TRADE PERFORMANCE OF FREE TRADE ZONES

Jean-Marc SIROËN
Université Paris-Dauphine

Ayçıl YÜCER
University of Dokuz Eylül

Introduction:

- Proliferation of FTZs (especially EPZs) with pro-trade policies in developing and emerging countries
  - Exceptions to national regulations: tariff exemptions on imported inputs, tax breaks etc.
  - Generally accompanied with export requirements with restrictions on domestic market sales.
- Positive Impact of FTZ on economic development
  - The role of FTZ in GVCs and for export-led growth policies
  - « Catalytic effects » : Linkages between EPZs and the rest of the economy: e.g. Knowledge spill-overs
  - Absorbing FDI with minimum impact on domestic market (Wu, 2009)
  - Unven impact on growth across FTZ programs (FIAS, 2008)
- Drawbacks
  - Source of distortions
  - Lawless areas with sweatshops
  - Illegal trade and money laundering

Trade Impact of FTZs: Success Stories?

Case studies show a large share of exports for some FTZs (Chinese SEZs, Maquiladoras etc.) but what about the country level trade?

- Trade Creation: effect with lower tariff rates

- Second Best solutions: Elimination of counter-productive effects of high tariffs on firms' competitiveness and exports.

  - Windfall Effect: Relocation of companies from their initial place in the country to FTZ zone

  - Trade Diversion Effect: FTZ exports at the expense of the exports of the rest of the country

  - Preference Erosion Effect: Substitution of imported inputs to a less competitive domestic supplier by exporters (decrease of exported value-added)

- Aim of the paper is to test the link between the contributions of FTZs to exports and the host country's trade protection policy with a cross-cut analysis.

FTZ, EPZ and MPZ

- Common characteristic: Exceptions to tariff and/or fiscal policy
- Several definitions of FTZs by referring their different characteristics
  - Geographic form (concentrated or widespread)
  - Type of business (transit, processing, commercial etc.)
  - Industrial specialization (Service, technology, logictics etc.)
- Export Processing Zones (EPZs) imply a transformation of imported inputs before exporting a processed good.
- Export share requirements are not straightforward
  - 100% export share requirement with no access to domestic market
  - 80% export share requirement; in other words 20% sold in domestic market (eg. Bangladesh)
  - No requierement (eg. Uruguay, Thailand etc.)
- « Import Process Zones » (MPZ)?

  Duty-free domestic access used as a further incentive for investors (eg. 20% in Mauritius, FTZ of Manaus with advantegous tariff rates conditional on local value-added etc.)

Implications: EPZ versus MPZ

Different trade impact of Export Process Zones and « Import Process Zones »

- Increase of exports and imports of EPZ country
  - EPZ driven by GVCs and export-led growth strategies
  - New trade opportunities enhanced with lower trade costs,
  - Export share requirements
- Decoupled impact of MPZ: More imports for less exports
  - MPZ driven by regional development policies
  - Trade-off between sales to domestic and international markets
  - Raise of performance and exports due to « heterogenous firm process »

FTZ DataBase

- No cross-cutting studies due to lack of data :
  - Different definitions of FTZs
  - Regime opacity
  - Inoperative FTZs
  - ILO database by Singa & Boyange (2007), WEPZA database etc.
- Original data constructed by authors under project ANR Program « Les Suds II »
  - WTO Trade Policy Reviews from WTO Secreteriat (information about date of creation and legislative details, type of zone(s), activity of zone(s) etc.)
  - US Department of State (Number of zones, main activity etc.
  - Reports from International Organizations, academic papers, published books…
  - Soon available from www.ftz.dauphine.fr

Methodology:

- FTZ criteria of database: EPZ or EMPZ
  - EPZ criteria: Processing activity and tariff exemptions
  - EMPZ criteria: Duty-free access to domestic market
  - Activity Criteria: Having at least one firm
- FTZ variable is defined for a sample of 122 countries,
  - 62 have an active FTZ program (EPZ and/or EMPZ)
  - 11 have an active Export-Import Process Zone (EMPZ)
  - 9 not active FTZ program
- We use a Gravity model of bilateral trade (Xij)
  - At cross-country level for the year 2008
  - Average MFN tariffs and original FTZ data
  - Model is estimated by PPML in its mutiplicative form (Santos Silva & Tenreyro; 2006). PPML is a strong tool to solve,
    - « Zero » trade values
    - Heterogeneity bias when log-linearized

VARIABLES	(1) Basic
Ln(Dij)	-0.685***
	(0.042)
Ln(Yi)	0.733***
	(0.031)
Ln(Yj)	0.743***
	(0.030)
Ln(YperCapi)	-0.005
	(0.046)
Ln(YperCapj)	0.017
	(0.038)
Ln(Rij)	1.384***
	(0.145)
Ln(Rji)	1.137***
	(0.136)
RTAij	0.040
	(0.088)
EC27ij	0.516***
	(0.140)
CONTij	0.580***
	(0.108)
LANGij	0.365***
	(0.069)
COLij	-0.208**
	(0.088)
LLi	-0.148*
	(0.086)
LLj	-0.135
	(0.099)
Constant	10.406***
	(2.379)
Observations	14,116
R-squared (Pseudo)	0.753

BASIC GRAVITY MODEL:

☐ **Nominal GDP** of country i, j in current US$ (positive, significative)

☐ **Nominal per capita GDP** of country i, j in current US$ (not significative)

☐ **Geodesic distance** between i and j (negative, significative)

☐ **Remoteness index** (Helliwell; 1998) of country i and j (positive significative)

☐ **Landlocked** variable for i and j (negative, not significative for j; significative at %10 for i)

☐ **Regional trade agreement** between i and j other than the EU (positive, not significative)

☐ **European Union (27)** countries i and j (positive, significative)

☐ **Contiguity** of i and j (positive, significative)

☐ **Common language** between i and j (positive, significative)

☐ **Colonial linkage** between i and j (negative, significative)

Table 1: FTZ, (EPZ and EMPZ) and Tariff Impact

VARIABLES	(2) FTZ	(3) FTZ interaction	(4) EPZ-EMPZ	(5) EPZ-EMPZ interaction
LnMFNi	-0.556***	-0.898***	-0.573***	-0.902***
LnMFNj	-0.794***	-1.000***	-0.783***	-0.985***
FTZi	0.193*	-1.391***		
FTZj	0.527***	-0.461*		
*FTZi*LnMFNi*		0.977***		
*FTZj*LnMFNj*		0.620***		
EPZi			0.347**	-0.610
EMPZi			0.140	-1.731***
EPZj			0.518***	-0.259
EMPZj			0.513***	-0.611*
*EPZi*LnMFNi*				0.667***
*EMPZi*LnMFNi*				1.140***
*EPZj*LnMFNj*				0.507***
*EMPZj*LnMFNj*				0.696***
R-squared (Pseudo)	0.795	0.837	0.802	0.838

*** is siginificant at 1% ; ** at 5% and * at 10%.

Average Marginal Effect (AME) of FTZ for Exporter *i*

Legend: Average Estimated Xij (FTZi=0) — Average Estimated Xij (FTZi=1)
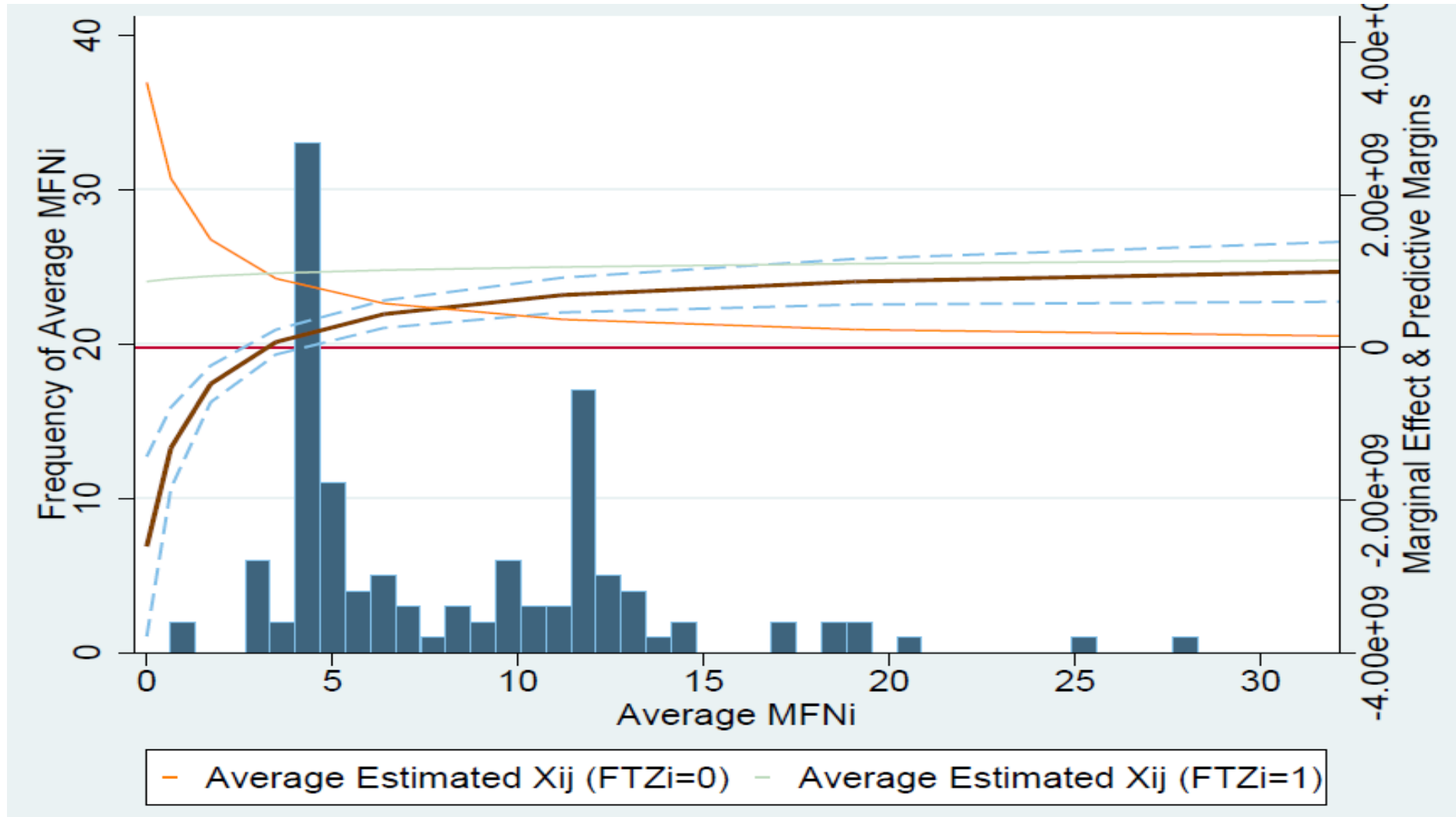
Average Marginal Effect (AME) of FTZ for Importer j (exports to an FTZ country)
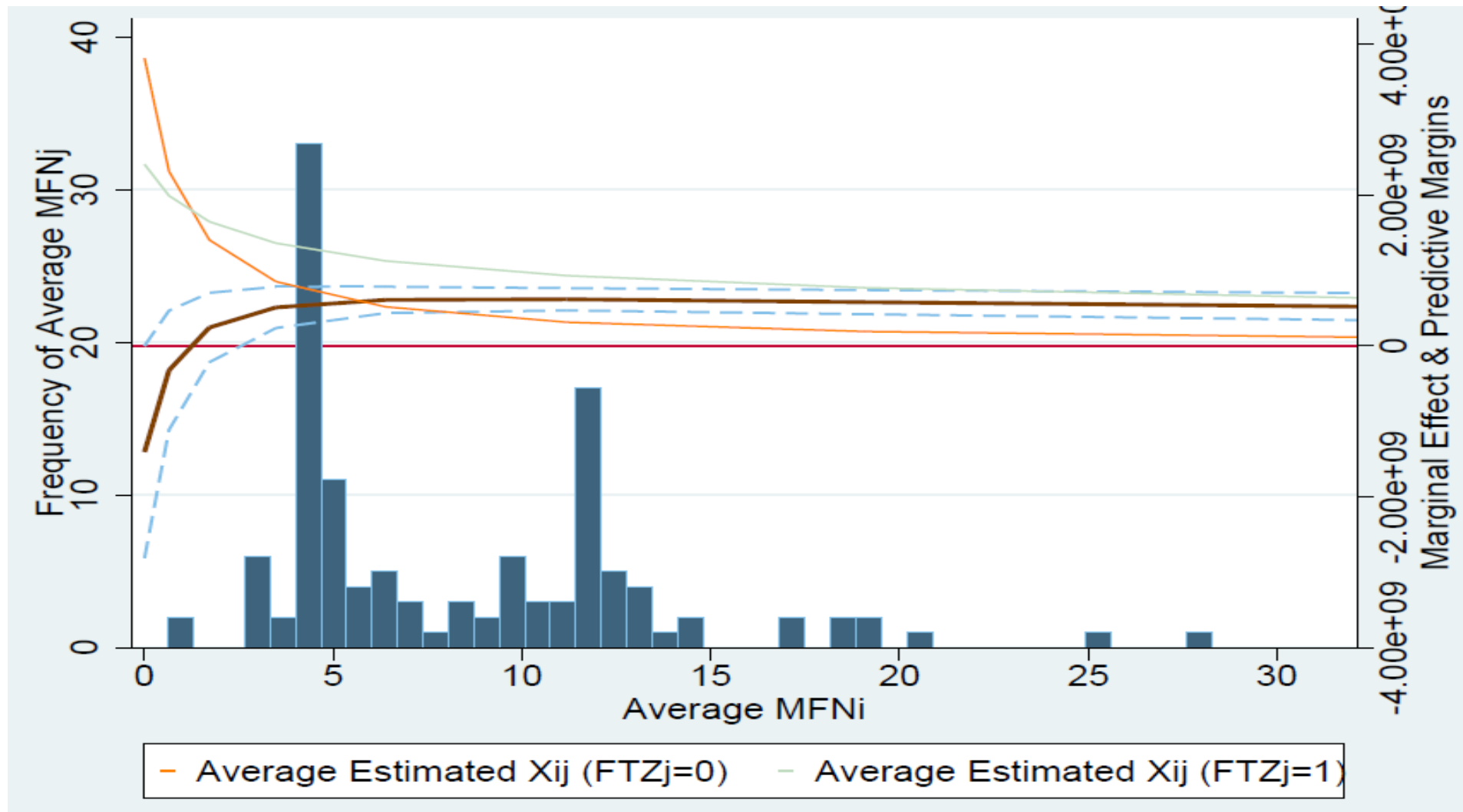
Robustness Analysis

- Exporter and importer fixed effects (fe) model to control for Mutilateral Resistance (MR) and the correlation between bilateral trade costs and FTZ policy
    - *at a second stage*, regressed over MFN tariffs, FTZ variable, the interaction terms and unilateral control variables.
    - Similar results for exporter and importer FTZ country trade.
- Exporter and importer fe model with tariffs, EPZ and EMPZ variables.
    - Similar Results in sign and in significance
    - EMPZ impact on imports of country j: not significative in the interaction model but have the same sign.
- Controlling the database
    - A broad definition of activity (necessary and sufficient condition: existence of the program): Similar results
    - A restrict definition: « very active » FTZs: Similar results
    - USA status from FTZ country to non-FTZ country (limited share of FTZ exports in US exports): Changing the US status (positive FTZ impact is higher, negative impact is lower in interaction model....)
    - Dropping China: Similar results.

Conclusion:

- ☐ FTZs raise trade only by easing the negative impact of protection.
- ☐ FTZ impact on imports are higher and more robust than their impacts on exports.
- ☐ By the way, they increase world's exports. This result confirms their contribution to GVCs.
- ☐ The negative impact of protection are more offsetted by EMPZ policy.
- ☐ Instead of a debate **« distortive » versus « stimulating » effects**; a debate around **« trade creation » versus « trade protection»** seems more relevant….

Thank you!

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