



GLOBAL FORUM

ON INTERNATIONAL TRADE STATISTICS AND ECONOMIC GLOBALIZATION

UNITED NATIONS
STATISTICS DIVISION 
Trade Statistics Branch
comtrade@un.org
tradeserv@un.org

Linking Trade Statistics and the Business Register in a developing country: the INEC – UNSD project

Ronald Jansen and Luis Gonzalez, UNSD
Odilia Bravo and Ana Umana, INEC



Theoretical Background

- Global Shift - Peter Dicken (2011, 6th edition)
- Joining, Upgrading and Being Competitive in Global Value Chains – Cattaneo, Gereffi, Miroudot, Taglioni (2013)
- Global Value Chains and Economic Globalization – Timothy Sturgeon (2013)



GLOBAL FORUM

ON INTERNATIONAL TRADE STATISTICS AND ECONOMIC GLOBALIZATION

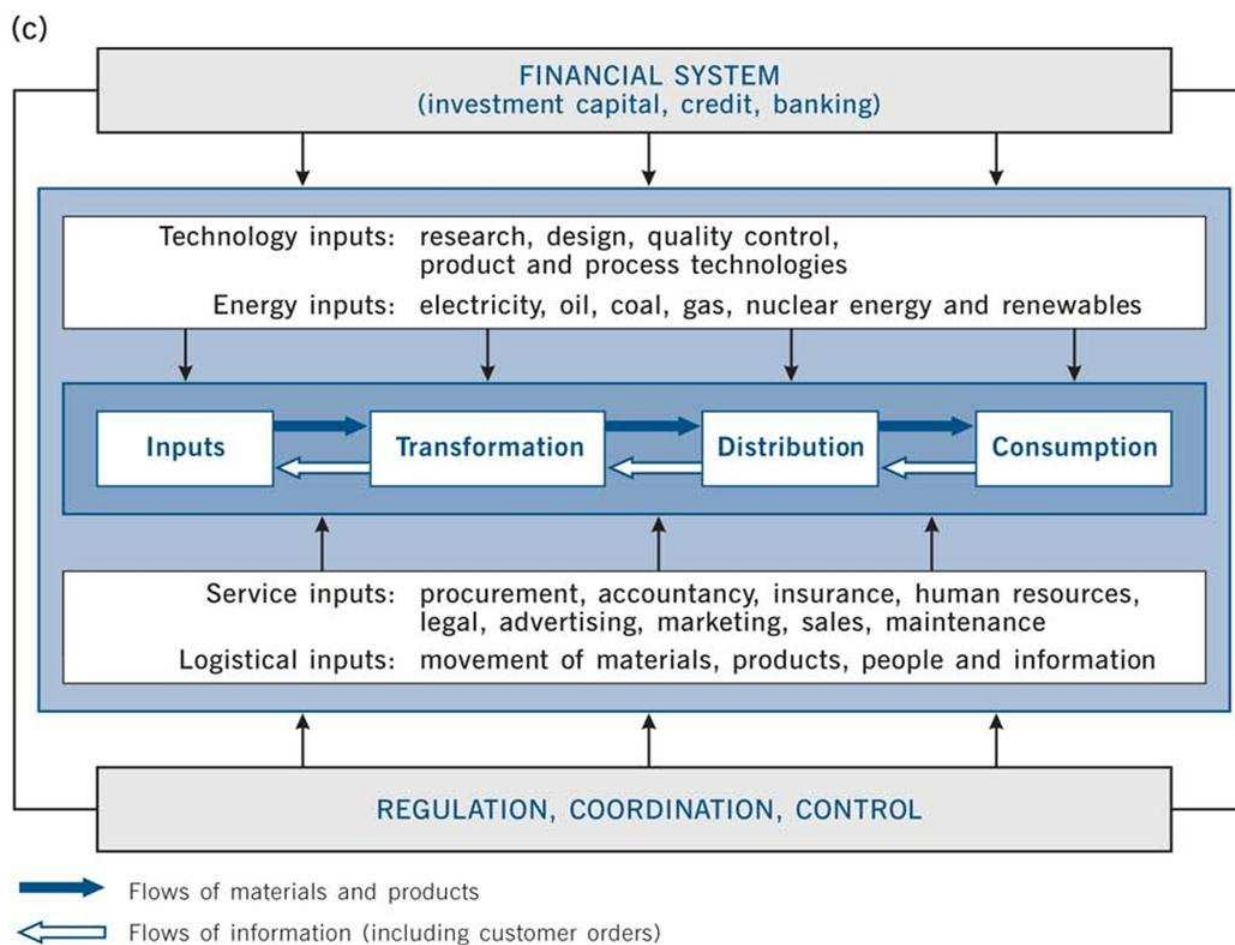


Figure 3.3 The basic components of a production circuit



GLOBAL FORUM

ON INTERNATIONAL TRADE STATISTICS AND ECONOMIC GLOBALIZATION

UNITED NATIONS
STATISTICS DIVISION
Trade Statistics Branch
comtrade@un.org
tradeserv@un.org

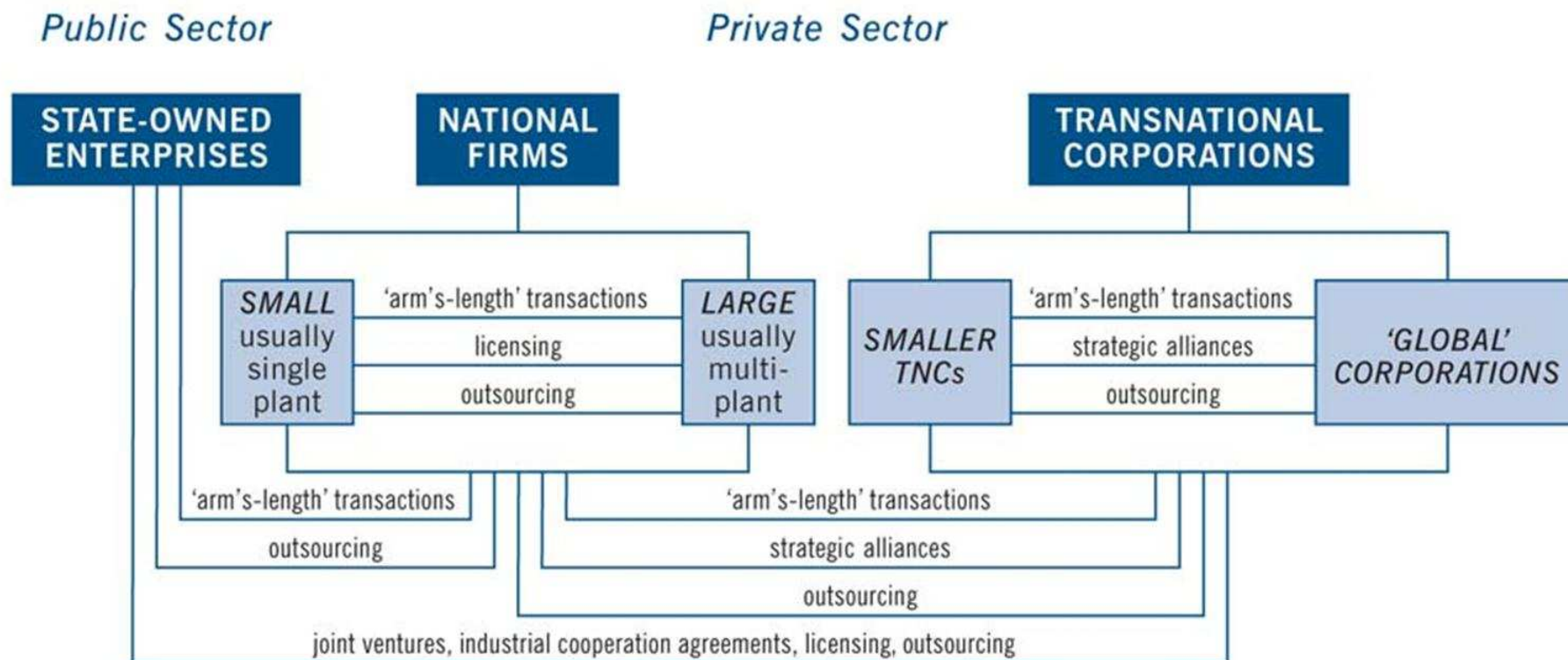


Figure 3.5 Types of firms in an economy



GLOBAL FORUM

ON INTERNATIONAL TRADE STATISTICS AND ECONOMIC GLOBALIZATION

Figure 6. A simple value chain with sourcing possibilities and data resources

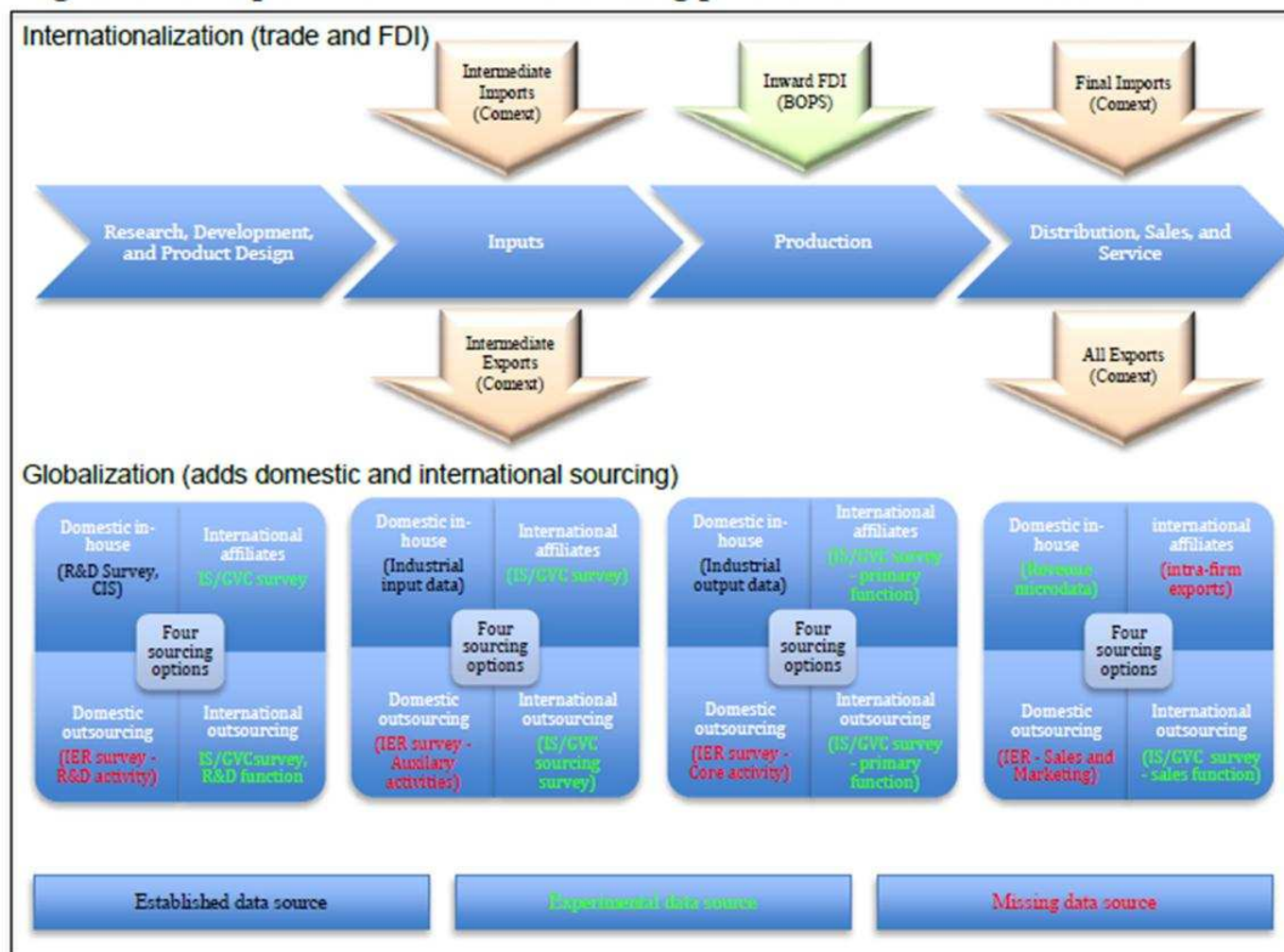


Figure 21. Offshore services upgrading trajectories for selected countries

Type	Diagram	Description
Entry into the Value Chain		<ul style="list-style-type: none"> Common way to enter the offshore services value chain is through the establishment of call center operations. Opportunity for low-income countries to enter into the knowledge economy. <p>Recent examples of countries entering the value chain through call centers include El Salvador (Dell, Sykes and Teleperformance), Nicaragua (Sitel), Panama (HP and Caterpillar) and Guatemala (Exxon Mobil, ACS and 24/7 Customer) (Gereffi et al., 2009).</p>
Upgrading within the BPO Segment (Functional Upgrading)		<ul style="list-style-type: none"> Companies expand their BPO services within the segment. Improving and expanding call centers operations or specialization in certain areas. <p>South Africa has been an important destination for BPO services currently employing around 87,000 people and growing at 33% per year. South Africa is actively working in expanding their BPO activities (Everest Group and Letsema Consulting, 2008; Sykes, 2010).</p>
Broad Spectrum Services (Functional Upgrading)		<ul style="list-style-type: none"> Companies positioned in the ITO and KPO segments may opt to provide a more comprehensive range of activities and include BPO services. Acquisitions of smaller BPO firms and/or creating a new business unit within the company. <p>India has seen a number of firms in the IT and consulting (KPO) segment expand to the BPO sector. This is true for both big domestic firms like Infosys, Wipro and also foreign firms located in India like IBM and Accenture among others.</p>
Upgrading from ITO to KPO functions (Functional Upgrading)		<ul style="list-style-type: none"> IT service firms include KPO activities in their portfolio. IT companies engage customers to find solutions for unsolved business problems. <p>For example, between 2002 and 2005, Indian firms Infosys, Wipro, TCS and WNS amongst others developed and launched business consulting services practices.</p>
Industry Specialization (Intersectoral Upgrading)		<ul style="list-style-type: none"> Companies offering some ITO, BPO and KPO services for a wide range of industries start specializing and focus on key industries to develop expertise. <p>The Czech Republic, which entered into the offshore services industry through the establishment of BPO shared services activities, has quickly upgraded into R&D segments of vertical industries, particularly in the automotive, aerospace and IT areas (Business and Innovation Center- Brno, 2009).</p>

Source: Fernandez-Stark, Bamber, and Gereffi, 2011b

Upgrading within the BPO Segment (Functional Upgrading)



- Companies expand their BPO services within the segment.
- Improving and expanding call centers operations or specialization in certain areas.

South Africa has been an important destination for BPO services currently employing around 87,000 people and growing at 33% per year. South Africa is actively working in expanding their BPO activities (Everest Group and Letsema Consulting, 2008; Sykes, 2010).



Costa Rica and Global Value Chains

- Costa Rica: Trade Opening, FDI Attraction and Global Production Sharing (Monge, Jan 2011)
- Costa Rica's Global Value Chains in the Global Economy (Duke University, Jan 2012)
- Latin America's Prospects for Upgrading in Global Value Chains (Mexico, Mar 2012)

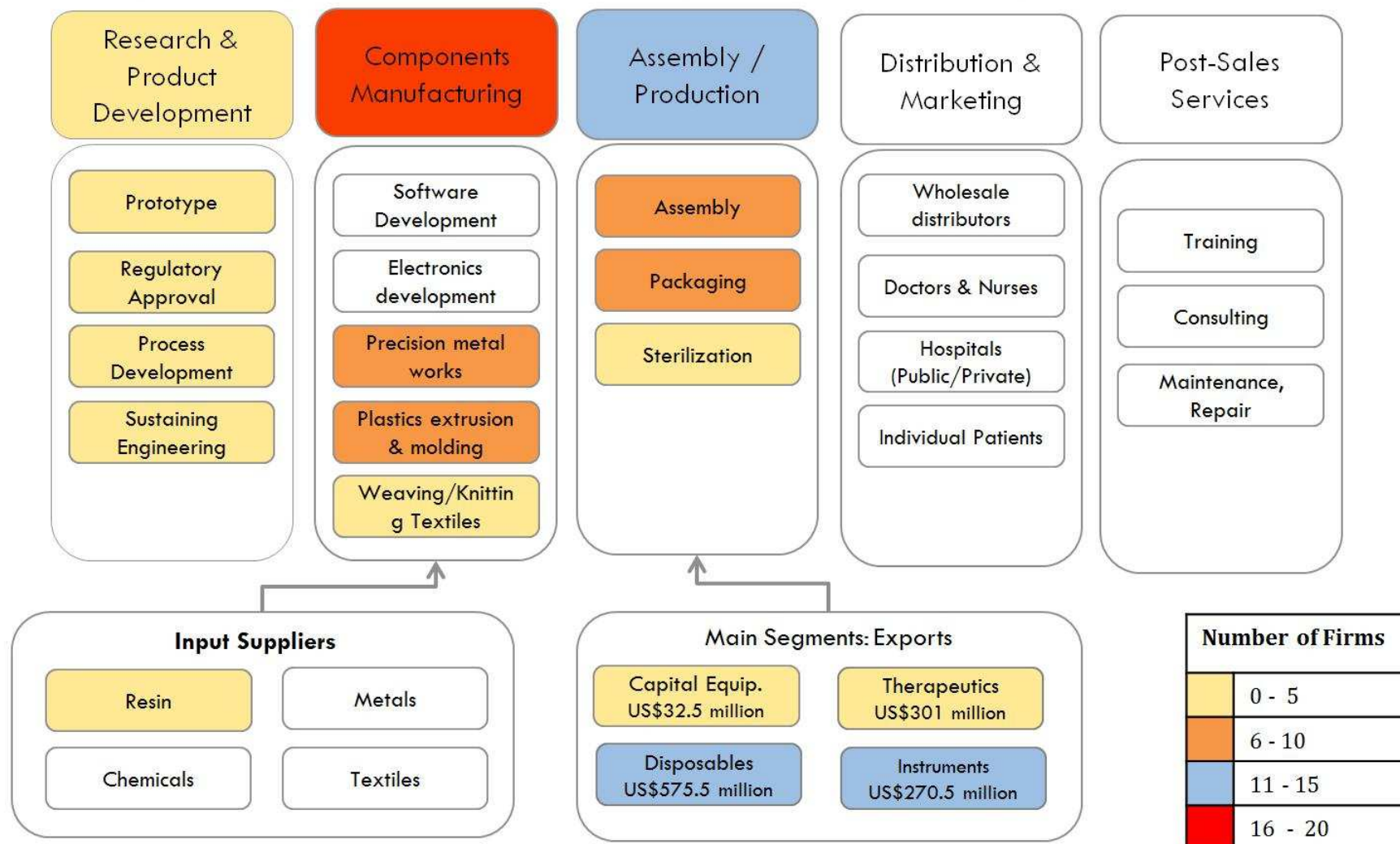


GLOBAL FORUM

ON INTERNATIONAL TRADE STATISTICS AND ECONOMIC GLOBALIZATION

UNITED NATIONS
STATISTICS DIVISION
Trade Statistics Branch
comtrade@un.org
tradeserv@un.org

Costa Rica's Position in the Medical Devices GVC



Local firms are mainly in packaging & support services (12 of 19) versus 4 in limited role in plastics molding & metal finishing



Costa Rica – Policy Questions

- Understand the role Costa Rica currently plays in three high priority GVCs;
- Identify potential upgrading trajectories for Costa Rica to increase the value of its participation in these GVCs; and
- Based on these outcomes, identify the set of public policies that should be implemented to consolidate, increase and strengthen Costa Rica's integration in industrial GVCs



Costa Rica – Policy Questions

- Evolution of FDI and Exports
- Structure of FDI by country of origin
- Structure of Economic Activity by country of export
- Domestic production of GVC Exports
- Distribution of services purchased by firms participating in GVCs



Improving Data Availability – By linking Trade data and Business Register

- Since May 2012, UNSD works with INEC to link the Business Register of Costa Rica (maintained by INEC) with the detailed Customs data (processed by the Customs administration in cooperation with INEC)
- The cooperation has resulted in the creation of a first micro-level dataset for the monthly trade statistics of December 2011-April 2012
- Improved micro-level dataset on monthly trade statistics for June - December 2012

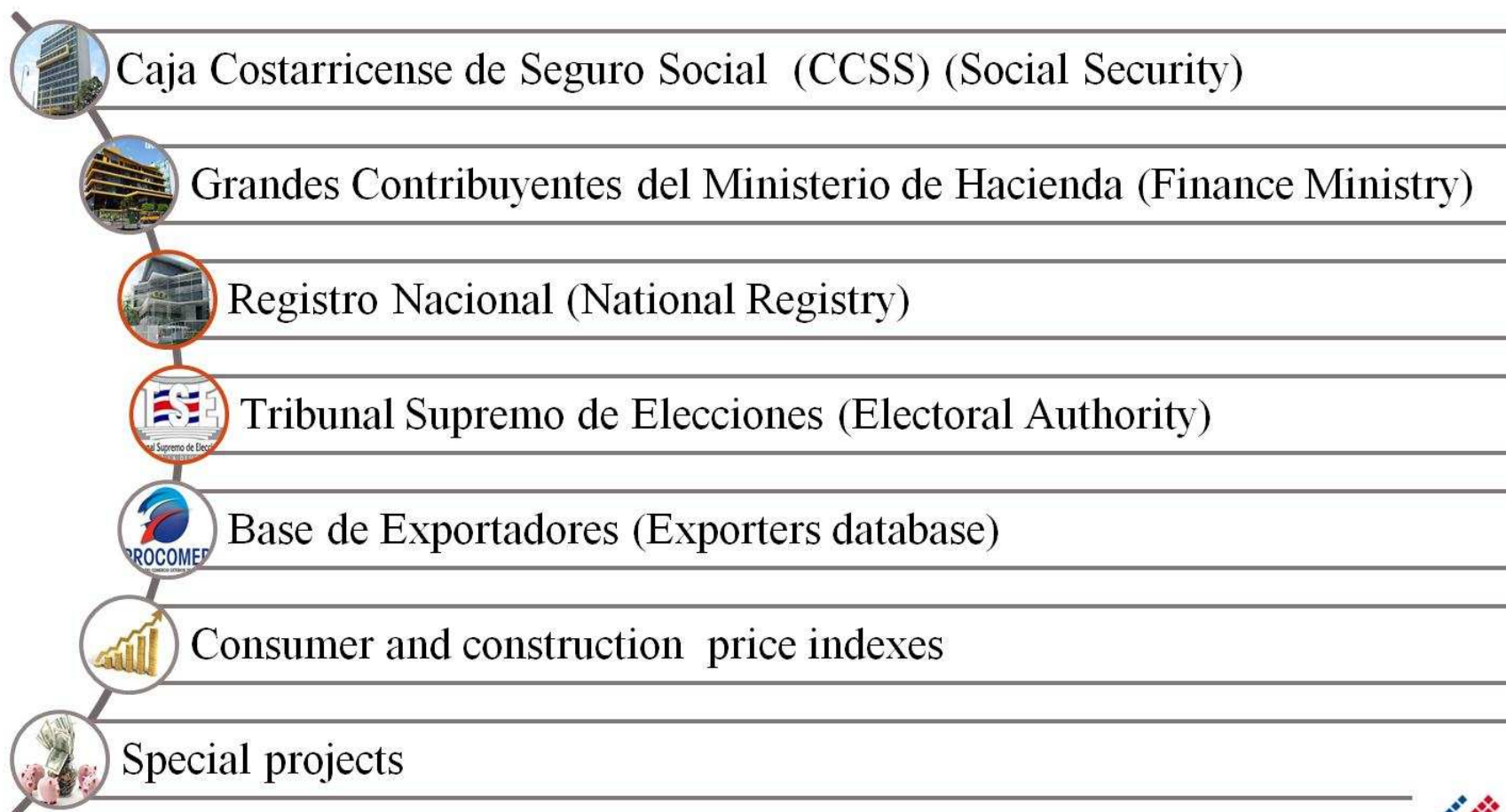


GLOBAL FORUM

ON INTERNATIONAL TRADE STATISTICS AND ECONOMIC GLOBALIZATION

UNITED NATIONS
STATISTICS DIVISION
Trade Statistics Branch
comtrade@un.org
tradeserv@un.org

Business Register (DUIE) – Data sources





GLOBAL FORUM

ON INTERNATIONAL TRADE STATISTICS AND ECONOMIC GLOBALIZATION

Main enterprise

- Province, county, district
- Comercial name
- Legal name
- ID number (unique)
- **BUSINESS ADDRESS**
- Main phone number
- Main Fax number
- Web site
- E-mail
- **NUMBER OF EMPLOYEES**
- **MAIN ACTIVITY DESCRIPTION**
- **MAIN ACTIVITY ISIC REV.4 CODE**
- **START OF OPERATIONS (YEAR)**
- Contact/informant name

Same-location activities

- Activity description
- ISIC Rev.4 code
- **ACTIVITY PRODUCTION COSTS ESTIMATION**
- Number of employees

Other-location activities

- Province, county, district
- Commercial name
- Legal name
- ID number (unique)
- Business address
- Main phone number
- E-mail
- Number of employees
- Main activity description
- Main activity ISIC Rev.4 code
- Start of operations (year)
- Contact/informant name



		All Business Register	
	Main activity	No. of firms	No. of employees
A	Agriculture, forestry and fishing	3,791	87,982
01	Crop and animal production	3,608	85,069
02	Forestry and logging	132	1,567
C	Manufacturing	4,257	144,706
10	Manufacture of food products	1,078	48,328
14	Manufacture of wearing apparel	559	7,949
25	Manufacture of fabricated metal products	441	6,043
26	Manufacture of computer, electronics	40	6,531
27	Manufacture of electrical equipment	37	4,477
	Wholesale and retail trade;		
G+H	Transport, warehousing, and support activities	18,668	201,935
46	Wholesale trade, except motor vehicles	2,471	58,966
47	Retail trade, except of motor vehicles	11,663	88,411
	Other activities	19,277	318,907
	Hotel and Restaurants	4,892	
	Professional and scientific services	2,472	
	Social and Health services	1,871	
	Unkown activity	2,988	15,771
	Non-matches	-	-
	TOTAL	48,981	769,301



Data model

Relationships among the units of the Business Register:





Results of second linking exercise (June – December 2012)

	Not linked	Linked	Total
Number of records	20,934	355,960	376,894
	5.6%	94.4%	100.0%
Value in '000 USD	130,354	3,248,470	3,378,824
	3.9%	96.1%	100.0%
Number of enterprises	n.a.	1,903	n.a.
Number of legal units	764	1,958	2,722
Number of establishments	n.a.	n.a.	n.a.

Main activity		All Business Register		Exporting enterprise		
		No. of firms	No. of employees	No. of firms	No. of employees	Value of exports (US\$)
A	Agriculture, forestry and fishing	3,791	87,982	294	40,283	216,690,448
01	Crop and animal production	3,608	85,069	279	38,698	210,146,426
02	Forestry and logging	132	1,567	8	688	5,289,339
C	Manufacturing	4,257	144,706	598	106,429	2,554,099,671
10	Manufacture of food products	1,078	48,328	137	34,661	447,071,957
14	Manufacture of wearing apparel	559	7,949	25	5,022	42,878,988
25	Manufacture of fabricated metal products	441	6,043	39	2,497	42,358,757
26	Manufacture of computer, electronics	40	6,531	21	6,369	787,049,178
27	Manufacture of electrical equipment	37	4,477	20	4,204	143,662,034
	Wholesale and retail trade; transport, warehousing, and support activities	18,668	201,935	739	55,190	387,741,850
46	Wholesale trade, except motor vehicles	2,471	58,966	591	30,086	349,309,112
47	Retail trade, except of motor vehicles	11,663	88,411	60	17,370	25,826,992
	Other activities	19,277	318,907	186	33,792	63,137,508
	Hotel and Restaurants	4,892				
	Professional and scientific services	2,472				
	Social and Health services	1,871				
	Unkown activity	2,988	15,771	71	864	24,375,886
	Non-matches	-	-	-	-	131,689,763
TOTAL		48,981	769,301	1,894	236,794	3,378,826,643



- **Trade data (exports)**

- Year / Month
- Customs office
- Commodity code
- Product Description
- Country of origin
- Country of destination
- Customs Procedure
- Transportation mode
- FOB Value
- Net Weight
- Gross Weight
- Legal Unit of exporter

- **Business Register**

- Location
- Number of employees
- Main activity description
- Main activity ISIC Rev.4 code
- Start of operations (year)
- Production Costs



Trade by Enterprise Analysis

- **Profile of Exported Products**
 - Major export companies and destinations, by value
 - Concentration of exports
 - Degree of diversification of destinations
 - Share in exports
 - totals
 - by destination
 - Value of exports
 - total
 - By size category exporters
 - By category of "age" of exporting companies
 - Exports / Total Production



Trade by Enterprise Analysis

- **Profile of Exporting Enterprises**
 - Major products and destinations, worth
 - Degree of diversification of products and destinations
 - Share in exports
 - by product
 - by destination
 - Total value of exports
 - Frequency of export activity
 - Size (number of employees)
 - Time from start of operations ("age" of the company)
 - Exports / Number of employees
 - Export / Total Sales



Way Forward

- Adding Trade in Services, FATS and FDI
- Reporting Template for Trade by Enterprise Statistics
 - General
 - Country specific
- Linking to Enterprise groups