Are Trade Preferences a Panacea? The Export Impact of the African Growth and Opportunity Act

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Motivation

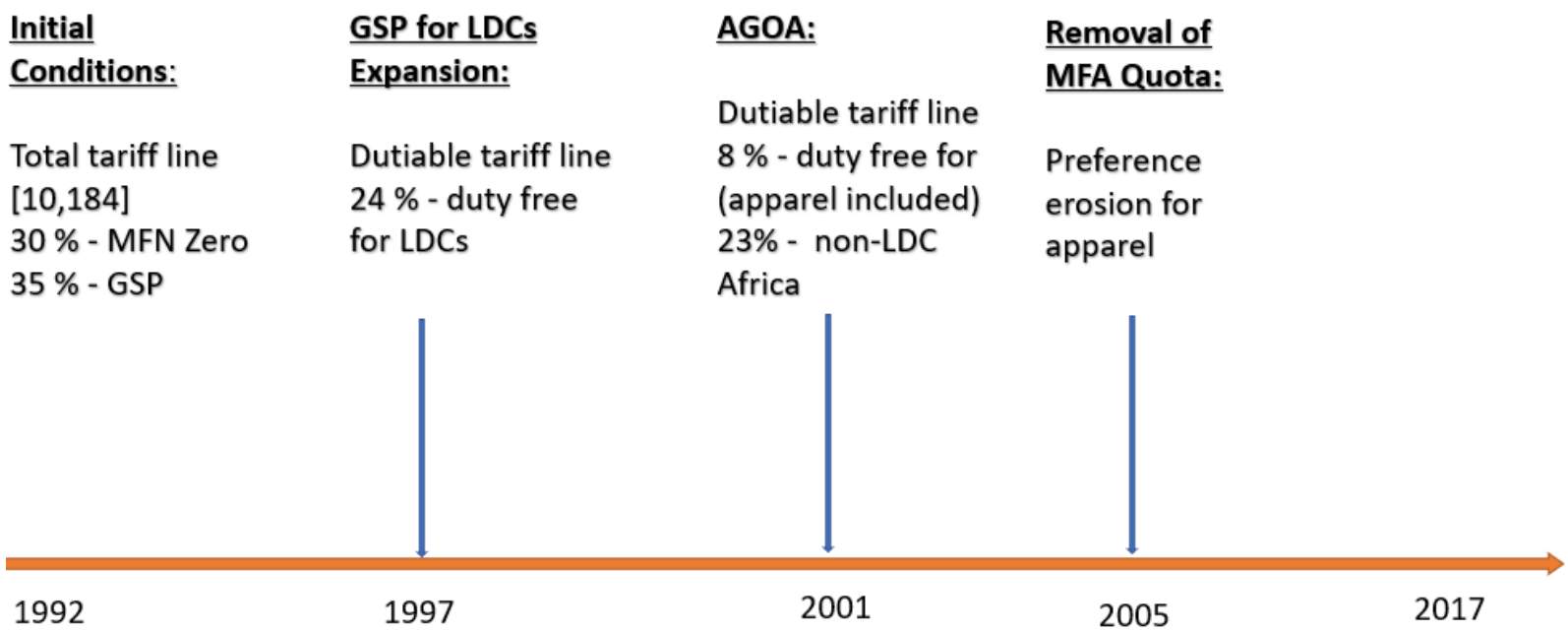
Does preferential access to foreign markets stimulate exports of developing countries?

1. Optimistic view of trade preferences
   - Static gains (economies of scale) but also dynamic comparative advantage (learning-by-doing, externalities) and ultimately become competitors that no longer need the preferential treatment.
   - Empirical support: Frazer & Van Biesebroeck (2010), Gil-Pareja et al. (2014)
2. Skeptical view of trade preferences
   - Can dilute the incentives for domestic policy reform (Ozden & Reinhardt 2005, Hoekman & Ozden 2005)
   - Empirical support: Herz & Wagner (2011), Ornelas & Ritel (2018)

- However, little evidence on whether preferential access durably boosts export performance.

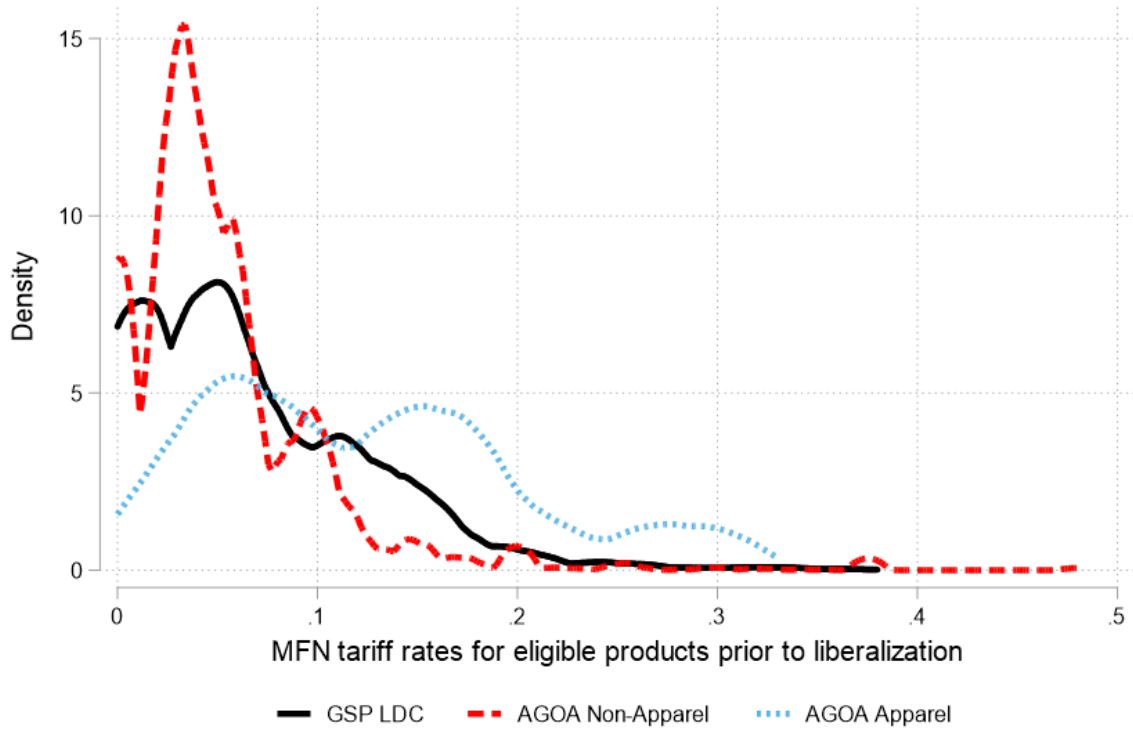
This paper

- Did preferential access *durably* boost African export performance?
  - Exploit US trade policy changes over long period



- Preferential access to rich markets as "infant industry" assistance
  - Benefits conditional on competing successfully in foreign markets.
  - True measure of success is not whether performance improves while assistance is in place but whether improvement survives a reduction in assistance (through erosion of preferences).

This paper (cont.)



AGOA reduces tariff rates imposed by the US more substantially for apparel products

Scope of AGOA and GSP

Key results

1. AGOA led to initial boost in African apparel exports but effects leveled off after end of MFA though response to AGOA differed across African sub-regions/countries
2. GSP for LDCs boosted African non-apparel exports but effects also faded over time
   - $\Longrightarrow$ Evidence does not support AGOA and GSP LDC durably increasing competitiveness of African exports
3. Firm-level evidence reinforces this conclusion

Literature

- Impact of nonreciprocal trade preferences on developing countries' trade
  - Gravity model of trade and aggregate trade data: Gil-Pareja et al. (2014), Herz & Wagner (2011), Ornelas & Ritel (2018)
    - ★ Country-year indicator makes it difficult to infer causal effect of preferences since not all products are eligible for preferential treatment
  - Triple-differences model and highly disaggregated trade data: Frazer & Van Biesebroeck (2010)
    - ★ Unable to assess whether benefits of AGOA survived erosion of preferences given focus on short post-AGOA time horizon (2001-2006) & findings mix effect of AGOA and GSP LDC
  - Emphasis on early impact of AGOA provisions on apparel: Collier & Venables (2007), Edwards & Lawrence (2010), De Melo & Portugal-Perez (2013), Rottuno et al. (2013)

Data

- 26 years of highly disaggregated trade data (1992-2017) for ALL countries - exporting to the US from US Census.
  - Exports to the US by country-HS8-digit-year.
  - Aggregated to country-HS6-digit-year and using HS1996 revision codes.
  - Dataset expanded to add zero trade flows $\Longrightarrow$ 27 million observations.
- Import tariffs at country-product year level for the period 1997-2017 from USITC.
- AGOA and GSP country and product eligibility from USITC.
- Trade and Market Access data in the EU

Empirical Strategy

Triple-differences specification

$$
\begin{aligned}
\ln(Imp_{cpt}) = & \sum_{r \in (s,ns)} \beta_{1r} \times GSP_p \times GSP_c \times PostGSP_{ct} \times 1[c \in r] + \\
& \sum_{j \in (n,e)} \beta_{2j} \times ANonApp_p \times ANonApp_c \times ANonApp_{ct} \times 1[c \in j] + \\
& \beta_3 \times AApp_p \times AApp_c \times AApp_{ct} \\
& + \sum_{r \in (s,ns)} \gamma_{1r} \times GSP_p \times GSP_c \times PostGSP_{ct} \times \tau \times 1[c \in r] + \\
& \sum_{j \in (n,e)} \gamma_{2j} \times ANonApp_p \times ANonApp_c \times ANonApp_{ct} \times \tau \times 1[c \in j] \\
& + \gamma_3 \times AApp_p \times AApp_c \times AApp_{ct} \times \tau + \delta_{cp} + \delta_{ct} + \delta_{pt} + \epsilon_{cpt}
\end{aligned}
\tag{1}
$$

- five categories of treated countries and products: GSP LDC(2), AGOA non-apparel (2) and AGOA apparel (1).
- δ_{cp} - impacts identified relative to pre-AGOA imports of that country-product.
- δ_{ct} - shocks to overall US imports from a country (supply shocks).
- δ_{pt} - shocks to US imports of a product (US preferences or global technological/supply shocks).
- τ - treated country-product-specific trend.

Positive impacts of GSP LDC and AGOA apparel

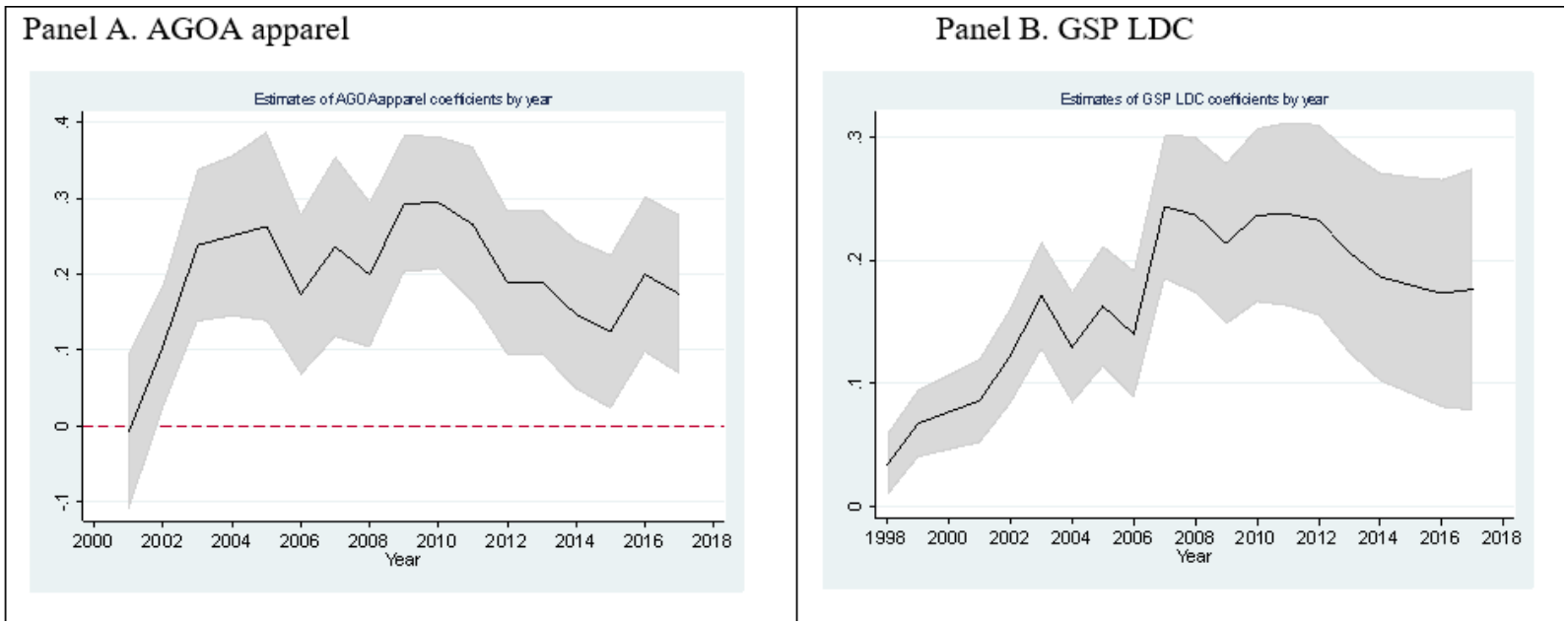
Table 1: Baseline impacts of AGOA and GSP and some robustness checks

	Data at exporting country-HS 6-digit-year level (including zeros) is used							
	Dependent variable is:							
	$Log(USimports+1)$		$ImpDum$	$Log(USimports+1)$				
				Excluding OECD	Excluding non-GSP	Excluding China	Controlling for competition	1998-2006
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GSP LDC * Africa	0.215***	0.114***	0.008***	0.063***	0.102***	0.116***	-0.006	0.033***
	(11.49)	(6.70)	(5.60)	(5.29)	(6.06)	(6.90)	(-0.77)	(3.90)
GSP LDC * Non-Africa	0.004	-0.046*	-0.005**	-0.084***	-0.051**	-0.044*	-0.159***	-0.092***
	(0.22)	(-2.43)	(-2.95)	(-4.97)	(-2.74)	(-2.34)	(-5.92)	(-3.70)
AGOA Non-LDC	0.105***	0.027	-0.0001	-0.009	0.026	0.028	-0.019	-0.005
	(6.49)	(1.86)	(-0.06)	(-0.71)	(1.77)	(1.90)	(-1.52)	(-0.35)
AGOA Non-apparel	0.210***	0.0633	0.0008	0.018	0.061	0.059	-0.019	0.007
	(4.66)	(1.74)	(0.26)	(0.59)	(1.58)	(1.63)	(-0.49)	(0.23)
AGOA apparel	0.254***	0.200***	0.012***	0.185***	0.180***	0.198***	0.168***	0.275***
	(5.40)	(4.78)	(3.63)	(4.47)	(4.42)	(4.74)	(3.88)	(8.23)
Relative preference margin (RPM)							0.530***	
							(4.73)	
Indicator for MFA quota							0.799***	
							(11.49)	
MFA quotas on competitors							0.567	
							(1.04)	
Treated group time trends	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-product fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Product-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,420,560	27,420,560	27,420,560	22,944,154	17,677,794	27,288,901	21,904,250	9,491,040

Notes: Robust t-statistics in parentheses, clustered by HS 6-digit product.

Understanding durability of AGOA apparel and GSP LDC impacts

Figure 1: Timing of the impact of AGOA and GSP LDC



Notes: figures show coefficients and 95 percent confidence intervals based on robust standard errors, clustered by HS 6-digit.

- Marginal impacts on apparel explode in early AGOA years but then level off after end of MFA
- Stronger boost for GSP LDC on non-apparel ends with Great Recession.

Country heterogeneity and durability of AGOA apparel impact

Figure 2: Heterogeneity across sub-regions

Notes: figures show coefficients and 95 percent confidence intervals based on robust standard errors, clustered by HS 6-digit.

- End of MFA hurt Southern Africa: AGOA did not create durable comparative advantage.
- East Africa took off late: initial inadequacy of domestic conditions was remedied by domestic reforms. $\Longrightarrow$ AGOA necessary but not sufficient for export expansion.

New export creation OR trade redirection to the US?

Table 2: AGOA and redirection of African exports

	Data at country-HS 6-digit-year level (including zeros) is used		
	Dependent variable is:		
	Log (EU imports + 1)	Log (EU+ROW imports + 1)	Log (US + EU + ROW imports + 1)
	COMEX data	WITS/COMTRADE data	
	(2)	(4)	(5)
GSP LDC * Africa	0.053***	0.081***	0.075***
	(4.57)	(5.08)	(3.95)
GSP LDC * Non-Africa	0.031**	0.047**	-0.037
	(2.78)	(3.03)	(-1.88)
AGOA Non-LDC	-0.004	0.019	-0.001
	(-0.43)	(1.28)	(-0.07)
AGOA Non-apparel	0.028	0.078**	0.096**
	(1.36)	(2.64)	(2.72)
AGOA apparel	-0.067***	-0.116***	0.127***
	(-6.54)	(-9.42)	(3.38)
Treatment group-specific time trends	Yes	Yes	Yes
Country-product fixed effects	Yes	Yes	Yes
Country-year fixed effects	Yes	Yes	Yes
Product-year fixed effects	Yes	Yes	Yes
Observations	24,588,684	25,445,675	25,445,675

Notes: Robust t-statistics in parentheses, clustered by HS 6-digit product.

- AGOA resulted in a decrease in apparel exports to other destinations $\Longrightarrow$ sign of trade redirection and of no economies of scale spurred by AGOA
- BUT there is also an overall increase in African apparel exports.

Understanding country heterogeneity in AGOA apparel impact

Table 3: Correlates of country heterogeneity

	Data at country-HS 6-digit-year level (including zeros) is used Dependent variable is log (US imports + 1)			
	(1)	(2)	(3)	(4)
GSP LDC * Africa	0.114***	0.121***	0.115***	0.112***
	(6.70)	(6.73)	(6.49)	(6.59)
GSP LDC * Non-Africa	-0.046*	-0.044*	-0.044*	-0.045*
	(-2.43)	(-2.34)	(-2.32)	(-2.37)
AGOA Non-LDC	0.028	0.020	0.020	0.025
	(1.92)	(1.08)	(1.04)	(1.60)
AGOA Non-apparel	0.063	0.069	0.091	0.042
	(1.74)	(1.44)	(1.60)	(1.11)
AGOA apparel	0.390***	0.237***	0.142**	0.231***
	(4.97)	(4.46)	(3.18)	(5.36)
AGOA apparel * Avg. import tariff	-0.017***			
	(-3.95)			
AGOA apparel * Cost to start a business		-0.0001		
		(-1.71)		
AGOA apparel * Internet users			0.049**	
			(3.25)	
AGOA apparel * Oil rents as % of GDP				-0.015***
				(-7.32)
Treated group time trends	Yes	Yes	Yes	Yes
Country-product fixed effects	Yes	Yes	Yes	Yes
Country-year fixed effects	Yes	Yes	Yes	Yes
Product-year fixed effects	Yes	Yes	Yes	Yes
Observations	27,420,560	26,310,236	25,889,429	26,893,286

Notes: Robust t-statistics in parentheses, clustered by HS 6-digit product.

- Stronger impact when tariffs are lower, IT infrastructure is stronger, specialization in natural resources is lower.

Firm dynamics behind AGOA apparel impact

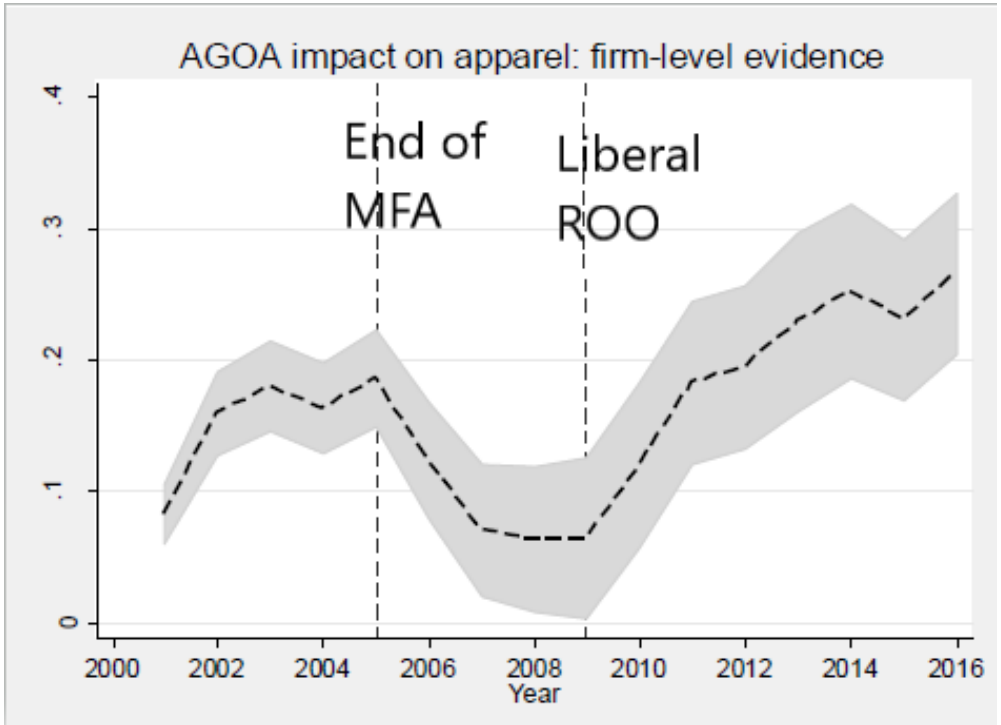
- Analysis uses firm-level data for 4 African countries.
- Two possible sources of apparel export growth:
  1. if intensive margin after end of MFA would indicate firms benefiting earlier from AGOA would have learned by doing
  2. if extensive margin could be evidence of externalities (demonstration effects from incumbents) but also of domestic improvements

Figure 3: Decomposition of long-run apparel export growth

- Growth driven by entrants in Ethiopia and Kenya suggests no durable competitiveness in apparel for incumbents created by preferential access to US under AGOA.
- Declines in Madagascar and Mauritius after end of MFA and withdrawal of AGOA benefits driven by firm exit.

Does the restrictiveness of rules of origin (ROO) matter?

Figure 4: Impact of AGOA on Mauritius apparel exports: firm-level evidences



Notes: figures show coefficients and 95 percent confidence intervals. The regression is based on 4,916,706 observations at the firm-HS6-destination-year level.

- Mauritius was competitive in the US market only after it was granted liberal ROO and hence a wider preference margin.
- Ups and downs in firms' export performance were driven by fluctuations in the preference margin rather than by dynamic benefits internal to the firm.

$\Longrightarrow$ AGOA preferences + strict ROO did not equip Mauritian apparel firms to cope with international competition from the MFA end.

Conclusion

- Aggregate Africa effects suggest stagnant but persistent benefits post-MFA (2005).
- Regional heterogeneity reveals that persistence is entirely due growth in East Africa offsetting contraction in Southern Africa.
- Country heterogeneity reveals that within East Africa, post-MFA growth is driven primarily by Ethiopia and Kenya.
- Ethiopia only began to grow after the period of high preferences ended in 2005; Kenya did begin to grow before 2005 and sustained it after 2005.
- Firm level data suggests that Kenya's sustained growth was driven mostly by firms that entered post-MFA and not by firms that benefited from high preferences.

THANK YOU!!

Scope and Breadth of AGOA and GSP LDC

	Number of US tariff lines (HTS 8-digit)		% of Exports to US	
	LDC	Non-LDC	LDC	Non-LDC
MFN Zero	3,131	3,131	9%	28%
GSP duty-free	3,507	3,507	1%	4%
GSP LDC duty-free	1,670		79%	
AGOA Apparel	555	555	11%	3%
AGOA Non-LDC		1,610		64%
AGOA Only	225	225	0%	0%
No Preference (MFN>0)	1,096	1,156	0%	1%
Total	10,184	10,184	100%	100%

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