

# **Kenyan Flower Exports during the Violence: *a Quantitative Assessment***

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# Background & Disclaimer

- ◆ 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.

## Summary II

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*.

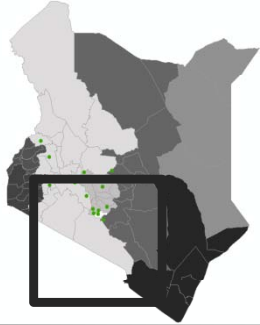
**Two outbreaks of violence coded as:**

- and*
- (i) **30<sup>th</sup> DEC – 5<sup>th</sup> JAN**
  - (ii) **24<sup>th</sup> JAN – 30<sup>th</sup> JAN**

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

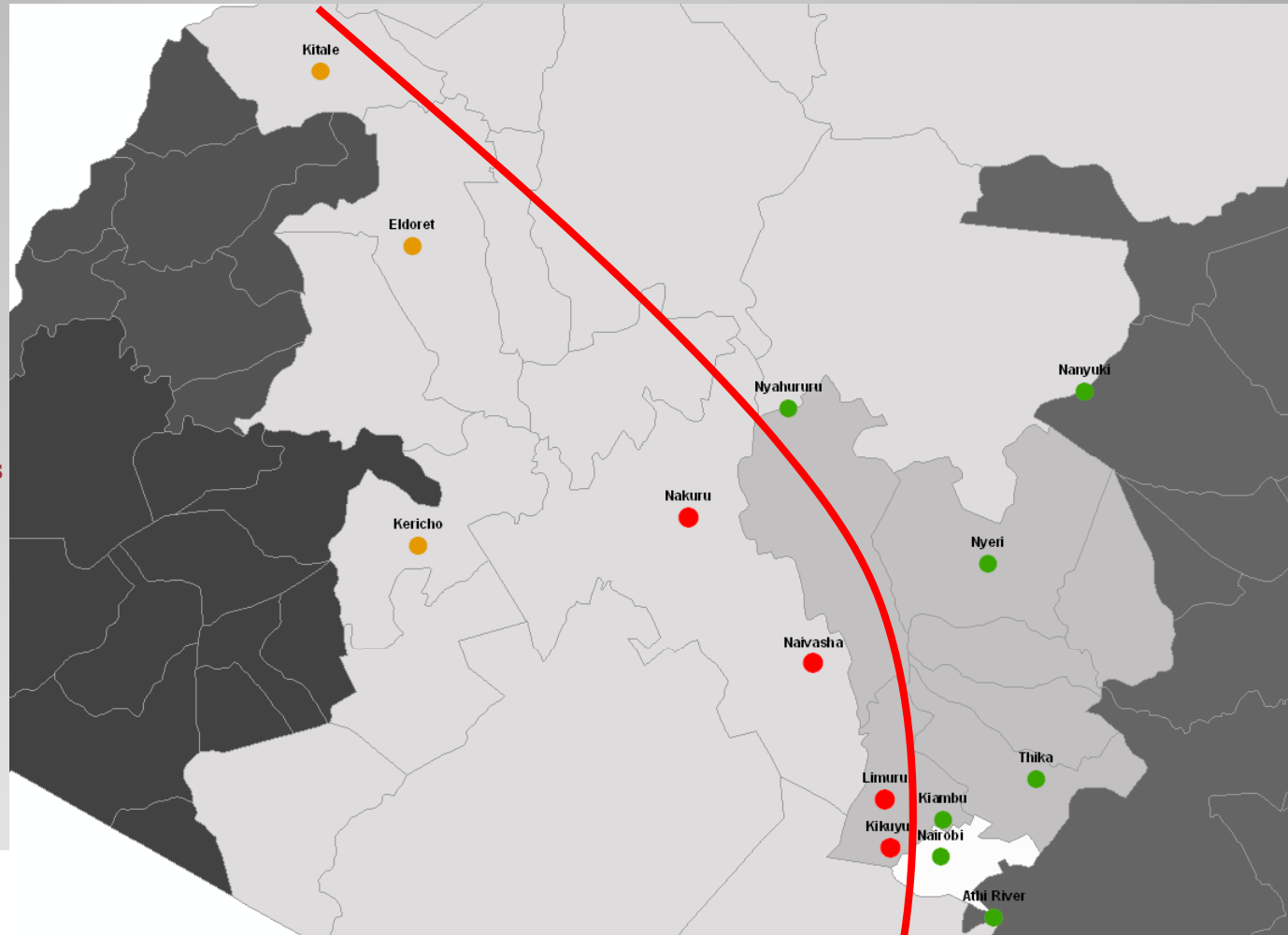
Sample: **all** flower firms who were regularly producing and exporting flowers in the months preceding the violence.

# Location of Firms & Violence



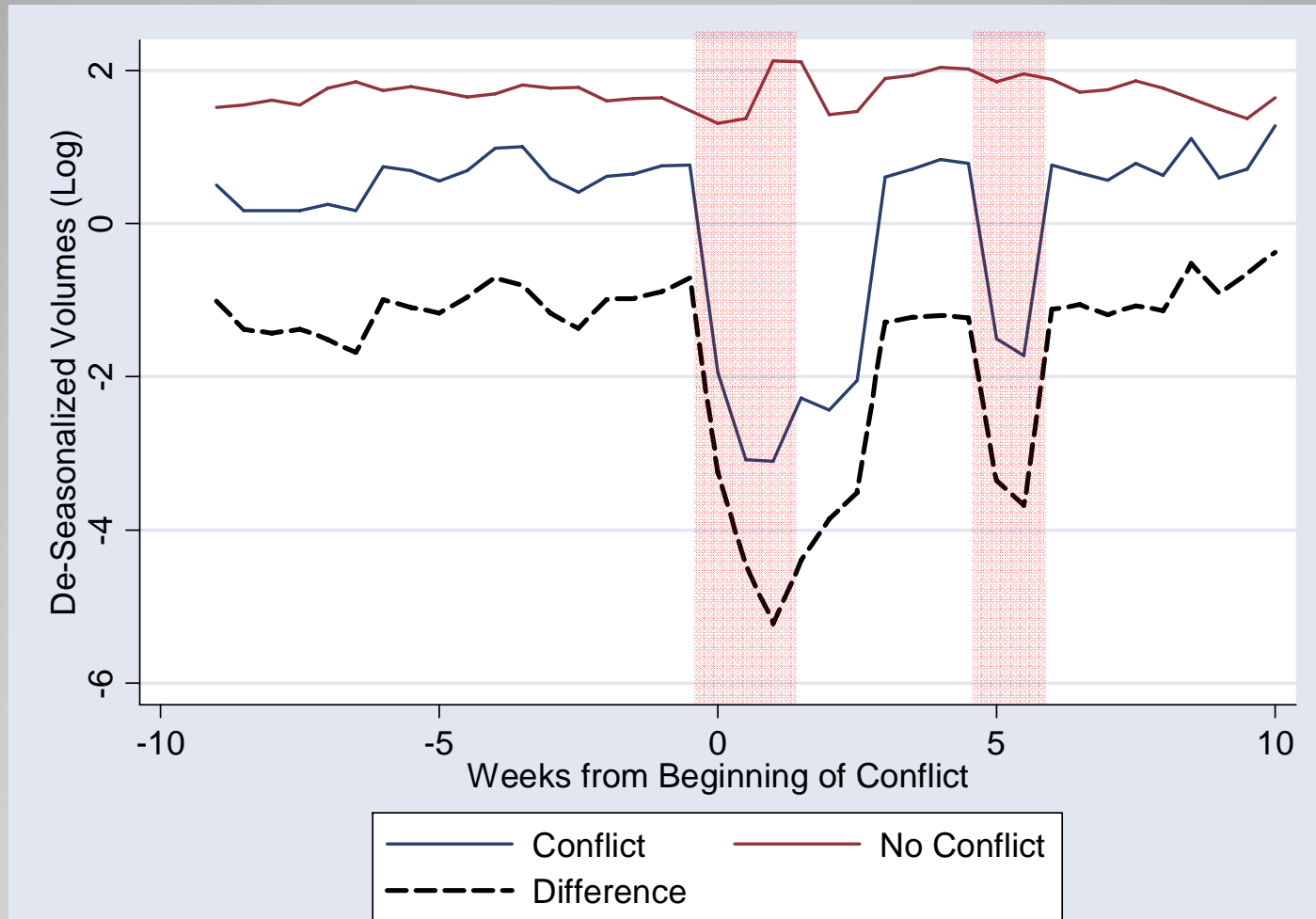
For illustration purposes only.

Dots are nearest towns to flower farms.





# Violence and Export Volumes



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.

	<b>% Workers Lost</b>	<b>% Firms facing challenges with transportation</b>
<b>Areas without Violence</b>	<b>1%</b>	<b>32%</b>
<b>Areas with Violence</b>	<b>33%</b>	<b>69%</b>

## *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?

# Heterogeneity (I)

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.

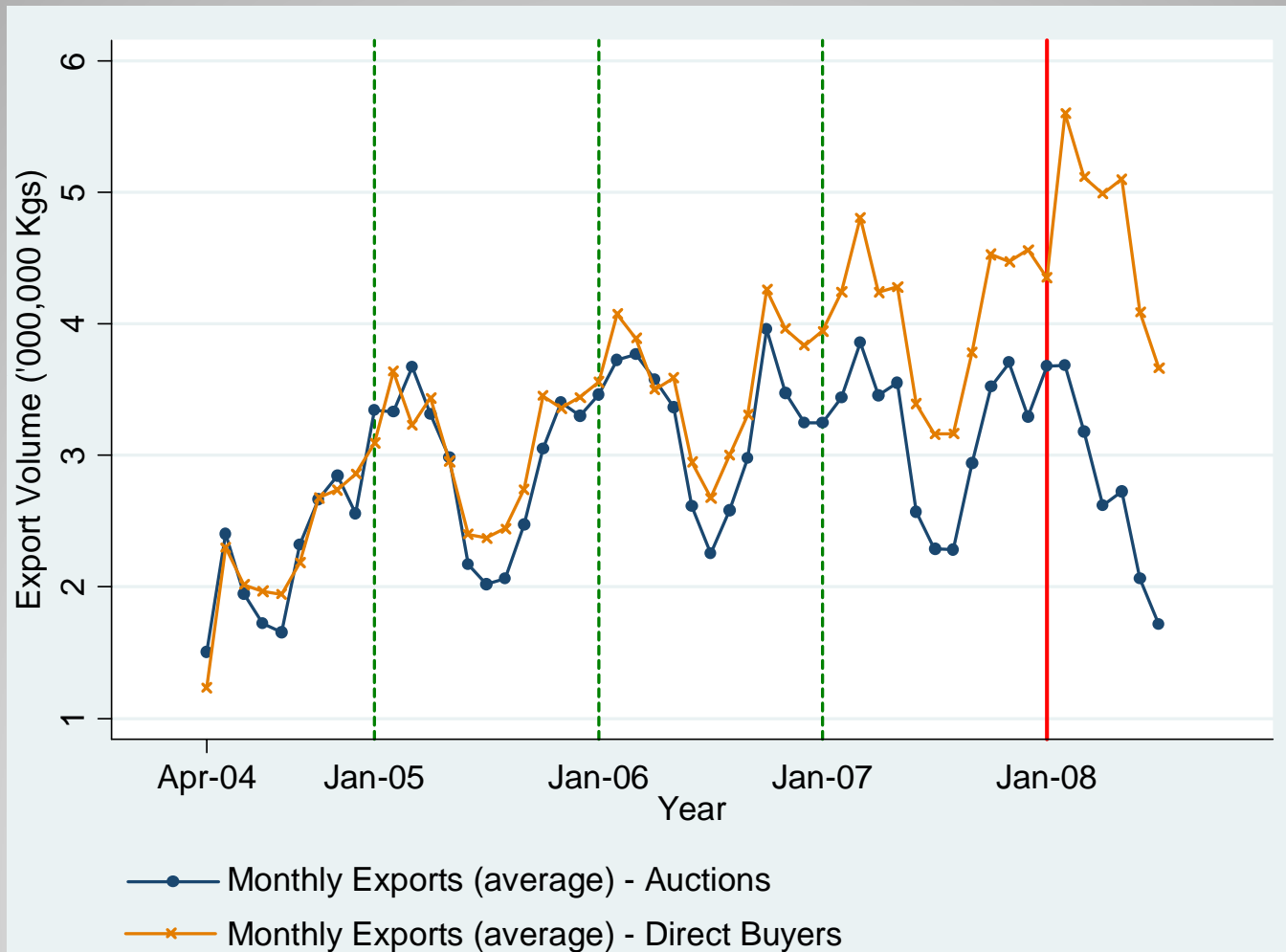
# Marketing Channels – Trends

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:

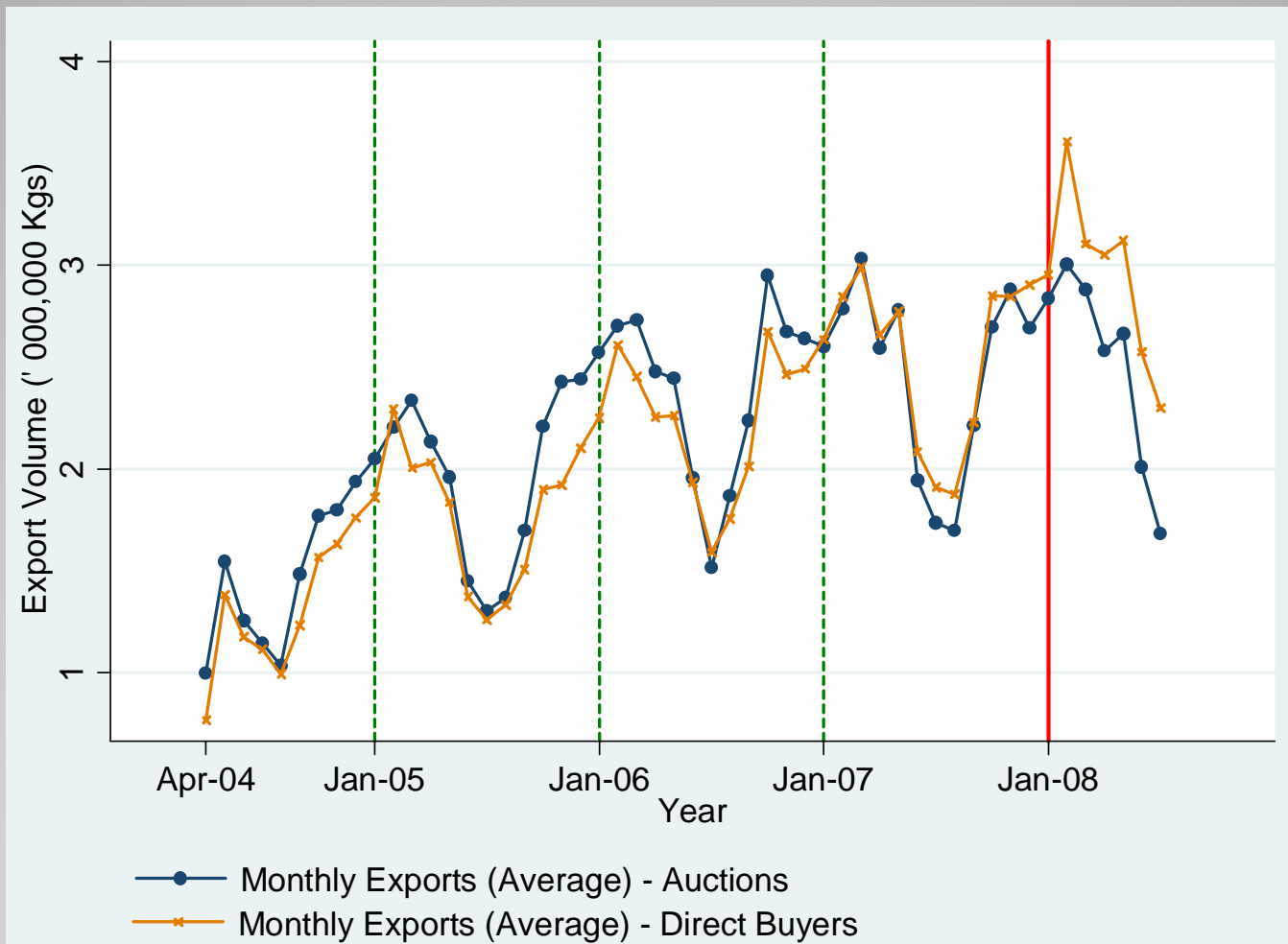
- trend towards direct sales is mostly driven by the largest firms,
- firms appear to be specialized in their marketing channels. Most firms sell majority of their produce through one channel only.

# Aggregate Monthly Exports to...



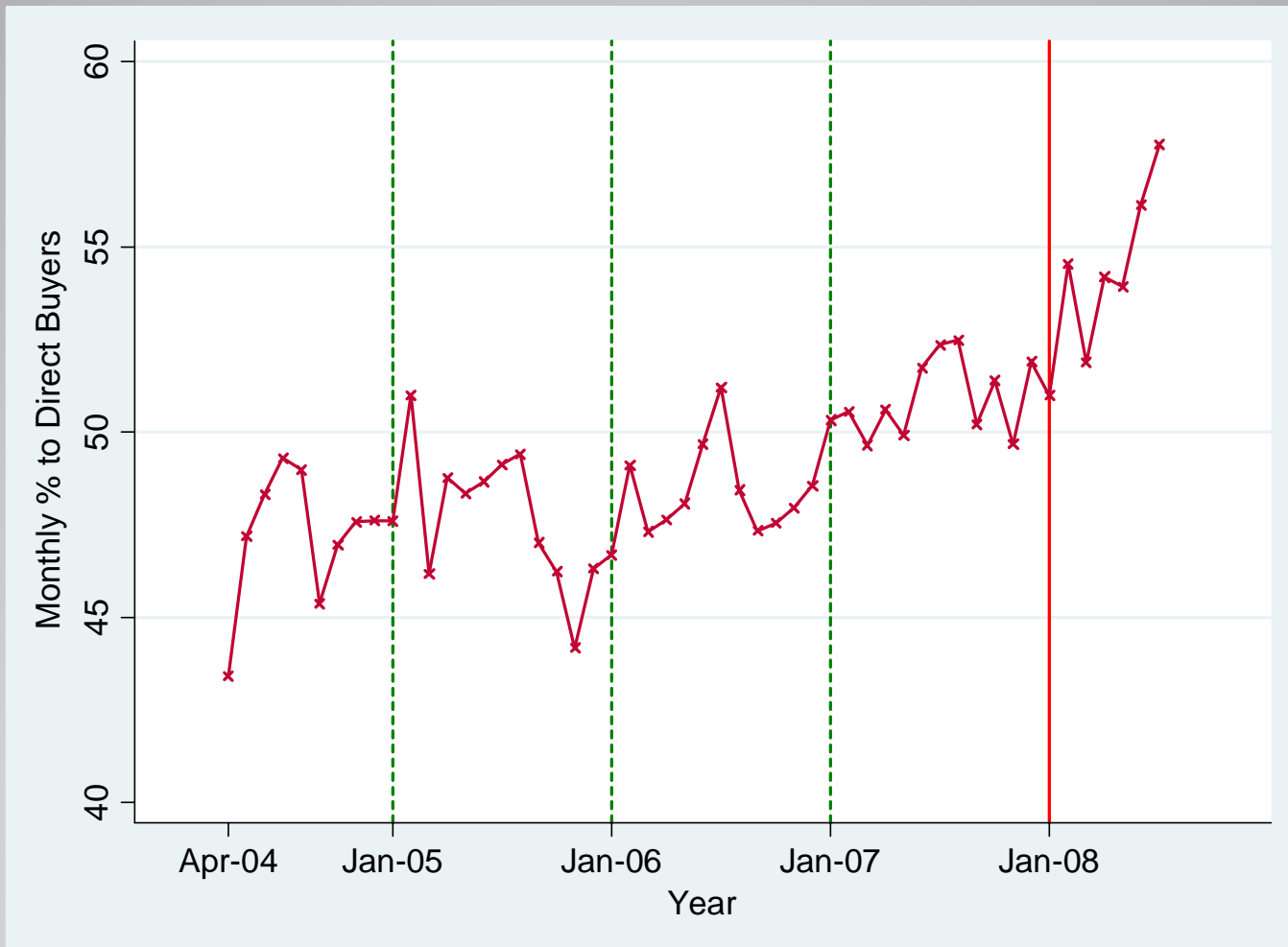
The figure illustrates approximate monthly exports in Kgs to each of the channels ALL firms in the industry.

# Aggregate Monthly Exports\* to...



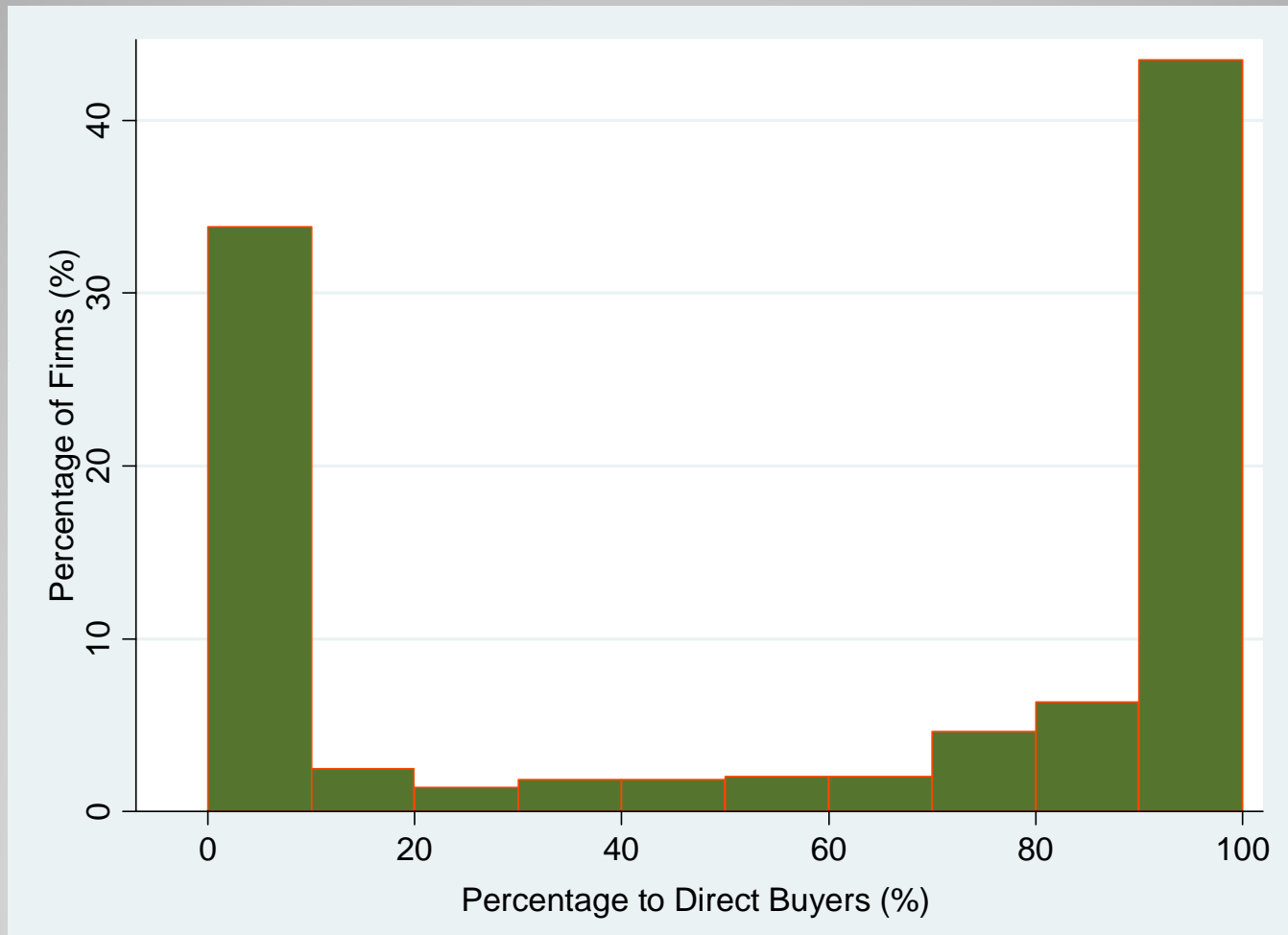
\* The figure illustrates approximate monthly exports in Kgs to each of the channels excluding four largest firms in the industry.

## 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)

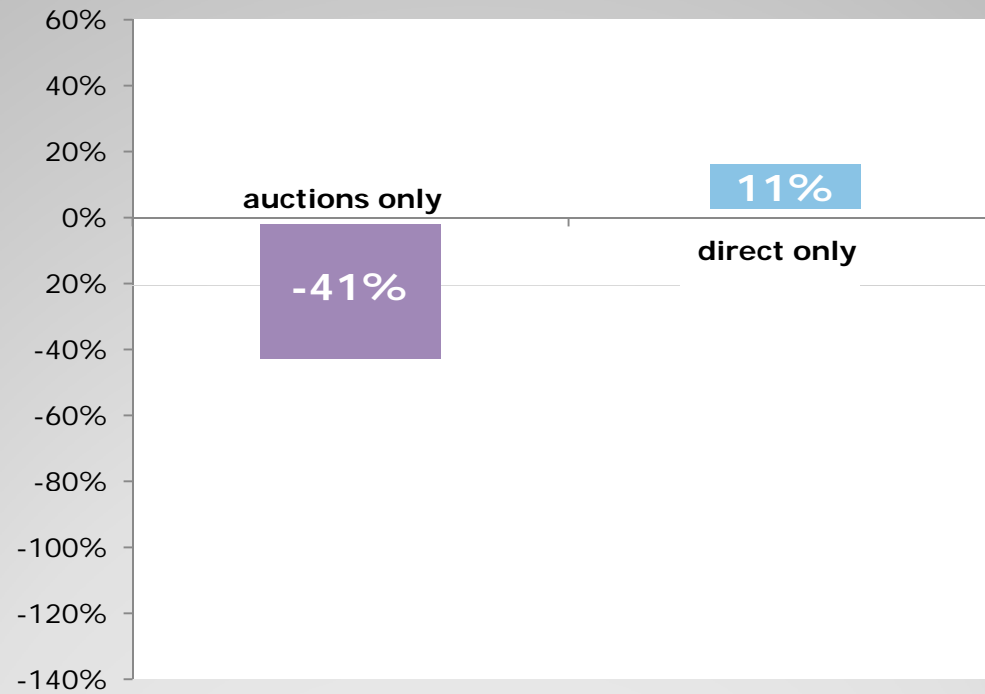
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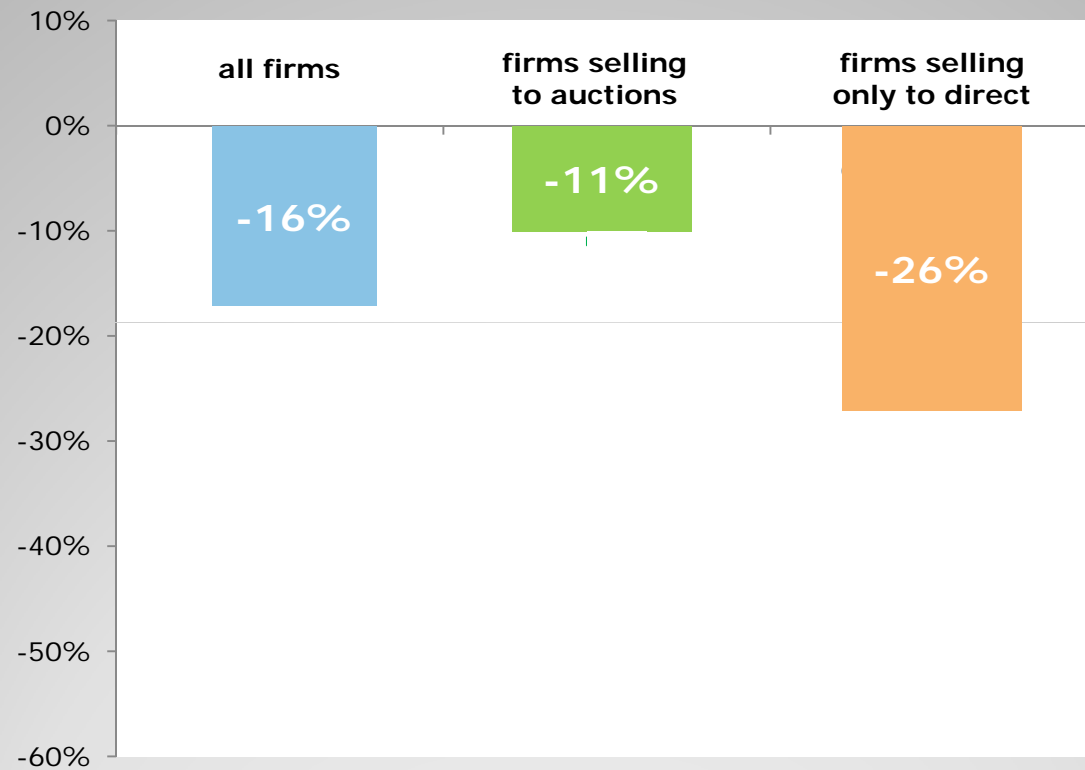
# Heterogeneity – across firms



## 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



# 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.**