A CONTEXTUAL ANALYSIS OF VALUE ADDING AND TRADE COMPETITIVENESS IN CROSS-BORDER EXPORT MARKET IN NORTHERN TANZANIA

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Abstract:This study was conducted to investigate the value adding potentials and trade competitiveness of the cross border trade in a selected non-traditional export market in Northern Tanzania. The survey was conducted on fruits in Muheza. Specifically objectives were to (a) evaluate trade competitiveness of the cross border export market for oranges. (b) Determine the value adding criterion and examine variations across every market actor. (c) Identify factors influencing export values (gross margins) of farmers. The study is based on farmers, local and Kenyan traders surveys, and a PRA. Data were analysed using (SPSS). Descriptive statistics, gross margin technique, concentration ratio, Chi square and T-test were also used. Results reveal that the cross border export market for oranges was uncompetitive and there was a significant value addition between actors. Lastly the study revealed producers' gross margins were influenced significantly by some factors. The following recommendations were made; there be training to farmers on business and credit management. There be government regulation to correct inefficiency in the market and producers should increase their farm sizes and number of mature trees along with input use.

INTRODUCTION

The Tanzanian economy depends mainly on agriculture. Noteworthy, agriculture is the dominant sector contributing an average of 47 percent of GDP, provides for 80% of employment and contributes 65% to exports. Cash crops (traditional exports) - cotton, coffee, sisal, cashew nuts and tea account for 60% of exports earnings (Bank of Tanzania, 2000). Since independence in 1961, the Tanzanian government implemented several programmes that aimed at increasing its exports. These programmes included the formation of crop authorities/boards which where aimed at ensuring good performance of the agricultural exports. They included coffee, cotton, sisal, tea, and cashewnuts boards. In line with these boards, cooperatives were also inclined in the promotion of same export crops as is evidenced by the fact that cooperatives were strong where these crops were grown e.g. Kilimanjaro, Arusha and Kagera.

Following major macroeconomic reforms in Tanzania known as Structural Adjustment Programme in 1980's, the agricultural sector has gone through various changes. These changes have significantly affected the performance of the traditional exports crops, such changes include reduction of government participation through provision of subsidies and input credit schemes to mention a few. Furthermore, falling of prices for these exports at the world market has put Tanzanian export sector at stake because the country still depend on traditional exports for its foreign exchange earnings. The need to expand and diversify the export base have been on the top of agenda with emphasis being on non-traditional agricultural exports, which are both less capital intensive and have a big potential to employ and raise incomes of majority Tanzanians engaging in the agricultural sector.

STATEMENT OF THE PROBLEM

Tanzania has since it's independence in 1961 been dependent mainly on traditional exports for her foreign currency earnings. These traditional exports include coffee, cotton, sisal, tobacco and raw cashew nuts. They contributed an average of 60% of total export volume in Tanzania over the past decade (Bank of Tanzania, 1999). In recent years prices for these agricultural exports at the world market have dropped e.g. coffee prices dropped from US$ 4.10 per kg in 1997 to US$ 1.9 per kg of *Arabica* in 2000. Likewise sisal (U grade) prices dropped from

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US$ 868.25 per ton in 1996 to USD 631.8 per ton in 2000 (Bank of Tanzania, 2001).

As pointed out by Nakhumwa *et. al.*, (1997), Tahzania like other countries in SADC have very narrow export base. It is necessary to expand the export base so as to diversify and hedge the foreign exchange revenues against such drastic falls when other shocks arise and also to protect producers who solely depend on incomes from traditional agricultural activities. Non-traditional Agricultural Exports (NTAE) are among available alternatives that are of high potential for expansion of the export base in Tahzania. This is a sub sector that, if well developed, can contribute significantly to the export volumes and values. In support of the statement, findings by Gutierrez (1999) showed that growth in highly perishable agricultural exports could potentially lead to higher economic growth rates in developing countries and not domestic production of manufactured goods.

Regarding factor endowment, most developing countries, including Tanzania, have comparative advantage in agricultural production as it is endowed with arable fertile land and a high potential for irrigation. This by itself does not provide a competitive edge for such economies as argued by Porter (1990) that complimentary factors such as good strategies, technology, and well-trained human resources have to be developed so as to attain the required competitiveness in the international trading environment. In Tanzania only 6% of arable land is currently being utilized, partly due to lack of the said complimentary factors.

It is therefore the aim of this study to investigate on the prevailing competitiveness of the aforementioned market as well as the value adding potential and impediments to high returns in the course of attempting to expand Tanzania's export base.

RESEARCH OBJECTIVES

The study aimed at evaluating the export market potential of selected non-traditional agricultural export in northern Tanzania and oranges produced in Tanga region were selected for as a case study. The specific objectives were:

1) To evaluate trade competitiveness of the cross border export market for oranges in the study area.
2) Determine the value-adding criterion and examine variations across every market actor.
3) To identify factors influencing export values (gross margins) of orange farmers in the study area.

RESEARCH QUESTION AND HYPOTHESES

Research Question

Is the cross border market for oranges in the study area competitive in the prevailing national and local government policies and regulations?

Null Hypotheses

1) Returns are the same for all market actors in the export market of the study area.
2) Export values of producers (measured as gross margins) in the study area are not influenced by their age, duration of skill training, orange farming years, farm size, number of mature trees, with or without contract, variety of oranges grown and time taken to get where the car can park from the farm.

LITERATURE REVIEW

Tanzania's exports depend mostly on agricultural products especially crops, both traditional and non traditional, but not much has not been done on policies concerning non-traditional agricultural exports in particular. Backed by the institutional framework of their establishment, crop boards helped greatly in the promotion of traditional agricultural exports such as coffee and cotton (Koda, 1999). With regard to Non Traditional Agricultural Exports (NTAE), there is currently no defined policies guiding the trade;

but rather bilateral trade agreements with other trading partners in various integrations that Tanzania has entered into are the preferred approaches. Most of the negotiations over trade agreements between Tanzania and organizations such as the World Trade Organisation (WTO), North America Free Trade Agreements (NAFTA) and the East African Community (EAC) have taken place in secrecy, between unelected and largely unaccountable government agents. Citizens have been excluded from the process of decision-making about trade agreements. This indicates the need to extend principles of good governance over the export channels (Mbilinyi and Nyoni, 2000). In another study Mbilinyi and Nyoni (2000) observed that, company agents deliberately purchase crops at household level in Tanzania so as to take advantage of lack of information on crop prices among farmers, which completely negates the concept of competitive marketing. Worse still both vertical and horizontal integration has tightened within agribusiness in Tanzania, at the disadvantage of local producer.

Furthermore, it is difficult to monitor trade policies under present circumstances in Tanzania because of marketing agents' reluctance to reveal necessary data on volumes of purchase and sales, prices e.t.c. and on the other side, the government lacks adequate institutional mechanisms to regulate the operations of the market with respect to agriculture as in the other sectors. For example, there was no market surveillance system that ensures competition or fair trade in any agriculture-related ministries like in the Ministry of Industries and Trade. In the words of a top official in the government, market liberalization in Tanzania means "no rules, no regulations" (Mbilinyi and Nyoni, 2000).

Most farmers are forced to sell their crops so as to provide for vital cash needs due to the unprotected situation facing them. Most important is perhaps the fact that these farmers do not have advantages of contested markets with free entry, good market information and risk management tools that are rarely found in Tanzania, especially in the non-traditional agricultural export sub sector.

ROLE OF AGRICULTURAL EXPORTS IN THE ECONOMY

Exports play a strategic role in determining national income, rate of savings and capital formation, price stability and the process of economic development planning (Gyimah-Brempong, 1991). Export earnings also determine the country's import capacity where grants, loans and aid are excluded (Love, 1989). Decline in capital goods imports implies a decline in the level of investment. Unavailability of foreign exchange constrains the level of imports and since capital and intermediate goods are primarily imported, it becomes an important determinant of capital formation and national income (Love, 1992). Consequently, the effects of instability in export earnings, for example, increases balance of payments problems. Arguably, instability in export earnings is likely to cause inflation and instability of tax revenue collected through exports (Adams *et. al.*, 1979). Instability in export earnings has also implications in the debt burden, since the ability to meet debt obligations rests essentially on the revenue from commodity exports for the majority of developing countries. As such, there is a strong case for traditional measures to raise real commodity prices from persistently depressed levels so as to complement measures to reduce debt overhang and/or encourage the flow of financial resources to highly indebted primary commodity exports dependent countries (Maizels, 1994). With these few observations there is no doubt that instability in export earnings can have implications on economic development.

STATUS AND TRADE TRENDS BETWEEN KENYA AND TANZANIA

According to World Bank Development indicators, almost a quarter of Kenya's GDP is exported while Tanzanian export propensity is at 13% and Uganda is at 11%. Kenya is also a more open economy with trade representing 55% of GDP, whereas Tanzania's trade represents only 41% of the GDP. Tanzania had a TShs. 49 billions trade deficit with Kenya in year 2000 (see Table 1)

Table 1: Trade Between Tanzania and Kenya 1995-2001

Year	Exports (in mil. TShs)	Imports (in mil. TShs)	Trade Balance (in mil. TShs)
1995	6 897	78 742	-71 845
1996	8 120	93 377	-85 257
1997	7 808	55 558	-47 751
1998	17 307	70 319	-53 012
1999	15 631	70 799	-55 168
2000	25 811	74 734	-48 923
2001	33 392	84 206	-50 814

Source: **Bank of Tanzania, 2002**

The significant trade deficit with Kenya illustrates Tanzania's vulnerability with regard to the penetration of imports from its neighbours (Word Bank, 2002). For the past seven years Tanzania has been a net importer to Kenya as shown on Table 1 above. This is a challenge to Tanzanians because Kenya is relatively small in size and has less comparative advantage in agricultural production compared to Tanzania. As presented before in the World Bank report that Tanzania is vulnerable with regard to the penetration of imports and exports at its borders. The figures could be more than what has been presented in the Table 1 above because of existence of informal cross border trade between Tanzania which according to (Ackello-Ogutu and Echessah, 1996) is estimated at around 40 % of the formal cross border trade which is reported. As a result of these impediments, the recently signed East African Community Trade Protocol has provided that Tanzanian exports to Kenya should not be taxable whereas Kenyan exports to Tanzania should be taxable so as to have the deficit reduced before a full-fledged trade agreement is signed in five years time in 2008 (URT, 2003). These five years basically are to allow Tanzania to pull up the bilateral trade with Kenya, among other issue to identify tradable produces from Tanzania and how the business environment would ensure maximum returns to Tanzanian exporters.

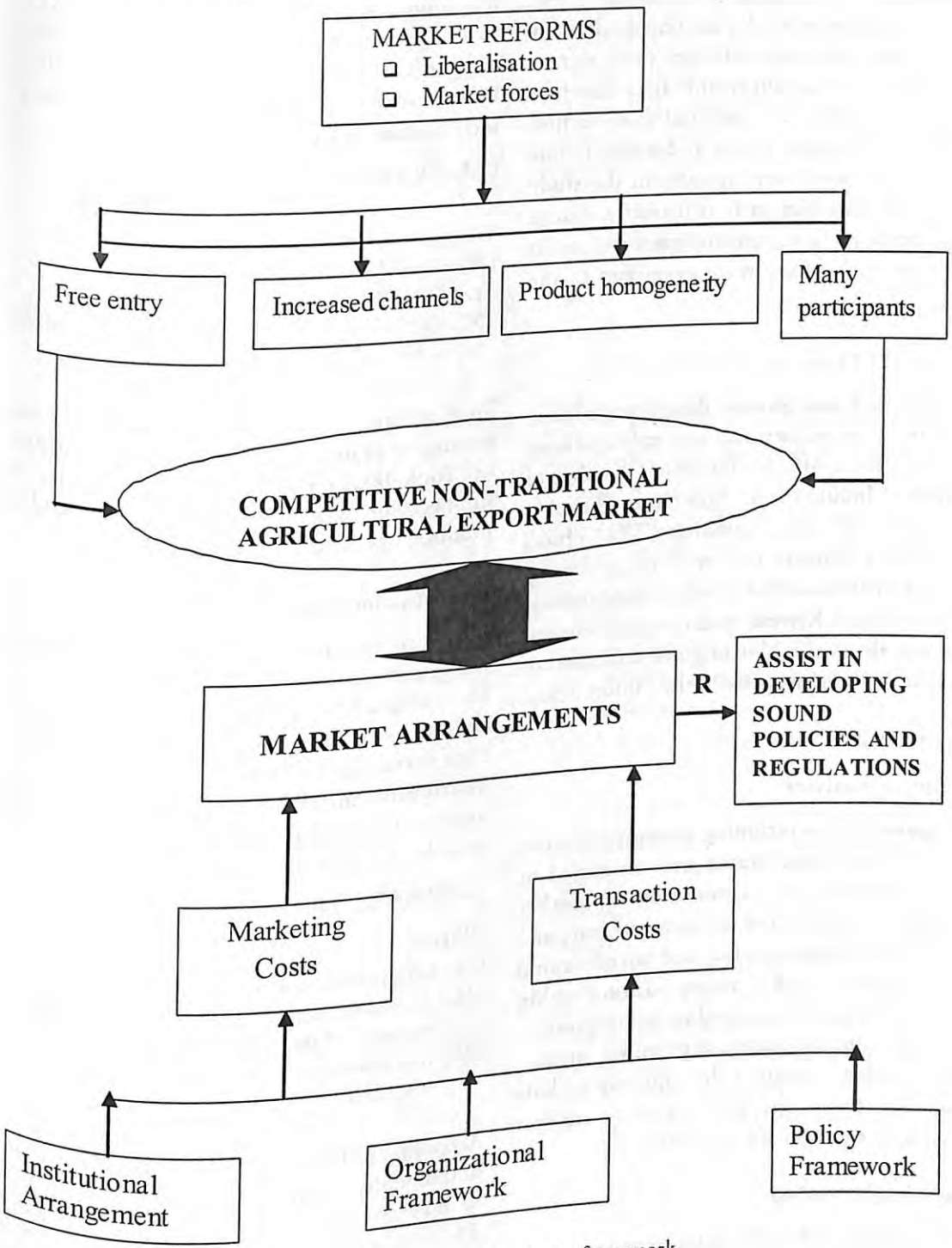
CONCEPTUAL FRAMEWORK (see Figure 1 overleaf)

The upper panel of the conceptual framework presents the market reforms that were emphasizing on liberalization of trade and the functioning of market forces in an economy as opposed to the controlled kind of an economy, which was some how protective of domestic traders and restrictive to the foreign traders. The reforms were expected to bring about free entry and exit to the market with less and less restrictions, product homogeneity and increased channels with many participants in product outlets. The characteristics define the competitive non-traditional agricultural export market. The upper panel refer to macro initiatives in making the market liberalized and competitive.

The lower panel addresss issues of institutional, organizational and political frameworks that shape marketing and transaction costs, which in turn determine market arrangements. These arrangements are a good observation point of market competitiveness. The lower panel refers to the localized, micro level practices that shape the market arrangements and subsequently influence competitiveness of the market.

Since there are different market arrangements practiced by farmers at the grass root level, and these farmers are the centre of attention of this

Figure 1: *The Conceptual Framework*



R = A link showing where this study (market research) lie in the framework.

study, the author targeted the market arrangements as the focus of the study. These market arrangements are also location specific and farmers make decisions whether to or not to participate in the arrangement. It is therefore necessary to conduct an empirical study to find out where the market stands and which factors influence decisions more specific to the study area. Market variables such as market exchange arrangements, market competitiveness and export values (gross margins) were examined in the study.

DATA COLLECTION

Both secondary and primary data were collected for this study. Secondary data were collected from Muheza District offices, Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) and Tanzania Revenue Authority (TRA) offices at the border. Primary data was collected using structured questionnaires i.e. Producer questionnaire, local traders and Kenyan traders questionnaires. There was also a checklist to guide collection of Participatory Rapid Appraisal (PRA) information.

DATA ANALYSIS

Descriptive Analyses

Descriptive analysis including percentages, sums, cross tabulations and means were employed to describe general characteristics of market participants. Data on the indicators of entry and exit to the business capital and social capital needed to practice in a higher position within the chain were gathered based on actual position of the market participants and potential entrants. Other variables captured descriptively include social economic characteristics of market participants e.g. age, marital status etc.

Gross Margin Analysis

Gross margins of individual exporters were determined and used as a proxy variable for profits (export value) in this study. The model was employed in addressing objective number two and testing the first hypothesis. Gross Margin (GM) of a producer/farmers is obtained by subtracting total variable costs (TVC) from total revenue (TR) as follows:

$$GM_i = TR_i - TVC_i$$

Where;

GM = Gross Margin of exporter/trader/producer
TR = Total Revenue of exporter/ trader/ producer
TVC = Variable Total Cost of exporter /trader/ producer
i = 1-n producer / trader

Total revenue was obtained by multiplying the number of oranges sold by price of unit orange in (Tshs). Total variable costs where obtained by summing up all the variable costs the i^{th} trader/ producer incurred.

Concentration Index

In this study a market concentration of sellers was used in determining the degree of concentration of sellers in the study area. As defined by (Pomeroy and Trinad, 1995) market concentration is the number and size of distribution of sellers and/or buyers in the market. This distribution can be measured by an index known as seller concentration given by:

$$C = (MR/TR) \times 100$$

Where;

C = Seller index of concentration
MR = Revenue accrued to sampled farmers who sold their oranges to Muheza Dalalis
TR = Total Revenue accrued to all sampled farmers in the study area.

According to (Khols and Uhl, 1990), it is a rule of thumb that a concentration ratio of above 50% is indicative of a strong oligopolistic industry; 33-50 % a weak oligopoly and less than 33 % an un concentrated industry. Farmers who sold to Muheza middle men was used because it was

the dominant marketing outlet and thus would have a higher potential of showing some oligopolistic behaviours in the market.

Regression Analysis

The theory behind regression models provide that linear regression, estimates the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable. The regression model was employed to address the third objective that "Export values of producers in the study area are not influenced by their age, duration of skills training, orange farming years, farm size, number of mature trees, with or without contract, variety of oranges grown and time taken to get where the car can parks from the farm."

The Generalized Least Square (GLS) technique was used in the estimation because of the nature of its dependent variable (Gross Margins) being non probabilistic and having a normal distribution. The model was also tested for severe multicollinearity (a common problem in cross sectional data) by using a partial correlation matrix and found to be having the problem in some of its variables which were dropped from the model, since multicollinearity can also be caused by a small sample, the sample size of producers (120) was enough to take care of the problem. The estimated parameters were also having logical signs proving further that the model had no severe multicollinearity after the corrections. The other common problem (inherent) with cross sectional data is heteroskedasticity, which makes the t values small due to large variances, the researcher transformed the variables in the model into natural logarithm form so as to take care of the inherent heteroskedasticity.

Both spatial and non-spatial factors were included in the model. Spatial variables included distance of the farm from Muheza town and time taken from the farm to where the car could park. Non-spatial variables include, age of exporter, years of skills training, gross margins, years of orange farming and market arrangements. The specification of the model is as hereunder:

GM = (A, S, D, T, C, B, V, N)
GM = ∫ Gross Margin (export values)
A = Age of producer
S = Duration of skills for producer
D = Distance from Muheza town to the farm
T = Time taken to get to the farm from where the car parks
C = Dummy for market arrangement
B = Years of experience in orange farming
V = Dummy for variety grown by the exporter
N = Number of mature trees in the farm

RESULTS AND DISCUSSION

Description of Market Participants

In this orange marketing chain study in Muheza there are three main participants namely producers, village *dalalis* and Muheza *dalalis* (local traders) and the Kenyan traders. Producers are the primary marketers selling mostly to the *dalalis.** *Dalalis* are divided into two sub groups: the Muheza *dalalis* and the village *dalalis*. Village *dalalis* are mainly the agents of Muheza *dalalis*. The Muheza *dalalis* are sometimes referred to as "big *dalalis*". Village *dalalis* identify producers who can trade with the Muheza *dalalis* either with or without contracts. Occasionally village *dalalis* enter into written contracts with producers on behalf of the Muheza *dalalis*. Village *dalalis* operate in the villages as their name suggests and they are sometimes referred to as "small *dalalis*." Muheza *dalalis*, who are stationed in Muheza town, are fewer compared to village *dalalis*, relatively advanced for they are the ones having links with Kenyan traders, posses motor bikes and operate mobile phones to facilitate their business. Kenyan traders are the other participants in this trade. These are Kenyan

* *Dalalis* are local middlemen traders who deal with farmers in the study area. They are categorised ny their location, those in Muheza are called Muheza *Dalalis*, whereas those located in villages are called Village *Dalalis*..

and unreliable) were independent of villages ($p>0.05$, X2 value = 38.3) implying that regardless of their villages, producers used the same means to set their prices.

The index is above 50% and according to Khols and Uhl (1990), the ratio is suggests a strong oligopolistic industry (structurally), which implies a non competitiveness market. According to a participatory appraisal results, using focus group discussions in the study area where both producers and traders themselves admitted separately, that village *dalalis* are agents for Muheza *dalalis*. This would imply that Muheza *dalalis* are sole agents linking the Kenyan traders and the producers. Furthermore, evidence from the participatory appraisal suggests that the traders sometimes colluded to fix purchase prices for oranges in the study area, hence their abnormal prices (performance). From the theory point of view when a market is dominated by such a tendency, a strong signal of existence of non-competitiveness behaviour in the market is observed (Scarborough and Kydd, 1992).

Furthermore, the producers were having diseconomies of scale, which could render them less competitive in the market.

Table 2: *Regression results to establish the r/ship between farm size and costs.*

	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std. Error	Beta		
(Constant)	1.675	.406		4.126	0.000
Farmsize in hectors	.132	0.06	.198	22.00	0.03**

The results in Table 2 show a low correlation (0.198) between farm sizes in hactares and per unit cost of production incurred by a producer during the season. This variable had a positive sign implying that as farm size increases the per unit costs of production also increases. This phenomenon negates the theory of economies of scale that as the farm size increases (assuming full production and input use), per unit production costs decrease. In such a situation, producers in the area will be making either loss or small gross margins, which might not justify their existence in the business. In the long run they might be forced out of the business if such a situation continues.

Answering the Research Question

In addressing objective one, which was to evaluate trade competitiveness of the cross border export market for oranges in the study area, research question was: "Is the cross-border market for oranges in the study area competitive in the prevailing national and local government policies and regulations? It is clearly not competitive as there are barriers to entry like poor financial capital availability to producers and relatively lower social capital of producers, diseconomies of scale, poorly coordinated market information especially to producers; there are also a few buyers (local traders) as opposed to many sellers (producers). Local traders (Muheza and village *dalalis*) purchase 99 % of all oranges for reselling to the Kenyan traders and they have a seller concentration ratio of 72% implying that producers are bound to sale to a few buyers. These findings negate the assumptions of neoclassical competitive market characteristics.

Variations in Prices and Return per Orange (value adding) Between Market Participants in the Chain

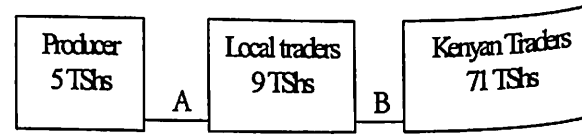


Figure 2: *Variations in prices between market participants*

Consider Figure 1 below. At link A the producers receive 5 TShs from the local traders. Producers incur costs of weeding the farms, buying agrochemicals and spraying agrochemicals

against pest and diseases and for those in contracts they also pay penalties for breach of terms of the contract. On average, total cost incurred by local traders in procuring the oranges was 3 Tshs per orange and had a return of 2 Tshs per orange.

Local traders incur costs of travelling from Muheza town to the farms to evaluate, monitor and inspect the contract producers, costs of communication in coordinating, and organising the assembly and later procurement of oranges from producers in the village etc. On average, total cost incurred by local traders in procuring the oranges was 4 Tshs. Local traders get a price 9 Tshs from Kenyan traders (at link B) and have a return of 5 Tshs per orange.

Kenyan traders pay for their travel and stay in Tanzania, communicating to the local traders on procurement of oranges, transportation of the oranges to Kenya, pay taxes at the borders and bear the risk of loss due to spoilage of oranges along the way to Kenya. On average, total cost incurred by Kenyan traders in procuring the oranges was 47 Tshs. Kenyan traders receive a price of 71 Tshs (exchange rate 12.5 Tshs to1.0 Kshs) from retail stores and other buyers in Kenya and have an average return of 24 Tshs per orange.

Table 3: *Results (t-test) for comparison of return per orange between market participants*

Participants	t	Df	Std. Dev	Mean	Sig (2-tailed)
Producers' return per orange	2.641	119	8.5400	2.0592	.009**
Kenyan traders' return per orange[c]	7.813	6	8.1417	24.0418	
Local traders' return per orange	1.807	21	12.8982	4.9689	.085

c Kenyan traders' return per orange was used as a control for returns to market participants

** Significant at 0.00

Results in Table 3 show that producer's return per orange was highly significant different from the return per orange that Kenyan trader get. This implies that the return to a producer's orange is very low compared to that of Kenyan trader. The return to local traders was not significantly different from that of Kenyan traders implying that Kenyan traders got more or less same return per orange. Producers are therefore the disadvantaged market participants as far as return per orange is concerned.

Answering Hypotheses Number One

In addressing objective two that was "Determine the value-adding criterion and examine variations across every market actor " there was the null hypothesis that "Returns are the same for all market actors of the export market in the study area." Since there has been significant difference among returns to different actors, the null hypothesis is rejected and the alternative hypothesis is accepted, that "Returns are the not same for all market actors of the export market in the study area."

Variable	Coefficients	Std. Error	Sig
(Constant)	-13.5	90.8	.145
Age of respondent	.3388	.1479	.027*
Duration of training for skills for respondent	.3865	.18954	.048*
Orange farming years	.8023	.2011	.000**
Dummy for variety grown	.518	.542	.347
Number of mature trees	.223	.83	.011*
Dummy for if had contract last season	-.433	.483	.377
Time used to take oranges from the farm to where the car parks (in minutes)	-1.0957	.4093	.011*

Key:
Dependent Variable: Natural log of gross margin of producers
Adjusted R Square (R^2) 0.669 F value 63.292**
* Significant at 0.05 ** Significant at 0.01

It is also seen that 10% change in the duration of training for skills is significantly associated

with a 3.9% increase of gross margin of producers at $p<0.05$. The variable had a positive sign, suggesting that the more time spent on training the more the gross margin. It is logically true that as one learns more both practically and theoretically, delivery is also expected to increase. A ten percent change in years of orange farming was significantly (highly) associated with 8% change in producers' gross margins at $p<0.01$, meaning that many years of farming brought about an overall advantage in gross margin of a producer.

The number of mature trees in a farm was also a significant factor at $p<0.05$. It was also observed that a 10% change of the number of mature trees is associated with a 2.2% increase of producers gross margin as the variable had a positive sign. This can be explained further by the fact that mature trees are the ones that bear fruits so the more trees (to optimal level) the more oranges and thus big gross margins ceteris paribus.

A 10% change in the time taken to take oranges from the farm to where the car parks (in minutes) was found to be significantly associated with 11% decrease in gross margin of producers at $p<0.05$. Since this variable (time taken to take oranges from the farm to where the car parks) was a proxy in measuring the effect of remoteness to the gross margins, the results suggests that as the time decreases the gross margins increases implying that remoteness affected gross margins negatively. This could be due to additional costs incurred in the process of bringing the oranges from the farm to the truck.

Regarding the insignificancy of variety grown ($p>0.05$), this would be superseded by other factors like quality and size of the oranges, which were not examined in this study. The dummy variable if had contract or no was insignificant ($p>0.05$). This could be due to the fact that some respondents were not willing to admit that they were having such contracts. This could have resulted to measurement error i.e. producers who had contracts were classified as no contract producers. However, this variable had a negative sign thus going against the theory that institutions reduce transaction cost and increases returns (gross margins for this study). This can be explained by the fact that benefits can be qualitative such as price stability, easing of liquidity problems etc, these benefits were not captured by this study. Another reason could be that the contracts were not standardised and thus do not perform the function of lowering transaction cost as an institution.

The explanatory power of the model adjusted R^2 was found to be 0.669 implying that 67% of the variations in of the dependent variable (gross margins of producers) were explained by the variations in the independent variables in the model. The model was powerful enough to explain the variations as it had an F- value of 63.292, which was also highly significant at $p<0.01$. This means that the model was well estimated.

Answering Hypotheses Number Two

The hypotheses stated that "Export values of producers in the study area are not influenced by their age, duration of skills training, orange farming years, number of mature trees, if had contract or not, variety of oranges grown and time taken to get where the car can parks from the farm". Since there has been a number of significant factors at $p<0.05$, the null hypothesis stated above was rejected and the alternative hypothesis that "Export values of producers in the study area are influenced by their age, duration of skills training, orange farming years, number of mature trees and time taken to get where the car can park from the farm" was accepted.

Results of this study were aiming at generating information that would help in formulation of sound policies and regulations

pertaining the cross border export market for oranges in the study area. The following chapter presents conclusions and recommendations based on these results.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Several findings emerged from this study. The first objective of this study was to evaluate trade competitiveness of the cross-border export market for oranges in the study area. The variables thought to be potential in setting barriers to entry into any stage of the marketing chain were identified. Results suggest that producers were not having enough social capital required to join the trader's group implying that the capital (both social and financial) could be a restrictive variable to entry into a higher position. Furthermore, there was a high concentration (72%) of sellers (producers) to Muheza *dalalis*, which implies the existence of oligopolistic behaviour in the market. Market information flow was poorly coordinated on the producers' part since most producers (81%) relied on subjective indicators such as a big influx of trucks in the village to mean high demand and therefore high price. To the contrary, local traders were found to be using mobile phones and were highly mobile using their motorbikes coordinating the business. This shows that traders are organised and have a better access to market information than producer, a case of asymmetric market information. There were also reports of collusion in setting of buying prices among traders from participatory appraisal with producers. Furthermore, the producers were having diseconomies of scale, which could render them less competitive in the market. It can therefore be concluded that the cross border market for oranges in the study area is not competitive. This is to the disadvantage of many producers who are the main stakeholders in the orange cross border trade.

The second objective of the study was to "Determine the value-adding criterion and examine variations across every market actor." It was found out that there has been a significant difference among returns to different actors; it is therefore conclude that returns are not the same for all market actors of the export market in the study area.

The third objective was to identify factors influencing export values (gross margins) of orange farmers in the study area. Regression analysis employing generalised least square technique was used and results showed that age of the producer, duration of training for skills for producers, orange farming years, number of mature trees and time used to take oranges from the farm to where the car parks (in minutes) where significantly affecting the gross margins of producers. It is therefore concluded that age of producer, duration of training for skills for producers, orange farming years and number of mature trees in the farm influences gross margins positively, that as they increase they also increase gross margins of respective farmers. Time used to transfer oranges from the farm to where the car parks (in minutes) influences the gross margins of producers negatively meaning that as the distance increases the gross margins of producers decrease.

Recommendations

Based on the findings and conclusions of this study the following recommendations that might be a starting point to what is already in place in the process of formulating sound policies and regulations in orange marketing would seem appropriate. It was evident that producers' chance of trading in orange market was hindered by among other things social capital requirement (with Kenyan traders). Since it is difficult to influence social behaviour (interaction, trust etc) of the respondents to acquire the social capital, it is therefore recommended that there be a

training on credit management including record keeping so that traders attain minimum creditworthiness status by the lending institutions. After attaining the capital there should be established a group (social capital network) that can trade competitively and profitably in the chain.

There should also be established a market information centre in the study area where producers can access the information at low cost if need be. This will help producers liberate themselves from the subjective approach to market information. The government at district level should establish a mechanism that wont allow for collusion of existing traders in fixing buying prices at the disadvantage of farmers. It should also encourage more private traders to purchase oranges direct from the producers so as to dismantle the oligopolistic behaviour of the market where a few buyers dominate the market and protect themselves from others who wish to enter the market. Among the alternatives should be facilitation of establishment of strong cooperative societies, which would be for the producers and help them in attaining reasonable returns from their farming.

Kenyan traders have been the great beneficiaries in this cross-border trade since they have the best return per orange as compared to farmers and the *dalalis*. Efforts should be directed towards enabling Tanzanians, especially the farmers, to access the Kenyan market so as to reap lucrative returns. These efforts would include formation of a cooperative society that will increase their bargaining power in the market as most farmers are constrained by basic factors like language (English), inadequate capital and small volumes of products. The cooperative will help them pull resources together and have an advantages of economies of scale in marketing and transportation activities that will reduce their costs and maximise their potential returns. Furthermore, there should also be studies to identify other countries (trading partners) for oranges and other non-traditional export crops.

In the long run the government should build a processing industry near the study area, which will save a dual purpose of being a reliable market for the small producers and also value adding to the oranges.

The study suggests that the number of mature trees being significantly influential towards increasing gross margin of producers. It is therefore recommended that producers should be encouraged to increase the number of mature orange trees and subsequently their farm sizes and use recommended farming practices. The increase in the number of trees and farm size should go along with optimal use of required inputs so as to enable producers to exploit economies of scale, which they currently do not enjoy.

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