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**INFORMAL, NON-AGRICULTURAL ACTIVITIES
AND FOOD SECURITY IN THE SAHEL**

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I. INTRODUCTION

The geo-climatic layout of the Sahel allows for the distinction of three production zones, known as the Sahelian, Soudanian and Guinean zones. The first two zones comprise the greatest area and are characterized by fairly irregular, minimal rainfall, poor soil and fairly advanced desertification. As a result, cereal production yields are weak while at the same time cereals are the principal source of food throughout the Sahel.

Within this context, marked by chronic cereal production shortfalls, the population of these areas continue to assure their food security (Fall, 1991; Reardon, Delgado and Matlon, 1992). It is therefore imperative that household strategies be examined in detail, to understand better the methods employed by households to manage hunger-related risk.

Evidence seems to indicate that a large number of households are involved in activities of outside cereal production, such as animal husbandry, and informal, non-agricultural activities. In turn, these activities provide an indispensable, complementary revenue source that is needed to ensure food security at the household level.

Rather than analyze food security through a description of its content and dimensions, we will use this paper to examine the relations that may exist between informal, non-agricultural activities and the achievement of food security by given households or regions, in both rural and urban areas. The reasons for conducting such a study are numerous. We will stress the following:

(i) Rural populations are less and less self-sufficient in cereal production; consequently, they must purchase all or some of their cereal needs to insure food security. For example, the realization of food self-sufficiency in the Sahel is experiencing difficulties because of agro-climatic problems, technology gaps and market imperfections. In this situation, the result is that a large number of farmers are **net buyers** of cereals in Mali (Dioné, 1990); Senegal (Gootz et al, 1988) and Burkina Faso (Reardon, Delgado and Matlon, 1992).

(ii) Urban populations, facing a contraction of the formal sector, are seeking refuge in the informal sector, thereby demonstrating a willingness to not give up and to fight for their survival.

These populations buy all their foodstuffs with the revenues of formal and informal activities. A significant part of these activities are subsistence in nature. As an example, it was observed by Woillet (1983) and Cabrera and Caffi (1985) that the fundamental objective of artisans in the Sahel was to obtain daily food for their families.

(iii) Finally, these activities are generally poorly understood with respect to their nature and dynamics. Until now, researchers have been interested in the problem of coming up with a definition; the statistics are very badly mastered even though they simultaneously influence policies and strategies for the medium and long-term.

In the Sahel, it is important to delve deeper into the nature of these informal, non-agricultural activities, their importance to households and the local economy, as well as the reasons that motivate households to enter into these endeavors. It is equally important to take

into account the synergies of real and monetary flows between informal, non-agricultural and agricultural activities.

The key objective of this review is to come up with a list of fundamental questions as yet unanswered or insufficiently addressed. These questions will form the core of an additional research agenda permitting a clarification of policies and strategies that relate to informal activities and their contribution to food security in the Sahel (see Dioné, 1990).

The data presented here are the results of several studies that have attempted to explore this domain. Certain studies conducted in non-Sahelian countries are included for a better comprehension of the phenomena under discussion and to raise hypotheses for the Sahel.

The present review is structured around eight different points:

1. **Definitions and interpretations:** This section aims to identify informal, non-agricultural activities and to understand the interpretation of different definitions.
2. **Importance of informal, non-agricultural activities:** Here we present evidence on their economic and social contributions with the help of certain performance indicators, like the creation of employment and revenues that contribute to increased purchasing power and increased productivity of factors of production.
3. **Nature and structure of sectors:** This section will define the composition and impact of different sectoral branches in terms of employment and revenues. Several characteristics of these activities will also be discussed.
4. **Functions, roles and effects:** This section addresses the question of the goal one sets when undertaking informal activities; these functions, roles and effects must be clearly distinguished for both the households and the local economy.
5. **The determinants:** These explain household motivations to practice informal activities in both rural and urban settings in order to minimize food security risks.
6. **Constraints and possibilities:** Here, we will discuss an array of obstacles facing informal activities and the conditions that would justify maintaining a large number of households in this sector over time. To this end, we will distinguish those activities with a strong growth potential from those with only a weak potential for growth.
7. **Policy approaches:** This section takes into account current policies, and those that offer a better perspective for ensuring food security.
8. **Research implications:** There will follow an evaluation of the preceding sections, assessing at each step along the way where knowledge is lacking and where specific themes or topics have not yet been studied in detail. This section will also discuss operational approaches that permit better analysis of the operation and performance of informal activities.

All these points will be woven together in a conceptual framework, with empirical examples given that simultaneously take into account rural and urban aspects, the role of the household and the local economy.

II. DEFINITIONS AND INTERPRETATIONS

Numerous researchers have invested a great deal of time in proposing complex and varied definitions of informal economic activities. Of these, the definition retained by the International Labor Organization (ILO) is very explicit and takes into account many concerns. It states the following: "The informal sector consists of small independent activities, with or without paid workers, typically operating with only a weak degree of organization and technology, having as its principal objective the creation of employment and revenues for those who participate; to the extent that these activities are conducted without official approval, thereby eluding the administrative mechanisms responsible for ensuring compliance with tax and minimum wage legislation as well as other similar regulations about fiscal concerns and working conditions, they are secretive" (DNSI, 1989. p. 26).

The definition of informal activities comes up against a multitude of terminologies. The most commonly used are: informal activities, informal sector, non-structured sector, transitional economy, petty trade sector, etc. Certain authors have remarked that this multitude of definitions originated largely because of the differing points of view between economists and development theorists. We must acknowledge that no definition is universally accepted. Bremer-Fox et al.'s statement therefore rings true "that there exist almost as many definitions of the non-structured sector as authors who write about it..." (p.3).

An analysis of the definition given above encompasses many concerns that have preoccupied various authors writing about the subject at one time or another. One category of authors stresses one or more characteristics that serve as a general base for the definition of informal activities (Oudin. X, 1987; Mettelin. P, 1985; 1987), whereas another group (De Soto, 1989; Bremer-Fox et al., 1990)... emphasizes the notion that informal sector activities are carried out without legal sanction.

Today, the term "small and "micro-enterprises" is widely used in the language of development. More and more, researchers are referring to these when speaking of informal activities. The general tendency is to acknowledge that the target group for development actions is composed of very small units comprised of an individual or family that may or may not belong to the informal sector, depending on the country. These small units correspond to a definition of the informal sector that refers to one or more criteria (USAID, 1989; Liedholm, 1991).

Following this distinction, we adopt the definitions of "rural" and "non-agricultural" activities given by Haggblade et al., (1987). For these authors, non-agricultural activities seem easy to describe; they include all economic activity that is different from agricultural production and animal husbandry. These activities are therefore composed of services, construction, mining, commerce, manufacturing and finally agro-industrial activities that transport, transform, package and distribute agricultural products. The specific definition of the term "rural", in contrast, is very complex, indicating in general something other than "urban". Specific criteria

used by different authors for defining rural areas are extremely variable and take into account differences in population density, activity types, infrastructural development, etc.

III. IMPORTANCE OF INFORMAL, NON-AGRICULTURAL ACTIVITIES

The importance of informal, non-agricultural activities is measured by degree of employment creation and value added, both of which are very significant parameters in household, regional and country-wide economies. Generally speaking, people who are engaged in these activities are not highly specialized and may easily participate in numerous economic activities. The interactions among these activities make it often difficult to evaluate the importance of any given activity, thereby influencing the level of appreciation for the importance of these informal activities.

3.1. Employment Creation

Outside of agriculture, the employment situation within the Sahelian countries is characterized by the existence on the one hand, of an official sector involving modern technologies, protected and located for the most part in urban centers, and employing one segment of the population. On the other hand, there is an informal, non-structured sector, bringing together another segment of the population in informal, non-agricultural, activities located in both the rural areas and urban centers. These jobs offered by this sector can be either permanent or temporary.

3.1.1. In Rural Areas

Rural populations are employed in informal, non-agricultural activities either on a permanent or a temporary basis. In the former case, these activities comprise the principal occupation of certain strata of the rural population who are extracting virtually all of their resources from these activities. These activities are these groups' primary occupations in terms of both time devoted to them and revenue earned. Commerce and artisanal ventures are the principal examples. In this case, the concerned populations do not practice agriculture or do so only as a secondary activity.

In the second case, rural populations may be occupied, throughout the year but above all during the dry season, with work that may or may not require special qualifications. These are complementary activities to agriculture in the numerous cases where agricultural production is insufficient to meet the family's needs. Such activities may involve rural to urban migration in which rural dwellers temporarily move from their villages in search of employment. The revenues from these non-agricultural activities can be more important than those from agriculture, even when agriculture remains the principal occupation in terms of time.

In sum, permanent non-agricultural employment is that which exists in a continuous fashion and is the primary occupation in terms of time; temporary employment is only practiced during a given period.

For the local economy, there is a movement of labor between agriculture and rural non-agricultural activities, and vice versa. An absence of statistics in this area and the complexities of these activities in the Sahel does not yet permit an appreciation of the level of these permanent and temporary kinds of employment.

Studies conducted elsewhere, however, testify to the size of rural non-agricultural employment. First, in a group of 18 developing countries, the percentage of the rural population employed permanently by informal, non-agricultural activities varied between 14% and 49% (Chuta and Liedholm, 1979; Haggblade et al., 1987). Second, this same study estimates that in western Nigeria, 20% of rural men are temporarily engaged by non-agricultural work, whereas in Sierra Leone, this figure is 11%. Non-agricultural activities in rural areas serve as a source of primary or secondary employment for 30 to 50% of the population in developing countries (Chuta and Liedholm, 1979). Thus non-agricultural activities comprise a quantitatively important source of employment in the rural economy.

3.1.2. In Urban Areas

Three phenomena form the basis of the existence of informal activities in the urban areas. First, a fringe of the urban population works permanently in informal activities because they have the expertise required. Second, migratory movements, especially rural-to-urban migration, contributes to the inflow of unskilled workers for participation in informal activities. Finally, the implementation of structural adjustment programs, which led to the State's total or partial withdrawal from public enterprises where the State had exhibited poor performance, forced certain former government workers to seek refuge in informal, non-agricultural activities.

Cabrera and Caffi (1985) affirm that in the urban centers, and especially in Bamako, a large part of the population is involved with informal activities, be they self-employed, salaried employees, or apprentices; in fact, one of every two households receives all or some of its income from the non-structured sector.

Case studies are limited in the Sahel and do not treat the issues uniformly. For example, Bremer-Fox et al. (1990) have stated that in Burkina Faso, more precisely in Ouagadougou, 73% of the work force is employed by informal activities. For Pean (1989), in Chad, the entire economy was in the hands of the informal sector throughout the preceding decade (during which time there was a war); the informal sector there presently employs 60 to 75% of the work force in N'Djamena. As for Mali, more than 55% of the urban work force participates in informal activities (DNSI, 1989).

In Niger, a study by Mead et al. (1990) estimates that informal activities employ 58% of non-agricultural workers. This study also showed that almost 50% of these enterprises belong to women.

Outside the Sahel, large African cities are presently demonstrating a proliferation of informal activities resulting from the mass exodus of Sahelian populations to large, neighboring centers like Abidjan. In the Sahel, the exact magnitude of this important labor movement is not well known due to poor statistics.

3.2. Revenue Creation

In the Sahel, outside of agriculture and animal husbandry, informal, non-agricultural activities play an important role at the local economy and household levels in both rural and urban settings. In Niger, for example, rough estimates place the contribution of the non-structured sector at 35 to 40% of annual economic activity, while the agricultural contribution is 40 to 45% (Bremer-Fox et al., 1990). In Senegal, informal, non-agricultural activities contributed roughly 58% in 1985 of gross national product according to Bremer-Fox et al (1990).

With respect to specific target groups, serious questions remain concerning the revenues generated by the participation of women in informal, non-agricultural activities. The role of women in non-agricultural revenues at the household level and in the local economy remains a question that merits particular attention, given that across the Sahel, women are deeply involved in rural, non-agricultural activities. Such participation leads to many important considerations.

An analysis by Haggblade et al. (1987) allows one to say that the role played by revenues from informal activities varies according to the prior level of wealth of the socioeconomic groups involved. The highest income group, in contrast to the poorest class, uses informal, non-agricultural activities to increase its capital base beyond that needed for day-to-day activities. The poor households, on the other hand, depend more on non-agricultural revenues for their day-to-day survival because almost all of their income comes from these activities.

3.2.1. In Rural Areas

The generation of revenues at the rural household level comes from the remuneration gained by those individuals engaged in assorted work as well as from the sale of goods and services produced in informal activities.

Does the numerical importance of rural, non-agricultural employment, as demonstrated above, result in an important monetary flow to rural level? For the Sahel, we do not have the statistics needed to answer this question. Nevertheless, this relationship must be assessed in order to make a judgement about the opportunity to substantially increase rural non-agricultural employment.

In the Sahel, it is difficult to compare across countries or zones the magnitudes of income generated by rural non-agricultural activities, given the multiple evaluation criteria that have been used in different studies. Therefore, all values presented here give only an approximate assessment of contributions made by informal, non-agricultural activities. The following table captures the importance of non-agricultural revenues as a percentage of total revenues in the different agro-climatic zones of Burkina Faso and Senegal.

Importance of Non-Agricultural Revenues as a Percentage of Total Revenues in the Different Agro-Climatic Zones

	Sahelian Zone	Sudanian Zone	Guinean Zone
Burkina Faso*	23%	27%	37%
Senegal*	41%	46%	23%
Senegal*	43%	33%	--

Sources:

* Reardon et al. (1992)

** Fall (1991)

The portion of total revenues related to non-agricultural activity in the Sahelian and Sudanian zones is higher in Senegal than in Burkina Faso. On the other hand, the portion of overall total revenues generated by non-agricultural activities is more important in Burkina Faso than in Senegal (Reardon et al, 1992). Furthermore, Fall (1991) demonstrates that average income per person is higher in the Sahelian zone (33,510 F.CFA) than in the Sudanian zone (23,790 F.CFA). This difference in favor of the Sahelian zone is explained by the considerable contribution of non-agricultural activities and animal husbandry to total household revenues. These non-agricultural activities represent, respectively, 43% and 33% of total revenues in the Sahelian and Sudanian zones.

Such a comparison appears interesting and should be expanded to all of the Sahel in order to explain the economic disparities between the different climatic zones of the same country and also the differences and similarities between countries.

Outside the Sahel, the estimated values are expressed differently and do not allow for strict comparisons with the previously cited figures. A detailed study conducted in Sierra Leone showed that 36% of rural household revenues are provided by non-agricultural activities, whereas this figure reaches 28% in northern Nigeria (Liedholm and Chuta, 1979).

In the Nigerian case study, Matlon notes that the portion of net household revenues attributable to non-agricultural income is 28%. Nevertheless, he goes on to say that non-agricultural income is even more important in the larger, more accessible village, where it comprises 36% of total revenues. On the other hand, it is less important in the most isolated village, where it represents only 24% of total revenues.

3.2.2. In Urban Areas

As in the rural areas, the numerical importance of informal, non-agricultural activities in terms of employment leads to monetary flows in the urban economy that are poorly understood. In the Sahel, it is nevertheless evident that a significant portion of the population extracts all of its income from informal activities. The number and complexity of these urban-based activities calls for a classification whose purpose would be the identification of more remunerative

enterprises and the drawing up of short, medium and long-term plans for the development of those enterprises.

IV. SECTORAL CHARACTERISTICS AND ORGANIZATION

This chapter briefly looks at the sectoral composition of informal, non-agricultural activities as well as some of their characteristics.

4.1. Sectoral Composition

4.1.1. Conceptual Framework

Within the framework of a given overall economy, specific activities take place within some parts of the economy known as sectors. These sectors compose the framework under which all production activities fall.

Traditionally, economists distinguish three large sectors, known as the primary, secondary and tertiary sectors. This sectoral classification responds to the needs of macroeconomic analysis.

Nevertheless, for analyses at the microeconomic level, Fall (1991) distinguishes the following subsectors in Senegal: agricultural production, agricultural labor, animal husbandry, commerce, services, transportation, food preparation, gathering, and crafts. It must be noted that this classification is not exhaustive, but represents an example of sectoral classification that uses as its criteria those activities that are most important for a given economy.

All of the sectors defined in this way group together production activities. The purpose of this breakdown is to provide evidence for the contribution of each sector to non-agricultural activities.

4.1.2. Empirical Results

The results presented here are based on studies conducted in different agro-climatic zones of Senegal and Burkina Faso, as well as in the OHV zone (Upper Valley Development Authority) of Mali. Certain characteristics of the agro-climatic zones serve as determinants the level and type of informal, non-agricultural activities. The Sahelian zone, for example, is very poor with weak, variable rainfall, resulting in extremely variable agricultural production. Yields on rainfed crops are very low and the importance of animal husbandry is very apparent. The Sudanian zone is generally poor also, with relatively weak but less variable rainfall than the Sahelian zone. Cereal production yields are low in this zone as well. The Guinean zone is favored by above-average and less variable rainfall when compared to the other zones. Its population produces rainfed cereals and tubers, but also a substantial quantity of cash crops, like cotton, in Burkina Faso and Mali.

From the sectoral point of view, Fall (1991) shows that commerce and crafts contribute considerably to the composition of household revenues in the Sahelian zone, with commerce providing 20% of total household income and crafts 12%.

Similarly, Reardon, Delgado and Matlon (1992) note in a more detailed study that commerce respectively represents 35%, 15% and 24% of non-agricultural revenues in the Sahelian zone, 15% in the Sudanian zone, and 24% in the Guinean zone of Burkina Faso. The situation for these different agro-climatic zones in Burkina Faso is presented in more detail below.

(a) **In the Sahelian Zone**

- Commerce is the activity least directly related to local agriculture. Its role in non-agricultural revenues is greatest (35%) in the Sahelian zone where it is principally concerned with the commerce of products from outside the zone such as cola nuts, tobacco and spare parts.
- Artisanal activities are strongly linked with local agriculture and represent 47% of non-agricultural revenues. They are composed primarily of weaving activities (using cotton yarn), as well as activities involved in the production of agricultural tools and other types of goods.
- Food preparation, a forward (downstream) linkage of agriculture, represents only 5% of non-agricultural revenues because of the absence of a local beer industry.

(b) **In the Sudanian Zone**

All local, non-agricultural activities are directly linked, through forward and backward channels, to local agriculture and are divided between:

- Commerce, which produces 15% of non-agricultural revenues and is principally concerned with rainfed coarse grains.
- Artisanal activities, which account for 19% of non-agricultural revenues. These activities encompass the manufacturing of baskets and mats using local agricultural materials.
- Food preparation represents 15% of non-agricultural revenues, this higher percentage being attributable to the presence of a local beer industry.
- Services are the most important activity in the Sudanian zone, responsible for almost 50% of non-agricultural revenues.

(c) **In the Guinean Zone**

Close to 90% of local, non-agricultural activities are directly supported by local agriculture. The sectoral composition is as follows:

- Commerce generates 24% of non-agricultural revenues, half of which comes from agricultural products and inputs and the rest from other consumption goods.
- The artisanal industry is tightly linked to the production of local cotton and represents 16% of non-agricultural revenues.
- Food preparation counts for 38% of non-agricultural revenues. It encompasses the preparation of beer, condiments, grilled meat, various dishes, etc.
- Services provide 16% of local, non-agricultural revenues and are principally comprised of cereal processing activities.

Share of Non-Agricultural Activities in Total Non-Agricultural Revenues by Agro-climatic Zone

	Sahelian Zone	Sudanian Zone	Guinean Zone
	(1) (2) (3)	(1) (2) (3) (4)	(1) (2) (3) (4)
Burkina [*]	35 47 5	15 19 15 50	24 16 38 16
Senegal ^{**}	20 12 3	12 -- <1 --	

Sources:

* Reardon et al (1992)

** Fall (1991)

Note: Other categories complete the table to 100%.

- (1) commerce
- (2) artisanal activities
- (3) food preparation
- (4) services

The table above summarizes the relative importance of specific activities by agro-climatic zone. In both countries, for the Sahelian and Sudanian zones alike, commerce is more important than artisanal activities. Also, commerce is more important in the Sahelian zone than in the other zones. Food preparation generates less revenues in Senegal than in Burkina Faso.

The study that was conducted in the OHV zone of Mali with first a group of men and then a group of women represents an example of how diversified activities are in the rural setting (D'Agostino and Sundberg, 1992). In this region, among the men, animal husbandry proved to be the most important activity for both those groups able to attain food security and those unable to do so. Animals represent a type of savings that can be sold in order to meet needs during times of crisis or emergency. Farmers who have an acceptable level of food security participate in the sale of cereals, cotton, transportation using oxcarts, and the cutting and selling of wood as important non-agricultural activities. Farmers who are subject to food insecurity depend more on non-agricultural activities like mat and rope manufacturing, and

pottery; and they are equally occupied with animal husbandry. Certain members of this group provide services as herders, plant others' fields or practice masonry.

In general, for the first group, the range of activities generating revenues is more important among households that are subject to food insecurity. This would suggest that these households must resort to more diversified sources of revenue; they engage in work that requires little capital investment and less human capital (with respect to particular qualifications and management skills).

As for the women's group, animal husbandry serves as an appreciable source of revenue. Women also participate in activities such as cotton spinning, wood carrying, petty commerce, prepared food sales etc., activities that procure substantial revenues. There are no significant differences in terms of the frequency of participation in certain activities generating revenues. Nevertheless, women who are subject to food insecurity have a much larger range of activities than those who are food secure (D'Agostino and Sundberg, 1992).

These studies demonstrate the need throughout the Sahel for in-depth research that looks at the degree and nature of diversification of non-agricultural revenues by agroclimatic zone, by socio-professional group, by sex, etc. These studies must also assess the importance of the relationship between informal, non-agricultural activities and urban and rural development in terms of population and infrastructure; changes in informal, non-agricultural activities as they relate to technology changes; and finally, the impact of foreign competition. Together, these research endeavors must allow for the medium and long-term understanding of the nature and structural organization of informal, non-agricultural activities.

4.2 Institutional Characteristics

The various characteristics of informal sector firms have enriched the multitude of definitions used in studying these activities. For example, Oudin (1981), Mettelin (1987) and many others based their definitions on one or more criteria used to define an informal activity. The criteria most commonly used are the size of the enterprise (volume of sales, number of workers, etc.), the productivity of the factors of production (labor and capital, etc.), and level of education. In the following section, we present a detailed view of some of these criteria.

(a) Size

From a conceptual point of view, it should be remembered that informal, non-agricultural enterprises are typically small in size, family-run and a potentially important target group for decision-makers. Empirical results reveal that the average size of informal sector firms renumerated in censuses carried out in Ouagadougou and Niamey was two people per enterprise (Lubell, 1990).

These urban figures from Ouagadougou and Niamey are low in comparison with the country average. In Mauritania, manufacturing, services and construction businesses employ an average of five persons (Lubell, 1990). In Burkina Faso, one-person enterprises generally comprise half of all non-agricultural endeavors, with the other half using at most five workers on average (Haggblade et al., 1987).

Outside the Sahel, in Sierra Leone for example, the average enterprise size is two workers, with 99% of enterprises employing fewer than five individuals (Liedholm and Chuta, 1976).

(b) Education

Generally speaking, access to a formal education is limited in the Sahelian countries. Therefore, apprenticeships currently provide whatever training is furnished for informal, non-agricultural enterprises. Faced with this knowledge, certain questions must be asked. What impact does this type of training have on the viability of these enterprises? What type of training is appropriate for informal, non-agricultural enterprises? Should this training be differentiated depending on the socio-professional level of the enterprise? Lacking concrete evidence on these different questions, we submit them to researchers for their reflection.

(c) Productivity

The level of productivity of various factors of production is also a distinguishing characteristic of informal activities. Informal enterprises are generally small, not only in terms of the numbers of persons employed but also with respect to their modest capital demands. Nevertheless, the demand for capital may vary considerably from one activity to another.

In general, these activities are described as being highly labor-intensive because they employ a significant amount of labor per unit of invested capital. This is explained by the fact that in a majority of developing countries, capital and foreign exchange are relatively rare whereas labor, unskilled labor in particular, is relatively abundant. In the absence of an example for the Sahel, a study conducted in Sierra Leone by Liedholm and Chuta (1976), shows that rural, small-scale enterprises have a labor intensity at least twice that of similar enterprises in the same sector in urban areas.

As for capital productivity, during the 1970s, many studies showed that certain small-scale enterprises that were highly labor-intensive were also more efficient in the use of their capital (Liedholm and Chuta, 1976). Today it is important to confirm certain of these results in the Sahelian context.

The approach of the International Labour Organization (ILO) uses enterprise characteristics like conditions of access, scale of production, dimension of etc. to provide the basis for its definition of informal activities.

A priori certain characteristics would seem to be important in the success of these firms, but have not been the subject of empirical research. It is therefore pertinent to ask the following questions: What are the conditions of access for the activities in question? In what proportions do these enterprises emerge? Are they family or individual enterprises? Do these operations only operate on a limited scale? Are the techniques adapted to these firms' conditions? Are the markets open to competition? There are many questions here that must have clear answers in the context of the Sahelian economies in order to come up with precise development strategies.

It is equally important to know which factors influence the productivity of labor in these firms (level of training, technical skills and management capacity of workers, capital used per employee). Another point to clarify concerns the efficiency of informal enterprises in their use of capital, taking into account the training problems mentioned earlier.

Empirical observations show that one of the characteristics of the informal sector is its difficult, if not impossible, access to formal credit (Club du Sahel, 1990; Dijk, 1986a; 1986b; De Soto, 1989a; 1989b). This is explained by the firms' lack of credit guarantees, difficulties of having at one's personal disposal adequate wealth for project financing, and the stringency of bookkeeping requirements and the administrative complexities involved in obtaining formal credit. According to Schmid (1992), the demand for credit is also a function of the difficulties faced by individuals in pooling credit through partnerships. The lack of confidence among potential partners (e.g., a fear that contracts among the partners will not be respected) leads entrepreneurs to try to raise capital through borrowing rather than pooling capital through partnerships.

This last characteristic deserves attention because the dynamics that are involved in financing as well as their policy implications must be recognized in order to free up the capital that is essential for the production of consumer goods and the generation of revenues.

This problem of credit involves questions of both the supply of and demand for financing. With regard to the demand for financing, Liedholm (1991) observes that the relative importance and dimensions of the demand for capital change as enterprises age and grow. Also, financial sources for the informal enterprises change as these firms evolve. Studies conducted in the Sahel and elsewhere on this subject are many and varied, identifying both internal and external sources of funding (Sonia, 1984; Dijk, 1986; Mettelin, 1987; Deborah, 1989 and the Club du Sahel, 1990).

Internal, family-oriented funding sources are made up of personal savings. These personal savings are in turn the savings obtained from earlier activities. What is confirmed here is the role of the extended family in the informal sector and the fact that funding is obtained by resorting to largely endogenous mechanisms between informal activities. Tontines or rotating savings associations are important among friends. They involve persons sharing a common interest, work or business. Outside funding sources consist of client credit, informal consumption credit and commercial credit.¹

¹ - Client credit: This is the most widely visible type of credit. Frequently, retailers offer the informal enterprises credit either in the form of raw materials or as a cash advance.

- Another form is informal credit for consumption that increases with the age of the enterprise and is a subtracting mechanism in which the client (generally a larger enterprise) gives necessary raw materials to microenterprises in order to produce commissioned goods. This mechanism has a tendency to be limited to enterprises in such areas as clothing, wood, construction and metalwork. According to Mead, it is much more widespread in Asia than in Africa.

V. FUNCTIONS, ROLES AND EFFECTS OF DIVERSIFICATION

An interdependence exists between agricultural and non-agricultural activities. Agricultural growth creates and stimulates, by its induced employment effects, the expansion of non-agricultural activities. These non-agricultural activities, in turn, enhance agricultural productivity by furnishing needed goods and services for the development of agriculture. Similarly, agriculture procures, by the sale of its products, the revenues necessary for the start-up and expansion of non-agricultural activities.

In this manner, two types of flows are built up and developed between agriculture and informal, non-agricultural activities. First are the flows of real resources that are concerned with the exchange of goods and services between different activities. Second are monetary flows, which can also be described as the generation of revenues that follows the exchange of goods and services between different sectors. The intersectoral linkages existing between agricultural and non-agricultural activities also encourage economic diversification.

The importance of the functions and roles of diversification are mirrored in the reasons given by both rural and urban populations for their participation in informal activities. In the Sahelian environment, rural households are faced with enormous difficulties of trying to satisfy important needs for liquidity. These cash flow needs are relatively insensitive to both the variability of agricultural fertility across zones as well as to the state of harvest, which can fluctuate greatly from one year to the next. In this context, income diversification through the practice of one or more non-agricultural activities is essential to rural households as part of a strategy both to stabilize and to increase their incomes. The real and monetary fluctuations of diversification contribute to the stabilization of overall revenues, compensating for the effect of negative fluctuations in agricultural production. In the long run, diversification allows for the enhancement of household revenues by developing forward production linkages and backward linkages to local agriculture. For example, income earned from non-agricultural enterprises can finance the purchase of agricultural inputs or products that otherwise could not take place due to the inadequacies and failures of formal credit markets.

At the level of the local economy, the real and monetary flows generated by diversification favor the further development of informal, non-agricultural activities. The investment of non-agricultural revenues generated in this way for the acquisition of factors of production (labor, capital etc.) in turn supports the growth of agricultural production in general and cereal production in particular.

- An additional outside source of informal funding is commercial credit granted by the providers of inputs or commercial credit with a down payment. This form of credit tends to be less important than client credit for a majority of low-income countries.

- Professional moneylenders are another source of informal financing for microenterprises. Nevertheless, studies have revealed that in a majority of countries, microenterprises generally do not make use of this informal financial market. Use of this happens at irregular intervals and in this case credit is rapidly available, but involves transaction costs and rates of interest that can vary widely.

The results of Reardon and May (1991) demonstrate that for Burkina Faso cereal purchases are the primary use of revenues generated by non-agricultural activities. In non-fertile zones, the liquidity is principally used for the purchase of cereals during bad harvest years. In fertile zones, by contrast, this liquidity permits households to diversify their diet throughout the year. The second greatest use of non-agricultural income is for the purchase of agricultural inputs to increase overall cereal production.

One should remember that the functions fulfilled by informal activities are of both a physical nature (production of goods and services) and monetary nature (generation of revenues). The question that remains is whether informal enterprises are able to effectively guarantee, in the medium to long-term, these functions and roles which help maintain food security among rural and urban populations. Without pretending to give an answer to this question, it is important to deepen our awareness of certain aspects upon which depend, at least in part, the future of informal, non-agricultural activities.

Hirschmann holds that during the process of development, backward linkages drive investment in infrastructure to produce inputs to a given activity, while forward linkages lead to infrastructural investments associated with further processing of the outputs of that activity (Eicher and Staatz, 1990). This author thinks that government investments should be concentrated on activities where the linkage effects are strongest in order to maximize the induced investments in already-existing industries.

According to this idea, one can define three different types of linkages. First, backward production linkages include the production and distribution of inputs. Forward linkages comprise the transformation and distribution of outputs. Second, consumption linkages depend on the multiplier effect of revenues earned from the activity. Third, fiscal linkages are the result of growth financed through investments of taxes imposed on specific activities. In the Sahelian context, it is worthwhile to examine the impact of these different steps on the growth of informal activities, according particular attention to the force and nature of linkages thus defined.

The expected effects of diversification are numerous. Under normal conditions, the realization of certain objectives should result in the growth of household revenues in order to assure greater food security and to stabilize the inter-year fluctuations in production and consumption. In practice, however, people can create a product, service or supplementary revenue without acquiring systematic food security. Even though the expected functions and roles of informal non-agricultural activities can be clearly expressed, the degree to which those objectives have been met must still be quantified, taking into account the resources to meeting them by households and the local economy. In other words, as noted by Reardon, Delgado and Matlon (1992), the effects of diversification on consumption would be unambiguous if diversification was systematically associated with an increase in revenues.

VI. DETERMINANTS OF DIVERSIFICATION

By analyzing the factors that affect diversification, our aim is to understand the motivations behind individuals' decisions to participate in informal activities and, consequently, the internal dynamics and relations, at the intersectoral level, of these activities. Here it is

necessary to distinguish between determinants that are linked to natural conditions and determinants that are relevant to the individual or collective predispositions of populations. Understanding these different parameters is fundamental for better targeting those types of activities that have strong potential for development.

In rural areas, factors of diversification can be grouped into two categories. Firstly, there are "push factors". These factors, which help determine the choice of activities, are a function of agro-climatic conditions and societal structure. For example, certain ecological conditions become limiting factors to agricultural expansion, thereby forcing people to turn towards activities like the production of non-agricultural goods and services, whose income generation helps to meet, partially or totally, the objective of food security.

Secondly, there are "pull factors". They arise from conditions that favor the participation in one or more non-agricultural activities. In contrast to the "push factors", the pull factors favor the start-up or expansion of an activity and contribute significantly to the production of goods and services, stabilization and growth of revenues and, finally, capital formation.

6.1 "Push" Factors

Push factors are multiple, varied (Reardon et al., 1992) and predominant in deprived areas where agricultural production is weak and cereal production is inadequate. These factors must be classified into two categories.

6.1.1 Poor Revenue Levels Generated by Traditional Agriculture

Three categories of factors work towards weakening productivity and revenues in Sahelian agriculture. First, the sub-region is characterized by a short growing season (generally three months) that, moreover, has a tendency to become even shorter during repeated droughts. During this short season, crops benefit only from very weak rainfall. The spatial distribution of that rainfall defines two agro-climatic zones. The dryer of the two, known as the Sahelian zone, stretches out over the 300mm - 600mm isohyets, and is exposed to the negative effects of a strongly variable annual rainfall, intense heat and the Harmattan. A little more temperate and better watered, the Sudanian zone (800mm - 1000mm) is also subject to weak and fluctuating rainfall. The combination of this highly variable rainfall with the worrisome phenomena of soil degradation and progressive desertification largely explains the fluctuations in agricultural production, the well-known low levels of yields and the hunger problems that ensue throughout the Sahel.

To these agro-climatic difficulties can be added the severe constraints of available agricultural land. Despite the vast territories of Sahelian countries, cultivable areas remain limited because of poor soil fertility, high development costs and the virtual absence of efficient irrigation systems. The controversy concerning the causes of these land constraints and their ramifications for land tenure remains a major challenge for empirical research.

Finally, there are the persistent problems of inherent poverty associated with quasi-subsistence agriculture. This type of agriculture is dominated by relatively low levels of cereal production, the bulk of which is destined for home consumption. This low proportion of

marketable surplus of cereals therefore generates only a little revenue to add to the already low level of cash income in those areas lacking important cash crops.

6.1.2 Instability of Agricultural Revenues

The instability of agricultural revenues in the Sahel is the result of numerous factors. Most notable among these are:

- (a) Agricultural pests, locusts in particular, that have plagued the Sahel in recent years.
- (b) Household sensitivity to deterioration in the terms of trade for cash crops: the fluctuation in international prices for certain cash crops, like cotton and peanuts, create unstable farm revenues, especially in countries where there is no policy of supporting prices of agricultural goods. Collier and Khatkhate, cited in Reardon, Delgado and Matlon (1992), note that, on the one hand, cash crops can substitute for non-agricultural activities to attain target revenues and, on the other hand, cash crops can potentially furnish the liquidity needed to invest in non-agricultural activities, specifically in situations where credit markets are blocked or insufficiently developed.
- (c) The perception itself of the risks of instability: This perception results from previously mentioned problems, which influence the pattern of cereal production and farmer revenues. Indeed, Reardon, Delgado and Matlon affirm that because of the high level of instability in crop production and because markets for consumption credit and crop insurance are practically absent, households that hope to smooth out consumption and revenue fluctuations across years feel a need to diversify their revenues. As suggested above, the greater the risks in agriculture, and the smaller the correlation between agricultural and non-agricultural production, the more diversified household revenues will be.

6.2 "Pull" Factors

Pull factors result from a potentially profitable situation in which individuals, because of their economic or social situation, are able to undertake a given activity by using an existing capital base. Among the important pull factors, one can cite the presence of an initial capital stock (animals, ready cash). Such a capital stock is generally used as start-up capital or as collateral for obtaining a loan from a financial institution. Good infrastructure (roads, financial structures, markets, urban areas, etc.) also favors the emergence of informal, non-agricultural activities.

A priori, populations that benefit from these conditions are very often capable of assuring their food security, due in part to satisfactory agricultural production. It is in the Sudanian and Guinean zones, for example, that the already-existing capital is best developed and most dynamic (Reardon et al, 1992; Delgado and May, 1992).

The absence of specific empirical studies in Sahelian urban areas suggests another path in need of research, focusing on the determinants of diversification and their prevalence by

socio-professional category, type of urban area and socio-demographic characteristics. One can, however, conclude from the preceding discussion that diversification seems attributable to two factors: (i) the battle for survival in an environment where the risks are high; (ii) the desire to improve living conditions by building on a dynamic agricultural base, where such a base exists. Each of these factors may be specific to a given agro-ecological zone (Reardon, Delgado and Matlon, 1992).

VII. PROBLEMS AND PERSPECTIVES

Reflecting on these factors allows one to conclude that certain push and pull factors, rather than contributing to the diversification of revenues, become constraints to the start-up and expansion of informal, non-agricultural activities. In this way, in both rural and urban areas, a certain number of problems arise relative to access to financing, interest rates, marketing, obtaining inputs, training and means of communication.

According to Haggblade et al. (1987), growth constraints for rural, non-agricultural enterprises may be due either to insufficient demand or to difficulties in expanding supply. Notwithstanding these constraints, it is useful to explore certain perspectives concerning the expansion of informal, non-agricultural activities.

7.1 Constraints

7.1.1 Supply Factors

The dynamics and implications of financing problems as they pertain to the policy environment deserve particular attention. These dynamics, on which are based the supply of and demand for financing, underlie capital accumulation, which is indispensable for the production of consumer goods and generation of income.

Chuta and Liedholm (1979) note that the issue of credit supply raises questions about the costs and risks associated with loans extended to informal activities in general and rural, non-agricultural enterprises in particular. High administrative costs are often called into question and seem to be explained by the geographical dispersion of the beneficiaries. The relative impact of administrative costs on interest rates remains to be established, however, as do the identification and quantification of many other elements that help to determine the interest rates. This is especially true for the risk that results from informal enterprises' possessing few guarantees against the high probability of real losses on borrowed capital.

This debate carries with it implications that are unfortunately unresearched in the Sahel. Are interest rates major obstacles in preventing small enterprises from adopting more productive technologies? In the Sahel, is it not possible that the apparent credit problems often cited by entrepreneurs of informal, non-agricultural activities are really manifestations of other deficiencies, like (i) the poor functioning of input supply systems that result in working capital being immobilized in stocks of raw materials; and (ii) the insecurity of contracts that limit one's ability to pool capital through partnership?

The development of a communications infrastructure is another indispensable condition for the promotion of informal, non-agricultural activities. In rural areas, insufficient or absent infrastructural investments drive the system towards a contraction of trade between villages and between villages and towns. This situation slows down the development of informal, non-agricultural activities. In urban areas, on the other hand, communications infrastructure may be better developed and may facilitate the movement of goods and people. Thus, in areas well served by transport and communication infrastructure, trade is often well developed and therefore favors the diversification of revenues.

Inadequate training among principal small business players constitutes a serious handicap for the promotion of informal activities. The question about what kinds of training are appropriate for developers of informal activities is key. It is obviously true that the training needs vary between the cola nut merchant and the metal worker, each of whom, for example, must master his or her own types of input supply and output marketing systems.

Input supply and output marketing channels impose another category of major constraints. The relative inefficiency of these elements generally result in higher costs of production, slow sales of product, and a greater need for liquidity. Given the poor quality and degradation of Sahelian soils, any growth in agricultural production requires use of fertilizer and selected seeds that, up to now, have been largely inaccessible to most farmers because of their frequently high costs. Output marketing systems may experience difficulties because of the thinness of the market, principally in rural zones, and because of slow sales of locally produced products that are competing with cheaper imports.

7.1.2 Sources of Demand

Demand behavior vis-a-vis products of the informal sector may be a determining factor in why certain diverse activities stagnate. This behavior depends on income, income elasticity of certain goods manufactured by informal activities and the existence of substitutable goods.

The demographic importance of a built-up area may be expressed as a function of its greater or smaller demand for goods produced by non-agricultural enterprises. Therefore, contrary to large towns, small towns may not be favored by a level of demand that is able to stimulate growth of non-agricultural enterprises. However, the demographic importance of a particular place can only enhance the demand for a product, in a significant manner, if the population concerned remains solvent. Taking into account the complexity of this problem, it is important to question the nature and effects of the relations between rural and urban populations, the determinants of demand for goods and services and the development of informal, non-agricultural activities.

Another aspect of demand to explore is that linked to the existence of a dynamic sector such as agriculture. The resultant demands of this sector are directed towards other sectors of the economy, where a functional and complementary nature between agricultural and non-agricultural activities is seen to be prevalent. Referring to Hirschman's idea, agriculture uses inputs (agricultural equipment, seed, etc.) that the outputs of other sectors. Also, agricultural products are processed and distributed by other activities. Therefore, before and after the conduction of agricultural processes, there exist a series of activities that generate revenues as well as expanded goods and services. Finally, it should be noted that the duties and taxes

imposed on these activities serve to finance the infrastructural build-up that in turn benefit the development of informal ventures.

7.1.3 Macroeconomic Constraints

The politics of public authorities may serve as a constraint to the development of informal, non-agricultural activities. For example, agreements and taxes that apply to the informal sector, favorable or unfavorable views of certain activities and the adoption or non-adoption of measures generally destined to promote the modern, industrial sector, may prompt one towards illegal competition, in turn reducing the vitality of activities lacking a particular advantage.

Informal enterprises often experience difficulties in overcoming the principal influences that cause competition between the informal and formal sectors. These influences are based on both quality and prices of manufactured products, facility of payment and other services available to clients and the extent to which efforts have been realized by modern, industrial enterprises to win over the market through advertising.

Furthermore, the nature of these legal arrangements has been found to prompt a large number of entrepreneurs from the informal sector to operate illegally (De Soto, 1989). To varying degrees, this finding may also apply to the Sahel, especially with regard to activities in urban centers. By operating illegally, those enterprises that have been reduced to working underground have a severely limited potential for growth.

7.2 Possibilities and Perspectives

In order to promote the informal sector, it is mandatory to keep in mind two fundamental concepts that condition the existence or expansion of a sector.

When activities develop because of an individual's desire to overcome difficulties linked to poor agro-climatic conditions or socioeconomic aspects, the growth perspectives of these activities are very limited, the potential for growth weak, the primary objective being to feed one's family and not to produce capital. On the other hand, when these activities arise from a desire to improve living conditions, the activity may not only serve to satisfy consumption needs but also to promote capital formation. The clear revenues are then partially reinvested and contribute to the promotion of other activities.

In observing the problem from an agro-ecological viewpoint, it would seem that the strongest potential for inter-linking growth between non-agricultural and agricultural activities is in the Guinean zone where conditions are most favorable towards agriculture and blooming, informal, non-agricultural activities (Reardon et al., 1992).

Nevertheless, Reardon, Delgado and Matlon (1992) think that diversification of revenues is a useful mechanism, particularly in the Sahelian zone where the potential is weakest, and to a lesser degree in the Sudanian zone, to compensate for the absence of a credit market as well as bad harvests, in turn helping to smooth out inter-year revenue and food consumption fluctuations. In the long run, agricultural growth would provoke a drop in cereal prices for a large number of net buyers in the Sahelian and Sudanian zones. This could then encourage

non-agricultural enterprises based on animal husbandry and other types of informal, non-agricultural activities that are backward and forward linkages to agriculture.

However, a real mechanism for attaining this seemingly viable growth level has yet to be established in the Sahel. Case studies from Sierra Leone and the Ivory Coast present several ideas for reflection that are related to this subject. It has been established that the income elasticity of demand for goods and services produced by informal enterprises is positive. Liedholm and Chuta (1976) demonstrate that the concerned goods and services are not considered inferior in Sierra Leone. Added value alone may be positive and tends to vary as a function of the type of activity. For example, a study conducted in the Ivory Coast by Lubell (1991), demonstrates that in 1970, the informal sector as a whole could be characterized by weak capital accumulation and added value per worker on the order of 23 - 24% that of each of the formal sectors, including industry, construction and transportation.

These perspectives are even more appreciable when alternative measures involving risk reduction and administrative costs are developed. Rather than insisting on a loan guarantee, for example, an emphasis should be placed on the economic viability and potential funds of the borrowers. Also, an agreement for debt reimbursement should be looked into, that depends on the nature of different rural, non-commercial enterprises. Finally, it is important to appreciate the proportion of non-agricultural revenues truly invested in agricultural development.

VIII. POLICIES

In view of their integration into the process of economic development, Lachaud (1985b) elaborated on policy aids available to informal, non-agricultural activities. He distinguished between different groups of activities, keeping in mind those for which demand would grow if both qualitative and quantitative productivity were improved through interventions in both capital and labor. In concrete terms, this assistance must place a priority on those activities that have already expressed a certain entrepreneurial spirit, and that possess a certain amount of capital, as well as potential for employment. This is in opposition to those activities that are too erratic or too marginal to be developed as part of an economic plan.

For Vaa (1987), diversification of informal activities makes doubtful the possibility of coming up with a general policy measure that can provide a solution. Frequently, such errors in thinking make one believe that a single policy can be applied to the informal sector as a whole; this is why governments tend to adopt similar programs for operators of different professional levels.

In reality, the informal sector is large enough and diversified enough to require a range of different policies from which one can choose. Among the options would be policies dealing with motivational aspects, assistance and rehabilitation for informal enterprises. Appropriate policy choices that would lead to growth in the productive capacity of informal activities depend in part on the specific nature of the activities and on the demand for their output. It is no less important that the stated objectives of workers in the informal sector, as well as those of governments, must be considered the same as predominating societal values.

8.1 Types of Policies

Liedholm and Mead (1987) summarize the impact of macroeconomic policies on small and large enterprises on factor and product markets. The instruments of macroeconomic policy, such as credit subsidies and regulation of the balance of payments, affect factor markets and mostly favor large enterprises, to the detriment of small ones, by reducing the cost of capital. Among these policy elements figure tariffs and other protectionist measures used by local enterprises operating on a grand scale, implicit and explicit subsidies through the overevaluation of local currency, credit and subsidized interest rates.² The informal, non-agricultural enterprises that do not have access to such preferential treatment are obliged to put up with unequal competition.

At the microeconomic level, policy instruments are composed of bestowing credit to preferential conditions, as well as providing assistance in management and marketing, production techniques, training and the creation of new enterprises. Taking into account the fact that assistance-oriented projects have very limited financial capacities, such measures only touch on a small fraction of microenterprises that are considered viable.

8.2 Assistance Approaches

With the arrival of structural adjustment programs, countries like Mali retreated from certain macro and microeconomic practices and instead looked towards a more general favoring informal enterprises. This willingness brought about a positive attitude on the part of governments towards informal enterprises in urban areas or artisans and small-time merchants who were subjected to the abuse of municipal powers.

The different points raised so far are fundamental and lead to the posing of certain questions that must be examined seriously at all levels. As such, it can be asked if governments have an interest in encouraging informal enterprises to become formal enterprises, the intention being to offer better help through training and assistance programs, or rather to subjugate them

² Finally, a question no less important concerns an applicable interest rate. In effect, many countries and donor agencies continue with the sentiment that rural, non-agricultural enterprises must receive credit at an inferior rate to the opportunity cost of capital. The argument is that these enterprises frequently belong to poor individuals, who are already working in a hostile environment. Nevertheless, there are many arguments in favor of interest rates roughly near to the opportunity cost of capital.

A subsidized interest rate may encourage rural enterprises to adapt technologies that are capital intensive. Many studies reveal that rural, non-agricultural enterprises are ready to pay a higher interest rate than what is presently in effect in the formal market, especially when the only alternative is a very high interest rate from informal moneylenders. The economic viability of a lending institution may be seriously compromised if the interest rate is unfairly subsidized.

Also, although arguments exist in favor of an interest rate close to the cost of interest of the opportunity cost of capital, the political, economic and social realities may necessitate a degree of interest rate subsidization for rural, non-agricultural enterprise projects.

to taxes and duties. What advantages do the informal entrepreneurs associate with formal enterprise status? What would they gain by remaining informal? Another equally important question that requires in-depth discussion is whether or not policies dealing with informal, non-agricultural activities should be conceived of in a general, centralized or decentralized manner.

Development approaches for small and microenterprises distinguish among three types of activities, the classification of which leads to a better orientation of policies (USAID, 1989). First, the subsistence economy is composed of the poorest of these enterprises, for which a **training approach** is used, offering technical assistance and credit availability with which to get things off the ground and develop management capacity. Second, growing enterprises are assisted with the growth of their product through the **expansion approach**, that implements revolving funds, credit and a minimum of training. This approach does not have an impact on increasing employment but contributes towards expanding productivity and overall enterprise production. Last are small-scale enterprises with more than ten employees. Here the **transformation approach** helps microenterprises to become small-scale enterprises. This approach is based on a significant amount of credit, training and technical assistance.

The support systems presently used in the Sahel, according to Bremer-Fox et al., focus on credit, technical assistance and structural adjustment. The credit programs include differences in the amount and type of training and technical assistance. The purpose of the technical assistance activities is to improve the competence of enterprise personnel and sectoral organization. The strategic reform programs of structural adjustment aim to improve the macroenvironment of private enterprises. It should be noted that while contributing to the proliferation of the informal sector through the total or partial liquidation of public enterprises, structural adjustment programs also support aspects of management training to benefit those individuals who are coming in to swell the ranks of the informal sector.

8.3 Regulators of the Environment

In the Sahel, as in other parts of Africa, the paradox is that advantages that are linked to informal activities are only available to a small minority of enterprises that are capable of using their political ties and financial resources to overcome structural inadequacies. The majority of these enterprises operate inside a system where the rules are unknown, impossible to uncover and constantly changing. In this situation, formal and informal enterprises must resort to unofficial operational mechanisms in their transactions with other economic players and employ similar methods when trying to conduct business with the government.

Economy-minded Sahelians know to not expand their activities in a legal environment that, not at all succeeding in responding to the needs of the structured sector, is totally inapplicable to informal activities. Also, Bremer-Fox et al. (1990) believe that certain key questions must be resolved when coming up with a strategy that exploits private enterprises. These questions concern:

- The kinds of relations between the government and different structures, for example the appropriate structure for relations between the government and the non-structured, small-scale sector.

- The appropriate structure for relations between the government and the non-structured, traditional or ethnic sector.
- The appropriate structure for relations between different enterprises, taking into account the diversity of the private sector in the Sahel. This structure must convey the possibility for elaborating on property rights systems, contracts and prejudices that are applied in the same manner to large, modern enterprises as to marginal enterprises.

In a more condensed account, Baumann (1985) estimates that the range of measures destined to promote informal, non-agricultural activities must emphasize the need for awareness among rural populations concerning the types of problems encountered during a transitional economy. Based on the report that the existing system of taxation and commercial regulation neither responds to the needs of the structured sector nor to those of the unstructured sector, it is advisable to ask about the best way to improve the situation.

As a preliminary step, an examination of commercial codes and support structures must be conducted. This analysis would allow one to determine the applicability of existing rules and commercial institutions to structured and non-structured enterprises (like commercial courts) and to elaborate on the options that would better reflect enterprise realities, development problems among both enterprises and societies, and institutional capacity.

In his research on solutions, Schmid (1992) identified many roles that government can play in the development process. He especially noted the following:

- leave an unrestricted path to the private sector
- reduce transaction costs so as to free up profits from trading opportunities
- facilitate the use of shared capital
- reduce the assumed costs of development agents
- favor development agents rather than money seekers

Along these same lines, Sacasa (1987) and Orsini (1989) believe that laws and regulations provide no incentive for businessmen in the informal sector, nor on their enterprise plans, nor on the eventual transitional plans towards the formal sector. As a result, these authors favor concrete efforts, the purpose of which is to:

- reduce barriers that discourage and prevent citizens from joining the private, structured sector
- simplify the system of establishing tax registration for small companies and pardon microentrepreneurs
- facilitate credit flow in the direction of the most productive sectors of the economy

- improve the economic rationalization for encouraging more capital repatriation, removing the obstacles that block productive investments
- implement improved education and better training programs to benefit informal entrepreneurs, in order to help them increase output when their activities are faced with policy reforms that raise barriers and obstacles

8.4 Organizational Structure of Firms

The question about the organizational structure of informal enterprises is important because it can influence policies, structures and the implementation of contracts. The organizational structure that applies to informal activities is subcontracting, which is a mechanism available to enterprises for their reciprocal development according to Mead (1984). Three principal reasons have been identified for justifying this choice by operators to work in a disaggregated fashion. All of these reasons emphasize costs, circumstances being of such a nature that it may be less expensive to employ someone from outside the production system for a particular activity than having the enterprise do it alone. Subcontracting allows producers to initiate more complex production and distribution processes than those they could manage or finance if they only used their own resources.

For small enterprises in the Third World, the disaggregation of production and distribution systems may be of great importance in facilitating a move towards more complex products and distant markets. In any case, this disaggregation results in a limited capacity for management and financing and may be temporary. As time progresses and pilot enterprises become stronger, they may decide to integrate production and distribution activities within their own businesses.

Finally, it is necessary to recall that the dynamics of informal activities are complex, varied and evolve as development evolves (Lachaud, 1985c). The success of economic policy with regard to informal activities is tied to a double wish: that individuals be more concerned with the need for effective collaboration and that the authorities explicitly recognize informal activities as essential elements of economic transition. The different promotional strategies for informal activities underscore areas that have been only weakly if not at all explored as well as inadequate or poorly adapted analytical techniques.

IX. IMPLICATIONS FOR RESEARCH

This paper underscores the importance of informal activities, the problems they pose and the perspectives of the businessmen who are involved. It is of concern that the development policies of these activities must depend on the dynamics of the sectors that encompass them, with an eye to creating employment, generating revenues and improving global productivity for an increased contribution to food security. The line of research needed to guide the selection of policies must be oriented towards the improvement of work methods and a definition of strategies that allow a discriminatory means for handling relatively saturated activities from those offering possibilities for significant expansion. To this effect, the suggestions that follow

articulate what is needed in terms of a data base, as well as the kinds of fundamental questions and operational approaches to be taken into consideration by the research.

9.1 The Data Base

In general, there is very little data available concerning informal activities in the Sahel. To make up for this deficiency, it would be necessary to strengthen survey techniques in order to develop specific studies covering both rural and urban zones. Investigative efforts must lead to invaluable data related to the identification of informal activities, with a better understanding of their socio-demographic characteristics and a good appreciation of their range of contributions from the production of consumer goods to the generation of revenues.

9.2 Development Strategies

Beyond the controversies surrounding both definitions and classifications, the composition and characteristics of informal, non-agricultural activities suggests five principal orientations for future research efforts.

(a) Determinants of Income Diversification at the Household Level

Research in this area must identify specific cases according to ecological zones of production as well as socioeconomic and cultural data related to both rural and urban settings.

(b) Development Dynamics of Informal, Non-Agricultural Enterprises

Specific studies in rural and urban settings are required, not only to define the relations between supply and demand as they relate to the factors of production of goods and services among informal activities, but also to apprehend the constraints and priorities associated with the expansion of these activities. These studies must be focused on the opportunities and constraints facing individual entrepreneurs rather than the opportunities and constraints facing their microenterprises. At this level, there should be an emphasis on the motivations of the entrepreneurs, the nature, characteristics and evolution of their activities, and the critical differences that distinguish their diversification approaches.

(c) Support Strategies for Informal, Non-Agricultural Activities

Efforts in this direction must focus on assistance-oriented research, of a type that is diversified in nature and form, and adapted to different kinds of informal activities. Appropriate directions for study include entry conditions for operators of certain types of activities, their level of professional training, their access to financial and product markets, and economic performance of their activities compared to those in the more formal sectors.

(d) Synergies Between Agriculture and Informal, Non-Agricultural Activities

Two basic questions need to be addressed at this level. First, it is necessary to have a better understanding of the motivations and development methods used by non-agricultural enterprises as an alternative to agriculture in zones possessing weak agricultural potential and as a source of capital accumulation in zones with strong agricultural potential. Complementing this

aspect, the second question touches on the identification of the essential conditions needed to invest non-agricultural revenues on behalf of agricultural development.

(e) Questions Concerning the Participation of Women in Informal Activities

Keeping in mind their dominant economic contribution to informal, non-agricultural activities, women comprise a target group to which future studies must pay particular attention. It is important, for example, to identify specific constraints and opportunities common to women in both rural and urban areas, as well as the induced effects of current changes on the rural economy in general and the non-agricultural activities of women in particular.

9.3 Methodological Approaches

The diversity of informal activities compels one to use tools and approaches that are equally varied and complementary in the economic analysis of these activities. Attention here will be focused on four particular approaches.

(a) Subsector Analysis

This approach encourages, for a given product or group of products, the diagnosis of internal and vertical coordination constraints at different stages of input supply, production, transformation, preservation and consumption. This approach also looks into the behavior of different players within a subsector as well as the relationships of individuals from competing subsectors that produce substitutable products.

Based on the vertical coordination of the production and market structures of a given product or group of products, the subsector approach allows for the identification of forces that influence competition among microenterprises of the same sector (Boomgard et al., 1991). It is advantageous in its capacity to identify problems as well as consistent, corrective interventions, using a perspective that is efficient and demonstrates a comparative competitiveness of the growth potential of different production types and distributional chains.

Mead et al. (1990) recommend that higher-performance research for small and microenterprises focus on coming up with solutions to subsector-specific bottlenecks. Furthermore, Liedholm and Mead (1990) support this methodological choice in areas where overlapping occurs between a particular group of products and numerous activities of different dimensions. In the real world, the analytical frame of reference must distinguish between suppliers of raw materials, intermediate and final products. This framework must also include marketing systems and vertically-coordinated relationships, in particular the contractual mechanisms that link together different steps of the production-distribution process.

Subsector analysis, however, has application limits (Boomgard et al., 1991). First, this approach loses efficiency through its market analyses and detailed management schemes that examine the internal constraints of an enterprise, particularly when the research aims to propose solutions that include credit programs or technical assistance. Second, the subsector approach does not go along well with the analysis of activities that intersect crosswise many vertical, production-distribution systems. Because of this, activities such as commerce, transportation and finance, although important in the vertical dimension of subsectors, cannot be well understood

without other methodological approaches. Third, the analysis of coordination mechanisms that is an essential component of the subsector approach remains to be developed. Significant efforts are needed to better outline certain determinants and indicators of vertical coordination linkages, in particular transaction economies of scale and the relative efficiency of retail distribution activities. The following three approaches allow for partial compensation of these deficiencies.

(b) Household Models

These models allow for the examination of household behavior when faced with certain decisions. For example, decisions about whether or not to diversify income or what path to follow when the decision to diversify has been made are individual decisions that may vary from household to household.

(c) Cost-Benefit Analysis

At the most elementary level, an analysis of project costs and benefits calls for the identification of all effects on the well-being of individuals in a community. This is an evaluation tool that looks at the profitability of an activity within an enterprise and a comparative economic analysis of different scales of activity.

(d) Intersectoral Analysis

This allows for the identification of profitable activities, based on the interdependence of different sectors within the economy. Also, the production, consumption and fiscal linkages first developed by Hirschman, are well incorporated.

Finally, these analyses must be applied through case studies in different Sahelian countries. These studies will help to establish a long-lasting development strategy for informal, non-agricultural activities.

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