

Latin America in Global Value Chains

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HIGHLIGHTS

- Latin America & the Caribbean (LAC) considered to be a **latecomer to GVCs, but participation is growing**, driving exports and engaging a growing number of firms and workers
- Integrated into **traditional resources sectors** with strong comparative advantage: mining & agriculture **but also in high tech manufacturing & services**
- **Upgrading** within industries in **high-value activities** and structural transformation of economies into **higher tech sectors** creating new **job opportunities**

LAC PARTICIPATION IN GVCs: A REGIONAL PERSPECTIVE

As a latecomer, **LAC has trailed** other developing regions and the global average in **integration in GVCs**



Region	GVC Participation (2010)	Participation Growth Rate (2005-2010)	Domestic Value Added
Latin America & the Caribbean	40%	4.9%	16%
Africa	54%	4.8%	30%
Asia	54%	5.5%	25%
Developing Economies	52%	6.1%	28%
Developed Economies	59%	3.7%	18%
Global	57%	4.5%	22%

Source: (OECD, 2015; UNCTAD, 2013)

Notes: The GVC participation rate is the combination of 'upstream' participation, that is, the share of imports (or foreign value add) used in a country's exports, and 'downstream' participation, that is, the share of a country's exports that are used in the exports of a third country, divided by the country's total exports (UNCTAD, 2013).

- By 2010, LAC region **behind Africa, Asia** in GVC participation & domestic value added
- **Low domestic value added** suggests participation of LAC firms & workers **primarily in low-value adding stages** of the value chain

PARTICIPATION OF LAC IN GVCS IS HETEROGENOUS

Proximity to the US

Central America & Mexico used GVC-oriented trade policy to leverage low-cost labour & proximity to the US integrate into manufacturing chains

Small island states Small economies, connectivity and lower levels of economic development have hindered deeper integration into product-based GVCs

Resource-rich

Primary commodities provided basis for a historically strong integration in GVCs in agriculture and the extractive sectors

Large domestic markets

More developed, resource-based countries with large populations; more restrictive trade policies & lower overall participation; but sectoral exceptions & strong backward linkages



COUNTRY PARTICIPATION IN GVCS

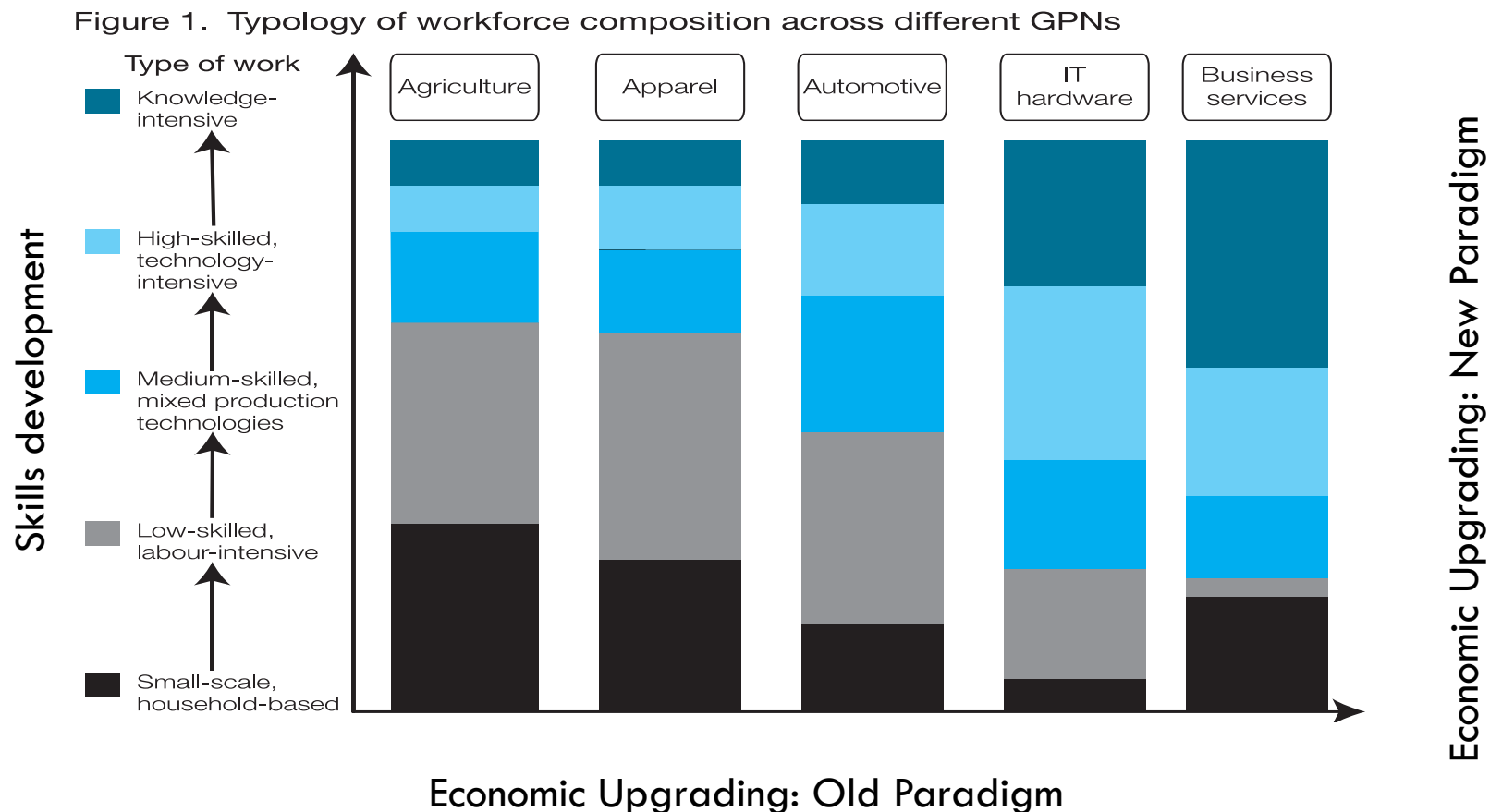
Many countries participate in **agricultural chains**, few in low value manufacturing

Sector	Select Value Chains	
	<ul style="list-style-type: none"> Argentina (Soya, Beef) Brazil (Beef, Soya) Chile (Fresh fruits) Colombia (Coffee) Dominican Republic (Cacao) Ecuador (Bananas, Cacao) 	<ul style="list-style-type: none"> Guyana (Sugar & Rum) Honduras (Asian Vegetables) Panama (Bananas) Paraguay (Stevia) Peru (Fruits & vegetables) Uruguay (Beef)
	 <ul style="list-style-type: none"> Argentina (Mining, Oil & Gas) Brazil (Mining, Oil & Gas) Chile (Mining – Copper) Colombia (Mining – Coal) 	<ul style="list-style-type: none"> Jamaica (Mining) Mexico (Mining) Peru (Mining –Copper) Trinidad & Tobago (Oil & Gas)
	<ul style="list-style-type: none"> Haiti (Apparel) Nicaragua (Apparel) Honduras (Apparel) Dominican Republic (Textiles & Apparel) 	<ul style="list-style-type: none"> Peru (Apparel)
	<ul style="list-style-type: none"> Argentina (Automotive - Parts) Brazil (Aerospace, Electronics) Costa Rica (Medical Devices) 	<ul style="list-style-type: none"> Mexico (Aerospace, Automotive, Medical Devices) Nicaragua (Automotive)
	<ul style="list-style-type: none"> Argentina (IT & Call Centres) Chile (Engineering) Colombia (BPO) Costa Rica (BPO, KPO) 	<ul style="list-style-type: none"> Guatemala (Call Centres) Jamaica (BPO) Panama (Logistics, Financial Services) Uruguay (IT & BPO)

GVC PARTICIPATION, JOBS & SKILLS FOR UPGRADING

Participation of workers in GVCs can be viewed through the lens of job categories defined by skill level:

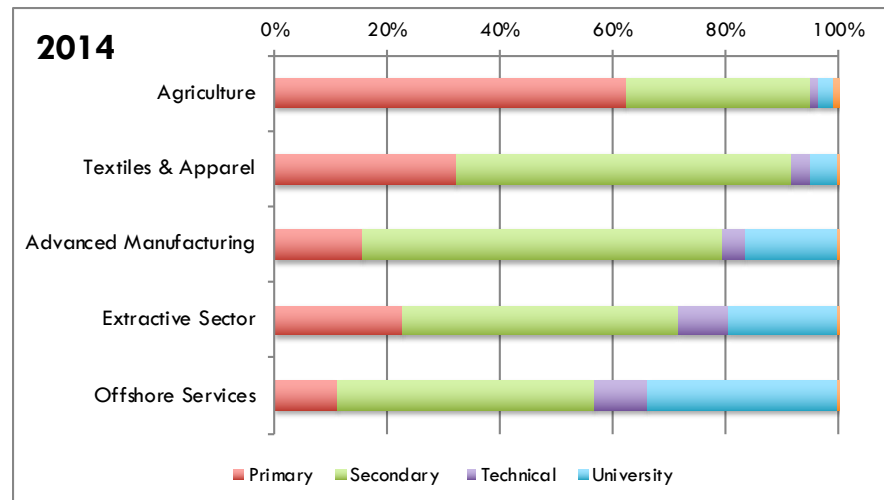
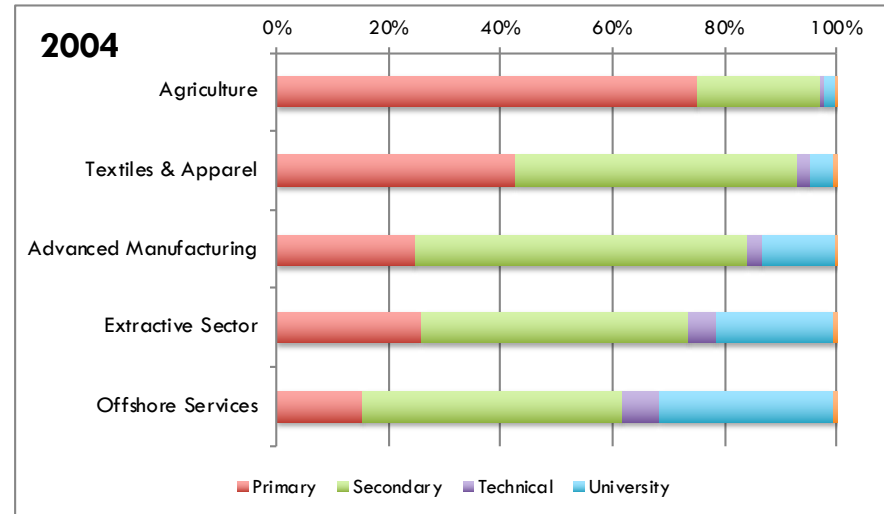
- **Skill requirements increase** as value chain **activities increase in complexity**



GVC PARTICIPATION, JOBS & SKILLS: LATIN AMERICA & CARIBBEAN

- **Most jobs are still in a lower skill level:** Relatively labour-intensive and low-technology tasks → assembly or other routine production activities
- Moving up in 'lower value' GVCs and in **more sophisticated chains** requires higher skill profiles: production, design, marketing, logistics and finance are moving to LAC (e.g. Costa Rica)
- GVC participation in **non-traditional sectors created new jobs:** Employment in advanced manufacturing & offshore services increased by 5%

Workforce Composition in Key Sectors in South and Central America



Source: Bamber, et al. 2016. "Promoting Decent Work in Global Supply Chains in Latin America and the Caribbean." Geneva: International Labour Organization.

Notes: Based on national household surveys in Brazil, Colombia, Costa Rica, Ecuador, Honduras, Panama, Peru, Mexico, Nicaragua and Uruguay.

LAC PARTICIPATION BY SECTOR: CASES

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HIGH VALUE AGRICULTURE

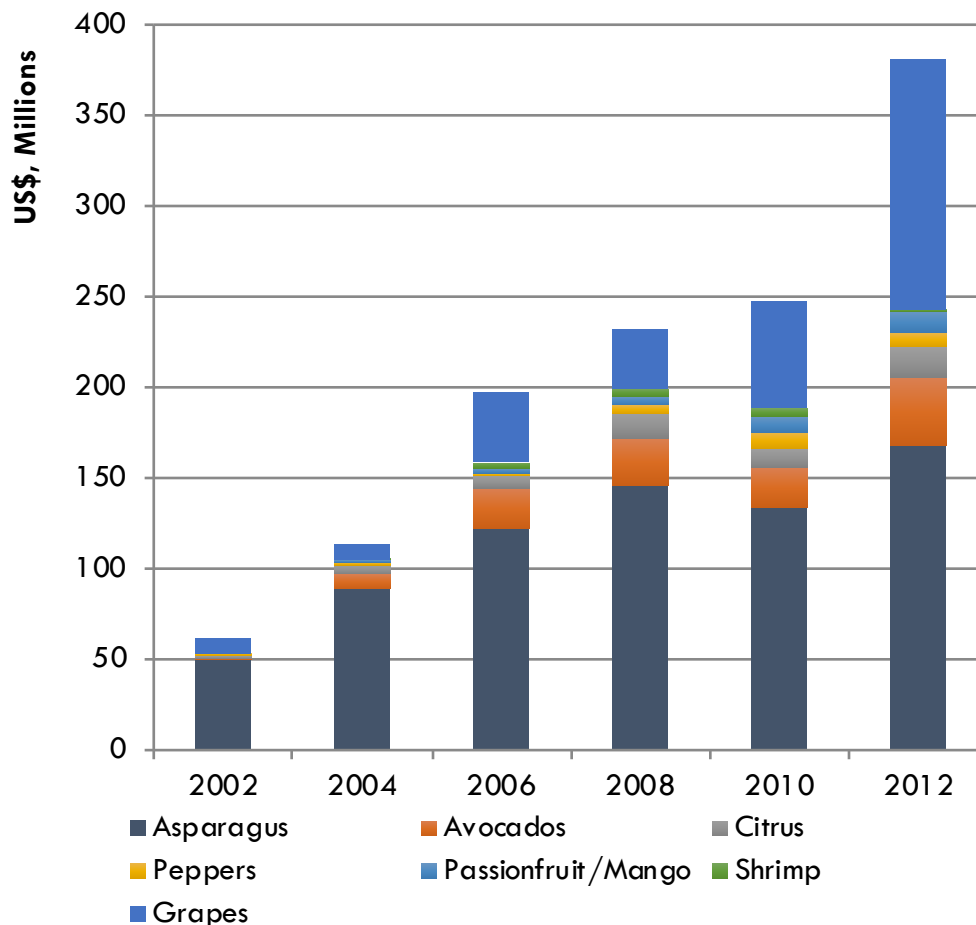
Simplified Fresh Fruit and Vegetable Global Value Chain



- **High degree of GVC participation** with strong involvement of local firms and job creation
- Region is **the 2nd largest global exporter of high value fresh produce** to the world:
 - 20% global market share by volume & 18% by value
- **Leading suppliers from LAC** have grown and become increasingly sophisticated
 - **Functionally upgraded** into upstream R&D and downstream logistics, distribution and marketing, owning importers & ripening facilities in key markets
 - **Geographically diversified** across major production areas to extend supply season
 - **Diversified across multiple products** and/or **product upgraded** into higher value crops and product segments (e.g. avocados, cherries, or organic)
 - Increased **capital intensity** of operations to enhance efficiencies and meet standards of demanding customers

PERU IN THE FRESH FRUIT & VEGETABLES GVC

Fruit & Vegetables Exports by Leading Peruvian Exporters, 2002-2012



Source: Fernandez-Stark, Karina, Penny Bamber and Gary Gereffi. 2016. "Peru in the Table Grape Global Value Chain: Opportunities for Upgrading." Washington, D.C.: The World Bank.

One of the three fastest growing exporters globally: 2002:US \$325M exports; 2017: US\$3.8B

- Entry into GVC has created **significant opportunities for local firms** & labor alike
- **Local firms** have grown & diversified into higher value products
 - Began with **asparagus**, followed by **citrus**, then **avocados** and **grapes**, and now into **blueberries**.
 - New higher value activities in logistics
- **Labor:** 1.5 million new direct jobs
 - **temporary but formal** & access to social protection benefits

LOW TECH MANUFACTURING GLOBAL VALUE CHAINS: APPAREL

- **Central American economies** have highest participation in apparel closely linked with US firms & markets (e.g. cotton t-shirts)
 - All countries perform similar roles in the GVC (i.e., apparel assembly)
 - Textile production more advanced in Honduras, Guatemala and El Salvador compared to Nicaragua.

Central American in Textile & Apparel GVC

Design	Raw Materials	Trim	Yarn	Fabric	Final Products	Branding	Honduras
Design	Raw Materials	Trim	Yarn	Fabric	Final Products	Branding	Guatemala
Design	Raw Materials	Trim	Yarn	Fabric	Final Products	Branding	El Salvador
Design	Raw Materials	Trim	Yarn	Fabric	Final Products	Branding	Nicaragua

Source: Bamber, Penny and Stacey Frederick. 2018. "Central America in Manufacturing Global Value Chains." Vol. Durham, N.C.: Duke Global Value Chains Center.

But overall, region has **lost competitiveness** in the sector with the exceptions of those supported by preferential trade agreements (e.g. Nicaragua & Haiti)

ADVANCED MANUFACTURING GVCS

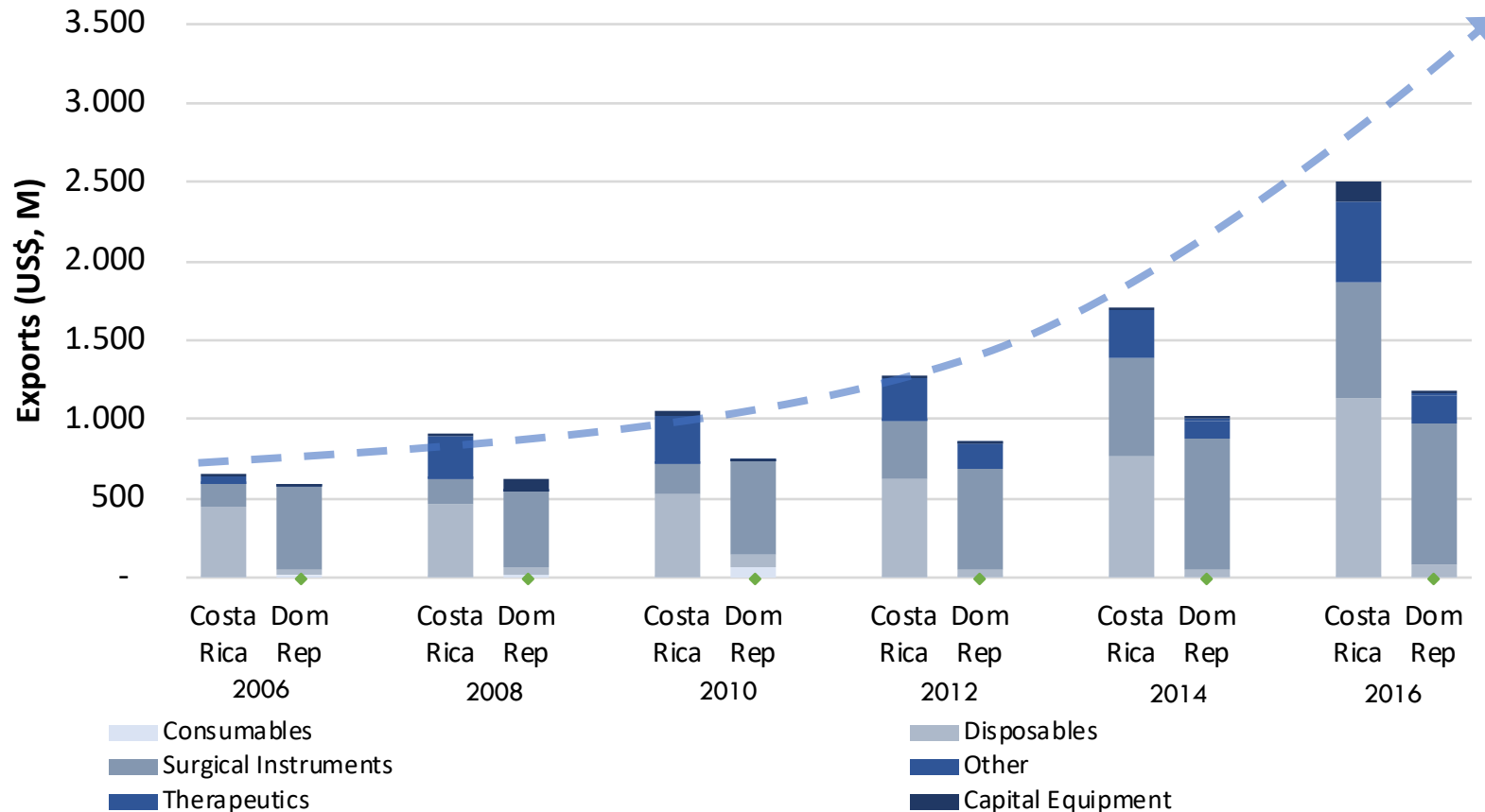
- LAC participation in advanced manufacturing GVCs is **concentrated in Central America, Mexico and Brazil**
 - Automotive (Brazil, Mexico & Central America)
 - Aerospace (Mexico, Brazil)
 - Medical Devices (Mexico, Costa Rica, Dominican Republic, Brazil)
- **Entry in assembly**; upgrading mainly through **diversifying products & adopting new technologies**

Simplified Manufacturing Global Value Chain



COSTA RICA & DOMINICAN REPUBLIC IN MEDICAL DEVICES GVC

Upgrading in Costa Rica and the Dominican Republic Medical Devices GVC



Source: Bamber and Hammrick, 2019. Gender Dynamics and Upgrading in Global Value Chains: The Case of Medical Devices. World Bank, Washington, D.C.

Largest export sector in both economies

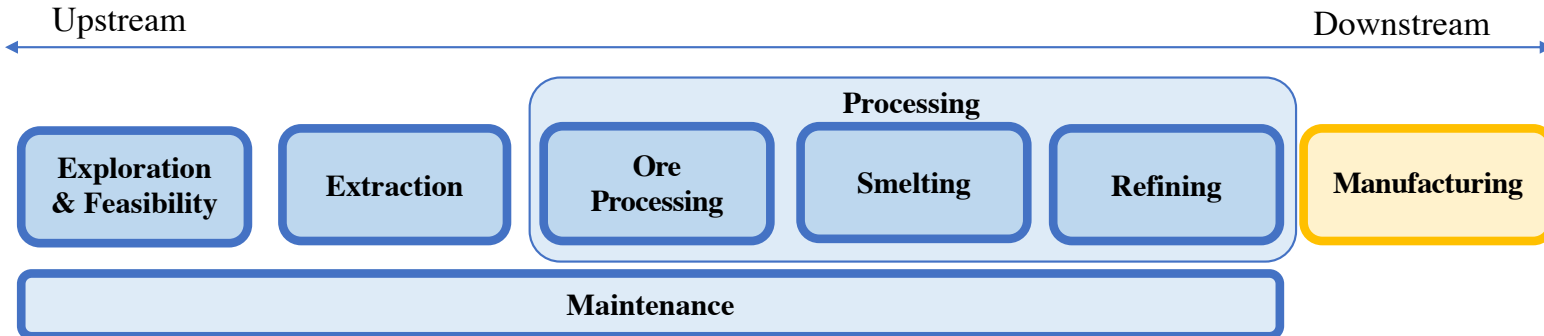
- 2017: +17% in Costa Rica; +14% Dominican Republic

Small, but **skilled workforce** with strong female participation

- 16.4K in Costa Rica; 20.7K in Dom. Rep.

EXTRACTIVE INDUSTRIES

Figure 1. Simplified Mining Global Value Chain

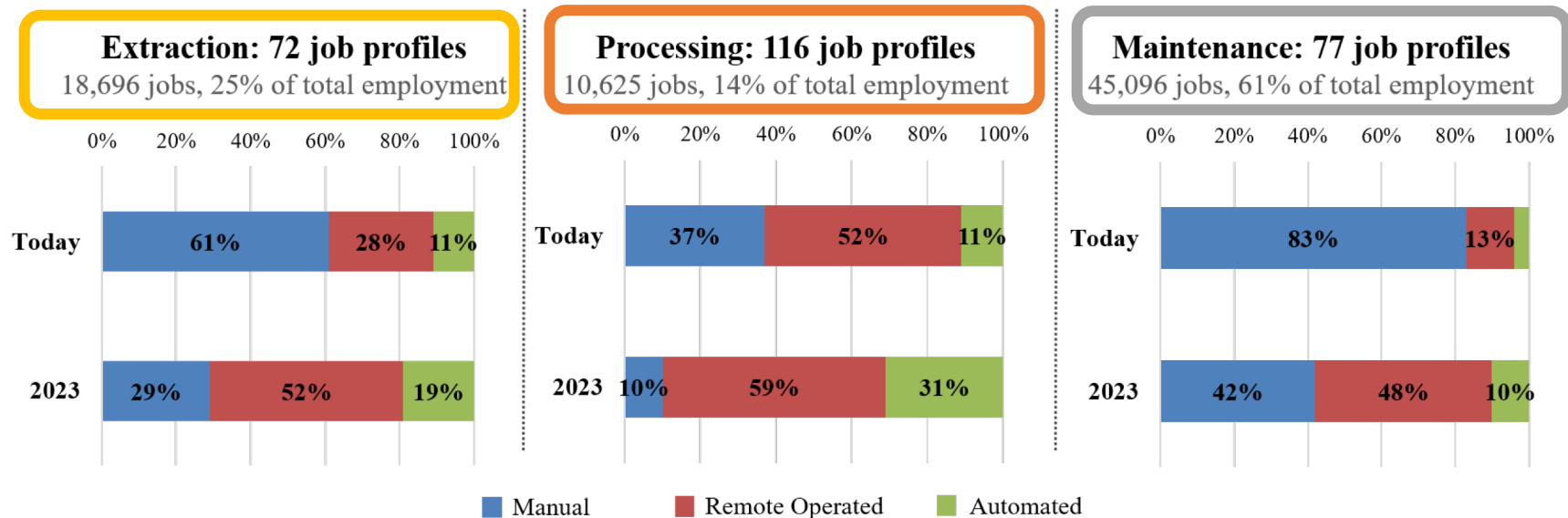


- Major driver of GVC participation
 - **Mining: Chile** → world's largest producer of copper **Peru** → 2nd-largest silver producer & 3rd-largest copper producer
 - **Oil and gas**: Argentina, Brazil, Guyana, Mexico, Suriname & Trinidad & Tobago
- Specific value chain stage differs by country and resource:
 - E.g. Peru → extraction stage; Chile → extraction & processing
 - Argentina, Mexico & Brazil → mid-stream processing (petrochemicals and steel)
- Key contributor to downstream industries, but capital intensity creates **fewer opportunities for local firms and job creation**

CHILE IN THE COPPER MINING GVC

- Chile is a **world leader in the mining GVC**; **pioneer in technology adoption** in the sector amongst developing economies
- In 2018: Small number of direct jobs: 200,000 & **2% of national employment** → but **well-compensated, semi-skilled & skilled**
- Sector is adopting new **digital technologies ushering in new types of jobs**
 - Higher cognitive skills, emotional & social & digital

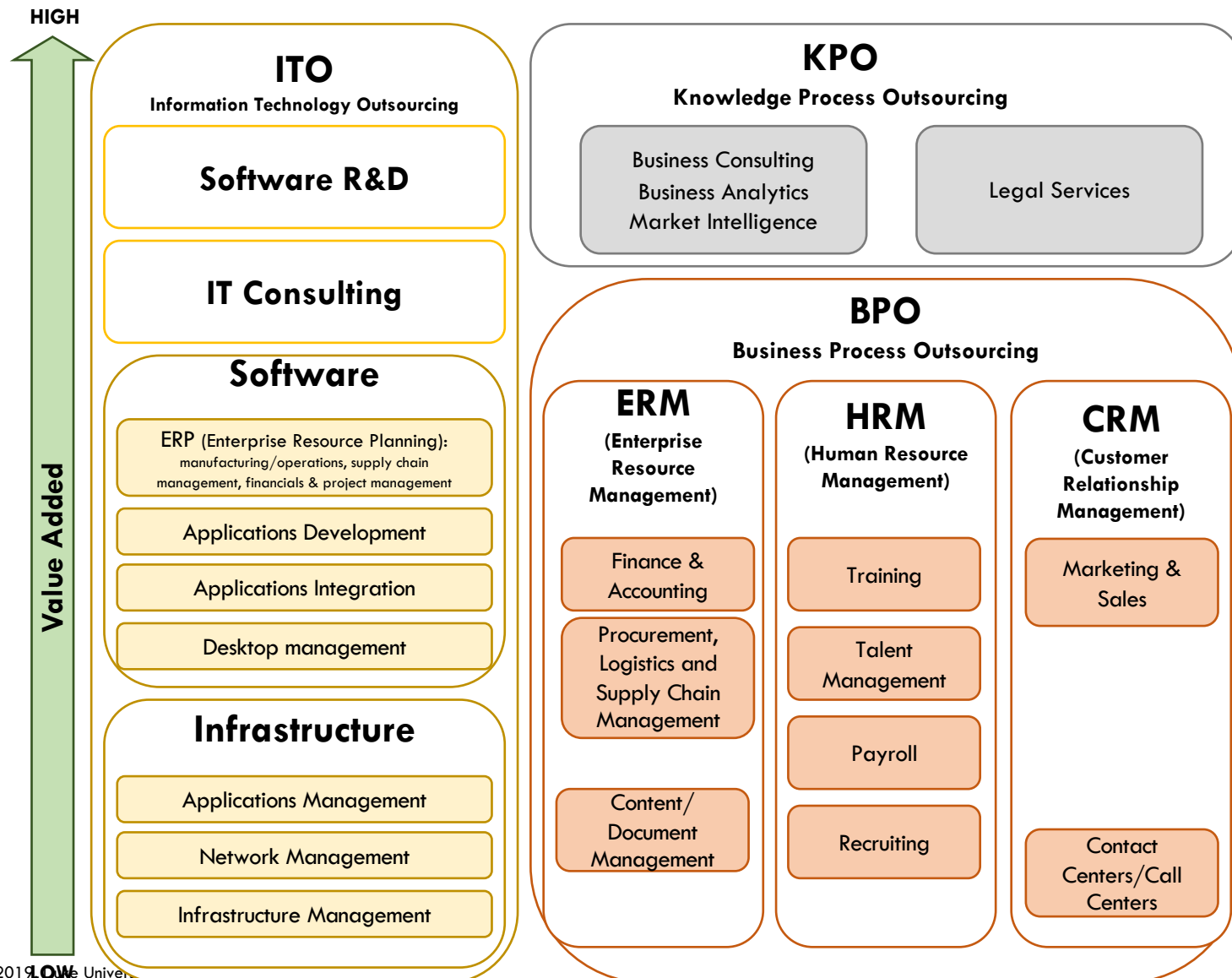
New Technology Impacts on Job Profiles in Chile's Mining GVC, 2017



Source: Consejo de Competencias Mineras (2018)

Offshore Services Global Value Chain

Horizontal Activities



Vertical Activities ^a Industry specific ^b

Banking, Financial Services and Insurance (BFSI)

Ex. Investment research, private equity research, and risk management analysis

Manufacturing

Ex. Industrial Engineering and sourcing and vendor management

Telecommunications

Ex. IP transformation, Interoperability testing and DSP and multimedia

Energy

Ex. Energy Trading and Risk Management, and Digital oil field solutions

Travel & Transportation

Revenue management systems, customer loyalty solutions

Health/Pharma

Ex. R&D, clinical trials, medical transcript

Retail

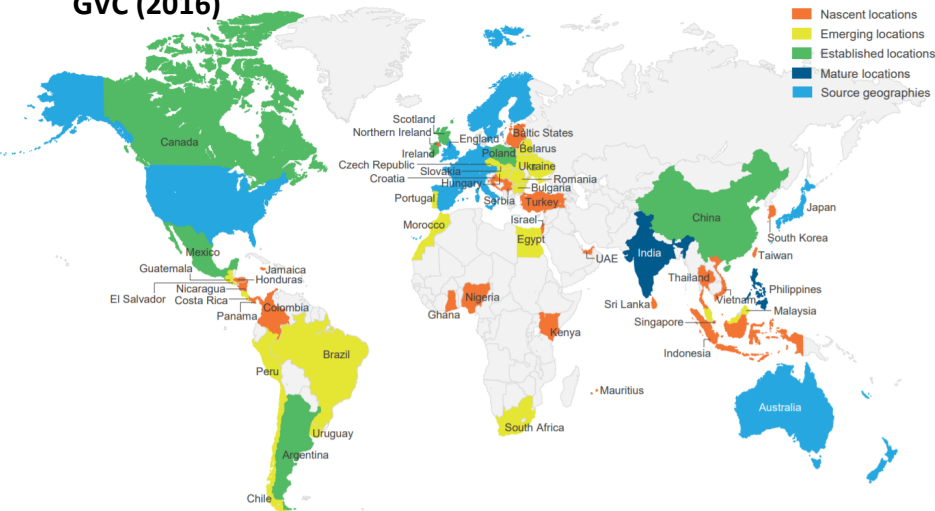
eCommerce and Planning, merchandising and demand intelligence

Others

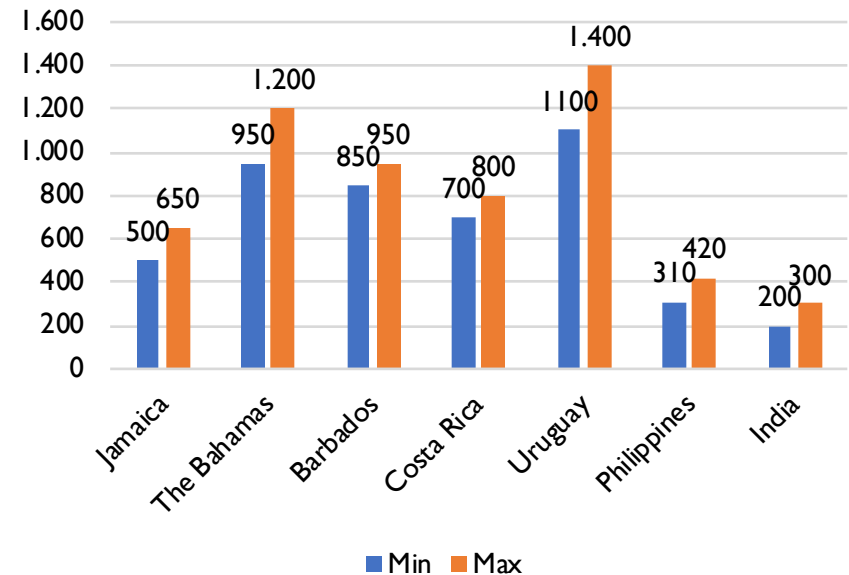
LAC IN THE OFFSHORE SERVICES GVC

- In 2016 LAC: 20% of the global market; 20% of recent global call center employment creation
- Led by Brasil, Argentina, Costa Rica, México, Chile, Panamá, Uruguay,
- Participation varies by country but focused primarily on ITO (Mexico, Chile, Uruguay) and BPO (Costa Rica, Guatemala, Colombia)

Dynamics of supply and demand in the Offshore Services GVC (2016)



Comparison of Salaries in Select LAC Countries for entry-level non-voice BPO (US\$/month), 2016



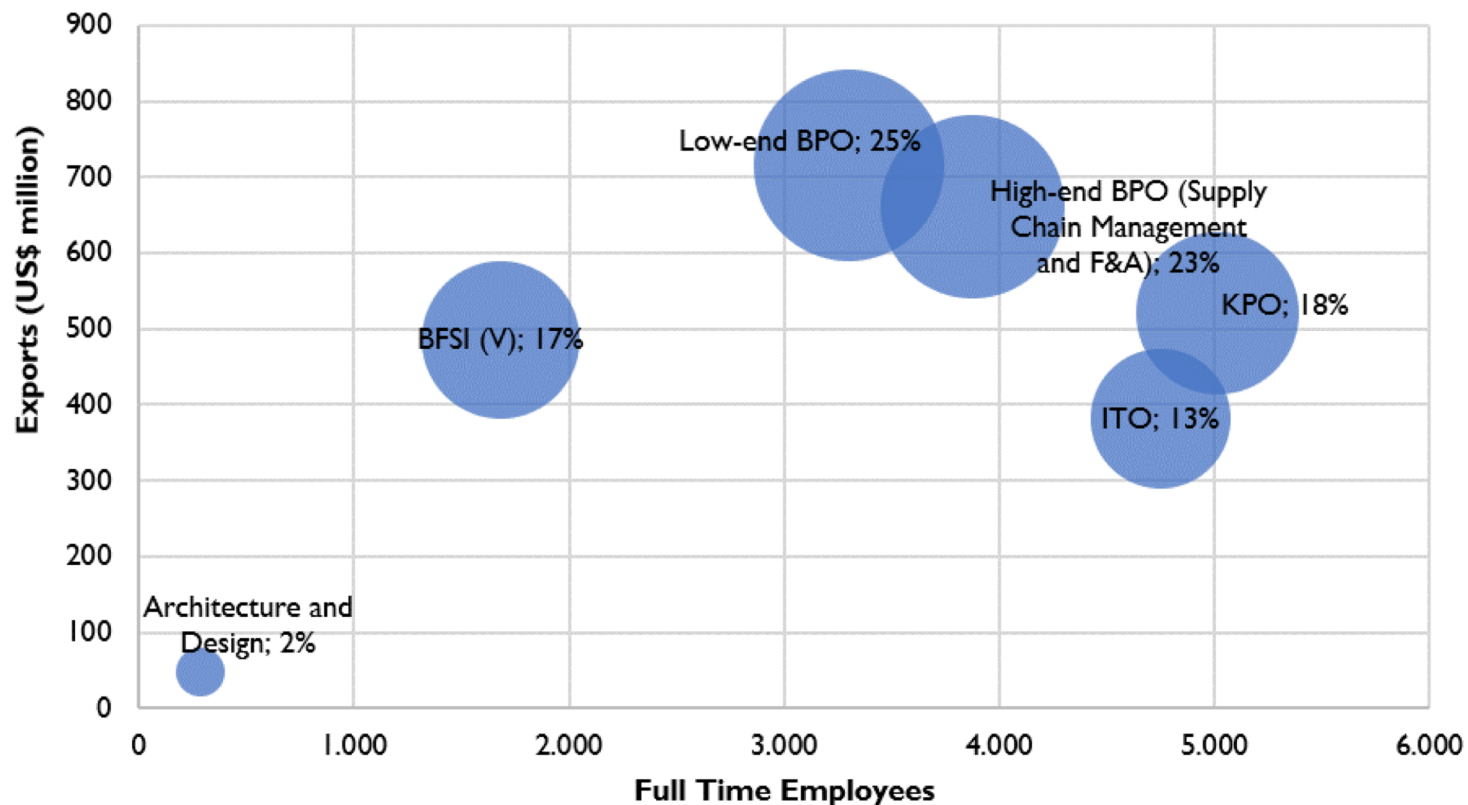
Source: (Everest Group, 2017f).

Source: Authors based on (Tholons, 2016; Uruguay XXI, 2017b).

URUGUAY IN THE OFFSHORE SERVICES GVC

- High per capita exports: **US\$240K/employee**
 - 2017: Highest IT exports/per capita in the region.
- Specialized **industry-specific software for Banking, Finance & Insurance (BFSI)**, maritime and livestock (traceability system) verticals.

Uruguay's Offshore Services Exports and Employment, by Segment



Source: Duke GVC Center (2018), based on (Uruguay XXI, 2017b).

Notes: The size of the bubble indicates the share of each segment in the offshore services industry.

IN CLOSING

- Impacts of GVC participation is **considerably higher** than the aggregate, comparative trade in value added data suggests
- Despite the region's relatively weak participation in manufacturing, specific countries are **upgrading into** the **highest value stages of the GVCs** in which they do participate
- This has had a **notable impact on exports, job creation and opportunities for local firms**

THANK YOU

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