Kenyan Flower Exports during the Violence: a Quantitative Assessment

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The purpose of the study is **academic research**

The authors are solely responsible for the subject, design, finding and conclusions.

In particular, the study/report:

i) has **not** been commissioned by any organization (government agency, business association, firm),

ii) is funded by DFID under the **iiG**, a research program on pro-poor growth based at the London School of Economics and Oxford University.

*These organizations are not responsible and do not endorse the report.*
Content

♦ Summary of Main Findings,
♦ Data Sources & Methodology,
♦ Estimated Export Losses due to the Violence,
♦ The Importance of Marketing Channels,
♦ Policy Implications,
♦ Future Work
Summary I

1. Firms were affected:
   (a) there was a 38% drop in export volumes for the average firm in the conflict location during the days of violence.
   (b) for the average exporting firm there was a drop in 24% in the days of violence compared to the days of non-violence.

2. The magnitude of these losses vary substantially across firms.

3. Losses realised mainly from absence of workers, very few reported losses due to disruptions in transportation logistics.
4. Exports to direct buyers affected less than exports to auctions; but the two channels are complementary, not substitutes.

5. KFC Certification – rather than membership – correlate with dampening the effects of the violence.

6. Policies should:
   - assist firms to diversify their export channels,
   - improve access to credit for smaller indigenous firms.
Data Sources

The study is **quantitative**. It combines:

- export records obtained from HCDA,
- firm level survey data collected by the authors through field interviews during summer 2008
- ancillary data [internet, company register, red cross bulletins etc...]

**Confidentiality Concern:**

No individual firm can be identified from reported results and access to data is restricted to the authors alone. Research report screened to ensure no confidentially information is revealed.
Methodology

1. Compare export performance of firms in locations directly affected by the violence against firms in regions not affected by the violence, relative to previous years.

   Two outbreaks of violence coded as:
   
   (i) 30\textsuperscript{th} DEC – 5\textsuperscript{th} JAN
   (ii) 24\textsuperscript{th} JAN – 30\textsuperscript{th} JAN

2. Analysis: at the firm level and not at country aggregate.

   Sample: all flower firms who were regularly producing and exporting flowers in the months preceding the violence.
Location of Firms & Violence

For illustration purposes only.

Dots are nearest towns to flower farms.
The figure illustrates approximate % change in export volumes over 3 days periods around the violence for the median firm in the two regions relative to the same period in previous seasons.
Findings

1. Relative to previous seasons, the average exporting firm suffered a reduction in export volumes of approx. 24% during the days of violence compared to the same firms in the days of non-violence. For the average firm within the conflict location there was a 38% drop in export volumes during the days of violence.
   ♦ This implies that export volumes of firms in the non-conflict region were not affected.
   ♦ This is an average, not an aggregate, effect!!

2. The outbreak of violence did not effect country equally – i.e. violence was not national. Country level logistics were functioning – the comparison group was not touched by the violence.

3. In the periods post violence, there is no evidence of catch-up: what was lost was lost.
How did Violence Affect Exports?

Both the number of workers lost during violence and transportation problems were mentioned by respondents.

- The difference between the areas with and without violence is particularly strong for the percentage of workers lost.

<table>
<thead>
<tr>
<th></th>
<th>% Workers Lost</th>
<th>% Firms facing challenges with transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas without Violence</td>
<td>1%</td>
<td>32%</td>
</tr>
<tr>
<td>Areas with Violence</td>
<td>33%</td>
<td>69%</td>
</tr>
</tbody>
</table>
How did Violence Affect Exports?

- Transportation difficulties led firms to reduce the number of sales transactions by more than 50% (instead increasing the average weight per sale)

- Transportation and production difficulties led firms to reduce the number of sales transactions by more than 70% during the periods of violence (in the violence affected areas)
Workers Lost – A Parenthesis

Certain firm characteristics *correlate* with fewer loss of workers during violence:

- firm exporting directly to buyers,
- firm with housing programs on their premises,
- firm employs fewer temporary workers,
- firm with KFC certification and *not* membership per se
Revenue - A Parenthesis

Limited information was shared on prices and revenues through the survey. We cannot precisely estimate the losses. However, firms did report substantial losses in revenue.

Relative to the % drop in volumes, the % drop in revenues will be:

- higher, if quality (and hence prices) went down,
- lower, if prices went-up because of reduced supply.

This should only affect % revenues drops at the Auctions, as prices from direct buyers is pre-agreed.

Additional data on auction prices and quality information from KEPHIS would help obtain a more precise estimate.
Costs - A Parenthesis

Firms did report increase in costs due to

- extra security / escort of produce,
- paying over time to workers,
- maintaining absent workers on payroll,
- paying safe transport for workers.

However, firms reported these costs to have been not substantial at all.
Caveat I

1. Short-Run analysis:

- Preliminary evidence suggests that effect of the violence persisted till March and April,

- Data for the 2008/09 season to be analyzed. This will allow to **disentangle** long run impact of the violence from the impact of the current **global financial crisis**.
Caveat II

2. Only differential effect across conflict and non-conflict locations is identified. Country-wide effect is not included.

A less reliable estimate, however, suggests the effect was negligible in the short run.

- depreciation of KShs and problems in supply might have implied higher prices at the auctions,

- in the long run, did buyers see the problem as affecting the whole of Kenya or only certain regions?
The Violence *did not* affect the export volumes of all firms equally!!

Key difference has been across *marketing channels*: selling to auctions vs. direct buyers.

- export volumes to direct buyers suffered less,
- evidence also found in firms that sale to both channels suggesting value of direct relationships

Before we illustrate the differential effect, let’s have a look at recent evolution in the use of different marketing channels.
Marketing Channels – Trends

Over the past 4 years, our estimates indicate a trend towards increasingly using direct buyers instead of auctions to export of flowers.

Two facts about marketing channels:

- trend towards direct sales is mostly driven by the largest firms,

- firms appear to be specialized in their marketing channels. Most firms sell majority of their produce through one channel only.
Aggregate Monthly Exports to...

The figure illustrates approximate monthly exports in Kgs to each of the channels ALL firms in the industry.
Aggregate Monthly Exports* to...

* The figure illustrates approximate monthly exports in Kgs to each of the channels excluding four largest firms in the industry.
Monthly Share of Exports* to Direct Buyers

* The figure illustrates approximate monthly exports in Kgs to each of the channels excluding four largest firms in the industry.
Firms supply* to different channels of distribution...

* The figure illustrates the distribution of firms with % distributed through the Direct Buyer - excludes four largest firms in the industry.
Heterogeneity (I)

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Heterogeneity – across firms

![Graph showing heterogeneity across firms with percentages for auctions only (11%) and direct only (-41%)](image)
Heterogeneity (II)

- firms who have frequent buyers provided insurance, i.e. allowed slackness during the violence.

- relationships of firms also selling to auctions have suffered less than relationships of firms only selling to direct buyers.

- In risky environments, the two marketing channels are complements, not substitutes.
Direct relationships

-16%  -11%  -26%
Policy Implications

Government could support initiative aimed at:

- assisting and facilitating relationships with direct buyers,
- encourage diversification in export channels because in risky environments (and especially for younger firms) auctions and direct buyers are complementarities,
- encouraging adoption of KFC certification,
- alleviate financial constraints for smaller, indigenous firms*

* Inference from firm level survey when management asked on major obstacles to business and NOT on a quantitative analysis of the return to capital and investment on those firms.
Work in Progress

For current study:

- can we disentangle long run effects of the violence from the current financial crisis? YES

- detailed price information is necessary to quantify revenue losses, value of direct relationships and response of buyers’ due to the crisis.

- firm level data from KEPHIS on inspections / rejections would also be useful.
Future Work – Bigger Picture

R1: Comparison with other African Countries:
- Study well received in the UK → further funding available to study Ethiopia and Zambia flower industries. Colombian and Ecuador case is also very interesting.
- Focus on policy lessons to attain larger % of value chain & response to the crisis.

R2: Quantitative evaluation of firm-specific practices
- requires closer collaboration with selected interested firms to make policy conclusions.
- e.g. labour productivity, HIV control, value chain management
Thank you!

Please contact us for any other further feedback and suggestions.

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Your input is highly appreciated.