Economic and Social Effects of a Possible Trade Agreement Between Latin America and Asia Pacific

24th Annual Conference on Global Economic Analysis
"Global Food System: Opportunities and Challenges"

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June 25th, 2021

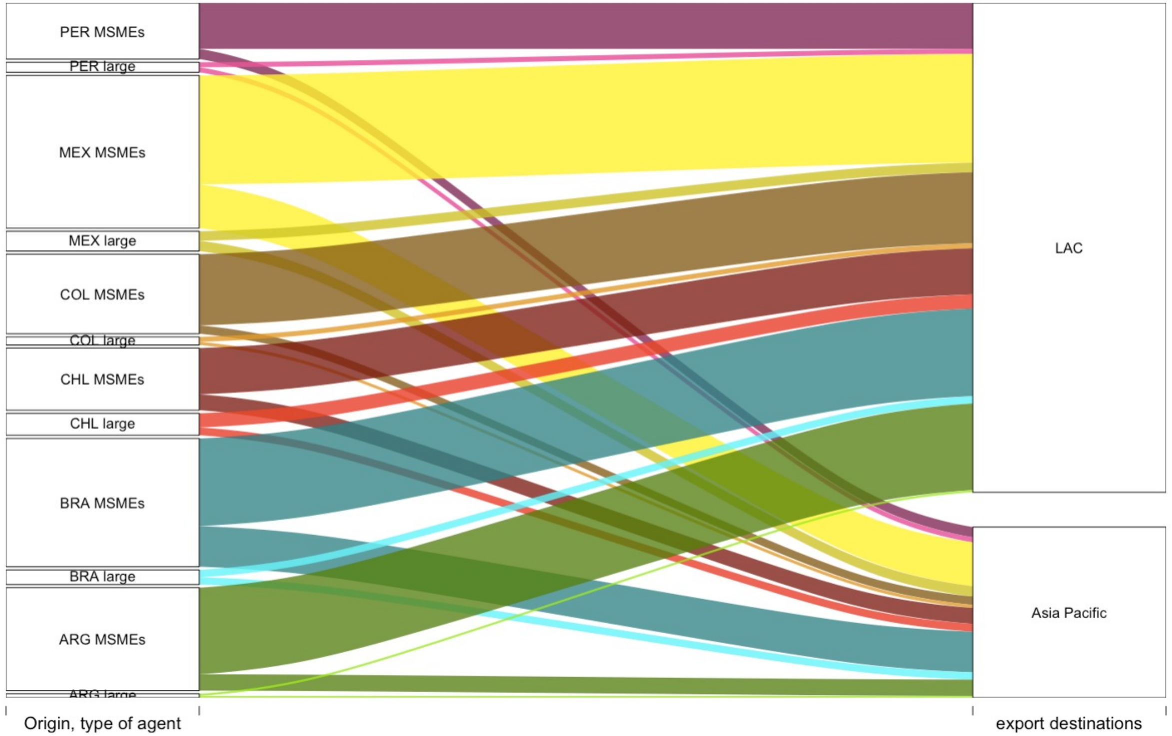
Outline

- Introduction & Motivation
  - Status quo of trade agreements and tariffs
- Methodology
  - Scenarios and main assumptions
  - Inclusion of micro-data (large firms, MSMEs)
- Main Results and conclusion
  - Production, Welfare and employment
  - Effects on exporting firms by size
  - Winning and losing sectors
- Final Thoughts

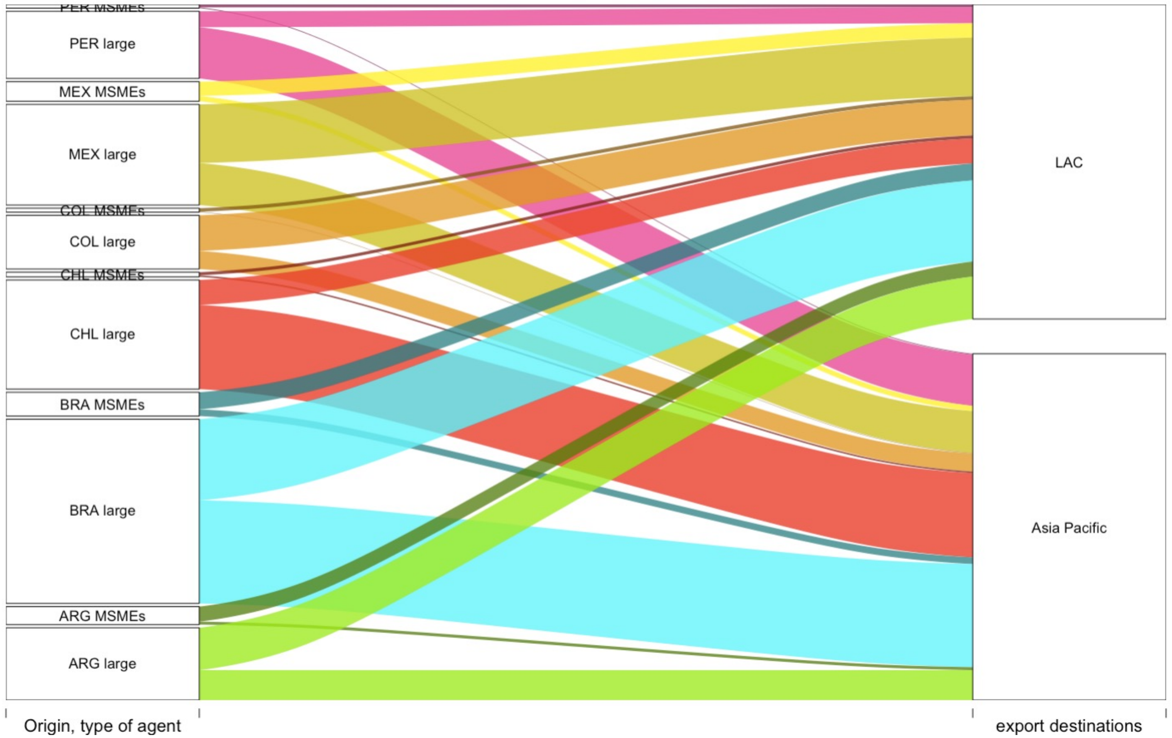
Introduction & Motivation

Figure 1: Participation of Latin American large and MSMEs in exports to Latin America and the Caribbean and Asia Pacific, different years

a) Number of exporting companies



b) Amount exported



Source: Authors, based on the customs microdata from 13 selected countries.

How will the **Regional Comprehensive Economic Partnership** (RCEP) impact LAC?
What would a **bi-regional trade agreement** between LAC and Asia Pacific have?
Microsimulations based on the model outputs allow to assess **the impact on MSMEs in LAC**.

MSMEs: Micro, Small and Medium-sized Enterprises

Trade Policy: LAC

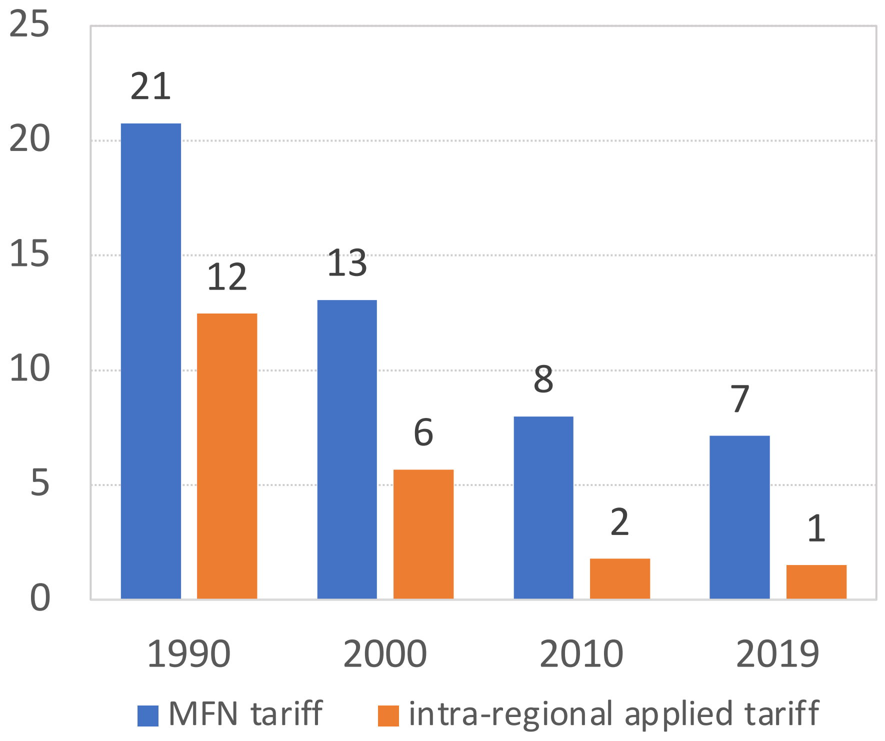
Table 1: Status of trade interrelations between Latin American and Caribbean countries, as of May 2021

Regions/ Countries	MERCOSUR	Andean Community (4)	Pacific Alliance (4)	CACM (6)	CARICOM (15)
MERCOSUR	With Protocol	FTAs	No FTAs	No FTAs	Partial Agreement
Andean Community	FTAs	With Protocol	FTAs Less Ecuador	No FTAs	Partial Agreement
Pacific Alliance	FTAs	FTAs	With Protocol	No FTAs	No FTAs
Chile	FTAs	Various FTA	Full Member	Various FTA	Partial Agreement
México	Partial Agreement	Partial Agreement	Full Member	FTA	Partial Agreement
CACM	Partial Agreement	Partial Agreement	Partial Agreement	With Protocol	FTA
CARICOM	No FTAs	Partial Agreement	No FTAs	FTA	With Protocol
Cuba	Partial Agreement	Partial Agreement	No FTAs	No FTAs	No FTA
Dominican Republic	Partial Agreement	Partial Agreement	No Agreement	FTA	No FTA

Source: Authors' own elaboration, based on existing Trade Protocols, Free Trade Agreements and partial trade agreements and those under negotiation.

Figure 2: LAC, evolution of most-favored-nation tariff: 1990, 2000, 2010 and 2019

(Ad valorem percentages)



Source: Authors' calculation based on Dolabella and Durán (2021), and information from the World Bank Databank Indicator Database.

Trade Policy: RCEP members

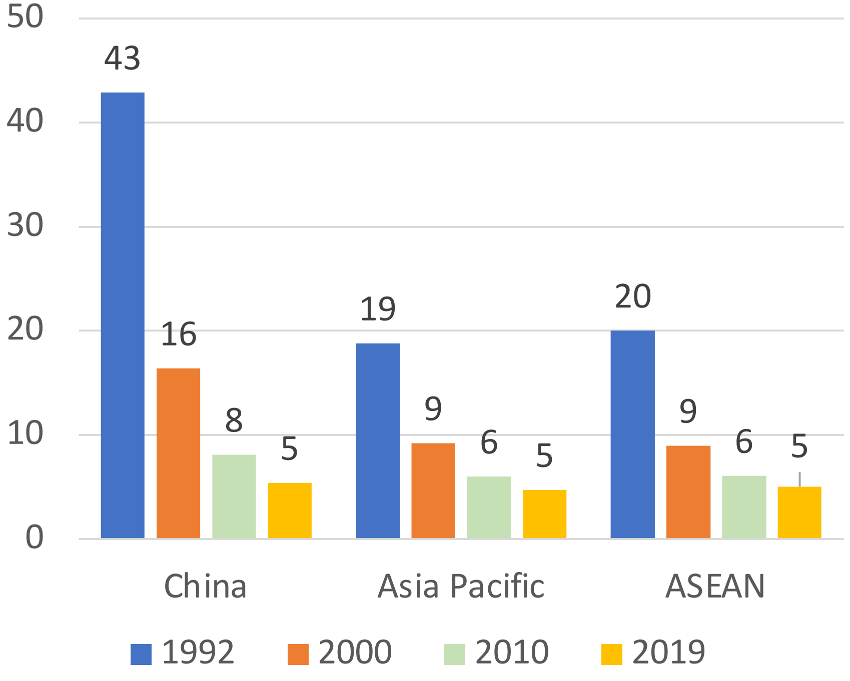
Table 2: Status of intra-regional relations between RCEP member countries, as of May 2021

Regions/ Countries	ASEAN	Australia	China	Japan	Rep. of Korea	New Zealand
ASEAN	-	FTA	FTA	FTA	FTA	FTA
Australia	FTA	-	FTA	FTA	FTA	FTA
China	FTA	FTA	-		FTA	FTA
Japan	FTA	FTA		-		
Republic of Korea	FTA	FTA	FTA	detained	-	FTA
New Zealand	FTA	FTA	FTA		FTA	-

Source: Authors' own elaboration, based on existing Trade Protocols, Free Trade Agreements and partial trade agreements and those under negotiation.

Figure 3: Asia Pacific, China and ASEAN, evolution of most-favored-nation tariff: 1990, 2000, 2010 and 2019

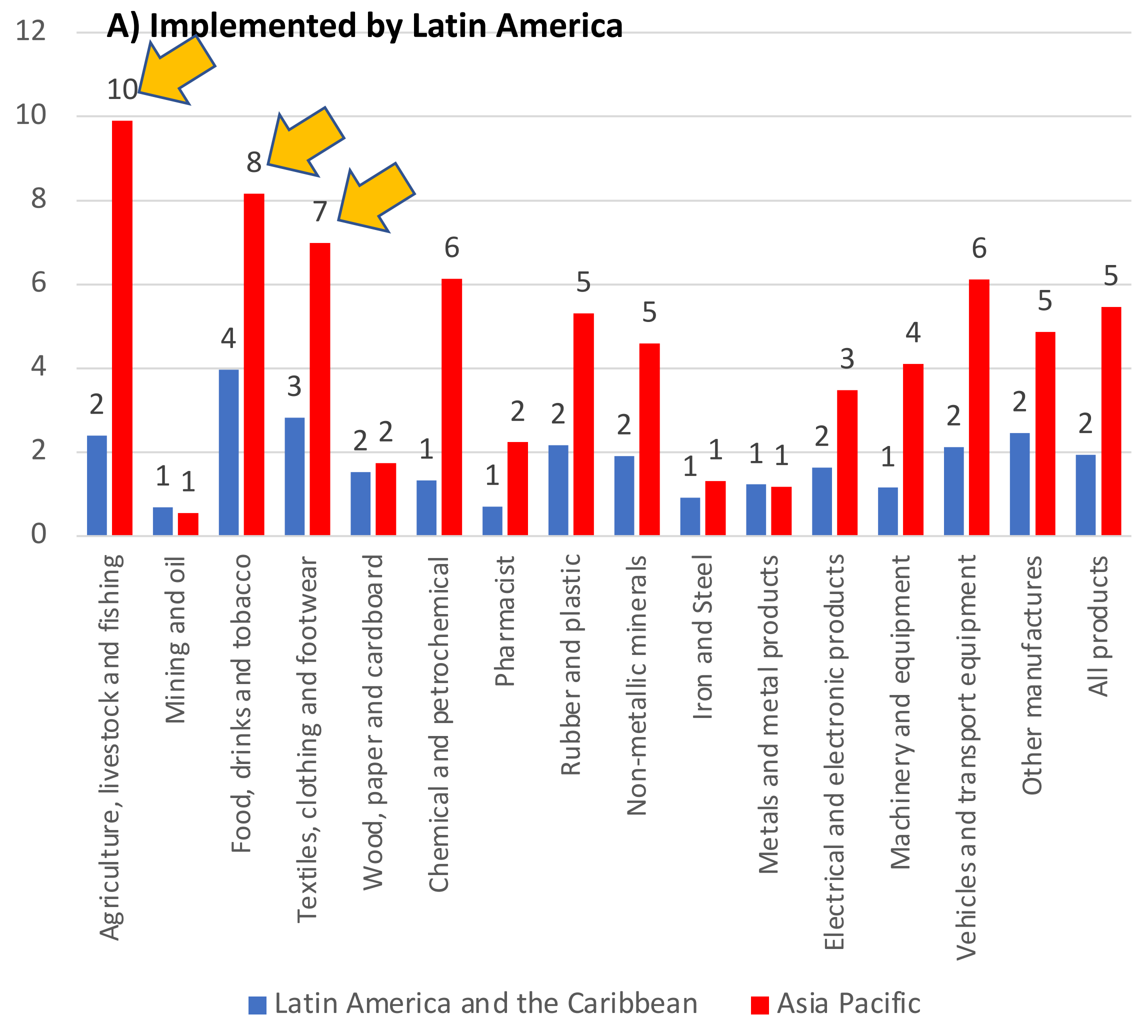
(Ad valorem percentages)

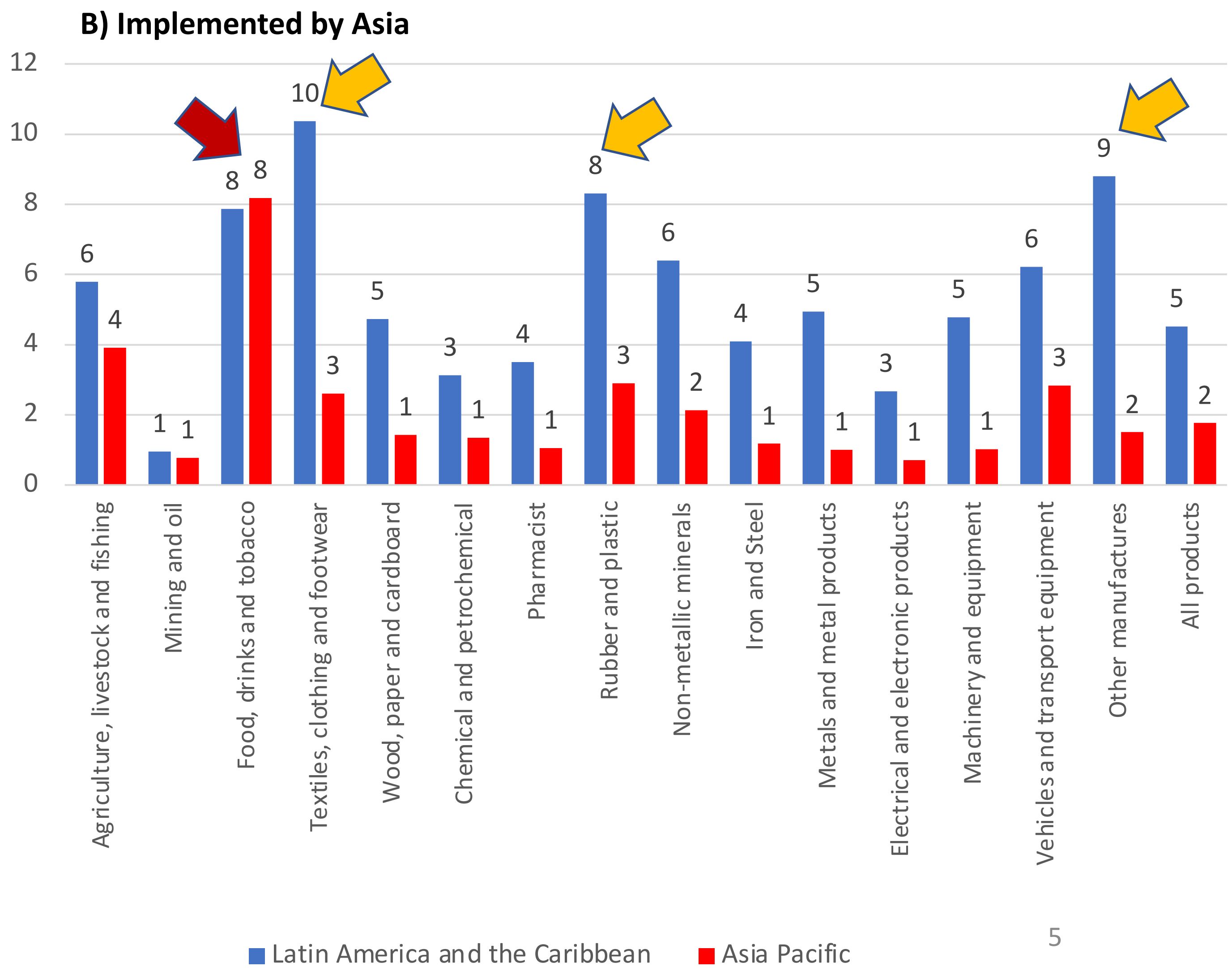


Source: Authors' calculation based on Dolabella and Durán (2021), and information from the World Bank Data Bank Indicator Database.

Bilateral Applied Tariffs

Figure 4: Latin America and the Caribbean and Asia Pacific (RCEP countries): Bilateral applied tariffs between the two regions, 2018
(ad valorem equivalents in percentages)



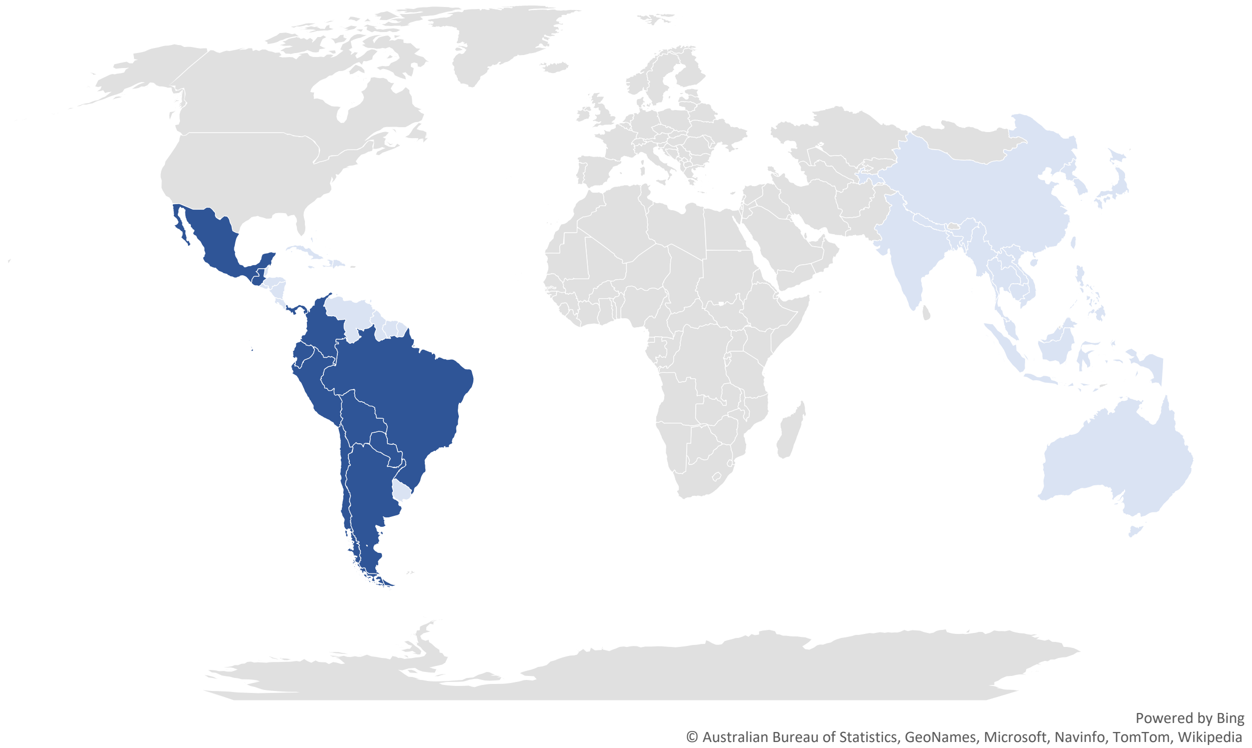


Source: Authors' own elaboration, based on GTAP 11.0 model protection.

Model Specification

AGGREGATIONS	GTAP 11.0 41 ECONOMIES 39 SECTORS	LITERATURE REFERENCES COVERAGES
CLOSURES / ASSUMPTIONS	Standard GTAP Model Unemployment of unskilled labor Capital accumulation Sensitive products (textiles, agro-industrial and industrial products) Trade facilitation (MNAs reductions) iceberg cost	Hertel (1997); MacDonald, & Nordstrom (1996)
SCENARIOS & SIMULATIONS	Only RCEP FTAs (0 tariffs) Only LAC FTAs (0 tariffs) Bi-regional FTAs (0 tariffs) Trade facilitation across and/or within regions Sensitivity products in tariffs across and/or within regions Unemployment Capital accumulation	Ando and Urata (2007); Ferrantino, Maliszewska, & Taran (2019); Li, Scollay, & Gilbert (2017); Dolabella & Durán (2021)
THE NOVELTY OF ANALYSIS	Microsimulation using trade data for export firms by size (large, medium, small and micro) Custom data for 13 LAC countries (different years: 2009-2019)	Argentina, Bolivia (EP.), Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Panama, Paraguay, Peru, Uruguay and Venezuela (RB)

Microsimulations



Countries subject to a bilateral agreement, for which microsimulations were conducted (ARG, BRA, BOL, CHL, COL, ECU, GTM, MEX, PAN, PRY, PER, URY, VEN)

Countries subject to the biregional agreement

- By means of a **microsimulation technique**, a data base was obtained that included the differentiated effects of the impacts received on the exports variable derived from simulations of the computable general equilibrium model (in case of a bi-regional agreement).

$$X\,(t+1)_{ij}^{k,E} = X(t)_{ij}^{k,E} * (1+\Delta X_{ij}^{k})$$

X, exports;
t the base year of reference;
i, country of origin of exports;
j, destination region;
k, sector or industry;
E, type of economic agent;
ΔX, estimated percentage change.

- This makes it possible to decompose the rates of change of exports after the simulations into an **impact on large and micro, small and medium-sized enterprises (MSMEs) on the sector-level.**
- At the same time, including complementary microdata allows to **validate GTAP data base**.

Results - Scenarios

Bi-regional FTAs (0 tariffs)

With Unemployment

Trade facilitation across and within regions

Table 3: Latin America and the Caribbean and Asia Pacific: Effects of a bi-regional agreement on production: Scenarios of a FTAs under the assumption of full employment and unemployment.

(Changes from baseline = 2017)

Selected Regions/subregions/countries	Gross domestic product (GDP)		
	Full employment	With unemployment	
	Standard closure	Standard closure	Capital accumulation
Asia Pacific (RCEP countries)	**0.46**	**1.00**	**2.10**
ASEAN	0.81	1.38	2.46
Australia	0.24	0.56	1.52
China	0.41	0.85	1.96
Japan	0.35	0.78	1.90
New Zealand	0.32	0.57	1.54
Republic of Korea	0.84	2.82	3.89
Latin America and the Caribbean	**0.35**	**0.61**	**1.69**
MERCOSUR	0.31	0.59	1.52
Pacific Alliance	0.43	0.65	1.89
Central American Common Market	0.55	1.18	2.21
Caribbean countries	0.09	0.17	1.17

Source: Authors based on model simulations.

Results - Scenarios

Bi-regional FTAs (0 tariffs)

With Unemployment

Trade facilitation across and within regions

Sensitivity products in tariffs across and/or within regions

Table 4: Latin America and the Caribbean and Asia Pacific: Change in foreign trade under various simulated scenarios under unemployment assumption.
(Changes from baseline = 2017)

Simulations	Latin American and the Caribbean		RCEP	
	exports	imports	exports	imports
Full impact (RCEP and LAC FTAs)	**5.01**	**4.35**	**4.55**	**5.22**
RCEP tariff reduction	-0.10	-0.19	2.77	3.17
Trade facilitation among RCEP countries	-0.20	-0.11	1.39	1.47
LAC tariff reduction	0.96	1.00	-0.01	-0.02
Trade facilitation among LAC countries	0.42	0.45	-0.01	-0.01
Trade facilitation among RCEP and LAC	0.13	0.28	0.02	0.00
Trade facilitation among LAC and RCEP	0.39	0.17	0.04	0.09
LAC-RCEP with sensitive sectors (textiles, agro-industrial and industrial products)	**3.40**	**2.61**	**0.34**	**0.53**
LAC-RCEP with sensitive sectors (agricultural products)	0.01	0.15	0.01	-0.001

MICROSIMULATIONS

Source: Authors based on model simulations.

Results - Production

Bi-regional FTAs (0 tariffs)

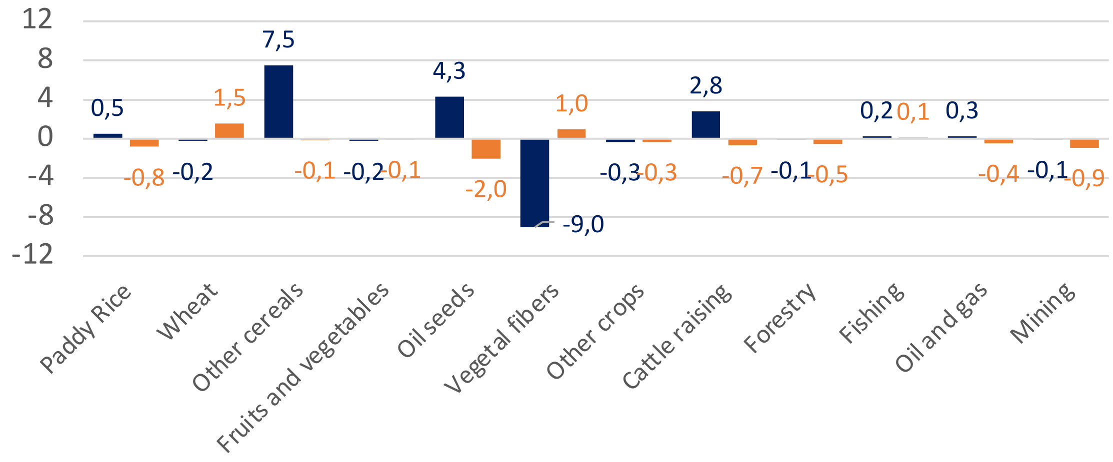
With Unemployment

Trade facilitation across and within regions

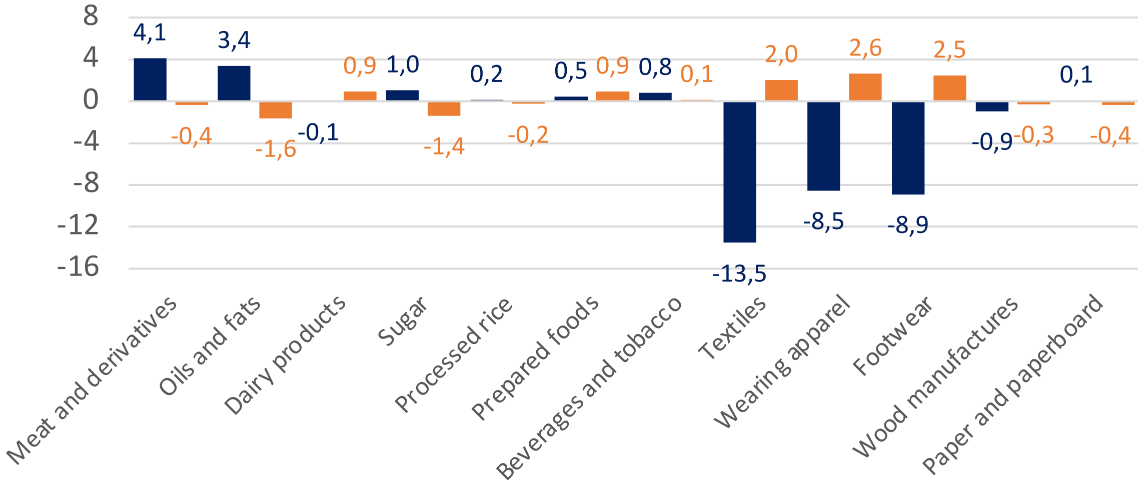
Figure 5: Latin America and the Caribbean and Asia Pacific: Average change in GDP at the sector level

(Changes over the baseline = 2017)

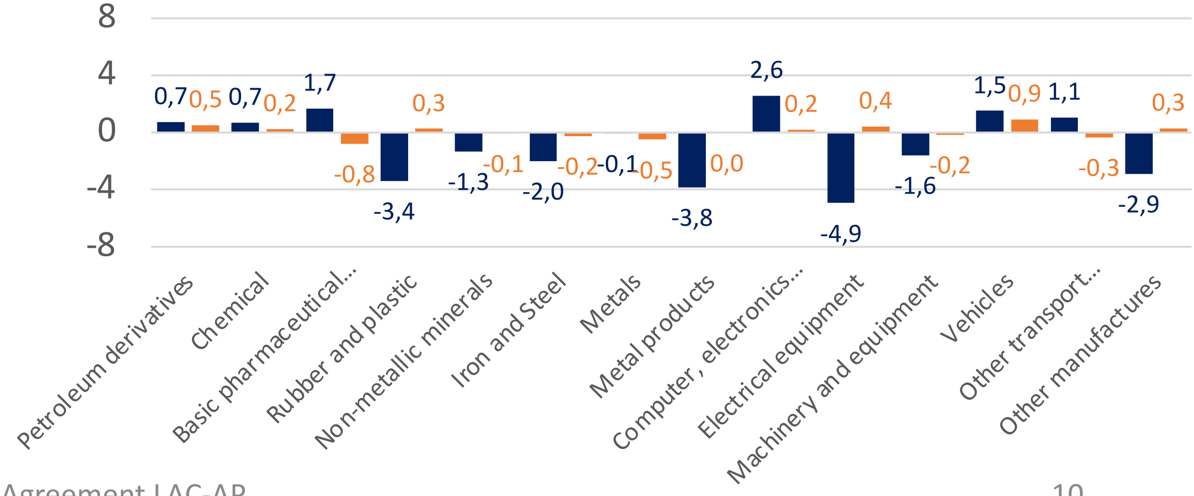
a) Primary products



b) Light manufacturers



c) Heavy manufacturers



■ Latin America and the Caribbean ■ RCEP countries

Source: Authors based on model simulations.

Results – Microsimulations

Bi-regional FTAs (0 tariffs)

With Unemployment

Trade facilitation across and within regions

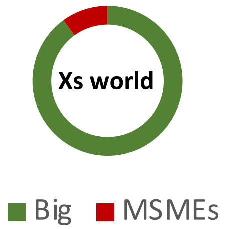
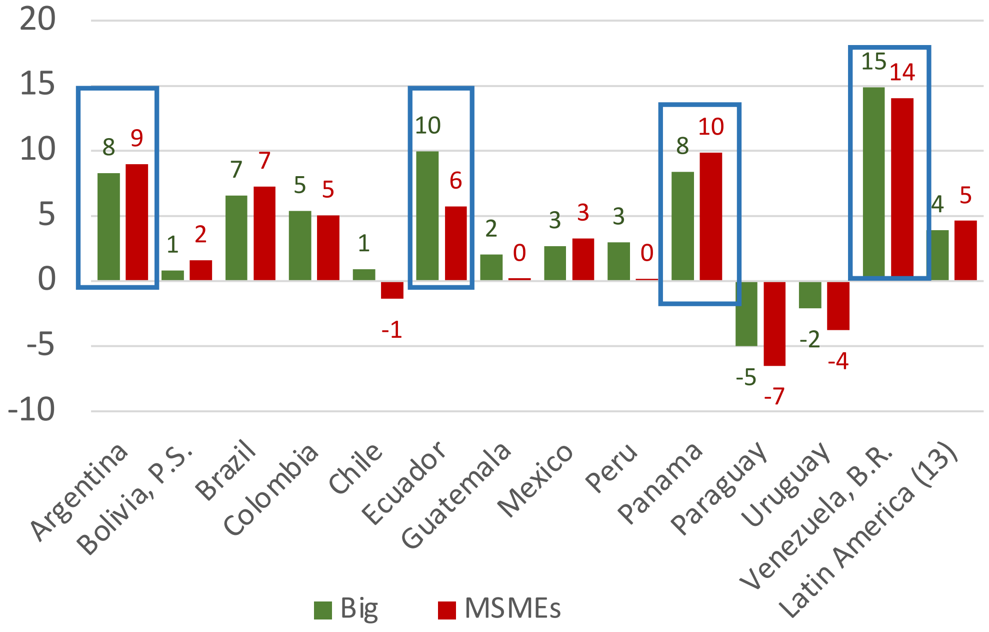
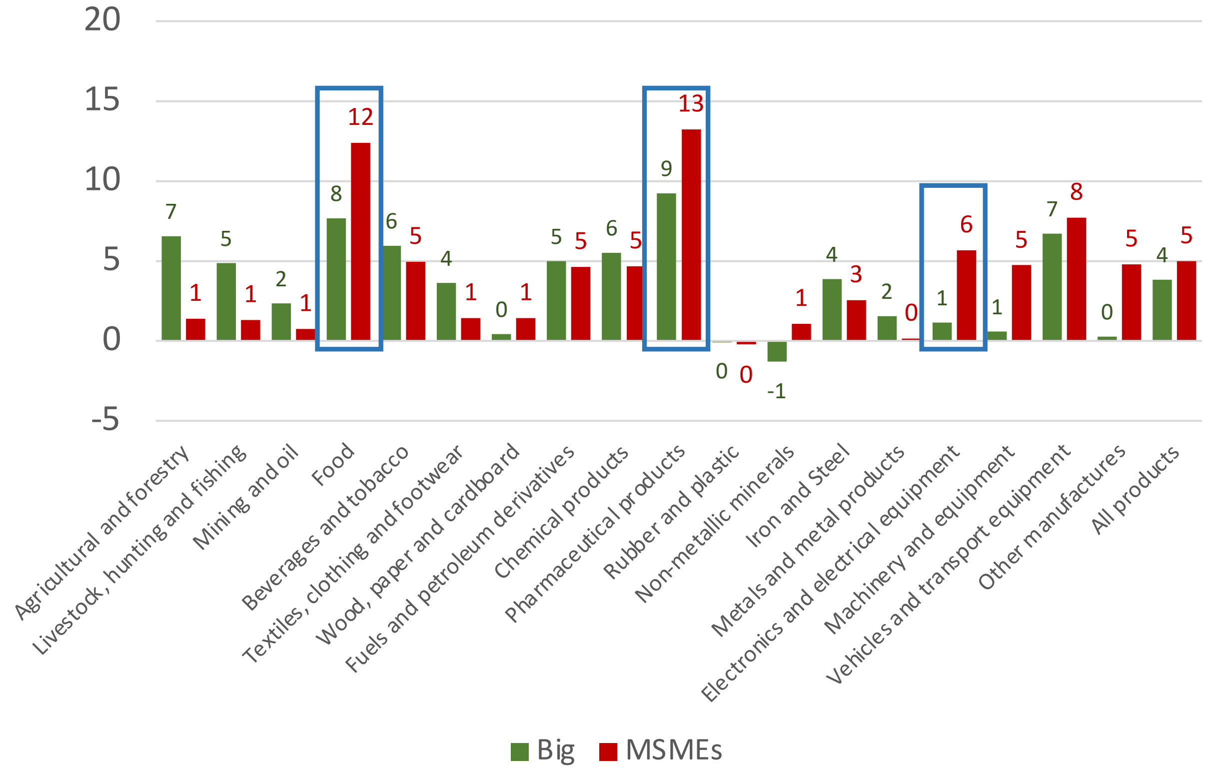


Figure 6: LAC: Changes in exports under the bi-regional scenario by type of agent

(Changes over the baseline = 2017)





Countries subject to a bilateral agreement, for which microsimulations were conducted:
ARG, BRA, BOL, CHL, COL, ECU, GTM, MEX, PAN, PRY, PER, URY, VEN

Source: Authors based on model simulations.

Results – Microsimulations

Bi-regional FTAs (0 tariffs)

With Unemployment

Trade facilitation across and within regions

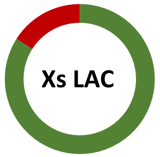
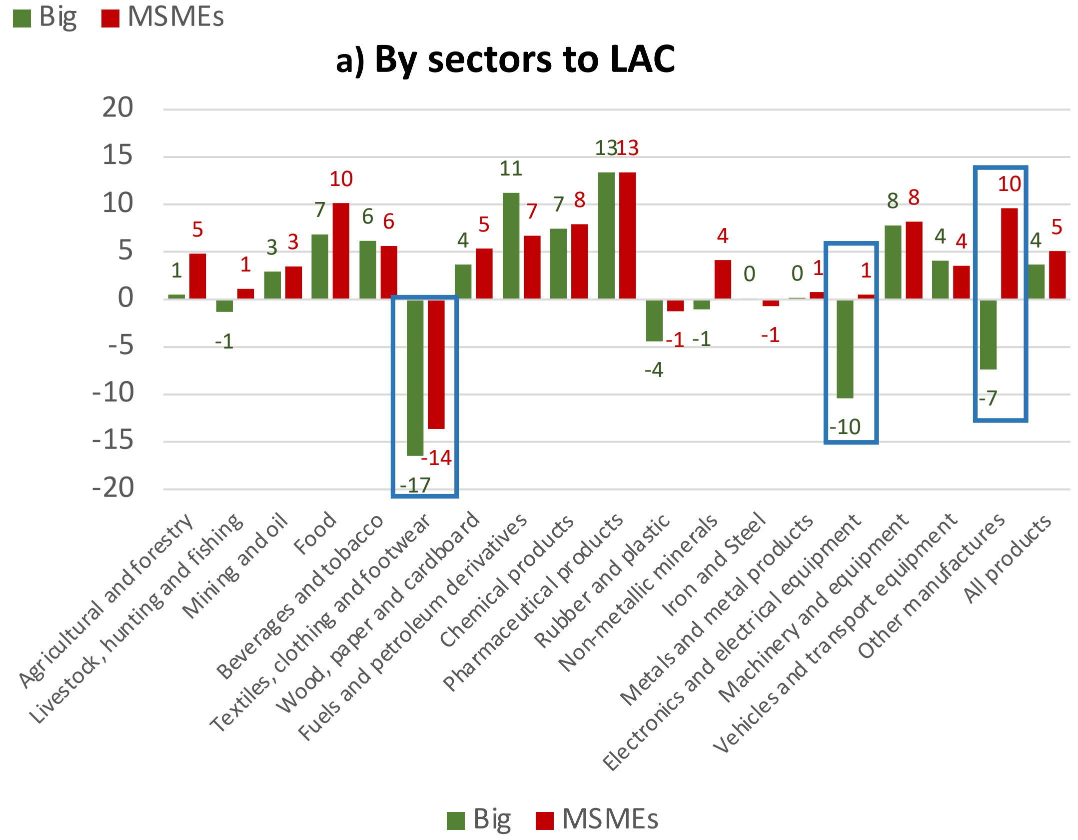
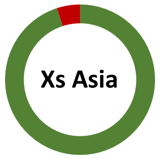
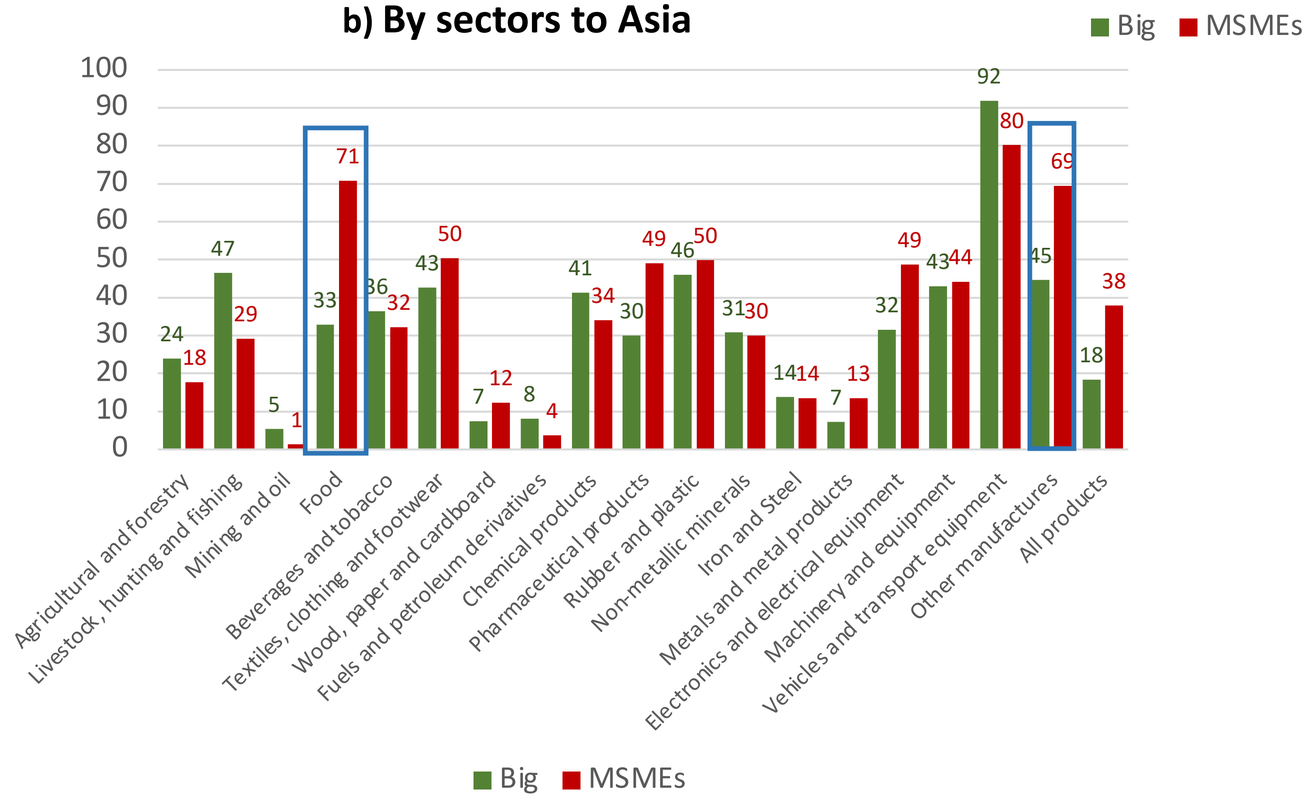


Figure 7: LAC: Changes in exports under the bi-regional scenario by type of agent

(Changes over the baseline = 2017)







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ARG, BRA, BOL, CHL, COL, ECU, GTM, MEX, PAN, PRY, PER, URY, VEN

Source: Authors based on model simulations.

Conclusions I

- ✓ In terms of the effect of the scenarios on the export and import variables, a generally positive effect for Latin American and the Caribbean and Asian-Pacific (RCEP) countries can be observed.
- ✓ Simultaneous implementation of trade deepening in LAC - RCEP:
  - ✓ The macroeconomic results show a rate of **change of output in Latin America and the Caribbean of 0.61%**
  - ✓ In case of the **RCEP member countries**, **the variation in GDP is 1.0%**, with a higher impact in ASEAN countries, indicated by a variation of 1.38%.
- ✓ When capital accumulation is permitted in the scenario of a bi-regional agreement**:**
  - ✓ the percentage variations in GDP increase **by 1.69% for LAC countries.**
  - ✓ GDP increases **by 2.10% for RCEP countries**.
- ✓ For **RCEP member countries, the increase in employment** is greater with a wider range. In terms of the effect of the scenarios on the export and import variables, it is found that in general it is positive for LAC and RCEP.

- ✓ If only the implementation of the RCEP is considered, without a free trade agreement with Latin America, results are negative for Latin America (-0,3% Xs and -0,3% Ms).
- ✓ Aggregate results for exports and imports in both regions are maximized when tariffs are reduced, including a trade facilitation processes within and between both regions. In this case, the increase in exports and imports for Latin America are estimated **to reach around 5% and 4.35%, respectively.**

Conclusions II

- ✓ A bi-regional agreement is expected to exert a **stronger positive impact on exports from Latin American MSMEs** compared to large companies. This accounts especially in the foods sector (meats, dairy, processes rice, vegetable oils), as well as in electronic, pharmaceutical products and machinery.
- ✓ **Winning sectors in export** were meats, dairy products, and beverage and tobacco (primarily affects LAC, Australia and New Zealand).
- ✓ **The winning countries** are those with agricultural and agro-industrial exports: Argentina, Brazil, Ecuador, Colombia, and Panama.
- ✓ **Loosing sectors**: textile, clothing and footwear, rubber and plastic, and iron and steel (primarily affects LAC, due to low ability to compete; sectors with many MSMEs).
- ✓ Uruguay and Paraguay face increased competition from Australia and New Zealand with respect to agro-industrial products in the region.
- ✓ Countries with already established agreements (Asia Pacific - Latin America) increase their exports only slightly after simulations (affects primarily Chile and Peru).

MSMEs account for 46% of the exports in the textile sector to LAC, 27% to AP.

Final Thoughts

- ✓ **Clearly, the RCEP (tariff reduction and trade facilitation) treaty negatively affects trade variables in LAC.** Likewise, the LAC treaty would negatively affect RCEP countries, although on a minor scale.
- ✓ **The bi-regional agreement between LAC and RCEP would be of greater importance to LAC than to RCEP.** The reduction of tariffs in the agricultural sectors for LAC exports has a weak effect. Imports in LAC are positively affected by the reduction in agricultural tariffs.
- ✓ The identification of losing sectors sheds light on defensive positions in the event of future negotiations. The estimations on the possible effects on MSMEs may increase the willingness to negotiate a bi-regional agreement.

- **The application of trade facilitation processes, is much more favorable if it occurs simultaneously in both regions, rather than only in one.**

- *Limitations*: Firm-level data not up to date for some countries, classification based on exports

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Appendix

Exports by trading partners

Ranges for the typification of economic agents

(In millions of dollars)

Country	Year	Type of economic agent				
		Large	Medium	Small	Micro	Tiny amount
Argentina	2017	≥33	≥4	≥0.6	≥0.005	<0.005
Bolivia	2019	≥5	≥1	≥0.1	≥0.005	<0.005
Brazil	2009	≥23	≥2	≥0.3	≥0.005	<0.005
Chile	2015	≥5	≥1	≥0.1	≥0.005	<0.005
Colombia	2018	≥5	≥1	≥0.1	≥0.005	<0.005
Ecuador	2018	≥5	≥1	≥0.1	≥0.005	<0.005
Guatemala	2012	≥1.0405	≥0.3642	≥0.104	≥00.05	<0.005
Mexico	2015	≥25	≥4	≥0.6	≥0.005	<0.005
Panama	2010	≥2.5	≥1	≥0.15	≥0.005	<0.005
Paraguay	2009	≥0.4971	≥0.995	≥0.0309	≥0.005	<0.005
Peru	2017	≥5	≥1	≥0.1	≥0.005	<0.005
Uruguay	2012	≥5	≥0.18	≥0.06	≥0.005	<0.005
Venezuela	2010	≥6.4115	≥2.5646	≥0.2308	≥0.005	<0.005

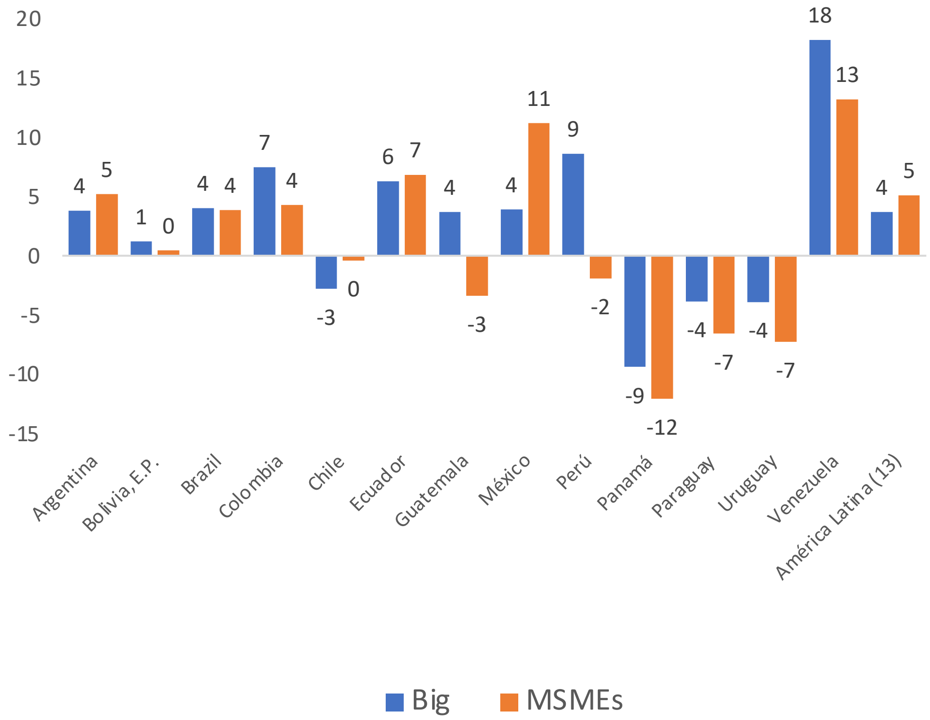
Source: Authors.

Intra-regional Trade: LAC

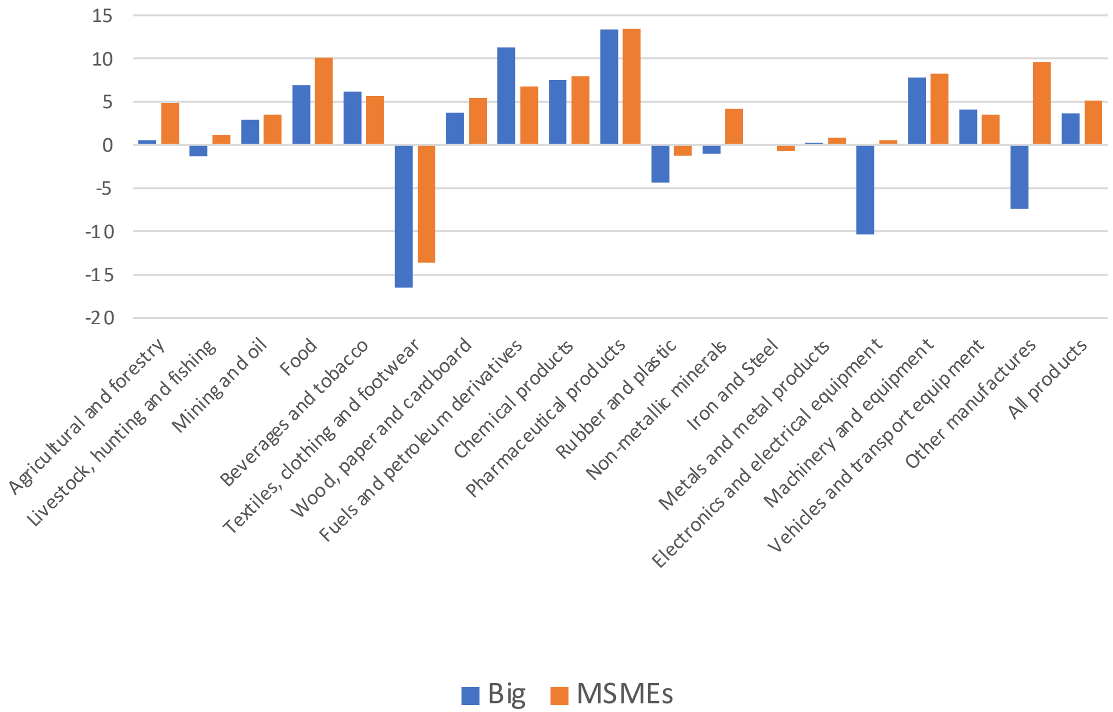
Bi-regional FTAs (0 tariffs)
With Unemployment
Trade facilitation across and within regions

Latin America (13 countries): Differential effects on intraregional exports by type of economic agents
(Percentage change over baseline)

a) By countries to LAC



b) By sectors to LAC



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Source: Authors based on model simulations.