

# ECLAC in GIANT

## IOT for support Policy in Latin America and the Caribbean

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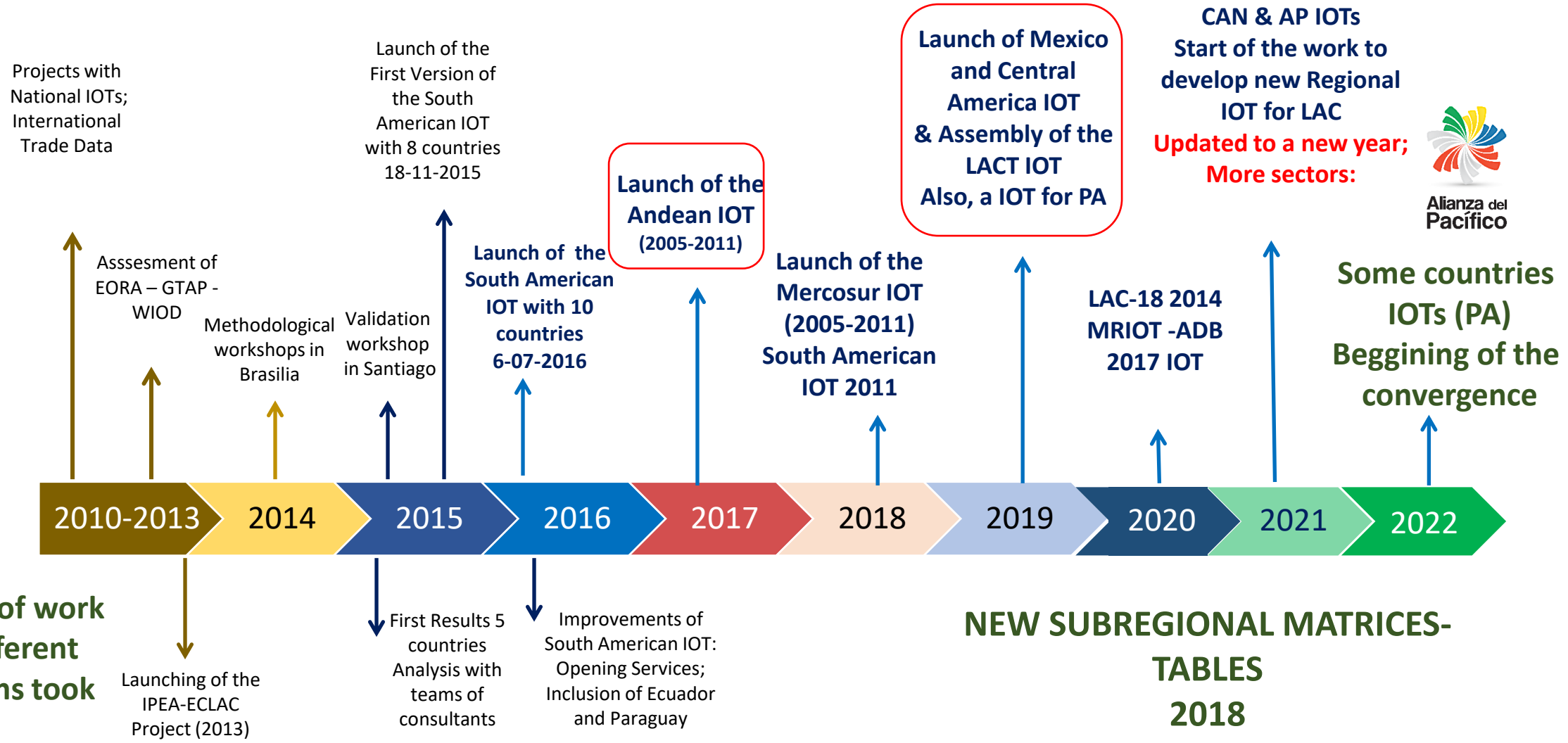


Gijón, Spain. September 5, 2024

# Summary

1. ECLAC MRIOT of Latin American and the Caribbean
2. Data sources
3. New multisector structure. From 40X40 IOT to a 60X60 IOT; 68 or 72
4. New countries (6 Caribbean countries)
5. Similarities / Differences between initiatives (Arg, Bra, Mex)
6. Conclusions

# The milestones in the process of Latin America's value-added trade project. The way followed to achieve the current state of IOT.



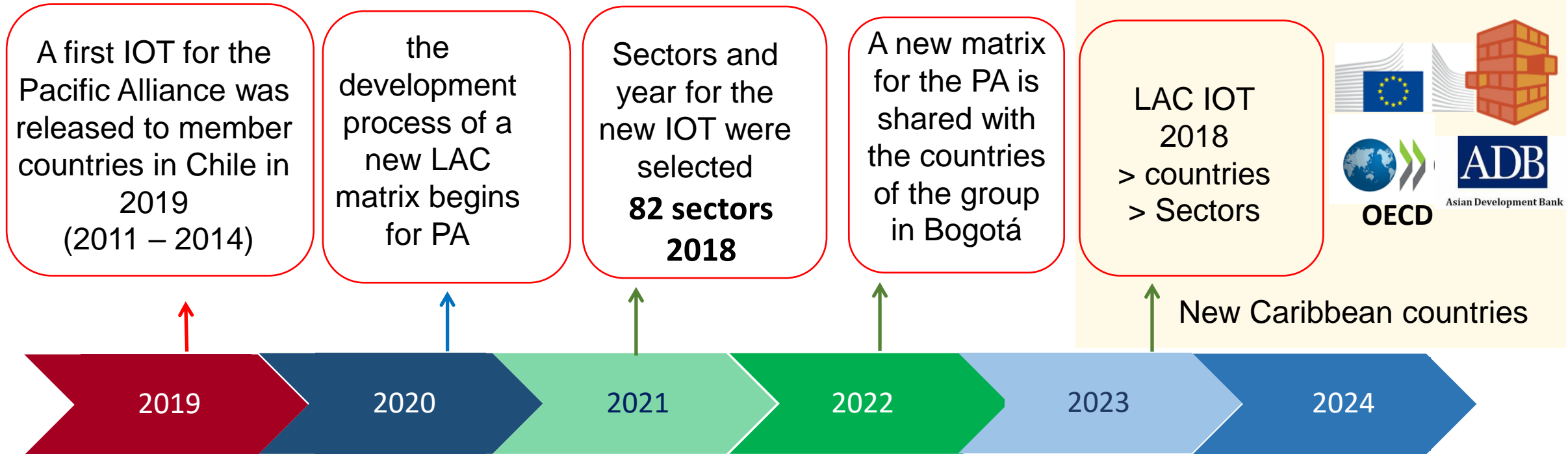
Source: ECLAC, based on: Durán & Banacloche (2021). "Economic analysis based on input-output tables: Definitions, indicators and applications for Latin America".

# Regarding IOT matrices: What ECLAC had? and What ECLAC will have?

- We start with 6 countries of South America (ARG, BRA, CHI, COL, PER, and URY) (2005)
- We managed to have all South America (10 countries) (2005)
- Then we expanded the countries up to 19: Including México, Central America and Dominican Republic (2011 and 2014).
- Then, we have countries represent 4 subregions (updated until 2014 and 2017 for South America and Mexico). And 40 sectors.
  - Andean Community (**AC**) (BOL, COL, ECU, PER)
  - **MERCOSUR** (ARG, BRA, URY, PRY, VEN)
  - Central American Common Market (**CACM**) (CRI, GTM, HND, NIC, PAN, SLV)
  - Pacific Alliance (**PA**) (COL, CHI, PER, MEX)
  - Only one Caribbean country (Dominican Republic)
- The Challenges - What ECLAC will have?
  - Improve Lack of information to expand countries.
  - Need of estimation of some sectors, and a special case for CUB, HT and DR



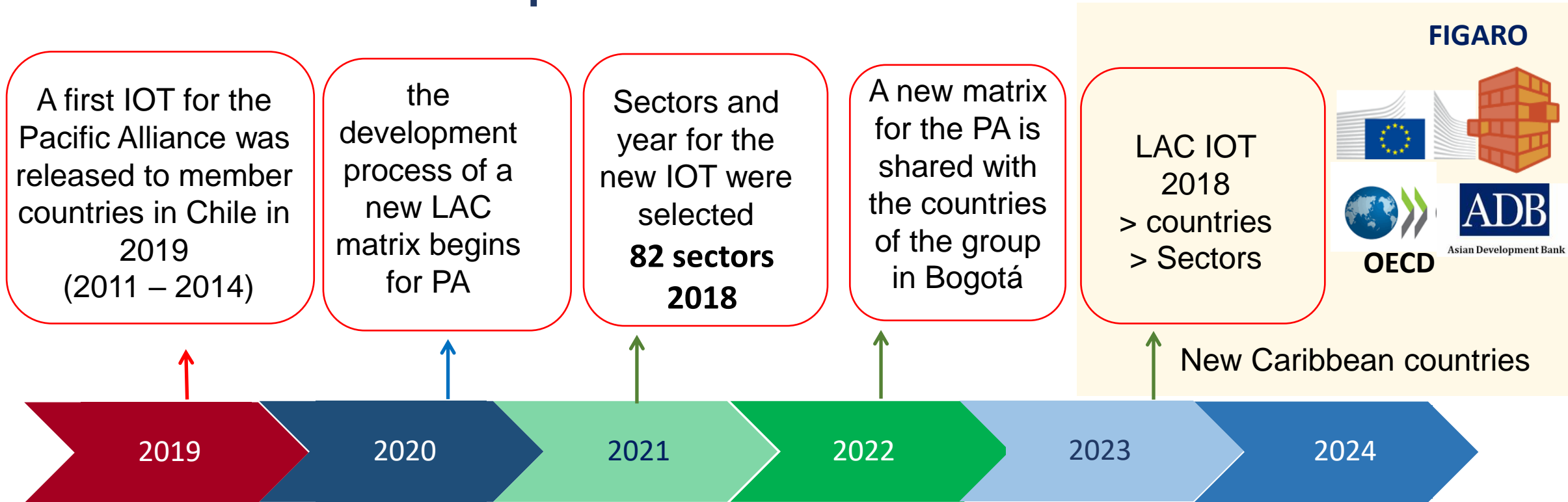
# Statistical institutes (DANE, INEI, INEGI, IBGE, INDEC), the Central Bank of Chile, Ecuador, Paraguay and Uruguay, have played an important role in the development of the New LAC IOT for 2018



ECLAC, altogether with the EC-JRC, held a workshop on value chains and indicators for government officials of the PA countries IN 2022

Haiti Institute of Statistics and Informatics (IHSI)  
Cuba National Statistics Office (ONE)  
The Statistical Institute of Jamaica (STATIN)  
ECLAC Repository  
ECLAC estimations based on Official figures.

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# What was the way followed?

## First Step

### Sector selection

- Selection of a group of sectors compatible with different initiatives: OCDE, FIGARO, ADB.
- Compatibility with former LAC IOT 40 sectors
- **Discussion for sector validation (meetings with Statistic Offices and Central Banks)**

## Second Step

### Update of LAC 18 countries (70X70)

- Move subregions IOT from 2014 to 2018 (by country)
- Preparation of each new country IOT (national). First group of countries: Pacific Alliance (2022)
- **Preparation of trade datasets (with LAIA dataset FOB-FOB) and COMTRADE.**

## Third Step

### Increase the number of countries (From 18 to 23)

- Focus on the Caribbean countries.
- For 2018 and in parallel 2011 and 2014 to expand former LAC IOTs

# The path followed to select the new list of sectors

82 sectors

- Theoretical sector selection
- Sector benchmark (broad classification)
- Greater sectoral openness: **more services**

**2018**

**Modular and convergent**

- **40x40 (OCDE)**
- **50x50 (FIGARO-EUROSTAT)**
- **25X25 (ADB)**



Country and subregional sectors (different sizes)

- **Pacific Alliance (70X70)**
  - **MERCOSUR IOT (70X70)**
  - **Andean Community (70X70)**
  - **Central America (72X72)**
  - **The Caribbean (40X40)**
- } 70X70



40 sectors

- Former LAC IOTs
- **25X25 (OCDE)**
- **25X25 (ADB)**



# Status of the Project to updated the LAC TIVA Project

- Updates the existing sub-regional IOTs and sets the new reference year 2018.
- A collaborative process supported by the official National Accounts statistics. The year 2018 was constructed based on the official information of that year.
- 3 Caribbean countries were added to the IOT ( Jamaica, Trinidad y Tobago and Guyana)
- 2 other countries will be added (Cuba and Haiti)
- More sectors (From 40 to 70) so now it could be more easily matched with other GIANTs Initiatives

┌──────────────────────────┐  
└──────────────────────────┘  
Common 50 sectors (FIGARO)  
Common 45 sectors (OCDE)

Convergence / cooperation



# National matrices already updated to 2018 (As of September 2024)

## Andean Community

Bolivia (EP) (70x70)

Ecuador (70x70)

Colombia (70x70)

Perú (70X70)\*

Chile (70X70)

México (70X70)

Argentina ( 70x70)

Brazil ( 70x70)

Uruguay ( 70x70)

Paraguay (40x40)\*

Venezuela (RB) (70x70)



Pacific  
Alliance

MERCOSUR

Costa Rica (70X70)

Guatemala (70X70)

El Salvador (70X70)

Honduras (70X70)

Nicaragua (70X70)

Panama (70X70)\*

Dominican Republic (70X70)

Jamaica (2018) (40x40)

Trinidad y Tobago(40x40)

Guyana (2018) (40x40)

Haiti (2014) (40x40)

Cuba (2011) (40x40)

- Same currency (US\$)
- Homogeneous Sectors (70x70)
- Compatible with other IOTs:  
TIVA OCDE, FIGARO, ADB.

# Preliminary convergence sector (ECLAC – FIGARO) 50 sectors

## 4 Primary – 19 Manufacture

	Descripcion ECLAC-FIGARO	FIGARO SECTORS	ECLAC SECTORS
s01	Crop and animal production, hunting and related service activities	A01	t01
s02	Forestry and logging	A02	t02
s03	Fishing and aquaculture	A03	t03
s04	Mining and quarrying	B	t04 t05 t06 t07 t08
s05	Manufacture of food products; beverages and tobacco products	C10T12	t09 t10
s06	Manufacture of textiles, wearing apparel, leather and related products	C13T15	t12 t13 t14
s07	Manufacture of wood and of products of wood and cork, except furniture; ...	C16	t15
s08	Manufacture of paper and paper products	C17	t16
s09	Printing and reproduction of recorded media	C18	t17
s10	Manufacture of coke and refined petroleum products	C19	t18
s11	Manufacture of chemicals and chemical products	C20	t19
s12	Manufacture of basic pharmaceutical products and pharmaceutical preparations	C21	t20
s13	Manufacture of rubber and plastic products	C22	t21
s14	Manufacture of other non-metallic mineral products	C23	t22
s15	Manufacture of basic metals	C24	t23 t24
s16	Manufacture of fabricated metal products, except machinery and equipment	C25	t25
s17	Manufacture of computer, electronic and optical products	C26	t26
s18	Manufacture of electrical equipment	C27	t27
s19	Manufacture of machinery and equipment n.e.c.	C28	t28
s20	Manufacture of motor vehicles, trailers and semi-trailers	C29	t29
s21	Manufacture of other transport equipment	C30	t30 t31
s22	Manufacture of furniture; other manufacturing	C31_32	t32
s23	Repair and installation of machinery and equipment	C33	t33

• **There are more primary products and manufactures sectors in ECLAC than in FIGARO initiative**

# Preliminary convergence sector (ECLAC – FIGARO) 50 sectors

## 27 Service sectors

	ECLAC-FIGARO Description	FIGARO	ECLAC
s24	Electricity, gas, steam and air conditioning supply	D35	t34
s25	Water collection, treatment and supply	E36	t35
s26	Sewerage, waste management, remediation activities	E37T39	t36
s27	Construction	F	t37
s28	Wholesale and retail trade; repair of motor vehicles	G45 G46 G47	t38
s29	Retail trade, except of motor vehicles and motorcycles	H49	t39
s30	Water transport	H50	t40
s31	Air transport	H51	t41
s32	Warehousing and support activities for transportation	H52	t42
s33	Postal and courier activities	H53	t33
s34	Accommodation and food service activities	I	t44 t45
s35	Publishing activities	J58	t46
s36	Motion picture, video, television programme production; programming and broadcasting activities	J59_60	t47
s37	Telecommunications	J61	t48
s38	Computer programming, consultancy, and information service activities	J62_63	t49
s39	Financial service activities, except insurance and pension funding	K64	t50
s40	Insurance, reinsurance and pension funding, except compulsory social security	K65	t51
s41	Activities auxiliary to financial services and insurance activities	K66	t52
s42	Real estate activities	L	t52
s43	Professional, scientific and technical activities	M69_70 M71 M72 M73 M74_75	t53
s44	Administrative and support services	N77 N78 N79 N80T82	t54
s45	Public administration and defence; compulsory social security	O84	t55
s46	Education	P85	t56
s47	Human health and social work activities	Q86 Q87_88	t57
s48	Arts, entertainment and recreation	R90T92 R93	t58
s49	Other service activities	S94 S95 S96	t59
s50	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	T U	t60

- There are more service sectors in FIGARO than in ECLAC

# How do these matrices articulate and how they will in the future?



ECLAC ADB  
73 countries

18 AL  
+  
partners

2005; 2011; 2014 IOTs

RIOT

MRIOT- ADB-CEPAL, 2017 IOTs

MRIOT

New IOTs 2018

Central America - DR

70 sectors

Mexico

70 sectors

Caribbean

40 sectors

CAN - Chile

70 sectors

MERCOSUR

70 sectors

Pacific Alliance

70 sectors

Modular matrices  
that articulate with  
each other  
(2005-2011-2014)

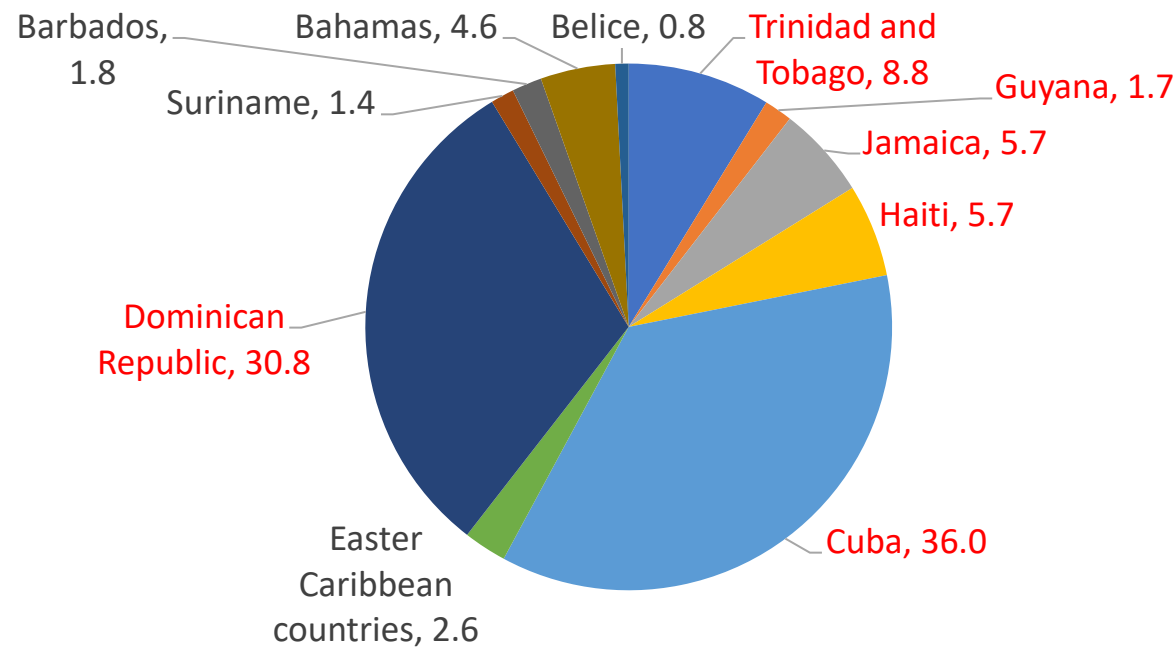
2018

FIGARO



# The Caribbean subregional matrix

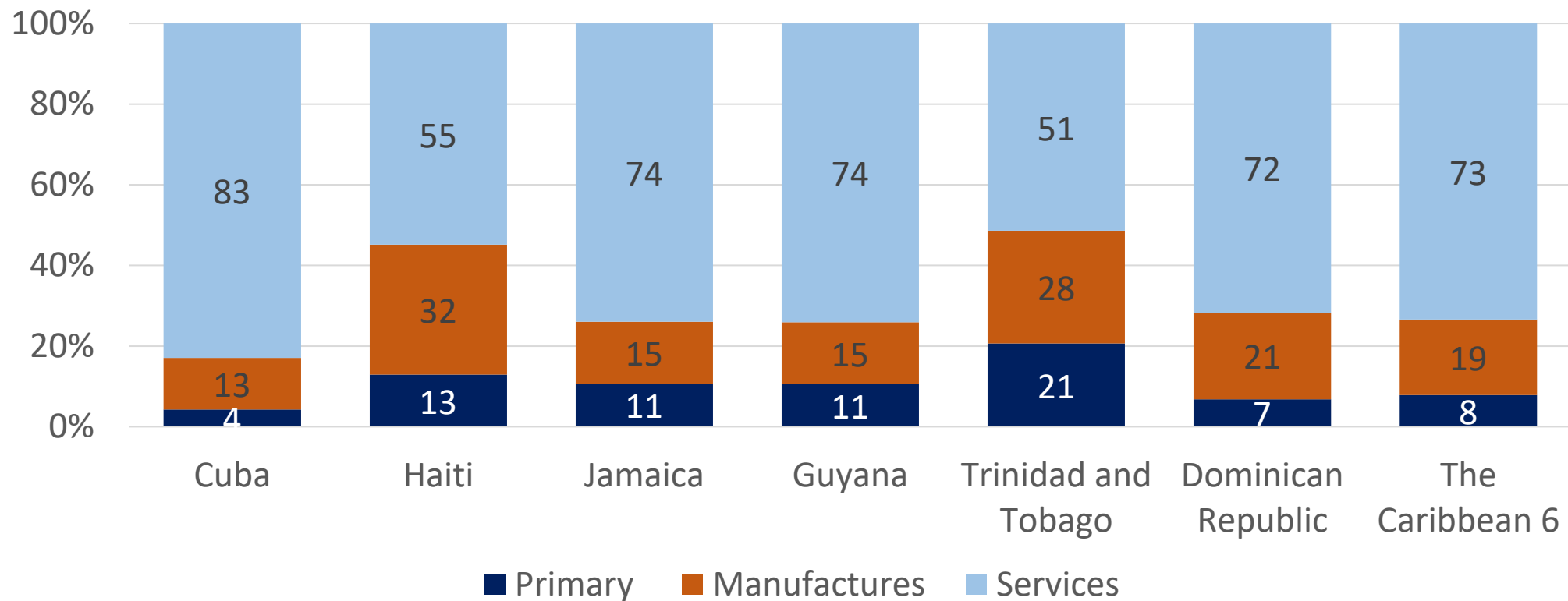
- Actually, 6 countries
- **Jamaica, Trinidad y Tobago, Dominican Republic, and Guyana** (2018)
- Haiti and Cuba : 2011-2014 . Working to update to 2018
- 40 sectors compatible with LAC IOT (2005, 2011 and 2018)



**6 Selected countries represent 89% of total Production of The Caribbean region**

# ¿How subregional GDP is distributed in Caribbean?

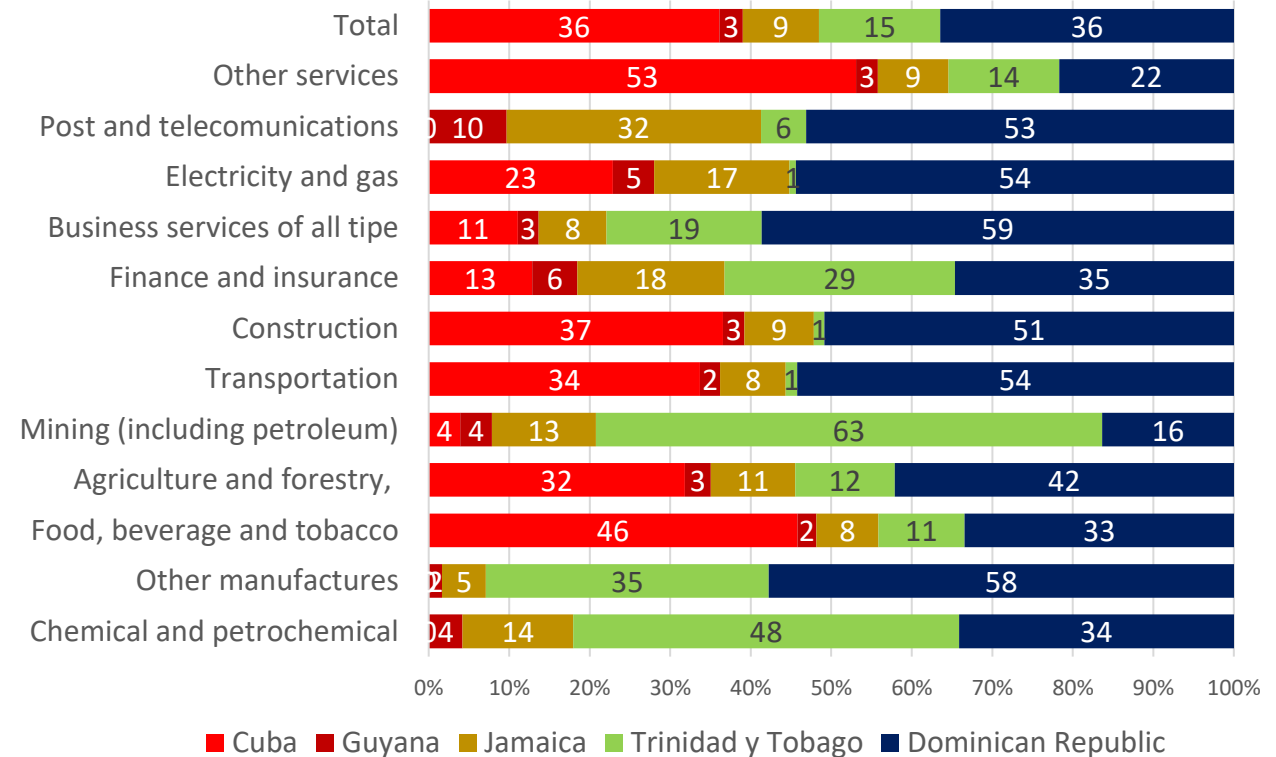
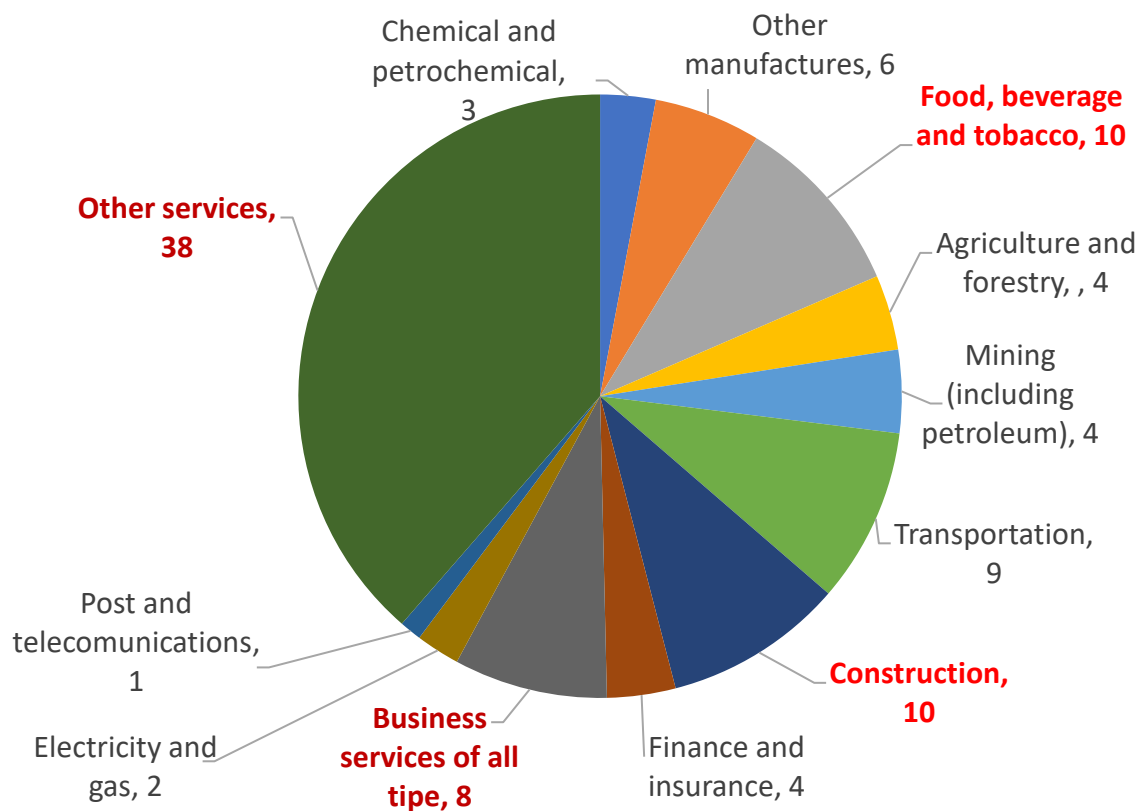
Caribbean: Sectoral structure of the sub-region's Value Added, 2018  
(Percentage of total)



Source: ECLAC, based on 2018 Input-Output Tables of each Caribbean country. In the case of Haiti and Dominican Republic, data are for 2014

# Agroindustry (10%); Transportation (9%); Construction (9%), are the most important sectors in the Caribbean, also Tourism (included in other services)

The Caribbean: Sectoral structure of the sub-region's Value Added, 2018 (Preliminary figures)  
(Percentage of total)

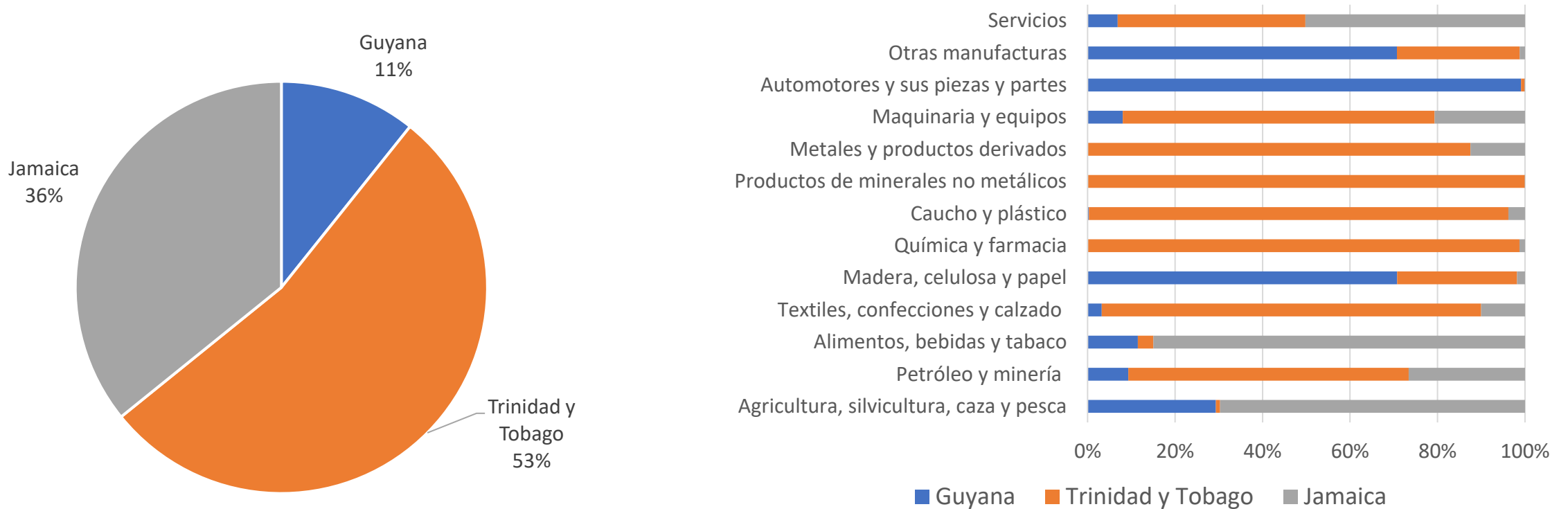


Source: ECLAC, based on 2018 Input-Output Tables. and CEPALSTAT



# ¿How subregional Exports are distributed in Caribbean?

Caribbean (3): Sectoral structure of the sub-region's Exports, 2018  
(Percentage of total)



Source: ECLAC, based on 2018 Input-Output Tables of each Caribbean country.

# Aggregates comparison between TIVA initiatives : GDP, domestic intermediate inputs, exports.



Argentina  
Brazil  
**México**  
68 sectors

FIGARO



Argentina  
Brazil  
**Mexico**  
64 Sectors



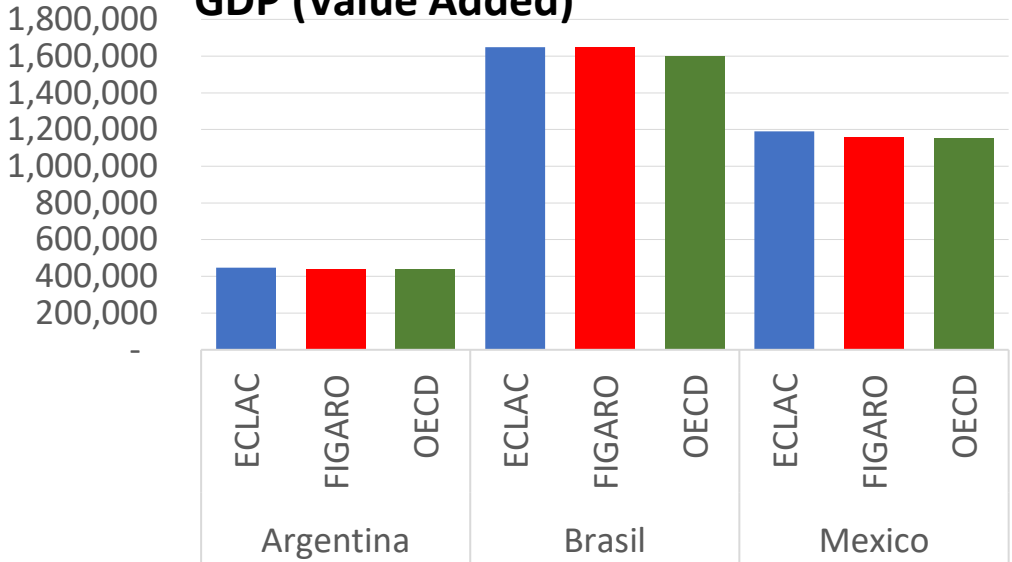
Argentina  
Brazil  
Colombia  
Chile  
**Mexico**  
Peru  
45 sectors

50 sectors (3countries)

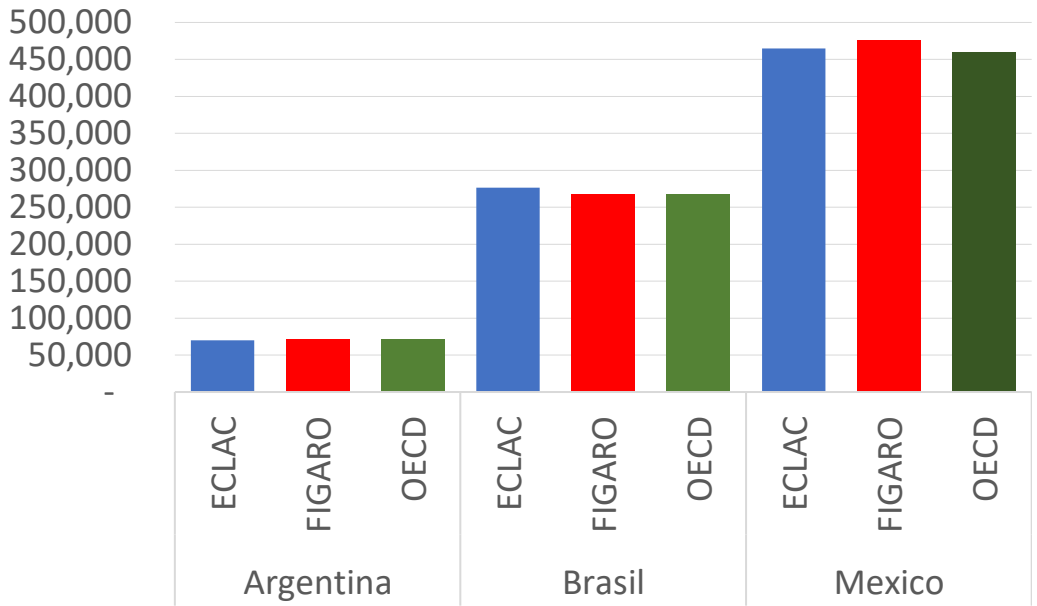
# Comparing aggregated IOT data (ECLAC – OECD - FIGARO) for Brazil-Argentina and México, 2018

(In United States of America million dollars)

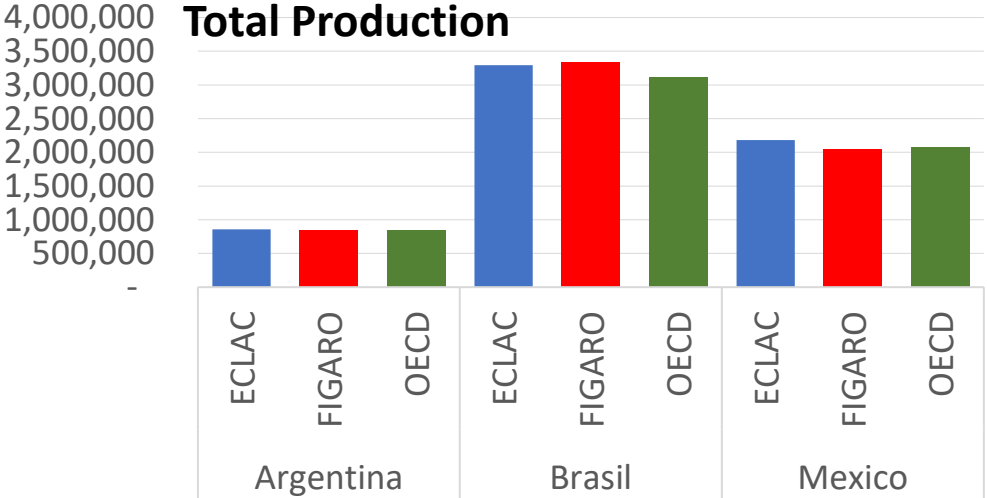
**GDP (Value Added)**



**Total exports**

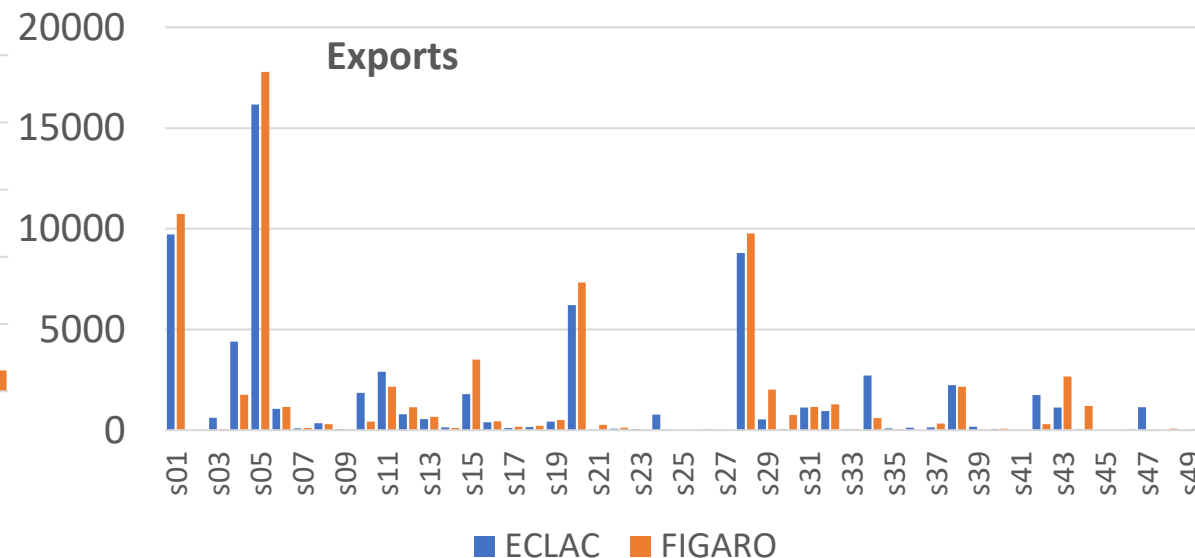
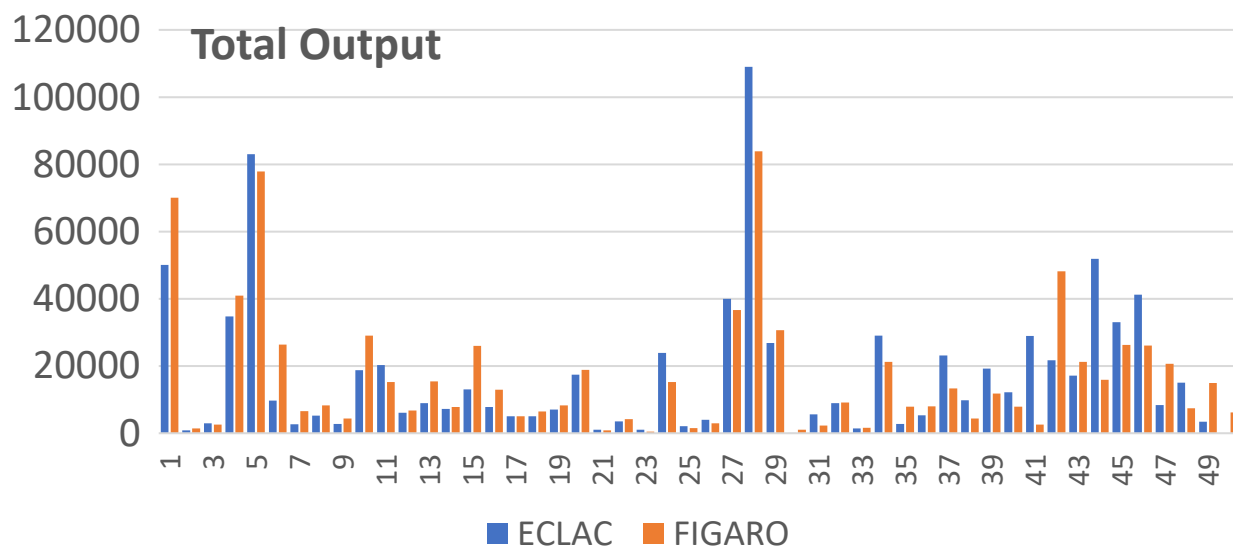
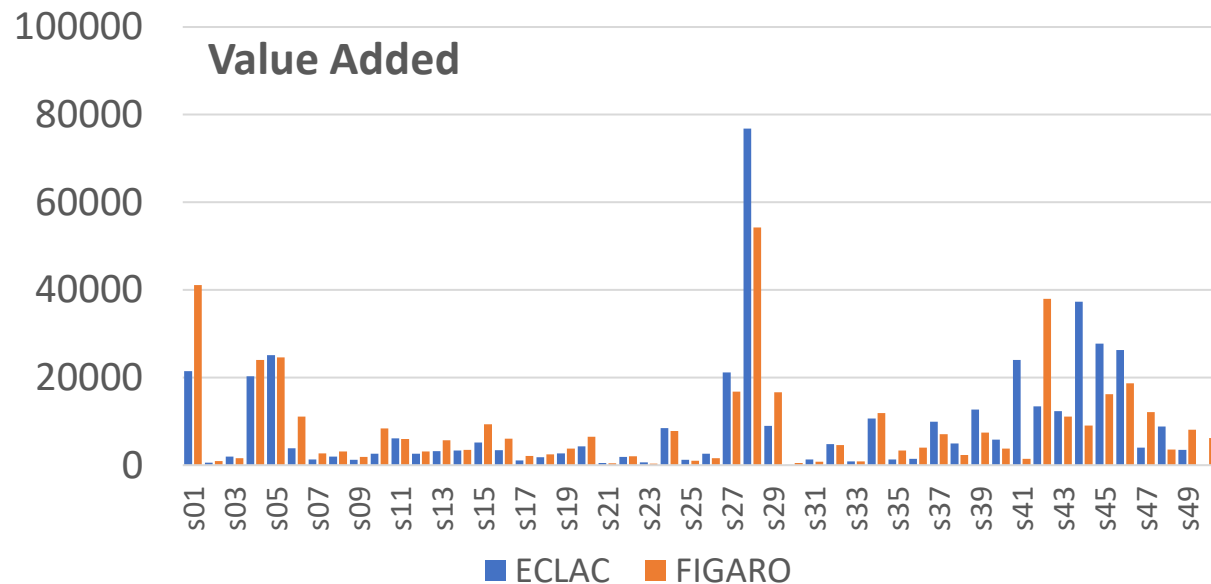
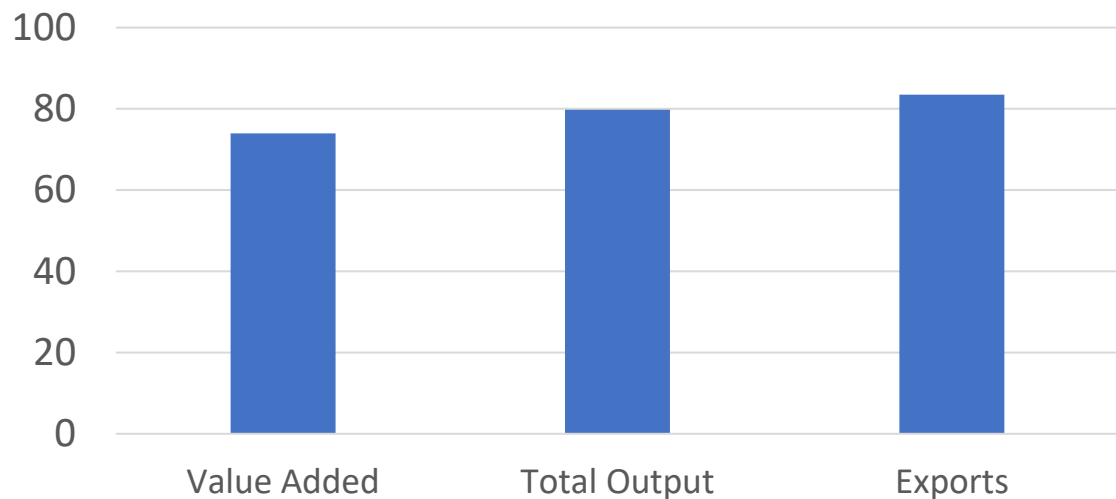


**Total Production**



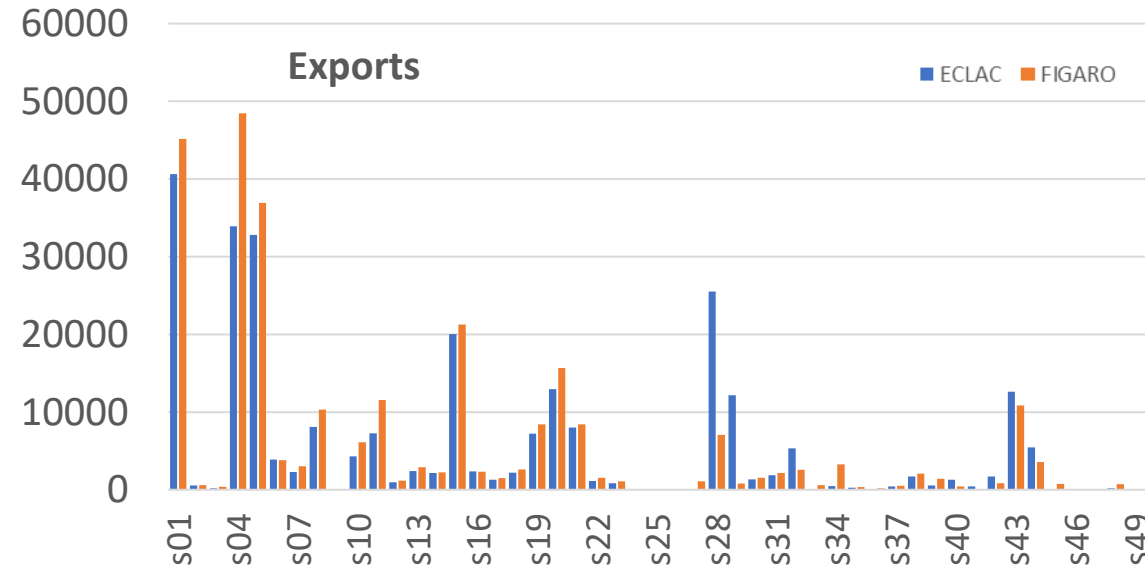
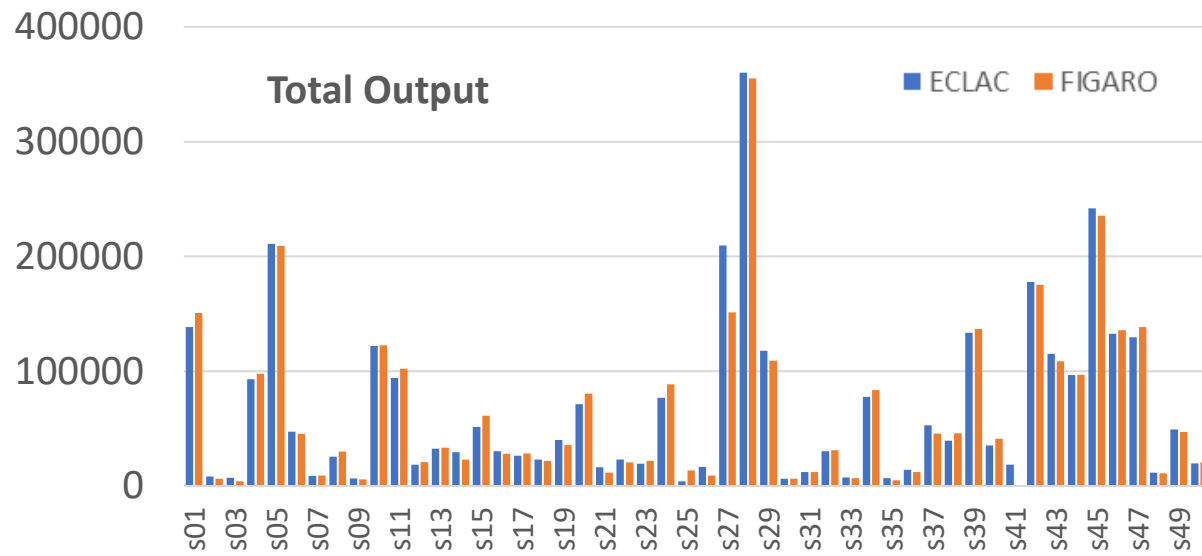
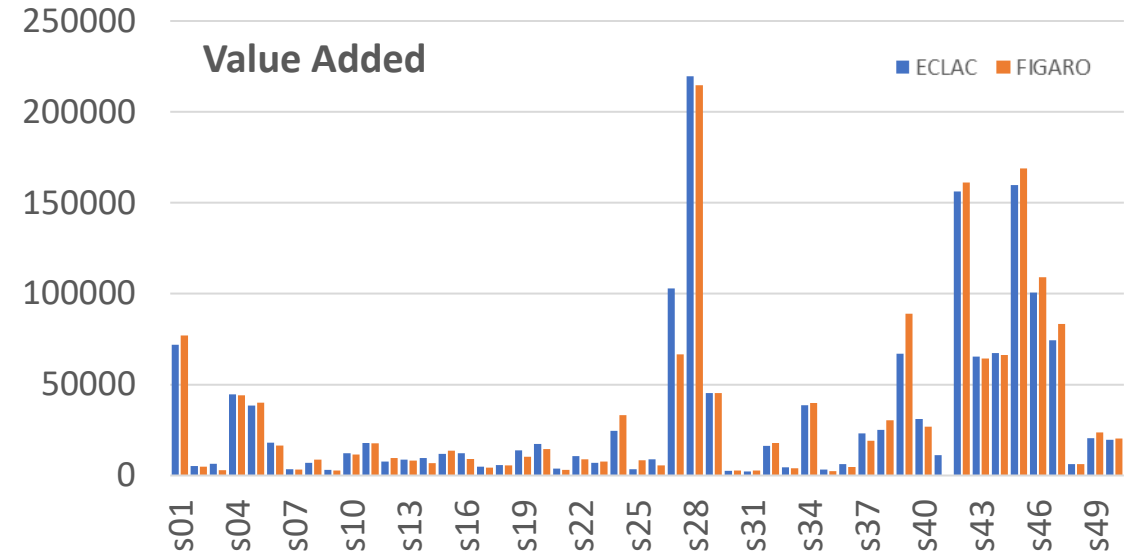
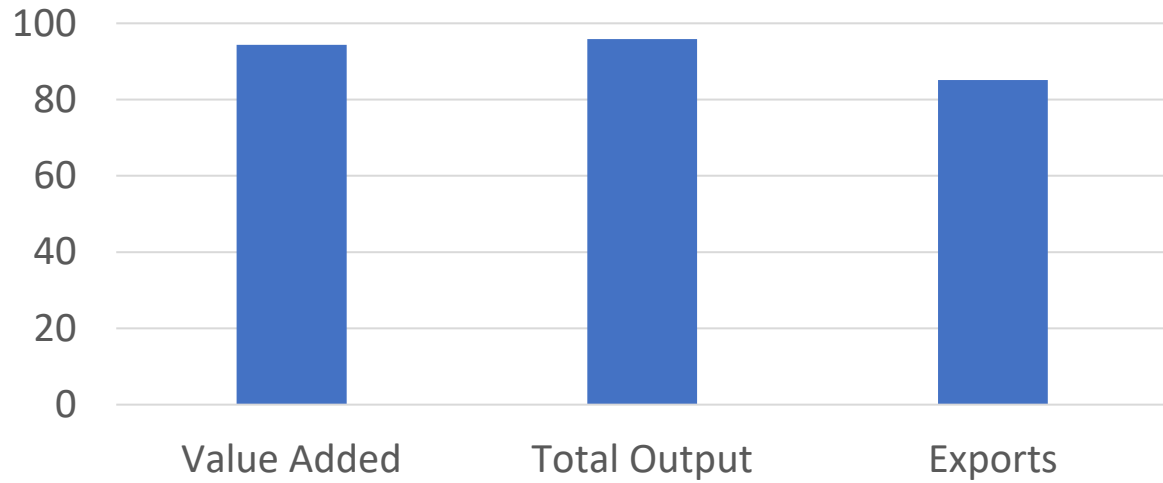
Source: ECLAC (2023) based on OECD ICIO & FIGARO.

# Similarity index – Comparative structure (ECLAC – FIGARO) (Argentina), 2018



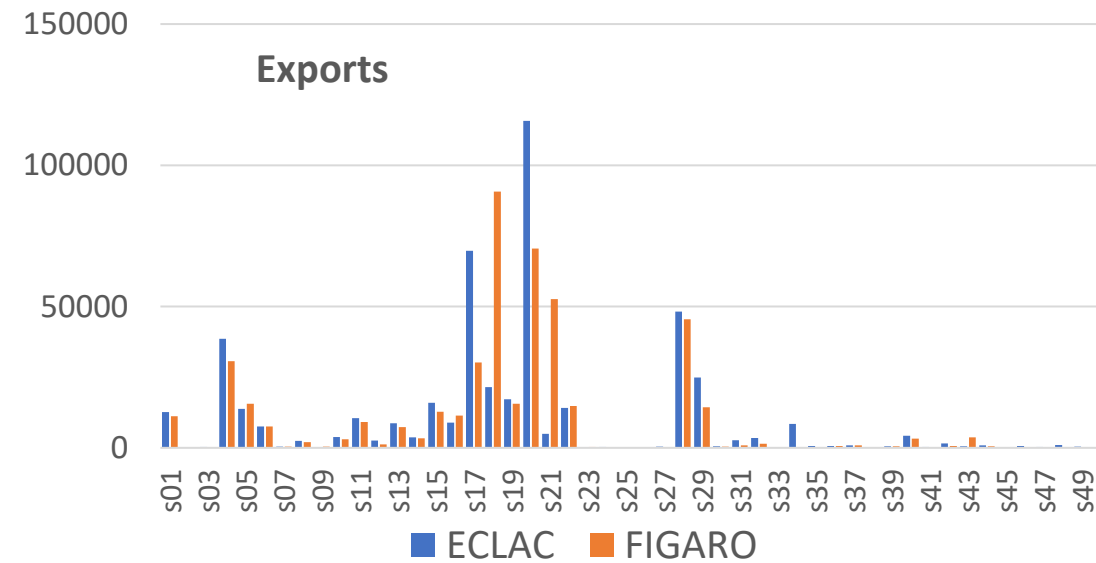
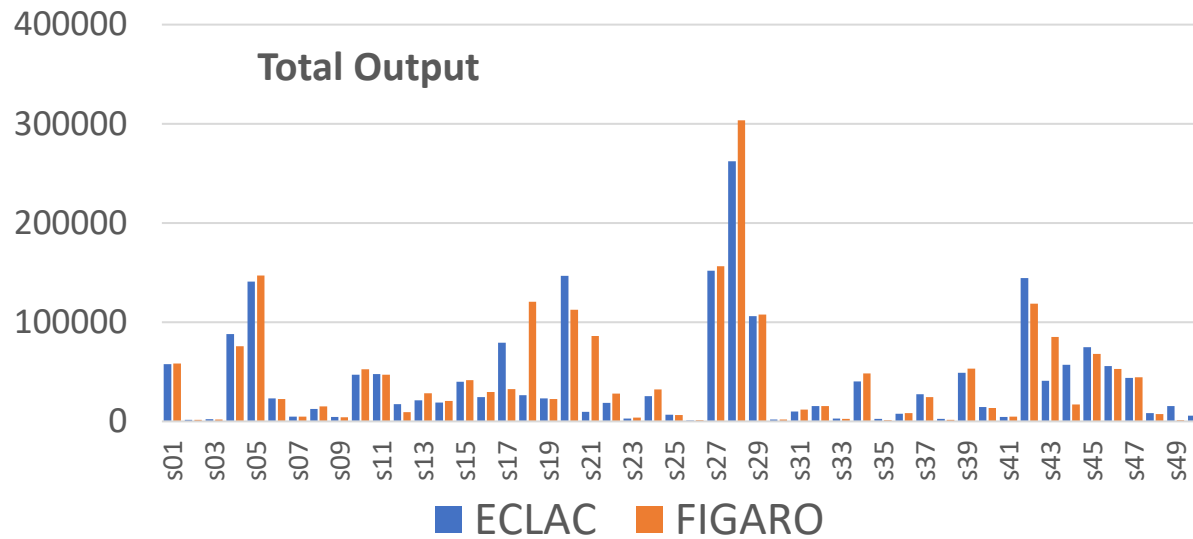
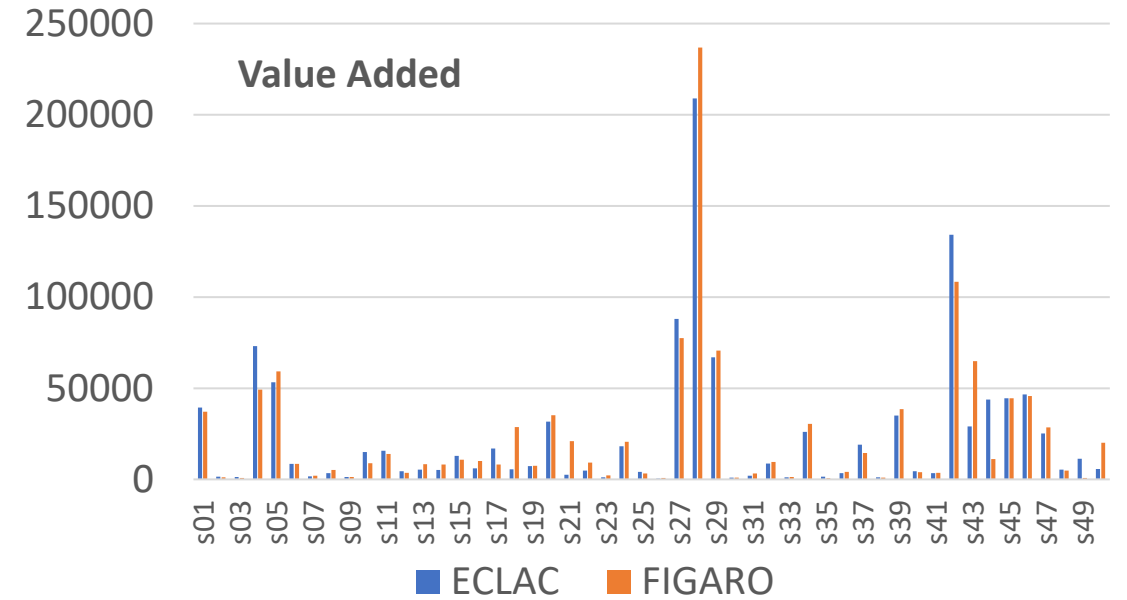
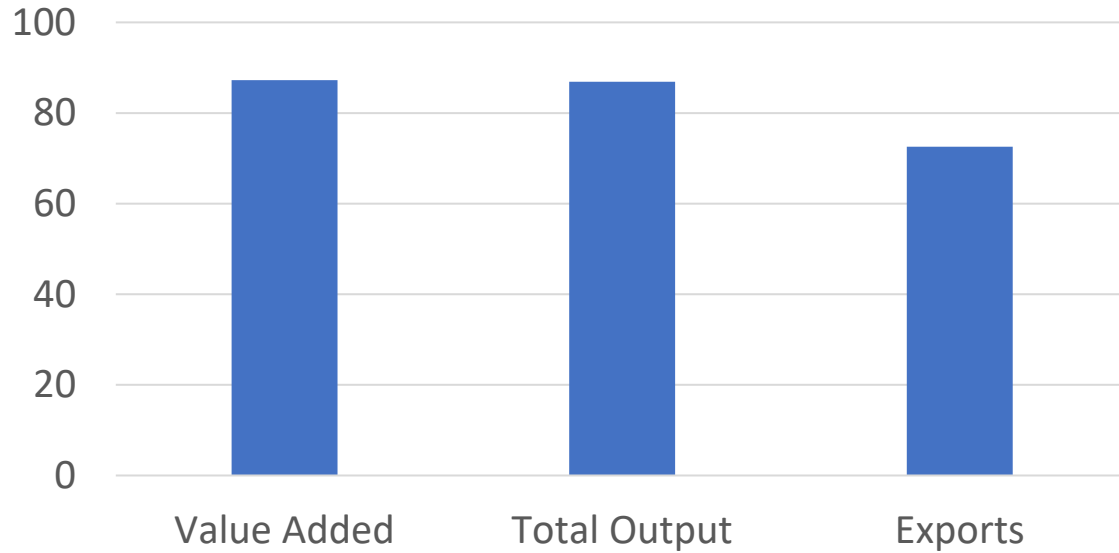
Source: ECLAC (2023) based on ECLAC and FIGARO.

# Similarity index – Comparative structure (ECLAC – FIGARO) (Brazil), 2018



Source: ECLAC (2023) based on ECLAC and FIGARO.

# Similarity index – Comparative structure (ECLAC – FIGARO) (Mexico), 2018



Source: ECLAC (2023) based on ECLAC and FIGARO.

# Conclusions

- IOTs allow for a more informed analysis of the state of Regional Integration (productive structure and complementarities), specially in the Caribbean region.
- A matrix with a greater number of economic sectors allows for a closer analysis of the productive structure.
- Some concluding remarks considering the exercises developed with Caribbean countries.
  - The input-output approach allows us to confirm the enormous dependence of Caribbean countries on a few natural resources: bauxite, aluminum, gas, and oil, among others.
  - The preeminence of mining and oil, agricultural products, and food and beverage sectors among the more value added exported is an example of the dependence of the region.
  - Another confirmed regularity is that the bulk of the value added in primary sectors leaves the Caribbean with foreign markets (USA, European Union, and also China and Asia).
  - Contributing to countries that have still weak data to strengthen their basic statistics is essential.
  - We are happy to be able to contribute to promoting the analytical agenda in the Caribbean countries.

# THE WAY FORWARD

- Integration with other initiatives is expected. It would be the next logical step.
- **Why?:**
  1. ECLAC has more countries than FIGARO for Latin America,
  2. The FIGARO (JRC-EUROSTAT) initiative has complementary countries that ECLAC do not have,
  3. To fulfill the objective, all TIVA initiatives must converge to integrate into a MRIOT,
  4. Final product: A big, FIGARO-ECLAC MRIOT with more countries
  5. 2018 will be the convergence year.
- **What will be the benefits?**
- Possibility of conducting regional and sub-regional analyzes from a country/industry perspective (LAC-EU; MERCOSUR-UE).



# CHALLENGES AND FUTURE STEPS

## Lastly and not less important

- Compatibility of sectoral disaggregation between initiatives.
- Shared converters (For production and trade);
- Shared databases and a common methodology;
- Organizing workshops with national institutions to share best practices to help to improve base data (capacity building).
- Put evidence on the table of policymakers

**We have a fertile field of cooperation between JRC – EUROSTAT, OECD, IMF, ADB, WTO,... and ECLAC.**



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**José Elías Durán Lima**  
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**Thank you!**  
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