Go Ahead and Trade: the Impact of Uncertainty Removal in the EU's GSP scheme[1]

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Motivation and Context - NRTPs

The Generalized System of Preferences (GSP) of the EU offers non-reciprocal trade preferences (NRTPs) to developing countries.

Studies on specific preferential schemes, with product level data, find positive impacts of NRTPs on trade of beneficiaries:

- Thelle et al. (2015): EU GSP preferences boost exports of covered products (5% on average).
- Frazer and Van Biesebroeck, (2010): AGOA preferences led to 13% increase in US imports.
- Hakobyan (2017a, 2017b): exclusion from US GSP, or its temporary expiration, harms imports of affected products.

Motivation and Context - NRTPs uncertainty

Uncertainty has long been seen as a hurdle to NRTPs effectiveness.

- "Donors" have discretion to revoke them, which might reduce investment in eligible products or RoOs compliance (Ornelas 2016, Limao 2016).
- GSP schemes have limited duration, expire and need periodic renewal.
- GSP schemes feature mechanisms for preference removal, which increase insecurity.

This paper studies directly the **trade impact of NRTPs uncertainty**.

Motivation and Context - TPU

The impact of trade policy uncertainty (**TPU**) on trade has been addressed by a recent literature. E.g.:

- Handley (2014): large **tariff overhangs** limit entry of exporters (Australia)
- Handley and Limao (2015, 2017): **EU entry** of Portugal and **China WTO accession** explain large fractions of export growth post-entry/accession.
- Brexit effect:
  - Crowley et al. (2018b): **switch to renegotiation regime** reduces entry of UK exporters into EU.
  - Graziano et al. (2018): **uncertainty pre-referendum** reduces UK-EU trade.
- **This paper**: impact of NRTPs uncertainty removal in the 2014 **reform of the EU's GSP**.

The EU's GSP

The EU's GSP is divided in three sub-schemes, with increasing stability of preferences and level of market access in the EU.

- Standard GSP: lower that MFN or zero tariffs on 66% of 8-dig tariff lines.
  - Low and lower-middle income countries with no other PTA with EU.
- GSP+: duty free import of approx. the same tariff lines as standard GSP
  - For vulnerable GSP members which ratify a list of conventions.
- EBA: duty free imports on products all but arms
  - For Least Developed Countries (LDCs).

Graduation: mechanisms of preference removal:

- All GSP members are subject to income related *country-graduation*.
- Standard GSP and GSP+ (up to 2014) subject to competitiveness related *country-section graduation*.

Competitiveness related graduation

The EU removes GSP preferences from competitive country-section pairs if:

- a country's share of EU imports of GSP eligible products in a section, out of total EU GSP imports in that section, exceed a certain threshold:
  - threshold currently set at 57% (47.5% for textiles).
  - graduations are decided at 3-year intervals

Graduation threshold generates uncertainty.

- A country can lose GSP preferences in a section:
  - if its EU imports increase
  - if other GSP members' EU imports decrease
- higher uncertainty for country-sections closer to the threshold

2014 reform of the EU's GSP

General aim: make preferences more meaningful and predictable.

1. Meaningfulness: focus on countries most in need
   - Graduate all upper-middle income countries, countries with alternative PTAs with EU and territories under control of EU
     - Membership was cut from 177 to 88 countries

2. Predictability:
   - **Remove competitiveness-related graduation for GSP+ members.**

- The threshold removal for GSP+ countries could have eliminated NRTPs uncertainty
- Our contribution is to assess whether the reform affected GSP+ countries' trade, and to isolate the role of NRTPs uncertainty removal.

Data

- **Product level** import data (COMEXT) at the CN-8 digits product level, 2009-2016.
- **Tariff** data (TRAINS): CN-8-digit level, 2009-2016
  - GSP, GSP+, EBA product eligibility information
  - GSP, MFN and other EU PTA tariff schedules
- **GSP membership** (EU regulations): GSP, GSP+ and EBA membership, and graduation episodes.

Methodology - main impact of reform

We adopt a triple-difference estimator *a' la* Frazer & Van Biesebroeck (2010) and exploit three sources of variation:

- GSP+ members vs non-members: $GSPplus^{member}_{cs,t}$ (country-section level)
- GSP+ eligible vs non-eligible products: $GSPplus^{prod}_{k,t}$ (8-digit level)
- time-varying effect of reform: ref_t (pre- post-2014)

$$ln(imp)_{k,cs,t} = \beta_1(ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member}_{cs,t}) + \gamma_{\mathbf{cs,t}} + \delta_{\mathbf{k,t}} + \lambda_{\mathbf{cs,k}} + \varepsilon_{k,cs,t}$$

Identification comes from country-section-product (cs,k) specific changes in imports post-reform, relative to their pre-reform average.

Methodology - uncertainty or better market access?

Some tariffs could have changed for GSP+ members, e.g. Pakistan moved from GSP to GSP+ in 2014

To separate the impact of the change in uncertainty from that of better market access, we construct 2 binary variables:

- $GSPplus_{cs,k}^{prod,\Delta pref=0}$, 1 if a country-product tariff *margin* is unchanged in 2014
- $GSPplus_{cs,k}^{prod,\Delta pref\neq 0}$, 1 if a country-product tariff *margin* changed in 2014

$$\begin{aligned} ln(imp)_{k,cs,t} = \beta_1(ref_t * GSPplus_{cs,k}^{prod,\Delta pref=0} * GSPplus_{cs,t}^{member}) + \\ \beta_2(ref_t * GSPplus_{cs,k}^{prod,\Delta pref\neq 0} * GSPplus_{cs,t}^{member}) + \\ \gamma_{cs,t} + \delta_{k,t} + \lambda_{cs,k} + \varepsilon_{k,cs,t} \end{aligned}$$

Table: Impact of 2014 reform on EU imports from GSP+ countries

	(1)	(2)	(3)
$ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member}_{cs,t}$	0.0727**	0.0680*	
	(0.036)	(0.036)	
$ln(\tau_{k,cs,t})$		-0.628***	
		(0.163)	
$ref_t * GSPplus^{prod,\Delta pref=0}_{cs,k} * GSPplus^{member}_{cs,t}$			0.0718*
			(0.039)
$ref_t * GSPplus^{prod,\Delta pref\neq 0}_{cs,k} * GSPplus^{member}_{cs,t}$			0.0749*
			(0.044)
Country-section-year FE	y	y	y
Product-year FE	y	y	y
Country-section-product FE	y	y	y
N	881137	881137	881137

Note: Standard errors clustered at country-product level in parentheses, * p <0.1, ** p <0.05, *** p <0.001

Intensity of NRTPs uncertainty

The uncertainty decreases with the distance from the grad. threshold: its removal should have induced more trade for country-section pairs close to it.

We construct the **distance** from the threshold, as the ratio between import shares (pre-reform rules, 2009-11 data) and the pre-reform threshold.

$$ln(imp)_{k,cs,t} = \beta_1(ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member}_{cs,t}) + \beta_2 dist_{cs} + \beta_3\left[(ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member}_{cs,t}) * dist_{cs}\right] + \eta ln(\tau_{k,cs,t}) + \gamma_{cs,t} + \delta_{k,t} + \lambda_{cs,k} + \varepsilon_{k,cs,t}$$

Alternatively, we construct three binary variables, which separate the country-sections pairs in the following categories:

- $GSPplus^{member,5pp}_{cs,t}$ for import-shares < 5 pp from the threshold
- $GSPplus^{member,5-10pp}_{cs,t}$ for import-shares 5-10 pp from the threshold
- $GSPplus^{member,>10pp}_{cs,t}$ for import-shares > 10 pp from the threshold

$$ln(imp)_{k,cs,t} = \beta_1(ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member}_{cs,t}) + \beta_2 dist_{cs} + \beta_3\left[(ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member}_{cs,t}) * dist_{cs}\right] + \eta ln(\tau_{k,cs,t}) + \gamma_{cs,t} + \delta_{k,t} + \lambda_{cs,k} + \varepsilon_{k,cs,t}$$

Table: Relevance of distance from graduation threshold

	(1)	(2)	(3)	(4)
$ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member}_{cs,t}$	0.0481	0.0443		
	(0.038)	(0.038)		
$(ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member}_{cs,t}) * dist_{cs}$	0.640**	0.619**		
	(0.282)	(0.282)		
$ln(\tau_{k,cs,t})$		-0.622***		-0.623***
		(0.163)		(0.163)
$ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member,5pp}_{cs,t}$			0.540***	0.521***
			(0.190)	(0.191)
$ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member,5-10pp}_{cs,t}$			0.528***	0.495***
			(0.150)	(0.150)
$ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member,>10pp}_{cs,t}$			0.0663*	0.0618*
			(0.037)	(0.037)
Country-section-year FE	y	y	y	y
Product-year FE	y	y	y	y
Country-section-product FE	y	y	y	y
N	881137	881137	881137	881137

Note: Standard errors clustered at country-product level in parentheses, * p <0.1, ** p <0.05, *** p <0.001

Timing of reform - uncertainty vs competition

The reform reduced GSP membership, which could have conferred a competitive advantage to GSP+ countries.

- To disentangle the Δ uncertainty vs Δ competition we exploit the timing of the reform
  - The reform was announced in 2012 (EU regulation), but applied in 2014.
  - In 2013 **competition is unchanged**, but **uncertainty has changed**

- We recode the reform variable as taking value 1 from 2013 onwards, and use interactions with time dummies, from 2013 to 2016, to estimate the impact of the reform announcement in 2013

$$ln(imp)_{k,cs,t} = \sum_{t=13}^{16} \Big[\beta_{1,t}(ref_t * GSPplus_{cs,k}^{prod,\Delta pref=0} * GSPplus_{cs,t}^{member}) + \beta_{2,t}(ref_t * GSPplus_{cs,k}^{prod,\Delta pref\neq 0} * GSPplus_{cs,t}^{member}) \Big] * T_t + \gamma_{cs,t} + \delta_{k,t} + \lambda_{cs,k} + \varepsilon_{k,cs,t}$$

Table: Impact of reform announcement

		(1)	(2)	(3)
$ref_t * GSPplus^{prod}_{k,t} * GSPplus^{member}_{cs,t}$	2013	-0.0251	-0.0265	
		(0.050)	(0.050)	
	2014	0.0649	0.0562	
		(0.055)	(0.055)	
	2015	0.0365	0.0392	
		(0.047)	(0.047)	
	2016	0.101**	0.0917*	
		(0.048)	(0.048)	
$ln(\tau_{k,cs,t})$			-0.620***	
			(0.163)	
$ref_t * GSPplus^{prod,\Delta pref=0}_{cs,k} * GSPplus^{member}_{cs,t}$	2013			**0.141*** **
				(**0.049**)
	2014			0.0783
				(0.057)
	2015			0.0728
				(0.050)
	2016			0.121**
				(0.052)
$ref_t * GSPplus^{prod,\Delta pref\neq 0}_{cs,k} * GSPplus^{member}_{cs,t}$	2013			**0.0348**
				(0.060)
	2014			0.214**
				(0.088)
	2015			0.0165
				(0.057)
	2016			0.108*
				(0.056)
Country-section-year FE		y	y	y
Product-year FE		y	y	y
Country-section-product FE		y	y	y
N		881137	881137	881137

Note: Standard errors clustered at country-product level in parentheses, * p $<$0.1, ** p $<$0.05, *** p $\leqslant$0.001

Conclusion and way forward

- The 2014 reform of the EU GSP programme removed the "threat" of competitiveness related graduations for GSP+ countries, which caused an increase in EU imports from GSP+ countries, by **7%** on average

- We provide evidence that the reform reduced uncertainty of NRTPs:
  - The effect is robust to excluding changes in pref. margins.
  - Δ imports is stronger for country-sections "close" to grad. threshold

- The increase in EU imports is not matched by a decrease in ROW imports - no trade re-direction (not shown today)

- Additional exercises and ongoing work:
  - Estimated the impact of the reform by utilization rates groups
  - Explore the impact of reform on medium and high-tech products, likely to have a high investment intensities (higher investment intensity should be more responsive to a Δ uncertainty)

Thank you.