Nov.-Dec. 1978; G. Nihan, E. Demol and C. Jondoh: "The modern informal sector in Lomé", ibid., Sep.-Oct. 1971; and E. Demol and G. Nihan: "The modern informal sector in Yaoundé", ibid., Jan.-Feb. 1982.

[10] For a comprehensive review of economic analyses of the rural small-scale sector in numerous developing countries see E. Chuta and C. Liedholm: *Rural non-farm employment: A review of the state of the art,* MSU Rural Development Paper No. 4 (East Lansing, Michigan State University, 1979).

[11] See ILO: *Programme on rural industrialisation, rural non-farm technology and employment,* World Employment Programme (Geneva, 1978).

[12] A more detailed presentation of the survey finding is contained in D. C. Wilcock: *Rural small scale enterprises in eastern Upper Volta: Survey results,* African Rural Economy Program Working Paper No. 38 (East Lansing, Michigan State University, 1981).

[13] When the term "closed economy" is used in the context of West African economic history, it does not imply an economy cut off from trade or one that lacked institutional or economic sophistication. It was simply one in which the bulk of economic production and consumption to meet the necessities of life was for and by the local economy. This was, of course, the case with most viable peasant-based economies before they were politically incorporated

into larger economic empires (traditionally capitalistic, but increasingly we see "socialist" or state capitalist examples too).

[14] These estimates are based on population data contained in Republic of Upper Volta: *Principaux résultats du recensement de 1975* (Ouagadougou, Institut national de la statistique et de la démographie, 1979) and on demographic data collected by the ORDE in 1978-79.

[15] *Dolo* is a general term used for local three-day beer brewed across the Sudan belt of West Africa. In Upper Volta it is made from red sorghum by preference, but other sorghum or maize can also be used. For more information on the economics of this important traditional industry in Upper Volta see Madir Saul: *Beer, sorghum and women: Production for the market in rural Upper Volta,* Paper presented at Workshop on Sahelian Agriculture (West Lafayette, Indiana, Purdue University, 1980).

[16] This figure falls in the range of average firm sizes noted in several other rural industry studies: Sierra Leone: 1.6 persons; Jamaica: 1.8; and Western Nigeria: 2.6 (Chuta and Liedholm, op. cit.). But it is important to note that these different studies do not always examine the same types of rural industries; that type of comparison (tailoring, carpentry shops, etc., across countries) could of course be the most meaningful.

[17] It should be emphasised that training is clearly not a sufficient condition in itself. This is confirmed by the fact that almost no graduate of the highly regarded Fada N'Gourma secondary-level technical training school is at present employed in the region. The school's graduates, trained in carpentry, masonry, auto mechanics and electricity, can all generally find employment in the formal sector or in the "larger-scale" informal sector in the three or four largest cities in the centre and southwest of Upper Volta.

[18] It should be noted that these were actual start-up capital requirements reported by enterprise owners but uncorrected for enterprise starting date. They are meant only to indicate relative magnitudes of the capital costs of technologies currently in use.

[19] Republic of Upper Volta, op. cit., p. 12.

[20] The National Centre for the Upgrading of Rural Craftsmen provides rural craftsmen identified by the various Regional Development Organisations with practical training in masonry, carpentry, blacksmithing and motorcycle repair. An attempt is also made to provide follow-up assistance in the form of equipment loans and supply of materials.

[21] This was an area where cross-cultural differences produced questions which were misinterpreted by respondents. Many illiterate enterprise owners reported using records in their operations. This was probably due to a confusion of terminology or a reference to various types of "non-written" records (use of symbols, marks, etc.).

[22] See Wilcock, op. cit., pp. 42-47, for more details.

[23] See, for example, the 1977-81 Five-Year Plan.

[24] See Nihan et al., 1979, op. cit., for example.

[25] The ORDE has increasingly attempted to make rural credit funds available for non-farm village-level pre-cooperative investments such as grain banks, village stores, pharmacies and grain mills. This effort has been hampered by a lack of precise guidelines on costs and returns, standard investment guides (size of village, demand for firms' output, etc.) and management procedures appropriate to illiterate people.

[26] For a more detailed explanation of this pattern of political-economic dependency in Sahelian West Africa and some implications for rural development programmes see D. C. Wilcock: *The political economy of grain marketing and storage in the Sahel,* Ph. D. dissertation, published as African Rural Economy Program Working Paper No. 24 (East Lansing, Michigan State University, 1978).

[27] It is also of interest to note that the transformation of the leatherworking industry from production for local demand to a more modern production for tourist, export or local high-priced markets is being held up by the fact that virtually all the tanned hides produced in the modern tannery in Ouagadougou are exported to the Western European leather industry.

[28] For an example of this type of comprehensive approach see C. Liedholm and E. Chuta: *The economics of rural and urban small-scale industries in Sierra Leone,* African Rural Economy Program Working Paper No. 14 (East Lansing, Michigan State University, 1976), and E. Chuta and C. Liedholm: "Employment growth and change in Sierra Leone small-scale industry 1974-80", in *International Labour Review,* Jan.-Feb. 1982.