NOT FOR PUBLICATION

ONLINE APPENDICES

The Value of Relationships:
Evidence from a Supply Shock to Kenyan Rose Exports

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Appendix A: Data Sources

Appendix B: Theory

Appendix C: Additional Figures

Appendix D: Additional Tables

Appendix A: Data Sources

This appendix describes all of the data sources used in the paper.

1. Transaction-Level Export Data

The data cover all exports of roses during the period from April 2004 to August 2008. The data are obtained from the Horticultural Crops Development Authority (HCDA), a parastatal body which promotes and regulates the horticultural industry in Kenya. Records of each export transaction are entered in close collaboration with the Customs Authority. The invoice for each transaction is directly entered into the database at HCDA before the flowers are exported. Each invoice contains information on name of the Kenyan exporter, name of foreign consignee/client, type of produce, weight (kgs), units, unit value, total value, date, destination, currency and freight clause (C&F, FOB). We restrict our sample to established exporters that export throughout most of the season in the year preceding the violence. The sample covers more than ninety five percent of export records in the data.

2. Survey and Administrative Data

Information provided in the background section was collected through a firm-level survey. The survey was designed in collaboration with Christopher Ksoll and was implemented by the two authors in July to September 2008. The survey covered i) general questions about the firm (history, farm certification, ownership structure, level of vertical integration, location of farms etc.), ii) contractual relationships in export markets and marketing channels (direct wholesaler and/or auction houses), iii) firm production (covering detailed information on labor force, input use and assets), iv) retrospective post-election violence period (effect on operations, loss of workers by week, issues on transportation and air-freight, financial losses and extra-costs incurred). The survey was administrated to the most senior person at the firm, which on most occasions was the owner himself/herself. Upon previous appointment, face-to-face interviews of one to two hours were conducted by the authors with the respondent.

The location of exporters in the sample is obtained from HCDA, the Kenya Flower Council (KFC) and field visits during the survey. The names and nationality of firms owners and directors are obtained from the Registrar of Companies at the Attorney General's Office. Internet search and interviews guided the classification of foreign buyers into different marketing channels. Prices and volumes at the auctions is obtained at the weekly level from the International Trade Centre, UNCTAD/WTO, Geneva.

3. Time and Location of the Violence

To classify whether a location was affected by the violence we rely on the Kenya Red Cross Society's (KRCS) Information Bulletins on the Electoral Violence which were issued daily during the relevant period (see Kenya Red Cross Society (2008) for details). Various other sources were used to supplement and verify the information, including: i) *Disaster Desk* of the Data Exchange Platform for the Horn of Africa (DEPHA),[1] ii) *Ushahidi,*[2] iii) the Kenya National Commission on Human Rights Report (2008), and iv) the Independent Review Commission Report (2008). Finally, we confront this information with the responses in the firm survey. For the locations relevant to the flower industry, the first outbreak of violence occurred on the 29^{th} December 2007 and lasted until January 4^{th} 2008, around Eldoret, Kitale, Kericho and Nakuru. The second outbreak occurred between the 25^{th} and 30^{th} of January 2008 and also involved the towns of Naivasha and Limuru.

[1] DEPHA provides geographic information data and services to the region under the UN. DEPHA maps of the violence were accessed at `http://www.depha.org/Post_election_Violence.asp` on September 23^{rd}, 2008.

[2] *Ushahidi* is an open-source site launched to gather information from the general public on the events in real time. The general public could on a map of Kenya pin up a town/area where conflict had erupted and when. For details, see `http://legacy.ushahidi.com/` (accessed on September 30^{th} 2008).

Appendix B: Theory

RESULTS IN SECTION II.A: *Under perfect contract enforcement the optimal contract features: i)* $\underline{p} < w_t^* < \overline{p}$*, ii)* $\overline{q}^m = \frac{\overline{p}}{c} - q^*$ *and iii)* $\underline{q}^m = 0$.

PROOF: Assumption $\kappa > v$ implies that the buyer never purchases roses in the market. Assumption $v > \overline{p}$ implies that the buyer's willingness to pay is higher than market prices in both seasons. As a result, it is optimal for the buyer to offer $\overline{q} = \underline{q} = q^*$. Assumption $\underline{p} = 0$ is made for convenience alone, and implies $\underline{q}^m = 0$. Assumption $cq^* < \overline{p}$ implies that the marginal cost of producing q^* is smaller than the price in the market in the high season and, therefore, $\overline{q}^m = \frac{\overline{p}}{c} - q^*$. The price w is set by the buyer and, following standard arguments, can be recovered from the binding participation constraint. Simple algebra gives $w_t^* = \frac{\overline{p}+\delta(c(q^*)/q^*)}{1+\delta}$.■

RESULTS IN SECTION II.B: *Under limited enforcement: A) the optimal relational contract is stationary; B) there is price compression, i.e.,* $w_t^R < \overline{p}$*; C) the seller's constraint in the low season never binds.*

PROOF: The proof of *Part A*) follows standard arguments (e.g., Abreu (1988) and Levin (2003)) and is omitted. The logic of the proof is that with risk neutral parties and publicly observed history there is no need to distort future continuation values to provide incentives.‖

The proof of *Part B*) is as follows. Given the stationarity of the contract, we omit the time subscript. Suppose, instead, that $w^R = \overline{p}$. Obviously, $\underline{q}^R \leq q^*$ and since, by assumption, $cq^* < \overline{p}$, the seller's profits in the low season are strictly positive, $\underline{\pi}^R = w^R \underline{q}^R - c(\underline{q}^R) > 0$. In contrast, profits in the high season in the relationships are equal to profits in the spot market, since $w^R = \overline{p}$. The buyer could, therefore, lower the price by a small amount ε, still satisfy seller's constraints (3) and (4) and increase profits. Increasing profits at any date only helps satisfying buyer's constraints (1) and (2). A contradiction.‖

The proof of *Part C*) is as follows. Given the stationarity of the contract, we omit the time subscript. First, note that in the low season, the seller never sells to the auctions since $\underline{p} = 0$. In the high season, the seller always produces quantity $\overline{q}$ implicitly defined by $C'(\overline{q}) = \overline{p}$, i.e., $\overline{q} = \frac{\overline{p}}{c}$. The quantity $\overline{q}$ is partly sold to the buyer, according to the relational contract $\overline{q}^R$, and the rest, given by $\overline{q}^m = \overline{q} - \overline{q}^R$, is sold at the auctions. Therefore, in the high season the seller never deviates by changing production plans and the only constraints to be taken into account is side-selling, given by (3). In the low season, the best possible deviation, instead, is to produce nothing.

This gives constraint (4).

We now derive the necessary value functions. Denote with $\overline{\pi}^m$ the per period profit the seller makes if optimally selling all the production to the auctions in the high season. We have $\overline{\pi}^m = \frac{\overline{p}^2}{2c}$. Similarly, $\underline{\pi}^m = 0$. Also, denote $\underline{\pi} = \left(w\underline{q}^R\right) - c(\underline{q}^R)$. The value functions in the relationship are then given by $\overline{V} = \overline{\pi}^m - w\overline{q}^R + \delta\underline{V}$ and $\underline{V} = \underline{\pi} + \delta\overline{V}$. Solving for the two equations gives $\overline{V} = \frac{\overline{\pi}^m - w\overline{q}^R + \delta\underline{\pi}}{1-\delta^2}$ and $\underline{V} = \frac{\underline{\pi} + \delta\left(\overline{\pi}^m - w\overline{q}^R\right)}{1-\delta^2}$. Similarly, the outside option of the seller in the high and low seasons are respectively given by $\overline{V}^O = \frac{\overline{\pi}^m}{1-\delta^2}$ and $\underline{V}^O = \frac{\delta\overline{\pi}^m}{1-\delta^2}$.

Substituting the value functions in the constraint for the high season, (3), gives, after some manipulation, $\underline{\pi} \geq \frac{(1-\delta^2)(\overline{p}-w)\overline{q}^R}{\delta} + \delta w\overline{q}^R$. Similarly, for the low season, constraint (4) can be rewritten as $\underline{\pi} \geq \delta w\overline{q}^R$. Given price compression, $\overline{p} > w$, constraint (3) guarantees (4) and, therefore, (4) cannot be binding.|| ■

RESULTS IN SECTION II.C: *If the aggregate incentive constraint (5) is binding, the value of the relationship increases over time.*

PROOF: The value of the relationship at age τ is given by the net present value of future expected surplus generated by the relationship. Recall from the main text that $\mu_\tau = \theta_\tau + (1-\theta_\tau)(1-\lambda)$ denotes the expected probability of a delivery. Consider a relationship of age τ in which quantities $\overline{q}_\tau^R$ and $\underline{q}_{\tau+1}^R$ must be traded. Denote with $\overline{q}_\tau^m$ the quantity sold in the market and with $\overline{q}_\tau = \overline{q}_\tau^R + \overline{q}_\tau^m$ the total quantity produced.

Recall that, for simplicity, we have assumed that in the case of a delivery failure, the seller can still sell roses to the spot market. The expected joint profits generated by the relationship in the high season is given by $\mu_\tau \left(r(\overline{q}_\tau^R) + \overline{pq}_\tau^m\right) - c(\overline{q}_\tau)$. The outside option gives the buyer an exogenous period payoff $\overline{u}$. Similarly, the outside option gives the seller a period payoff equal to $\mu_\tau\left(\overline{pq}_\tau\right) - c(\overline{q}_\tau)$. The period surplus generated by the relationship in the high season τ, is then given by $\overline{s}(\theta_\tau) = \mu_\tau\left(r(\overline{q}_\tau^R) + \overline{p}\left(\overline{q}_\tau^m - \overline{q}_\tau\right)\right) - \overline{u}$. For all quantities $\overline{q}_\tau^R \leq q^*$ the expected surplus can be rewritten as $\overline{s}(\theta_\tau) = \mu_\tau(v - \overline{p})\overline{q}_\tau^R - \overline{u}$ and is an increasing function of θ_τ. Similarly, and adapting notation in an obvious manner, the surplus in the following low season is given by $\underline{s}(\theta_{\tau+1}) = \mu_{\tau+1} v\underline{q}_{\tau+1}^R - c\left(\underline{q}_{\tau+1}^R\right) - \underline{u}$ and for all $\underline{q}_{\tau+1}^R \leq q^*$ is also an increasing function of θ_τ.

Suppose in the optimal relational contract traded quantities in the high seasons, $\overline{q}_\tau^R$, and in the low seasons, $\underline{q}_{\tau+1}^R$, stayed constant over time at a level below q^*. The value of the relationship would still mechanically increase over time due to the increase in θ_τ. However, this would violate the assumption that the constraint (5) is binding. A contradiction.■

RESULTS IN SECTION II.D: *The likelihood of delivery during the violence is inverted-U shaped in the age of the relationship.*

We characterize the (equilibrium) seller's incentives to exert effort at the time of the violence, e^*_τ, and the likelihood of delivery, $e^*_\tau \mu_\tau$. We prove the result stated in section 3.4 focussing on configurations that match two key facts documented in the empirical analysis. First, as *Test 1* shows, we assume that the incentive constraint (5) in the relational contract at age τ is binding. Second, as *Test 2* shows, we assume that the quantity traded in the relationship, $\overline{q}^R_\tau$, and the value of the relationship (for the seller) increase in τ. We make an additional assumption regarding the youngest relationships observed in the sample. We assume that buyer's beliefs in these relationships are just above the minimum level necessary to start a relationship.

PROOF: *Preliminary Observations.* The likelihood of delivery is given by $e^*_\tau \mu_\tau$ where e^*_τ is the equilibrium level of effort. Denote with $\widetilde{e}_\tau$ the buyer's beliefs about the effort exerted by the seller. The buyer's beliefs about the seller's type following a delivery is given by $\theta^{d=1}_{\tau+1} = \frac{\theta_\tau}{\mu_\tau}$ and is independent of the buyer's beliefs about effort during the violence, $\widetilde{e}_\tau$. Moreover, $\lim_{\tau\to\infty} \theta^{d=1}_{\tau+1} = 1$. The buyer's beliefs following a delivery failure, instead, are given by $\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau) = \frac{\theta_\tau(1-\widetilde{e}_\tau)}{\mu_\tau(1-\widetilde{e}_\tau)+(1-\theta_\tau)\lambda}$. Note that $\lim_{\tau\to\infty} \theta^{d=0}_{\tau+1} = 1$ for all $\widetilde{e}_\tau$ and that $\partial \left(\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau)\right) / \partial \widetilde{e}_\tau < 0$. Moreover, $\lim_{\widetilde{e}_\tau\to 1} \theta^{d=0}_{\tau+1}(\widetilde{e}_\tau) = 0$. The buyer's outside option, U^0_τ, is assumed to be larger than the value of a relationship in which beliefs about the seller's type are sufficiently pessimistic. This implies that there exists a threshold $\overline{\theta}$ such that if $\theta^d_{\tau+1}$ falls below $\overline{\theta}$ the relationship is terminated. Since $\theta^{d=1}_{\tau+1} > \theta_\tau$ the relationship is never terminated after a delivery. However, the properties of $\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau)$ imply that there exists a threshold $\overline{e}_\tau$, increasing in τ, such that if $\widetilde{e}_\tau > \overline{e}_\tau$ the relationship is terminated following a delivery failure.

LEMMA 1: *An interior equilibrium with* $e^*_\tau \in (0,1)$ *always exists.*

PROOF: Denote with $V^D(\theta^{d=1}_{\tau+1}(\widetilde{e}_\tau))$ and $V^D(\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau))$ the seller's payoff after delivery and after non-delivery. The first-order condition of the seller, given by (8), is $\mu_\tau \left(V^D(\theta^{d=1}_{\tau+1}) - V^D(\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau))\right) = \Gamma'(e_\tau)$. The left-hand side doesn't depend on e_τ. The right-hand side is a strictly increasing and function of e_τ, with $\lim_{e_\tau\to 0} \Gamma'(e_\tau) = 0$ and $\lim_{e_\tau\to 1} \Gamma'(e_\tau) = \infty$. This guarantees that (8) is necessary and sufficient to characterize the seller's best response.

In equilibrium, $\widetilde{e}_\tau = e_\tau = e^*_\tau$. Note that $\partial \left(\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau)\right) / \partial \widetilde{e}_\tau < 0$ implies that $V(\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau))$ is a (weakly) decreasing function of $\widetilde{e}_\tau$. Specifically, $V(\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau))$ decreases in $\widetilde{e}_\tau$ if $\widetilde{e}_\tau \leq \overline{e}_\tau$ and is equal to the constant outside option V^O_τ otherwise. This implies that the left hand side of the seller's first order condition is (weakly) increasing in $\widetilde{e}_\tau$. $\Gamma''(e_\tau) > 0$ implies the right hand side of the seller's first order condition is increasing in e_τ and that $e_\tau(\widetilde{e}_\tau)$ is a continuous function. Brouwer fixed-point theorem, then, implies existence of an equilibrium. To see why the equilibrium must be interior, i.e., $e^*_\tau \in (0,1)$, note that $\lim_{\widetilde{e}_\tau \to 0} \theta^{d=0}_{\tau+1}(\widetilde{e}_\tau) < \theta^{d=1}_{\tau+1}$ implies that the left hand side of the first order condition is bounded away from zero for $\widetilde{e}_\tau \to 0$. The assumption $\lim_{e_\tau \to 0} \Gamma'(e_\tau) = 0$ then implies $e^*_\tau > 0$. Finally, $\lim_{e_\tau \to 1} \Gamma'(e_\tau) = \infty$ implies $e^*_\tau < 1$.[36] ‖

LEMMA 2: *For sufficiently low τ, equilibrium effort e^*_τ is positive and increasing in τ.*

PROOF: Denote with $\overline{q}$ the total quantity produced by the seller and by $\overline{q}^R_\tau$ the quantity to be delivered to the buyer. If the seller delivers to the buyer, she gets the revenues from the remaining quantity to be delivered, $(1-\gamma)\left(\overline{q}p - (p - w_\tau)\,\overline{q}^R_\tau\right)$, and the continuation value in the relationship associated with the updated beliefs, $\underline{V}\left(\theta_{\tau+1}\right)$. This gives $V^D(\theta^{d=1}_{\tau+1}) = (1-\gamma)\left(\overline{q}p - (p-w_\tau)\,\overline{q}^R_\tau\right) + \delta \underline{V}\left(\theta_{\tau+1}\right)$. Note that following a delivery, the buyer's posterior beliefs remain as in the original relational contract, i.e., $\theta^{d=1}_{\tau+1} = \frac{\theta_\tau}{\mu_\tau}$. The binding incentive constraint (5) implies the buyer cannot further incentivize delivery during the violence. The buyer would renege on any promise of higher prices or of a higher continuation value to the seller following a delivery at the violence.[37] Following a non-delivery, instead, the seller gets $V^D(\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau)) = (1-\gamma)\,\overline{q}p + \delta \underline{V}\left(\theta^{d=0}_{\tau+1}\right)$.

Consider a relationship that has started shortly before the violence. In such a relationship, $\tau \to 0$ and $\theta_\tau \to \overline{\theta}$. By assumption, beliefs are marginally above the threshold below which the relationship is terminated following a delivery failure during the violence. We have $\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau) < \overline{\theta}$ for all $\widetilde{e}_\tau$ and, therefore, in equilibrium it must be $e^*_\tau > \overline{e}_\tau$. The equilibrium necessarily entails relationship's termination following non-delivery. The continuation value is equal to the outside option, $\underline{V}\left(\theta^{d=0}_{\tau+1}\right) = \underline{V}^O$. Substituting into the seller's first order condition the continuation values derived above, we obtain $\mu_\tau\left((1-\gamma)\left(-(p-w_\tau)\,\overline{q}^R_\tau\right) + \delta\left(\underline{V}\left(\theta_{\tau+1}\right) - \underline{V}^O\right)\right) = \Gamma'(e_\tau)$. The binding aggregate incentive constraint (5) implies that the seller's incentive constraint must also have

[36] If multiple equilibria arise, we focus on the one with the highest expected delivery. The intuition for multiple equilibria is as follows: if the buyer believes effort to be high she becomes more pessimistic following a delivery failure. This lowers the seller's payoff $V^D(\theta^{d=0}_{\tau+1}(\widetilde{e}_\tau))$ and provides incentives for higher effort.

[37] For simplicity, we assume that roses already delivered, $\gamma \underline{q}^R_\tau$, are not informative about the realization of the reliability shock. Results are unchanged under the more realistic assumption that the unreliable type is hit by a shock preventing the fulfillment of the remaining order with probability $\lambda^{1-\gamma}$ (instead of λ). In any case, this formulation captures in a parsimonious way the fact the violence hit relationships in the middle of the high season.

been binding in the original relational contract and, therefore, $\delta\left(\underline{V}\left(\theta_{\tau+1}\right)-\underline{V}^{O}\right)=\left(p-w_{\tau}\right)\overline{q}_{\tau}^{R}$. In equilibrium effort is implicitly defined by $\mu_{\tau}\gamma\left(p-w_{\tau}\right)\overline{q}_{\tau}^{R}=\Gamma'(e_{\tau}^{*})$. Implicit differentiation of the first order condition with $\Gamma''(e_{\tau})>0$ and both μ_{τ} and $\gamma\left(p-w_{\tau}\right)\overline{q}_{\tau}^{R}$ increasing in τ establishes that e_{τ}^{*} increases in τ for all τ such that $e_{\tau}^{*}>\overline{e}_{\tau}$.‖

LEMMA 3: *For sufficiently high τ, equilibrium effort $e_{\tau}^{*}=0$.*

PROOF: Note that as $\tau\to\infty$, the threshold $\overline{e}_{\tau}\to 1$. This, together with $\lim\limits_{e_{\tau}\to 1}\Gamma'(e_{\tau})=\infty$, implies that in the (highest) equilibrium the relationship is not terminated following a delivery failure. Since $\lim\limits_{\tau\to\infty}\theta_{\tau+1}^{d=0}=\lim\limits_{\tau\to\infty}\theta_{\tau+1}^{d=1}=1$, we also have that $\lim\limits_{\tau\to\infty}\underline{V}\left(\theta_{\tau+1}^{d=0}\right)=\lim\limits_{\tau\to\infty}\underline{V}\left(\theta_{\tau+1}^{d=1}\right)$. Substituting this into the first order condition, we obtain $V^{D}(\theta_{\tau+1}^{d=1}\left(\widetilde{e}_{\tau}\right))<V^{D}(\theta_{\tau+1}^{d=0}\left(\widetilde{e}_{\tau}\right))$ and, therefore, $e_{\tau}^{*}=0$. Since $\mu_{\tau}\to 1$, this also establishes $\lim\limits_{\tau\to\infty}\mu_{\tau}e_{\tau}^{*}=0$.‖

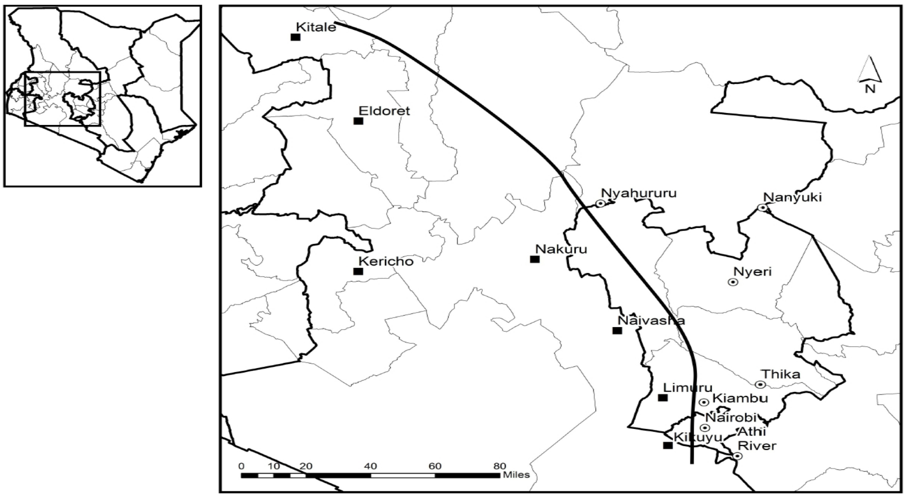
Combining **Lemma 2** and **Lemma 3** establishes that over an initial range of young relationship expected deliveries $\mu_{\tau}e_{\tau}^{*}$ are an increasing function of τ. Eventually, however, for sufficiently old relationships expected deliveries $\mu_{\tau}e_{\tau}^{*}$ tend to zero. We have therefore proved that, over the relevant range, expected deliveries are an initially increasing and eventually decreasing function of relationship's age τ.■

Additional References for Appendix B

Abreu, Dilip. 1988. "On the Theory of Infinitely Repeated Games with Discounting", *Econometrica*, 56(6): 383-96.

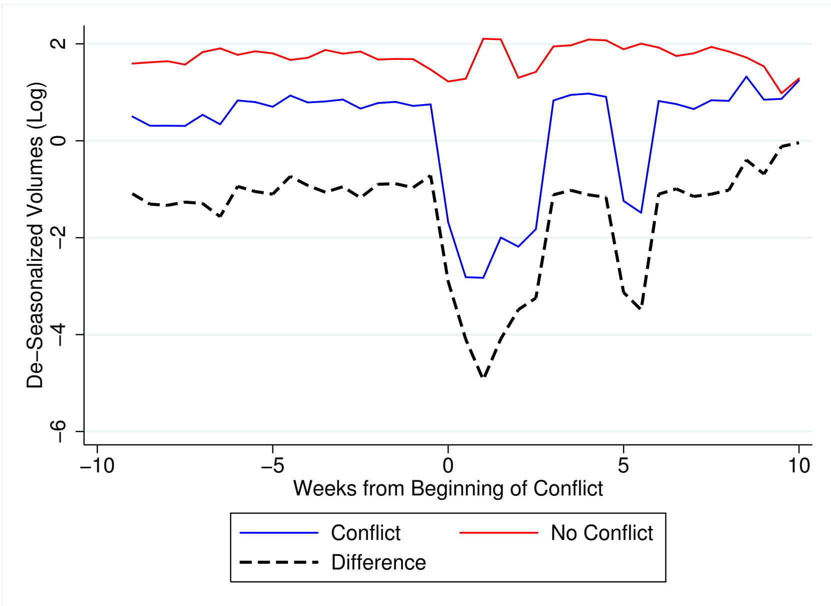
Levin, Jonathan. 2003. "Relational Incentive Contracts", *American Economic Review*, 93(3): 835-857.

Appendix C: Additional Figures



APPENDIX FIGURE A1 - CONFLICT AND NON-CONFLICT AREAS

Notes: Among the towns around which flower firms are located, the figure illustrates those locations that were directly affected by the electoral violence to the left of the line (solid squares) and those locations that were not affected by the electoral violence to the right (hollow circles). The solid black lines indicate province boundaries and the light gray indicate district boundaries.



APPENDIX FIGURE A2 - EFFECT OF VIOLENCE ON EXPORT VOLUMES

Notes: The figure shows the median biweekly residual of a regression that controls for firm specific seasonality and growth patterns in conflict and in non-conflict locations for the 10 weeks before and 10 weeks after the first outbreak of violence. For data sources, please refer to the Online Appendix and Ksoll, Macchiavello and Morjaria (2013).

Appendix D: Additional Tables

APPENDIX TABLE A1- THE VIOLENCE, SELF-REPORTED RECORDS

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	Violence on operations?	Staff absent due to violence?	Highest proportion workers absent?	Extent of worker absence impact production?	Transportation problem to airport?	Hire additional security?
Conflict Region (yes=1)	0.575***	0.702***	43.898***	2.333***	0.477***	0.311***
	(0.103)	(0.072)	(5.609)	(0.124)	(0.100)	(0.099)
Dep. Var. in No-Conflict Region (Mean)	0.333	0.206	1.511	0.167	0.233	0.071
Adjusted R^2	0.36	0.51	0.35	0.55	0.136	0.116
Number of Firms	74	74	74	74	74	74

Notes: ***, **, * denote statistical significance at the 1%, 5% and 10% level respectively. The Table reports the difference in mean in responses between firms located in regions directly affected by the violence and firms located in regions not directly affected by the violence respectively. All the dependent variables are obtained from the firm survey. The exact survey questions for each column (number in parenthesis) is as follows: (1) Did violence affect at all the operations of your firm; (2) Were there any days in which members of your staff did not come to work because of the violence; (3) What was the highest proportion of workers absent due to the violence?; (4) To what extent did worker absence cause a loss in production?; (5) Did you experience any transportation problem to transport flowers to the airport?; (6) Did you hire extra security? Robust standard errors, clustered at the town level, are reported in parenthesis.

APPENDIX TABLE A2- UNIT WEIGHTS PLACEBOS

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	Unit Weight: Average			Unit Weight: Standard Deviation		
Past Temptations	0.006	0.011		0.024	-0.002	
	(0.067)	(0.045)		(0.037)	(0.051)	
Direct Relationship			0.022		-0.023	
			(0.053)		(0.021)	
Firm fixed effects	yes	–	yes	yes	–	yes
Buyer fixed effects	yes	–	no	yes	–	no
Relationship fixed effects	no	yes	no	no	yes	no
Season fixed effects	–	yes	–	–	yes	–
Observations	146	444	274	146	444	274

Notes: ***, **, * denote statistical significance at the 1%, 5% and 10% level respectively. Robust standard errors, two-way clustered at the firm and buyer level, are reported in parenthesis.