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Trade Costs and Barriers for Landlocked Commodity Dependent Developing Countries

By

Author: Marcel Vaillant, Professor, Universidad de la República (Uruguay) and UNCTAD Consultant

Presentation and comments: Marcelo Olarreaga, Professor, Université de Genève

TRADE COSTS AND BARRIERS FOR LANDLOCKED COMMODITY DEPENDENT DEVELOPING COUNTRIES

Marcel Vaillant

Presentation and comments
by Marcelo Olarreaga

Workshop on fostering the integration of agricultural value chains of commodity-dependent landlocked developing countries into regional and global value chains, Geneva, November 25

Objective

- Analyze trade costs faced by four LLDCs in their top export product
  - Laos (maize)
  - Ethiopia (coffee)
  - Mongolia (meat)
  - Uzbekistan (processed fruits)

- Propose policy recommendations to reduce trade costs

Measuring Agricultural Trade Costs

- Assume gravity model works
  - Worhorse model in international trade
  - Explains more 90% of the variation in bilateral trade flows

- Trade cost is obtained by (Novy, 2013):
  - taking the (geometric) mean of the ratio of bilateral trade flows with respect to intra-national trade flows
  - Using existing estimates of the trade elasticity
  - Allows decomposition into observed trade costs (tariffs) and non-observed trade costs (NTB, transport, logistics, language others)

- Drawback:
  - It does not allow for decomposition of non-observed trade costs

Agriculture trade costs in LLDCs (%)

Country	Trade costs in 2015			Variation 1995-2015 (%)		
	Tariff	Other	Total	Tariff	Other	Total
Laos	12	286	343	-60	-2	-22
Mongolia	12	348	413	-51	17	-1
Uzbekistan	21	327	436	-15	34	25
Ethiopia	25	320	446	-36	32	10
World	16	249	315	-33	12	-1

Intra and extra-regional trade cost by country[a)], 2015

AFR • CAM • EAS • EUR • NAM • SAM • SEA • CAR • CAS • ERS • PAC • SAS • MEA
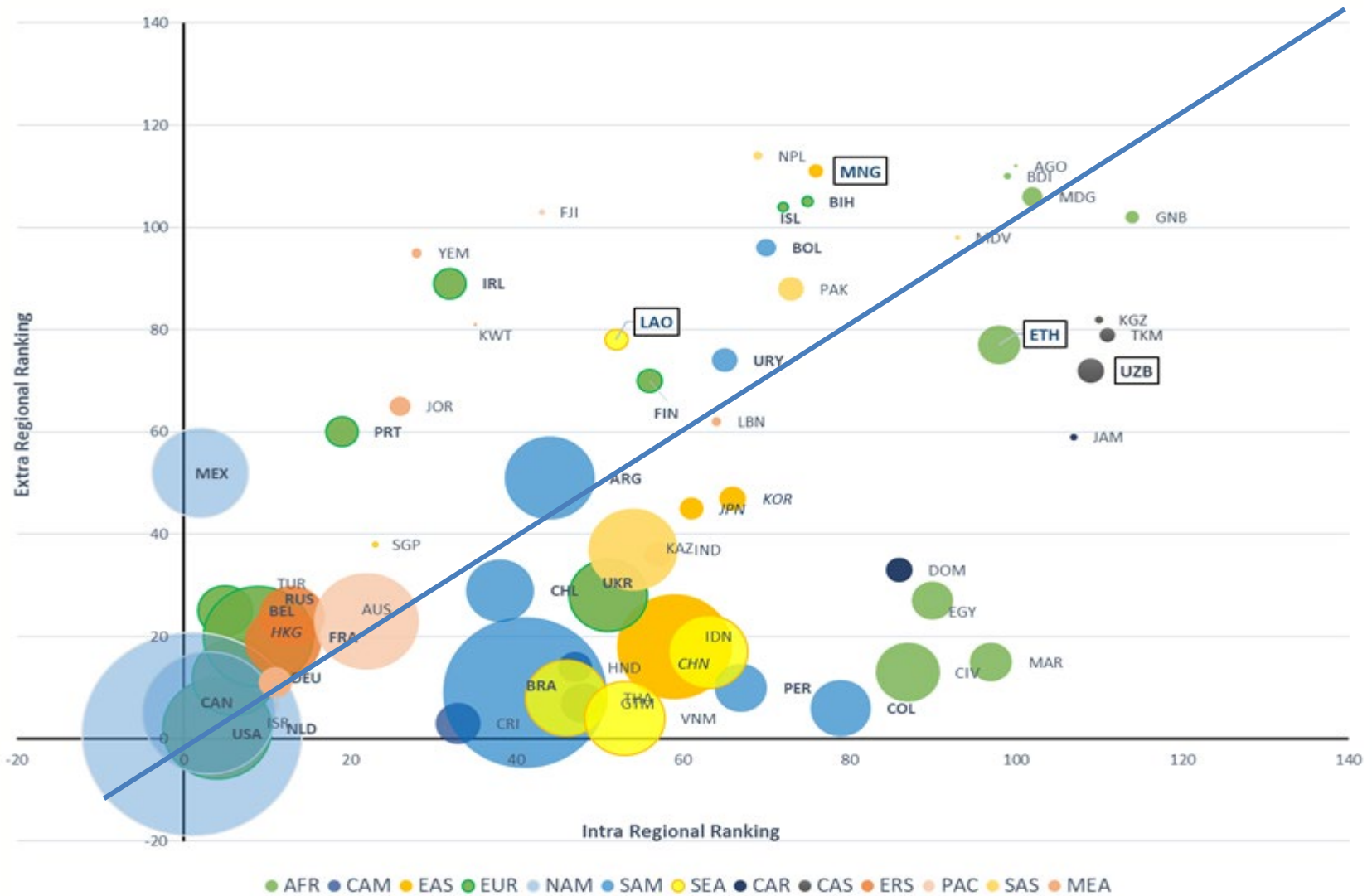
Product level analysis

- Measuring the trade-intensity and expenditure ratio for LLDC (including Laos, Mongolia, Uzbekistan and Ethiopia for maize, coffee, meat and processed fruits.

- **Trade intensity** captures the relative importance of the main importer in the export bundle (relative to the importance of the exporter in world production).

- **Expenditure ratio** captures the relative trade-intensity of the main importer relative to the trade-intensity of the exporter in terms of domestic sales.

- Trade intensity is a measure of dependence on the main importer

- Expenditure ratio is a measure of the relative dependence on the main importer with respect to domestic sales

Trade intensity and expenditure ratio in the four markets

Countries/ExpImp/Product			Maize	Coffee	Meat	Processed fruits
World		ExpImp	USAMEX	COLUSA	USAMEX	THAVNM
		Bilateral Trade (:USD)	2639	1112	3640	174
		Trade intensity (ratio)	1,4	3,4	2,6	7,3
		Expenditure Dependence Ratio	0,4	nd	0,46	nd
Landlock export country		ExpImp	CHEIRN	ETHDEU	BLRRUS	AFGIND
		Bilateral Trade (:USD)	297	141	728	67
		Trade intensity (ratio)	74,1	2,1	19,2	37,6
		Expenditure dependence Ratio	0,64	0,0446	nd	nd
Targets countries		ExpImp	LAOCHN	ETHDEU	MNGCHN	UZBKAZ
		Bilateral Trade	41	141	19	21
		Trade intensity	0,5	2,1	0,4	64,3
		Expenditure dependence Ratio	0,0007	0,0446	0,0002	nd

Trade policy in main export markets

Trade policy/Countries	Lao PDR	Ethiopia	Mongolia	Uzbekistan
Main export destiny	CHN	DEU	CHN	KAZ
Share (%)	100,0	47,0	90,1	86,3
Export rival in main destiny	UKR	BRA	USA	TJK
Tarifff MFN main destiny (%)	65	6,1	20	5
Applied tariff to target country (%)	50	0	20	0
Tariff to export´s main rival in main destiny	65	6,1	20	nd

Measuring impact of other trade costs

- Estimate structural trade gravity model with proxies of other trade costs:
  - Landlockness
  - Distance
  - Common Language
  - Island
  - Border and documentary compliance
  - Trade policy (PTA, total number of PTAs GSP, preferential tariff, etc..)

Other trade policy costs in agriculture trade

Variable	Coefficient
PTA_{ijt}	0.1569***
$PTA_{ijt} \times NPTA_{it}$	0.0033**
$PTA_{ijt} \times NPTA_{jt}$	-0.0054***
$NPTA_{it} \times NPTA_{jt}$	0.0003***
$PTA_{ijt} \times ln(T_{jt})$	-2.4661***
$OP_{ijt} \times ln(T_{jt})$	-1.7329***
$NoP_{ijt} \times ln(T_{jt})$	-1.9693***
Observations	115676

Other non-trade policy costs in agriculture trade

Variable	Coefficient	Coefficient
landlocked	-0.697***	-0.691***
Island	0.118	0.120
Contiguity	0.226**	0.226**
common language	0.606***	0.604***
distance	-0.957***	-0.950***
Cost to export/import: Border compliance (geometric average)	-0.0592**	
Cost to export/import: Documentary compliance (geometric average)		-0.0532
Number of Observations	10,920	10,920

MODEL FOR THE SELECTED PRODUCTS

Effects/Products	Maize	Coffee	Meat
$NPTA_{it} \ x \ NPTA_{jt}$	0.0009***	0.0007***	0.0008***
$PTA_{ijt} \ x \ ln(T_{jt})$	-1.8725*	0,0982	-1.0556***
$NoPTA_{ijt} \ x \ ln(T_{jt})$	-1,4037		
$OP_{ijt} \ x \ ln(T_{jt})$		-2.4602**	-1.6741**
$NoP_{ijt} \ x \ ln(T_{jt})$		-0,1992	-0.6983*
CC_{ijt}	0.5296***	0.3066***	0.2756***
Observations	14.646	31.156	37.103

Conclusions

- High agricultural trade costs worldwide. Around 315%!
  - Mainly explained by non-tariff barriers (80% of total)

- Agricultural trade costs are particularly high for our four LLDC
  - Laos 343%
  - Mongolia 414%
  - Uzbekistan 436%
  - Ethiopia 446%

- In the four main import markets tariff barriers are sometimes still high:
  - Lao in China (maize) faces a 50% tariff (23% preference)
  - Ethiopia in Germany (coffee) faces a 0 tariff (100% preference)
  - Mongolia in China (meat) faces a 20 percent tariff (0% preference)
  - Uzbekistan in Kazakhstan (process fruits) faces a 0 percent tariff (NA)

- Intra-regional trade costs higher than extra-regional trade costs for Ethiopia and Uzbekistan

- Landlockness is an important trade cost. Reduces trade by 50%

- PTAs can help reduce tariff costs which can be high in some sectors.
  - Learning by doing
  - Partial preferences are not enough
  - Deep PTA should address other costs: transport infrastructure and logisitics (outside PTAs as well, cooperative agreements, see Laos experience)

- PTAs may not be enough. LLDCs need to take an active role in multilateral trade discussions in the WTO aimed at fostering access by landlocked and LDC countries

Discussion

- Preferences and PTAs are not always a panacea
  - Tariff rent may be captured by the importer, leaving little to the exporter
  - Importance of export promotion and finding new clients to boost bargaining weight
  - Careful with demands for more liberal ROO.

- Role of investment in transport infrastructure
  - International, but also domestic

- E-commerce can help reduce costs associated with distance, common language, etc.
  - Difficult in agriculture, but possible at the regional level
  - Lendle et al. (2016) suggest that countries that benefit the most from e-commerce (and its reputation mechanisms) are remote and low-income exporters