

## **POLICY SYNTHESIS**

### **FOOD SECURITY RESEARCH PROJECT - ZAMBIA**

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## **DO BROKERS HELP OR HINDER THE MARKETING OF FRESH PRODUCE IN LUSAKA? PRELIMINARY INSIGHTS FROM RESEARCH**

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### **Main Points**

1. Brokers are agents who arrange sales without taking ownership of the commodity, earning their money on a commission. Brokers are a common but often controversial presence in wholesale markets of East and Southern Africa
2. Efficient brokering can be beneficial by matching buyers and sellers more effectively than if each had to search independently for someone to transact with.
3. Yet buyers and sellers can be harmed if brokers are able to behave in uncompetitive, collusive, or unethical ways. In Soweto market of Lusaka, common complaints lodged by sellers are that brokers force sellers to use them by threatening the security of the sellers' produce, and that the brokers add "hidden" commissions when selling a farmer or trader's produce.
4. This policy brief explores the role of brokers in the marketing of fresh produce in Soweto Market. It concludes that, while brokers appear to provide some valued service to some sellers, the chaotic nature of the market and the lack of any regulatory and enforcement structure leads to questionable broker behaviour including charging of hidden commissions.
5. As government and city officials grapple with how to improve fresh produce wholesaling, it is imperative that they focus not just on physical infrastructure but also on the governance, regulatory, and enforcement structures without which new market places will be of little use.

**INTRODUCTION:** Brokers – agents who arrange sales without taking ownership of the commodity, earning their money on a commission -- are a common but often controversial presence in wholesale markets of East and Southern Africa.<sup>1</sup> Farmers and others selling in Soweto wholesale market in Lusaka have mixed opinions of brokers: some suggest that they are forced to sell through brokers via threats of stealing product if they try to sell on their own, while others develop relationships with brokers that provide greater security for their product and better sales opportunities. Yet even these sellers lodge a common complaint – that brokers add price mark-ups which they take for themselves without the sellers' knowledge.

To better understand the role of brokers in Soweto's fresh produce wholesale market, the ACF/MSU Food Security Research Project collected data from brokers and first-sellers from January through May, 2010. This Policy Brief

draws from a much larger report (FSRP Research Report #46) to report preliminary results from this work.

### **BACKGROUND AND HYPOTHESES:**

Brokering services can improve market efficiency by economizing on search effort (Gabre-Madhin 2001); by developing expertise in gathering information on buyers and sellers and bringing them together to effect transactions, without having to put time and effort into managing the substantial price risk found in fresh produce markets, an efficient and competitive set of brokers can match supply with demand at lower cost than if all sellers and buyers conduct their own search. Largely for this reason, all produce arriving in South Africa's system of modern wholesale markets must legally be sold through brokers.

Actual performance of a brokering system can be reduced in several ways: brokers may not behave competitively, they may hinder the flow of information on supply and demand or on the

<sup>1</sup> Gabre-Madhin (2001) analyzes brokers' contribution to grain market efficiency in Ethiopia.

commissions they are charging, or search costs may be low, suggesting little advantage from brokering, but buyers and sellers may be prevented, by law or by collusive behavior among brokers, from conducting their own search and negotiating their own transactions.

Formally testing for the efficiency of a brokering system would require data more detailed than we currently have. In the absence of such data, we can nevertheless develop testable hypotheses and may be able to draw insights regarding the efficiency of this process in Soweto market.

First, in the absence of legal mechanisms requiring or precluding brokering, and assuming that search costs and opportunity costs of time differ across buyers and sellers, we expect to find a mix of brokered and unbrokered (direct) sales. Second, due to the absence of a cold chain, we expect that the more perishable items will be most likely be sold through brokers, since failing to find a buyer early in the day can result in major financial losses for the seller. This suggests that among the three crops we studied (tomato, rape and onion) rape should have the highest rate of brokerage and onion the lowest. Third, traders selling in the market should be less likely than farmers to use brokers, since traders have more frequent exposure to the market, more opportunity to develop relationships with retail buyers, and so should have lower search costs.

Finally, if brokerage services are offered competitively, we expect that sellers with large quantities to transact will be more likely to do so through a broker, since they face a higher risk of not selling all their product and may also have higher opportunity costs of time, both of which favor brokering. We also suspect that such sellers are generally better connected and more knowledgeable of the market and its participants. If so, this means that such sellers have lower search costs (thus reducing the likelihood of brokering) and are less likely to be maneuvered into a brokered transaction against their will by non-competitive brokers. A finding that large sellers are more likely to sell through brokers may thus be evidence that, at least in their cases, brokers are offering a valued service to sellers. At the same time, such a result could suggest that smaller sellers who may benefit most from access to efficient brokering services (due to

high search costs) are not able to gain that access, because brokers focus their effort on larger sellers.

Before examining these hypotheses, we briefly describe the data we use and then review first seller attitudes towards brokers.

**DATA:** We use two sets of data in this brief. To examine the level of openly declared commissions charged by brokers, and the existence and level of any possible hidden or undeclared commissions, the ACF/MSU Food Security Research Project has since January 2010 collected two additional variables during its normal data collection in Soweto: the price the first seller reported receiving for their product and the percent commission the broker charged on this price. We compute the hidden or undeclared commission as the difference between the observed sales price for this lot to retailers (data FSRP has collected since 2007) and the price the seller reported receiving (collected only since January 2010). In addition, FSRP carried-out a survey of 46 first sellers - a combination of farmers and traders – regarding their relationship with and attitudes towards brokers.

**HOW DO FIRST SELLERS VIEW THE ACTIVITIES OF BROKERS?:** First sellers in Soweto were asked the advantages and disadvantages of selling through brokers. That brokers provided security to sellers' produce was the most important advantage (Table 1; 56%); brokers helping to find customers was a far less important advantage (16%). That farmers have more time to attend to other things while their produce is being sold is one of the most important benefits of selling through brokers the world over, yet only four out of 43 sellers cited this advantage. In fact, these interviews and FSRP market reporter experience reveal that first sellers most often remain within the market to monitor sales, raising questions about the level of trust between brokers and sellers.

The main disadvantage of using brokers was the lack of transparency in pricing, whereby brokers take a commission without the knowledge and consent of the farmer (Table 2; 67%). In fact the first sellers contend that brokering slows the sales process (17%) after which the brokers go back to the sellers to ask for a reduction in the

price on top of which they will still put a mark-up for themselves (11%). The above notwithstanding, 28% of the interviewed sellers reported stable relationships with brokers, averaging 6 years. However, 19% of these reported terminating their past relationships due to perceived dishonesty.

**Table 1. Advantages of Selling through a Broker**

Advantage	Freq.	%
Brokers provide security	24	56
Brokers more easily to find customers	7	16
Brokers sometimes provide some inputs	4	9
Allows time to do other things	4	9
No advantage	2	5
Provide market information	1	2
Brokers sometimes pay transport costs	1	2
Total	43	100

Source: Interviews with farmer first sellers

**Table 2. Disadvantages of Selling through a Broker**

Disadvantage	Freq.	%
Lack of pricing transparency	31	67
Slows sales	8	17
Results in reduced prices	5	11
Make farmers make losses	1	2
Farmers have no say on pricing	1	2
Total	46	100

Source: Interviews with farmer first sellers

**HOW COMMON IS BROKERING IN SOWETO MARKET?:** Examination of the extent of brokering by crop and by type of first seller confirms our first three hypotheses (Table 3): with the exception of rape, essentially all of which is sold through brokers, we see a mix of brokered and unbrokered transactions; onion as

expected shows the lowest rate of brokered transactions; and farmers of tomato and onion are more likely than traders to sell through brokers. Differences between farmers and traders selling tomato, however, are not large – 99% of tomato farmers sell through brokers while 89% of tomato traders do so -- suggesting that perishability may be more important than search costs in driving the seller's decision.

**Table 3. Role of Brokers in Lusaka, by Crop and Type of First Seller**

	Tomato	Rape	Onion
	broker share of transactions		
Total	0.886	1.00	0.116
By farmers	0.985	1.00	0.861
By traders	0.851	1.00	0.027

Source: FSRP Vegetable Market Volumes and Prices Monitoring Data, January 2007 to January 2009.

### DO OPEN BROKER COMMISSIONS REFLECT FULL BROKER CHARGES?:

Table 4 presents information on openly declared and apparent hidden commissions. The table supports first sellers' contention that the brokers routinely charge hidden commissions.

Transparent commissions are 9%-10% for all crops except impwa and okra, which showed no transparent commission for most sales. Total commissions, however, are 17%-21% for all crops, including impwa and okra.

To more rigorously test our hypotheses, including the fourth that has not yet been tested, we conduct a probit analysis using data collected from 29 October 2007 to 16 November 2009. Data is on individual sales lot. We exclude all

**Table 4. Relative Real Broker Commission for Selected Vegetable Sales in Soweto Market, Lusaka (January-May, 2010; All Prices in ZK/Unit)**

Commodity	No. of obs.	Mean price to retailer	Mean price received by 1 <sup>st</sup> seller	Mean transparent commission	Mean hidden commission (A-B)	Total commission (C+D)	Total commission as % of price to retailer (E/A)	Mean transparent commission as % of price of retailer (C/A)
		(A)	(B)	(C)	(D)	(E)	(F)	(G)
Tomato	732	47,742	43,456	4,346	4,286	8,631	20	10
Rape	609	32,967	30,153	3,015	2,814	5,830	20	10
Impwa	108	46,065	37,824	139	8,241	8,380	19	<1
Sweet potato leaves	108	25,972	23,926	2,317	2,046	4,363	17	9
Pumpkin leaves	103	23,806	21,456	2,141	2,350	4,490	20	9
Okra	105	33,886	27,419	200	6,467	6,667	21	<1
Chinese cabbage	99	25,222	23,434	2,328	1,788	4,116	17	9

rape transactions because essentially all conducted through brokers. By including mean daily quantities transacted over the past month in addition to monthly dummy variables, we control for two aspects of potential seasonality: total volumes transacted (through the lagged quantity variable), and weather effects (heat and precipitation and their effect on product quality) through the monthly dummies. Because seasonal patterns are different for onions and

tomato, we run separate regressions for each, in addition to one regression pooling the crops.

Consistent with previous results, farmers in all three regressions are much more likely than traders to sell through brokers, and the small number of wholesalers that operate in the market are even less likely than traders to use brokers (Table 5). Women in all three regressions are more likely than males to use brokers.

**Table 5. Marginal Effects from Probit Analysis of Determinants of Selling Through a Broker**

	<b>Tomato &amp; Onion</b>	<b>Tomato</b>	<b>Onion</b>
Number of observations	21,592	13,642	7,211
Prob>chi2	0.000	0.000	0.000
Pseudo R2	0.797	0.660	0.615
Log likelihood	-2,952	-1,643	-1,058
<b>Variable</b>	<b>Dy/dx</b>	<b>Dy/dx</b>	<b>Dy/dx</b>
<i>Continuous variables</i>			
Log quantity being sold (seller's lot size)	0.082***	0.011***	0.021***
Log total quantity sold in market that day	-0.060***	0.008	-0.024***
Log mean daily quantity sold in market over past month	-0.042***	0.003	-0.023***
Trend (week)	-0.000	0.000	-0.000
<i>0/1 variables</i>			
Seller is a farmer (trader excluded)	0.661***	0.236***	0.756***
Sellers is a wholesaler (trader excluded)	-0.568***	-0.563***	-0.020*
Seller is female (male excluded)	0.171***	0.030***	0.108***
Product being sold is onion (tomato excluded)	-0.715***	----	----
Monthly dummies included but results suppressed			

Dependent variable is 1=sale made through broker, 0=sale made directly to retailer

\*\*\* significant at 1% level; \*\* 5%; \* 10%

Our most important result is that the seller's lot size in all three regressions is positively and significantly associated with the probability of selling through a broker. To further probe the robustness of this result, we ran two other regressions, one limited to farmers and another limited to traders. In each case, seller's lot size remained positive and significant. As argued above, this result may suggest that, at least for these larger sellers, brokering adds value and involves a free choice by the sellers. Results are also consistent with brokers preferring to work with larger sellers and perhaps not making these services available to the smaller sellers who may be most in need of them.

**CONCLUSIONS:** These results paint a mixed picture of brokering in Soweto market. Of greatest concern is the chaotic nature of the market and the lack of any formal regulatory and enforcement structure for brokering activity. As a result, the main advantage that sellers see in

using brokers – security for their produce – is something that sellers should not have to worry about and brokers should not be responsible for. Though some sellers see additional positive aspects of working with brokers, mistrust between the groups is high and brokers appear to routinely charge hidden commissions. As government and city officials grapple with how to improve fresh produce wholesaling, it is imperative that they focus not just on physical infrastructure but also on the governance, regulatory, and enforcement structures without which new market places will be of little use.

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