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STREET FOODS IN SENEGAL

by

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The Equity Policy Center's study of street foods began in September 1981 with funding from the United States Agency for International Development, Office of Women in Development. The project comprises country studies in Senegal, Bangladesh, Indonesia, and the Philippines. Each project has examined the street food trade in order to design interventions that would increase the income of the vendors and improve the nutritional quality of the food sold. In the Philippines and Indonesia, additional attention has been given to the nutritional contribution of street foods to household diet. In Bangladesh, the implementation of recommendations forms an integral part of the project. The Street Foods project is scheduled for completion in November 1984, at which time a report of the overall project and the results of the individual country studies will be available.

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Preface

"Le marché tient sa cour au centre de la cité. Une halle est reservée à la boucherie et à la poissonnerie, une autre aux marchands de pierreries et d'étoffes venues d'Angleterre et du Portugal, importées par les Havsas, marcheurs infatigables ou par les Bambaras. Entre les deux batisses, par terre ou sur des nattes de rafia, on trouve des calebasses decorées, des peaux de toutes sortes, des racines inconnues, de la poudre pour les maux les plus divers, des fruits, des oeufs de toutes dimensions, allant de ceux de la poule à ceux de l'autruche, sans oublier çeux du caiman. C'est la tour de Babel: un forum negre. Dans cette fourmilière où hommes et bêtes se melaient, les pleurs des enfants, les aboiements des chiens étaient recouverts par les appels des marchands."

Description of the St. Maur market in Ziguinchor circa 1950. From Ousmane Sembene's O Pays, mon beau peuple!

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INTRODUCTION

This report presents an account of research carried out for 18 months in the small West African city of Ziguinchor in Senegal. It concerns a ubiquitous phenomenon in developing countries--the street foods trade. It is the first study completed in a worldwide project initiated in 1981 to examine street foods. The project was initiated by the Equity Policy Center, a Washington-based, non-profit research and educational organization with funding from the United States Agency for International Development, Office of Women in Development.

The research examines the street food sector primarily from an economic perspective; that is, as an income-generating activity in which women are particularly active. In the broadest possible terms, the research sought to describe the operations of the sector from the production stage through the distribution and marketing of the foods. In addition to providing an account of the economic viability of street food enterprises, profiles of the entrepreneur and consumer were developed using survey and case study data. Finally, based on a confluence of these results, recommendations are proposed concerning how the trade might be improved with respect to efficiency, cost effectiveness and the nutritional quality of the foods.

CHAPTER 1. ZIGUINCHOR: THE CITY AND ITS STREET FOOD TRADE

The Setting

Ziguinchor is the fifth largest city in Senegal with an estimated population of 98,000 in 1983.[1] Even conservative estimates project that by the year 2000, the population of the city will have surpassed 200,000. The relatively high growth rate notwithstanding, Ziguinchor is a city where problems typically associated with urbanization such as overcrowded housing and traffic congestion are not yet apparent. It remains a provincial town in character.

As capital of the Casamance, it is an administrative center of some importance. The regional headquarters of most government agencies are found in Ziguinchor as are the only surgical hospital and complete secondary school in the province.

The Casamance is a well-defined geographical area which is separated from the rest of Senegal by the Gambia (see Figure 1), an independent English-speaking country now in the process of confederating with Senegal. The political union of the two countries may alleviate some of the difficulty associated with reaching Dakar, Senegal's capital, by land from the

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[1] The 1976 census figure for Ziguinchor was 72,726. The 1983 estimate given above uses a 4.4 percent annual growth rate adopted by SONED (1981). Colvin (1981) determined Ziguinchor's annual growth rate between 1971-76 during the drought years to be as high as 9.5 percent. She indicates that after 1976 the flow of migrants from outlying regions to urban areas subsided substantially however. The 4.4 percent rate used in our calculation is probably conservative.

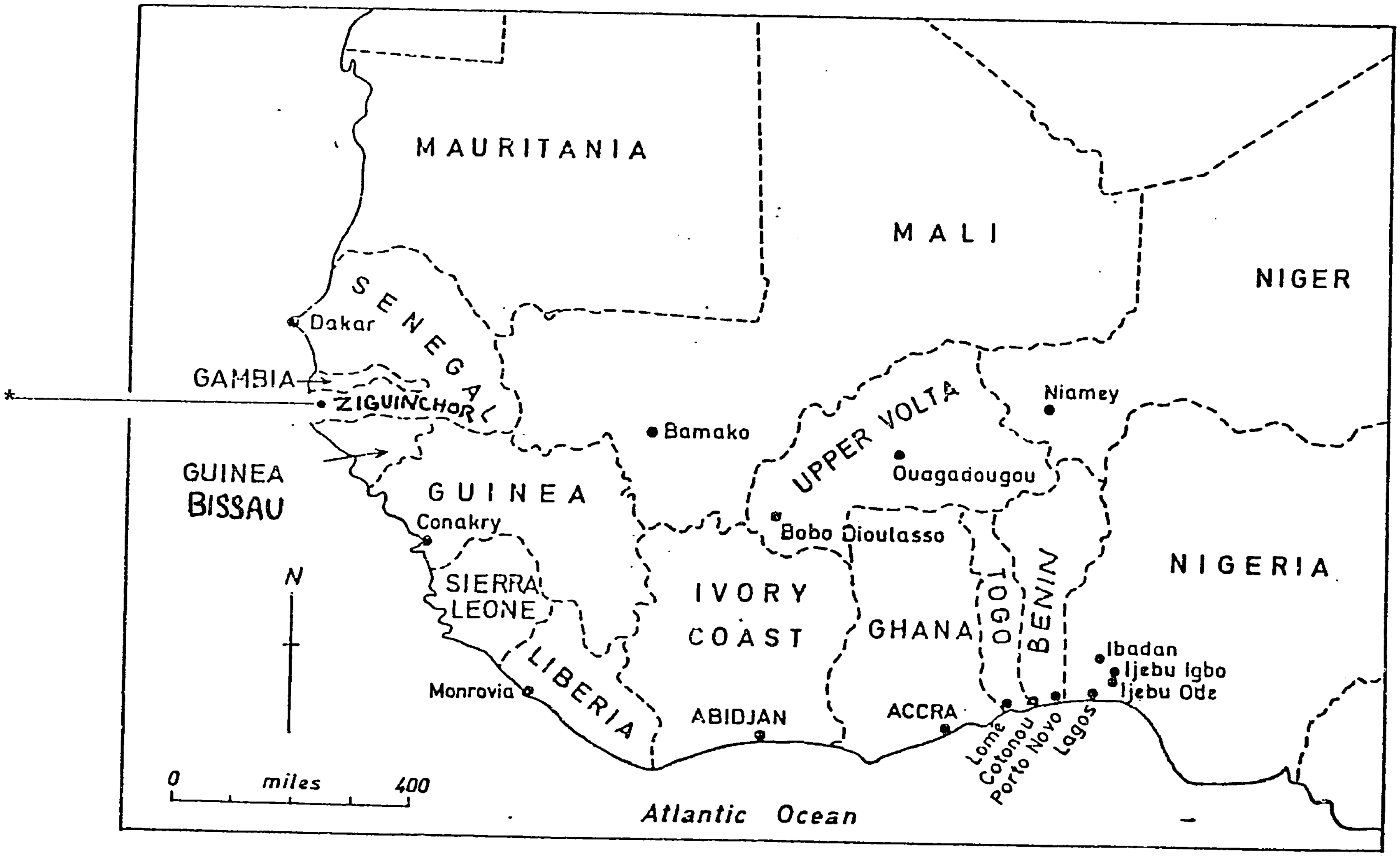

Figure 1. West Africa

Casamance, but the main bottleneck remains the ferry crossing on the Gambia River. Delays at this juncture make transporting perishables both to and from the region risky and therefore more costly. This has an obvious effect on food producers and processors.

Agriculture is, as elsewhere in Senegal, the main contributor to the regional domestic product. With a comparatively high average annual rainfall [1233 mm between 1965-80 (ISRA, 1980)] and an extensive river and estuary system as a predominant geographical feature, the Casamance represents an area of some agricultural and primary sector potential, particularly in the production of paddy rice, fruits, vegetables, fish and shrimp. It should be pointed out however that approximately 15 years of intermittent below-average rainfall and concommitantly low agricultural productivity have resulted in a high rate of out-migration from rural Casamance, both on a seasonal and permanent basis (de Jong et al., 1976). The rate of departure from the area which includes equal numbers of men and women is the highest in the country. It has been estimated that 15 percent of the entire population of lower Casamance leave their villages during the dry season (van Loo & Star, 1973). Most of the movement is toward Dakar.[1] However, unlike other secondary cities in Senegal, Ziguinchor (with its sustained high growth rate) is also a receiving zone for migrants (Colvin, 1981). It may be that Ziguinchor represents the first step in a journey that ultimately leads migrants to Dakar.

Ziguinchor is situated on the south bank of the Casamance River 60 km from its mouth at the Atlantic Ocean and 15 km from the Guinea-Bissau

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[1]Van Loo and Star's study (1973) shows that 41 percent of female migrants sought work in Dakar; only 9 percent of the women migrated to Ziguinchor.

border. The proximity with Bissau recalls Ziguinchor's distinct history. The city was under Portuguese control for 240 years before being sold to the French in 1857. Its access to the Atlantic and Dakar made it an ideal collection point for groundnuts grown in the region, a crop which was already becoming the base of the colonial economy.[1] A number of French trading companies (CFAO; Maurel & Prom) made Ziguinchor the seat of their commercial operations in the Casamance during the last decade of the 19th century (Bruneau, 1979). These large firms dominated the peanut trade and other commercial activities in Ziguinchor until independence (1960)[2], when a nationalized peanut marketing system (l'ONCAD) was instituted. Ziguinchor remains, under the current system, a major collection site for peanuts. The largest part of the crop brought in from the hinterland is processed into oil at the refinery, Ziguinchor's main industry.

Opportunities for Employment in Ziguinchor

A breakdown of the occupational activities of the work force in Ziguinchor gives an indication of the employment opportunities available. Table 1 presents data collected by Bruneau in 1973. At that time 39 percent of the adult population (15,200 people) were estimated to be working.[3]

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[1]The economy still depends heavily on peanuts. It is Senegal's major export, representing 40 percent of Senegal's export income (Berniard, 1979).

[2]The "golden age" of the peanut trade was between 1914-59. The trading companies extended credit to the farmer against his upcoming crop for imported merchandise. This hastened the penetration of the money economy in the region.

[3]"Gens exerçant réelement un metier."

Table 1: OCCUPATIONS OF THE ADULT WORK FORCE IN ZIGUINCHOR, 1973

	Men	Women	Total
	(Percentage Distribution)		
Agriculture	17	21	18
Fishing	7	-	6
Industry	3	5	4
Informal Sector[1]	30	3	24
Transport	6	8	6
Commerce[2]	11	22	14
Government Jobs[3]	16	11	15
Domestic Service	2	27	7
Religious	4	3	3
Other	4	-	3
Total (%)	100	100	100
Total (Number)	12,200	3,000	15,200

[1] Includes tailors, mechanics, electricians, construction workers and "travaux manuels."

[2] Includes the entire range of market sellers and street food vendors active year-round.

[3] Includes administration, teaching, health, police and army.

Table 1 shows the important role that agriculture and other primary sector activities play in the economy of the urban area. Twenty-four percent of those working are active in this sector. They fish in the estuaries and maintain fields in the peripheries of the city or abandon the town altogether for the rural area during the growing season. Much of the land near Ziguinchor is used for paddy rice, a crop for which women have the primary responsibility for planting and harvesting (which explains the large proportion of females in this category). Updated figures on the proportion of urban residents involved in agriculture are given by SONED (1981). By their estimate, 31 percent of working adults derive an income from fishing and agriculture.[1]

What is also apparent from Table 1 is the narrow range of activities open to women. Women are dominant in only three of the ten occupational categories listed; namely, agriculture, commerce and domestic service. These three activities account for 70 percent of the women estimated to be working. The 600 women employed in government and industry together (salaried jobs) account for only 20 percent of the total.

On the basis of certain demographic assumptions which were not specified in the 1973 study,[2] this author determined that the number of women in commerce in 1973 represented only 4 percent of the total number of

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[1]This figure only includes those who produce cash crops. If one were to consider those who farm for home-consumption (rice producers), the proportion would be much greater.

[2]It was assumed that the proportion of adult women in the population was the same in 1973 as in 1980 when it represented 50 percent of the population between the ages of 15-64 (SONED, 1981).

adult women. Using our own data concerning the number of women engaged in commerce in early 1982,[1] and SONED's figures on the distribution of adult women in the population at that time, it was estimated that approximately 8.5 percent of the women of working age were involved in commercial activities. A comparison of the two figures suggests that the proportion of women in commerce has more than doubled in nine years. While it is not unlikely that there has been a real increase in the proportion of women traders in the interim, the criterion used by Bruneau in his census apparently did not include part-time or neighborhood traders. Thus, the precise increase cannot be determined. Suffice it to say, however, that micro-commerce in Ziguinchor is an extremely active sector for women, generating some income for almost one in every ten adult females.

Retail Activity in Ziguinchor

With the decline of the French-dominated peanut trade in 1960, all but one of the large commercial establishments (Maurel & Prom) abandoned their activities in Ziguinchor and retreated to Dakar. Unlike the colonial period when Ziguinchor was the seat of commercial operations for the entire Casamance, today commerce is limited to meeting the needs of urban residents. While a few French and Lebanese establishments remain, the two most common ways the needs of the indigenous population are met are by the ubiquitous small dry-goods stores ("petites boutiques"), often operated by the Peuhl, and by diverse traders on the streets and in the urban markets.

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[1] The figure includes all women traders in the city markets plus neighborhood sellers during the dry season for a total of 2016 out of 24,000 women.

Marketplace Trading

Both in terms of volume and demand, the most important retail institutions are the town's five open-air markets, which vary in size and economic importance (see Figure 2).

The largest of these, St. Maur, which occupies 12,000 m^2 is located in Boucotte. With 21 percent of the city's population, it is one of the most densely populated parts of town (SONED, 1981). The market houses about a hundred stalls in and around its walls and contains four large hangars. St. Maur offers all the basic food staples as well as cloth, used clothing, household wares, medical products, beauty aids and a host of other articles used by the indigenous population. In addition, there are a large number of vendors selling prepared foods, fruit and snacks to be consumed on the spot. It is on these products that the present study focuses.

Four smaller markets are located in the peripheral neighborhoods of the city (Nema, Santhiaba, and Petit Kandé) and at the main river port in the commercial district (Escale). The neighborhood and port markets are much smaller[1] and are active only in the morning, unlike St. Maur which is open from sunrise to sunset and after (it is particularly active in the evening during Ramadan, the Moslem month of fasting). The neighborhood markets have a limited range of foodstuffs for sale; supplemented by the small boutiques which are located nearby and occasionally by a larger store (e.g., SONADIS at Nema), they constitute small poles of retail activity in relatively densely populated areas away from the center.

Municipal agents collect a daily location tax from all vendors who sell in and around the markets and other areas where traders congregate such

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[1]The Escale Market occupies 600 m^2.

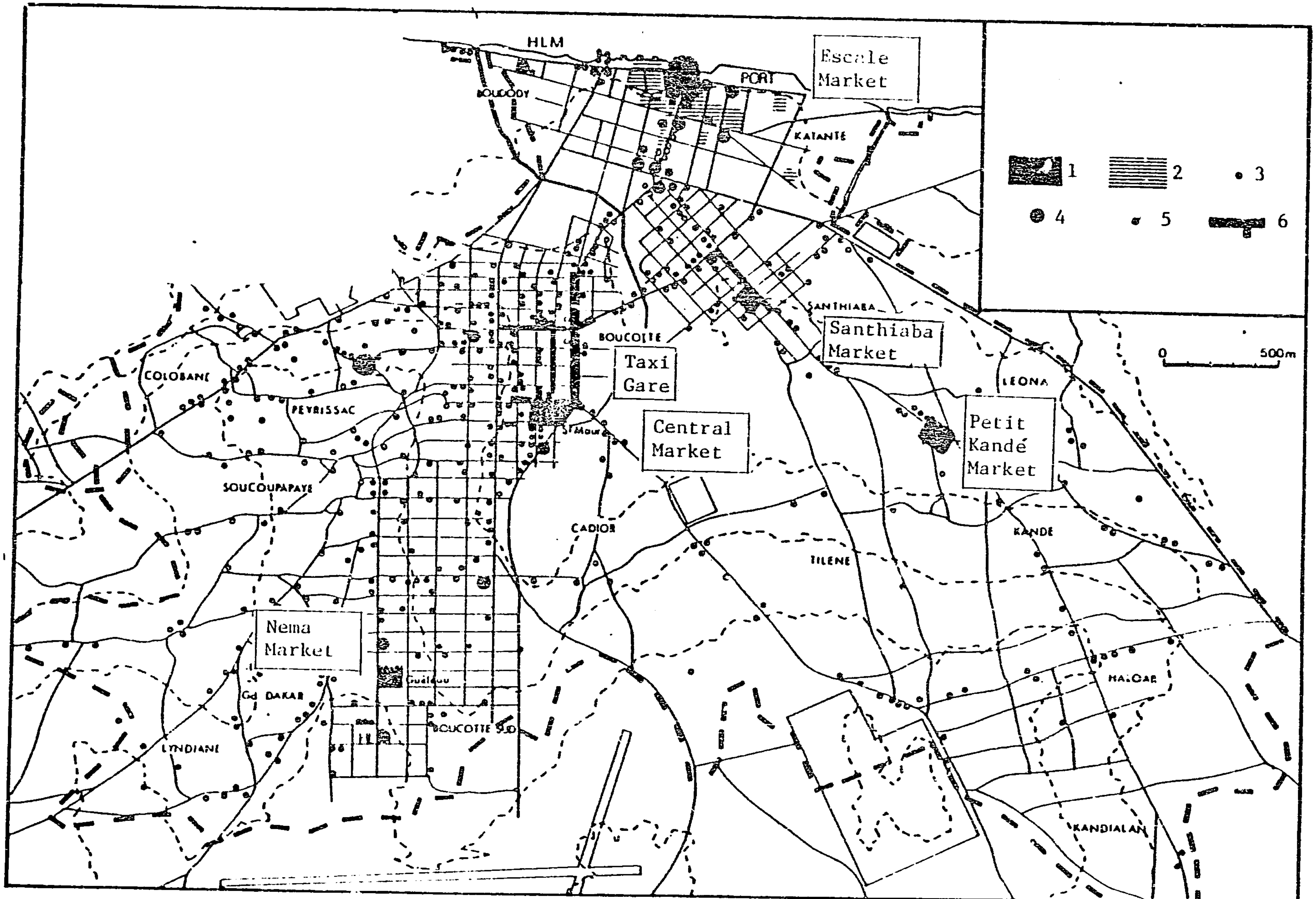

Figure 2. Distribution of Small Retail Activity in Ziguinchor

1. Markets
2. European-type stores
3. Lebonese businesses
4. Large Senegalese businesses
5. Small Senegalese businesses
6. Small commercial activity, every 25 m

(Source: Bruneau, 1979)

as the bush taxi station. Unlike those in other cities in West Africa, the tax collectors in Ziguinchor are relatively benevolent and do not always demand payment from sellers whose profits are obviously marginal. The fee for the "droit de place" as it is called is roughly determined according to the amount of space a seller occupies. Those who set their wares upon the ground, the majority of whom are women, pay 25 fr/day. Those who have a permanent table (about a meter square) pay 50 fr, and the small number of sellers with stalls are taxed 100 fr. on average. By convention, those with tables and stalls have fixed spaces. The stalls in good locations are secured or bought from a retiring vendor by other sellers who have been awaiting such an opportunity. Thus, there is a traditional rather than a legal code in the market which determines the rights of succession.

The total number of market sellers citywide for all commodities varies considerably from one season to another. Based on the municipal tax records in 1981 and 1982, the average number of sellers during the dry season months (January-May) was determined to be 2100.[1] During the height of the rainy season in July and August the average number of market sellers declined by 35 percent to 1365. This decrease reflects the active participation of urban residents in seasonal agricultural activities, as mentioned above.

Our calculations[2] indicate that by far the largest percentage of market vendors, on average 65 percent, were located in St. Maur. For the

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[1]This figure is probably low as we estimate that between 5-10 percent of market sellers are not taxed.

[2]The distribution of market sellers was determined from the tax records of the last two weeks in January 1982.

rest, 15 percent sold at the port market, 13 percent in Nema and 7 percent at Petit Kandé or Santhiaba.

To obtain further precision on the distribution of men and women selling in the markets (again, for all products) and the amount of tax paid by each, a survey was conducted with the help of the tax collectors. The average data for a week in the dry season show that while the total population of sellers was approximately equally distributed by sex--53 percent were women, 47 percent were men--women were far more likely to be in the 25 fr bracket. Sixty-eight percent of those paying 25 fr were women. Men, on the other hand, dominated the 50 fr category four to one. This tax by gender data provides a very rough index of the magnitude of men's and women's sales since those who pay a 50 fr tax generally have a larger stock than those paying 25 fr.

Neighborhood Trading

Two forms of indigenous retail activity proliferate outside the market places: the small dry-goods store (boutique Peuhl) is one and the sale of foods consumable on the street is the second.

The small boutiques. These stores carry all the nonperishable merchandise required by the urban family: rice, tomato paste, condensed milk, sugar, Nescafé, soap, kerosene, cigarettes and candy. Virtually all of these products are sold at retail prices determined by the State and strictly controlled. The sale of charcoal is sometimes a sideline. Such items are obtained on credit from the "demi-grossiste" (wholesaler) and sold at rates determined by the government. The boutiques can be found all over the city but tend to be located on the major thoroughfares. Not surprisingly, the number of boutiques per quarter correlates with the density of the population. A map (Figure 2) showing the location of the shops is presented in Bruneau's monograph (1979) and is reproduced here. The map also indicates the degree of commercial activity in different neighborhoods of the city. It can be seen that Boucotte and the areas immediately surrounding it to the west and south are the most important areas for commerce.

Street food traders. Like the "boutiquiers," street food vendors concentrate in the most populous neighborhoods of town and along the streets leading to the central market, the taxi station and the commercial district. Table 2, which gives the distribution of street food sellers in each neighborhood along with the overall population of each quarter, shows this clearly. The largest proportion of street food sellers (32 percent) is found in Boucotte West where 21 percent of the population reside and the central market is located. Boucotte South, which includes the Nema market, has the next largest proportion of sellers (18 percent) and also has a large number of inhabitants (28 percent).

The only neighborhood where it appears that many sellers are supported by a relatively small number of residents is Boudody. The reason for the low population in this neighborhood is that it includes the commercial district (Escale), the industrial zone (Goumel), and a middle-income housing development (HLM-Boudody), all areas in which income levels are high but population density is low. It would be tempting to suggest, given these data, that where incomes are high as they are in Boudody (with average incomes more than double what they are in Boucotte West and South, SONED, 1981), there is an increased demand for street foods. However, the con-

Table 2: DISTRIBUTION OF THE URBAN RESIDENTS AND STREET FOOD TRADERS BY NEIGHBORHOOD

Neighborhood[1]	Population[2] (1980)		Street Food Sellers--Dry Season (1982)					
			In the Neighborhood		In the Marketplace		Totals	
	N	%	N	%	N	%	N	%
1. Boudody	3,572	4	135	15	90	14	225	15
2. Boucotte East	8,434	10	109	12	63	10	172	11
3. Santhiaba	20,175	23	132	15	90	14	222	14
4. Boucotte West	17,760	21	254	27	238	38	492	32
5. Boucotte South	24,337	28	132	15	150	24	282	18
6. Colorane	3,226	4	52	6	--		52	4
7. Kandialan	2,640	3	43	5	--		43	3
8. Kandé	4,616	5	46	5	--		46	3
9. Nema	977	1	--		--		--	
10. Kenia	588	1	--		--		--	
Total	86,295	100	903	100	631	100	1,534	100

[1]The neighborhoods ("quartiers") used are those determined by the municipality.

[2]Source: SONED, 1981.

concentration of sellers in Escale, the commercial zone, suggests an alternative hypothesis. The relationship between supply and demand in Boudody as in Boucotte is to some degree a function of the magnetism of the commercial poles which attract not only the neighborhood residents but people from all over the city. This variable in conjunction with the population density of the neighborhood appears to regulate the relation between the supply and demand for street foods.

Categories of Traders

Three types of traders (of all commodities) were distinguished both within and outside the marketplace. They can be described in terms of their mobility on a continuum from static to ambulant. The static trader generally occupies a permanent table[1] or stall in the market, although coffee stalls (tangana) can be found on the streets of Boucotte and Boudody. There is generally a relation between the size of the trader's stock and the type of unit he or she has. The greater the volume of stock, the more likely a permanent stall (where it can be stored overnight) will be sought. Some traders in the static category store their wares in locked trunks chained to their tables. However, with the exception of the tangana trader who uses nonperishables, prepared-food sellers have a small stock which they must liquidate each day, so storage is not a concern. The second category of trader, those with semi-static units, are the most numerous. This type of seller has a limited stock which she transports daily to market or to a

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[1] These large, shaded tables are generally made of concrete bricks covered with tiles and cemented to the floor. Stalls have three permanent walls. The fourth side is often a shingle which can be locked.

location on the street, where she sets up on the ground or on a small portable table. In the marketplace, the semi-static seller locates in the same space every day although official territorial rights are not assured by payment of the location tax. Among street food sellers in the markets the semi-static units outnumber the static units four to one. In the neighborhoods approximately 90 percent of the sellers are of this type. The other 10 percent are ambulant vendors. In the present context, the ambulant trader is generally one who sells from door to door or moves about the market with a tray or bowl on her head. Sometimes those who prepare ices hire boys who carry their ice chests to several locations during the day. Like the semi-static vendor, the ambulant vendor's stock is limited to the amount she can transport at any one time. The most common street foods sold by ambulant sellers in the neighborhoods are millet porridge and local yoghurt. The vendors have a precise route with a fairly regular clientele.

Trading Practices

There are two kinds of relations that obtain between street food sellers and their clients. Particularly important to the seller are her regulars: friends, relatives or clients she has cultivated over time who buy from her exclusively on a regular basis. These customers can be counted on to purchase a relatively fixed proportion of her stock each day and thereby guarantee a degree of stability to her trade. In return for their business, the seller always gives an added bit to these clients, one extra measure of whatever is being bought, an additional lump of sugar or spoonful of sauce for instance. For some sellers (such as the ambulants), the regular clientele account for a large proportion of the total sales. More commonly though, the regular clientele represent between 25 and 50 percent of a seller's customers.

The other type of client vendors must negotiate are either unknown or uncommitted to them. From the buyer's perspective, he or she is faced with the difficulty of choosing between a number of vendors selling what to the eye appear to be identical products for exactly the same price. While certain sellers try to attract clients by calling out to them, more often than not a client is left alone to determine from which seller he or she will buy.[1] Even when aggressive attempts to lure customers are made, once a buyer makes an overture at one table, other vendors--following market mores--will not intervene. In fact, it often happens that traders make sales on the behalf of absent competitors. On the surface then, intervendor rivalry is kept at a minimum. Competition among street food sellers remains indirect, revolving around the expansion of the circle of privileged clients by means of family and friendship networks.

Although competition in the above sense exists, bonds between sellers are established as well. One way this occurs is by maintaining adherence to the established price set for a product. Although most street foods are sold by conventional units or measures which cost 5 fr, the size of the unit for some products has been progressively decreased as the costs of ingredients rise. The degree to which there is collusion among sellers on pricing became apparent during the course of the study when the porridge sellers were faced with a crisis. At the end of the rainy season the price of millet almost doubled and despite the fact that many porridge sellers

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[1] Buyer-seller conduct varies according to product and location. The women selling European-style vegetables at the Escale market are extremely aggressive in their attempts to lure customers their way.

were forced out of business and others saw a precipitous decrease in profits, citywide, sellers were reluctant to independently raise their prices or reduce the size of their measuring spoons. In large part they hesitated for fear their colleagues would not follow suit and they would lose their regular clients; however, it was also quite clear that maintaining harmonious relations with peers was another important motivation.

In sum, unspoken conventions adhered to by the sellers regulate the way business is conducted in the market and on the street and serve to keep competition covert, thereby permitting bonds between sellers to develop.

Street Food Categories

We define street foods as anything edible that can be consumed on the spot. Within this broad grouping, four main categories of foods were distinguished, namely, (1) meals, (2) constituents of meals, (3) snacks and (4) beverages. Beverages were considered only peripherally. Almost the entire gamut of foods are sold in the central market, a narrower range of foods are available on the streets and in neighborhood markets and one product (tangana) is sold exclusively from roadside stalls at crossroads and in densely populated neighborhoods. Not included are foods purchased in small restaurants (permanent structures) as they appear to constitute another level of enterprise which cater to a wealthier clientele. A description of representative foods in each category follows. The names are given in various foreign languages, French (Fr.), Wolof (W.), Manding (M.) and Diola (D.).

Meals

Breakfast is the most common meal available from vendors. All three of the following are eaten for breakfast or as meal substitutes.

Monie (M.) - A thin millet porridge prepared by homemakers and street vendors alike.

Tangana (W.) - Herb tea [kenkelibah (W.)] or Nescafé and condensed milk often served with tartines (Fr.) of French bread and butter--a typical breakfast in the homes of middle-class Senegalese. Outside the home, it is sold from special roadside stalls.

Brochettes (Fr.) - Grilled meat and onions often eaten on French bread as a sandwich; a street food, exclusively.

Constituents of Meals

Although the foods in this category can be eaten alone, they are usually accompanied by other foods. Thus they are generally taken home.

Lait caillé (Fr.) [sow (W.)] - Soured milk or thin yoghurt made from whole or powdered milk; eaten alone, with monie or with cous-cous. Prepared exclusively by street vendors.

Cous-cous (Fr.) - A millet-based staple eaten with a sauce [in this form called tiéré (W.)] or lait caillé [in this form called tiachri (W.)]. Prepared in the home and by entrepreneurs alike.

Petits poissons (Fr.) [djapet (W.); bekuhoy (D.)] - Tiny fish caught in the estuaries prepared by salting and dehydration. Eaten with rice or as a snack in bars.

Snacks

The largest number of street foods sold in Ziguinchor fall into the category of snacks. Several subgroups are distinguished: peanuts, fruits, vegetables, spicy snacks and sweets.

Peanuts - By far the most common street food in Senegal. Available year-round, they are purchased either shelled and roasted or raw in the shell.

Fruits - Fruits are eaten on the streets year-round. The most popular fruit is the mango, available from April to June or July. Other common tropical fruits include oranges, limes, watermelon slices, guavas, and the cashew fruit. Less commonly known are the following local fruits: taba (M.), ninkon (M.), caba (W.), ditah (W.), tol (W.), and bananes de singe (Fr.).

Vegetables - Roasted corn, boiled or raw sweet potatoes, yams and cassava are all snacks which are both prepared in the home as well as for sale as a street food. Corn is available for only a very short period (August and September) while sweet potatoes and cassava can be found most of the year.

Spicy snacks - Eaten between meals or ordered for special occasions:

- Acaras (W.) - Deep-fried cowpea fritters served with a peppery sauce.
- Pastels (Fr.) - Meat- or fish-filled pastries or boulettes de poisson (deep-fried fish balls), eaten on special occasions such as baptisms and marriages.

- Marinated oysters - Oysters are boiled and then marinated in lemon juice and hot pepper. This snack is sold near bars and palm wine depots.

Sweets - A variety of sweets of different types are sold in the market and on the streets. Some of the most popular include the following:

- Ices - Made with the fruit of the baobab tree [Olé (W.)], the bisap plant or commercial syrups and large quantities of sugar. They require freezing and are thus the province of either middle-class entrepreneurs or enterprising boutiquiers.
- Bon-bons (Fr.) Hard cookies made with wheat flour. A baked product requiring large ovens, they are made by a select group of entrepreneurs.
- Beignets (Fr.) Doughnuts made with wheat flour and powdered with sugar.
- Sunguof (W.) Mounds of sweetened steamed millet or rice, often served at funerals.

Beverages

Apart from the Moslem month of fasting[1], noncommercial, nonalcoholic drinks are relatively rare on the market. During Ramadan, iced drinks made of ginger or bisap are sold in the main market after sundown. Palm wine brought in from the surrounding rural areas during the dry season is sold at depots in the outlying quarters of town. About 20 such depots were identified around Ziguinchor; however, they were not a focus of the study.

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[1] During this period, both eating and drinking are prohibited during daylight hours.

Preparation and Sale of Foods

All cooked foods with the exception of bon-bons are prepared on a wood fire or a charcoal brazier (four malgache). Standard weights are not employed in determining portions although various conventional measures exist for each product. Old bottle caps, empty Nescafé cans, a particular kind of spoon or ladle are all accepted measures which generally sell at the rate of 5 fr per scoop. Fruit and other products sold by the unit (acaras, pastels, beignets, etc.) are only approximately equal in size but are sold for the same price. Again, the most common price per unit is 5 fr.

Most cooked foods are prepared anew each morning and sold before noon. If there are leftovers a trader might return to market in the afternoon to sell, otherwise she distributes the product to her children and friends. Some products are kept overnight (yoghurt) or for longer periods (petits poissons), which occasions concern about their safety. In general, however, the rapid turnover of street foods reduces the risk of contamination, at least insofar as cooked foods are concerned.

In conclusion, the description of Ziguinchor presented in this chapter sets the stage for the research carried out with street food traders. Although some of the findings that are discussed in the sections that follow are specific to this city, more often they have a wider applicability. Ziguinchor is typical of many other secondary cities in West Africa that have close ties to the rural areas surrounding them and which have been until recently overlooked by development planners. As elsewhere, an extended period of drought has contributed to a rapidly increasing urban population whose members are seeking ways to make a living. The street food trade has developed as a response to this critical need for employment.

CHAPTER 2. PROFILE OF THE ENTREPRENEUR

The preparation and sale of street foods provide poor urban women, for whom few employment opportunities exist, with a means of making an income. Little is known about the dynamics of the trade and its participants. In order to investigate a variety of issues related to the sector, several surveys were conducted during the course of the 18-month study period. The socio-economic results are organized around two themes. Considered in this chapter is a profile of the entrepreneur with descriptions of the traders and their households; chapters 3 and 4 respectively present a characterization of the enterprise and an analysis of the economics of the "industry."

Two sources of information provided data on the personal characteristics of street food sellers: a questionnaire administered to 200 respondents, and in-depth case studies of 15 sellers representing five key products.[1] The sample chosen for the survey was based on a citywide census of street food sellers taken in August and December, 1982. The 200 respondents represent between 20 and 25 percent of the total number of street food entrepreneurs in Ziguinchor. The sample was stratified by product type and by location: 56 percent of the respondents sold in the markets or other concentration points; 44 percent were neighborhood or ambulant sellers. As a number of questions concerned seasonal variation in productive activities, half of the respondents were contacted during the rainy season and half during the dry season.

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[1] Appendix 2 gives detailed information on the survey methodology.

Sex, Age, Family Status and Education

The sale of prepared and snack foods is one area of the informal sector that women clearly dominate. Over 75 percent of the entrepreneurs sampled were women. Apart from three products which are sold by men exclusively (brochettes, tangana and bon-bons), street food enterprises are operated primarily by women.

Not unlike other African contexts where small retail trading is in the hands of mature women, the average age of the Ziguinchor entrepreneur is relatively advanced - 35 years (the standard deviation around the mean was 10.2 years). In fact, the majority of women in the sample are clustered above the mean age: 66 percent of them are older than 35,[1] compared to 42 percent of the men. Only a small number of sellers younger than 20 were encountered (18 percent). Most of these were unpaid assistants who sold food prepared by other members of their family. Unlike other areas of the informal sector (such as tailoring, masonry or crafts), a formal apprenticeship system does not exist for the street foods trade. However, family members are often enlisted to help prepare the products and sometimes substitute for the seller when she is unable to go to market. In this way, girls and young women are introduced to an activity they may engage in independently at a later time. Indeed, the age distribution indicates that women enter the sector at a time when their childbearing and child-rearing responsibilities become less consuming. Once there are older children to whom childcare and housekeeping chores can be entrusted, or co-wives with whom cooking and marketing can be rotated, women are freer to devote part of their time to income-producing activities.

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[1] SONED (1981) estimates that 66 percent of the population of Ziguinchor is younger than 24. Only 22 percent are older than 35.

The extended household (defined as all those residing in the same compound who eat together) of the sellers is composed of 9.5 people on average, with three economically active adults contributing to the upkeep of the family. Additional analyses showed that 59 percent of the women are responsible in large measure for their own and their families' welfare. These are women who are divorced, widowed or whose husbands are not present or are otherwise not contributing to the support of their children. While most of them are living in the homes of their natal extended families, they are responsible at the very least for clothing themselves and their children and generally feel obliged to contribute in some measure to the food budget. Table 3 shows the marital status of the sample.

Table 3: MARITAL STATUS OF MEN AND WOMEN VENDORS

Marital Status	Men		Women		Total	
	N	%	N	%	N	%
Married: spouse present	28	58	72[1]	47	100	50
Married: spouse absent	6	13	28	19	34	17
Divorced	-	-	11	7	11	6
Widowed	-	-	21	14	21	10
Unmarried	14	29	14[2]	9	28	14
Unmarried Parent	-	-	6	4	6	3
Total	48	100	152[3]	100	200	100

[1] 16 of the 72 women support retired or unemployed husbands.

[2] 6 of the 14 women are older than 21 and consider themselves self-supporting.

[3] The total number of self-supporting women is 90 (59 percent).

As almost the entire sample (93 percent) is Moslem,[1] the Islamic tenet concerning the obligation of husbands to support their families (Le Cour Grandmaison 1979; Faladé, 1971) is a dominant cultural value which is at least espoused, if not always acted upon. Islam as practiced in this part of Africa does not constrain women from active participation in activities outside the household. In fact, most of the women interviewed at length appeared to consider remunerative work one of their many roles in life. However, they are often reluctant to admit that their wages are essential to sustaining the family's basic needs, which upon closer inspection is often the case.

The level of formal education among the sellers is extremely low; 80 percent of the sample had received no formal (French) schooling. Only 4 percent had reached secondary school and 16 percent were marginally literate. Level of education was not found to be a significant factor contributing to traders' success in business. (Magnitude of sales was taken as proxy for success.) Given the predominance of Moslem women, a high illiteracy rate is not surprising. Most of the women had not attended Koranic school beyond the perfunctory two-year period; thus, very few had learned to write Arabic. The men, on the other hand, had attended for much longer periods and many were able to write Arabic numbers which could be used to keep accounts or perform calculations on paper. By and large, however, neither men nor women keep records or compute on paper. For the single-product, part-time seller there is no need to keep accounts. However, practical training in basic numerical calculations and elementary bookkeeping might well benefit sellers who hope to expand or diversify their product

[1]The remaining 7 percent are Diola Catholics.

lines or those who would form buyers cooperatives. This suggestion is discussed in the chapter on assistance to the street foods trade.

In sum, the street foods trade in Ziguinchor is run by mature unskilled women who are in need of cash to support their families or supplement the income of other family members. Trading in foodstuffs is by far the most important economic activity engaged in by urban women because it requires no particular training and little working capital.

Ethnic Distribution

The ethnic distribution of the sample is presented in Table 4, which also shows the percentage of each major group in the city at large.[1]

Table 4: DISTRIBUTION BY ETHNIC BACKGROUND

	Diola	Manding	Peulh	Wolof	Other	Total
		(Percentage Distribution)				
In City of Ziguinchor	35	18	13	10	24	100
Street Food Sellers	18	27	21	16	18	100

Diola. It is apparent from Table 4 that the ethnic distribution of street food sellers does not reflect that of the overall urban population. The Diola, the dominant ethnic group in the Lower Casamance and in its

[1] The ethnic distribution by sex in the sample was as follows:

	Diola	Manding	Peulh	Wolof	Other	N
Men	3	5	28	7	5	48
Women	33	49	14	25	31	152

regional capital, are substantially underrepresented (by 50 percent), while the other three major groups show greater participation in the sector than their numbers in the population might suggest.

One explanation for the underrepresentation of the Diola is due to the fact that the survey was conducted during the months of September and January, times when the particularly labor-intensive agricultural tasks that are the responsibility of Diola women (transplanting and harvesting rice), take priority.[1] In the rural areas surrounding Ziguinchor, the Diola have traditionally cultivated mangrove swamp rice in the channels of the estuaries (Linares, 1981) and many Diola living in Ziguinchor maintain rice fields in their native villages or in the perimeters of the city (SONED, 1981). For this reason, their presence in the market is more apparent during the off-agricultural months. Even at that time, however, there were not many more Diolas selling street foods. A survey done in May showed only 23 percent were Diola. It appears that given their greater access to land in and around the city, Diola women focus their dry season income-producing efforts on the production and sale of vegetables, which are generally more profitable than most street food enterprises. Furthermore, younger unmarried Diola women and men, having had greater educational opportunities than other ethnic groups (SONED, 1981), are better able to find salaried jobs as domestics in the city and thus their representation in all areas of commerce is low.

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[1]The traditional rural Diola women is expected to provide rice for her family during the dry season (Weil, 1982). While the obligation is not so well-defined among urban Diola, the fact that young women who migrate to urban areas for wage labor often return to help with transplanting (Hamer, 1981) attests to the continuing importance of rice and the role of women in its production to the culture.

Despite their greater access to land, Diola predominance in the selling of locally grown fruits and vegetables as street foods are not apparent. This contrasts with the strong producer-seller links for particular products seen among other ethnic groups (such as the Peuhl). Even peanuts, a major crop for the Diola in the surrounding areas, are not a street food they control. There are relatively few producers who sell their own peanuts on the street or who participate in ethnically dominated trade channels. Producers sell primarily to the peanut marketing board (SONACOS) although small retailers (<u>bana-bana</u>) do have the right to buy up to 200 kg to sell in the market at the fixed retail price. Establishing more direct trade links between producers and sellers would benefit traders and consumers alike by eliminating the cost of the middleman.

<u>Manding</u>. The Manding are the most numerous group in the sample (and probably in the entire market population), accounting for 27 percent of the total. Manding are prominent in the northern tier of the Lower Casamance, Middle Casamance and the Gambia. The Manding living permanently in Ziguinchor are not generally land-endowed. Moreover, they are educationally disadvantaged, being schooled in the Koranic system, if at all. As a result, they have few occupational outlets open to them apart from those offered by the informal sector. Their dominance in the realm of commerce in the Casamance has historical antecedents. Since the beginning of the century, Manding traders took up residence in south-bank Diola towns and villages, accelerating the spread of the money economy on the one hand and Islam on the other (Leary, 1969).

The street food enterprises of the Manding cover almost the entire range of products (<u>brochettes</u> and <u>tangana</u> excluded). Manding women are particularly active in the preparation and sale of acaras (cowpea fritters) and millet porridge, but they also account for one-quarter of the peanut, fruit and vegetable sellers.

Peuhl. Peuhl traders, particularly male immigrants from the Fouta Djallon region of Guinea, are active in commerce throughout the Casamance. They specialize in the ubiquitous small retail shops that are described above (p. 12). They are so closely associated with these shops that they are frequently designated "boutiques Peuhls."

Another area of the food distribution system which the Peuhl virtually monopolize in Ziguinchor (and many other West African towns) is the meat industry--both at the wholesale and retail level. Their control of this sector has its roots in their pastoral background. In his dissertation on a group of traditional Peuhl, Grayzel (1977) explains that while the primary productive activities of all members of the society revolve around the herd, the focus of men's and women's activities differs. For the men, "cattle are the quintessence of life--for the women, the quintessence of life is milk" (p. 83). This symbolic distinction, which is translated into specific gender-related tasks among rural Peuhl, is apparent among the Peuhl in urban contexts as well, albeit with some variations on the theme. For example, the preparation and sale of yoghurt is dominated by Peuhl (who represent 60 percent of yoghurt sellers in the sample). Both men and women are involved in yoghurt production but the women sell yoghurt made from whole milk exclusively while the men, whose operations are larger, use powdered milk. For the women, the intrinsic quality of the product is of great importance and the use of powdered milk (which one woman termed "le faux lait") is anathema. Thus traditional cultural determinants contribute to the involvement of men and women in the preparation of their products.

For the Peuhl woman, yoghurt is a cultural tradition made in a prescribed way. The outcome is a reflection of her knowledge of "Peuhl ways." Note that Peuhl women do not engage in commerce to a large extent (see table, footnote p. 27), apparently for cultural and religious reasons. Several Peuhl men indicated that the marketplace was not a domain for women, and other studies (Smale, 1980) have shown that the activities of Peuhl women in the urban setting are closely monitored by their husbands, who express fear that the women in town risk losing their Islamic religious values.

Another street food which, in accordance with Grayzel's observation, is monopolized by male Peuhl is the sale of grilled meat or brochettes. Informal credit systems exist between butchers and brochette sellers making it possible for newcomers to enter the sector with a minimum cash outlay. In effect, such credit channels make this an ethnically closed trade, entered only with difficulty by those of other ethnic groups. Furthermore, it is frequently the first job for new entrants to the sector, most of whom hope to save enough money to invest in more lucrative enterprises such as the tangana stalls or the all-purpose boutique. Thus for the Peuhl, brochette vending is the first rung in ascending the ladder towards increased economic stability.

Wolof. The Wolof are the largest ethnic group in Senegal, originating in what is known as the Peanut Basin, an arid zone to the north of the Gambia River. They began penetrating the Casamance as agents of the French colonial administration and have retained their functionary role in the region since independence. They are also, however, well represented in commerce and other domains of the informal sector such as carpentry and masonry (SONED, 1981). Many of the Wolof operating in the informal sector of Ziguinchor acquired their skills in Dakar or other northern cities and exploit the opportunities existing in Ziguinchor, where competition is not as great as it is in the North.

Wolof vendors lead in the sale of two popular sweet snacks, beignets (doughnuts) and bon-bons (cookies), both made with European wheat flour and sold widely on the streets of Dakar. The skills and techniques for making these products appear to be "imported" by the Wolof from Dakar where French-style bakeries date from the early colonial period. Bon-bons are baked in large cement or adobe ovens, only affordable to those with another source of income. As a result, most often the entrepreneurs are active or retired bakers, which explains where they learned the recipes as well as the design and operation of the ovens. Both the skills involved and the means of acquiring the initial capital outlay make this street food very different from the others encountered in Ziguinchor.

To summarize, all of the major ethnic groups in Ziguinchor actively participate in the sale of street foods, with the possible exception of the Diola. There is a relationship between landlessness and year-round involvement in the sector, which explains the lesser participation of the Diola and greater involvement of the other three groups, particularly the Manding. Certain groups, namely the Peuhl and Wolof, dominate the sale of particular products (yoghurt, brochettes, bon-bons) by dint of their cultural or historical connection with the food. However, most street foods are not ethnically restricted nor are sellers generally grouped together in the markets along ethnic lines.

Work History and Migration

In the economic literature, a strong case is made for the link between migration and informal sector activities. The lure of the city and its opportunities for wage employment operate as "pull" factors away from the rural areas, which have frequently experienced decreasing agricultural productivity and unchanging standards of living. The ILO studies on the informal sector in a number of West African cities (Sethuraman, 1981) show the proportion of migrants in the informal sector to be as high as 97 percent in Kumasi (Ghana) and 87 percent in Lagos (Nigeria).

Among Ziguinchor's street food sellers the proportion of migrants was much lower; Table 5 presents the relevant data. Approximately 40 percent of the sample were born in Ziguinchor and only 26 percent came from areas outside the region. Moreover, even among those who have migrated, the majority (56 percent) are long-term (10 years or more) residents of the city. One reason why one sees here a less dramatic influx than elsewhere is that Ziguinchor is not a magnet like Lagos or Dakar. Large capitals like those attract migrants both because they can absorb greater numbers of job seekers and because they are modern metropolises having all the diversions associated with them. By contrast Ziguinchor offers little in the way of either opportunities or "city lights." Thus the women in our sample who are migrants did not come to Ziguinchor in search of jobs. Rather, they accompanied their husbands or other family members. Once here, they have taken advantage of one of the few existing opportunities to create work for themselves.

The data on work histories suggest that the motivations for entering the trade may be different for men and women. Sixty percent of the women

Table 5: MIGRATION STATUS

(a) Birthplace of street vendors

	N	%
Ziguinchor	80	40
Casamance	67	34
Senegal (Other)	22	11
Outside Senegal	31	15
Totals	200	100

(b) Length of time in Ziguinchor[1]

	N	%
Less than one year	8	7
1-2 years	17	14
2-5 years	31	26
5-10 years	22	18
10-20 years	23	19
Over 20 years	19	16
Totals	120	100

[1]Migrants only

reported never having worked before while only four men (8 percent) cited no previous work experience. Over 75 percent of the men (N=39) were active in the primary sector (agriculture, fishing, or animal husbandry) prior to establishing themselves in commerce. These sellers migrated for the express purpose of seeking out more lucrative activities. Of the 40 percent of women with prior work experience, 25 percent had farmed and 10 percent had gardened; the remaining 5 percent had produced crafts, taken in wash or sewed to earn money.

In sum, most women in the sample are long-term residents of Ziguinchor who have not previously been involved in agriculture or any other income-generating activity. They turn to the street food trade at a relatively advanced age for a number of reasons that will emerge from the information on household management systems which follow.

Consumption Patterns

In order for projects supporting the efforts of women traders and entrepreneurs to be enacted by governments and donor agencies, documentation concerning the significance of women's incomes and who benefits is usually required. The data on spending patterns provide evidence of the importance of women's earnings, however small, to the family's well-being. They also shed light on the interplay of traders' work motives, their personal gains and the particular financial obligations they have within the family.

Given the continuing economic decline of the Sahelian countries today, to question why urban women work may seem unnecessary. Yet what appears to be an economic imperative also has cultural underpinnings which determine how women handle their earnings and how they and their families view their contributions. Both cultural and religious traditions as well as the exigencies of urban living regulate the economic arrangements between husbands and wives and help explain why women seek independent financial means.

One important factor was mentioned above: the Islamic tenet requiring husbands to provide for the upkeep of their families. Perhaps even more fundamental than religion in determining the financial responsibilities of husbands and wives is the management system employed in polygynous households. In such households in rural areas, the husband is required to provide each subunit (a wife and her children) with a house, the resources for the production of food (land, tools, etc.) and his "protection." Given this support, each wife is expected to manage for herself. Modifications on the system obtain in urban settings, where food must be purchased and houses are often rented. In the city, married men who are salaried generally buy the staples for each subunit at the beginning of each month and contribute a fixed sum to each wife's daily food expenditures. However, as a result of widespread unemployment urban women in such marriages frequently assume an even greater responsibility for the family than they do in a rural setting, where men's revenues from the sale of cash crops generally go toward clothing the family and covering incidental expenses.

Another cultural value that interacts with those above is the maintenance of separate savings by husbands and wives. There is no tradition of shared wealth among marriage partners in this part of West Africa. In an article referring primarily to the Wolof, Le Cour Grandmaison (1979) maintains that the proceeds of a woman's work belong to her exclusively and that she contributes to the household expenses only when there are extenuating circumstances. The explanation for strict adherence to accumulating separate savings has to do with the prevalence of polygamous marriages among Moslems and the high divorce rate associated with them. Under such circumstances, women do well to maintain ties with their natal families, which they do by sending gifts or money to them as often as they can.

That women in Senegal control their earnings is undeniable (not one married woman in our sample demurred when questioned about it), but it has also been found that urban women in Senegal (Dakar) contribute to the household budget, often as much as one-third of the total expenditures (Achleitner and N'Dione, 1981). This finding was also upheld among street food sellers in Ziguinchor; however, the proscriptions mentioned before play a large part in determining what form the contribution takes. Before discussing the data on how earnings are spent, a brief description of the seller's living arrangements is given.

Living Arrangements

The majority (60 percent) of the sellers questioned live in houses that they or their family own. Only 8 percent of the vendors pay rent themselves. Those who are unmarried or divorced live with (natal) extended family members and if there is a rent to pay, a male relative who is working is usually responsible.

The typical house visited during the participant observation sessions was a five-room, one-story affair built of mud bricks and covered with cement. Aluminum roofs were generally the rule. Houses were rarely electrified (only 29 out of 200) or equipped with running water (only 9 out of 200). Many of the compounds visited did have wells, however (9 out of

15)[1], which eliminate the time-consuming task of fetching water at the public spigot.

Household Expenses

The data on household expenditures come from two sources. The first was based on the responses of the 200 survey participants asked to list their major and secondary expenses each month. In addition, each of the 200 sellers was asked who in the family usually bought specific items such as rice, the ingredients for the sauce and clothing and who usually paid school fees. The second source of information came from inquiries made of 15 sellers concerning their estimates of actual cash expenditures for the month.

Table 6 shows the major expense categories cited by the 200 men and women sellers in the sample. It appears, on the basis of this rating, that men and women's earnings are indeed targeted differently, much in keeping with the Islamic domestic ideal. The major category named by 71 percent of the male vendors was food for household consumption, while only a quarter of the women listed food in first place. Clothing and personal effects were the first concern of 50 percent of the women and the needs of their children were the primary expense for 20 percent. Secondary expenditures were more varied, but food is still of lesser importance to women than men. House improvements, mentioned by 28 percent of the women, encompassed rebuilding kitchens, digging wells and roofing their houses as well as buying beds and

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[1]This information was obtained while visiting the compounds of the 15 sellers chosen for the participant observation phase.

other furniture. Improving one's business was cited by only a small proportion of both women and men, 15 and 20 percent respectively.

Table 7 further disaggregates categories of food and other major expenditures. Respondents were asked to indicate who in the extended family usually bought each of these items, thus the response could be "myself" or any of a long list of relatives. For the purposes of the table we have summed across male and female family members but the data collected clearly show the extent to which household expenses are shared by all the adults in the family who are active in the money economy (on average three individuals per household). It can be seen that rice, which is a major staple, is

Table 6: MAJOR EXPENDITURES OF STREET FOOD SELLERS

	Men		Women		Total	
First Major Expense:	N	%	N	%	N	%
Clothing/Personal Effects	12	25	76	50	88	44
Food	34	71	37	24	71	35.5
Children's Needs	2	4	30	20	32	16
Aide to Parents	-		9	6	9	4.5
Total	48	100	152	100	200	100
Second Major Expense:						
House Improvements	-		43	28	43	21.5
Clothing/Personal Effects	13	25	25	16	38	19
Improving the Business	10	20	22	15	32	16
Food	9	18	22	15	31	15.5
Children's Needs	12	24	19	13	31	15.5
Miscellaneous	4	8	21	14	25	12.5
Total	48	100	152	100	200	100

Table 7: GENDER-DETERMINED HOUSEHOLD PURCHASES IN SURVEYED HOUSEHOLDS

Item	Men	Women	N[1]
Rice	167	33	200
Millet	96	37	133
Sauce Ingredients	96	104	200
Clothing	60	121	181
Medicine	86	109	195
Fuel	89	102	191

[1]Those categories not totaling 200 were not named as major expenses by all respondents.

bought in virtually all households principally by men (84 percent of the time). In most cases, it is bought in large quantities--50 or 100 kg bags--which are expected to last the month. Millet, eaten by many (67 percent of the sample) as porridge in the morning or occasionally in the form of cous-cous for the evening meal, is more frequently bought by the kilogram, thus women are more likely to be the purchasers. The ingredients for the sauce (oil, tomato paste, vegetables and fish), which are bought once or twice daily, are shared by both men and women.[1] Women are also more likely to provide clothing, medicines and fuel for the family.

In sum, it appears that women purchase in small quantities on a daily basis, while men contribute on a monthly basis. These schedules probably derive from the difference between wage and profit earnings; the former received at the end of the month, the latter set aside each day. The reason

[1]When asked to indicate who else was likely to contribute to (or complete) the daily market allowance, women were named 76 percent of the time.

women perceive their contributions to the food budget to be marginal may be a function of the kind of piecemeal purchasing they do.[1]

Case Study of Consumption Patterns

The results of the survey of 200 street food sellers suggest certain trends in consumption patterns, however further observation and questioning bring important additional information to light. More detailed data on spending patterns were solicited from 15 sellers representing five food products in an attempt to determine typical costs of a household's[2] major expenses. Table 8 shows the results. While the deviations around the means

Table 8: ESTIMATES OF AVERAGE MONTHLY EXPENSES FOR 15 HOUSEHOLDS

Expenditure Group	Level of Expense (fr. CFA)	
Food: Staples	6,300	23,300
Sauce	15,250	
Fuel	1,750	
Medicine	2,680	
Clothing	1,920	
Transportation	1,200	
School Fees	165	
Total	29,265	

[1]Weil (personal communication) comments that it is rare for women in this part of Senegal to control "economic bundles" (considerable sums of money), which is an unfortunate fit between the old values of the polygynous family (i.e., women as economic dependents) and modern-day urban realities (i.e., extreme competition for wage jobs).

[2]The household unit is defined as those individuals living in the same compound who eat together -- on average 9-10 children and adults.

were not excessive and were directly related to household size, the small sample size should be kept in mind when considering these figures.

Food expenditures were estimated by the sellers themselves, who determined how many sacks of rice are needed to feed the family for a month and how much money is generally spent at market each day. Information on medicines, clothes and transportation are probably less accurate and more than likely underestimated. School fees pertained to only two families, a trend consistent with the larger sample of 200 among whom only 23 percent were supporting children in school.

The results show that by far the largest proportion of the household budget, 80 percent, is destined for food and fuel.[1] Furthermore, the daily purchases of fish and condiments for the sauce represent far more of an investment than the monthly rice allotment: 50 percent of the total monthly budget, as compared to 22 percent. Moreover, frequently the rice is not sufficient for the month as a few visitors can make a big dent in the family's store. Then it becomes necessary to add rice to the daily shopping list. Women usually cover these unforeseen expenses.

Unfortunately, it proved virtually impossible to identify exactly how much husbands and wives as well as other family members contributed to the budget except in a few cases. This is not surprising given the tradition of separate savings between marriage partners and jealousy among co-wives. Obviously, women know how much their husbands give them but they are not informed about what other wives receive nor do they usually know how much their husbands make or spend on themselves.

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[1] A recent study done in Dakar with 32 families showed similarly that 75 percent of the budget went for food (Achleitner and N'Dione, 1981).

These ambiguities notwithstanding, it became clear that the women contribute a considerable amount to the food purchases, even if they themselves do not see it this way. Consider the situation of one of the wealthier women in the sample. During the course of the survey year she sold marinated oysters at a secondary market near her home and hired an assistant to make and sell ices (she owned a freezer). When she was interviewed during the participant observation phase, she had also just opened a restaurant, one of a handful in town. Though she is not representative of most sellers, her management of the household budget was not so atypical. Her husband, a retired government functionary, gives her 15,000 fr each month. With this, she buys 50 kg of rice for 5,500 fr; the sum remaining is put toward the daily food expenses (i.e., the sauce). She spends an average 700 fr a day at the market to feed seven people. She receives no other assistance and she supports two older children who are not working, the offspring of a previous marriage. Thus at the very least the woman adds 10,000 fr per month to her husband's food allowance but she also provides clothing and medicine for herself and her children -- all while having managed to save enough to invest in an ambitious new business.

Another older woman (51 years), who is one of the poorest among the group, sells yoghurt at the bus station. She is the sole supporter of her brother's family of 12: two wives and ten children. Her brother has been out of work for more than two years and his wives do not have enough money to get started in business. On a good day, the woman can make 400 fr profit (although the range is between 300 and 400 fr/day). All her earnings go to feed the family. She buys rice and millet and very little else. Clothing and medicines for the children are solicited from other relatives.

One final example is of a monie (millet porridge) seller whose husband, recently retired, receives a pension of 17,000 fr/month. To supplement his income, he also cultivated two hectares of peanuts to sell, and one hectare of millet for his family of 12. Both the woman in question and her co-wife sell food in the market. The man and his two wives support the other nine family members, five of whom are unemployed adults. The family consumes 150 kg of rice a month (16,500 fr) and spends 15,000 fr/month on fish. Vegetables and condiments, grown in the family's garden, supplement the sauce. The wives share the cost of the marketing (7,500 fr/month each) and cover all other expenses from their profits. The wife who sells porridge brings home about 14,000 fr/month when millet is available in the market at a reasonable price. However, this year after the harvest, millet was not plentiful and the monie sellers were forced to buy from small producers at black market prices. The State-set price per kilo was 85 fr but the women were forced to buy millet "par petit pot" (by the cupful) at the rate of 125 fr/kg because there was so little to be had. Since the sellers were unable to come to an agreement on raising the price of porridge, they absorbed the increase themselves and suffered a 40 percent decrease in profits. Many of the women went out of business or turned to another product. The woman in question continued selling but her earnings were considerably less, in the order of 9,000 fr/month.

To summarize, while each family has a unique way of making ends meet, all 14 case studies of women sellers (one male vendor was studied) revealed the contribution of these women to the family food budget to be significant: on average, about 45 percent of the total amount destined for food. Often this represented the seller's total profits, especially in the poorest households. Nevertheless, because they dole out their earnings in small amounts, and because they prefer to view their domestic financial arrangements as conforming to the accepted Moslem norm, they perceive or at least describe their contribution as supplemental. The questionnaire results on expenditures, which show a woman's main expense to be clothing, must be reinterpreted with such situational and cultural realities in mind, as must accounts in the literature, which portray market women as frivolous consumers (cf. Faladé, 1971).

Savings Associations

Given the financial stress experienced by the urban poor, it is not surprising that the majority of street food sellers surveyed (66 percent) are not able to save any part of their earnings. The remaining 34 percent do manage to save a part of their profits and 40 street food sellers accomplish this by participating in rotating savings associations known as *tontines* (French) or *naths* (Wolof).

Tontines function in the following way: a group of individuals, usually women, contribute a predetermined sum of money to a fund according to a fixed deposit schedule (daily, weekly or monthly). The sum that is collected each day or at the end of the week or month becomes the property of each participant in turn. Those who receive the money early in the distribution cycle receive, in effect, an interest-free loan financed by those who come later in the cycle. For this reason, a lottery system is sometimes used to determine turn order. Associations like these are ubiquitous in West Africa (Lewis, 1976) and common in many other parts of the world as well (see Ardener, 1964, for a review).

Among street food vendors in Ziguinchor,[1] the average number of participants in any one savings association was found to be 16 and the most typical contribution 200 fr/day. On this basis, members receive on average 2,800 fr every two weeks, which represents a relatively large proportion of their earnings. A question arises: why do the street food sellers who are tontine participants manage to save effectively while the large majority of their cohorts appear to be living much closer to their limits. One wonders if tontine members are not a privileged segment of the market population.

No significant variations in the family situations (45 percent had nonworking husbands), reported daily sales,[2] or consumption patterns of tontine as compared to non-tontine street food sellers were discovered. However, two apparent differences were (1) the year-round nature of their enterprises and (2) the fact that they mostly sell in the marketplaces rather than on the streets. The high concentration of sellers in the markets facilitates daily collections, while the full-time status of the members reduces the risk that the group will disband before completing the cycle.

Conclusions

Several findings reviewed in this chapter point to important policy considerations. In particular, the research shows that many urban women

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[1] In Ziguinchor, tontines are not formed on the basis of the commodity sold. Therefore, street food sellers who participate in tontines do so with market women who sell produce, textiles and other items. In two of the secondary markets in Ziguinchor (Nema and Petit Kandé), as many as 10-15 different tontines existed. It was not possible to determine how many function among vendors in the central market, but it can be assumed there are a substantial number.

[2] Among women tontine members, the average daily sales was 1150 fr, the average for non-participants was 1440 fr.

must engage in some income-producing activity in order to assure the welfare of their families. The profits they earn are not spent on frivolities as is sometimes assumed but represent significant contributions to the household budget. In many cases, street food earnings are the only source of cash available to a woman or her children. In fact, as many as 59 percent of the street food sellers in our sample were *de facto* heads of household. Furthermore, while men and women assume different financial obligations according to polygynous household management systems and other cultural imperatives, women operate completely independently in the economic sphere both in terms of financing their activities and controlling the way in which their earnings are spent. Therefore, increased efforts in support of the economic activities of urban women need to be initiated and they must be directed toward the women themselves.

Some suggestions concerning the way women can be assisted also emerge from the general survey results. For example, it was shown that some women who sell street foods in the market are successful in accumulating savings by participating in rotating savings associations (*tontines*). In effect, *tontines* constitute a collective action in which market women pool resources and maintain strict solidarity so that each member benefits from participation. These characteristics also make *tontine* members interesting from the perspective of the development planner concerned with marketplace collectives, market women's associations and credit schemes. As the *tontine* members are already organized into cohesive groups with an economic goal, they might function as points of departure for projects which aim to strengthen the earning power of market women.

CHAPTER 3. THE STREET FOOD ENTERPRISE

The informal sector concept offers a useful framework for evaluating the economics of street food enterprises. In general, the street food "industry" is comprised of single-person production units and characterized by very small-scale output and the use of traditional food-processing technologies. The capital required to enter this sector is minimal, permitting the participation of women; however, their lack of capital contributes, in turn, to slow rates of expansion. Thus, seen on the continuum of informal sector activities, street food operations appear at the most marginal end. Nevertheless for urban women who have few marketable skills and who must juggle work with domestic responsibilities, the sector offers one of few opportunities for self-employment.

Mode of Operations

Previous research on small traders has shown that both a qualitative and quantitative leap occurs when enterprises evolve from an individual or family operation to the type employing wage labor (McGee & Yeung, 1977). In general, more developed production systems like the latter are found in large cities, particularly in Asia and among other segments of the informal sector (i.e., tailors, masons, etc.). In Ziguinchor, 96 percent of the street food sellers operate on an individual basis; that is, they both prepare and sell their product themselves. Only 11 out of 200 sellers interviewed employ paid assistants to prepare or sell their products.

By and large, those who do are men whose scale of production and level of profits are considerably higher than average.

While paid assistance is rare, a quarter of the sellers are aided by unpaid family members, particularly daughters or other female relatives. Most often, the girls help prepare the product by taking over one of the more tedious steps in the process; mixing the cowpea batter for <u>acaras</u>, pounding and winnowing millet for porridge, shelling peanuts for roasting and so on. Furthermore, these girls are also responsible for particular housekeeping and cooking chores (only 20 percent of the sellers prepared meals every day), which frees time for the entrepreneur to devote to her business. It is uncommon, however, for women to send their daughters or young relatives to market to sell their products on a regular basis. One woman explained it this way: "We market women are all 'mères de familles,' we know the value of money. My daughter has yet to learn how to operate in the market. She doesn't know how to compete with more experienced merchants and she doesn't have a large circle of friends who will come and buy from her." Two important aspects of small-scale business dealings are brought out here. One is the competition encountered in the "catch as catch can" world of the market, where a client gained by one seller is a sale lost for her neighbor. The second is the personal nature of the relation between the seller and her "regulars." The latter requires careful cultivation if a seller is to ensure a degree of economic stability in the trade, while the competitive aspect determines the successful and expanding enterprise.

Longevity in the Trade

The average length of time street food sellers had been in business at the time of the interview was 2.75 years, ranging between one month and 15 years.[1] Those with more established businesses, two years or greater, were more likely to sell in the marketplaces (68 percent of the older businesses were located there), while more recent entrants tend to ply their wares closer to home. There are several explanations for this phenomenon. In some cases, new entrants to the trade are young women with young children who find it more convenient to sell from the doorstep. Once children are older it is easier to move further from home, but this is not the only issue involved. Market sellers make more of a commitment to the trade in many ways. They must walk to market, pay taxes, vie for a good location and strive to build up a regular clientele who are not neighbors. In return for their greater effort they will generally bring in greater profits; thus the decision to close up shop is far more difficult to make than it is for doorstep sellers.

One surprising finding was that even seasoned vendors had not changed products since first going into business. This stability contrasts with other accounts of African women involved in the processed food industry. Simmons (1976) who investigated Hausa women in "purdah" (seclusion) in Northern Nigeria found their employment patterns to be extremely variable. They often ceased their food-processing activities for weeks at a time and frequently changed product lines. It should be remembered, however, that they worked from their homes and furthermore, being rural, were probably not dependent on their incomes to purchase food. Data on average work weeks and

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[1]The median length of time in business was 24 months.

absenteeism, collected as part of the economic surveys[1] indicate that street food sellers in Ziguinchor show a more full-time commitment to their work. Sellers across locations reported working an average 6.5 days in the week preceding the interview, and the average number of days absent during the preceding month was 4.8.

Time Spent Preparing and Selling the Product

One major difference between the participation of men and women in the street foods industry is the amount of time they devote to the preparation and sale of their products. Although generally men and women are involved in both the preparation and sale of their products, women spend a greater amount of time at home preparing their products--in some cases, almost as many hours as they devote to selling them. Millet porridge and acaras are particularly time-consuming operations, taking two and three hours respectively from start to finish. As mentioned above, some help in preparing the product may be provided by daughters or other female relatives, particularly in the case of products which involve a number of discrete steps (i.e., pounding, winnowing, mixing).

Men, on the other hand, typically sell products which require little (i.e., yoghurt) or no advance preparation (i.e., fruit). Meat and corn are grilled on the spot. Tangana (coffee or tea with bread) is prepared to order. The production of bon-bons diverges from this pattern but hired help are enlisted to do the baking and selling of the biscuits. Table 9 presents the data on preparation and selling times for men and women vendors. The total amount of time devoted to street food activities can be determined

[1]See Appendix 2 for a description of the methods used in the economic surveys.

from the figures given. The average preparation time for men is misleading due to a few outlying cases. The median is more informative here: half the men sold products involving less than five minutes preparation. Overall, men spend a somewhat greater amount of time attending to business than do women--8½ as compared to 6½ hours a day.

Table 9: AVERAGE TIME SPENT SELLING AND PREPARING PRODUCTS, BY SEX[1]

	Women		Men	
	Mean	Median	Mean	Median
Hours Preparing (in advance)	2.08	2	1.08	.08
Hours Selling	4.37	4	7.7	7

[1]The data for the rainy and dry seasons were combined in this table.

But more important, men devote four additional hours to hawking their products. Only 4½ hours of the women's day is actually spent selling. This time represents a considerable potential increase in men's earning power (almost 50 percent) which is not available to women because of competing demands on their time. Note, however, that a simple increase in the amount of time a woman devotes to selling would not necessarily boost her earnings appreciably. As long as women remain essentially one-person operators--even if they had the capital to expand production--the increase in preparation time would prove a constraint. Women were well aware of this fact, indicating that with additional capital, they would add a less labor-intensive product such as a fruit or vegetable rather than increasing their current level of production.

One possibility which was not observed but which is certainly feasible is for women to create production chains, specializing in either the preparation or the sale of street foods which are time-consuming to produce. Organizing such production systems might encounter initial resistance as sellers in Ziguinchor and elsewhere (e.g., Simmons' sample in Nigeria) are reluctant to go into business with others. The task of introducing the idea might be handled by a market extension service.

Credit Availability

An important restraint on business expansion is the inability of most sellers to reserve enough capital beyond that which is required to maintain the level of daily operations. Only a very few sellers indicated that they were able to turn their profits towards improving their enterprises. Furthermore, loans and credit-purchasing were not available to the vast majority (80 percent) of street food sellers but even when they were, real advances in business were not possible for several reasons. Buying on credit, more common among men than women, is not a practice that allows for the accumulation of capital as the turn-around time for repayment is usually not longer than one day. For example, an arrangement is made between a brochette vendor and a particular butcher whereby the latter supplies the former with meat in the morning and is paid back that evening or the following day.

Women in need of small amounts of capital generally request loans from family members who give them more favorable repayment terms but who can only be relied on occasionally. Women reported that it is more acceptable to solicit loans for the purpose of staying in business than for expansion or improvement schemes. If a woman has not been able to set aside enough money to maintain herself in business, the well-being of her family may be threatened and an appeal of this sort is usually successful in rallying the support of her husband or other members of her family. In one case study, however, we encountered a woman who was forced to cease production because her family could not provide her with the money she needed for a single day's ingredients. Her husband received a pension every three months and she would have to remain inactive until his next check was issued. Note that it was not for reasons of imprudence that this woman was unable to continue her operation. A substantial rise in the price of millet exhausted whatever small reserve she had been able to accumulate. There is an urgent need for credit lines which traders can tap in such emergencies, in addition to sources for funding business expansions such as building up stock, buying improved equipment or diversifying production.

Having the means to effect changes like these might well advance some enterprises from the level of marginal survival to that of self-sufficiency. Furthermore, credit might also be employed by women to move into larger food-related businesses such as the operation of small restaurants or coffee shops. Advancing into other more lucrative areas of market trade such as vegetables, cloth or cosmetics is another alternative, one that many women mentioned when asked what they would do with additional funds. Models for providing credit for micro-businesses will be discussed in chapter 6.

Effects of Seasonality

Commercial activity in Ziguinchor is attuned to the agricultural calendar and fluctuates considerably from the dry season (December-June) when the market is in its most active phase to the rainy season (July-November) when the total number of both buyers and sellers decreases. Government tax records show that the population of traders of all commodities in the city's markets declined last year by 35 percent from the dry season to the rainy season.[1] Our census data indicated that the number of street food sellers decreased by about 25 percent in the markets and by as much as 65 percent in the neighborhoods of town during the rainy season month of August (cf. census results in Appendix 1).

There are several reasons for the decline in the trader population. First, some individuals abandon their commercial activities with the first rains and devote themselves to agriculture, primarily rice cultivation. It has been estimated that a quarter of the adult population in Ziguinchor maintain fields in the peripheries of the city or in the surrounding rural areas (SONED, 1981). Among the sample of 200 sellers, 27 percent reported being engaged full time in agricultural activities during the rainy season. Only 60 percent of the group continued selling street foods on a regular basis. Clearly, if land is available to a family the competing labor opportunities must be weighed. Some women whose profits are marginal cannot afford to neglect their rice fields for commerce. On the other hand, rice production has declined radically in recent years due to the continuing drought so the decision is often not an easy one. Overall, it was found that those most likely to abandon selling for farming are neighborhood sellers. In some cases, neighborhood sellers do not make the effort to

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[1]This figure was based on the average number of location tax tickets sold each day between January and May 1982 which was 2100. During the early part of the rainy season (July, August) the average number was 1365. In September and October the average number sold rose to 1586.

establish themselves in the market--where profits are higher--because commerce is not the only productive activity open to them. So, conversely, it can be argued that landlessness to some degree brings one into the market trade.

The second and more compelling reason for the reduction in the number of sellers during the rainy season is simply a response to shrinking demand. Not only do people leave the city for the farm at this time of year, but villagers from the surrounding rural areas are far less likely to come into town to shop and visit. In addition, a large proportion of the student population is absent during this period. Finally, the fact that some raw materials are unavailable or too costly during the rainy season forces certain vendors out of business. Those selling goods made with locally produced grains and legumes are especially vulnerable, since reserves from the previous year's harvest are low or depleted at this time.

Conclusions

In sum, street food enterprises in Ziguinchor, unlike those in other parts of the world, are found to be essentially one-person operations. This is a feature which appears to limit women's profits. Female street food sellers, as compared to their male counterparts, spend longer preparing their products at home with the result that they have much less time available for selling--50 percent less on average. An intervention aimed at creating production systems where women specialize in either the preparation or sale of foods would improve the situation. The lack of credit for maintaining and expanding businesses is another limiting factor. This is again more acute in the case of women; for the men--at least in some product lines--have developed informal credit arrangements with their suppliers.

Other findings point to differences between neighborhood and market sellers which have policy implications. A number of variables converge to show that market sellers are less often land endowed than neighborhood sellers, a fact which both attracts them to the market and ensures their full time commitment. Marketplace sellers were found to have more years in the trade and were less likely than neighborhood sellers to exit during the rainy season, which has such a dramatic effect on the street food trade in Ziguinchor. Given their greater stability and lack of other alternatives, this group would appear to be the most likely candidates for credit or cooperative production schemes.

CHAPTER 4. ECONOMIC VIABILITY OF STREET FOOD OPERATIONS

To examine the profitability of street food enterprises, a detailed account of all costs and sales on a sample of approximately 25 percent of the city's sellers stratified according to product and location, was carried out during the two periods of the year considered to have an effect on the market. Sellers were asked to report all expenses, revenues, credit and labor time for the previous day's activities. The sample during the dry season focused on 165 sellers of processed food located in the markets. During the rainy season, the sample was expanded to include both non-processed street foods such as fruits, and a representative group of neighborhood street sellers. There were 185 respondents in the second round. The sample selection at both times was based on a census taken of the total number of sellers in the markets (in May) and streets as well as markets (in August). (See Appendix 1 for census data.)

From the information obtained, average daily costs, sales, and profits for each product by season were determined. In addition, five focal products were further disaggregated to show the amounts of the main ingredients used, cost of various ingredients, profits per hour and returns on investment.

Incomes Across Seasons

The most obvious question which arises with respect to the extreme seasonal fluctuation in demand for street foods is how it affects income.

The data bearing on this issue will be considered from several perspectives. At the most general level, costs, sales and profits across all products were determined by season and are given in Table 10. The results are grouped by sex as a bi-modal distribution was apparent.

Table 10: AVERAGE DAILY SALES, EXPENSES AND PROFITS FOR ALL PRODUCTS, BY SEASON[1]

	Sales	Expenses	Profits
		(frs CFA)[2]	
WOMEN			
Dry Season (N = 127)	930	625	305
Wet Season (N = 136)	920	490	430
MEN			
Dry Season (N = 38)	5,450	3,560	1,890
Wet Season (N = 49)	3,740	2,361	1,379

[1]The dry season sample included only market sellers; in the wet season, market and street sellers were sampled.

[2]400 fr = $1 at current exchange rate (September 1983).

The difference in the magnitude of the average profits made by men and women is considerable at both times of year but particularly during the dry season when men's profits are more than six times greater than women's. During the rainy season the difference is less marked. This is explained by the fact that a different relationship between the level of sales vis à vis costs is apparent for men and women at the two times of year. For the men, the ratio of input expenses to sales remains constant across seasons and one witnesses the expected decline in the level of sales during the rainy season in response to the drop in demand. Another factor which must be taken into account is the virtually constant number of male vendors in the market during the year. Due to the types of businesses men operate which often require relatively expensive fixed capital equipment (i.e., cement ovens for <u>bon-bons</u>, stalls for <u>tangana</u>, etc.), business entries and exits do not occur as a response to seasonal market conditions. Furthermore, the higher profit margins made by men permit them to accumulate reserves which can be relied on during lean periods.

The effect of the seasonal variation on women is more complex. During the dry season, the number of sellers waxes, resulting in a keenly competitive market. For certain products, additional amounts of expensive ingredients like sugar (for ices and <u>beignets</u>) or onions and tomato paste (for <u>acaras</u>) are used to attract customers. Moreover, grains and produce are plentiful during the dry season, making careful calculation of proportions less imperative than during the rainy season when millet, cowpeas, onions and tomatoes are frequently difficult to find and correspondingly expensive.[1] For this reason, those sellers who remain in business during the rainy season must cut ingredients and readjust proportions or portion sizes which, on balance, result in lower costs. Since the competition at this time is substantially reduced--by 40 percent in the markets and over 60 percent on the streets--those remaining can

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[1]In theory, the retail market prices of grains and legumes do not vary from season to season as they are determined by the government--but in practice this is not always the case.

afford to do this. Note that overall, the level of women's sales across seasons as shown in Table 10 does not vary appreciably because there are fewer vendors selling. Total profits are somewhat though not significantly higher due to a reduction in inputs.

In sum, the decrease in demand during the rainy season affects the remaining male vendors more than the women because for the men, unlike the women, input and competition remain relatively constant. In fact, two categories of street foods, clearly gender-related, are apparent here. One type, dominated by men, requires relatively high fixed capital outlays, ensuring a full-time commitment to trade. The other type, comprised mostly of women vendors, shows lower daily expenses, more variable costs across seasons and a higher level of seasonal participation in the trade.

Revenues by Product

Several exceptions to the seasonal sales trends cited above underscore the tremendous variability that exists across products by season. Consider Table 11 which presents the data on the level of sales for each product by location and season.[1] For example, in the wet season bon-bon operations do better than during the dry season, which the sellers themselves attribute to the unavailability of other sweets. Furthermore, ices which during the dry season showed an average 595 fr in daily sales, look as if they more than doubled in sales volume. In fact, the volume of trade remained relatively constant. The sellers raised the unit price of the ices from 5 fr to 10 fr in the interim because their operations were barely

[1] A comparable table presenting profit data appears in Appendix 3.

Table 11: AVERAGE DAILY SALES FOR MAJOR STREET FOODS, BY SEASON[1]

	Marketplace Sales (fr CFA)				Neighborhood Sales	
	Dry Season		Rainy Season		Rainy Season	
	Women	Men	Women	Men	Women	Men
Fried Wheat Flour Snacks	1075 (13)		1281 (5)		965 (2)	
"Bon-bons" (Biscuits)		5602 (12)		6309 (8)		
Sweet Cous-cous	836 (7)		937 (4)		515 (1)	
Ices	595 (7)		1264 (5)	1750 (2)	935 (7)	1125 (2)
Millet Porridge	682 (36)		914 (7)			
Tangana		6145 (13)		5359 (8)		
Yoghurt	3092 (8)	7633 (3)	1751 (3)			
Brochettes		3710 (10)		3576 (6)	2050 (2)	3500 (3)
Seafood Snacks	597 (14)		554 (8)			
Acaras	1103 (21)		1172 (8)		1001 (9)	
Peanuts	778 (8)		712 (8)		610 (15)	680 (1)
Fruits	316 (11)		1085 (18)	1840 (13)	790 (17)	3712 (4)
Vegetable Snacks	1750 (2)		1034 (5)	925 (1)	526 (3)	4000 (3)
Others			1109 (3)		745 (4)	
Mean N	929 (127)	5450 (38)	997 (76)	3976 (36)	821 (60)	3098 (13)

[1]The number of vendors of each product is given in parentheses.

profitable due to continual increases in the price of sugar. The average return to investment calculated in May when the price was 5 fr was only 2 percent. Vendors say the price leap has not affected business as the figures show. Ices remain a popular snack among children, particularly during the dry months.

Another category of the table which requires comment is fruit. Since the initial working definition of a street food was "anything edible that is minimally processed" (i.e., a peeled orange, or a section of watermelon), unprocessed fresh fruit did not meet the criteria. Therefore the dry season survey unfortunately did not include the vast fresh mango trade, although sellers of boiled mangoes were assessed. By August when the second survey was initiated, the definition had been broadened to include all fruits and any other items potentially consumable on the spot.

Fruits of various sorts are available all year and represent a considerable portion of the street food trade, as the results for the rainy season show. In August, between 20 and 30 percent of all the sellers in town were hawking fruit (cf. census in Appendix 1). In early June during the peak of the season, the number of mango sellers throughout the city was 580. This compares to 348 fruit sellers of all types enumerated in December, an important month for oranges. Since many of the fruit sellers are also producers or gatherers, their profits can be quite high though their operations are very short-lived. Producers of grafted mangoes, for example, sell their crop for between 35-50 fr in May or June or even more at the beginning and end of the season. The more common type of mango though is the smaller non-grafted variety which sellers gather themselves or buy from villagers who do so. In this case, the profit margin is much lower, particularly if the mangoes are bought.

This year and last as the month of kareme[1] overlapped with the mango season, certain other street food businesses were negatively affected. Sales of yoghurt, millet porridge, ices and tangana (bread and coffee or tea), all foods commonly eaten to break the fast at sundown, were down in sales from previous years[2] due to the availability of the universally popular mango. A baker in town reported that he generally makes twice as much bread during kareme but found he could only increase production by a third this year because of the interference of the mango trade.

Profitability of Five Foods

Table 12 gives detailed information on the amounts of ingredients processed daily, profits per hour of labor, and return on investments for five key street foods, averaged across seasons. For all five products, there exists an established market price for a conventional unit of measure (5 fr/ measure).[3] Thus profitability is contingent on other factors, namely:

(1) accurate estimation of daily demand

(2) determination of proportions and portion size in line with consumer preferences and the degree of market competition.

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[1] Kareme is the Moslem month of daytime fasting. It begins about a month earlier each year in correspondence with the lunar calendar.

[2] Sales for these products were still higher than at other times of the year.

[3] Porridge and yoghurt are sold by the ladle, peanuts by the capful, and oysters by the spoonful. Acaras are sold by the unit.

Table 12: DAILY COSTS AND RETURNS FOR FIVE FOODS

	Millet Porridge	Yoghurt[1]	Acaras	Peanuts	Seafood Snacks
Number of Observations	43	11	38	32	22
Main Ingredient	millet	whole milk	cowpeas	peanuts	fish & oysters
Average amount of main ingredient processed daily	3.12 kg	9.8 l.	2 kg	3.19 kg	1.35 kg
Costs (CFA):					
Main Ingredient	214	980	183	355	166
Other Ingredients	32	774	490	-	83
Non-Food Costs	126	20	68	65	45
Total Expenses	372	1774	741	420	294
Sales (CFA)	720	2726	1094	682	582
Profits (CFA)	348	952	353	262	288
Estimated time to prepare and sell (hrs)	5.05	4.9	7.05	6.58	4.13
Profits/Hour (CFA)[2]	69	194	50	40	70
Return to Investment (%)[3]	94	53	48	62	98

[1]The case of the whole milk producers is presented here. The amount processed daily is given in liters. The other ingredient included among the costs is sugar which is always an accompaniment.

[2]As of May 1983, the government set the wage scale of salaried tradesmen (3rd category) at 215 fr/hour (about $.54 at the September 1983 rate of exchange).

[3]Percent return to investment = Profits/Expenses X 100.

Millet Porridge. The price of a kilogram of millet rose from 65 to 85 fr between May and August, raising the cost of production. The average cost calculated for the average amount of grain processed daily was 214 fr, that is, 71 fr/kg. The only other ingredients utilized were salt and lemons or occasionally a small quantity of rice. Non-food expenditures included the cost of milling (20 fr/kg), location tax (25 fr) and charcoal or wood (25 fr/kg). Sugar cubes are sold as a sideline with porridge but were eliminated from costs and sales here. On average, one kg of sugar is bought each day at 335 fr. The box contains 225 cubes which, when sold at the rate of 3 for 5 fr, adds 40 fr to the day's profits. The average preparation time for porridge was two hours and the product is sold for about three hours in the early morning. The 94 percent return to investment is one of the highest calculated, particularly considering all ingredients are purchased.

Yoghurt. The costs of producing yoghurt from whole milk as compared to milk powder--the two types found on the market--varies considerably. Table 12 presents the data for the whole milk variety. Whole milk yoghurt, which is prepared by women, sells for 100 fr/liter. The milk is obtained from rural Peuhl herders who bring it to town in gerry cans strapped to the back of their bicycles. The price of the powdered variety, which is sold by men, depends on where (Ziguinchor or Dakar), how (wholesale or retail) and what quality (whole or skim) is bought. The average price per kilo of powder was 300 fr but it ranged between 640 (for full cream bought retail in Ziguinchor) and 160 fr/kg (for wholesale skim milk powder purchased in Dakar). Different proportions of whole and skim powder are used by each vendor. The advantage of powdered milk is that larger quantities can be bought at a time. Whole milk can only be bought in limited amounts.[1] There are, however, considerable non-food expenditures due to the cost of transporting the powdered milk from Dakar and other recurrent costs (such as stall rental, electricity and town water) which the male vendors incur. As a result, even though profits for powdered milk yoghurt are higher than for whole milk, 2330 fr as compared with 952, the return on investment for the powdered milk type was somewhat lower (44 percent) than that for the whole milk variety (53 percent), where no capital outlay for fixed equipment and no transportation costs are involved. The amount of sugar bought by the women was a substantial additional expense which the men did not show. This is because women's clients (often individuals at their workplace) are more likely to consume yoghurt on the spot than are men's (who buy for their families while marketing). Both kinds of yoghurt enterprises brought in the highest average daily profits and wages per hour of all five products. This appears to be due to the great demand for the product and the relative lack of competition for the market. Only a few individuals take up yoghurt production either because of the limited supply of whole milk or because production from powdered milk involves prohibitively high capital outlays.

Acaras. Cowpeas, the principal ingredient of acaras, are bought at 50 fr per volumetric measure (a large Nescafé coffee can), which holds approximately 500 grams of beans. The cowpeas are grown in rural areas

[1]There are two reasons for this. First, the cows which are indigenous to the region are not big milk producers so the supply is limited. Second, spoilage is a problem so only one day's supply can be bought at a time.

nearby and are often sold in the market by their producers. They are not plentiful during the rainy season. One seller indicated that the measure changes during the rainy season while the price remains constant, but spot checks did not reveal this to be the case. Included among "other" ingredients in Table 12 is oil, the most expensive input. The average cost of oil used daily was 372 fr.[1] Sellers use 1½ liters for 2 kg of beans on average. However, the variation in the amount of oil used is considerable--it ranged from 1/3 to 1½ liters per kilo of cowpeas processed--and was the main determinant of profit levels. Furthermore, additions to the sauce made of variable quantities of tomatoes, onions, oil and pepper also differed from seller to seller as well as across seasons. In general, the cost of acara production is high, though the equally high level of sales results in respectable profits and returns to investment.

Peanuts. While an occasional vendor has a hand in producing the groundnuts she sells,[2] it is more common for sellers to buy unshelled groundnuts from retailers in the market at the determined retail price of 5 fr per volume measure (approximately 50 grams, which is about 100 fr/kg).[3] Once shelled and roasted, the peanuts are sold, again by volume, 5 fr per

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[1] A liter of oil costs 250 fr.

[2] Groundnut cultivation in Senegal is the province of men although women may be enlisted to weed or harvest. The crop is either bought by the parastatal (SONACOS) at a determined farm gate price (70 fr/kg this year) or sold to small retailers. These "bana-bana" cannot transport more than 200 kg of peanuts to market, which has the effect of giving SONACOS control of the market for the production of oil.

[3] One kilo of unshelled groundnuts yields 500 grams of good quality peanuts, shelled.

15 g. Thus the resulting value-added[1] per kilogram of unshelled groundnuts is 47 fr. The only other costs are for the tax and fuel. While the average profits are low, as are profits per hour, losses due to spoilage are almost never incurred since the nuts can be kept until sold. Thus, the return on investment is in fact underestimated, determined as it was on the basis of one day's sales. The data points to the level of sales as the reason for low profits. Although Table 12 does not show it (because neighborhood sellers were sampled during the wet season only), the number of peanut vendors citywide is very high. Twenty-three percent of all sellers in December were selling peanuts, most of them in the streets. Thus, competition is keen and although peanuts are a very popular snack, the average amount consumers buy at any time does not generally exceed 15 fr. It is probable that the average profits shown here are on the high side, given the somewhat lower volume of sales normally encountered on the streets vis à vis the markets. The difference is in the order of 10-15 percent.

Seafood. This category includes two varieties of seafood caught in the estuaries and mangrove swamps of the Casamance River--marinated shellfish, somewhat like mussels (called huîtres), and a type of very small fish (petits poissons in French or baraye in Diola), prepared by partial dehydration. Both products are seasonal. The petits poissons appear on the market with the early rains in June but are abundant for only a short time. Once the agricultural season is in full swing the village women who catch them turn their attention to rice cultivation. The shellfish product is usually available off and on all year when the huîtres are plentiful. Women from

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[1]Value added is the difference between the cost of unshelled groundnuts and the value of the retailed peanut. The cost of non-food items is also accounted for in this calculation.

nearby villages either walk to market with the prepared product (particularly the fish) or if they do not have the time, sell it to other women in the outskirts of town who take it to market to resell. As with the other four products, a conventional volumetric measure for buying for resale is used which, when converted to metric weight, comes to 125 fr/kg. Wood or charcoal is required for the preparation of both products (the huîtres are precooked) but in the case of the petits poissons it is not usually an expense as it can be gathered. The ingredients used to marinate the shellfish include onions, lemons, hot pepper and spices. Lemons and salt are the only ingredients used for the slow cooking of the fish (accomplished with minimal liquid in a covered pot). The result is a partially dehydrated product which is said to last several days. The average costs for the shellfish product are higher, as petits poissons are often sold by the fisherwoman herself (although when this is the case she will sell only two or three days a week, alternating market days with fishing days). Sales and profits for the shellfish, which appear to be the more popular product, are also higher. Nevertheless the return on investment for both fish and shellfish is among the highest of all five products, 84 percent and 103 percent respectively. When compared with the other four products, which can be produced all year, their potential to generate income must be seen as limited however.

Conclusions

The aggregate economic data concerning daily street food operations discussed in this chapter show that women's profits average about 370 fr a day across seasons while earnings made by male vendors were more than four times higher, an average 1600 fr per day. Variations in the structure of enterprises operated by men and women parallel the differences in their earnings. Men's enterprises generally show both high fixed capital outlays as well as high daily expenditures which cut down competition and result in the year-long stability of the operation. The typical business run by women requires virtually no fixed capital outlay and functions on essentially a day-to-day basis with minimal working capital. The low entry requirements make setting up an operation relatively easy; on the other hand they do not work to discourage exits from business. Thus, a high level of seasonal variation is observed. The effect of seasonality is particularly operative in the case of neighborhood sellers who may have more demanding household commitments and in some cases greater access to land than women who sell in the markets.

A consideration of these two categories of street food operations is useful in identifying constraints to increasing profits and recommending possible solutions. Clearly the low level of working capital available to women is a limiting factor and making credit available to them is necessary if the level of their operations is to be raised. But simply making funds available is not sufficient and, alone, will not increase women's profits. For one thing, our results suggest that not all women street food sellers would be considered good credit risks. Neighborhood sellers were shown to have less experience than market sellers and were more prone to seasonal exits from business. Thus market sellers appear to be the most likely target group for credit schemes.

Another factor to be considered is that a number of products sold by women would not benefit from an infusion of capital. The market for some products, roasted peanuts for example, appears to be near saturation. As an alternative, products that are unlikely to be prepared at home because they are too time-consuming or because they require special technology should be given greater attention. The case of the successful bon-bons enterprises which show the highest daily profit across all street foods is illustrative. With expertise and technologies (ovens) learned in the bakery, these sellers provide the urban population with a product which cannot be made at home and which therefore is in great demand.

The promotion of similar innovative approaches to street food production falls within the domain of a market extension service. Such a service could not only be enlisted to introduce new products and technologies but also to provide women with advice concerning how to move out of street foods and into more lucrative food-related businesses. For example, the operation of small restaurants to compete with the profitable tangana trade is one area that might be considered if credit were to become available. It is an activity commonly pursued by women in Dakar but which is rare in Ziguinchor. Diouf (1981-83), who studied the operational mode of women's restaurants in Dakar, indicates how critical efficient recordkeeping skills are in assuring a profit in the restaurant business. This is because clients often do not pay for meals taken until the end of the month. Teaching the basic management and bookkeeping skills that would be required by the restauranteur falls again within the purview of a market extension service.

Finally, even though there are discrepancies between the level of profits earned by men and women, one should not dismiss women's street food enterprises as marginal (just covering the cost of production). The detailed data on costs and returns to production for the five key foods which are dominated by women were shown to be profitable and making high returns to investment--in the range of 48 to 98 percent. These high returns compare favorably with men's investment returns and highlight the point that for the very reason that they have scant means available to them, women practice sound (albeit conservative) market economics.

CHAPTER 5. A CONSIDERATION OF DEMAND

The effect of seasonal variations in demand for street foods on the profitability of the enterprises has been discussed at length. Considered in this section are features of demand that focus on the consumer, such as the taste preferences of different consumer groups, their need for meals or snacks at particular times of the day in specific locations around town and the constraints imposed on them by their pocketbooks. Other factors that influence the type and extent of demand for street foods will be discussed as well: the size of the city in question, the degree of urbanization and the magnitude of the employed work force.

Information of this type was solicited from 242 people who were buying street foods in October 1982.[1] These consumers were questioned about their backgrounds, their usual daily diet and their street food habits. Additional information on the five key products, particularly with respect to the amounts people purchase at one time, was obtained from another 250 consumers.

The Basic Diet

An assessment of the demand for street foods and the role they play in the diet must take into account the types and frequency of meals consumed

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[1]The purpose of the survey was to obtain information on those who actually consume street foods. For this reason, the sample was not drawn from the entire population. Rather, the sample selection was based on the distribution of vendors found in the August census. Eighty sellers, 10 percent of those enumerated in each of the 15 product categories, were selected at representative locations around town. Three consumers were interviewed at each site, making a total of 240 respondents (plus two extras) in all.

in the home. Asked about a variety of available foods, the consumers surveyed provided the following general picture of their daily food habits.

The basic diet of most Ziguinchor residents is surprisingly similar. Although the quantities consumed by the poor and wealthy undoubtedly differ, there is great homogeneity in the types of meals eaten in the home. The main meal which is taken at midday consists of boiled rice served with fish and a tomato-based sauce prepared with peanut oil, onions and condiments. Over 95 percent of the sample indicated that these items were consumed every day at noon. Other common additions to the sauce, although not as universal as the above, were okra, oseilles de guinea (a leafy green vegetable), and djakatou, a local variety of eggplant. The evening meal varied somewhat more across individuals. Forty percent of the sample indicated that they eat millet cous-cous as their evening meal staple. Supper for the majority, however, is similar to lunch and consists of rice with fish and sauce.

For breakfast, the group was divided: 50 percent said they eat millet porridge every day, often with lait caillé (yoghurt); 40 percent have a French-style breakfast consisting of bread and coffee or tea with condensed milk; and 10 percent indicated they eat rice porridge or leftovers from the evening. Sugar is consumed every day in one way or another by virtually all respondents but principally at breakfast. Other foods (meat, poultry, eggs) are consumed on rare occasions. Certain traditional dishes such as mafe (peanut stew) and tiebou dienn (rice, fish and vegetable cooked with oil and tomato paste) were eaten perhaps once a week (on Sunday) by about half the group. The rest ate these dishes only on special occasions.

The Demand for Street Foods

The role street foods plays in the diet of the typical Ziguinchor resident is not easy to assess. Obviously, it is dependent to some extent on the level of disposable income available to an individual or a family. Although statistics on women are not available, it has been estimated (SONED, 1981) that only 36 percent of adult men in Ziguinchor are wage earners (salaried and independents included). Within this economic context, one might expect expenditures on street meals to be lower than they are in other African cities where unemployment is not as widespread. In Dakar for instance, one sees a far greater number of catering "establishments," ranging from women with kettles of rice and sauce to coffee stalls and small restaurants. All of these serve meals to a work force with limited incomes. By contrast, in Ziguinchor the two main meals of the day, lunch and dinner, are virtually always prepared and consumed at home, eliminating the market for the most lucrative category of street food business--the open air restaurant. There are several reasons for this. For one thing, the city of Ziguinchor is not so large that returning home at noon presents a problem. Distances are not prohibitive and the lunch break is two or three hours long. Furthermore, because one can get home easily, the demand for meals is not great enough to permit entrepreneurs to provide dishes which are as economical as can be had at home. Thus two variables--the size of the city and its level of prosperity--function to curb expenditures on prepared meals in Ziguinchor. There is an important exception, however. Breakfast is the one meal which is commonly available on the street in various forms and which people are accustomed to buying from street vendors for consumption within or outside the home. Some factory workers buy their breakfast near the workplace and many other working people who must leave home at a very early hour such as fishermen, transporters and market sellers buy their breakfasts on an occasional or regular basis from street food vendors.

Escale, the port market, is a particularly lively spot in the morning. There are more than a dozen tangana stalls and brochette vendors, several small restaurants and five or six regular monie (millet porridge) vendors who are located there in response to the demand for fast morning meals. Generally, only men are seen at the tangana shops as the breakfast offered there is one of the most expensive options, affordable primarily to the employed labor force. Apart from the expense however, women do not think it is quite proper to sit down and eat in the stalls. The market women favor monie as a breakfast food. It is cheap and they can bring it to their location in the market to eat.[1]

Porridge sellers are also found in considerable numbers at St. Maur, the large central market, where there are no tangana stalls. On the other hand, tangana and brochette vendors, as well as monie sellers line the street at the bush taxi station where they serve transient consumers. When traveling, people often have extra money to spend or feel that it is an occasion for spending. Gifts for relatives are bought from ambulant sellers and food is purchased for the trip or to eat while waiting for the buses to fill up. Even those with little purchasing power might be tempted to have breakfast in one of the street food stalls while in transit.

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[1]It should be noted that among some segments of the population, eating food on the street is considered to be in poor taste. Women in particular buy snacks and take them home to eat.

Food for the Industrial Labor Force. Unlike Dakar, which has a considerable industrial work force, Ziguinchor's industrial sector is small. The largest employer is the peanut oil refinery which operates 24 hours a day most of the year. It employs 200 permanent workers and between 50-80 extra men during the most active season. In addition to the factory, there are four shrimp processing plants located near the port with a total of 180 year-round employees and approximately 245 seasonal laborers. These workers make one of several arrangements for their meals while on the job. Many do not eat a proper meal during their working hours although they might bring or purchase snacks to eat during their break. Others have meals brought in by family members and a minority purchase _brochettes_, bread and coffee, or rice and sauce at one of several _tangana_-style restaurants that exist in the vicinity of the workplace to serve them. Like the restaurants which grew up in the industrial park outside Dakar (Diouf, 1981-83), it is possible to take meals there daily and settle accounts at the end of the month. Again, these eateries cater especially to those seeking breakfast and lunch. They are generally closed in the evening.

Meals for Migrants. In many cities the preparation of meals for migrant laborers or other men living alone is an activity that women engage in which is akin to street food enterprises. The food is prepared by neighbors in their homes and paid for on a monthly basis. By contrast, the eating arrangements made by migrants in Ziguinchor are worked out by appealing to extended family networks or ethnic affiliations and payment is handled in kind. Since most migrants come from Casamance province, almost everyone has a connection in town. A door-to-door survey of 300 households in Boucotte, a densely populated central quarter of the city, did not reveal one case of a woman preparing meals for remuneration. Often respondents mentioned that there were students[1] who ate with their families but payment as such is not required. Workers on the road construction team, and an occasional bachelor merchant, did indicate that they hired women to prepare meals at the rate of 6000 fr/month, but this activity does not represent the same kind of opportunity for women in Ziguinchor as it does for those in larger, more anonymous cities with a more substantial paid work force.

Role of Street Foods in the Diet

In sum, it can be said that street foods are an integral part of the diet of many Ziguinchor residents, often providing at least one of their three daily meals. There is considerable room for expansion however. With the development of the region and a concomitant rise in disposable income, one would expect an even greater proportion of expenditures to be spent on prepared meals. One further point needs to be stressed in this discussion which has focused primarily on meals. The value of widely eaten street snacks such as peanuts and fruit cannot be overlooked. In the present context, they do not represent mere supplements to an otherwise balanced diet. For many in Ziguinchor, children in particular, they are an important source of essential proteins and vitamins which would not be obtained in any other form.

Profile of the Street Food Consumer

The consumer survey provides information on the background of street food consumers and their product preferences. While it does not indicate

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[1] There are approximately 7000 secondary school students in Ziguinchor, many of whom come from out of town.

what proportion of the population eat street foods, the demographic profile which emerges suggests that street food clients cut across a range of different age and occupational groups.

The sample of 242 respondents--selected randomly[1]--were fairly evenly divided by sex: 55 percent were males, 45 percent females. The average age of the group was 26 years. The age distribution by sex is presented in Table 13.

Table 13: CONSUMERS BY AGE AND SEX

Age (years)	Male		Female		Totals	
	N	%	N	%	N	%
8 - 12	16	12	21	19	37	15
13 - 17	19	14	13	12	32	13
18 - 29	40	30	39	36	79	33
30 - 40	36	27	32	29	68	28
+ 40	22	17	4	4	26	11
Total	133	100	109	100	242	100

Twenty-eight percent of the sample were children and adolescents, approximately the same proportion of that age group as is evident in the city population (SONED, 1981). Contrary to expectations, only 13 percent of the group were adolescents, typically a group which consumes large quantities

[1] Every third customer of a cross-section of vendors was interviewed until three customers had been seen at each site.

of foods on the street. The virtual absence of vendors selling in front of the large public high school (with 2,700 students) supports this finding. Street food sellers are much more likely to be found in front of the primary schools during recreation time. High school students, many of whom are living with extended family, have very little spending money and what they do have they save to utilize for other purposes such as clothing or recreation. Too, younger children are more likely to ask for and receive 5 or 10 fr from a family member for snacks.

Table 14 gives a breakdown of the occupations of the consumers.

Table 14: CONSUMERS' OCCUPATIONS

Occupation	Number	%
Children (schooled/unschooled)	50	21
Students (H.S.)	35	14
Housewives	42	17
Wage/Salaried Workers	30	12
Government Employees	29	12
Merchants	24	10
Unemployed	16	7
Others	16	7
Total	242	100

It is apparent that the largest group of consumers were adults (mostly men) with salaries: laborers, government workers and merchants. They account for 34 percent of the total. When the occupation of the head of household of all consumers (i.e., including housewives, children, students) is taken into consideration, the proportion from these three occupational categories reaches 75 percent. This is considerably higher than their contribution to the total amount of disposable income generated by different sectors in Ziguinchor.[1] Thus there appears to be a strong relationship between street food consumption and occupation. Those with regular monthly incomes[2] or their families are most likely to be consumers.

While this is perhaps not a surprising finding, in other developing countries (Malaysia for instance), it has been observed that the poorest urban sellers spend a greater proportion of their disposable income on street foods than do higher income groups (EPOC executive summary, 1983). Lack of cooking space and fuel shortages are given as an explanation for this phenomenon. Apart from these concerns, which do not pose as much of a problem for the poor in Ziguinchor, the variation in findings may be attributable to differences in the amount of disposable income people have to spend in parts of Africa as compared to cities in other areas of the Third World.

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[1] According to estimates made by SONED in their Master Plan for Ziguinchor (1981), 41 percent of the disposable income of the population comes from salaried employees (the government and private sectors) and merchants. The informal sector (excluding traders) generates 10 percent of the revenues and the primary sector 25 percent. The remaining 25 percent derives from pensions, real estate and outside support ("dons").

[2] The average monthly wage for salaried workers was estimated to be 47,000 fr; 18,000 fr was the estimate for merchants (SONED, 1981).

Popularity of Various Street Foods

Consumers were asked to describe the frequency with which they eat the most common foods available in the markets and on the street. A "popularity" score for each product was obtained by assigning representative weights to the four frequency categories and multiplying by the proportion of consumers giving that response.[1] The popularity ranking of the 29 products listed is shown in Table 15.

An examination of the range of scores brings to light several classes of street food products. First are the small number of universally popular foods which include both snack (mangoes, peanuts, roasted corn) and meal items (yoghurt). These are consumed by over 70 percent of the sample population virtually every day. With the exception of mangoes, which can often be found growing in front and back yards, all are purchased on the street. Some of the foods are seasonal such as mangoes (available from April-July) and corn (September and October), and are eaten with great enthusiasm while they are abundant. Others--yoghurt and peanuts[2] for instance--are available all year long. Yoghurt, a food virtually never produced at home, is bought in the market or from roving vendors. While it is eaten by some (laborers or travelers) at the point of purchase, for the

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[1]The categories and weights were the following:

Consumes every day	=	% of total x 7
Once-twice weekly	=	% of total x 2
Rarely (once-twice/mo.)	=	% of total x 0.5
Never	=	% of total x 0

Thus for mangoes, the most popular snack, 96 percent of the sample said they ate them every day during the season, 0.4 percent once or twice a week, and 3.3 percent rarely. The resulting popularity score for mangoes is 673.

[2]Peanuts can be stored from one harvest to another but they are especially popular when the new crop appears on the market.

Table 15: RANKING OF COMMON STREET FOODS

Rank	Product	Score	Rank	Product	Score
1	Mangoes	673	16	Bon-bons	145
2	Peanuts	591	17	Beignets	134
3	Yoghurt	496	18	Soft drinks	121
4	Corn	479	19	Brochettes	84
5	Porridge	349	20	Pastels	81
6	Sweet potatoes	340	21	Oysters	75
7	Tangana	336	22	Tiachri[3]	70
8	Cassava	325	23	Petits poissons	68
9	Oranges	315	24	Sunguof[4]	42
10	Caba[1]	315	25	M' Bouraké[5]	42
11	Bananas	273	26	Palm wine	40
12	Cashew fruit	239	27	Cowpea sweets	30
13	Ices (ole)	217	28	Ginger drink	26
14	Tiéré[2]	215	29	Bisap drink[6]	26
15	Acaras	146			

[1] Caba - an indigenous fruit.

[2] Tiéré - millet cous-cous, consumed with a sauce.

[3] Tiachri - millet flour formed into a cous-cous, sweetened and eaten with yoghurt.

[4] Sunguof - sweet snacks of millet or rice cous-cous, often served at funerals.

[5] M'Bouraké - a sweet made with millet flour and peanut butter then formed into balls.

[6] Bisap - a sweet drink made from the leaves of an indigenous plant (*Hibiscus Sabdariela*).

most part it is eaten in the home, consumed in the morning alone or with porridge or in the evening with cous-cous. Moreover it is frequently given to babies as a weaning food. Peanuts are sold and eaten everywhere.

Table 16 indicates where certain key products are consumed. It shows that the only product eaten exclusively outside the home more than half the time is brochettes. Mangoes, yoghurt and porridge on the other hand are eaten primarily at home, while peanuts are eaten in both places. In effect, this reflects the fact that peanuts are frequently consumed on the street. Along with mangoes, they are eaten "en cours de route" (on the run) while all the other products, if not transported home, would be consumed at the point of purchase.

Table 16: PLACE OF CONSUMPTION FOR SOME KEY PRODUCTS

Products	At Home	Outside the Home[1]	Both Places	Other[2]	Total
	(Percent of Respondents Naming Each Place)				
Mangoes	68	2	29	1	100
Peanuts	28	2	63	7	100
Yoghurt	90	1	5	4	100
Porridge	77	5	11	7	100
Acaras	29	9	34	28	100
Brochettes	29	53	10	8	100
Seafood	38	2	3	57	100

[1]Primarily at the point of purchase.

[2]Includes "at school" and "never consume."

Foods consumed daily by 30-50 percent of the sample (ranked fifth through fourteenth in Table 13) constitute a second class of foods in terms of popularity. A number of tropical fruits and vegetables are included in this category[1], as well as the two most common breakfast foods--millet porridge and tangana. Both of these, as well as tiéré (millet cous-cous) are prepared in the home or bought out and brought home. Millet products, because they are so time-consuming to process, are becoming less and less frequently prepared at home. A food consumption survey carried out in Dakar (CILSS, 1980) showed that while 32 percent[2] of the families eat cous-cous for their evening meal only 12 percent of the urban women prepare it themselves every day. Approximately the same number of families in the Ziguinchor sample, 38 percent, eat cous-cous daily; unfortunately, we do not have information on how many prepare it themselves.

The third class of foods (ranked 15-29) are those which have a much smaller number of devotees, and are generally consumed only occasionally by most people in the sample. They are by and large sweet snacks (e.g., bon-bons, beignets), other deep-fried snacks such as acaras and pastels and beverages (soft drinks, palm wine, drinks made of bisap and ginger). Acaras, for example, are eaten every day by only 19 percent of the sample, while 42 percent said they buy them once or twice a month. Many of those who eat them every day have them (sauced) for breakfast, with or without bread. Alcoholic drinks (palm wine) and nonalcoholic traditional drinks (bisap, ginger) have particularly low scores. It may be that some Moslem

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[1]Not all the varieties of fruits sold during the year were included on the list to be judged.

[2]The fact that only a third of the Dakar housewives serve millet at all is telling since among the rural sample (in Sine Saloum) it was prepared every day for the evening meal.

respondents were reluctant to admit that they drink palm wine and, as was found in the other surveys, the number of Diola[1] and other potentially non-Moslem ethnic groups (Bainounk, Creole, Manjack and Mancagne) account for only about 35 percent of the sample. Of these, a little more than half indicated that they buy palm wine on a regular basis--every day or several times a week when in season. As for non-alcoholic drinks, local brands of soft drinks are the most popular. Traditionally prepared sweet drinks such as bisap and ginger are only drunk by about half the sample and even at that they are sought only rarely or at particular times of the year such as the month of Ramadan.

Overall, the pattern of street food consumption in Ziguinchor is encouraging from a nutritional standpoint. The four most popular foods, eaten everyday by 70 percent of the buyers sampled, are highly nutritious and add needed vitamin and protein supplements to the basic diet in addition to calories. Only one of these four (yoghurt) is consumed with sugar. The second class of foods, consumed less universally but on a daily basis by a substantial number of people (30-50 percent), is similarly composed of fruits, vegetables and grains (porridge, tiéré) and includes only one overly sweet product (ices) which provides "empty" calories. It is only among the last group of products that one finds a preponderance (9/15) of highly sugared drinks and snacks. However, since most products from this group are consumed so infrequently or by such a small number of people, it is not a major nutritional concern.

[1]Probably half of the Diola group are themselves Moslem.

Five Key Foods: How Much Is Purchased and by Whom

Fifty individuals who were buying each of the five key foods were observed and questioned in addition to the original 242 consumers surveyed in order to determine with what frequency they buy and to obtain precise information on the average amounts that they purchase at one time. Table 17 shows the type of consumers and the amounts bought.

While preferences for buying certain items are evident across age groups, it is not always obvious who actually eats the product since the items were not usually consumed at the buying place. Children and housewives often buy yoghurt, porridge and _petits poissons_ for others or for the entire family. Thus it cannot be said that the products were destined for a single consumer, except perhaps in the case of peanuts. A full-sale consumption study would be required to determine how much is actually consumed by different age groups. Nevertheless, the data suggest that children and adolescents are heavy consumers of peanuts, while a greater proportion of adults purchased millet porridge. The price of an average portion (16 fr for the former; 42 fr for the latter) goes a long way in providing an explanation for this finding, in addition to other aspects of demand (i.e., need for breakfast at the workplace) already discussed. The same relation between the average cost of the amount bought and the age of the buyer is evident for _acaras_ and _petits poissons_. This of course reflects variable purchasing power, but may also reflect the greater orientation

Table 17: AGE OF BUYER AND AVERAGE AMOUNTS PURCHASED OF THE FIVE KEY FOODS

	Age Distribution of Buyers[1]			Average Amount Bought[2]	
	Child[3]	Adolescent[3]	Adult[3]	Fr. CRA	Weight (grams)
	(Percentage Distribution)				
Peanuts	34	42	24	16	45
Yoghurt	36	22	42	34	400
Porridge	22	34	44	42	1050
Acaras	56	20	24	18	90
Petits poissons	20	38	42	55	420

[1] Fifty consumers for each product were observed buying from five different vendors at different locations.

[2] Each product is sold in 5 fr units.

[3] Child equals 8 to 12 years; adolescent is 13 to 19 years; adults includes populations over 20 years.

children have toward snacks. Fortunately, both peanuts and acaras, the foods most often bought by children and adolescents, are very nutritious.[1]

Conclusions

The significance of street foods both in terms of prevalence and nutritional value has been the main theme of this chapter. In both respects, street foods have been shown to be important. The data from the consumer survey indicate that although large numbers of street foods are consumed only occasionally and are negligible from a nutritional standpoint, there are a smaller number of products which are integral components of the urban diet and which are eaten by a large proportion of the population virtually every day. These street foods include full meals (porridge, tangana), constituents of meals (yoghurt, cous-cous) and a variety of fruit and vegetable snacks (peanuts, mangoes, sweet potatoes). The nutritional contribution of such meals and snacks to the diet is very substantial and quite often overlooked in consumption assessments.

The survey also sheds light on the relationship between occupational status and street food consumption. It was found that those with a steady source of disposable income or their families were most likely to be street food consumers. These include government employees, factory workers and informal sector cadre. Given the general economic malaise of the region

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[1]On the basis of FAO statistics, it was calculated that the average amount of peanuts bought by consumers in the sample (45 g) provided 253 K calories and 12.9 grams of protein. For children between the ages of four and nine, this provides 57 percent of their average daily protein requirement. For adolescents (10-19 years), it would provide approximately 40 percent of their protein needs (FAO, 1972). As for acaras, a 100 g serving, only a little more than the amount purchased by consumers in Ziguinchor, provides 619 K calories and 8.25 g of protein (Dolvo et al., 1976).

only a little "pin-money" appears to filter down to the dependents of these wage earners, however. Contrary to expectation, only about a quarter of the purchasers were children and adolescents. These are groups which are large consumers of street foods in other developing countries and which are a major concern of national policymakers because they are frequently at risk nutritionally. While the types of foods bought by children in Ziguinchor are generally, though not always, positive additions to the diet, the range of items available at the school gates is quite limited. Expanding the range of foods sold at schools is one intervention that would serve to improve the health of urban children. Introducing street food sellers to weaning foods which are difficult to produce at home is yet another way of reaching a particularly vulnerable group of children (12 to 32 months) via their mothers. Specific ways this might be done are explored in the next chapter.

Finally, hand in hand with attempts to improve the nutritional quality of street foods is concern for their sanitation and level of purity. Certain street foods which were shown to be universally consumed such as roasted peanuts and yoghurt may sometimes be contaminated due to improper storage or methods of preparation. Programs which address these problems would have an effect on the general health of urban residents.

In sum, the fact that street foods are so widespread an urban phenomenon makes them an efficient vehicle for influencing the nutrition and health of the city population while at the same time contributing to the increased incomes of urban women.

CHAPTER 6. ASSISTANCE TO THE STREET FOODS TRADE

The principal aim of projects offering assistance to the street food trader is to increase women's earnings. However, efforts to safeguard or improve the quality of the product which reaches the consumer can and should be carried out concomitantly. In this section, three areas in which change would be desirable are identified and the constraints that exist which impede change discussed. The scope of the areas requiring assistance include: improving market conditions and marketing links, upgrading the nutritional and sanitary quality of street foods and introducing alternate food preparation and processing technologies.

Improved Market Systems

An improved market system would greatly benefit all foodstuff traders in Ziguinchor whether or not they actually sell in the marketplaces. The results of this study have shown that both the internal structure of market operations and the channels which link the market to suppliers in the rural areas or other urban sectors need to be strengthened. A comprehensive development plan for improving the marketing system of the region certainly falls within the scope of AID's country development strategy. Indeed, it has been identified as an area of specific concern (CDSS, 1983, p. 31). Such a plan would have to give thought to the following issues which are the bottlenecks limiting efficient trade.

Marketplace Infrastructure. The majority of traders in Ziguinchor's marketplaces are women who set up on the ground. For the space they occupy, they pay 25 fr a day. Far more than half the transactions go on in the direct sun and during the rainy season sellers are hard put to find a dry place in which to display their wares since operating space is at a premium. At the central and port markets, the alleys are often impassable because of puddles and mud which discourage customers from attempting to reach certain sections where the least established sellers are located. Poor drainage is also exacerbated by inadequate toilet facilities. Storage space is unavailable to those without stalls[1] and refrigeration (to rent) is universally lacking. This situation limits the amount sellers can buy and produce at one time and requires the liquidation of stock each day or a loss.

The poor condition of the marketplaces is recognized by authorities (SONED, 1981 and personal communication) but, apart from the plans for a new neighborhood market in Nema, nothing is being done. It is recommended that the problems mentioned above namely, inadequate shelter, operating space, sanitation, storage and refrigeration, be put before city officials by representatives of the market sellers and that avenues for redressing them be sought. While funding is an obvious constraint, plans to improve the marketplace infrastructure might be included in a larger scheme aimed at strengthening regional marketing systems, undertaken by USAID or another donor organization. On a smaller scale, "seed" money from local organizations like the Lions on Rotary Clubs might also be forthcoming for specific goals.

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[1]Security is a problem for those with stalls.

Market Associations. Unlike other cities in West Africa, this investigation has shown that the market sellers in Ziguinchor have not formed official trader's associations.[1] _Ad hoc_ meetings are occasionally held by sellers to discuss problems of mutual concern but no formal organization exists to confront municipal authorities. In Dakar, a chapter of the Association of Small Merchants and Artisans (l'APCAS) exists in each market. The organization, which was formed as a lobbying group, has acquired considerable political power and has been successful in defending the general interests of their members. There are many other purposes for which an association like l'APCAS would be helpful in Ziguinchor: disseminating information, establishing marketing channels, providing for credit and arranging social functions. A number of the suggestions made in this report would depend on having a representative organization with which to communicate.

It is recommended that a chapter of l'APCAS or some similar organization of merchants be formed in Ziguinchor that would include representatives from all the neighborhood markets. This could be achieved with the aid of the Dakar association or with support from an organization like _Promotion Humaine_.

One constraint is signaled by the fact that no trader associations currently exist in Ziguinchor. This may mean that merchants are reluctant to organize.[2] Moreover, with the current political unrest in the

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[1] Informal savings associations are common on the other hand.

[2] In the course of the case studies, sellers indicated a mild interest in forming a trader's association but remained sceptical about the effect it might have on current conditions.

region[1], any move to create a lobbying body may be looked upon with suspicion by representatives of the government. Therefore official support would have to be assured.

Access to Credit. No commercial facilities are available for entrepreneurs seeking small loans. Yet if micro-businesses are to expand, their need for assistance must be met. As has been discussed in Chapters 3 and 4, street food sellers require funds to supplement their working capital when business is bad, to invest in expansion or diversification of their enterprises or to move into other income-generating activities, either food or non-food related. These efforts would serve to elevate women's activities from the level of survival to that of self-sufficiency. Thus, it is recommended that credit funds for small entrepreneurs be initiated to assist them in improving or expanding their businesses.

In several other developing countries, projects which make low-interest small loans accessible to micro-entrepreneurs have met with considerable success under certain circumstances, in particular, when loan repayment is guaranteed and overseen by small self-organized groups of vendors (Farbman, 1981). These "solidarity" groups closely resemble existing savings associations in form and function and could be used as a model in implementing a credit scheme.

A source of funds for such a project is again a constraint but USAID has currently targeted money for credit schemes in the rural areas that might be available if a link to rural producers could be demonstrated. Details concerning the administration of loans would have to be worked out

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[1] In December 1982, a group with secessionist aims carried out protests which brought in government troops.

with a minimum of infrastructure. An appropriate model is set forth by the PISCES project (Farbman, 1981).

Market Extension. While some appropriate technologies relevant to rural food producers are being prompted by a cadre of trained extension agents in the Casamance, no such service is available to the processors and distributors of foodstuffs--the urban market sellers. It is recommended that a marketplace extension service be established to improve regional marketing functions.

An extension service which disseminates information concerning more sanitary or efficient ways of storing, processing and preserving foods that have arrived at market is a needed addition to the infrastructure which promotes agricultural development.[1] Marketplace extension agents could also provide training in basic numerical, bookkeeping and management skills. Finally, extension agents could introduce more efficient ways of operating enterprises, such as the formation of production chains which link producers and sellers.

Determining the institutional affiliation of the service could be problematic. Both PIDAC[2] (Project Intègre de Developpement Agricole) and Promotion Humaine[3] (PH) have expressed interest in the idea if funds from donor agencies are made available.

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[1]FAO (1977) has estimated that between one-quarter and one-half of consumer prices for domestic farm and marine products stem from the cost of distribution and processing.

[2]PIDAC is the extension service attached to the regional development agency, SOMIVAC (Société de la Mise en Valeur de la Casamance), which functions as a parastatal.

[3]Promotion Humaine is the national social service network.

<u>Trade Channels</u>. Links between rural food producers and urban foodstuff processors and traders are weak in the Casamance; regular outlets for producers and sources of supply for traders need to be developed. A classic example of the inefficiency is evident in the difficulty encountered by rural women in getting their vegetables to market during the dry season.[1] Not only is securing transport for relatively small quantities a problem but a buyer must be located beforehand as there are no coops or facilities for short-term storage available once produce arrives at market.

The milk distribution channel discussed in Chapter 4 is another case in point. Each yoghurt seller meets her regular supplier at a specified location every day, usually near the periphery of the city. As can be imagined, the link-up is not always made, resulting in lost business for one or both individuals. A milk coop organized by the sellers where the milk is kept under refrigeration would vastly improve both the efficiency and sanitation of yoghurt production.

<u>It is recommended that specific foodstuffs which would benefit from better producer-consumer links be identified and that efforts to improve their transportation, purchasing and storage be attempted by the extension service in conjunction with groups of traders</u>.

The exclusion of women traders from the operation of such trade channels is a problem which must be anticipated. Extension agents (who are mostly male) often focus their efforts on men, who may be easier to approach with new ideas than women because, as has been shown, men tend to have more

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[1]Vegetable production has been encouraged by PIDAC as an off-season income generating activity for village women's groups. The marketing problem has been signalled by a number of others (NCNW, 1983; SOMIVAC, 1981).

money and time available. In any case, attempts to involve women in establishing coops should be made a priority.

Upgrading the Sanitation and Nutritional Quality of Street Foods

A second theme around which assistance to the street food trade can be planned pertains to nutrition and health. The prevalence of street foods in the urban diet, a finding pointed out in Chapter 5, makes them an appropriate vehicle for such interventions. A brief summary of the status of health and nutrition in the Casamance (primarily the rural areas) and a description of a project which aims to improve the situation provides necessary background information.

With respect to health, the statistics on child mortality give an indication of the high prevalence of disease in the area. The mortality rate for children under five is given as 361 deaths per 1000 births (Ministry of Health, 1978). It is the highest mortality rate in all of Senegal. The primary causes of death among children are malaria, diarrhea and childhood diseases. All of these are said to be aggravated by poor nutritional status.

A food consumption survey carried out by ORANA, the applied nutrition institute, in rural villages in Lower Casamance showed that only 26 percent of the population met their caloric requirements during the rainy season, a period of intensive field work, low grain supplies and a high incidence of malaria. Protein needs were more adequately covered: 80 percent of the sample received 100 percent of their needs (Chevassus - Agnes and Parent, 1979). The authors suggest that the group at greatest risk nutritionally are children under five, particularly those at the weaning stage (12-32 months).

While it is impossible to generalize from this profile to the health/nutritional status of urban residents, one thing is certain--there is surely substantial variation across the population due to differences in income, particularly insofar as meeting calorie requirements is concerned (Worthington, 1980). In town, most food is bought and the prices for staples continue to rise at an alarming rate. As salaries have not kept pace, the situation is quickly deteriorating for low-income residents.

USAID has just initiated an integrated health and nutrition project in the Casamance in an attempt to redress some of these problems. An office of health and nutrition has been created within PIDAC which will train extension agents to disseminate information and pedagogical materials on improving nutrition and health practices in the countryside. In addition, a food consumption study[1] and a five village anti-malaria campaign are planned (USAID Project Document, 1982). Since the project was designed in accordance with USAID's policy of advancing agricultural self-sufficiency in Senegal, it has a rural focus, but in theory PIDAC is not limited to rural development alone. It would be unfortunate if some of the benefits of this project did not reach the region's urban population, which accounts for 30 percent of the people in the Lower Casamance.

To accomplish this, <u>it is recommended that a certain number of PIDAC's health agents be assigned to work in urban areas</u>. As in the rural areas, their main task would be to reach vulnerable groups (children and nursing mothers) in an effort to ameliorate their health and nutrition. One indirect way that this can be achieved is to work through street food

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[1]On the suggestion of the author, inclusion of a cross-section of urb residents is being considered as base line data do not exist on this population.

sellers to introduce new products which will supplement the basic diet and improve the quality and safety of existing street foods.[1] Some specific means of achieving theses aims include:

- contacting street food vendors who sell at primary schools in an effort to replace the sale of certain overly sweet products (i.e., ices) with other more nutritious ones (fruits, vegetables).
- introducing new nutritious products such as dried mangoes and bananas and weaning foods (i.e., cowpea baby puree).
- encouraging participating vendors to locate in areas where they can have an impact on vulnerable groups: areas such as pre-schools, elementary schools and baby out-patient clinics.
- identifying foods that are improperly stored, prepared or packaged and organizing seminars to instruct women in ways of improving food handling. Suggested topics include: ways to decrease aflatoxins in peanuts, purifying water used in making ices and powdered milk yoghurt, boiling milk used in preparing whole milk yoghurt and monitoring the temperature of oil used in fried products such as <u>acaras</u>.
- soliciting the aid of the city's Service Hygiene in monitoring the quality of foods.
- attempting to enlighten the public about the nutritional value of particular street foods by means of a media campaign.

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[1]Microbiological analyses of samples of four of the key foods completed after the initial writing of this report show contaminants in certain foods. Appendix 4 summarizes the results of these tests.

In carrying out this program of education and control, the perspective of the street food sellers must be kept firmly in mind. Their constraints with respect to time and capital cannot be ignored if change is to occur without decreasing their profits.

Introducing New Food Processing Technologies

The need for new and appropriate food processing technologies has been mentioned in relation to upgrading market systems as well as to improving nutrition and health. In this section several areas that would improve either the efficiency or cost-effectiveness of producing street foods (or both) are discussed. Particular attention is given to new methods of processing the five key foods.

Labor Saving Devices. A number of the products sold on the street are tedious or difficult to prepare. Millet-based products like porridge and cous-cous are particularly time-consuming, for even when mechanical milling is used dehulling by pounding is required. New dry mills designed for use with millet have been developed which not only grind the grain but dehull it as well (Vogel and Graham, 1978). These could be introduced to entrepreneurs looking for investment possibilities.

Designs for small-scale groundnut shellers are available which would make the task of shelling peanuts less arduous (e.g., MacGarry, 1977). The device would have to be simple and inexpensive to construct as well as effective if it were to be adopted.

Fuel Saving Devices. Virtually all cooked street foods are prepared on a traditional brazier (*four malgache*) with charcoal or wood. The findings of the economic surveys indicate that this system requires between

25 and 50 fr a day for fuel. Alternate systems are being developed in Senegal by CERER.[1] One method in particular, the Ban ak Suuf stove, is said to cut down fuel consumption by as much as 30 percent. A campaign to introduce the stove throughout the country has just gotten underway. Efforts should focus on the street food producer. The adoption of this system by those in the food preparation sector would not only cut down their expenses but improve the ecology as well.

Methods of Preservation. Seasonal surpluses and deficits affect producers, traders and consumers alike in Ziguinchor. In an effort to deal with the problem, particularly as it relates to rural vegetable producers, PIDAC's "volets feminins" section has been attempting to introduce methods of preserving fruits and vegetables (Timberlake, 1983). Solar driers have been built in several villages and women extension agents trained to promote their use. A number of fruits and vegetables which were successfully dried were among the most popular seasonal street foods (i.e., mangoes, bananas and sweet potatoes).

Methods of drying and other preservation techniques (i.e., jam making) should be introduced to women who sell fruit in Ziguinchor. Small, portable solar driers made of cardboard boxes and screening would probably be more appealing to street food sellers than the large stationary model employed by PIDAC. These have been constructed and used successfully by women in Jamaica (Lewis, 1983).

Storage Techniques. The price of grains[2] and legumes can vary significantly during the course of a year. Therefore, the profitability of

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[1] Centre de Recherches et d'Etudes des Energies Renouvelables.

[2] Millet went from 65 to 125 fr during one period last year.

enterprises based on them would be improved by buying in large quantities when the price is depressed and storing the grains in the home. Storing millet and cowpeas can be a problem, which is one reason why even sellers who have funds do not usually buy more than they need for a day. Cowpeas become easily infested with weevils and molds are commonly encountered in millet and peanuts if they are not kept free of moisture.

A considerable amount of research has been done on the best ways to avoid these problems by IDRC (International Development Research Council), combining traditional methods with modern storage ideas. For instance, cowpeas can be kept in sealed, baft-lined, plastic sacks to prevent weevil penetration (Dovlo et al., 1976). Studies in Senegal showed that threshed millet mixed with 30 percent sand incurred fewer losses than the traditional method of storing unthreshed grain (Vogel and Graham, 1979). Peanuts, improperly stored, are host to certain strains of mildew which secrete toxic substances (aflatoxins) suspected to be a cause of cancer (Kane et al., 1983) and related to kwashiorkor (L.I.F.E., 1983). The presence of aflatoxins, particularly prevalent in hot humid areas like the Casamance, could be reduced by better storage practices. Various storage methods to avoid this problem have been developed in Senegal but they are not commonly used. Educating traders about storage methods would not only improve cost-effectiveness for the vendors but general public health as well.

<u>Improved Recipes</u>. There are a number of ways that recipes currently being used by vendors could be improved. In the preparation of <u>acaras</u> for example, there is a wide range in the amount of oil employed per kilogram of cowpeas processed. The best ratio could easily be determined (IDRC gives recommendations but the taste preferences of this region should be taken

into account) and the recipe disseminated by an extension service. In addition, information concerning the optimal temperature of oil (when it is at the proper temperature and water is sprinkled on it, the crackling sound is brief) would improve the quality of this and other deep fried products. Methods of straining and storing oil for re-use could also be promoted. Since oil is an expensive input and is not generally saved, adopting these techniques would result in a considerable savings for sellers. Improving the method of preparing petits poissons and marinated oysters in order to cut down on contaminants is another area that needs to be explored.

The Food Technology Institute (ITA) in Dakar does standard laboratory tests on foods and develops improved recipes with local foodstuffs. There is a millet, dairy, and legume division, among others. The institute is an obvious resource for extension work of this nature.

Constraints in Implementing Change and Policy Considerations

Carrying out the commendations listed above would be dependent on the existence of a trained extension service with sufficient means to reach women who sell in the markets and on the streets of town. The organization of a market extension service in Ziguinchor could be seen as a testing ground for a national market extension service which would train agents to operate in all of the urban markets in Senegal. In Ziguinchor the most likely institution to oversee the training and operations of extension agents is PIDAC, the extension arm of the regional development agency.

Financial support for a project which aims to strengthen regional marketing systems, both at the macro and micro levels, could come from USAID. In its current country development strategy paper the links between rural producers and urban distributors are identified as a constraint to raising the incomes of both groups. It should be pointed out that the recommendations included here are relevant to and could be attempted in any of AID's priority regions (i.e., Sine Saloum, Casamance or Fleuve). Moreover, by singling out street food sellers as a special target group with which to attempt interventions, both the agricultural and health/nutrition priorities of AID would be met.

With respect to the constraints on assisting street food sellers _per se_, resistance to new ideas is always a potential problem but particularly when taste and money is concerned. It will be incumbent on the extension agents to make sure that the ideas being promulgated can be put into practice without decreasing profits or increasing production time. In fact, even when interventions assure better profits, certain social variables may be overriding, such as relationships among vendors (particularly insofar as pricing is concerned) and between vendors and their regular clients. Since their best customers are often friends and neighbors, vendors feel a keen responsibility to maintain quality (in their terms) and often identify closely with their products.

Finally, any intervention which leads to an increase in production time without significant monetary compensations would obviously be unacceptable. Time is a major constraint for women traders as the survey results indicate. Therefore schemes which aim to improve product quality by measures which increase preparation time (i.e., boiling milk or water) must have built-in incentives (i.e., options for credit) or behavioral changes are not likely to occur.

APPENDIX 1. STREET FOOD CENSUS

A census of vendors selling street foods in the markets (May, August and December 1982) and in all neighborhoods of town (August and December 1982) was carried out during the first phase of the study in order to provide information on the range of foods available and the number of people participating in the sector.

The May and December counts indicate the number of sellers who are active during the dry season. The August census gives the number selling during the rainy season.

The initial census (May) did not include unprocessed foods such as raw fruits and vegetables and only enumerated marketplace vendors. The August and December counts include all vendors observed selling edibles (requiring no further preparation) on all streets of the ten administrative districts of town. Restaurants were excluded. In the major commercial zones the streets were canvassed twice, in the late morning and in the evening; the average number is reported. In outlying wards the census was done only once, during daylight hours. The table below gives the results of the census by product and location. These data were the basis upon which the survey samples were selected.

Census of Street Food Vendors During Different Seasons

Senegal, 1982

Vendors by Location

(a) Dry Season: May 1982

STREET FOOD	CENTRAL MARKET N	CENTRAL MARKET %	SECONDARY MARKETS N	SECONDARY MARKETS %
Acara, beignet, bon-bon	32	12	69	21
Monie	38	14	28	8
Cous-cous	8	3	13	4
Yoghurt	15	5	13	4
Brochettes	7	3	19	6
Tangana	5	2	25	7
Ices	12	4	9	3
Peanuts	12	4	20	6
Seafood snack	10	4	14	4
Fruit	91	34	96	29
Vegetable snack	41	15	24	7
Other	--	--	--	--
Total	271	100	330	100

(b) Rainy Season: August 1982

	CENTRAL MARKET N	CENTRAL MARKET %	SECONDARY MARKETS N	SECONDARY MARKETS %	NEIGHBORHOODS N	NEIGHBORHOODS %
Acara, beignet, bon-bon	28	17	61	22	44	14
Monie	15	9	11	4	2	1
Cous-cous	13	8	4	1	4	1
Yoghurt	6	4	6	2	1	--
Brochettes	3	2	25	9	11	3
Tangana	2	1	23	8	5	2
Ices	14	9	24	9	36	12
Peanuts	8	5	30	11	67	22
Seafood snack	12	7	14	5	9	3
Fruit	37	23	58	21	89	29
Vegetable snack	25	15	21	8	40	13
Other	--	--	--	--	--	--
Total	163	100	277	100	308	100

(continued)

continued,

(c) Dry Season: December 1982

STREET FOOD	CENTRAL MARKET		SECONDARY MARKETS		NEIGHBORHOODS	
	N	%	N	%	N	%
Acara, beignet, bon-bon	46	19	41	11	110	12
Monie	4	2	9	2	8	1
Cous-cous	22	9	8	2	12	1
Yoghurt	8	3	6	1	9	1
Brochettes	3	1	20	5	33	4
Tangana	4	2	22	6	21	2
Ices	20	8	20	5	61	7
Peanuts	37	16	77	20	234	26
Seafood snack	13	5	6	1	9	1
Fruit	45	20	128	33	220	24
Vegetable snack	34	14	52	13	186	21
Other	2	1	4	1	--	--
Total	238	100	393	100	903	100

APPENDIX 2. RESEARCH METHODOLOGY

The research employed two general methodological approaches: socioeconomic surveys and participant observation case studies.

The Surveys

Questionnaires addressing three different aspects of the street food trade were developed:

- the economics of the enterprise
- the background and activities of the entrepreneurs (sociological)
- the consumer and his buying habits

Economic. Repeated two times during 1982 (in May-June during the height of the dry season and in August-September during the rainy season), the economic questionnaire asked sellers to provide information on all expenses, sales and labor time for the previous day's activities. The advantage of the "yesterday" approach is that it provides a concrete frame of reference for the respondent rather than general questions concerning monthly or weekly economic information. Its disadvantage is that it reflects the state of the market at the time it is carried out, necessitating repetitions across seasons.

The May-June sample, which included 165 market sellers, was selected on the basis of the first census completed in early May. The number represents approximately 25 percent of all the street food sellers in the markets and bush taxi station, stratified according to product and location and chosen at random. Unprocessed fruit and vegetable sellers were not included.

The August-September sample (N=188) represented 25 percent of sellers enumerated throughout the city at that time both in the markets and on the streets. The sample was again stratified by product and location. Fruits and vegetables sold by the unit were added to the list of products. Thus the sampling base for this survey was wider than that for the earlier survey (see census data for August, Appendix 1). Approximately 25 percent of the sellers from the first survey were interviewed again.

The economic surveys were conducted by three Senegalese research assistants (two females and a male) who spoke all of the languages encountered in the markets. The questionnaire took approximately 15 minutes to administer. All interviews were conducted at the selling place.

Sociological. The sociological questionnaire examined a wide range of issues related to the entrepreneurs and their trading practices. It went through several revisions on the basis of extensive pretesting.

The sample of 200 was stratified by product and location. Half of the sellers were contacted during the rainy season (late September), the other half were contacted during the dry season (January). Both market sellers (56 percent) and street sellers (44 percent) were included. The sample location was determined on the basis of the August and December census data. Approximately 20 percent of the sellers participated in all three rounds of surveys.

The questionnaire required about 40 minutes to complete. The interviews took place in the homes of the vendors. Not one refusal to participate or continue was encountered despite the length of time involved. This high acceptance rate was a function of successfully matching the interviewers and the respondents according to sex and ethnic group, thus the male Peuhl research assistant interviewed all the male Peuhl traders, the female Diola assistant, all the Diolas women, etc.

Consumer. Two consumer surveys were carried out in October 1982 and March 1983 to determine who buys street foods and with what frequency. The first consumer survey questioned people about their usual daily diet as well as their street food habits. The March survey focused on the five key street foods and sought to determine the amounts people buy at one time.

The sample of consumers in the October survey was based on the distribution of vendors (by product and location) found selling in August. Eighty sellers (10 percent of the total) were selected. Three consumers at each site were interviewed for a total of 240 respondents.

Interviews took place in the mornings and evenings if the product was sold at both times. The interviewers were instructed to approach every third buyer, when possible. The questionnaire took about 15 minutes to administer.

The March survey involved consumers of monie, yoghurt, acaras, petits poissons and roasted peanuts only. Five sellers of each product located in the markets and on the streets were chosen and 10 consumers at each site (total of 250) were questioned very briefly concerning their backgrounds and the amount of the product being purchased. Every other purchaser was approached.

The data collected from all questionnaires except the second consumer survey were tabulated and analyzed by microcomputer (Radio Shack TR-80).

Case Studies

Three vendors selling each of the five key products were selected for in-depth study (total of 15 case studies). The following dimensions were considered in selecting the sample: location (9 were market sellers, 6 were neighborhood sellers); ethnic group (all four major ethnic groups were represented); and level of sales (half the group had below average sales for the product in question; the other half, above average). Once sellers meeting these criteria were identified, the interviewers attempted to choose those among them who were most open and articulate.

The principal investigator and one assistant spent three or four days with each of the vendors selected. Sellers were observed at home, at work and while marketing. Both a structured interview format and spontaneous questions were employed. Precise information on the household budget was obtained from all 15 vendors. Much of the questioning attempted to verify and supplement information obtained from the questionnaires. The data are in the form of field notes which were made in the course of conversation and observations.

APPENDIX 3. AVERAGE DAILY PROFITS FOR MAJOR STREET FOODS BY SEASON[1]

	Marketplace Sales				Street Vendors	
	Dry Season		Rainy Season		Rainy Season	
	Women	Men	Women	Men	Women	Men
Fried Wheat Flour Snacks	263 (11)		320 (5)		259 (2)	
Bon-bons (Biscuits)		1588 (12)		1907 (8)		
Sweet Cous-cous	195 (7)		310 (4)		125 (1)	
Ices	103 (7)		544 (5)	890 (2)	368 (7)	300 (2)
Millet Porridge	319 (36)		496 (7)			
Tangana		2297 (13)		2725 (8)		
Yoghurt	913 (8)	2330 (3)	1055 (3)			
Brochettes		1590 (10)		1531 (6)	543 (2)	940 (3)
Seafood snacks	249 (14)		356 (8)			
Acaras	366 (21)		373 (8)		305 (9)	
Peanuts	289 (8)		291 (8)		227 (15)	332 (1)
Fruits	98 (11)		790 (18)	348 (13)	522 (17)	866 (4)
Vegetable snacks	256 (2)		235 (5)	825 (1)	222 (3)	2330 (3)
Others			469 (3)		330 (4)	
Grand Average N	305 (127)	1890 (38)	489 (76)	1483 (38)	355 (60)	1093 (13)

[1] The numbers in parentheses indicate how many vendors of each product were included in the average.

APPENDIX 4. FOOD SAFETY

Samples of five street foods were obtained in a random fashion at different times of the day. The foods were frozen in plastic bags soon after collection and later transported (under refrigeration) to Dakar by plane where they were analyzed by the Institut de Technologie Alimentaire (ITA). The following microbiological counts were obtained on all samples:

Aerobic Flora at 30°C x/g

Pathogenic Staphyloccus x/.01g

Clostridium Sulfitoreducteurs x/g

Salmonella x/25g

Microbiological Results:

(1) Lait caillé (4 whole milk samples; 1 powdered milk yoghurt sample)

The four whole milk samples showed the presence of clostridium sulfitoreducteurs presumed to result from fecal contamination, at least in part. Levels >10/g were obtained. The safety of these samples was deemed questionable. The sample of powdered milk-based yoghurt was considered to be satisfactory.

(2) Acara (cowpea fritters)

Four of the five samples submitted showed no pathogens. The remaining sample showed traces of staphyloccus (>5/.01g) and clostridium sulfitoreducteur (>1/g).

(3) Monie (Millet porridge)

Two samples were considered to be satisfactory. The remaining three samples contained staphyloccus pathogens (>9/.01; >1/.01; >1/.01) and clostridium sulfitoreducteurs (>1/g) and were said to be unsafe.

(4) Petits Poissons (dehydrated fish)

Four samples were satisfactory. One sample snowed a high level of coliforms (40,000/g)[1] and was deemed unsatisfactory.

(5) Marinated Oysters (4 samples only)

All four samples showed the presence of clostridium sulfitore-ducteurs (>10/g). One of the four also had staphyloccus pathogens (7/.01g).

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[1]This sample was submitted for analysis at an earlier time and additional tests were done.

BIBLIOGRAPHY

Achleitner, W. and N'dione, E.S., "La consommation en milieu infra-urbain," Dakar: ENDA, November 1981.

Ardener, S., "A comparative study of rotating credit associations," Journal of the Royal Anthropological Institute, 1964, 94, 201-29.

Berniard, S., Le Sénégal en chiffres: Annuaire Statistique du Sénégal, Dakar: Société africaine d'edition, 1979.

Bruneau, J.C., "Ziguinchor en Casamance : une ville moyenne du Sénegal," Centre d'Etudes de Geographie Tropicale, 1979.

Chevassus-Agnes, S. and Parent, G., "Enquêtes de consommation alimentaire et sur l'état nutritionnel effectuées en Casamance," Dakar: ORANA, Juillet 1979-Decembre 1979.

CILSS, "Etude du marche urbain sahélien (Senegal et Haute Volta) des céréales locales et de leurs dérivés susceptibles de se substituer aux importations," Paris: Marcomer (consultants), Juillet 1980.

Colvin, L. "Senegal" in L. Colvin (ed.), The uprooted of the Western Sahel: migrants' quest for cash in the Senegambia, NY: Praeger, 1981.

Country Development Strategy Statement (CDSS), "Senegal - FY 83," Dakar: USAID, January 1981.

de Jonge, K., van de Klei, J., Meilink, H. and Storm, R., "Senegal : Projet d'une recherche multidisciplinaire sur les facteurs socio-économiques favorisant la migration en Basse Casamance et sur ses conséquences pour le lieu de départ." Mimeo, Leiden: Africa-Studicentrum, October 1976.

Diouf, M.B., "Les restaurantrices de la zone industrielle de Dakar; ou la guerre des marmites," Cahiers d' Etudes Africaines, 1981-3, 21, 237-50.

Dolvo, F., Williams, C. and Zoaka, L., Cowpeas: Home preparation and use in West Africa, Ottawa: IDRC, 1976.

Equity Policy Center (EPOC), "Executive Summary: Street Foods Project," Washington, D.C., April 1983.

Falade, S., "Women of Dakar and the surrounding urban area," in D. Paulme (ed.), Women in Tropical Africa, Berkeley: Univ. of California, 1977.

F.A.O., "Market women in West Africa," Report of the seminar on the role of women in marketing local farm and marine produce," Accra, Ghana, December 1977.

F.A.O./WHO, "Energy and protein requirements," Report of a joint FAO/WHO group, Rome: FAO, 1972.

Farbman, M. (ed.), The Pisces Studies: Assisting the smallest economic activities of the urban poor, Washington, D.C.: USAID, 1981.

Grayzel, J., "The ecology of ethnic class identity among an African pastoral people: the Doukoloma Fulbé," Ph.D. dissertation, Department of Anthropology, University of Oregon, 1977.

Hamer, A. "Diola women and migration: a case study," in L. Colvin (ed.), The uprooted of the Western Sahel: migrants' quest for cash in the Senegambia, NY: Praeger, 1981.

Institut Sénegalais de Recherches Agricoles (ISRA), Station de Djibélor, "Recherches rizicoles en Casamance," Rapport d'activites, 1980.

Kane, A., Diop, N., M'Baye, A. and Mané, Y., "Etude préliminaire sur la contamination de la pâte d'arachide par l'aflatoxine B_1," paper delivered at the International Micotoxin Conference, Cairo, 1983.

League for International Food Education (LIFE), Newsletter, "Treatment for starvation may kill," 1983, 16, 2-3.

Leary, F., "Islam, Politics and Colonialism. A Political History of Islam in the Casamance Region of Senegal (1850-1914)," Ph.D. dissertation, Northwestern University, 1969.

Le Cour Grandmaison, C., "Contrats économiques entre époux dans l'Quest Africain," L'Homme, 1979, 12, 159-170.

Lewis, B., "The limitations of group action among entrepreneurs: the market women of Abidjan, Ivory Coast," in N. Hafkin and E. Bay (eds.), Women in Africa: Studies in social and economic change, CA: Stanford University Press, 1976.

Lewis, M., "Developing income generating opportunity for rural women," HORIZONS, 1983, 2, 28-31.

Linares, O., "From tidal swamp to inland valley: on the social organization of wet rice cultivation among the Diola of Senegal," Africa, 1981, 51, 557-595.

Mac Garry, B., "A groundnut shelling sieve and a fan assisted forge design," Appropriate Technology, 1977, 4, 29.

McGee, T. and Yeung, Y., Hawkers in Southeast Asian Cities: Planning for the bazaar economy, Ottawa: IDRC, 1977.

National Council of Negro Women (NCNW), "La femme casamançaise dans son milieu socio-économique," Dakar: USAID report, April 1983.

Sembene, O., "O Pays, mon beau peuple!" Paris: Presses Pocket, 1957.

Sethuraman, S.V. (ed.), The urban informal sector in developing countries: employment, poverty and environment, Geneva: ILO, 1981.

Simmons, E., "The small-scale rural food-processing industry in Northern Nigeria," Food Research Institute Studies, 1975, 14, 147-161.

Smale, M., "Women in Mauritania: the effects of drought and migration on their economic status and implications for development programs," Washington, D.C.: USAID, 1980.

SOMIVAC, "La problématique maraichère en Casamance," journée d'étude à Ziguinchor, 28 août 1981.

S.O.N.E.D., Ziguinchor: Plan Directeur de l'Urbanisme, Livre blanc, Tomes I et II. Dakar: Ministère de l'Urbanisme de l'habitat et de l'environnement, Decembre 1981.

Timberlake, J., "La prévulgarisation des methodes de conservation des légumes et fruits en Basse Casamance," PIDAC, Octobre 1983.

USAID Project Document (685-0205), "Volet Santé du projet regional du développement de la Casamance," 1982.

van Loo, H.L. and Star, N.J. La Basse-Casamance, Sud-Ouest Sénégal données de bases demographiques et socio-économiques. Leyde: University of Leyde, 1973.

Vogel, S. and Graham, M. (eds.) Sorghum and millet: food production and use. Ottawa: IDRC, 1979.

Weil, P., "Human resources " Harza Engineering Co. International, Master Plan of Agricultural Development of the Lower Casamance Area, Phase II, Final Report, August 1982.

Weil, P., Personal communication, 1983.

Worthington, L., "The nutrition factor," Joint Planning of US Assistance Program in Senegal, Dakar: USAID, 1980.