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**FINANCING RURAL FOOD MARKETING  
SYSTEMS IN GHANA**

by  
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ABSTRACT

This paper argues for a more comprehensive study of capital formation and management among food traders. It reports results of an empirical study of the importance of credit facilities to the financing of the food marketing functions within a rural community in Ghana.

## INTRODUCTION.

Empirical investigations tend to indicate that food traders in Third World countries (TWCs) operate with very limited capital and their undertakings are usually small. Their inability to generate additional capital from their operations or to secure loans seriously limits their technological innovations (Sorensen, 1984). Leading writers on the subject have therefore supported the conclusion that any significant development of the marketing system requires external intervention.

It is however the contention of this paper that the anatomy of capital formation and management within the food marketing system lacks comprehensive investigation. The size of undertakings and capital development depend not only on the size of initial capital, but also on turnover rate, profit margin, type of ownership and credit facilities at the disposal of traders. For example, the pooling of capital in the form of partnership and/or the availability of supplier's credit can significantly expand traders' undertaking. High turnover rates also improve chances of capital accumulation.

The study reported in this paper focuses attention on one of these variables - namely credit arrangements within the channel system. It examines the sources of the credit and their significance to traders' working capital foundation. It, in so doing, attempts to indicate the distribution of the burden of financing the local food marketing system within a specific rural community.

## 2. SOME THEORETICAL CONSIDERATIONS.

The main productive resources in any typical Third World food marketing system are capital and labour. The central issue in the efficiency debate has been the determination of the optimal input mixes within the trading system.

### 2.1. OVERMANNED MARKETING SYSTEM.

It has been forcefully argued by some writers that the channel systems have been "overmanned" in most countries (Galbraith and Holton, 1955). Thus, in order for equimortality to be restored between the two factors of production, either capital must be increased or labour must be reduced or both. Believing that small food traders lack managerial competence to improve the marketing system, their replacement by large modern private and/or cooperative channels have been suggested (Harrison et.al., 1974). The modern channel systems, it has been suggested, must be vertically and horizontally integrated

Others have argued for the development of multi-tier channel systems within which the small traders and cooperative coordinated framework. This would permit the retention of the small traders within the channel system and thereby avoid the socially explosive consequences of their outright elimination (Kuada, 1984).

### 2.2. NEED AND SOURCES OF ADDITIONAL CAPITAL.

At the centre of these reform proposals is the indisputable need for injecting additional capital into the food marketing system. Berens (1980) argued strongly that generally, the innovative capability of entrepreneurs within the retail trade is severely hamstrung by initial undercapitalization and the "leery" attitude towards his operation by financial institutions. For this reason, the innovative process is slowed and painfully discouraging for many. The successful ones depend mainly on internally generated sources of fund which accumulate slowly, especially if they are operating on a small scale. Furthermore, the lack of market support services such as research, information systems and physical infrastructure (eg. telephone and transport networks) raises the level of initial capital required for meaningful and profitable innovation (Mittendorf, 1982).

It is unimaginable to expect small traders who are eking for bare subsistence to generate their own funds for innovation. It is therefore generally agreed that additional funds should come from sources external to the trading system.

### 2.3. MANAGEMENT OF CAPITAL WITHIN THE TRADING SYSTEM.

This conclusion seems to have discouraged careful analysis of the capital formation and management process within the distributive trade. It is a common knowledge that small traders market the bulk of local foodstuffs in most TWCs. This they do in spite of government antagonism and efforts to replace them through generous support granted state food marketing enterprises (OECD, 1977). Since all marketable surpluses must be paid for and other marketing costs met, it is important to explain the apparent paradox of the limited capital situation and the traders' capability to control a significant share of the food market. The fundamental questions to ask are:

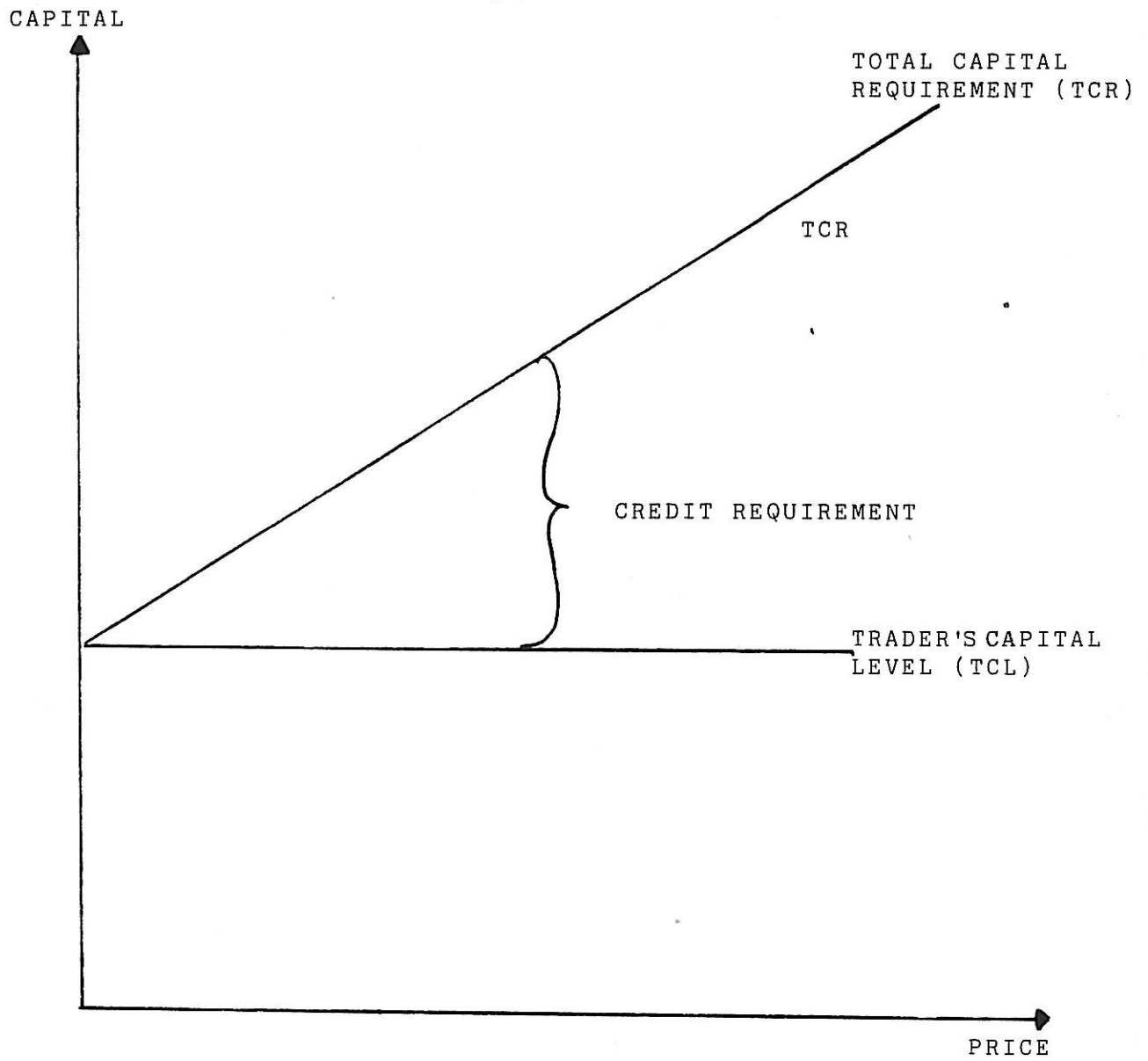
- a. who finances the marketing activities and
- b. how is the financial weight distributed within any given channel system?

In anticipation of our hypotheses below we suggest here that generous credit facilities within the channel system is the solution to this paradox. The importance of credit can be appreciated when we reckon the high rate of inflation in many TWCs.

Under acute inflationary conditions, rapid increases in food prices put an upward pressure on traders' capital requirements. Each subsequent purchase requires an additional amount, and other marketing costs rise in relation to the inflationary rate. Without credit facilities, traders would have to convey declining volumes of supplies, a situation which can further step up the inflationary tempo.

The relationship between food prices, capital and credit can be pictorially presented as in figure 1. We assume that working capital from a trader's own resources is constant over a short run (eg. during a season or a year). This is represented by the horizontal line parallel to the Y axis. As prices increase within the season, capital requirements increase. The gap between the trader's capital contribution line and total capital requirement indicates the credit required. This gap widens as prices increase.

FIGURE 1. RELATIONSHIP BETWEEN CREDIT, CAPITAL AND PRICES.



### 3. HYPOTHESES.

The discussions in section 2 raise two fundamental issues of study:

- a. an evaluation of the marketing inputs to determine their relative efficiency; and
- b. a systematic analysis of the capitalization process among the food traders.

The study reported in the subsequent pages focuses mainly on the second issue while passing comments are made on the first. The ability of the traders to maintain their present level of activities should suggest that the current financial arrangements among the channel members is quite effective and worth studying.

We hypothesise as follows:

1. Interchannel credit is the major source of working capital within the food marketing system
2. The need for credit increases with rising food prices (especially under inflationary conditions).  
(Corollarily traders' internal capital formation lags behind their working capital requirements under inflationary conditions).
3. The rate at which a given trader accumulates capital is a function of
  - a. her position<sup>1)</sup> within the channel system
  - b. her arrangements with her suppliers
  - c. her level of education
4.
  - a. A trader's goodwill or trustworthiness determines the amount of credit she gets
  - b. Trustworthiness depends on
    - (i) her position within the channel system
    - (ii) the size of her own working capital contribution
    - (iii) her trading history and experience within the given locality

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1. Position is defined here as the trader's major activity within the channel system - i.e. wholesaling, retailing or trucking.



#### 4. SOURCE AND NATURE OF DATA.

The data analysed here is part of a broader study of traders activities in Kpando Tokor market centre. The original sample embraces 164 traders. Out of this a sub-sample of 72 traders with specific characteristics have been selected for a careful study of the issues stated above.

This sub-sample is different from the rest in two principal ways:

- a. They all trade in either or both of the two most popular staple foodstuffs - yam and maize;
- b. They all buy directly from farmers or indirectly through their agents.

These characteristics reduce the number of intervening variables that could influence the results of our analysis and thereby improve their reliability.

The sub-sample is however not entirely homogenous. Apart from demographic differences, the respondents also differ in terms of their position within the channel system. About 70 per cent engage mainly in wholesaling while the rest are either retailers or prepared-food sellers.

On the subject of capital management respondents were required to provide information on their sources and amount of initial capital, current capital position, the amount of cash held, and credit to their customers as well as credit obtained from their suppliers. They were also asked to state the amount of capital they considered was necessary for their optimal operation. This last information was to give an indication of their level of aspiration and the degree of undercapitalization in general. Information from questionnaire responses was supplemented with in-depth personal interviews with ten leading wholesalers in the area. The supplementary information covers details of the terms of credit, and factors which ensure the effectiveness of the arrangement and thereby reduce the risk of financial loss to suppliers.

## 5. ANALYTICAL MODELS AND PROBLEMS.

Following hypothesis (1), we postulate that the total working capital at the disposal of a trader is the sum of her

- a. operating cash (i.e. cash-in-hand)
- b. credit to her customers, and
- c. credit from her suppliers

This relationship is defined symbolically as

$$TWK = CA + CR_1 + CR_2 \text{ -----(1)}$$

Where TWK is total working capital,  $CR_1$  is credit from suppliers and  $CR_2$  is credit to customers. In other words,  $CR_2$  represents the proportion of "external" contribution to the trader's working capital.

The formulation in this form holds the danger of double counting. The trader may merely pass the credit she receives from her suppliers further on to her customers.

In this way, credit flow within the channel may not represent any real addition from traders. This problem can be resolved by determining the real credit contribution of each channel member. That is

**Actual credit contribution (ACC) = Credit to customers - credit from suppliers**

Symbolically,  $ACC = CR_2 - CR_1 \text{ -----(2)}$

The trader's own contribution to working capital therefore becomes her cash-in-hand plus her credit contribution. That is,

$$WKc = CA + (CR_2 - CR_1) \text{ -----(3)}$$

(Where WKc is trader's working capital contribution).

These clarifications lead to the modification of relationship (1) above to become.

$$TWK = CA + CR_1 + (CR_2 - CR_1) \text{-----} (4)$$

In conventional business practice, credit has a cost to the recipient. The cost is estimated as the sum of

- a. the opportunity cost of the credit,
- b. the risk involved, and
- c. the rate of inflation which invariably depreciates the real value of the amount.

These three elements are incorporated into the interest charged for granting the credit. Thus

$$CR = A + A (I + r)^n \text{-----} (5)$$

Where CR is the credit granted, (A) is the amount (i.e. price x quantity), (r) is the interest rate and (n) the duration of the credit).

This formal cost calculation is absent within the food trading system. In fact, final prices are usually arrived at through bargaining. This gives rise to the incorporation of a wide range of non-economic considerations in the pricing system. It is fairly reasonable to assume therefore that suppliers do not include the cost of credit in their prices. In other words, the cost is indirectly waived. This means a subsidy to customers' working capital.

The subsidy element in the credit arrangement can be estimated by discounting the amount (A) received by the supplier at the end of the credit period by an estimated cost of credit. That is,

$$S^* = A - \frac{A}{(L+r)^n} \text{-----} (5)$$

(Where  $S^*$  is estimated subsidy, (A) is the amount of credit granted and  $(l+r)^n$  is the discount factor).

Since each credit transaction within the food trading system has an element of subsidy, the total subsidy enjoyed by the whole system can be easily calculated as the summation of all the individual subsidies within a given time period.

## 6. RESULTS.

### 6.1. CREDIT FACILITIES.

Our data cover only two levels within the channel system. As noted above, the traders in our sample invariably obtain their supplies from farmers and sell to retailers or consumers. Suppliers in this analysis therefore represent farmers.

Stated briefly, the results suggest the dominance of credit arrangements within the channel system. On the average, about 65 per cent of the traders' working capital is in credit (see table 1). Cash seems to be held just to cover logistics expenses and to pay deposits for produce purchased on credit.

The importance of farmers' in this credit arrangement must not be missed. As mentioned earlier, both wholesalers and retailers in this study get their supplies directly from farmers. The credit flow process is therefore initiated by farmers.

As shown in table two, farmers' credit constitutes 46 per cent of the working capital. The proportion is 41 per cent for the wholesalers and 65 per cent for the retailers. This tends to confirm the general view that traders enter trading with the barest minimum capital. But their dependence on farmers to finance a major proportion of their activities has hitherto not been revealed.

Following through this study, the volume at each given time period would be greatly reduced without credit from farmers. The consequences would be an escalation of food prices.

In this light the importance of credit to the food marketing system redefines the power structure within the channel system. It is a potential leverage for farmers and can be used collectively or singularly against the traders, if it is deemed necessary. As will be shown subsequently, the traders make considerable effort to maintain good relations with their established suppliers. This guarantees them credit and regular supplies during critical periods.

TABLE 1. COMPOSITION OF TRADERS' WORKING CAPITAL. (averages).

Type	Traders					
	Wholesalers		Retailers		All Respondents	
	cedis	%	cedis	%	cedis	%
Cash	22.000	34	7.000	35	16.000	35
Credit from supplies	26.000	41	13.000	65	21.000	46
Traders' net credit to customers*	<u>16.000</u>	25	<u>-</u>	-	<u>9.000</u>	19
	<u>64.000</u>		<u>20.000</u>		<u>46.000</u>	

\* Given as (Total credit to customers - credit from suppliers).

TABLE 2. RELATIVE CONTRIBUTION OF FARMERS TO TRADERS' WORKING CAPITAL

Type	Traders		
	Wholesalers	Retailers	All Respondents
	%	%	%
Traders' contribution	59	35	54
Farmers' contribution	41	65	46

## 6.2. DETERMINANTS OF CREDIT.

It has not been possible to undertake a statistical analysis of the determinants of a trader's creditworthiness. Exhaustive personal interviews with some of the leading traders in the area however tend to support our hypothesis. A trader's creditworthiness is not established by any form of documented business performance as it obtains in conventional business practices. Neither are credit risks insured with securities of any form of formal guarantees. The decision to grant credit is therefore based primarily on the supplier's judgment of her customer's trustworthiness, either through earlier business relations or by the recommendations of a mutual business associate.

A new entrant into the trading system naturally lacks any basis for determining her creditworthiness. Analysis of the general characteristics of the traders revealed that the younger ones operate on partnership basis in order to overcome this limitation. By pooling their capital together they are able to buy the bulk of their foodstuffs on cash basis. Over time, they establish their individual contacts and goodwill which guarantee them credit. Most partnerships break up when the traders begin to enjoy credit facilities.

There were also evidences supporting the hypothesis that the traders' position within the channel system partly determines their creditworthiness. The bigger wholesalers appear to enjoy stronger trust from the suppliers. They command greater financial resources and are nearly always capable to honour their debts with reasonable promptitude.

Since creditworthiness is based on subjective evaluation, traders take pains to maintain good relations with their suppliers and to protect their goodwill. Rumours of default can be disastrous for even the well established trader.

Gifts of kerosine, salt and other basic household manufactures are commonly given to farmers by traders. During critical farming seasons, some traders grant farmers short term personal loans if they so request. These are just some of the efforts they make to solidify their trading relations with farmers in the area.

### 6.3. TERMS OF CREDIT.

The credit arrangements seem to have a more profound influence on the structure and tempo of food marketing than hitherto acknowledged by analysis. The assembling of suppliers and their transportation have to be arranged to ensure that supplies get their money on schedule. Care is also taken by wholesalers not to oversupply their payment obligations on schedule. It is not uncommon for a trader to make a trip purposely to collect payments from retailers - i.e. without conveying new supplies to them. The costs of such trips tend to raise the overall marketing cost and reduce the disguised capital subsidy they enjoy.

The terms of the credit is itself very loose and vary widely among farmers. The common practice is that traders pay for their supplies within two weeks of delivery. This time corresponds with the time it takes the cargo vessel to make a round trip - i.e. from the farmers' end of the lake to the Tokor harbour.

The disguised capital subsidy mentioned above arises from the fact that the credit granted attract no interest. The amount of credit granted the traders in this sample has been discounted by an estimated interest factor to determine the extent of subsidy. In absolute terms, the 72 traders enjoyed a capital subsidy of ₡ 108,000 on an annual basis, or an average of ₡ 1,500. This corresponds to approximately 35 per cent of their own capital contribution.

### 6.4. CAPITAL SHORTAGE.

The respondents were asked to state the amount they considered necessary for their trading activities. This question has twofold objectives. First, it was to give an indication of the extent of capital shortage within the trading system. Second, it was to indicate the level of aspiration of traders as entrepreneurs.

The results showed that average capital requirements of retailers (and prepared foodsellers) was 122 per cent greater than their current contribution to capital (i.e. total working capital less credit

from suppliers). Wholesalers, on the average wanted 170 per cent more capital than they had (see table 2a).

The traders' conception of working capital differs from the definition adopted in this study. They did not regard credit from their suppliers as part of their working capital. The gap between the current and expected levels of capital reduces slightly when the figures are revised in line with our definition. The figures become 33 per cent for retailers and 90 per cent for wholesalers (see table 2b).

The additional capital was generally required for the expansion of their normal activities. None of the respondents considered introducing any specific technological or managerial innovations. All the same, the wide gap between the current and expected levels of capital suggests that they considered trading as a career rather than a temporary occupation. Ninety per cent of the respondents were willing to receive bank loans to finance their expansion. But serious doubts were raised about the bank's willingness to grant them loans. Only 5 per cent of the respondents have been granted short term loans (of one year duration) by the local banks.

## 7. SUMMARY AND CONCLUSION.

One of the primary objectives underlying efforts to integrate peasants in to the market economies of TWCs is to generate additional resources for national development. Through its link with farmers, the marketing system is viewed as an important channel for transforming and conveying the resources to other sectors of the economy. The focus has hitherto been on the provision of cheap food to the urban/industrial workers.

This study draws attention to another vital dimension - the financing of the marketing system itself. The results indicate the importance of credit facilities from farmers to the food distributive trade. This, it is argued provides farmers with a vital potential leverage to counter the power of local traders. Farmers are therefore not all together weak and helpless participants in the traditional marketing system.



TABLE 2a. COMPARISON BETWEEN CURRENT AND REQUIRED WORKING CAPITAL.

	<u>Retailers</u>	<u>Wholesalers</u>	<u>Total</u>
	¢	¢	¢
Main contribution of traders (cash + credit to customers).	18.000	64.000	46.000
Stated (average) capital requirement.	<u>40.000</u>	<u>173.000</u>	<u>121.000</u>
Extra capital required (percentage of current capital).	122 %	170 %	163 %

TABLE 2b. COMPARISON BETWEEN CURRENT AND REQUIRED WORKING CAPITAL.

	<u>Retailers</u>	<u>Wholesalers</u>	<u>Total</u>
	¢	¢	¢
Main contribution of traders (cash + credit to customers).	18.000	64.000	46.000
Suppliers' contribution (average).	12.000	26.000	21.000
Total (average) working capital.	30.000	90.000	67.000
Stated (average) capital requirement.	<u>40.000</u>	<u>173.000</u>	<u>121.000</u>
Extra capital required (percentage of total current capital).	33 %	92 %	81 %

The extent to which farmers use this power has not been established. But it is evident that traders are conscious of their vulnerability and are careful not to damage farmers' trust in them.

An interesting question to ask is whether traders would prefer alternative channels that ensure them immediate cash payment for their produce to the existing system. This study could not answer this question since farmers in this area lack an alternative channel system. But evidences elsewhere seem to suggest that the choice among alternative marketing channels involve a lot more than cash payment. The failures of state food marketing enterprises to draw farmers away from traditional traders in other areas of Ghana and elsewhere combine to attest to this view. Apparently farmers place greater priority on their personal relations with traders and the other petty services they provide them.

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