

Grin and Bear It: Producer-Financed Exports from an Emerging Market*

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Abstract

Trading goods across international borders is risky and takes time. Trading partners need to agree on how to share the risk and how to finance the period when the goods are in transit. This paper argues that the ability to bear the risk by providing export financing can give emerging market producers a competitive edge in foreign destinations. The analysis, based on the data covering the universe of Turkey's exports disaggregated by exporter, product, destination, and financing terms for the period 2003-2007, supports this view. The identification strategy takes advantage of an exogenous shock, the end of the Multi-Fiber Arrangement (MFA), a system of bilateral quotas governing the global trade in textiles and clothing until January 1, 2005. The results, based on a difference-in-differences approach, suggest that the share of exporter-financed exports to the European Union (EU) increased in the post-MFA period in products where Turkey's competitors faced binding MFA quotas, relative to the products where the quotas were not binding in 2004. As Turkey was not subject to the MFA quotas due to its customs union with the EU, these results are consistent with an increase in competition pushing Turkish exporters to offer export financing.

JEL Codes: F14; F15; F13.

Keywords: trade financing, competition, Multi-Fiber Arrangement, Turkey.

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1 Introduction

Trading goods across international borders is risky and takes time. Trading partners need to agree on how to share the risk and how to finance the period when the goods are in transit. This paper argues that the ability to bear the risk by providing export financing can give emerging market producers a competitive edge in foreign destinations.¹

Our exercise is motivated with a simple model in the spirit of [Antràs and Foley \(Forthcoming\)](#) and [Schmidt-Eisenlohr \(2013\)](#). The model focuses on three broad payment methods (financing terms): open account (OA), cash in advance (CIA), and letter of credit (LC). In transactions financed with OA, the importer pays after the arrival of the goods in the destination. In CIA-financed transactions, the importer pays before the exporter ships the goods to the destination. In LC-financed transactions, the importer's bank promises to pay for the goods on behalf of the importer provided the exporter meets the requirements specified in the contract. The model predicts that an increase in the importer's bargaining power will make exporter financing more likely because it is more advantageous to the importer. As higher competition is likely to increase the importer's bargaining power, exporter-financed exports are predicted to increase with the level of competition in the destination country.

This prediction is tested and confirmed in the data set covering the universe of Turkey's exports disaggregated by exporter, product, destination, and financing terms during the period 2003-2007. The identification strategy takes advantage of an exogenous shock: the end of the Multi-Fiber Arrangement (MFA), a system of bilateral quotas governing the global trade in textiles and clothing which was dismantled in 2005.

Until January 1, 2005, exports of clothing and textiles from developing countries to the United States, the European Union (EU) and Canada were subject to bilateral quotas under

¹This observation is in line with anecdotal evidence. For instance the *Trade Finance Guide*, published by the US Department of Commerce International Trade Administration in November 2012 in order to assist American companies in conducting export transactions, warns that insisting on the importer providing financing “could, ultimately, cause exporters to lose customers to competitors who are willing offer more favorable payment terms to foreign buyers” (p. 5). It also suggests that providing export financing “may help win customers in competitive markets” (p. 11).

the global Agreement on Textile and Clothing, previously known (and referred to in this article) as the Multi-Fiber Arrangement. After forming a customs union with the EU in 1996, Turkey was not subject to any quota restrictions in the EU market. Thus removal of the MFA quotas on large textile and clothing producers, China in particular, constituted a large shock to the competitive pressures faced by Turkish suppliers of these products to the EU market.

Our identification strategy takes advantage of the fact that the MFA quotas were binding in some, but not the other, products. The estimation focuses on exports of products covered by the MFA destined for the EU market. The results from this difference-in-differences approach suggest that in the post-MFA period the share of Turkey's producer-financed exports to the EU increased disproportionately in products in which the MFA quotas were binding in 2004 relative to products without binding quotas. These findings are consistent with the view that an increase in competitive pressures pushed Turkish exporters to offer trade financing.

Our conclusions hold when the estimation is performed using the data at the product-market-year level as well as at the firm-product-market-year level. The results are robust to estimation in first differences and to taking into account the probability of the export flow survival. The results are further confirmed by showing that the placebo regressions focusing on Turkish exports to markets where trade in textiles and clothing had not been governed by the MFA rule do not show similar patterns. Finally, the findings are confirmed in a triple difference analysis where the placebo countries are included.

The contribution of our study lies in providing evidence suggesting that the extent of competition in the export market matters for the choice of export financing terms. This is a novel observation that has not been documented in the existing literature. By focusing on an exogenous shock and employing a difference-in-differences approach we are able to make this point in a convincing way. Our focus on an emerging market is also an interesting question in itself as it sheds light on additional obstacles faced by exporters from such countries in

international markets.

Our paper is related to several strands of the existing literature. First, we extend the literature on determinants of financing terms in international trade transactions ([Antràs and Foley \(Forthcoming\)](#), [Schmidt-Eisenlohr \(2013\)](#), [Glady and Potin \(2011\)](#), [Hoefele, Schmidt-Eisenlohr, and Yu \(2013\)](#), [Niepmann and Schmidt-Eisenlohr \(2014\)](#)), [Ahn \(2014\)](#)), by pointing out the role of competition, a factor that has not been considered before. Second, we add to a broader literature which documents the importance of access to credit for the ability to export ([Chaney \(2013\)](#), [Greenaway, Guariglia, and Kneller \(2007\)](#); [Manova \(2008\)](#), [Manova, Wei, and Zhang \(Forthcoming\)](#), [Chor and Manova \(2012\)](#), [Manova \(2013\)](#), [Amiti and Weinstein \(2011\)](#), [Paravisini, Rappoport, Schnabl, and Wolfenzon \(2014\)](#)). Finally, we contribute to the literature examining the impact of abolishing the MFA. This literature has investigated the impact of the shock on the importing countries ([Harrigan and Barrows \(2009\)](#)) and the exporting economies such as China ([Khandelwal, Schott, and Wei \(2013\)](#)). We show that third countries have also been affected.

The rest of the paper is organized as follows. The next section presents the theoretical model and its main predictions. Section 3 discusses the data. Section 4 outlines the empirical strategy and reports the estimation results. Section 5 contains the concluding remarks.

2 Theoretical Framework

We present a simple Nash bargaining model which builds on the work of [Antràs and Foley \(Forthcoming\)](#) and [Schmidt-Eisenlohr \(2013\)](#). In the model, a Turkish seller and a foreign buyer share the surplus generated by an international trade transaction. Here, we are not interested in the bargaining process itself. Instead, we want to understand the properties of possible outcomes that are mutually beneficial to both sides.

In the model, a given Turkish exporter sells product p to a given importer in destination country c . Both firms are risk-neutral. We focus on the relationship between a buyer

(importer) and a seller (exporter) of an intermediate good. The exporter is supplying an intermediate input to the importer that uses the input in its production process. The specifications of the input are tailored to the exact needs of the importer. The exporter incurs a constant marginal cost that is normalized to one.² S denotes the value of the (intermediate) good to the importer. When the transaction takes place between the two partners, their payoffs are equal to their expected profits as they bargain before the transaction takes place.

In the case where both parties fulfil their contractual obligations, the timing of the events under different payment terms is as follows. Under the CIA terms, the importer makes the payment before the exporter ships the good to the destination. Under the OA terms, the exporter first produces and ships the good, and the importer makes the payment upon its arrival. Under the LC terms, the importer's bank guarantees payment to the exporter after the arrival of the good at the destination. Regardless of the method of payment, there is a time lag (t periods) between the time the good is produced/shipped and its arrival at the destination.

We assume limited commitment. When the transaction is on the CIA terms, the exporter may have an incentive to deviate from the specifications set in the contract. Imperfect enforcement on the exporter's side implies that contracts in Turkey are enforced with probability λ . So, with probability $(1 - \lambda)$ the contract is not enforced, and the exporter avoids a small effort cost, resulting in a product of an inferior quality.³ Thus the value of the intermediate input good to the importer falls to a fraction $\delta \in (0, 1)$ of the initial value. Based on these assumptions, expected profits of the exporter and the importer under CIA terms are given by:

$$\begin{aligned} E[\Pi_E^{CIA}] &= P^{CIA} - 1 \\ E[\Pi_I^{CIA}] &= \frac{\lambda + (1 - \lambda)\delta}{(1 + r_c)^t} S - P^{CIA}, \end{aligned}$$

²One can also add an iceberg-type trade cost to the model. Such modification does not change any of the results.

³Following [Antràs and Foley \(Forthcoming\)](#), we do not model the effort cost explicitly.

where P^{CIA} denotes the price agreed at $t = 0$, and r_c the cost of financing in the importer's country.

In the case of transactions on the OA terms, the contract is enforced with probability $\lambda_c \in (0, 1)$, which depends positively on the quality of institutions in country c .⁴ The importer's failure to meet the contractual obligations leads to a renegotiation process and lowers the payment to the exporter to a fraction $\gamma \in (0, 1)$ of the original price, P^{OA} .⁵ The expected profits of the exporter and the importer are given by:

$$E[\Pi_E^{OA}] = \frac{\lambda_c P^{OA} + (1 - \lambda_c)\gamma P^{OA}}{(1 + r)^t} - 1,$$

$$E[\Pi_I^{OA}] = \frac{S - P^{OA}}{(1 + r_c)^t},$$

where r denotes the cost at which the exporter finances the transaction.

It is worth noting some differences between the two payment options. Under the CIA terms, one dollar paid by the importer translates into one dollar received by the exporter. The same is not true of a one-dollar transfer between the two parties under the OA terms. There are two reasons for this. First, there is uncertainty regarding the payment under the OA terms (and not under the CIA terms). Second, the two parties discount their payoffs using different discount factors. This is immaterial under the CIA terms as the payment is made at $t = 0$. The wedge between the value of a dollar transferred between the two parties under the OA terms implies that any factor that affects the transfer will also affect the choice between the different contract types.

Under the LC terms, it is assumed that the exporter receives the payment with certainty and the exporter's incentive not to comply with the contract terms is negligible. While bank financing (almost) eliminates the moral hazard problem on both sides, it is costly. The importer's bank charges two types of fees: a fee $f^{LC} > 1$ which increases the cost of

⁴In this case, the exporter has no incentive to shave the quality of the product.

⁵For instance, the exporter needs to seek the help of courts to extract the payment from the importer. Due to court fees the payment recovered is a fraction of P^{OA} .

financing and a fixed transaction fee $F^{LC} > 0$ which covers the cost of handling documents.⁶ The expected profits under LC terms are given by:

$$\begin{aligned} E[\Pi_E^{LC}] &= \frac{P^{LC}}{(1+r)^t} - 1, \\ E[\Pi_I^{LC}] &= \frac{S - P^{LC}}{f^{LC}(1+r_c)^t} - F^{LC}. \end{aligned}$$

Under the LC terms, there is pre-financing on both sides: the exporter needs to procure working capital and the importer has to pay the fixed processing fee at $t = 0$.

The price set in the contract under each financing term is determined by a Nash bargaining solution. We consider a general Nash bargaining solution where the transaction price is chosen to maximize a geometric average of the importer's and the exporter's surpluses. The weights are assumed to represent the bargaining power of the two parties. For simplicity, we assume that the payoff of the outside option for each party is zero. For each type of financing terms, trade partners first determine the price that maximizes their joint surplus (transaction surplus), and then they choose the financing terms that generates the largest joint surplus. So the bargaining problem we consider is as follows:

$$\max_{P^f} \Omega^f = \{E[\Pi_I^f]\}^\alpha \{E[\Pi_E^f]\}^{1-\alpha}, \quad (1)$$

where $\alpha \in [0, 1]$ is positively related to the bargaining power of the importer, and $f = \{CIA, OA, LC\}$. We also require that the participation constraints hold for both parties: $E[\Pi_I^f] \geq 0$ and $E[\Pi_E^f] \geq 0$.

When the trading partners share the bargaining power, i.e. $\alpha \in (0, 1)$, they set the price under each financing term to maximize the joint surplus function in (1). Setting the first-order condition with respect to P^f in equation (1) to zero under each financing term, we

⁶The way that we model LC fees is consistent with the approaches adopted by [Antràs and Foley \(Forthcoming\)](#) and [Niepmann and Schmidt-Eisenlohr \(2014\)](#).

obtain the following expressions for the transaction prices:

$$P^{CIA} = (1 - \alpha) \frac{\lambda + (1 - \lambda)\delta}{(1 + r_c)^t} S + \alpha, \quad (2a)$$

$$P^{OA} = (1 - \alpha)S + \frac{\alpha(1 + r)^t}{\lambda_c + (1 - \lambda_c)\gamma}, \quad (2b)$$

$$P^{LC} = (1 - \alpha)(S - f^{LC}(1 + r_c)^t F^{LC}) + \alpha(1 + r)^t. \quad (2c)$$

One can substitute these prices into the respective expressions for the expected profits and use the joint surplus function from equation (1) to find the expressions for joint surpluses in terms of exogenous parameters.⁷

We are interested in how the change in the bargaining power of the importer affects the attractiveness of the OA financing relative to the other financing terms. In particular, we need to derive the sign of $\partial(\Omega^{*OA}/\Omega^{*f})/\partial\alpha$, where $f \in \{CIA, LC\}$. Since it is easier to work with the logarithm of the ratio, we will consider $\ln \Omega^{*OA} - \ln \Omega^{*f}$ in the comparative statics analyses in the remainder of the paper.

We first check whether the comparative statics results for the institutional quality and the interest rate in the destination country, as stated by [Antràs and Foley \(Forthcoming\)](#) and [Schmidt-Eisenlohr \(2013\)](#), hold when the two trading partners share the bargaining power. For $\beta \in \{\lambda_c, r_c\}$, the effect of β on $\ln \Omega^{*OA} - \ln \Omega^{*f}$ for $f \in \{CIA, LC\}$ can be written as:

$$\frac{\partial(\ln \Omega^{*OA} - \ln \Omega^{*f})}{\partial\beta} = \alpha \left(\frac{\partial \ln \Pi_I^{*OA}}{\partial\beta} - \frac{\partial \ln \Pi_I^{*f}}{\partial\beta} \right) - (1 - \alpha) \left(\frac{\partial \ln \Pi_E^{*OA}}{\partial\beta} - \frac{\partial \ln \Pi_E^{*f}}{\partial\beta} \right) \quad (3)$$

where we only consider the direct effect as the envelope theorem implies that we can ignore the indirect effect of a change in α through P^f . Using (3), Appendix B proves the following result:

⁷The expressions for Ω^{*f} are given in Appendix A. When we consider the extreme cases where the importer has the full bargaining power ($\alpha = 1$) or the exporter has the full bargaining power ($\alpha = 0$), we can show that financing on the OA terms becomes relatively more profitable as contract enforcement (λ_c) or interest rate (r_c) in the importer's country increases. These predictions confirm those in [Antràs and Foley \(Forthcoming\)](#) and [Schmidt-Eisenlohr \(2013\)](#).

Result 1 *Consider the joint surplus under the OA terms relative to the other financing terms $f \in \{CIA, LC\}$: $\ln(\Omega^{*OA}/\Omega^{*f})$. Both ratios are increasing functions of λ_c and r_c . In other words, OA financing becomes more attractive relative to the CIA and the LC terms as the quality of institutions in the destination country improves or the cost of financing in the importing country goes up.*

Result 1 extends the well-known results from [Antràs and Foley \(Forthcoming\)](#) and [Schmidt-Eisenlohr \(2013\)](#) to the case where the exporter and the importer both have some bargaining power.⁸

Now, we are ready to derive the main comparative statics result: how does the attractiveness of the OA terms relative to the other two terms depend on the bargaining power of the importer? We interpret α as a measure of the degree of competition in the destination market: in more competitive markets, buyers have more alternatives and are more likely to be offered better terms than those offered by the Turkish exporter. We derive the following result in [Appendix C](#).

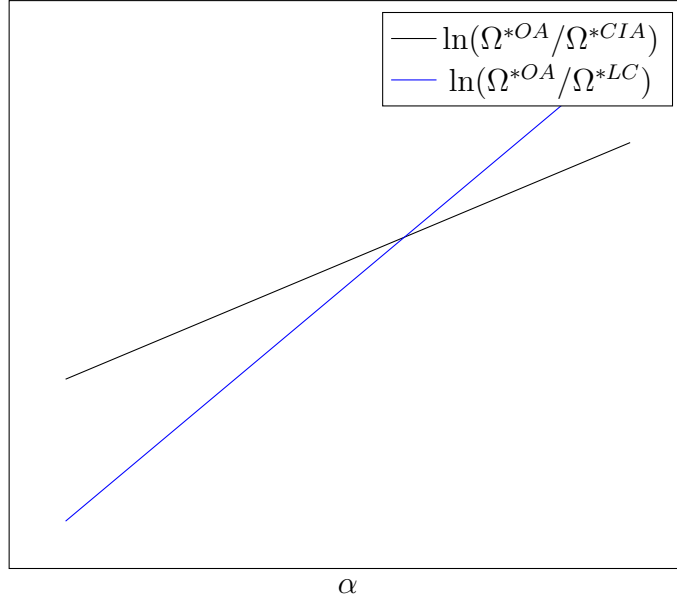
Result 2 *The joint surplus under the OA terms relative to the LC terms is unambiguously increasing in α . It is also (strictly) increasing relative to the CIA terms if the following inequality holds $\left(\frac{1+r}{1+r_c}\right)^t > \lambda_c + (1 - \lambda_c)\gamma$.*

This inequality is satisfied when $r \geq r_c$, i.e., the cost of financing in the exporting country exceeds the cost of financing in the destination country. This condition holds for all the countries in our dataset, i.e., the interest rate in Turkey is higher than the interest rate prevailing in the economies of Turkey’s trading partners in our dataset during the period under consideration.

Result 2 is the main prediction of the model that we take to the data. This result is intuitive. When the bargaining power of the importer increases, the joint surplus function

⁸In an online appendix, [Antràs and Foley \(Forthcoming\)](#) consider a setting where the importer has some bargaining power in the initial negotiations. However their setting is different from the one considered in this paper where the equilibrium is determined by an asymmetric Nash bargaining process.

Figure 1: Relative Surplus under the OA Financing and the Importer’s Bargaining Power



Notes: For simplicity, the figure assumes $r = r_c$

gives more weight to the expected surplus to be enjoyed by the importer from the transaction. Thus OA becomes more likely.⁹

Figure 1 plots the joint surplus under the OA terms relative to the CIA or the LC terms against the bargaining power of the importer. OA becomes more attractive relative to the other financing terms as the importer’s bargaining power increases. In other words, the model predicts that the share of OA-financed Turkish exports to a destination increases as the importer’s bargaining power increases. The importer’s bargaining power is likely to be positively correlated with the number of potential suppliers in the market. This implies that a shock that increases the competitiveness of Turkey’s competitors in given destination should lead to an increase in the share of OA-financed exports from Turkey. This is the main prediction we take to data in the next section.

⁹It is worth noting that our results would follow if there is either limited commitment or interest rate differential across the trading partners. Therefore, dropping one of these assumptions would not change the model’s predictions.

3 Data

Our empirical analysis is based on detailed international trade data for Turkey. Turkey is a fast-growing OECD country that ranks among the top twenty largest economies in the world. It exports almost 5,000 6-digit Harmonized System (HS) products to over 200 destinations reflecting a diversified export base. Since 1996, Turkey has been in a customs union with the EU. It is the 5th largest exporter to the EU and the 7th largest importer from the EU.

Our dataset, provided by the Turkish Statistical Institute, covers Turkey’s manufacturing exports disaggregated by the exporting firm, 6-digit HS product and the destination country for the period 2003-2007.¹⁰ The information is further broken down into three main financing terms (OA, CIA, and LC). For each observation, the dataset reports both the value (free-on-board) and the quantity of exports. Consistent with the theoretical setting presented in the previous section, we focus only on intermediate goods.

In the data, the average share (in terms of value) of OA-financed exports is 80 percent.¹¹ Nevertheless, such aggregation hides a lot of variation across the destination countries. Figure 2 presents the share of OA-financed exports in Turkey’s exports to China, Germany and Greece. While the OA-financed exports account for about 90 percent of total exports to Germany, this is true of only 50 percent of total exports to China. Greece is somewhere in between, and it registers an increase in OA exports during the financial crisis. Figure 3 shows that the patterns observed for intermediate goods do not deviate from the patterns observed for all goods.

¹⁰Manufacturing exports account for almost 95% of total exports.

¹¹In our data, the CIA-based exports account for about 5 percent of the total exports. Such rare use of the CIA terms is also reported by [Mateut \(2011\)](#) who uses data on domestic transactions by French firms. In her dataset, the CIA-based transactions account for less than 1 percent of the total value of all the transactions.

4 Empirical Strategy and Results

4.1 Estimation strategy

The purpose of our empirical analysis is to test whether the theoretical prediction presented in Result 2 holds in the data. More specifically, we test whether an exogenous shock to competition, which increases the bargaining power of buyers in an export market, is associated with an increase in the share of exporter-financed exports.

Turkey provides an ideal setting for such a test. As explained earlier, the Multi-Fiber Arrangement, which governed the global trade in textiles and clothing (T&C) by means of a system of bilateral quotas, ended on January 1, 2005. For Turkish exporters of T&C products to the EU, who enjoyed an unrestricted access to the EU market thanks to the customs union between Turkey and the EU, elimination of EU quotas on exports of T&C products from China and other Asian countries constituted a large negative shock. It eroded the competitive advantage of Turkish exporters of T&C products in the EU market. Between 2004-2005, China's exports of T&C products to the EU increased by 41.7 percent, while Turkey's exports increased by only 3.8 percent. Moreover, particularly useful for our analysis is the fact that the competitive shock was not the same for all products, as the MFA quotas faced by China in the EU market were not binding in all products prior to 2005.

Our analysis follows a difference-in-differences strategy. We examine whether Turkey experienced a greater shift towards exporter-financed exports in the post-MFA period in products that were subject to binding MFA quotas in 2004 (the treated products) relative to the products where the MFA quotas were not binding (the control products). Therefore, in our analysis we compare trade in 2004 (the last year under the MFA rules) to trade in 2005 (the first year when the MFA formally ended).¹² We narrow our attention to Turkey's exports of T&C products destined for the EU market. Following [Harrigan and Barrows \(2009\)](#), we define quota-bound products as those in which the quota fill rate exceeded 90

¹²Even though the MFA formally ended in 2005, China continued to face quotas for some products in the EU market until 2007. We drop these products from the empirical analysis.

percent in 2004. More precisely, we define a treated product as a 6-digit HS product in which the quota faced by China was binding in 2004:

$$Treat_p = 1 \text{ if } fill_rate_{p,2004} \geq 0.9$$

$$Treat_p = 0 \text{ if } fill_rate_{p,2004} < 0.9$$

The data on quota fill rates come from *Système Intégré de Gestion de Licenses* which publishes quota levels for EU imports of all textile and clothing categories by source country.¹³

As the first pass at the data, Figure 4 plots the average share of the exporter-financed exports to the EU for the treated and the control products in 2004 and 2005, which represent the pre- and the post-MFA period, respectively. In line with the prediction in Result 2, the difference in the share of the exporter-financed exports between the two product categories increases in favor of the treated products in the post-MFA period. More specifically, the average share of the OA exports in control T&C products remained virtually unchanged between 2004 and 2005, while the average share in the treated products increased by almost 7 percentage points during the same period.

4.2 Baseline results: Levels

The first step of our analysis relies on the data at the product, destination and year level.¹⁴ In our estimating equation, the dependent variable $Sh_{cpt}^{OA} \in [0, 1]$ is defined as the share of Turkey's exports on the OA terms (exporter-financed exports), measured in physical units, of a 6-digit HS product p destined for country c at time t . We use quantities rather than values as the latter could suffer from potential confounding effects of changes in prices taking place in response to a shock to competition. Our empirical specification takes the following

¹³We would like to thank Amit Khandelwal, Peter Schott, and Shang-Jin Wei for kindly sharing additional data they used in [Khandelwal, Schott, and Wei \(2013\)](#).

¹⁴We will focus on the firm dimension in the second step.

form:

$$Sh_{cpt}^{OA} = \gamma_0 + \gamma_1 Post_t * Treat_p + \gamma_2 Treat_p + \eta_{ct} + \alpha_{HS2} + \varepsilon_{cpt}, \quad (4)$$

where $Treat_p$ and $Post_t$ are dummy variables. $Treat_p$ identifies the treated products (defined at the 6-digit HS level), and $Post_t$ identifies the post-treatment period. The model includes country-year fixed effects to capture all shocks affecting equally all exports to the same market in a given year as well as HS2 product fixed effects to capture unobserved heterogeneity across product groups.¹⁵ Our parameter of interest is γ_1 which measures the effect of the shock on treated products in the post-treatment period. The standard errors are clustered at the HS6 level. Table 1 presents the summary statistics for the sample used in the empirical analysis.

Our estimation relies on Fractional Logit (FL) which is the appropriate method when the dependent variable is a share (Papke and Wooldridge (1996)). FL can accommodate the limiting values (zero and one) of the dependent variable and does not require an underlying latent variable.¹⁶ We also estimate each specification by means of a linear probability model (OLS). The linear probability model is able to accommodate a large number of fixed effects, so in the most stringent form our specification becomes:

$$Sh_{cpt}^{OA} = \delta_0 + \delta_1 Post_t * Treat_p + \eta_{ct} + \alpha_p + u_{cpt}, \quad (5)$$

The estimation results, based on the FL model and presented in the first column of Table 2, confirm the theoretical prediction. The share of Turkish exports financed on the OA terms increased in products in which Turkey experienced a competitive shock, relative to

¹⁵It is not possible to include a large number of fixed effects in the fractional logit model, hence the choice of HS2 fixed effects.

¹⁶For instance, Tobit model requires a latent variable interpretation, which is not compatible with proportions.

the products in which the MFA quota were not binding in 2004. The estimated coefficient is statistically significant at the one percent level. The results of a linear probability model, presented in column 2, are in line with those obtained using the FL. The magnitude of the estimated effect suggests an 8.4% point increase in the OA exports of treated products after the end of the MFA relative to the control products. This estimate is very similar to the changes illustrated in Figure 4. In column 3, we present the estimates of our most stringent specification. The variable of interest has the same magnitude as in column 3 and is statistically significant at the five percent level.

In columns 4-6, we extend our sample to include two additional post-shock years, namely, 2006 and 2007. We stop with 2007 to avoid including the period of the financial crisis. The results are almost identical to those found earlier. In all three specifications, the coefficient of interest is statistically significant at the one percent level.

4.3 Baseline results: First differences

The specifications estimated so far do not take into account the pre-shock trends in export financing. To take them into account, next we estimate a model with the dependent variable defined in terms of a first difference. In other words, we compare the changes in the share of the OA-financed exports in the pre- versus the post-shock period (2003-4 versus 2004-5) between the two product groups. In the most stringent specification, we estimate the following equation:

$$\Delta Sh_{cpt}^{OA} = \gamma_1 Post_t * Treat_p + \alpha_{ct} + \alpha_p + \varepsilon_{cpt}, \quad (6)$$

As before, we cluster the standard errors at the HS6 level.¹⁷

The results, presented in Table 3 provide support for the theoretical predictions. We find

¹⁷Note that now our dependent variable is not bound between 0 and 1, so there is no need to use the fractional logit estimation technique.

that the MFA products with the binding quotas experienced a disproportionate increase in the share of exporter-financed exports in the post-shock period relative to the control products. The coefficient of interest is positive and statistically significant in all specifications. The results from column (3) suggest a 10.6% point increase in exporter-financed exports of treated products relative to the control observations in the post-MFA period.

4.4 Increased reliance on OA financing: Within-firm switching

Our analysis so far has been conducted at the product-destination-year level. Next, we focus on developments within firms. Namely, we utilize additional information compiled from individual customs declarations that captures within-firm changes in export financing. First, we aggregate customs declarations at the firm-product-destination-year level. Only firm-product-destination combinations present in both 2004 and 2005 are kept. Second, an indicator variable *Switcher* is created such that it is equal to one if firm *i* increased its share of OA-financed exports in product *p* destined for market *c* between 2004 and 2005. The indicator variable takes the value of zero otherwise.¹⁸

$$\begin{aligned} Switcher_{icp} &= 1 && \text{if } Sh_{icp,Post}^{OA} > Sh_{icp,Pre}^{OA} \\ Switcher_{icp} &= 0 && \text{otherwise} \end{aligned}$$

Finally, for each product-destination cell, we sum up the values of the *Switcher*_{icp} variable and calculate the ratio of this sum to the total number of firms exporting in both periods. We refer to this new variable as *SwitcherShare*_{cp}. It captures the share of exporters increasing their reliance on OA financing among firms exporting the same product to the same destination in both 2004 and 2005. Then we repeat this exercise for the pre-shock period, i.e., 2003 and 2004.

We use *SwitcherShare*_{cp} to test whether there is a relationship between the increased

¹⁸This implies, *Switcher*_{icp} is equal to zero if firm *i* kept its share of OA-financed exports in product *p* destined for market *c* unchanged between 2004 and 2005, or $Sh_{icp,2004}^{OA} = Sh_{icp,2005}^{OA} = 1$.

reliance on the OA financing at the firm level and the MFA shock. More specifically, we estimate a model where we compare the prevalence of switchers in the pre-shock period (2003-4) to that after the shock (2004-5) between the two product groups. In its most stringent form, our equation takes the following form:

$$SwitcherShare_{cpt} = \beta_1 Post_t * Treat_p + \alpha_{ct} + \alpha_p + \epsilon_{cpt} \quad (7)$$

As before, we estimate the model using both fractional logit and a linear probability model. We cluster standard errors at the HS6 level.

The results, presented in Table 4, confirm our hypothesis that an increase in the level of competition induced Turkish exporters to offer more export financing. The interaction term is positive and statistically significant at the one percent level in all specifications. The magnitude is consistent with the results obtained earlier. These estimates suggest that Turkish firms exporting the treated products were more likely to increase their reliance on the OA financing in the post-shock period, relative to the pre-shock period and relative to the exports of the control products.

4.5 Firm-level evidence: First differences

In the final part of the analysis, we go down to the firm level and estimate variants of the following model:

$$\Delta Sh_{icpt}^{OA} = \alpha_1 Post_t * Treat_p + \alpha_{ct} + \alpha_p + \alpha_i + \epsilon_{icpt}, \quad (8)$$

where the dependent variable $\Delta Sh_{icpt}^{OA} \in [0, 1]$ is defined as the change in the share of firm i 's exports on the OA terms, measured in physical units, of a 6-digit HS product p destined for country c at time t . The other variables are defined as before. Focusing on first differences takes into account time-invariant characteristics specific to firm-product-destination level, such as a firm's experience with exporting a product to a given destination. We estimate

several specifications varying the set of fixed effects included in the model. The most stringent specification includes HS6, country-year, and firm fixed effects.

The estimation results (see Table 5) confirm our earlier findings. The estimates of interest are positive and statistically significant at the five percent level in all specifications. The magnitudes are slightly smaller than those obtained from the analysis of the aggregate data, but they are still economically meaningful. The estimate suggest that Turkish exporters of products affected by the MFA shock increased their reliance on the OA financing by 5.7% points more than exporters of other products. In sum, the firm-level evidence suggests that Turkish exporters who experienced an increase in competitive pressures were pushed to provide more export financing relative to exporters of products where no change in the level of competition was registered.

4.6 Firm-level evidence: Does the probability of survival matter?

One may be concerned that the export flows where the OA financing was already offered in 2004 were more likely to survive in the post-MFA period. To address this possibility, we follow [Paravisini, Rappoport, Schnabl, and Wolfenzon \(2014\)](#) who employ the methodology suggested by [Mulligan and Rubinstein \(2008\)](#).

In the first step, we estimate the probability that exports of product p to country c by firm i taking place in 2004 will continue in 2005. The explanatory variables include the value of the export flow in 2004 (logged), the share of exports financed on the OA terms (logged), a dummy for the treated products, country fixed effects and exporter fixed effects. As anticipated, the results presented in column (1) of Table 6 indicate that larger export flows were more likely to survive. The other two explanatory variables do not appear to be statistically significant.

In the second step, we divide the sample according the 5th, 10th, 25th, and 50th percentiles of the estimated continuation probability and estimate the specification from equation (8) for each subsample. This means that the sample is now restricted to continuing

exporters over the 2003-2005 period, which explains why its size is smaller than the sample size found in Table 5. In column (2), we estimate a specification comparable to that presented in column (4) in Table 5. In columns (3)-(6), we restrict our attention to flows with ever greater probability of survival. The estimates in all columns are positive, and they are statistically significant in all cases except for the last column. The estimated magnitude increases from 4.2% points in the full sample to 6.5% points in the most restrictive subsample. A comparison of the estimates across columns indicates that they are not statistically different from each other.

In sum, our firm-level results are consistent with the product-level results in suggesting that a shock to the level of competition forced Turkish exporters to offer more OA financing of their exports.

4.7 Firm-level evidence: Placebo test and Triple interactions

Finally, we run a placebo test by focusing on the export markets which did not regulate their T&C imports by means of the MFA quotas. In those markets, the end of the MFA system should not have had a direct impact and thus should not have had a perceptible effect on the behavior of Turkish exporters.¹⁹

We first estimate equation (8) on the sample of the export markets which did not regulate their T&C imports by means of the MFA quotas. The results are presented in columns (3) and (4) of Table 7. To ease the comparison, in columns (1) and (2) we reproduce our earlier results focusing on the EU market (previously presented in columns (3) and (4) of Table 5). The coefficient on our variable of interest $Post * Treat$ has a *negative* sign when non-MFA markets are considered. The estimate is statistically significant in column (4) suggesting that the indirect effects may be playing a role.

As our last robustness check, we combine the two samples and estimate a specification in

¹⁹However, there may be some indirect effects. For instance, if Chinese exporters free of quota restrictions redirected their exports from the non-MFA markets to the markets previously governed by the MFA, this may have translated into a lower competition level for Turkish exporters in the post-MFA period and thus we would expect to see them *decrease* their reliance on the OA financing.

triple differences:

$$\Delta Sh_{icpt}^{OA} = \beta_1 Post_t * Treat_p * EU_c + \beta_2 Treat_p * EU_c + \alpha_{ct} + \alpha_{pt} + \alpha_i + \epsilon_{icpt}, \quad (9)$$

where $EU_c = 1$ for the EU countries, and zero otherwise.

The results are shown in column 5 of Table 7. Consistent with the previously reported results, the coefficient on the triple interaction $Post_t * Treat_p * EU_c$ is positive and statistically significant at the one percent level. It implies that Turkish firms increased their reliance on the OA financing when selling T&C products to the EU market, as compared to their sales of similar products to the other countries considered in our exercise. The larger magnitude of the estimate may be due to the indirect effects mentioned earlier (i.e., the lessening of competitive pressures in the control countries leading Turkish exporters to move away from the OA financing in those markets).

5 Conclusions

International trade is risky and takes time, which means that the trading partners need to agree on how to share the risk and how to finance the period when the goods are in transit. This paper argues that the ability to bear the risk by providing export financing can give emerging market producers a competitive edge in foreign destinations.

Our analysis, based on the unique data set covering the universe of Turkey's exports disaggregated by firm, product, destination, and financing terms for the period 2003-2007, supports this view. Our identification strategy relies on an exogenous shock, the end of the Multi-Fiber Arrangement which dismantled the bilateral system of quotas governing the world's trade in textile and clothing. This shock meant an increase in competitive pressures faced by the Turkish exporters in the EU market in some, but not other, products as the MFA quotas were not binding for all products. Thanks to the customs union with the EU, Turkey was not subject to the MFA quota in the EU market since 1996. The shock, however,

affected the access of Asian competitors of Turkish exporters, such as China.

The results of our analysis suggests that the increase in competition shifted Turkish exports of the affected products toward exporter-financed trade. This finding is consistent with the prediction of a simple theoretical model in the spirit of [Antràs and Foley \(Forthcoming\)](#) and [Schmidt-Eisenlohr \(2013\)](#). It also suggests that the ability to provide export-financing can give emerging market exporters, such as Turkey, that are viewed as risky business partners, a competitive edge in foreign markets.

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Appendices

A Joint Surplus Functions

$$\begin{aligned}\Omega_{CIA}^* &= (1-\alpha)^{1-\alpha} \alpha^\alpha \left(\frac{\lambda + (1-\lambda)\delta}{(1+r_c)^t} S - 1 \right), \\ \Omega_{OA}^* &= (1-\alpha)^{1-\alpha} \alpha^\alpha \left(\frac{1+r}{1+r_c} \right)^{t\alpha} [\lambda_c + (1-\lambda_c)\gamma]^{-\alpha} \left(\frac{\lambda_c + (1-\lambda_c)\gamma}{(1+r)^t} S - 1 \right), \\ \Omega_{LC}^* &= (1-\alpha)^{1-\alpha} \alpha^\alpha \left(\frac{1+r}{1+r_c} \right)^{t\alpha} (f^{LC})^{-\alpha} \left(\frac{S - f^{LC}(1+r_c)^t F^{LC}}{(1+r)^t} - 1 \right).\end{aligned}$$

B Proof of Result 1

To prove the first comparative static result, the effect of λ_c on the relative attractiveness of the OA terms, we only need to derive the sign of $\partial \ln \Omega^{*OA} / \partial \lambda_c$ as joint surpluses under other financing terms do not depend on λ_c . So the expression in (3) becomes

$$\begin{aligned}\frac{\partial \ln \Omega^{*OA}}{\partial \lambda_c} &= \alpha \frac{\partial \ln \Pi_I^{*OA}}{\partial \lambda_c} + (1-\alpha) \frac{\partial \ln \Pi_E^{*OA}}{\partial \lambda_c} \\ &= (1-\alpha) \frac{\partial \ln \Pi_E^{*OA}}{\partial \lambda_c} \\ &= \frac{1}{\Pi_E^{*OA}} \frac{(1-\gamma)P^{OA}}{(1+r)^t} > 0\end{aligned}$$

To prove the second part of the result, we need to show $\partial(\ln \Omega^{*OA} - \ln \Omega^{*CIA}) / \partial r_c \geq 0$ and $\partial(\ln \Omega^{*OA} - \ln \Omega^{*LC}) / \partial r_c \geq 0$. For the former, we have the following:

$$\begin{aligned}\frac{\partial(\ln \Omega^{*OA} - \ln \Omega^{*CIA})}{\partial r_c} &= \alpha \left(\frac{\partial \ln \Pi_I^{*OA}}{\partial \beta} - \frac{\partial \ln \Pi_I^{*CIA}}{\partial \beta} \right) \\ &= \alpha \frac{t}{1+r_c} \left(-1 + \frac{\frac{\lambda+(1-\lambda)\delta}{(1+r_c)^t} S}{\frac{\lambda+(1-\lambda)\delta}{(1+r_c)^t} S - P^{CIA}} \right) > 0\end{aligned}$$

The inequality follows because the second term in parentheses in the last line is greater than one.

For the effect of r_c on the attractiveness of the OA terms relative to the LC terms, we have the following:

$$\begin{aligned} \frac{\partial(\ln \Omega^{*OA} - \ln \Omega^{*LC})}{\partial r_c} &= \alpha \left(\frac{\partial \ln \Pi_I^{*OA}}{\partial \beta} - \frac{\partial \ln \Pi_I^{*LC}}{\partial \beta} \right) \\ &= \alpha \frac{t}{1+r_c} \left(-1 + \frac{\frac{S-P^{LC}}{f^{LC}(1+r_c)^t}}{\frac{S-P^{LC}}{f^{LC}(1+r_c)^t} - F^{LC}} \right) > 0 \end{aligned}$$

Similarly, the inequality follows because the second term in parentheses in the last line is greater than one. This completes the proof.

C Proof of Result 2

We need to prove that $\partial \ln(\Omega^{*OA}/\Omega^{*LC})/\partial \alpha \geq 0$ and $\partial \ln(\Omega^{*OA}/\Omega^{*CIA})/\partial \alpha \geq 0$. Let us start with the former. The derivative of the ratio of joint surpluses with respect to the bargaining power of the importer is:

$$\begin{aligned} \frac{\partial(\ln \Omega^{*OA} - \ln \Omega^{*LC})}{\partial \alpha} &= \frac{\partial(\alpha \ln \Pi_I^{*OA} + (1-\alpha) \ln \Pi_E^{*OA})}{\partial \alpha} - \frac{\partial(\alpha \ln \Pi_I^{*LC} + (1-\alpha) \ln \Pi_E^{*LC})}{\partial \alpha} \\ &= (\ln \Pi_I^{*OA} - \ln \Pi_E^{*OA}) - (\ln \Pi_I^{*LC} - \ln \Pi_E^{*LC}), \end{aligned}$$

where the second line follows from the envelope theorem. Substituting the respective prices from (2b) and (2c) into the profit functions, we obtain the following:

$$\frac{\partial(\ln \Omega^{*OA} - \ln \Omega^{*LC})}{\partial \alpha} = -\ln(\lambda_c + (1-\lambda_c)\gamma) + \ln f^{LC} > 0$$

since $\lambda_c + (1-\lambda_c)\gamma < 1$ and $f^{LC} > 1$.

Similarly, we can express $\partial \ln(\Omega^{*OA}/\Omega^{*CIA})/\partial \alpha$ as follows:

$$\frac{\partial(\ln \Omega^{*OA} - \ln \Omega^{*CIA})}{\partial \alpha} = -\ln(\lambda_c + (1-\lambda_c)\gamma) + t \ln \left(\frac{1+r}{1+r_c} \right)$$

Unless we impose more assumptions on the parameter values, it is not possible to derive

a sufficient condition for the sign of $\partial \ln(\Omega_{OA}^*/\Omega_{CIA}^*)/\partial \alpha$. The derivative is given as follows:

$$\frac{\partial \ln(\Omega_{OA}^*/\Omega_{CIA}^*)}{\partial \alpha} = -\ln(\lambda_c + (1 - \lambda_c)\gamma) + t \ln\left(\frac{1+r}{1+r_c}\right).$$

The sign of this derivative is positive if and only if

$$\left(\frac{1+r}{1+r_c}\right)^t > \lambda_c + (1 - \lambda_c)\gamma \quad (10)$$

This inequality is satisfied when $r \geq r_c$, i.e. the cost of financing in the exporting country exceeds the cost of financing in the destination country. This condition holds for all countries in our dataset, i.e. interest rate in Turkey is higher than the interest rate in the countries of its trading partners included in our dataset during the period under consideration. However, the result also holds under a milder condition (10); i.e. r should not be too low compared to r_c .

D Main Tables

Table 1: **Summary Statistics: Product-level data**

	Mean	Std dev	Num. of obs.
2004-2005			
Share of OA exports	0.922	0.221	7310
<i>Treat</i>	0.020	0.142	7310
<i>Post * Treat</i>	0.011	0.103	7310
2004-2007			
Share of OA exports	0.919	0.226	15065
<i>Treat</i>	0.020	0.140	15065
<i>Post * Treat</i>	0.015	0.123	15065

Table 2: **End of the MFA and Exporter-Financed Exports: Baseline**

	2004-2005			2004-2007		
	(1)	(2)	(3)	(4)	(5)	(6)
	FL	OLS	OLS	FL	OLS	OLS
<i>Post * Treat</i>	0.994*** (0.35)	0.084** (0.032)	0.084** (0.035)	0.937*** (0.265)	0.082*** (0.029)	0.082*** (0.031)
<i>Treat</i>	-1.603*** (0.254)	-0.121*** (0.024)		-1.340*** (0.250)	-0.104*** (0.028)	
N	7310	7310	7310	15065	15065	15065
R^2		0.060	0.170		0.051	0.137
AIC	3536.7			7565.4		
FE	cxt,HS2	cxt,HS2	cxt,HS6	cxt,HS2	cxt,HS2	cxt,HS6

Notes: This table shows the results of the specifications presented in equations (4) and (5). The dependent variable is the share of exports on OA terms of HS6 product p to country c at time t , where $t = 2004, 2005$ in columns 1-3 and $t = 2004 - 2007$ in columns 4-6. *Post* is a dummy variable that takes on the value zero for $t = 2004$, one for $t = 2005$ in columns 1-3 and $t = 2005 - 2007$ in columns 4-6. *Treat* is defined as

$$Treat_p = 1 \text{ if } fill_rate_{p,2004} \geq 0.9$$

$$Treat_p = 0 \text{ if } fill_rate_{p,2004} < 0.9$$

FL stands for fractional logit. Standard errors are clustered at the HS6-level. *, **, *** represent significance at the 10, 5, and 1 percent levels, respectively.

Table 3: **End of the MFA and Exporter-Financed Exports: First Differences**

	(1)	(2)	(3)
<i>Post * Treat</i>	0.107*** (0.033)	0.107*** (0.033)	0.106*** (0.034)
<i>Treat</i>	-0.045 (0.0269)	-0.045 (0.0334)	
N	5828	5828	5828
R^2	0.016	0.017	0.077
FE	cxt	cxt,HS2	cxt,HS6

Notes: This table shows the results of the specification presented in equation (6). The dependent variable is the change in the share of OA exports of HS6 product p to country c in the pre-treatment period (2003-4) and the post-treatment period (2004-5). $Treat$ is defined as

$$Treat_p = 1 \text{ if } fill_rate_{p,2004} \geq 0.9$$

$$Treat_p = 0 \text{ if } fill_rate_{p,2004} < 0.9$$

Standard errors are clustered at the HS6-level. *, **, *** represent significance at the 10, 5, and 1 percent levels, respectively.

Table 4: **End of the MFA and Exporter-Financed Exports: Switching Financing terms 2003-2004 vs. 2004-2005**

	(1)	(2)	(3)
	FL	OLS	OLS
<i>Post * Treat</i>	1.227***	0.081***	0.077***
	(0.225)	(0.016)	(0.017)
<i>Treat</i>	-0.662	-0.031	
	(0.556)	(0.029)	
N	4142	4142	4142
R^2		0.062	0.179
FE	cxt,HS2	cxt,HS2	cxt,HS6

Notes: This table shows the results of the specification presented in equation (7). The dependent variable, $SwitcherShare_{cpt}$, is the share of firms with $Sh_{icp,t}^{OA} > Sh_{icp,t-1}^{OA}$ where $t = 2004, 2005$. $Post$ is a dummy variable that takes on the value zero for $t = 2004$, and one for $t = 2005$. $Treat$ is defined as

$$Treat_p = 1 \text{ if } fill_rate_{p,2004} \geq 0.9$$

$$Treat_p = 0 \text{ if } fill_rate_{p,2004} < 0.9$$

FL stands for fractional logit. Standard errors are clustered at the HS6-level. *, **, *** represent significance at the 10, 5, and 1 percent levels, respectively.

Table 5: **End of the MFA and Exporter-Financed Exports: First Differences at the Firm-Level**

	(1)	(2)	(3)	(4)
<i>Post * Treat</i>	0.076** (0.030)	0.076** (0.029)	0.061** (0.028)	0.057** (0.029)
<i>Treat</i>	-0.056*** (0.014)	-0.062*** (0.013)	-0.061*** (0.018)	
N	13168	13168	13168	13168
R^2	0.007	0.008	0.177	0.194
FE	cxt	cxt,HS2	cxt,HS2,i	cxt,HS6,i

Notes: This table shows the results of the specification presented in equation (8). The dependent variable is the change in the share of OA exports at firm-country-product level in the pre-treatment period (2003-4) and the post-treatment period (2004-5). *Post* is a dummy variable that takes on the value zero for the pre-treatment period and one for the post-treatment period. *Treat* is defined as

$$Treat_p = 1 \text{ if } fill_rate_{p,2004} \geq 0.9$$

$$Treat_p = 0 \text{ if } fill_rate_{p,2004} < 0.9$$

Standard errors are clustered at the HS6-level. *, **, *** represent significance at the 10, 5, and 1 percent levels, respectively.

Table 6: **End of the MFA and Exporter-Financed Exports: Controlling for Survival**

	Probit		OLS			
	(1)	(2)	(3)	(4)	(5)	(6)
	All	All	<i>Prob</i> > 0.14	<i>Prob</i> > 0.24	<i>Prob</i> > 0.46	<i>Prob</i> > 0.69
$\ln X_{icp,Pre}$	0.336*** (0.017)					
$\ln Sh_{icp,Pre}^{OA}$	0.059 (0.118)					
<i>Treat</i>	-0.256 (0.212)					
<i>Post * Treat</i>		0.042* (0.024)	0.052** (0.023)	0.056** (0.024)	0.065** (0.027)	0.066 (0.093)
N	4268	7003	6766	6513	5631	3986
R^2		0.108	0.108	0.106	0.105	0.122
FE	c,i	cxt,i,p	cxt,i,p	cxt,i,p	cxt,i,p	cxt,i,p

Notes: This table shows the results of the specification presented in equation (6). In column 1, the dependent variable is the probability that a trade flow X_{icp} survives in the post-MFA period given that it existed in the pre-MFA period, i.e. $Prob(X_{icp,2005} > 0 | X_{icp,2004} > 0)$. In columns 2-6, the dependent variable is the change in the share of OA exports at firm-country-product level in the pre-treatment period (2003-4) and the post-treatment period (2004-5). Hence, the larger number of observations than in column 1. Columns 2 to 6 divide the sample according the 0, 5th, 10th, 25th, and 50th percentiles of the estimated continuation probability, respectively. *Post* is a dummy variable that takes on the value zero for the pre-treatment period, and one for the post-treatment period. *Treat* is defined as

$$Treat_p = 1 \text{ if } fill_rate_{p,2004} \geq 0.9$$

$$Treat_p = 0 \text{ if } fill_rate_{p,2004} < 0.9$$

Standard errors are clustered at the HS6-level. * , ** , *** represent significance at the 10, 5, and 1 percent levels, respectively.

Table 7: **End of the MFA and Exporter-Financed Exports: Placebo Regression and Triple Differences**

	(1)	(2)	(3)	(4)	(5)
	Exports to the EU		Placebo		Triple differences
<i>Post * Treat</i>	0.061**	0.057*	-0.041	-0.131**	
	(0.029)	(0.029)	(0.097)	(0.056)	
<i>Treat</i>	-0.061***		0.071		
	(0.018)		(0.092)		
<i>Post_t * Treat_p * EU_c</i>					0.181***
					(0.051)
<i>Treat_p * EU_c</i>					-0.188***
					(0.060)
N	13168	13168	12972	12972	26140
<i>R</i> ²	0.177	0.194	0.182	0.201	0.160
FE	cxt,HS2,i	cxt,HS6,i	cxt,HS2,i	cxt,HS6,i	cxt,HS6xt,i

Notes: Columns 1 and 2 reproduce the results from columns 3 and 4 in Table 5. Column 5 presents the estimation results of equation (9). The dependent variable is the change in the share of OA exports at firm-country-product level in the pre-treatment period (2003-4) and the post-treatment period (2004-5). *Post* is a dummy variable that takes on the value zero for the pre-treatment period, and one for the post-treatment period. *EU* is a dummy variable that takes on the value one for exports to the EU countries, and zero otherwise. *Treat* is defined as

$$Treat_p = 1 \text{ if } fill_rate_{p,2004} \geq 0.9$$

$$Treat_p = 0 \text{ if } fill_rate_{p,2004} < 0.9$$

Placebo sample includes only the export markets where the imports of T&C had not been governed by the MFA rules. Standard errors are clustered at the HS6-level. *, **, *** represent significance at the 10, 5, and 1 percent levels, respectively.

E Figures

Figure 2: Share of exports on open account across countries (all goods)

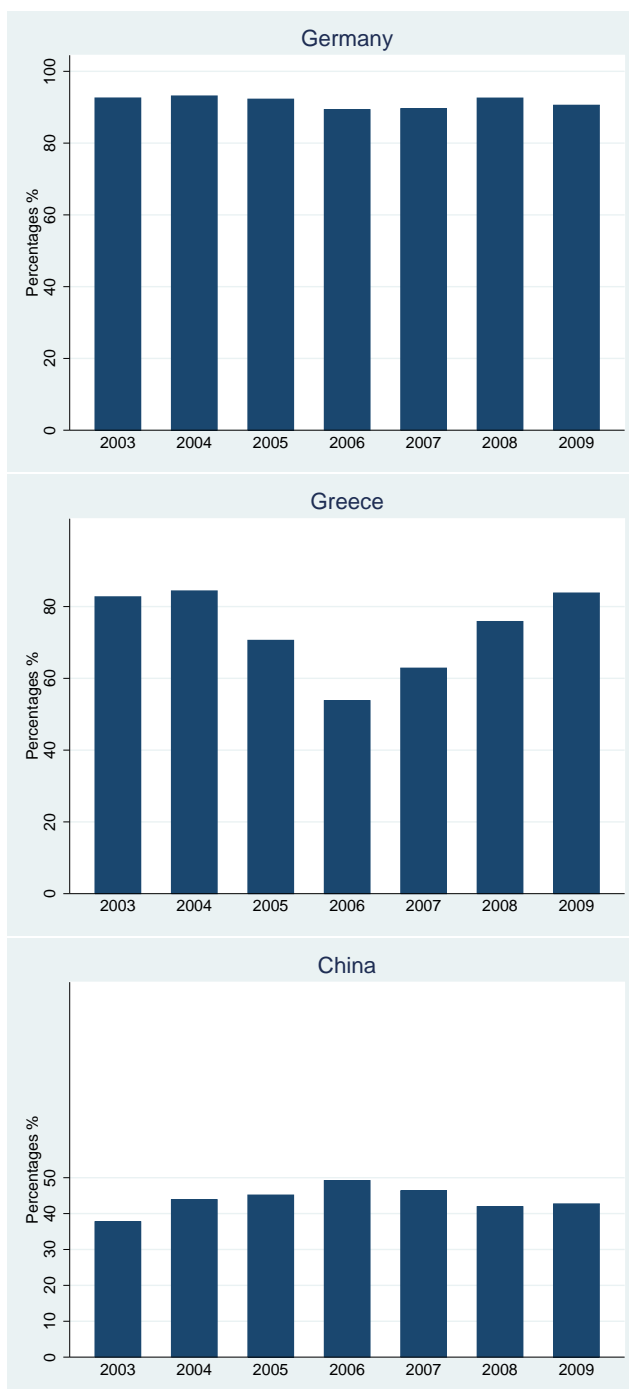


Figure 3: Share of exports on open account across countries (intermediate goods)

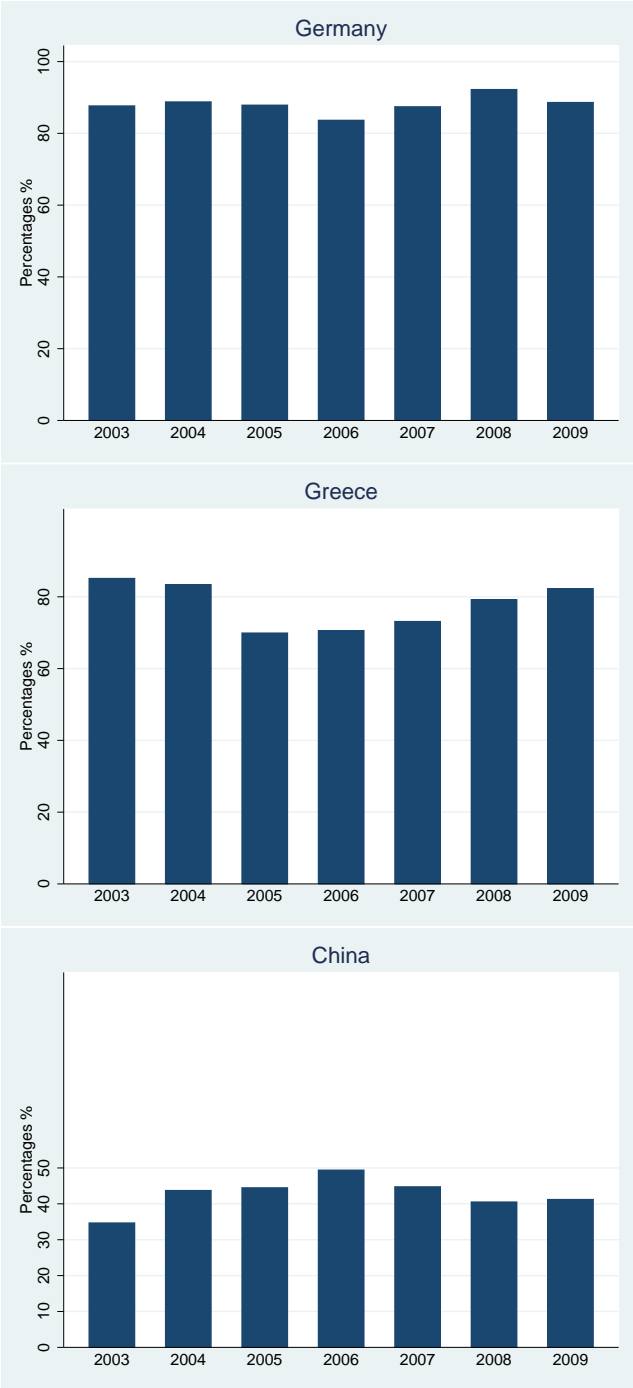
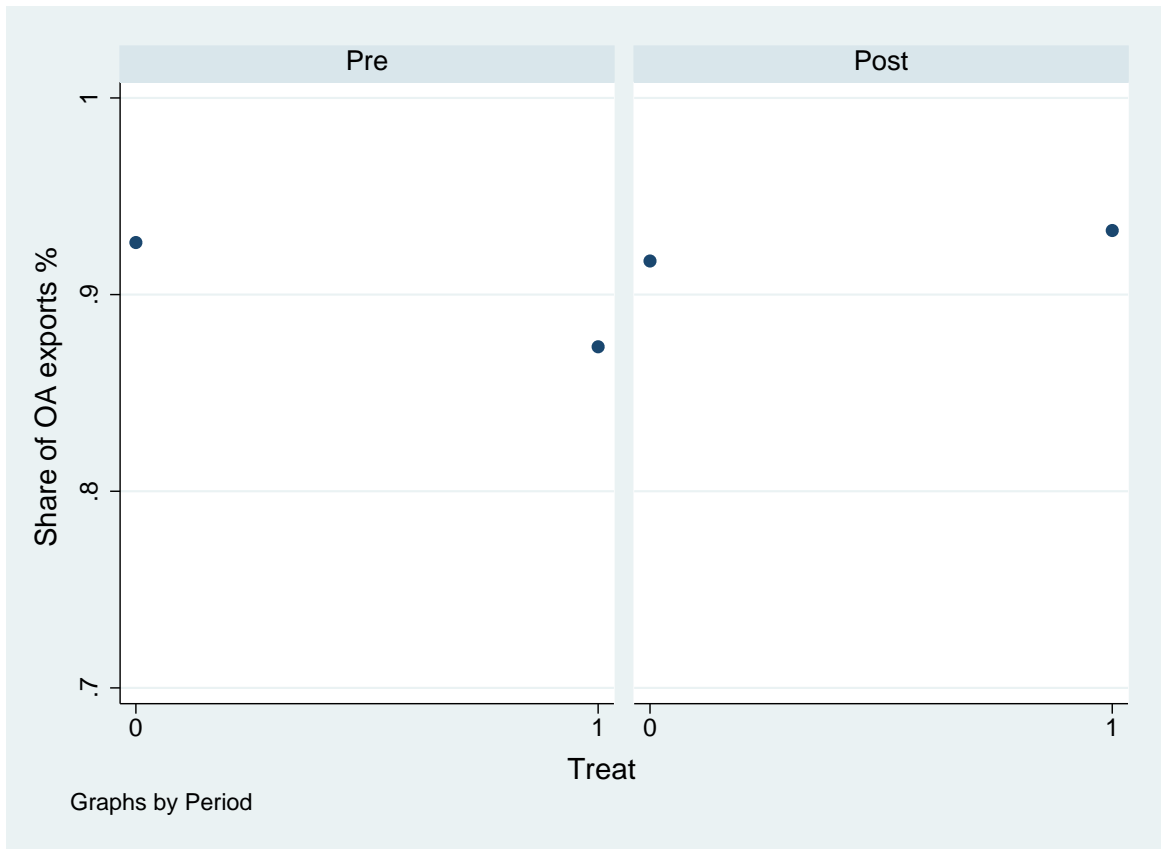


Figure 4: Share of Exports on Open Account Terms before and after the End of the MFA



Notes: *Pre* and *Post* refer to the years 2004 and 2005, respectively. *Treat* is equal to one for quota-bound HS6 products, for which the MFA quota fill rates exceed 90 percent in 2004, and is equal to zero otherwise.