

Lesotho's Export Performance: An African Success Story?

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Diversification

- Diversification into manufactured exports is a major development goal in most African countries.
- But few countries have succeeded.



Lesotho is a remarkable exception

- Least developed country, landlocked, impoverished.
- Yet largest exporter of clothing from S- S Africa.
- In response to AGOA preferences, major increases in export growth to the US up from \$110 million in 2000 to \$467 million in 2004, mainly clothing and mainly from firms owned by Taiwanese investors.
- What lessons should be learned?



Presentation Outline

- Brief overview of AGOA.
- Description of Literature.
- Theory of Supply-Chain responses to Import policies.
- Preliminary Empirical Results.
- Further Plans.



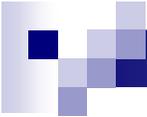
Why the Surge in Exports?

- Africa Growth Opportunities Act:
- S-Saharan countries were given duty-free access to the United States market.
- And the least developed countries were given a rule of origin allowing the use of non-originating fabric.

US Tariffs on Apparel Eliminated for AGOA Countries Eligible for Apparel Benefits

Comparison of average tariff on Apparel, selected countries & regions.

	Import weighted	Simple average					
	AGOA	AGOA	China	Vietnam	Bangladesh	Brazil	India
1996	19%	15%	14%	55%	16%	16%	14%
1997	18%	16%	14%	61%	16%	14%	14%
1998	18%	15%	13%	65%	16%	15%	14%
1999	18%	15%	13%	63%	16%	16%	14%
2000	17%	15%	13%	64%	15%	16%	14%
2001	11%	12%	13%	68%	15%	15%	13%
2002	5%	8%	13%	15%	15%	15%	13%
2003	4%	7%	12%	14%	15%	15%	13%
2004	1%	5%	12%	14%	15%	14%	13%
2005	1%	5%	12%	14%	14%	14%	13%
2006	0%	6%	12%	13%	14%	14%	13%
2007	0%	6%	12%	13%	15%	14%	12%
2008	0%	6%	12%	13%	15%	14%	13%



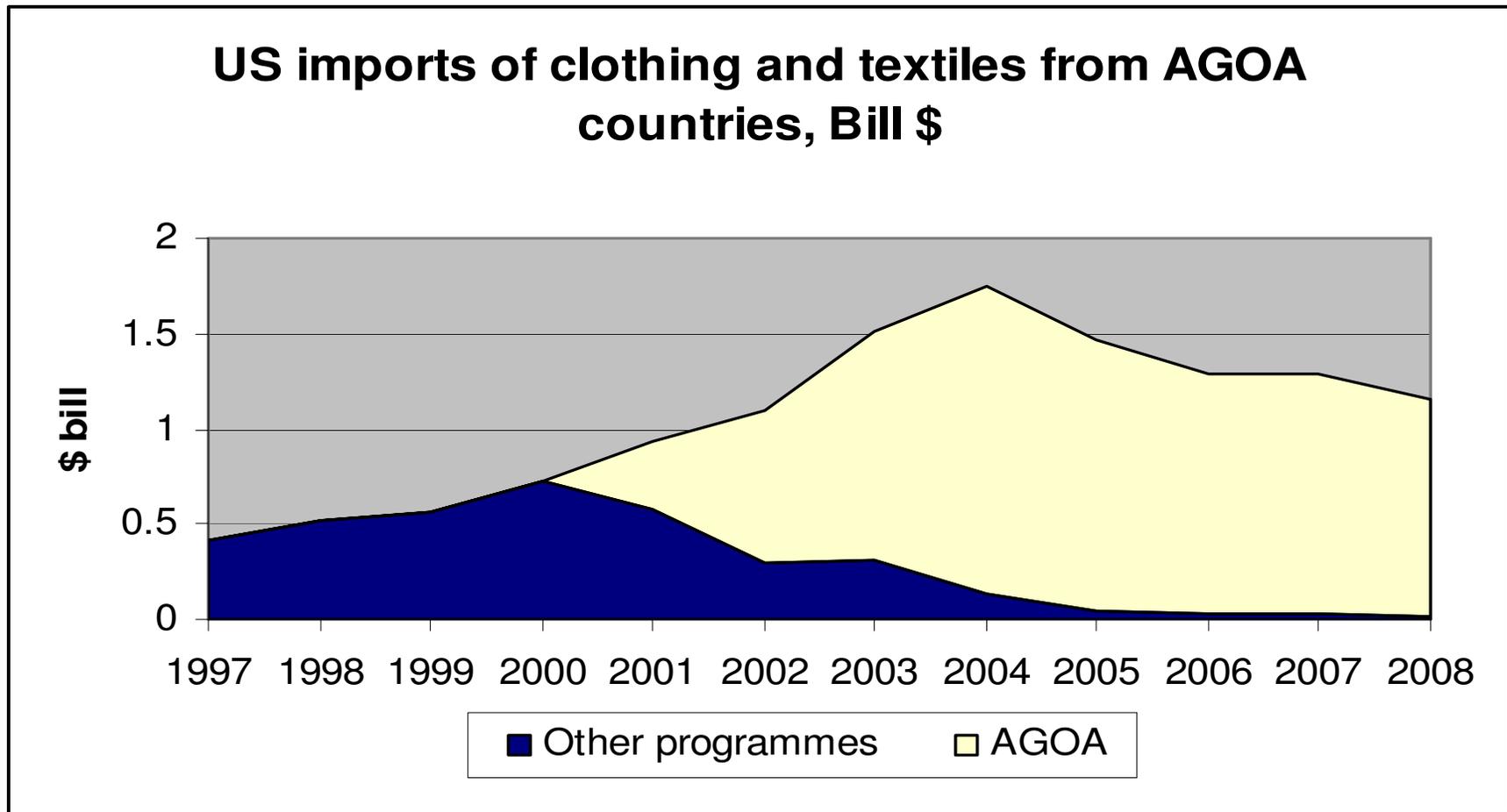
Apparel Rules of Origin under AGOA

Summary of Apparel Rules of Origin under AGOA

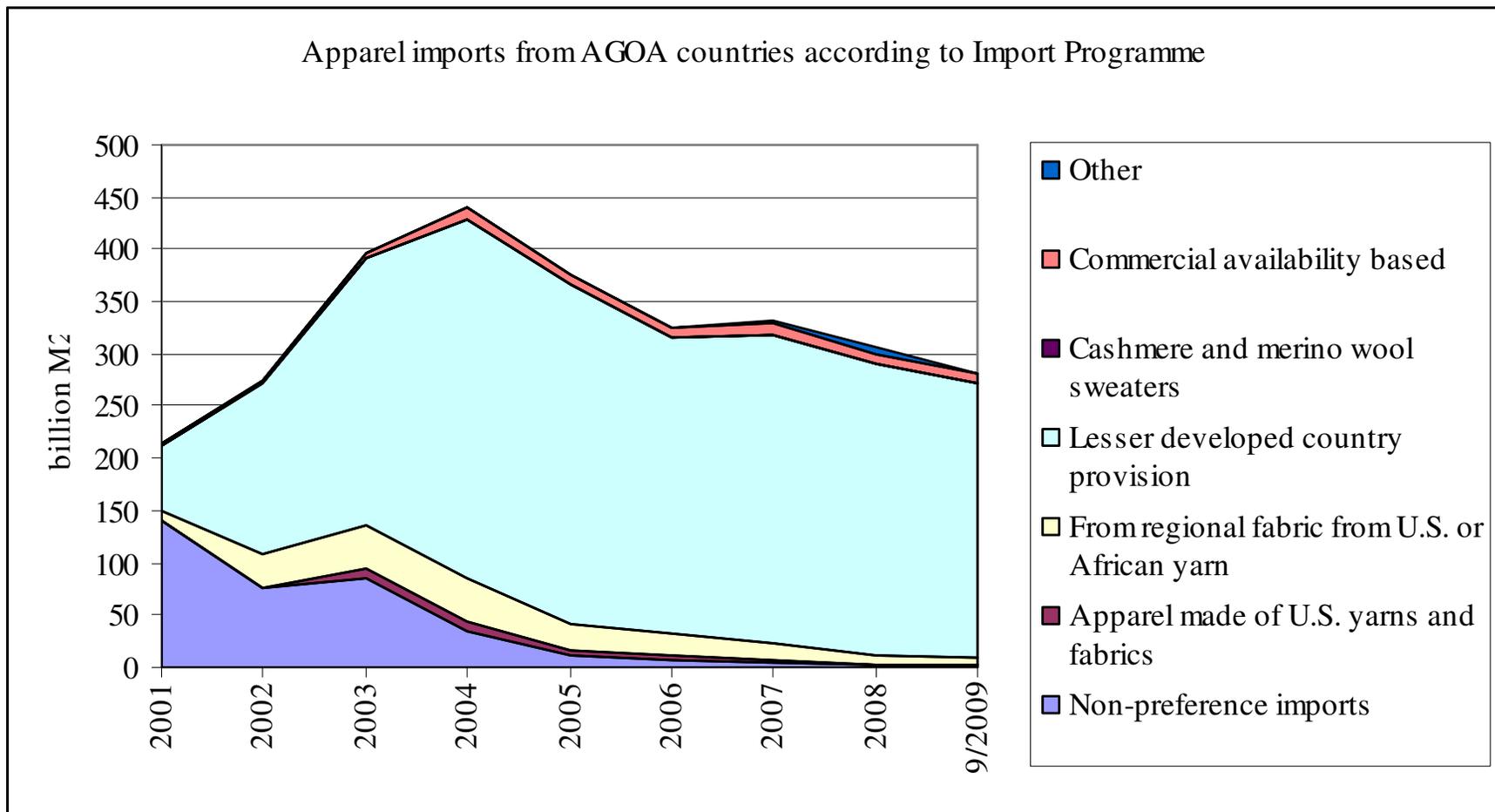
Description of the rules of origin requirements	Conditions of Access
1. Apparel made from U.S. yarns or fabric	Unrestricted
2. Apparel assembled from regional fabric from U.S. or African yarn	Subject to tariff rate quota cap (currently 6.43675 percent to 2015)
3. Apparel assembled in a Lesser Developed Country using foreign fabric or yarn	Unrestricted for four years, but extended to 2012 (cap of 3.5 percent of US imports)
4. Certain cashmere and merino wool sweaters;	Unrestricted for selected products
5. Apparel made of yarns and fabrics not produced in commercial quantities in the US	Unrestricted
6. Eligible handloomed, handmade, or folklore articles and ethnic printed fabrics; and	Unrestricted for selected products from Dec 2006 under AGOA IV

Note: Unrestricted implies duty-free and quota-free treatment

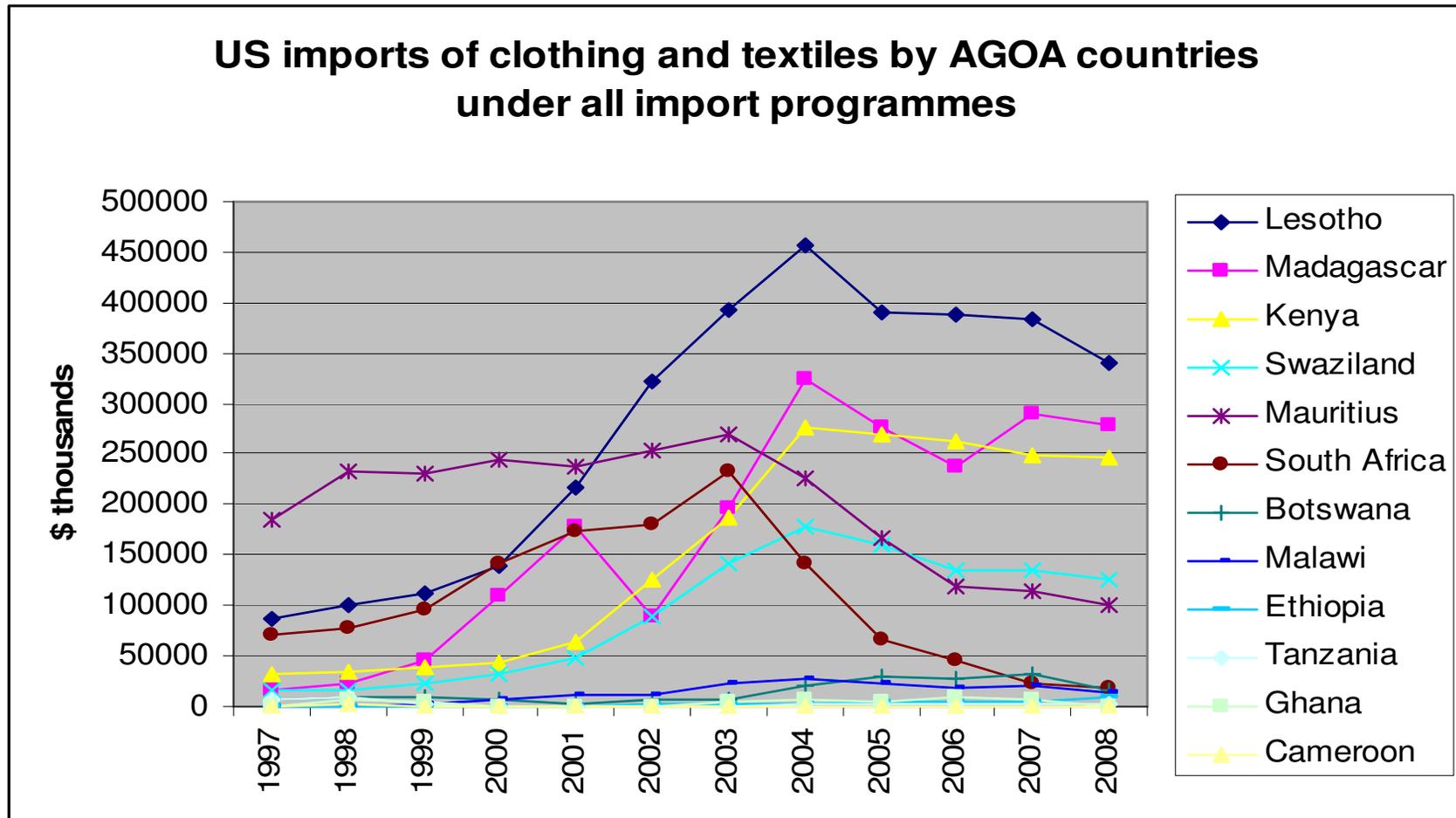
Result: Rapid surge in US imports after 2000.
Though some declines after expiration of MFA



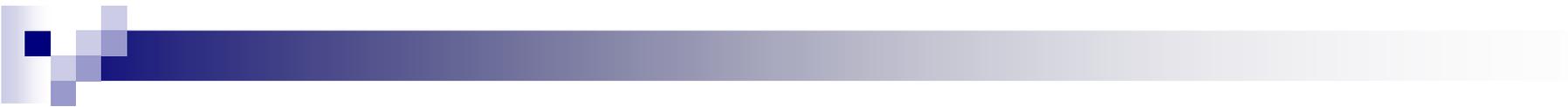
Rules of Origin Matter: Almost all Apparel Imported under Lesser Developed Country Provision



Concentrated in LDCs



Note contrast between LDCs and South Africa and Mauritius



But Not a Complete Success

- Lesotho has not enjoyed similar growth in clothing exports to other countries, especially EU or South Africa
- Only a few products are exported. Mainly cut-make and trim (CMT) products. Little diversification into higher value-added clothing and/or exports of other products.
- Few backward linkages into the rest of the economy, very few locals in management positions.
- **We will argue that these results are not accidental but the predictable consequences of the incentives created by the structure of the AGOA preferences.**
- **In particular, AGOA provides LDCs with incentives to specialize in products with low-labor value added per unit and high-fabric value-added per unit.**



Empirical Literature.

- AGOA Preferences a significant determinant of Apparel exports
 - Collier & Venables (2007) – 7 fold increase; Frazer and Van Biesenbroeck (2007) – 50% increase, with stronger effects on more protected sectors
- End of MFA quotas on China associated with declines in Chinese apparel unit-values and quality downgrading (Harrigan and Barrows, 2006)
- End of MFA Reduced AGOA exports (Brambilla, Khandelwal and Schott. 2007)
- AGOA countries only capture 38% of the apparel tariff rent (Olarreaga and Özden, 2005)



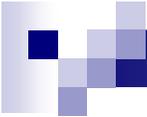
Missing from Literature.

- Unique feature of AGOA: preference is **related to the use of intermediate inputs.**
- But the empirical studies do not focus on how this preference affects the incentives for clothing unit value-added and fabric use.
- Need theory to work out how supply-chains are affected by the variety of US import policies that have affected clothing.



US Clothing Protection: Three phases.

- 1990s. Tariffs and MFA Quotas.
- 2000. AGOA Duty-free plus Rule of Origin.
- 2005: Expiration of MFA.
- Each, in theory will influence the composition and the volume of imports



Impact on Value-Added and Fabric Choice: Quotas

- Firms originally located in Lesotho because it had unused MFA quotas
- **Theory:** Under competitive conditions, a quota is equivalent to a specific tariff. More generally the shadow price of a quota is a specific dollar amount. This has a more adverse % impact on lower unit-value products. Thus constrained importers upgrade quality.
- **Unconstrained** importers will downgrade quality products. (Specific subsidy bigger on lower unit value products)
- Under MFA, firms in Lesotho therefore had incentives to specialize in low quality clothing.



Tariffs.

- **AGOA removed tariffs on imports from Sub-Saharan Africa.**
- Tariff escalation (higher tariffs on final products than inputs) raises effective protection most for US firms with high input cost ratios. This shifts foreign firms towards less fabric-intensive clothing products.
- Conversely, preferences which **eliminate** final tariffs such as AGOA **will shift foreign firms towards more fabric intensive, lower clothing value-added products**, even if the use of domestic inputs is required.



Impact on Value-Added and Fabric Choice: Non-originating rule of origin

- **Under AGOA Lesotho exports Duty-free Access and Non-originating rule of origin. The ability to use fabrics at world prices combined with a duty free preference is similar to the removal of tariffs on inputs in a protected market. The effective rate of protection is raised for Lesotho.**
- **Theory: Major benefit from the rule of origin is to bring fabric embodied in clothing into the US duty free. Thus the rule of origin allowing foreign fabric and yarn leads to downgrading of value-added per unit.**
- **The implicit subsidy will be greater, the more fabric-intensive the product.**
- **Thus under AGOA, firms in Lesotho had incentives to downgrade value-added but to use more expensive fabrics.**



Removal of MFA.

- In 2005 the MFA is eliminated. This reverses the incentives on constrained countries.
- Competition in lower quality clothing – precisely the kind in which LDC AGOA beneficiaries specialize will become more intense!



Implications of Theory.

- Originally MFA provided Lesotho with an incentive to specialize in low unit value products.
- AGOA provided firms with benefits to export but also to specialize in low value-added clothing made with relatively expensive fabrics. This was especially the case for the least developed AGOA countries such as Lesotho.
- Removal of MFA would be expected to have a particularly adverse effect on Lesotho's competitive advantage.
- Given its level of development, Lesotho is most likely to develop a fabric manufacturing capacity in low unit-value fabrics. However, AGOA encourages the use of more expensive fabrics.



Some Preliminary Results

- (a) Impact of AGOA (Export prices, volumes and values).
- (b) Impact of AGOA on value-added intensity.
- (c) Impact of MFA removal on AGOA Exports.



Data

- HTS 10 digit data from Foreign Trade Division of the U.S. Bureau of the Census
- 1996-2008
- Approx 1500 time consistent HTS codes
- 41 AGOA countries (27 Apparel eligible)
- 213 countries in total
- Merge with 21 NAICS 6-digit VA/sales for USA

Difference-in-Difference estimation

$$\ln IMP_{cpt} = (\alpha_1 + \beta_1 D_{2001}) * AGOA_{-cntry}_{ct} * ApparelEli_{g_{-cntry}_{ct}} + (\alpha_2 + \alpha_3 D_{2001}) * AGOA_{-cntry}_{ct} + (\alpha_4 + \alpha_5 D_{2001}) * ApparelEli_{g_{-cntry}_{ct}} + \alpha_5 D_{2001} + \lambda_t + \varepsilon_{cpt}$$

Where:

IMP is US imports of product *p* from country *c* in period *t*

AGOA_cntry =1 from time country becomes eligible for AGOA

ApparelElig_cntry = 1 from time country becomes eligible for Apparel

D2001 is dummy for post 2001 period for all products & countries

Also extend model by including country by product fixed effects (μ_{cp}).

And include additional interaction terms to measure value added or fabric intensity bias of import response

AGOA raised export values and prices

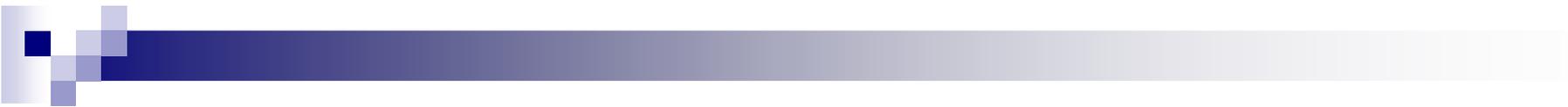
Marginal impact of AGOA Apparel eligibility on US Apparel Imports

	Standard diff-in-diff	incl. country/product fixed effects	Restricted period (1996-2004)	AGOA countries, Full Period
Marginal Effect	442.5%	77.9%	112.8%	80.0%
interact	1.691	0.576	0.755	0.588
t	7.494	4.066	5.332	4.768
N	440000	440000	300000	15489
Fixed effects		country/product year	country/product year	country/product year

Note: Marginal effect is calculated as $\exp(\text{interact})-1$

Marginal impact of AGOA Apparel eligibility on Import price per Square Meter Equivalent

	Standard diff-in- diff	incl. country/product fixed effects	Restricted period (1996-2004)
Marginal Effect	19.6%	18.6%	2.6%
N	4.40E+05	4.40E+05	3.00E+05
Fixed effects		country/product year	country/product year



Price effect suggests rents were captured.

- Olarreaga and Ozden Found an average price increase of just 5.2 percent for Lesotho and even smaller effects for other LDC countries. This is hard to square with large supply responses. Our result is more plausible.

Marginal impact by US VA intensity and Initial Tariff Protection: Largest impact in low-value added, high initial tariffs.

Marginal impact by VA share

	Full Period (1996-2008)	Restricted period (1996-2004)
Marginal effects by VA share		
0.36	95%	141%
0.42	79%	114%
0.6	37%	49%
N	440000	300000
Fixed effects	country/product year	country/product year

Marginal impact by Initial Tariff rate

	Full Period (1996-2008)	Restricted period (1996-2004)
Marginal effect by tariff rate		
0.05	0%	38%
0.1	13%	64%
0.15	29%	94%
0.2	46%	129%
0.25	66%	171%
0.3	88%	220%
N	3.70E+05	2.60E+05
Fixed effects	country/product year	country/product year

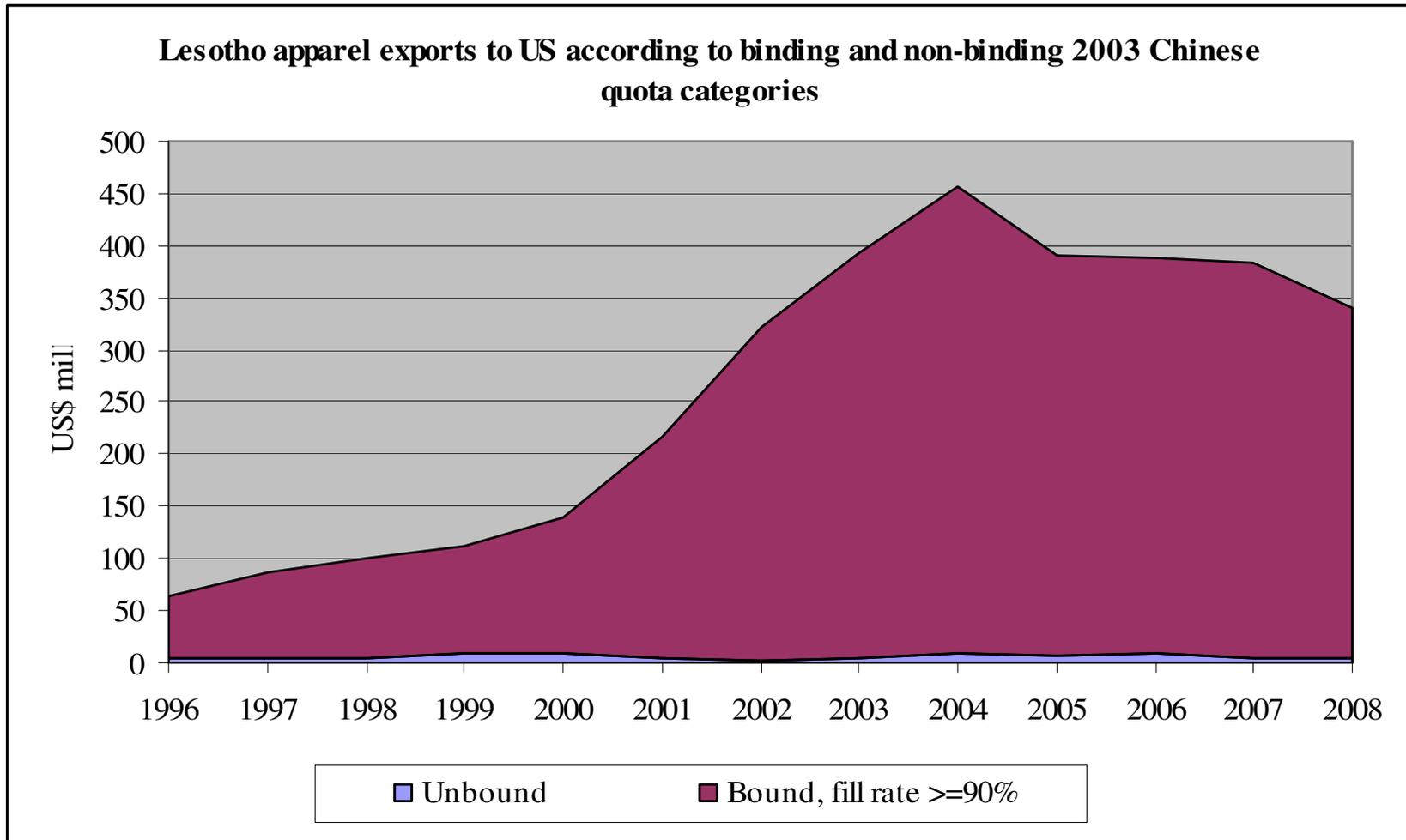
Largest impact on least fabric intensive? No! But need to do more work on measuring fabric intensity

Marginal impact by Initial log Price per Square Meter Equivalent

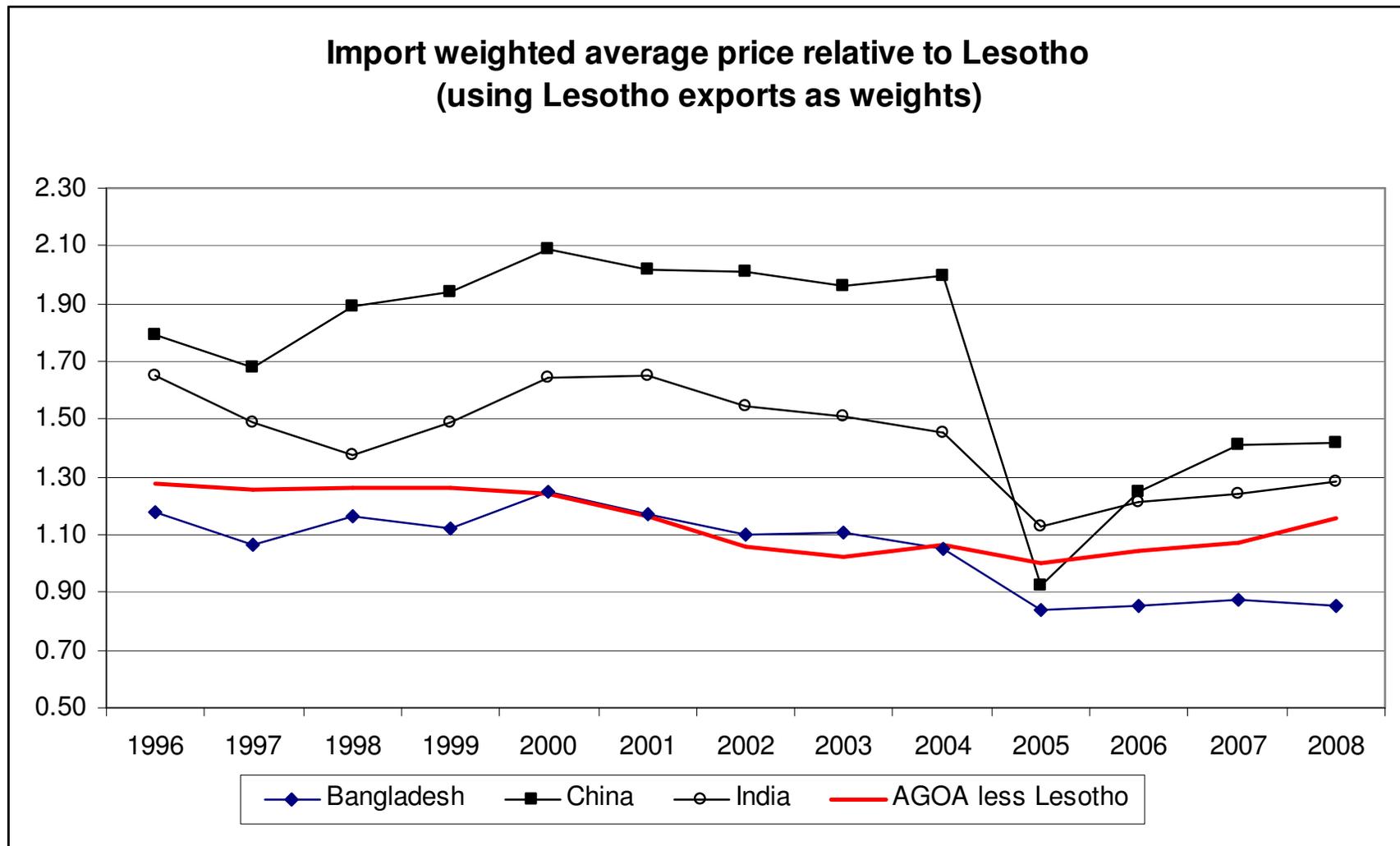
	Full Period (1996-2008)	Restricted period (1996-2004)
Marginal effects by various values of average $\ln(p/sme)$		
0.77	59.2%	91.5%
1.72	81.1%	116.2%
2.41	98.9%	136.2%
2.88	112.1%	150.8%
N	4.40E+05	3.00E+05
Fixed effects	country/product year	country/product year

MFA IMPACT:

Almost all AGOA apparel exports to US in product lines where Chinese Quotas are binding

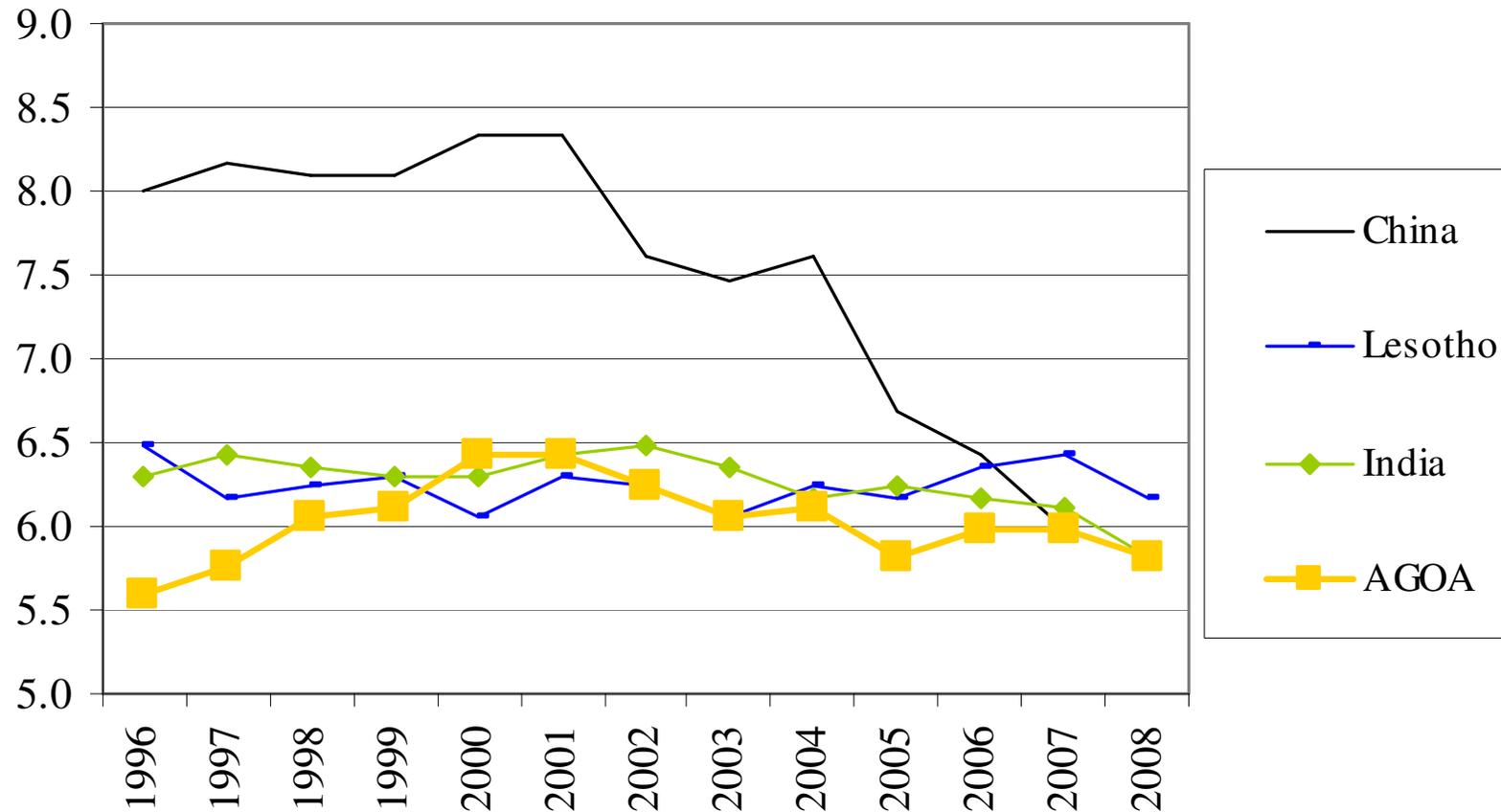


Dramatic Decline of Chinese (and Indian) prices in those products Lesotho (and AGOA) export



Combined With Structural Shifts by China to Low Price Products

Structural shifts in the composition of imports, import weighted US average unit value (\$) per SME pre 2001





Impact of End of MFA

Estimate impact of ending of Chinese quotas in 2005 on AGOA export volumes (SME).

Follow Brambilla et al (2007) and estimate the following relationship

$$\Delta \ln q_{crht} = \beta_{1rt} \text{ChinaBound}_{h,t-1} + \beta_{21rt} \text{ChinaUnbound}_{h,t-1} + \varepsilon_{crht}$$

q is import volumes,

ChinaBound is a dummy variable equal to unity if China's quota in product h in year 2003 had a fill rate exceeding 90 percent,

ChinaUnbound is a dummy variable equal to unity if China was not subject to a binding quota.

Removal of Chinese Quotas in 2005 associated with large decreases in AGOA Exports

region	Data	$\Delta \ln(\text{SME})$ 2005		$\Delta \ln(\text{SME})$ 2006		$\Delta \ln(\text{SME})$ 2007	
		Bound	Unbound	Bound	Unbound	Bound	Unbound
Agoa	Coef.	-0.41	-0.27	-0.28	-0.08	-0.23	-0.09
	Std. Err.	0.06	0.13	0.06	0.14	0.06	0.13
China	Coef.	1.80	0.36	0.01	-0.20	0.21	0.10
	Std. Err.	0.07	0.08	0.06	0.07	0.06	0.07
East Asia & Pacific	Coef.	-0.15	-0.08	-0.01	0.01	-0.16	-0.07
	Std. Err.	0.03	0.05	0.03	0.05	0.03	0.05
Europe & Central Asia	Coef.	-0.41	-0.21	-0.23	0.09	-0.24	-0.10
	Std. Err.	0.05	0.07	0.04	0.06	0.04	0.06
High income: nonOECD	Coef.	-0.50	-0.38	-0.33	-0.28	-0.38	-0.27
	Std. Err.	0.04	0.07	0.04	0.06	0.04	0.06
High income: OECD	Coef.	-0.22	-0.09	-0.16	-0.01	-0.08	-0.09
	Std. Err.	0.02	0.03	0.02	0.03	0.02	0.03
Latin America & Caribbean	Coef.	-0.19	-0.10	-0.25	-0.06	-0.18	-0.12
	Std. Err.	0.03	0.05	0.03	0.05	0.03	0.05
Middle East & North Africa	Coef.	-0.01	-0.35	0.19	0.19	-0.06	0.02
	Std. Err.	0.06	0.11	0.06	0.10	0.06	0.09
South Asia	Coef.	-0.05	-0.08	-0.14	0.03	-0.21	-0.13
	Std. Err.	0.04	0.07	0.04	0.06	0.04	0.06



Possible Implications:

- Trade preferences do work: incentives matter. Politically much easier than aid and are performance based.
- The nature of Lesotho's pattern of specialization. Large scale, low-value-added products is predictable from the incentives created by AGOA.
- Inputs play a major role. Lesotho cannot compete in South Africa even though tariff protection is higher than the US because it cannot use duty-free fabric.
- But care should be taken in the form preferences are granted, They are not a panacea or a substitute for more comprehensive development strategy.



Additional Work Planned

- Provide full theory.
- Obtain data on fabric and value-added costs.
- Complete empirical tests of theory.