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## SPATIAL INTERACTION OF MARKETS IN THE SHAI AREA

by

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### Introduction

The increasing awareness of the role of markets in development has currently generated considerable interest in empirical studies on trade and markets in Ghana and other developing countries in Africa. In this connection the works of Berry<sup>1</sup>, McKin<sup>2</sup> and Bronley<sup>3</sup> could be cited, but of special significance to this study are those of Scott,<sup>4</sup> McKin,<sup>5</sup> Hill and Smith<sup>6</sup> which concern interaction of markets in rural areas. Scott<sup>7</sup>, for example, analyses the spatial structure of rural markets, and evaluates market periodicity in the context of the exchange system in which all market users participate. He uses farmer and trader visitation patterns to bring out the differential attractiveness of rural markets. McKin<sup>8</sup> also demonstrates the spatial and temporal distribution of markets including the identification of a hierarchy of markets and a discussion of movements of goods and services which link these markets into a system. Hill and Smith<sup>9</sup> have also shown that there is a uniform spacing between markets meeting on the same day, but the distance between markets on the same day is greater than adjacent markets with different periodic market days. This paper attempts to demonstrate the extent to which the findings of these authors are applicable to the exchange system in the Shai Area.

### Objectives of the Study:

Three main objectives of the study can be distinguished. The first is to analyse both inter- and intra-regional trade patterns. The second is to determine the movements of traders, and their wares, and even more significantly the spatial and temporal arrangements of the markets. The final objective is to ascertain the periodicity of markets, and to investigate how such factors as improved transportation, increased

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urbanisation and higher purchasing power have led to the transformation of the system since the latter part of the nineteenth century.

#### Research Methodology:

Two major sources - secondary and primary sources - were utilised for the acquisition of data. The former consisted of both unpublished and published books, articles and governmental reports on trade and markets. Cartographic evidence from Ordnance Survey maps, and chieftaincy lands were used where available. Finally, manuscripts such as Colonial quarterly reports on the Prampri and Akwapin Districts were also utilised. The sources just mentioned were particularly useful for the determination of the nature of local, inter- and intra-regional trade in the Shai area.

The primary source - involved the administration of interview schedules, and constituted the main source of data for the study. The field interviews were carried out in the five Shai villages of Dodowa, Lyikuna, Agonedo, Doryumu and Kodiabe during the summer of 1975. The first part of the field data collection was an intensive reconnaissance survey in the areas where the interviews were to take place. This preliminary survey promoted the establishment of contacts with chiefs, family heads, administrators, traders, individual consumers and producers in the project area. Two different schedules were developed for the survey. The first was designed to cover past economic activities of the people, and was therefore administered to traders who are above fifty years old. The second and the more important covered the present economic activities and were administered in both the markets and individual households. The purpose of the market survey was to reach the traders who visited the Shai area from the regions, while the household one was to obtain information from people who traded in their homes or along the road as well as those who were involved in other means of livelihood apart from trading. In all 302 people were interviewed. This number excluded long unstructured interviews with some of the old and more articulate men and women in the Shai area who are no longer in

any active economic employment but who, as it were, had some knowledge of both past and current patterns of trade in the area.

### Inter- and Intra-Regional Trade

Local trade was as old as the Shai towns themselves,<sup>10</sup> but of more importance was the inter-regional trade in the Shai-Akwapin regions which was carried out through a regular market complex centred on Dodowa between 1790 and 1920.

The Shai areas produced mostly agricultural products which can be seen in the farms and plantations located all around the settlements. The slopes of the ridge were clothed with palm, while the food crops were cultivated on a more level land along the Accra-Dodowa Road. Most of the oil palm (Elaeis Guineensis) grew wild and were tended by the farmers. The food crops grown included types of yam (the Dioscorea species), corn (Zea Mays), ocro (Hibiscus osculentis), groundnuts (Arachis hypogea), cassava (Manihot utilissima) and plantain (Musa sapientum var paradisiasos). Though some of these food crops were for domestic consumption, the greater part entered into the local trade. Retailing of oil palm was done mostly by the Shai, but a few Krobo, Ada, Akwapin and Ewe were also involved. Pottery<sup>11</sup> was a speciality of the Shai and was produced at Agonedea, Doryumu, Kodiabe and Ayikuna. Fish, salt, shallots (a speciality of the Keta District) moved in from the southern coast to the interior, and products like plantain, rubber, yam, kola-nuts and monkey skins came in from the interior through Dodowa to the south, particularly to Accra and Prampran.

Investigations show that at least three categories of people were involved in the horizontal exchange mechanism. These were the farmer, local traders and itinerant traders. The local traders were mainly involved in the movement of locally grown foodstuffs from rural to nearby urban areas or from one rural area to another. Most of these traders operate near their home areas as arbitragers. Their strategy is to visit bulking markets, but cheaply and retail their purchases to small holders in other sections of the same market. In this system

profit margins are low, and commodities are seldom transported from one retail market to the other. The main objective of this practice is to sell quickly commodities that have been bought. The farmers are involved in the local trade by selling their own farm produce and in buying in return other commodities for resale in other villages. The local traders, on the other hand, are interested in trading directly with the intention of buying and reselling. In this trade mechanism, selling may take place daily or until such a time that the commodity is exhausted. This mechanism can be contrasted with the vertical trade system where people converge to buy at regular intervals. Both retailing and bulking are carried on as well, but bulking plays a major central function in the integrated regional market system.

#### Periodicity of Markets (1920-1948)

The settlements studied in the Shai areas have specific market days, where the dominant economic function is bulking and distribution of farm produce and local food processing products.<sup>12</sup> Thus from the point of view of functional organization, periodic markets are one of the most significant features of the operation of the market place sub-systems.<sup>13</sup> An economic theory on periodic markets was elaborated by Stine.<sup>14</sup> Stine's theory relied heavily on Christaller's<sup>15</sup> Central Place Theory's concepts of minimum and maximum range of a good service: the minimum range is defined as the "minimum amount of consumption of the central good needed to pay for the production or offering of the central good", while the maximum range refers to the "farthest distance the dispersed population is willing to go in order to buy a good offered at a place". Usually the maximum range is larger than the minimum range (thus enabling retail establishment to be locationally fixed), but where the minimum range exceeds the maximum, the establishment must become mobile (that is, the market must occur periodically) in order to survive. This theory was tested, basing the analysis on field work, interviews and documentary evidence. Figure 1 shows Dodowa as a market centre with its trade linkages in the Shai-Akwapin area around 1920. The market areas were delimited on the basis of the nearby settlements which depended on Dodowa for trade. The pattern follows Christaller's theory of central

places. The idea of market rings suggests that sellers and buyers move between markets on a weekly basis and usually might visit markets five days in seven, often walking up to fifty miles to exchange extremely low profit commodities. It has been suggested that these movements are more often the result of a social need of sellers, rather than a desire for profit. However, the behaviour patterns of buyers and sellers in the Shai-Akwapim markets show a remarkable departure from this view as is demonstrated in the rest of this section.

All the markets were founded either on palm-oil or cocoa trade in the Shai-Akwapim area.<sup>16</sup> These markets were favoured by their accessibility to other settlements in the region which promoted them as trade centres providing goods and services to other neighbouring settlements. The number of markets visited was small and they were usually bulking markets, though some retailing was carried on as well. The market days were arranged in such a way that the trader could visit other markets during the week; and the distance travelled by a given trader represents the degree to which he and the markets in which he participated were integrated into a regional or national economic system. The market days of Dodowa were Mondays and Thursdays, those of Agomeda were Tuesdays and Fridays and of Ayikuma Wednesdays and Saturdays. Figure 1 shows the market days of other regional market areas. The major markets in the Akwapim areas meet on different days so that a trader can visit as many as three markets in a week. The market days at Adawso were Tuesdays and Fridays, whilst those at Mangoase were Wednesdays and Saturdays. Bulky goods like cocoa and palm products were the most important commodities, and were sent to the nearest markets for bulking. Less bulky commodities like textiles and perishable items like fish were taken from one market to another. Similar products were retailed and bulked in most of the markets. Foodstuffs like yam, plantain, cocoyam, cassava and vegetables were sold in all the markets, while salt and fish were bulked by traders from Ada, Tema, Kpone, Ningo and Labadi. Dodowa and Ayikuma in particular specialised in palm products. Adawso, Awukugua, Mangoase and Tinkong, on the other hand, specialised in cocoa, though Adawso was the most out-

standing cocoa market in the Akwapin area during the early years of cocoa cultivation in the country. The cocoa and palm products were purchased in these markets by Akwapin and Fante middlemen, who transported them to the ports of Accra, Prampram or Kpong for shipment to Europe.

It is clear from the above discussion that the markets originated as commercial centres, though they undoubtedly had social functions as well. These markets did not offer services to only the inhabitants of the particular markets in which they were located, but to those of the surrounding villages and towns as well. The purchasing power of these settlements was such that there was no need for markets to meet daily. Where a trader had surplus commodities after the market day she walked to the next nearest market in the region the following day in order to dispose of those items. Though Christaller theorized that people had to walk up to eighty kilometres to the market or service centres in order to satisfy their requirements, in the study area people walked shorter distances. The study shows that traders walked up to sixteen kilometres within the market ring to sell, transporting their commodities mainly by head-potorage. Thus, a trader from Dodowa could easily trade between Dodowa, Ayikuma and Larteh, whilst a trader from Larteh could also trade at Dodowa and Awukugua.

#### The Spatial Organization of the Market System Today

The markets that have just been discussed were soon to experience profound changes in structure and organization due to economic upheavals that took place in the southern part of the country during the latter part of the twentieth century. In Figure 1 the foot-paths linking the various markets are demonstrated. These foot-paths played a significant role in the development of the various markets in the Shai-Akwapin area by linking all the market centres. However, when means of communication were improved and transportation became cheaper the markets at Dodowa and Ayikuma gradually lost a greater part of their tributary areas to centres which were better supplied with transportation lines. The cocoa

station at Mampong, in the Dodowa tributary area, was moved to Adawso from where the cocoa was transported to Mangoase and then sent by rail to Accra. Mangoase grew as a temporary terminus of the Accra-Kumasi railway which came to a standstill during the First World War in 1914. This gave Mangoase significance as the main outlet of cocoa in the Akwapim Region till after 1918 when the line was continued to Koforidua, which was also a major cocoa producing area. Dodowa and Ayikuma markets were the first to diminish in importance. When decline set in, many traders turned their attention to Mangoase, Adawso and Awukugua. These markets continued to flourish until about 1929 when the unfortunate capsid menace devastated the cocoa farms in Akwapim. This marked the end of the cocoa trade, and the importance of the markets in the Akwapim Region.

The inter-regional market system, as it exists today, has been shown in Figure 2. The market areas have shrunk considerably in size due to the collapse of the apim oil and cocoa industries. The markets are still in function; some have retained their functions as periodic markets, though on a less important scale, whilst others have ceased to function as markets. An example of such a market is that at Awukugua, which has collapsed almost entirely. The little that remained of it has been moved to Abiriu, as shown on the map.

#### Periodicity of the Market System Today

The periodic markets in the Shai area are much firmly localised and smaller in extent than they used to be during the second decade of the twentieth century. The periodic market days are still maintained and the Shai as well as the Akwapim regions experience a three-day market week. Figure 2 based on field work conducted during the summer of 1975 illustrates the periodic markets in the Shai area and their relationships to other markets in the Akwapim area. The evidence reveals the existence of market places rotating market meetings among a group of markets in such a way that one can attract a sufficient number of people to justify holding a market. The emergent pattern further shows that many



people from distant villages have the opportunity to attend markets in the bigger villages. The markets are spatially arranged in such a way that markets meeting on the same day are normally not less than 16 km. apart. This is true of Dodowa and Abiriw, on the one hand, and Agomeda and Larteh on the other hand (Figure 2). Thus, there is a uniform spacing between markets meeting on same days in the Shai and Akwapim Ridge towns. On the other hand, the distance between markets meeting on the same day is greater than adjacent markets with different periodic market days. Ayikuma, whose market day is Wednesday is only 8 km. away from Dodowa whose market day is Monday. There are no markets in the Shai area which hold markets on the same day except Doryumu and Agomeda whose market days fall on Tuesday and Friday. It must, however, be pointed out that, according to the residents of Doryumu, the settlement has no market day. There is a daily market though there is greater attendance on Tuesday and Friday. Secondly, the markets in the Akwapim area meet on days equivalent to the Shai market days. Thus, the market days of Dodowa - Monday and Thursday - coincide with those of Abiriw; Agomeda and Larteh meet on Tuesday and Friday whilst Ayikuma and Mangoase hold markets on Wednesday and Saturday. It is, therefore, clear that two distinct market cycles or rings exist - one in the Shai area and the other in the Akwapim area, and they are so arranged that the local trader can visit both Shai and Akwapim markets during the same market cycle period. The popular Akwapim markets visited by the Shai are Larteh and Mangoase. The choice of Larteh is obvious. It is nearer to the Shai area - being only 11.5 kilometres from Ayikuma, and 18 kilometres from Dodowa. Normally traders from Dodowa, who sell perishable commodities such as smoked fish and fresh vegetables, sell at Dodowa on Monday, visit Larteh on Tuesday, and trade on Wednesday. They go back to the Dodowa market with a second market day on Thursday. Those who tend to visit Mangoase are the foodstuff (cassava, plantain) dealers who are attracted by the greater economic opportunities of a bigger market.

An important aspect of trading in these periodic markets is the presence of farmer-sellers and farmer-traders who participate primarily in a horizontal system. The farmer-seller, especially foodcrop farmers, usually sell wholesale to either local or long-distance traders who, in turn, retail their purchases in a regional market like Accra. The farmer-traders, on the other hand, bring their vegetables or foodcrops to the market to retail and in return buy other goods to be resold in other villages like Doryumu or Kodiabe on daily basis.

The periodic market most visited by Dodowa traders is Dodowa. All the 103 traders interviewed in the town visit the Dodowa market as well as other Shai markets except 1% who claim that they do not visit any other markets besides Dodowa. The most important market visited by traders from Dodowa is Ayikuma which is visited by 33.4%. The next in order of importance is Larteh 22.4%, Somanya 19.8%, Agomenya 12.3%, Mangoase 9.1% and Frankadua 2%. The most popular markets visited by traders from Kodiabe and Doryumu are Ayikuma and Agomeda. The reason for the choice can be partly attributed to the proximity of Ayikuma and partly to its accessibility from these two settlements. The field survey, indeed, supports this view. According to the survey, 76% of the traders prefer to visit nearby markets in the Shai area owing to transportation problems; 54% of them get to the market by foot, whilst 10% prefer to visit markets with more participants. The rest tend to visit markets where they have regular customers, and also bigger service centres like Accra and Koforidua.

#### Commodity Flow

The commodities for trade offer an interesting topic for discussion since limited farming is done in the Shai area itself. Thus, the movement of local farm produce in the Shai area into the markets is not a simple movement of men and women from their farms.

The majority of the Shai people are traders (68%), and only 14.96% earn their living by farming (Table 1). The usual practice, therefore, is for the women traders to act as a first-level intermediary - they buy goods from a number of farmers in order to sell at the markets, and in some cases they even buy from other women who have purchased the commodities from farmers.

Table 1

OCCUPATIONAL CHARACTERISTICS AMONG THE SHAI

Settlement	Sample Size	Trade %	Farm %	Pottery %	Others %	Unemployed %
Dodowa	155	66.45	10.96	1.93	22.59	3.22
Agomeda	34	79.41	8.82	0.00	11.77	0.00
Ayikuma	35	65.71	11.41	0.00	22.88	5.71
Kodiabe	42	64.28	21.42	2.38	11.92	2.38
Doryumu	36	63.88	22.22	2.77	11.13	0.00

Most of the farmers prefer selling to non-relatives in order to get better selling prices for their goods; in actual fact, most of the farmers interviewed sell their farm produce to the local traders and visiting traders on periodic market days.

Although the various types of the marketable products from the neighbouring settlements move to the Dodowa market without any definite pattern, there is however, a certain degree of specialisation from the feeder areas as Table 2 shows.

The most outstanding specialization is shallots from the Keta district, whilst smoked fish enters the market from the coastal settlements of Ada, Prampram, Tema and Akuse along the Volta River. Unlike other periodic markets where distant traders arrive on the eve of market day, the traders to the Shai area, especially those from Keta and

Table 2FLOW OF COMMODITIES TO THE DODOWA MARKET

Commodity	Feeder Settlement	Distance from Dodowa (in km.)
Corn	Asesewa	83
	Frankadua	68
Cassava, Plantain	Asesewa	83
	Odumase	37
Shallots	Ada	97
	Keta	163
Fish	Akuse	49
	Ada	97
	Accra	40
	Prampram	31
	Tema	43
Pepper, Tomatoes	Somanya	32
	Akuse	49

Ada, leave at dawn to get to the market by 8.00 a.m. These are the traders who sell their commodity in bulk to local traders in order to return to their base the same day. The present movement of traders shows clearly that now agricultural products move for far greater distances than they used to during the latter part of the nineteenth century and the first decade of the twentieth century. This change is attributed to considerable improvement in vehicular and rail transportation which makes for greater mobility so that people can take their products over longer distances, instead of transporting their commodities by head-porterage for about 16 kilometres to get to the market. The improvement in transportation and the growing importance of foodcrop markets mainly account for the shrinkage of the market cycles (compare Figures 1 and 2). Whereas formerly traders were compelled to visit the nearest market because of the transport situation, now traders have a wider choice of markets.

The local products assembled in the markets in the area of study move in various directions, but three directions are outstanding. The first movement identified in the area is the flow of goods to the surrounding settlements in the ring. Women, who visit the market with the intention to sell, hardly leave the market without buying something, for the market serves as their local shop where they can buy their food and some imported material. Secondly, there is the movement of goods from one market ring to the other. Thirdly, there is a movement of goods, especially vegetables like tomatoes, pepper and garden eggs out of the markets to the nearby towns and other urban areas.

The other movement of goods is that of imported goods, which are not available in the immediate locality of the market, but come in from Accra. The scale of trading in this particular type of commodity is very small, but it serves a very important function by bringing within reach of the rural population such imported goods as textile, aluminium ware, milk, soap and sugar. As has already been pointed out, traders who sell such items usually visit several markets within the ring before returning to their base to replenish their stock.

In discussing commodity flow, one must not overlook the middlemen whose activities considerably aid the movement of goods to the Shai markets. In the Dodowa market, the middlemen who are mainly Ga-Dangbe and Akwapim, operate in seven centres, which form the source of the products they assemble on periodic market days. Foodstuffs like palm-nuts, cassava, garden eggs and pineapples are brought from Ashiaman and Kurabor, fish from Ada, Tema, Ningo and Accra, and vegetables from Iarteh. In the other Shai markets, it seems middlemen from the same centres operate, though in Kodiabe additional centres are involved. Middlemen purchase foodstuffs and vegetables from Suhun, Adawso and Mangoase as well. These middlemen are mainly interested in bulking and may not buy anything from the market for re-sale. On the other hand, there are some middlemen who specialize in earthenware, and, therefore, purchase pottery in bulk, especially at Agonedo, Kodiabe and Doryunu for bulk reselling in other markets like Tema and Ashiaman.

### Generation of economic activity

It is obvious that the Shai area is largely inhabited by the Shai people. The sample population of 302 interviewed in the Shai settlements shows that apart from Kodiabe where the greater proportion (42%) are Ningo, the other four settlements have a predominant Shai population. In Dodowa, 55% of the inhabitants are Shai, 9% Ningo, 6% Ada, 6% Krobo while other tribes including Ga and Akwapim comprise 24% of the population. Doryumu has a Shai population of 75%, Agomeda has 79% Shai, and Ayikuma has by far the largest Shai population of 97%. The majority of these people are traders as indicated in Table 1. In spite of the large percentage of traders there are inadequate incentives for the encouragement and expansion of trade in the area, hence the income of the Shai trader is prohibitively low (see Table 3). The average foodstuff trader in Dodowa earns about ₵36.00 per month; the average for the traders in the other periodic markets are lower still. Agomeda traders make on the average ₵25.60 per month whilst those in Ayikuma make ₵23.00 per month. Some traders earn as low as ₵8.00 per month. Compared with the income of ₵60.00 per month for the lowest paid labourer in the country, the Shai foodcrop trader is apparently very poor. Among the food-crop traders the palm-nut sellers could be singled out as high income earners. Most of them make about ₵100.00 per month in the Agomeda market. Perhaps the most profitable item of trade is earthenware,<sup>16</sup> which is locally manufactured and can be regarded as a speciality of the area, particularly in Kodiabe and Doryumu. Most of the pots are sold in bulk to middlemen from Tena, Somanya and Ashiaman. The average earning of the earthenware manufacturer in the two towns is ₵120.00 per month, though most of them earn up to ₵200.00 per month. In Kodiabe there are a few cattle dealers who make about ₵300.00 on a cow.

A picture, thus, emerges of the Shai trader with a low income and poor profit margin. This can be attributed to several factors, one of which is the organization of trade itself (see Table 4). Though the majority of traders do not employ any assistants, about one-third of the

Table 3

65.

## ECONOMIC PATTERNS AND PRODUCTIVITY IN THE SHAI AREA

Occupation	Number of Traders Employed					Average Net Return (Cedi/Month)				
	Dodowa	Agomeda	Ayikuna	Kodiabe	Doryumu	Dodowa	Agomeda	Ayikuna	Kodiabe	Doryumu
Wholesale Trader	7	1	3	1	0	60.21	53.61	4.11	23.45	0
<u>Foodstuff Retailer</u>										
Cassava	35	11	12	13	7	36.00	25.6	23.00	21.50	16.00
Plantain										
<u>Vegetable Retailer</u>										
Palmnuts	32	8	9	16	8	28.50	62.00	23.20	8.00	12.00
Garden Eggs										
Tomatoes										
Pepper										
Fish	16	6	3	4	1	20.00	90.00	32.40	12.65	12.00
Pottery	7	3	4	1	2	85.60	74.00	70.00	120.00	120.00
Food Sellers*	6	2	2	1	3	35.00	40.00	33.00	33.40	36.00
Wine and Spirit	9	-	-	2	-	56.00	-	-	25.40	-
Cattle	-	-	-	1	-	-	-	-	300.00	-

\*Food-sellers comprise those engaged in selling food items like bread, beans and gari, fried plantain and kenkey.

Table 4

## ORGANIZATION OF TRADE BY HOUSEHOLDS

No. of workers in trade	Dodowa		Agomeda		Ayikuma		Kodiabe		Doryunu	
	No.	%	No.	%	No.	%	No.	%	No.	%
No. of workers	82	52.90	28	82.35	24	68.57	22	52.38	26	72.22
1-2	44	28.38	3	8.82	8	22.85	11	26.19	5	13.88
3-4	14	9.03	3	8.82	1	2.85	4	9.52	1	2.77
5-6	2	1.29	0	0.00	0	0.00	1	2.38	0	0.00
No response	13	8.38	0	0.00	2	5.71	4	9.52	4	11.11
Household help in trade	55	35.48	6	17.64	9	25.7	13	30.95	5	13.55
No. of workers paid	55	35.48	6	17.64	9	25.7	13	30.95	5	13.50

Table 5

## SPECIALITY OF MIDDLEMEN IN TRADE

Trade Item	Dodowa		Agomeda		Ayikuma		Kodiabe		Doryunu	
	No.	%	No.	%	No.	%	No.	%	No.	%
Foodstuffs	22	14.19	3	8.82	2	5.71	0	0.00	1	2.77
Pottery	1	0.64	4	11.76	2	5.71	0	0.00	1	2.77
Fish	6	3.87	2	5.88	1	2.85	1	2.38	0	0.00
No specialization	126	70.30	25	73.54	30	85.73	41	97.62	34	94.00
Total	155	100.00	34	100.00	35	100.00	42	100.00	36	100.00



traders in Dodowa and Kodiabe get assistance from some members of their households, usually daughters or nieces. In most areas in Ghana, such household assistants do not receive any regular remuneration, but our research findings clearly reveal that all such assistants in Shai are paid as Table 4 shows. This practice reduces the already low profit margin of the trader. Another factor which further cuts down the profit of the trader is the operations of middlemen who specialise in food-stuffs, pottery and fish. The middlemen usually offer low prices for these commodities because they buy in bulk in order to resell in other markets and must be certain of a reasonable profit margin after reselling. Indeed, the middlemen usually make more profits than the farmer traders and seller traders. Yes, the traders do not strongly object to the activities of the middlemen. The latter assure the trader of her income and quick return especially where commodities with high perishability rate like tomatoes and fish are concerned. They also give the distant trader enough time to return to her destination by the afternoon. As Table 5 shows, most of the middlemen do not specialise in particular commodities, except a few who operate mostly in Dodowa, Agomeda and Ayikuma. In Dodowa, most of the middlemen are dealers in foodstuff and fish, whilst those in Agomeda handle more of pottery.

The low income of the Shai trader thus results in low savings and low capital formation, and because there is very little capital for investment in the expansion of agriculture or for increasing and extending her trading activities, the Shai remain poor. Those interviewed isolated four major problems which they think may have contributed to the plight of the traders. Availability of capital was identified as the major obstacle in their economic pursuits. Those who suffer most in this case are the farmer traders involved in oil-palm and cassava production who need to expand their farms or plantations. This is so because the farmer trader divides his capital so he operates at low levels in either way. Added to the financial problem is the difficulty of acquiring land for farming purposes. A third problem of the trader is transportation difficulties. Traders complain of high costs of transport which, in turn, reduces their profit margin. There is also

the problem of low purchasing power among the local population. Indeed, the last problem is a contributory factor in encouraging the periodic market cycle in the area. Owing to low sales in the study area, most of the traders prefer visiting other bigger and competing market centres like Accra, Tema and Ashiaman where purchasing power is much higher. Most of the Shai towns have thus been losing both traders and buyers to these bigger trading centres.

### Conclusion

The study has examined spatial interaction of markets, which can significantly be traced back to the beginning of the oil palm industry centres on Dodowa during the nineteenth century.<sup>16</sup> Both horizontal and vertical exchange systems were consequently developed with increasing emphasis on vertical trade, which, indeed, became the economic basis of the Shai area. The periodic market cycle is maintained, but improved transportation, increased urbanization and its associated higher purchasing power, have led to the transformation of the system since the second decade of the twentieth century. The trade system, as it survives today, exhibits a periodic market system with a three-day market cycle. Markets meeting on the same day are uniformly distributed spatially. The average separately distance markets meeting on the same day is 16 km., though the distance between adjacent markets meeting on different days is shorter. The Monday Market of Dodowa is 8 km. away from the Wednesday Ayikuma market, whilst the Tuesday Larteh market is only 4.8 kilometres from the Ayikuma market. The present periodic market system is not enough in achieving effective economic goals among the rural folks, who suffer poverty owing to low productivity and incomes and lack of adequate incentives for diversification in their rural economies. The consequence is out-migration of the able-bodied men in search of better jobs elsewhere - in the cities and in the farming regions. Perhaps with further research into availability and utilization of local resources, the economic base of the area will not only be broadened, but will be strengthened to meet the increasing needs of the exchange system, which involves 60 per cent of the Shai population and is the basic means of livelihood.

### Policy Recommendations

In the light of the above discussions, it has been necessary to make some policy recommendations.

The findings clearly reveal that there is need to improve and broaden the economic base of the Shai area. The improvements should be based on existing economic activities, which comprise trading, farming and the manufacture of earthenware. Trading is concentrated on food-crops such as cassava, garden eggs, pepper and tomatoes, most of which come from the outlying regions to the Shai area for marketing. The quantity originating from the Shai area itself accounts for not more than 2% of the foodstuffs marketed in the area. It is believed that if cultivation of these foodcrops were improved and expanded, settlements like Dodowa and Ayikuma could produce enough cassava and vegetables for their respective markets and even have a surplus for the urban markets, for example, Accra, which is just over thirty kilometres from Dodowa. In this connection the Food Distribution Corporation could perform an essential role by establishing collecting centres in the area, and helping with the marketing of the foodcrops. With the expansion of agriculture, particularly, the production of cassava, a gari processing plant could be established for the large-scale production of this food item which is a staple throughout the country. Starch and glucose could also be produced from the cassava. These developments would not only lead to increased productivity and supply, but also open up more job opportunities for the men who have been migrating to urban centres owing to the lack of employment opportunities in the area. The manufacture of earthenware at the moment is manual, but if this could be semi-mechanized to increase production and introduce more varieties of earthenware such as glazed mugs, plates, soup bowls and flower vases

the earthenware industry would be revolutionised and at the same time attract markets throughout the country and even abroad, thus helping to raise the low incomes of the majority of the people in the Shai area. Though it would seem over-ambitious to anticipate the development of the potteries in Staffordshire of England, developments along such lines would go a long way to transform the economy of the area.

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