

Increasing your chances of success while leaving your comfort zone: Adapting Sri Lanka's growth model

January 9th 2017

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President of Sri Lanka



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Prime Minister of Sri Lanka



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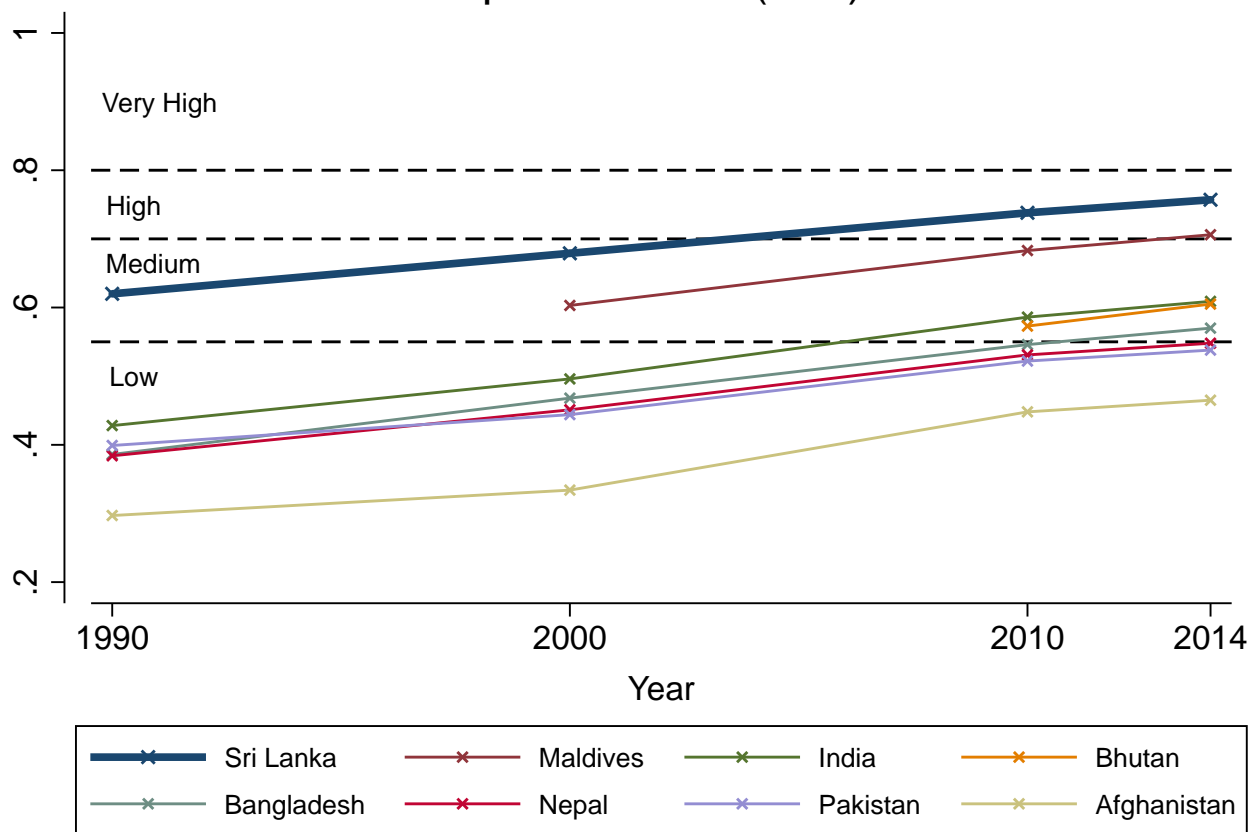


Kuchchaveli Tourism Team

SRI LANKA'S ACHIEVEMENTS AND CHALLENGES

Sri Lanka's path to middle income status has been strong and its efforts over the long-term in health and education delivery have been commendable.

Human Development Index (HDI) in South Asia



GDP per capita:
3,926 US\$ (2015)

Life expectancy:
74.8 (2014)

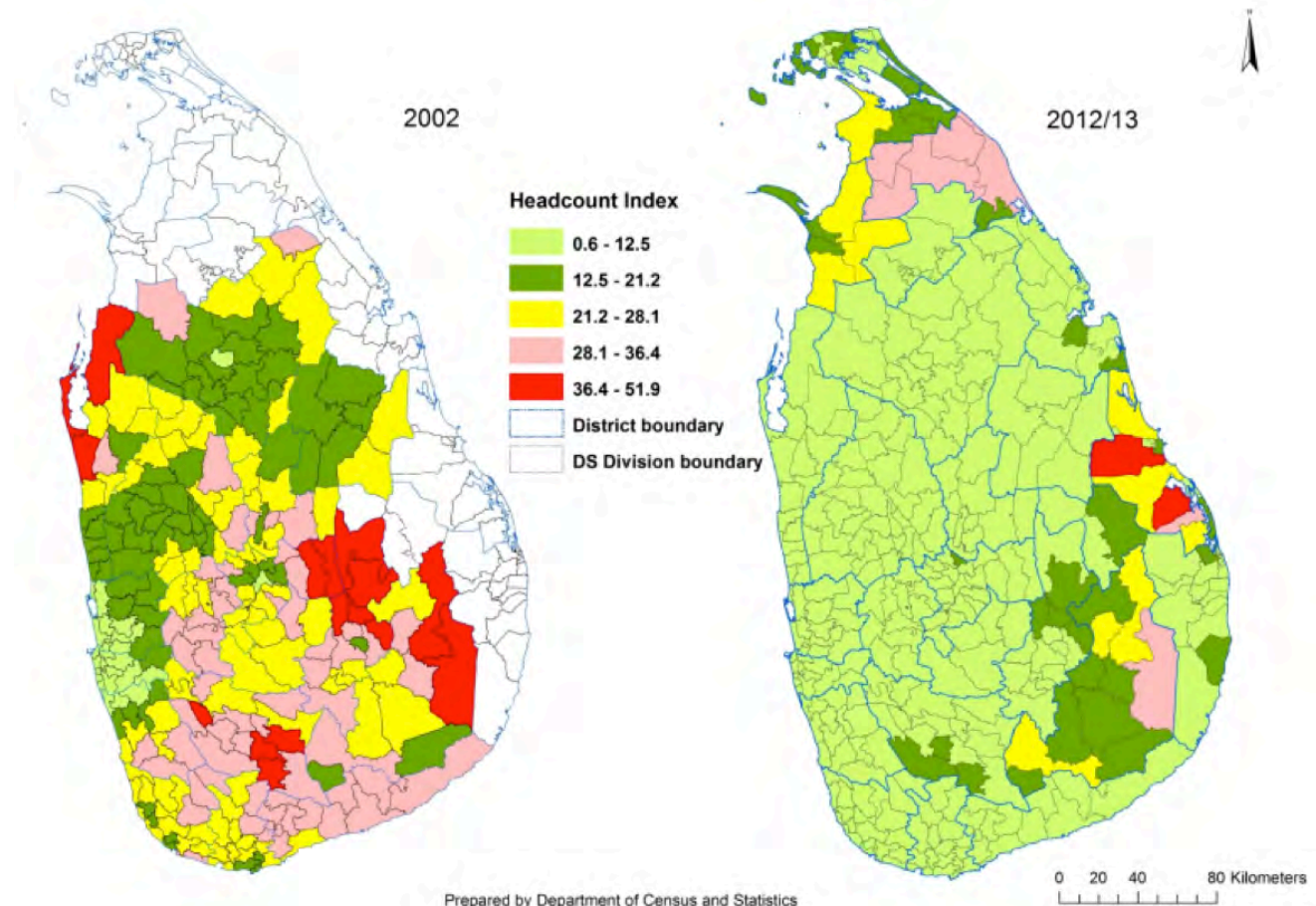
Adult literacy rate:
92.6 (2015)

Note: Sri Lanka's level of development is the highest in South Asia. Thus, the remainder of this analysis uses a different group of comparator countries.

Strong growth and the end of the conflict have been translated into poverty reduction throughout Sri Lanka.

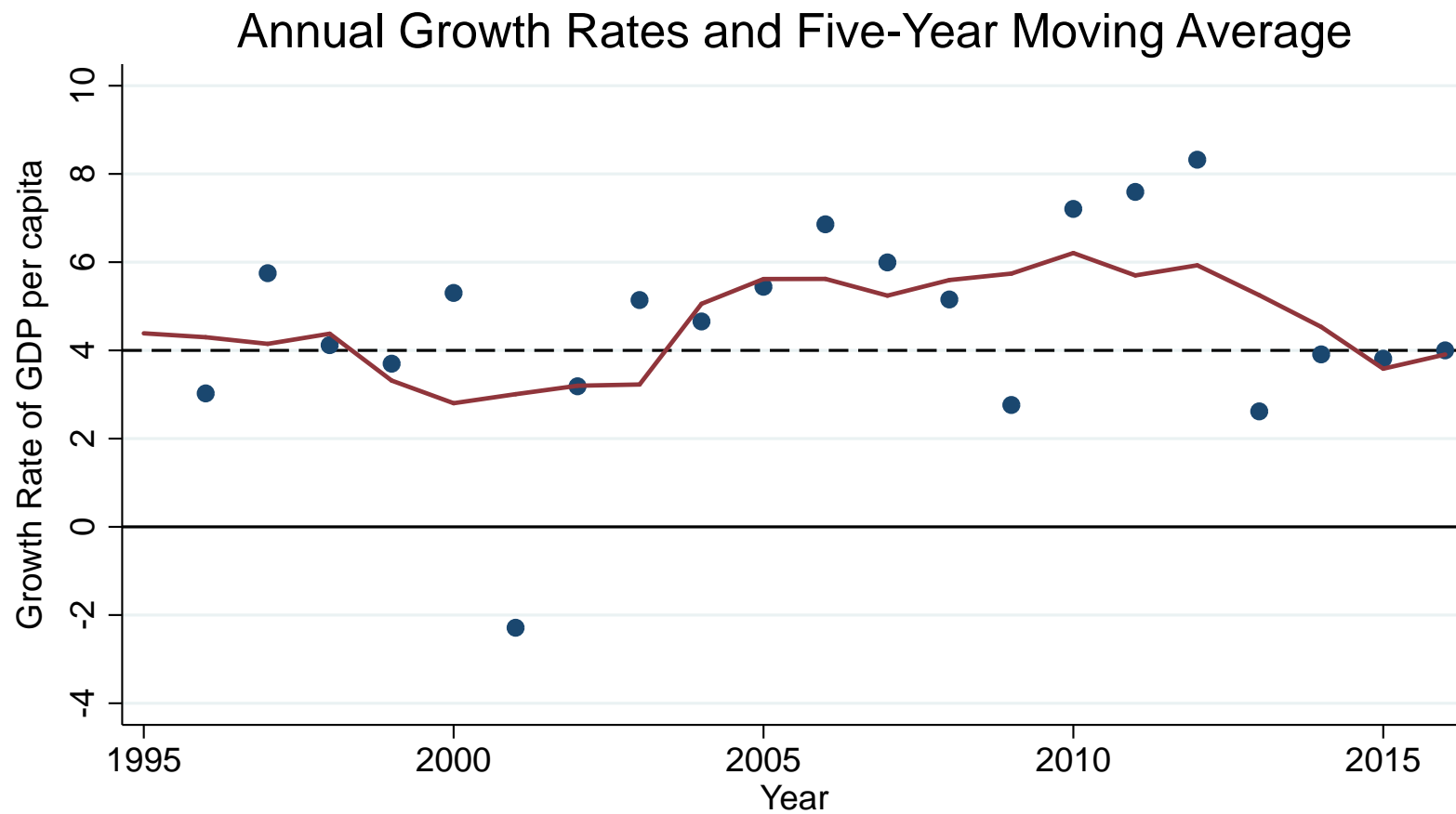
...but several parts of the country still remain left behind, and many people remain disconnected from the opportunities created by past growth.

Poverty headcount index in 2002 vs. 2012/13



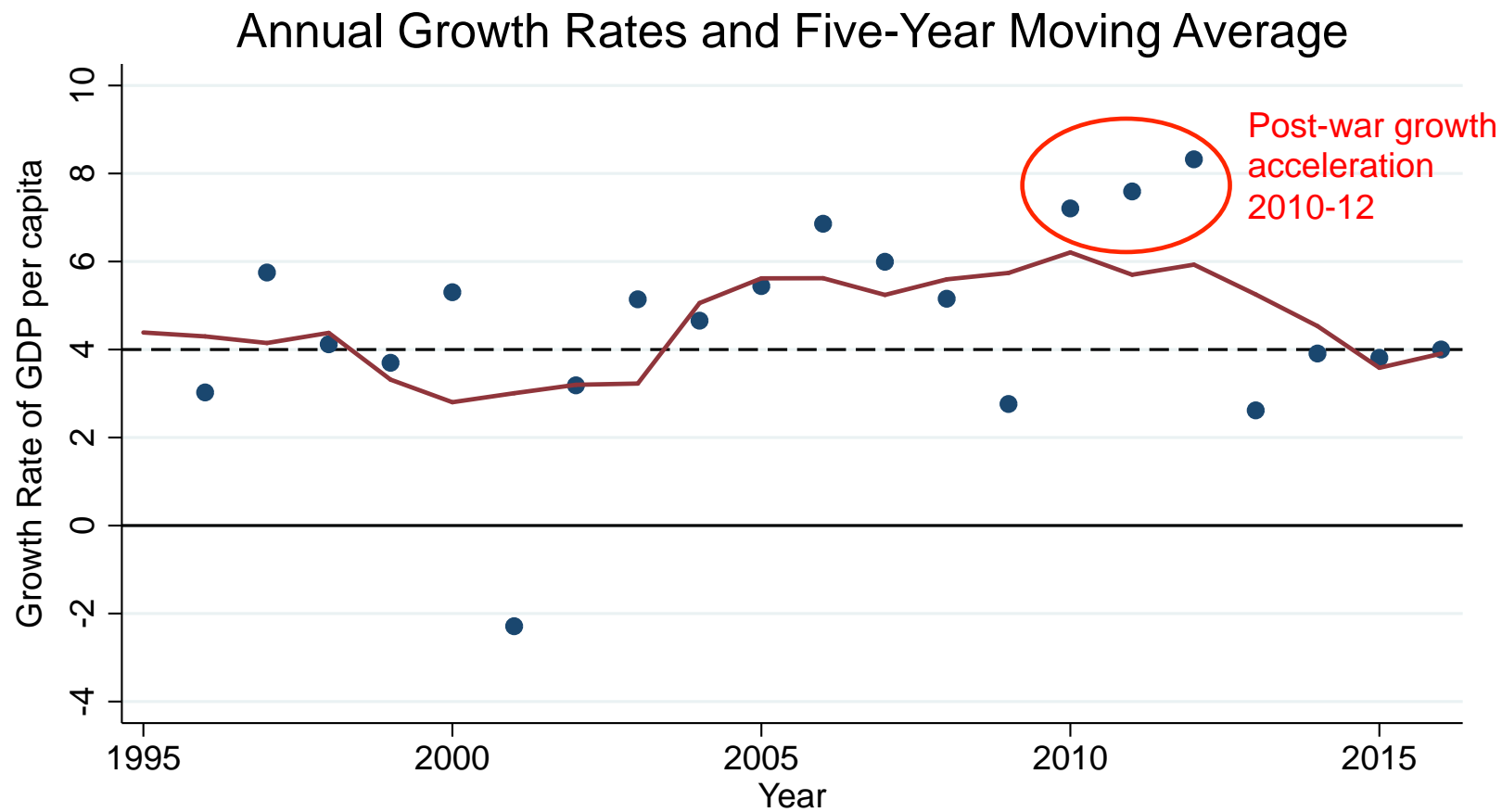
Source: Department of Census and Statistics

HOWEVER: per capita growth has slowed during the last four years



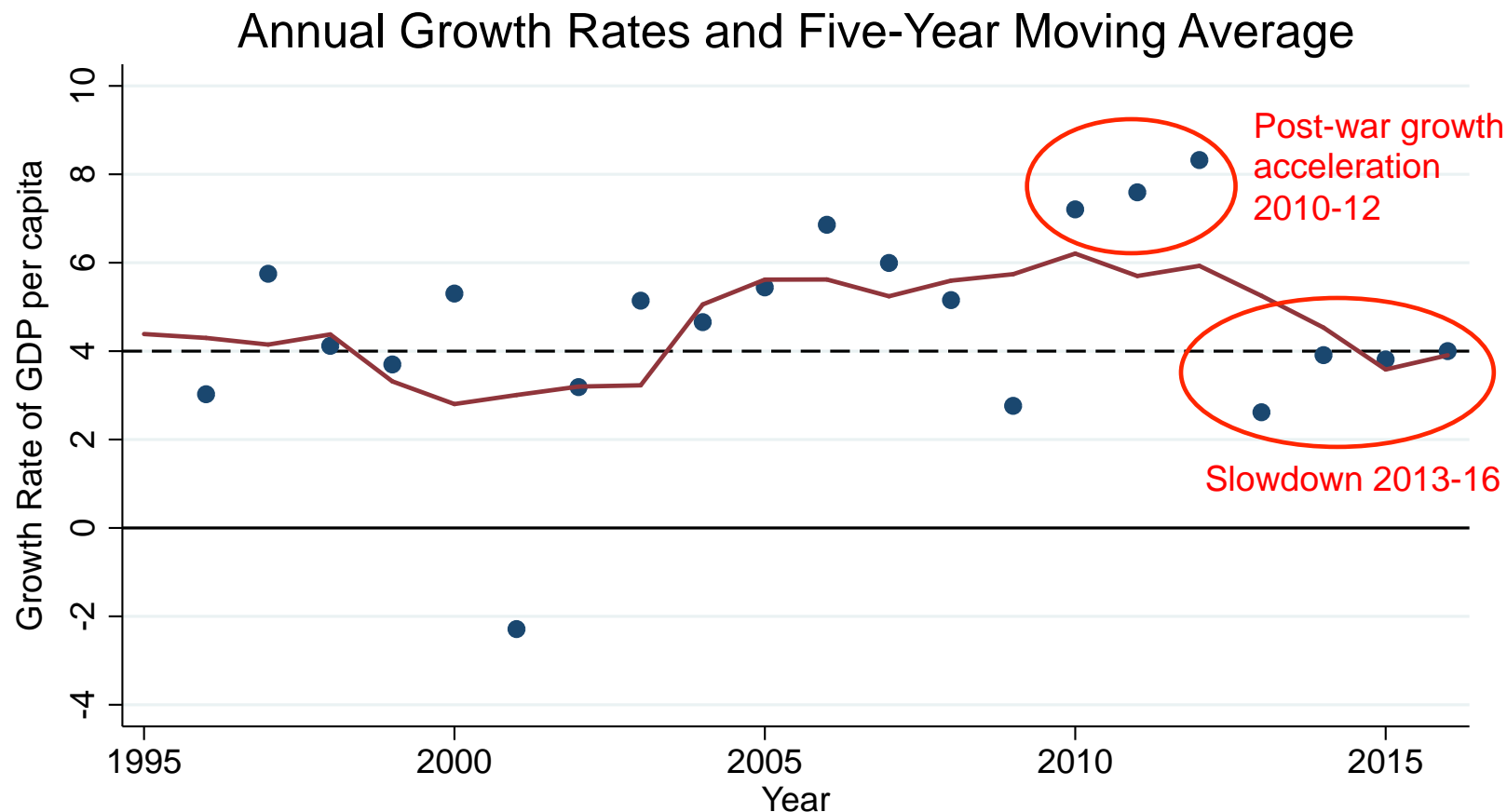
Note: GDP per capita as measured in constant 2010 US\$
Data sources: World Development Indicators through 2015 & predicted value for 2016 based on CBSL projections

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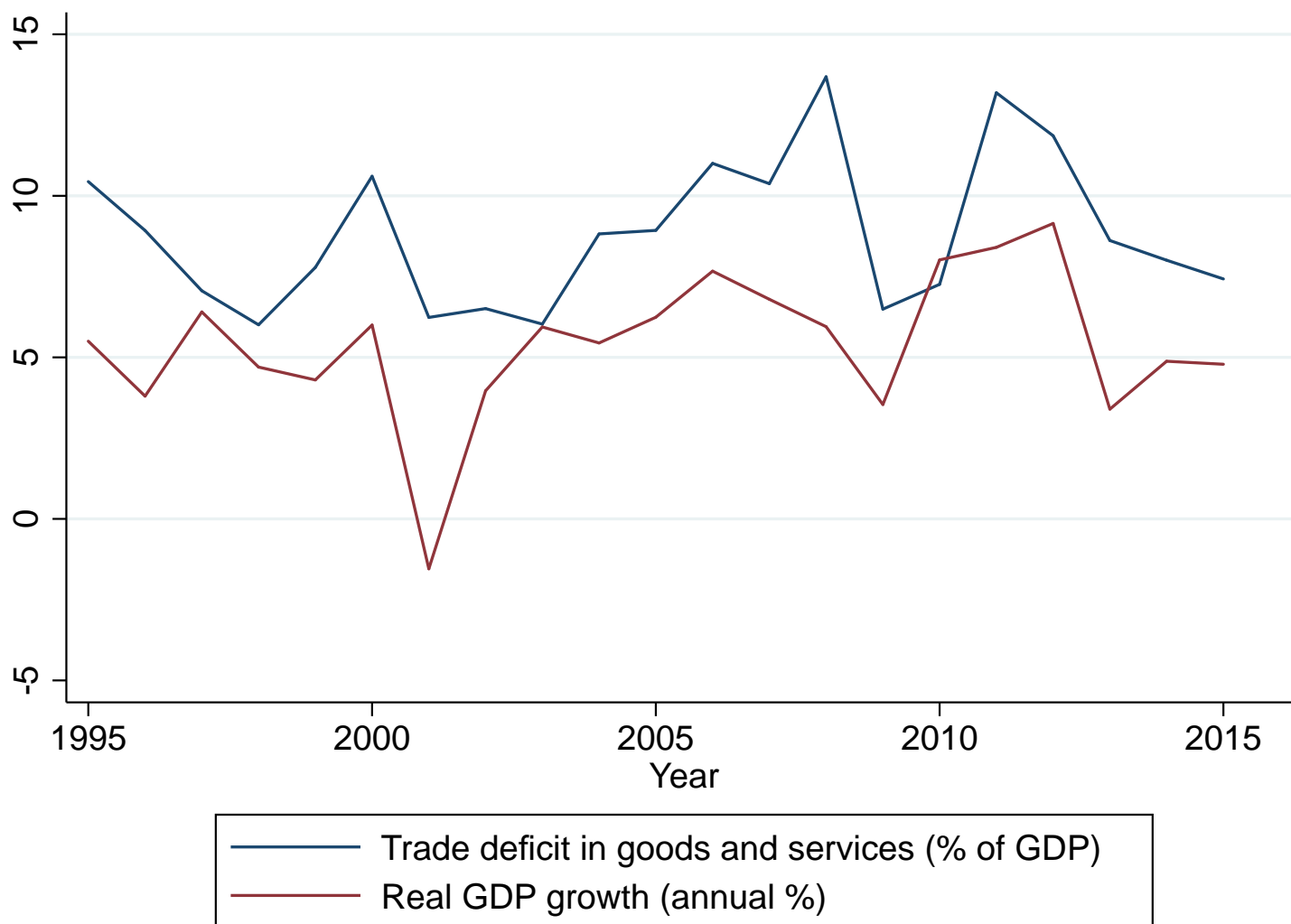
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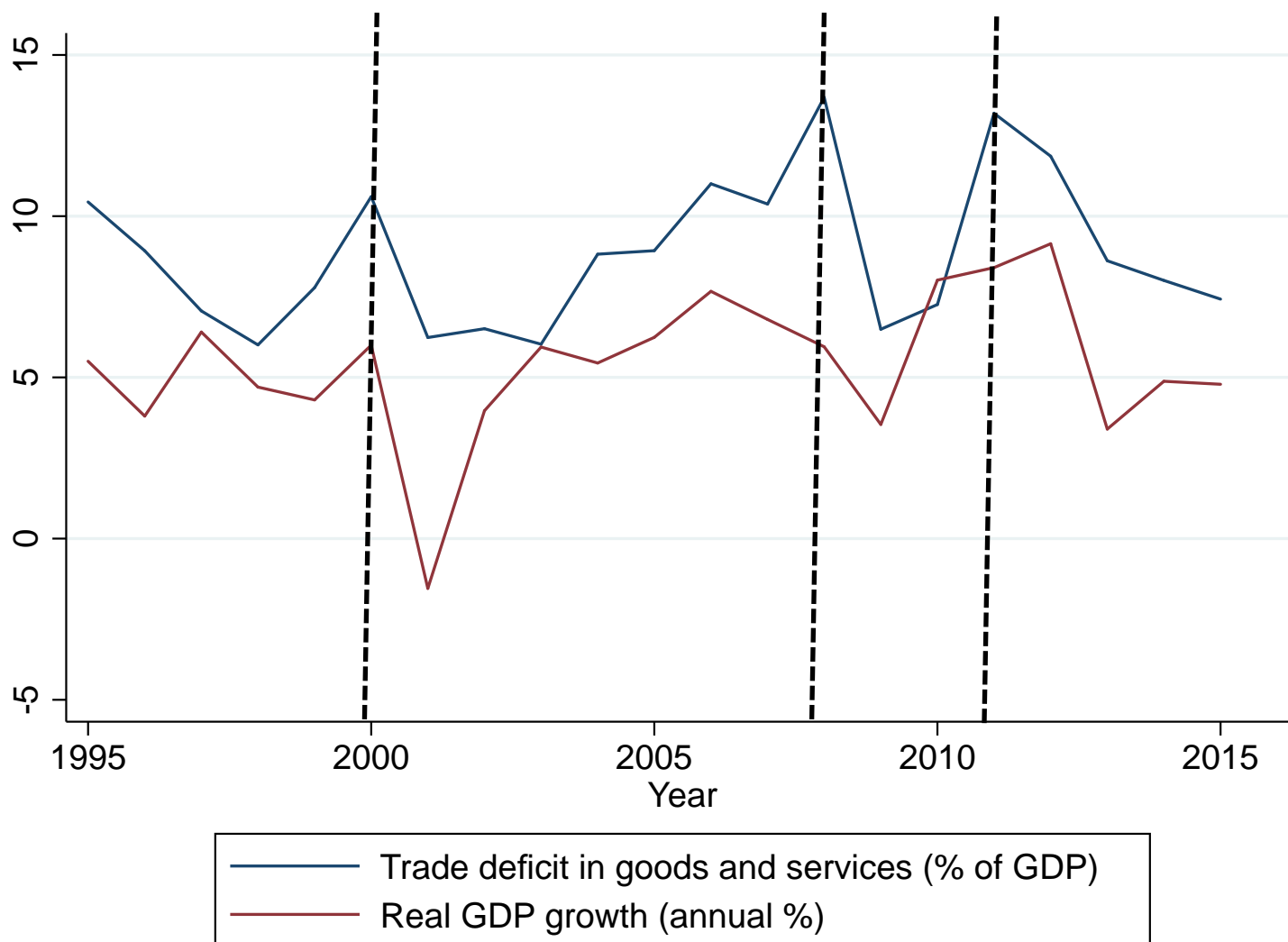
Note: GDP per capita as measured in constant 2010 US\$

Data sources: World Development Indicators through 2015 & predicted value for 2016 based on CBSL projections

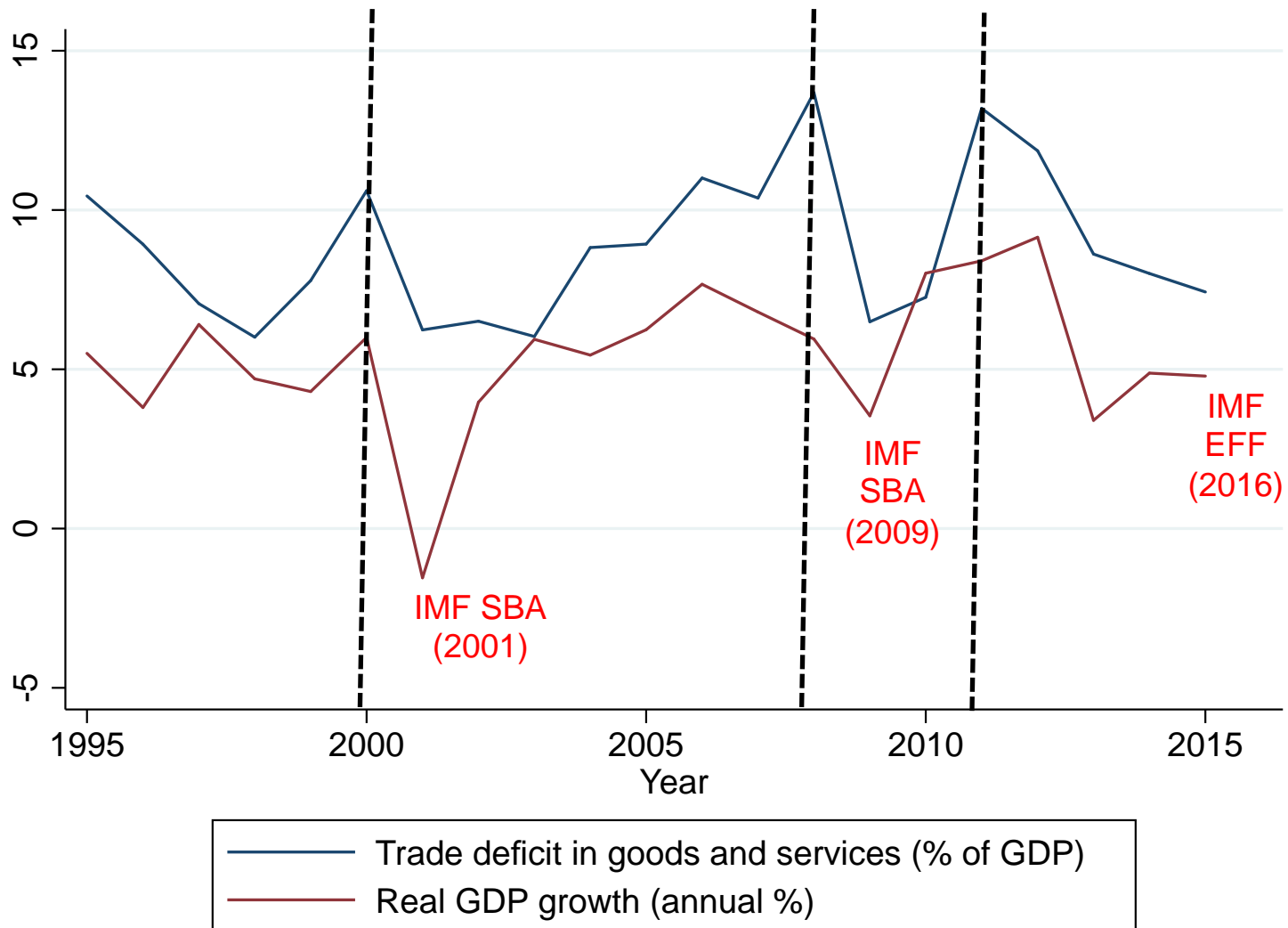
Why did growth slow down? Because a widening of the current account acted as a speed limit.

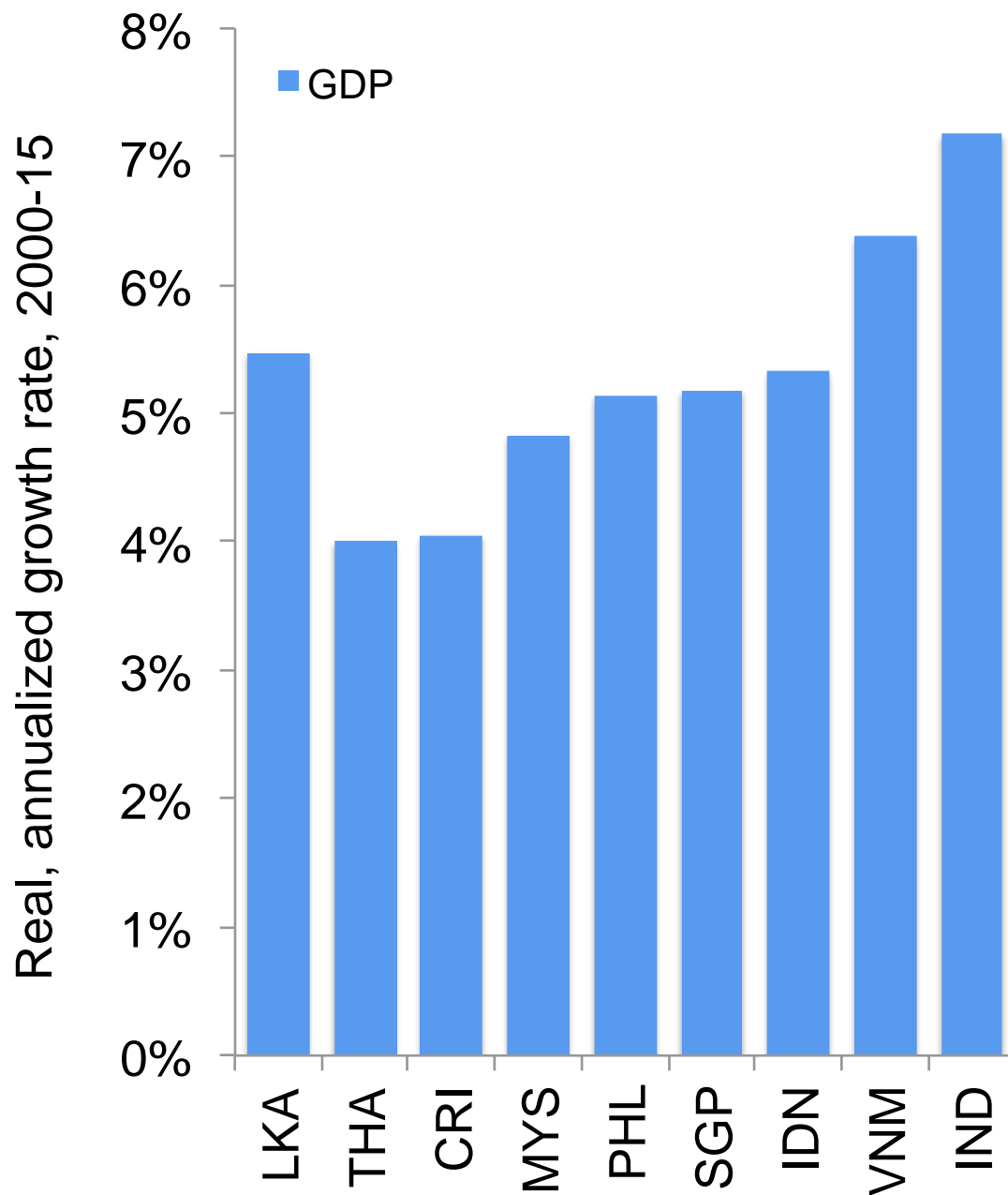


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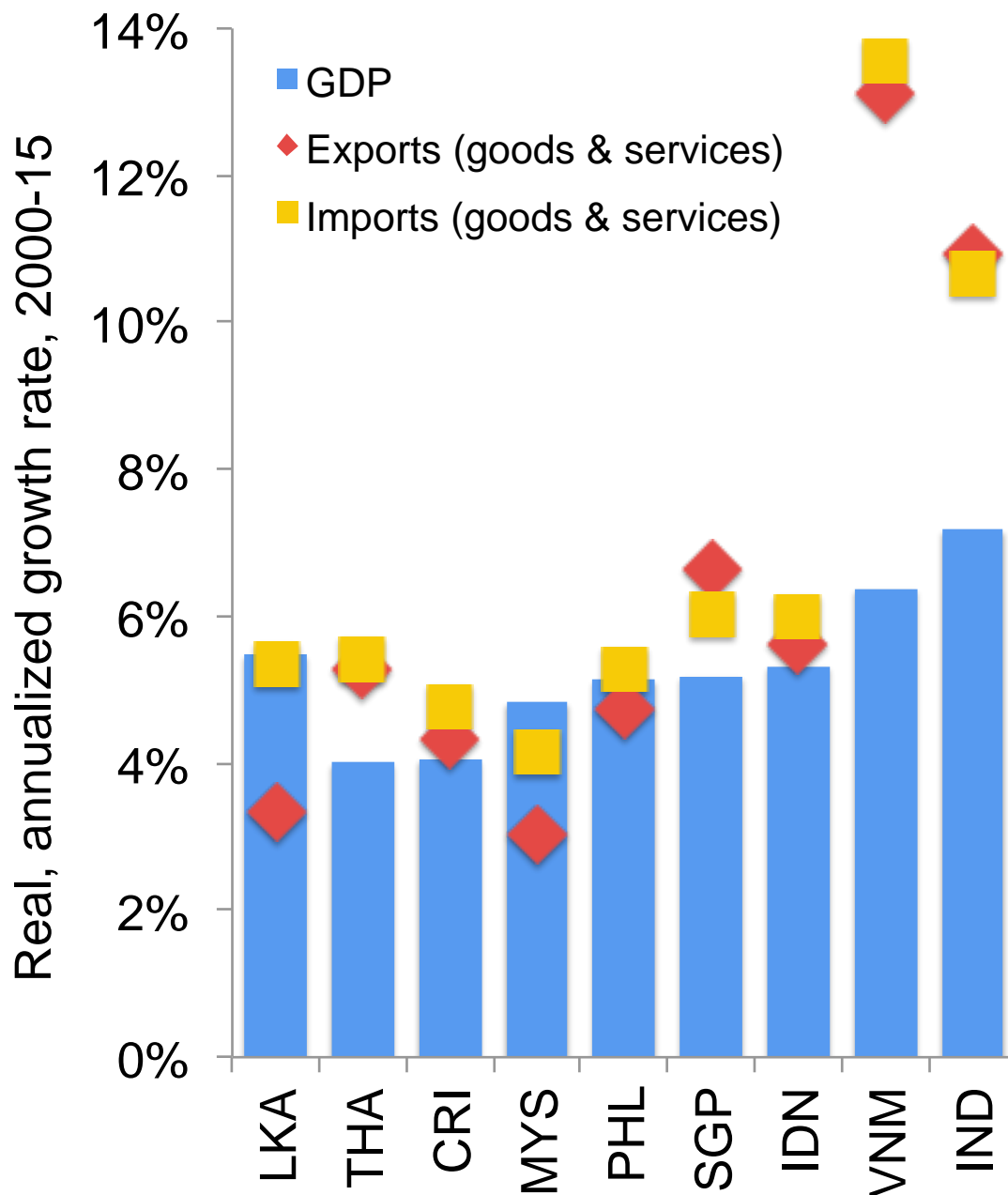
Sri Lanka's growth conundrum

- GDP growth is strong by regional standards.



Sri Lanka's growth conundrum

- GDP growth is strong by regional standards.
- Exports are not keeping pace...

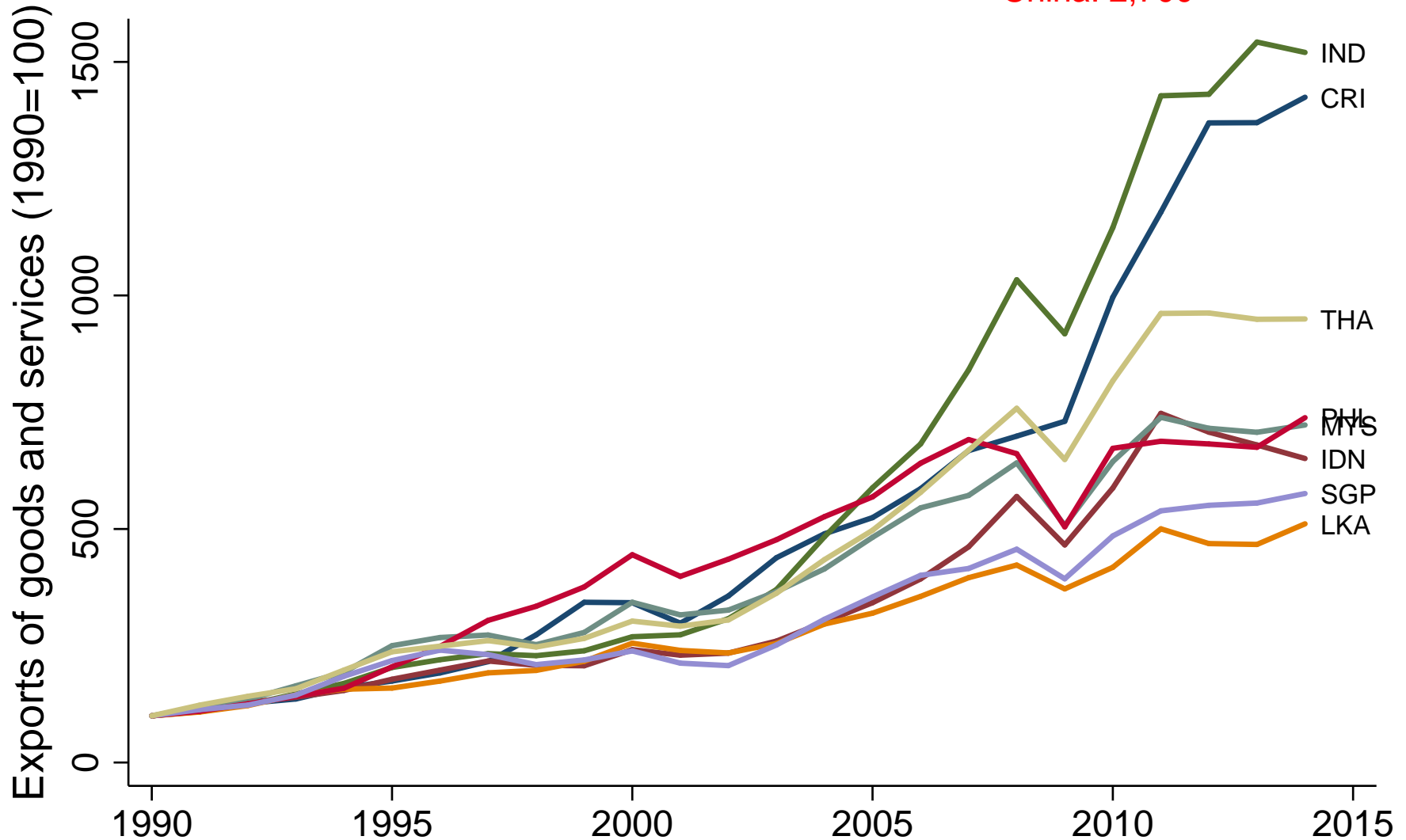


Sri Lanka's growth conundrum

- GDP growth is strong by regional standards.
- Exports are not keeping pace...
- ...but imports are.

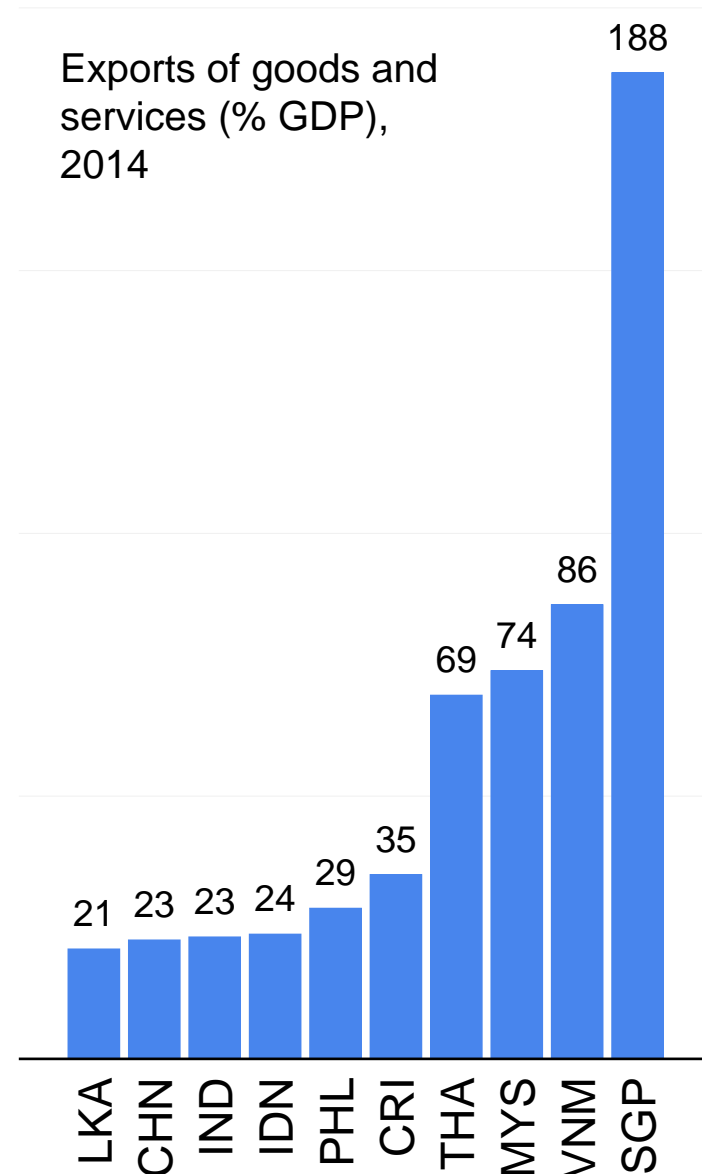
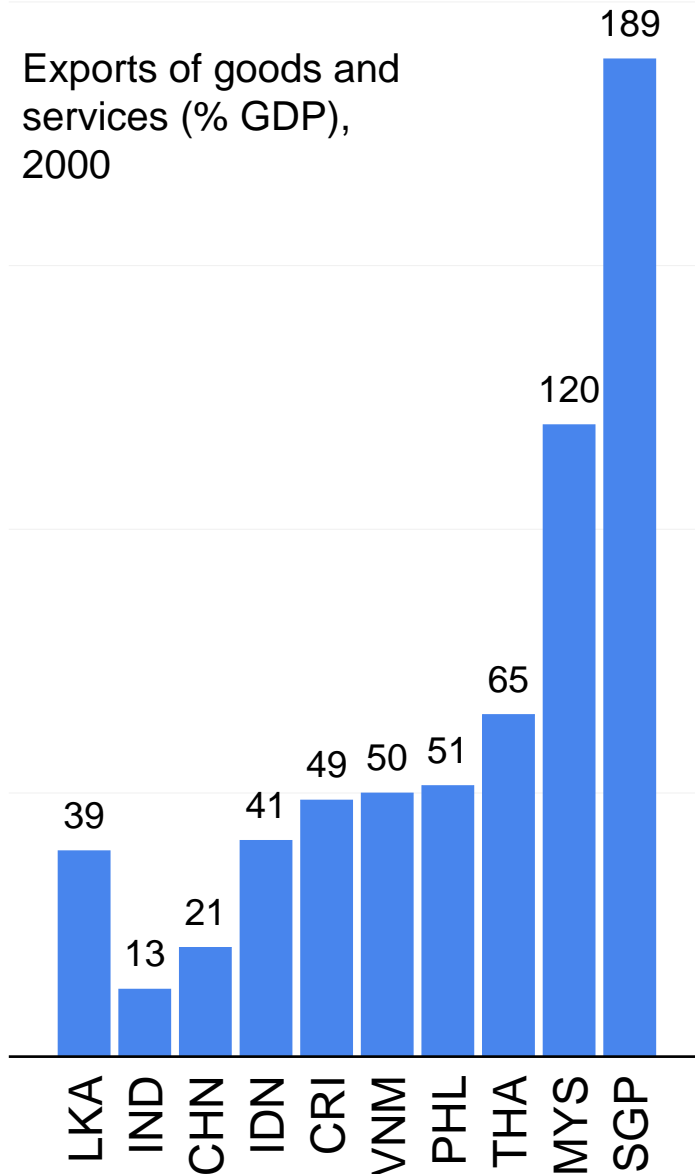
Export growth is consistently lagging behind peers

Off the charts:
Vietnam: 12,000!
China: 2,700



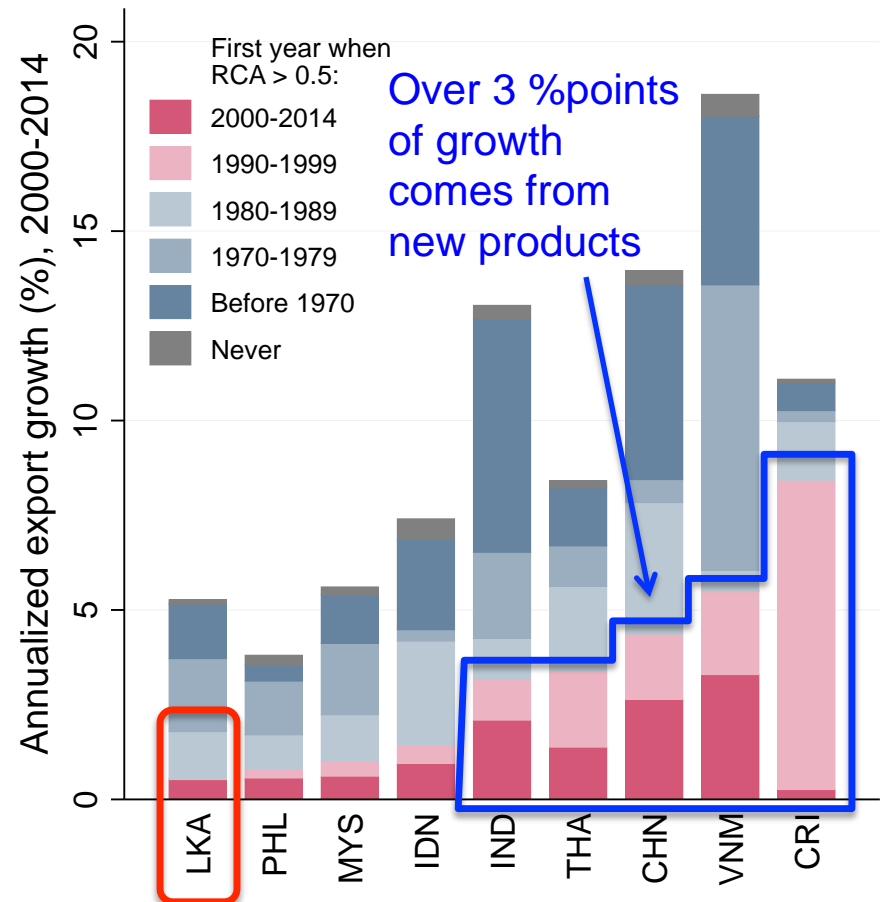
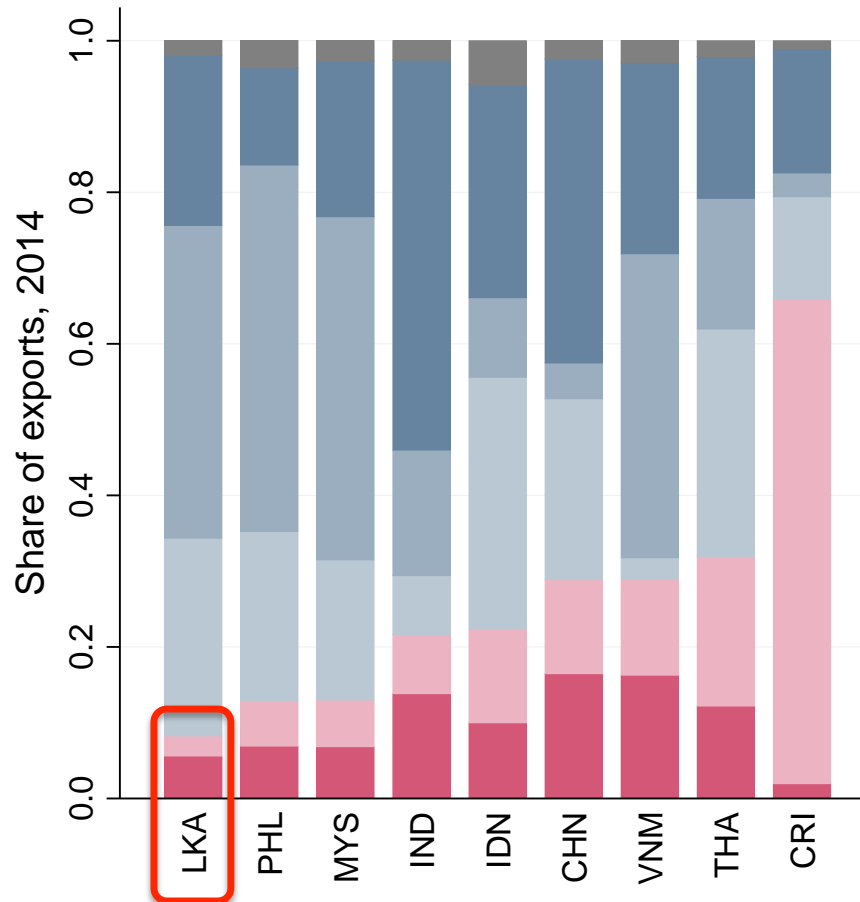
Data source: UN COMTRADE, via CID. Not adjusted for inflation.

And the economy is now considerably less export-oriented



Source:
WDI

One reason why Sri Lanka's exports are not growing fast enough: Sri Lanka's exports are not diversifying.



In other countries, diversification results in a direct boost to incomes

New export products, 2000-2015

Products without RCA in 1998-2000 and with RCA in 2013-2015

Country	New products	USD per capita	USD (billions)
China	76	245	331.6
Thailand	70	326	21.8
Vietnam	48	545	50.4
Philippines	11	12	1.2
Malaysia	10	149	4.7
Sri Lanka	7	5	0.1
Costa Rica	6	139	0.7
Indonesia	4	3	0.8
India	0	n/a	n/a

Note: uses both standard RCA and population-based version; excludes natural resources.

Source: CID calculations using COMTRADE data

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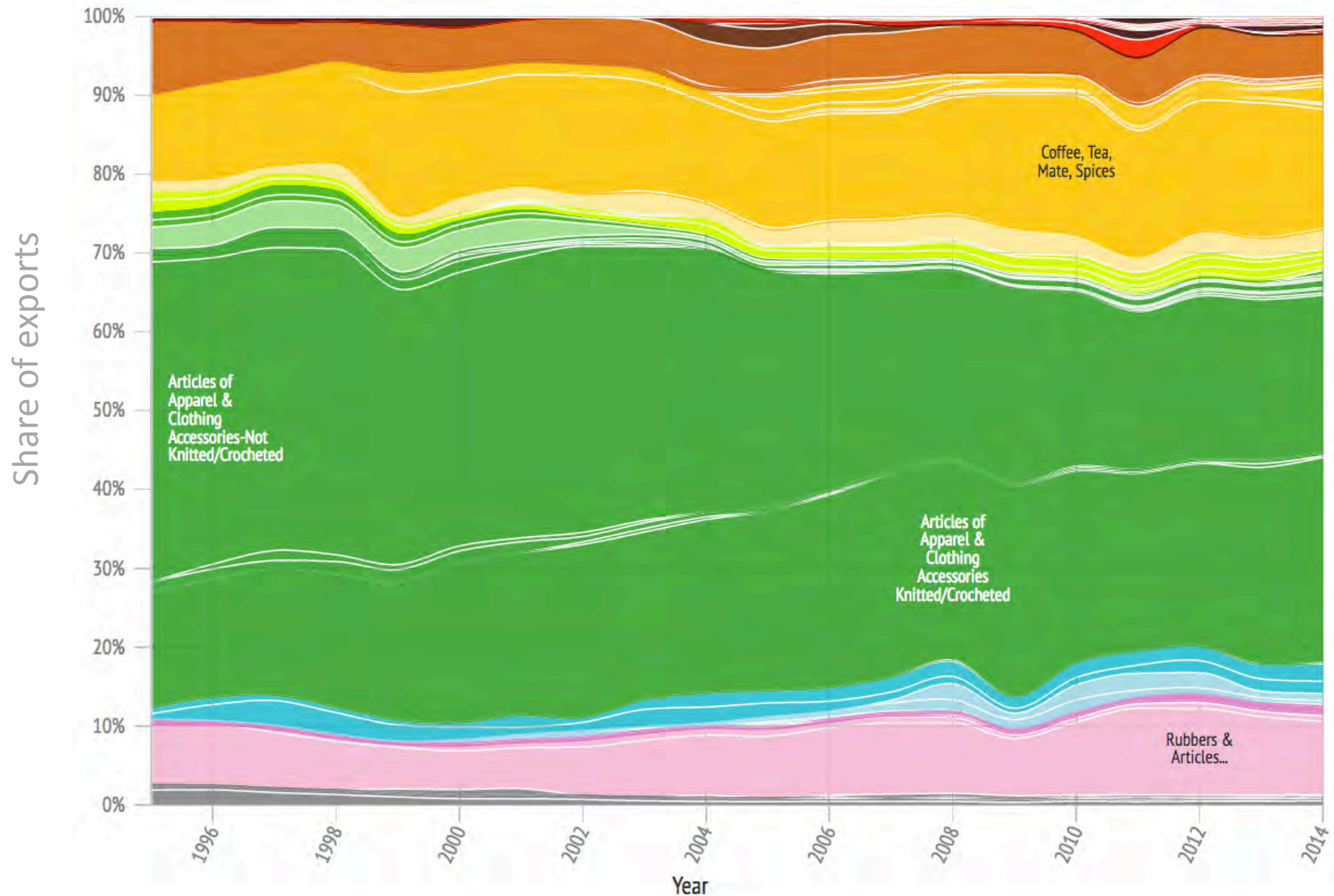
Country	New products	USD per capita	USD (billions)	Product
China	76	245	331.6	Rags, textile scraps
Thailand	70	326	21.8	Woven fabrics of bast fibers
Vietnam	48	545	50.4	Wheat or meslin flour
Philippines	11	12	1.2	Cigarettes
Malaysia	10	149	4.7	Tulles and other net fabrics
Sri Lanka	7	5	0.1	Lead oxides
Costa Rica	6	139	0.7	Textile for conveyor belts
Indonesia	4	3	0.8	
India	0	n/a	n/a	

Note: uses both standard RCA and population-based version; excludes natural resources.

Source: CID calculations using COMTRADE data

Sri Lanka's export composition has been stagnant since the mid-1990s.

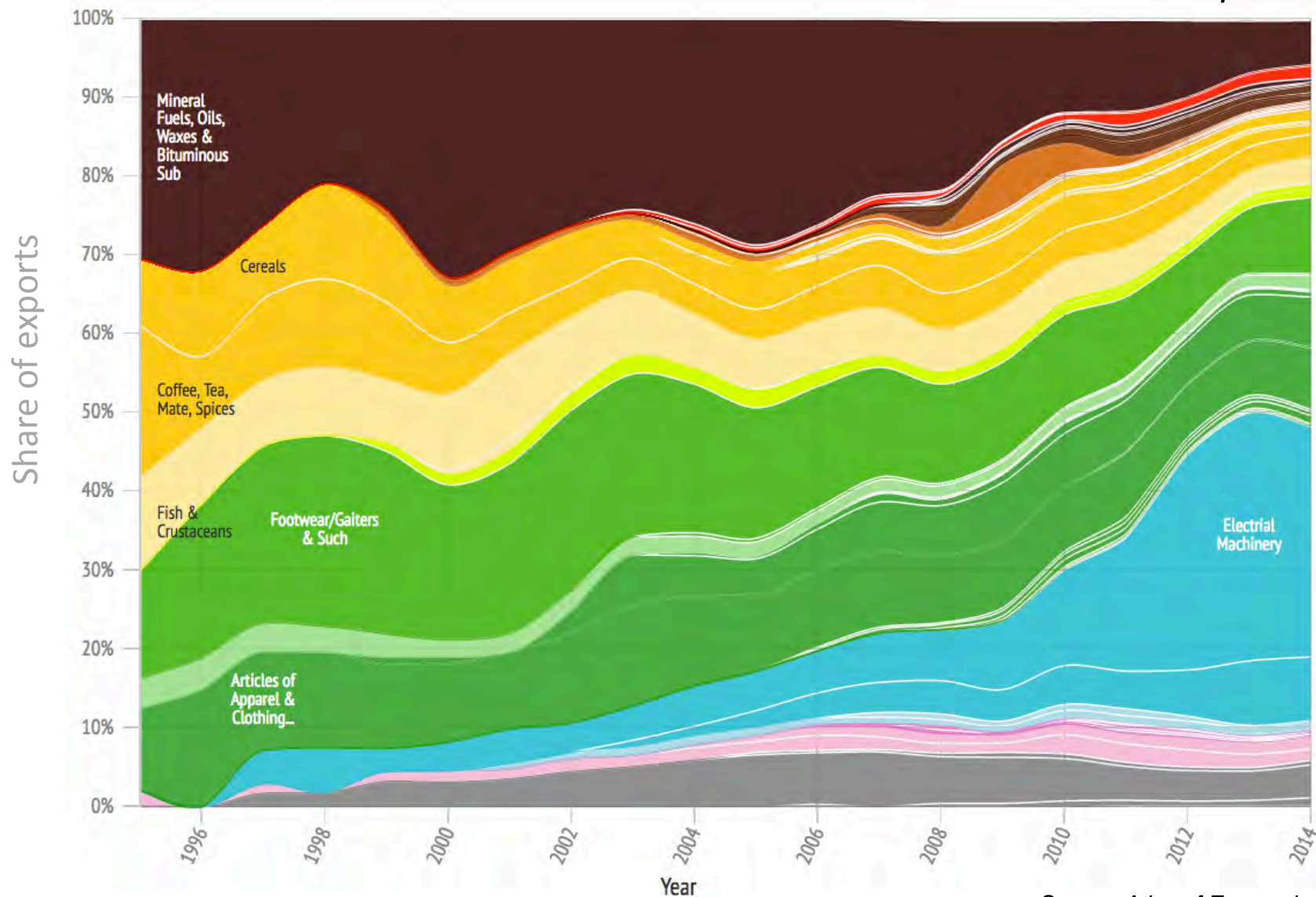
Sri Lanka's Goods Exports



Source: Atlas of Economic Complexity

Compare to Vietnam

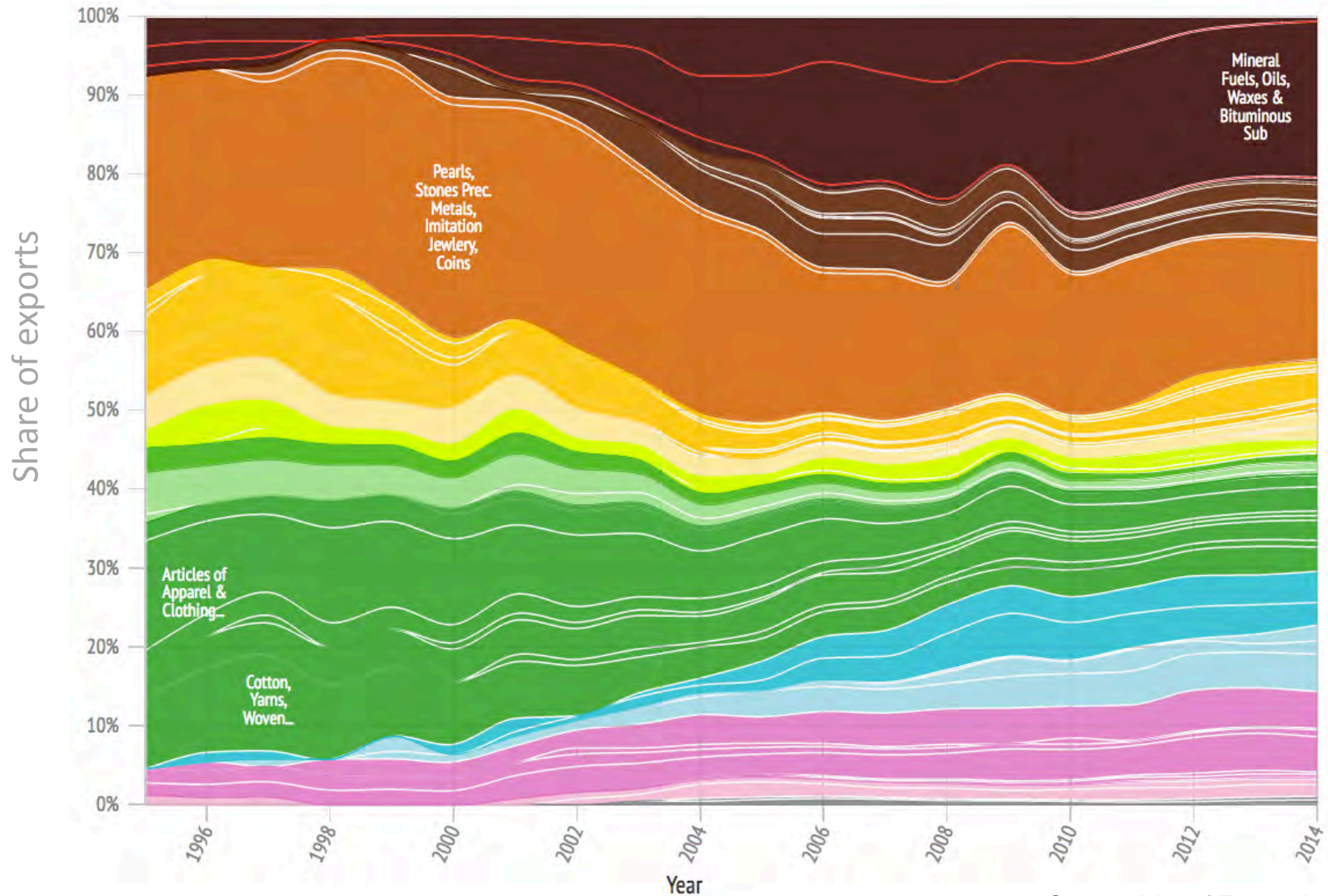
Vietnam's Goods Exports



Source: Atlas of Economic Complexity

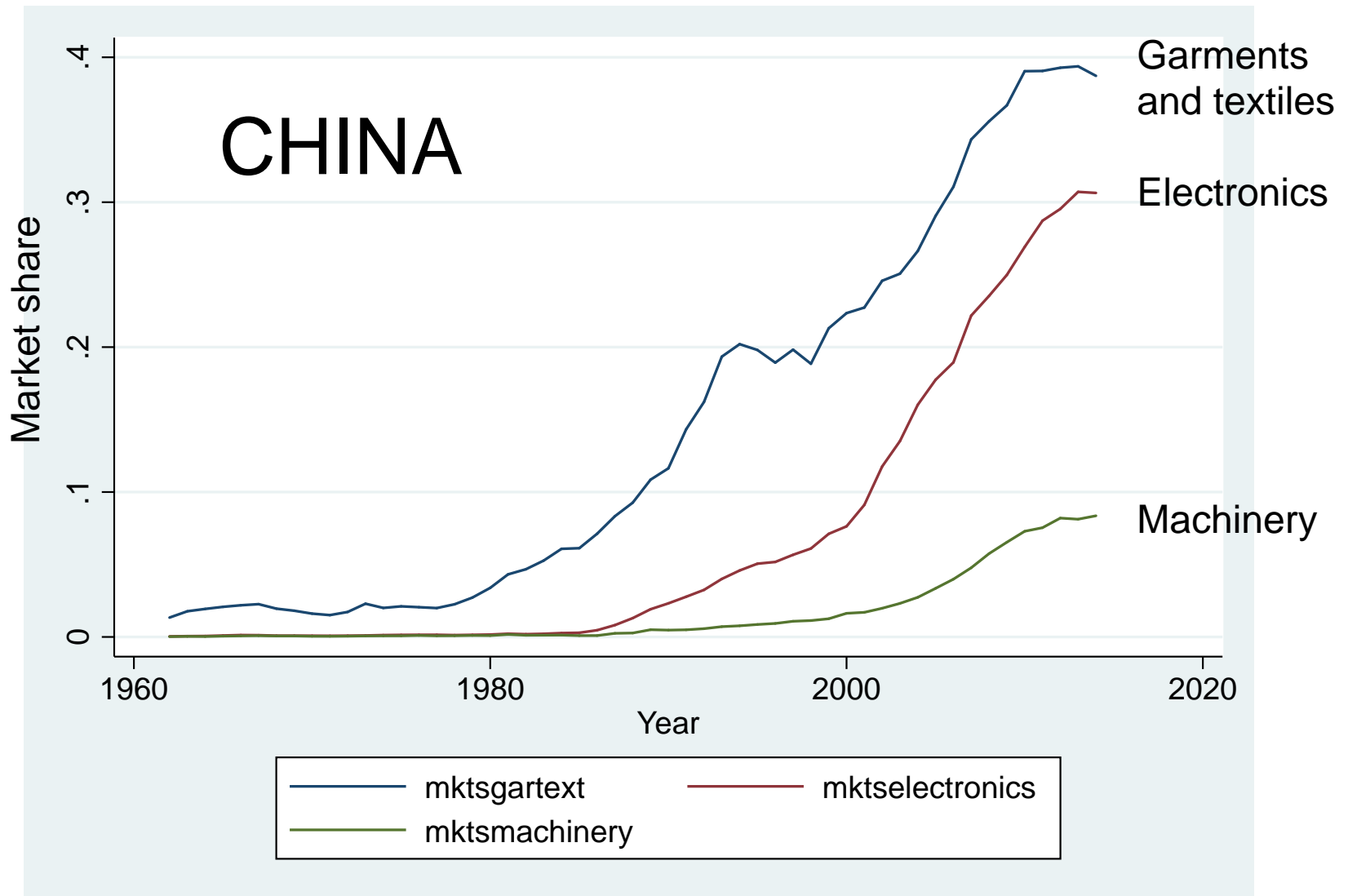
Or India

India's Goods Exports

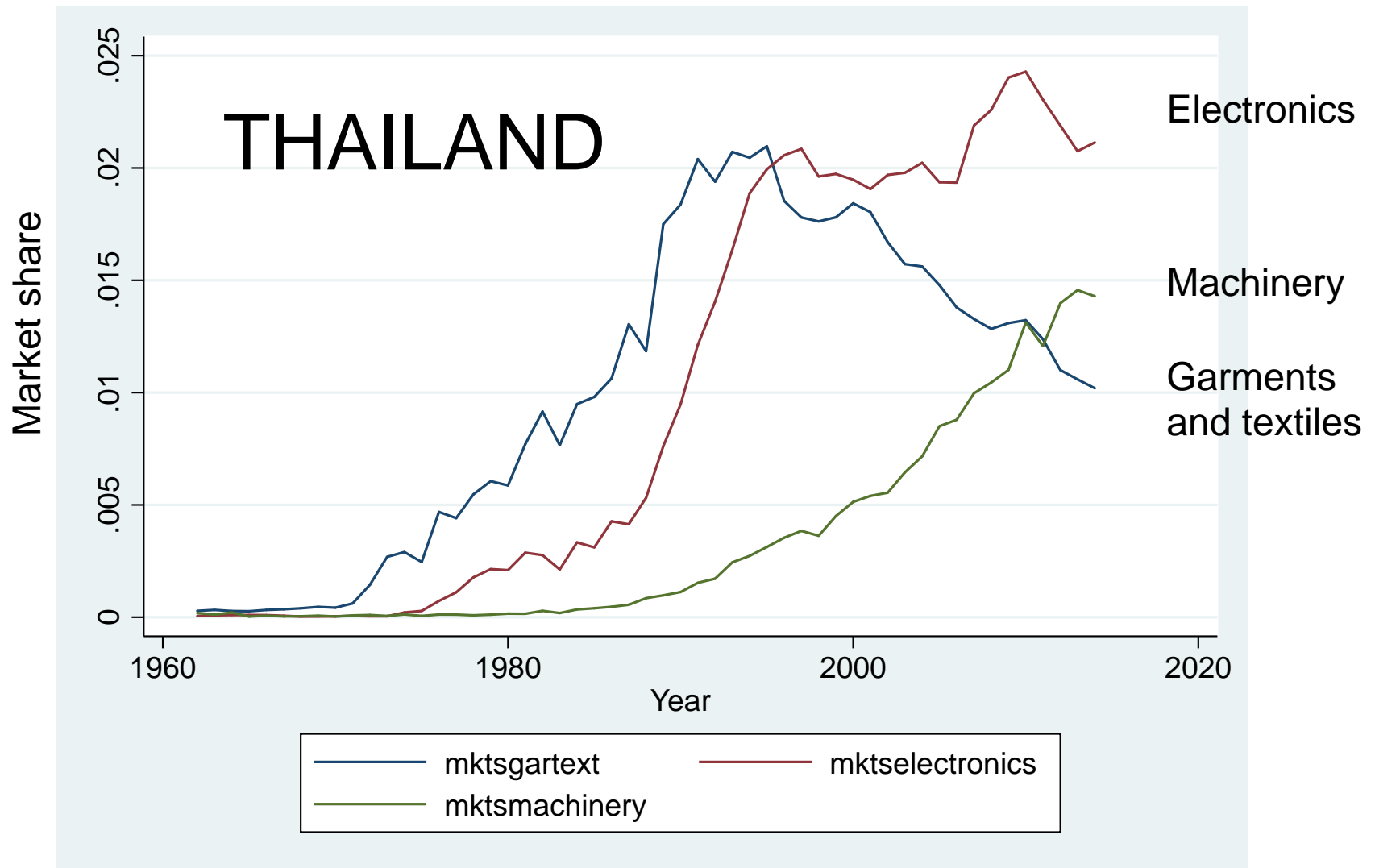


Source: Atlas of Economic Complexity

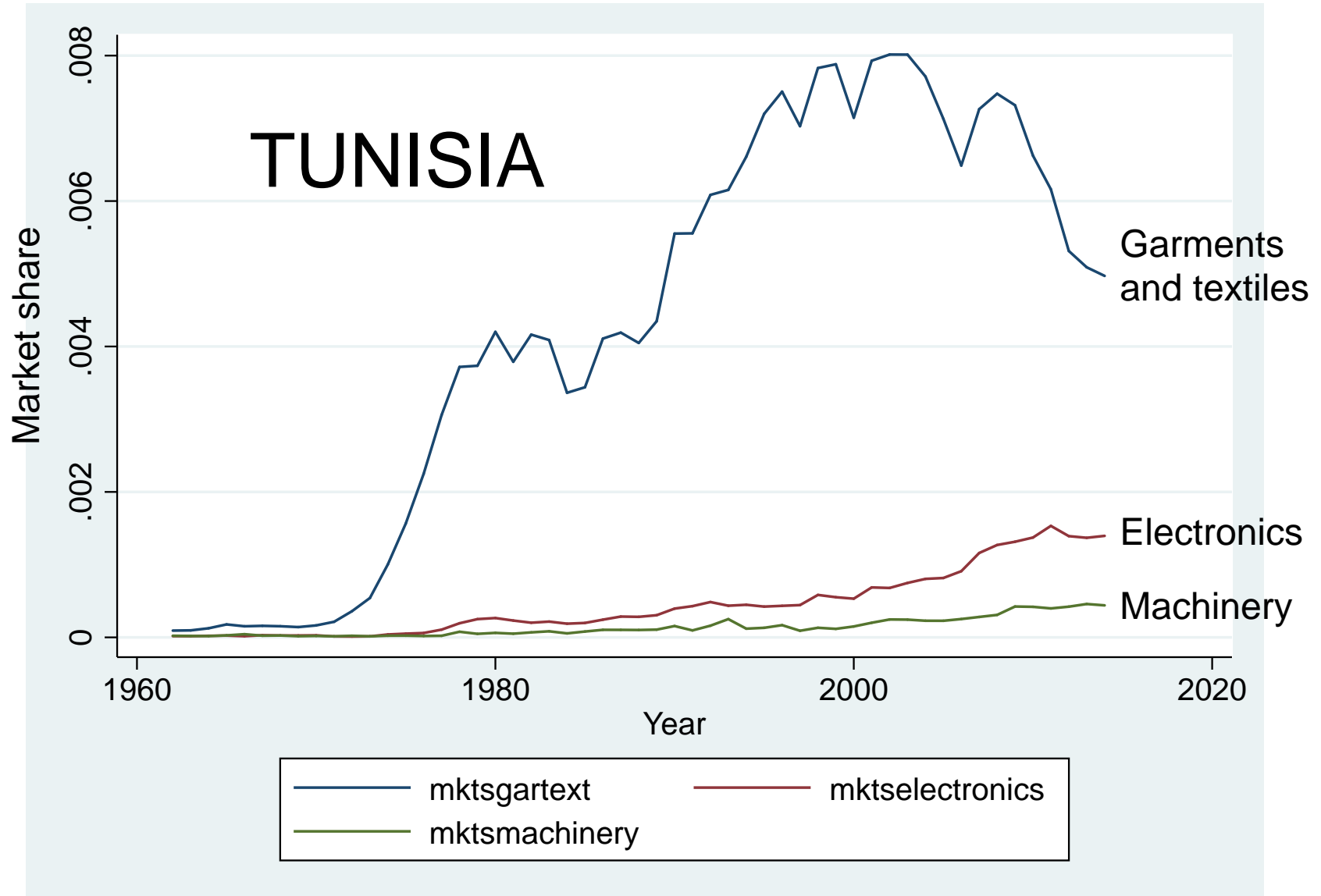
Countries often first diversify into garments,
followed by electronics and then machinery



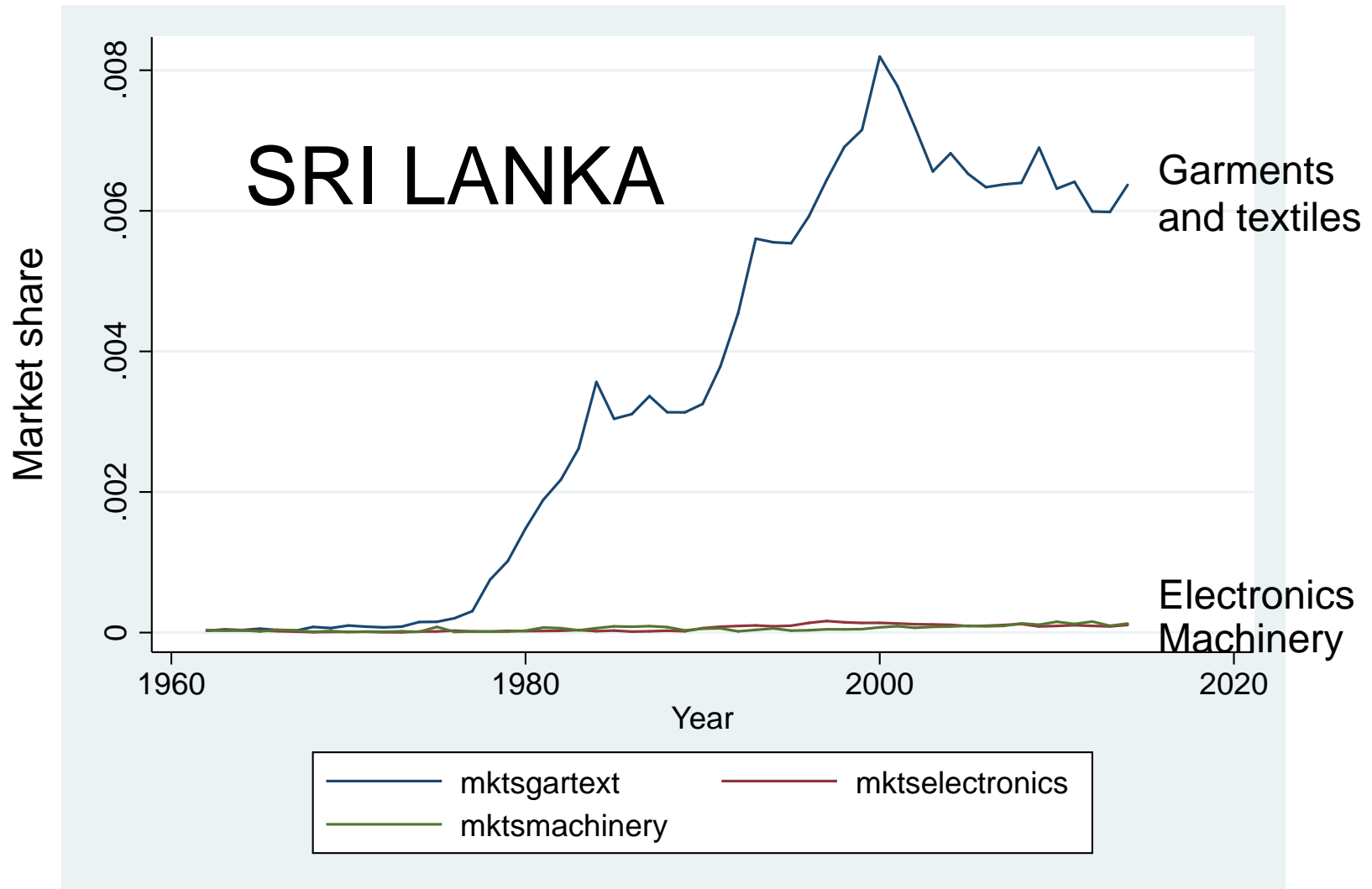
Over time, garments tend to peak as a share of exports as growth in other industries picks up



...but sometimes countries get stuck in the garments phase

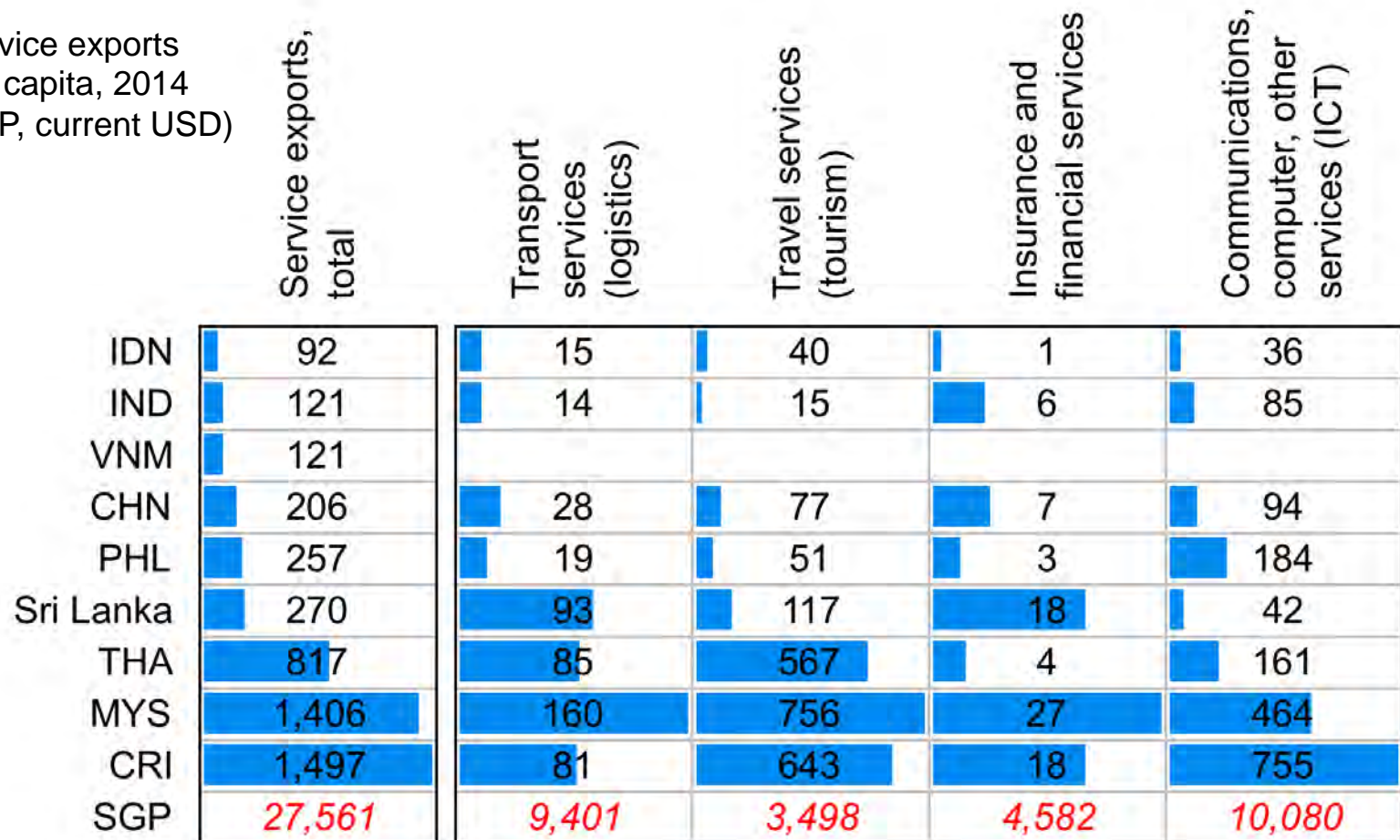


...this is what has happened in Sri Lanka



In service exports, Sri Lanka performs relatively well in transport and insurance/finance, but has much room to grow in tourism and ICT.

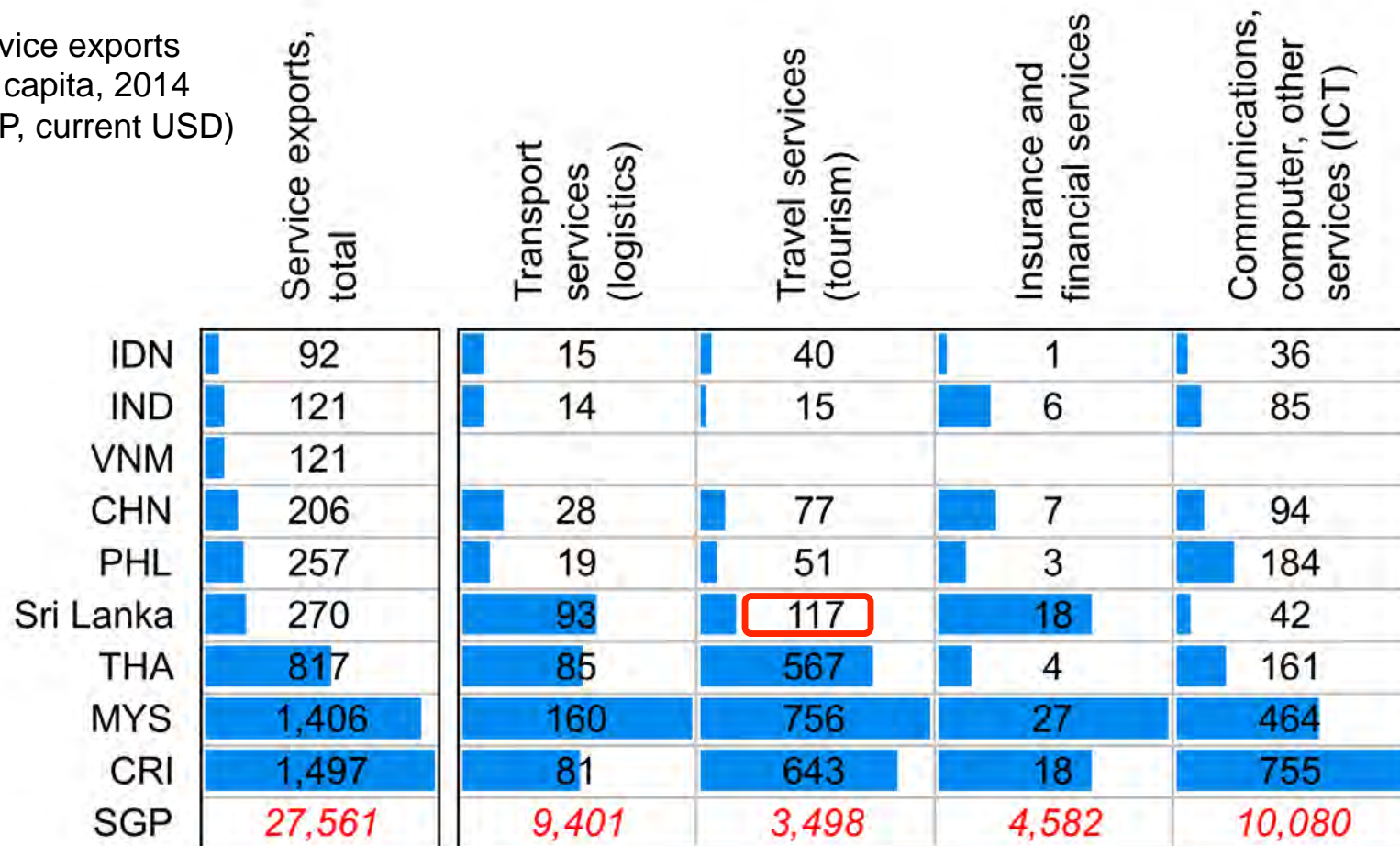
Service exports
per capita, 2014
(BoP, current USD)



Notes: Transport service exports are services related to the movement of non-resident goods & passengers. Travel service exports are services consumed by visitors (inc. tourists). Disaggregated data not available for Vietnam. Source: WDI

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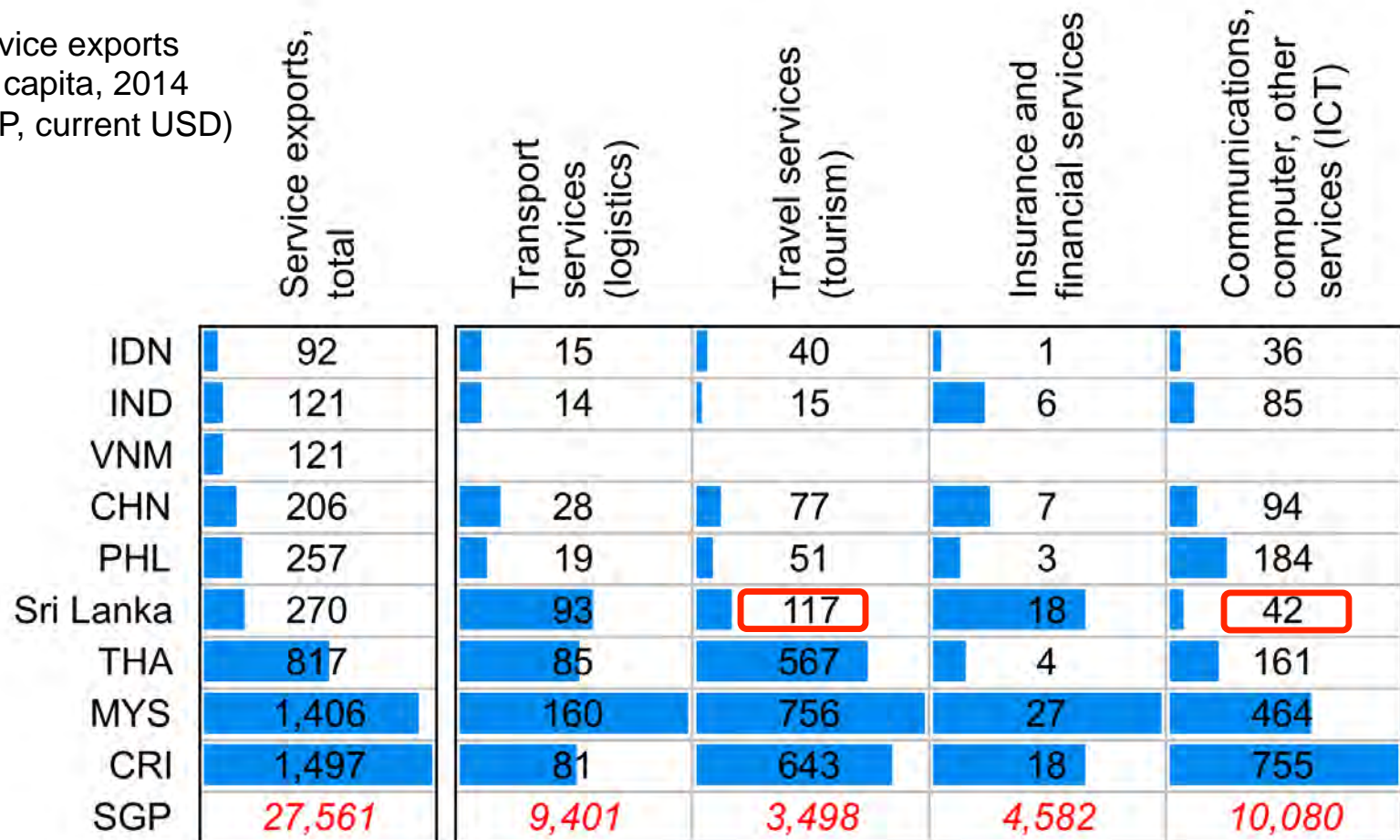
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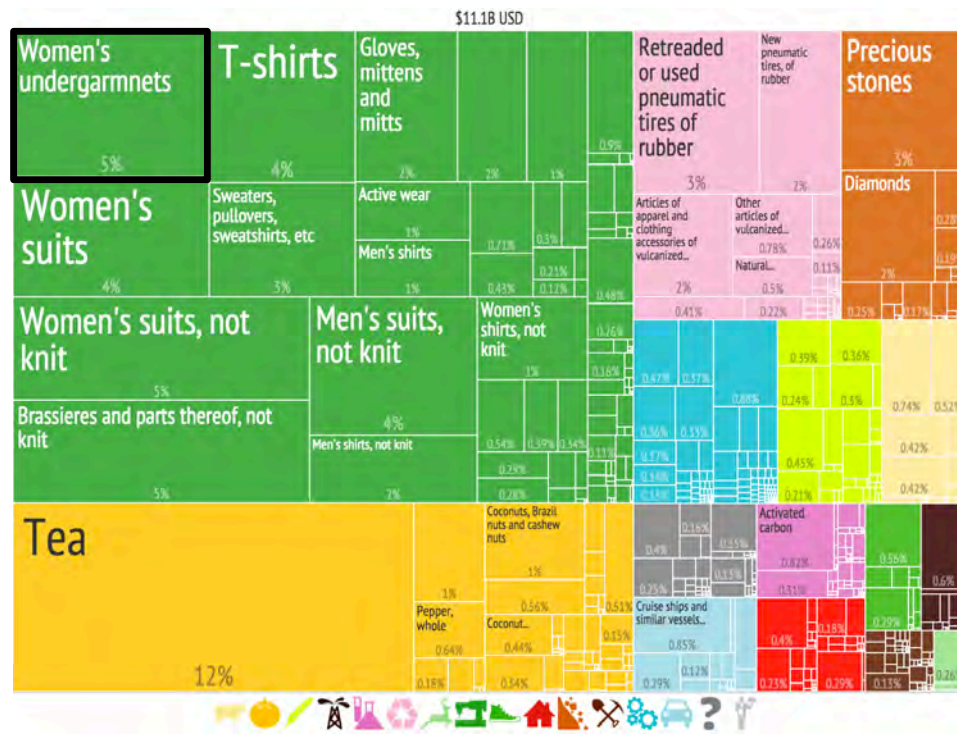
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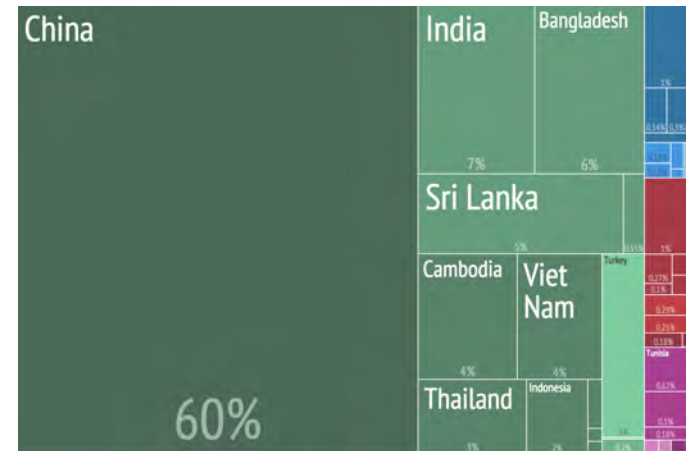
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Sri Lanka's main exports tend to face competition from low income countries

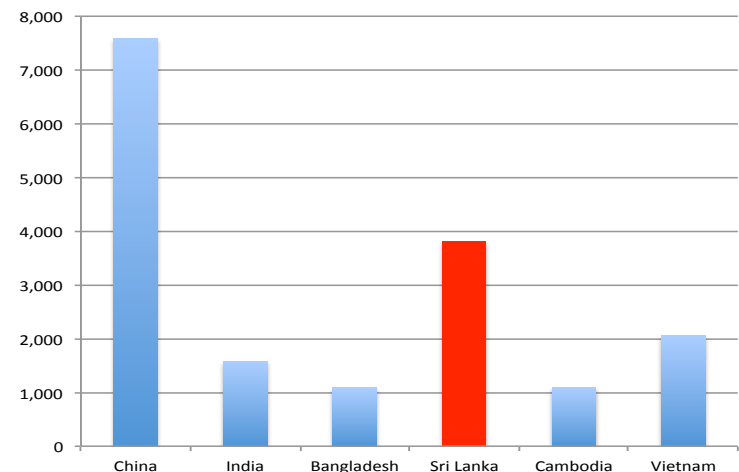
Sri Lanka's Goods Exports, 2014



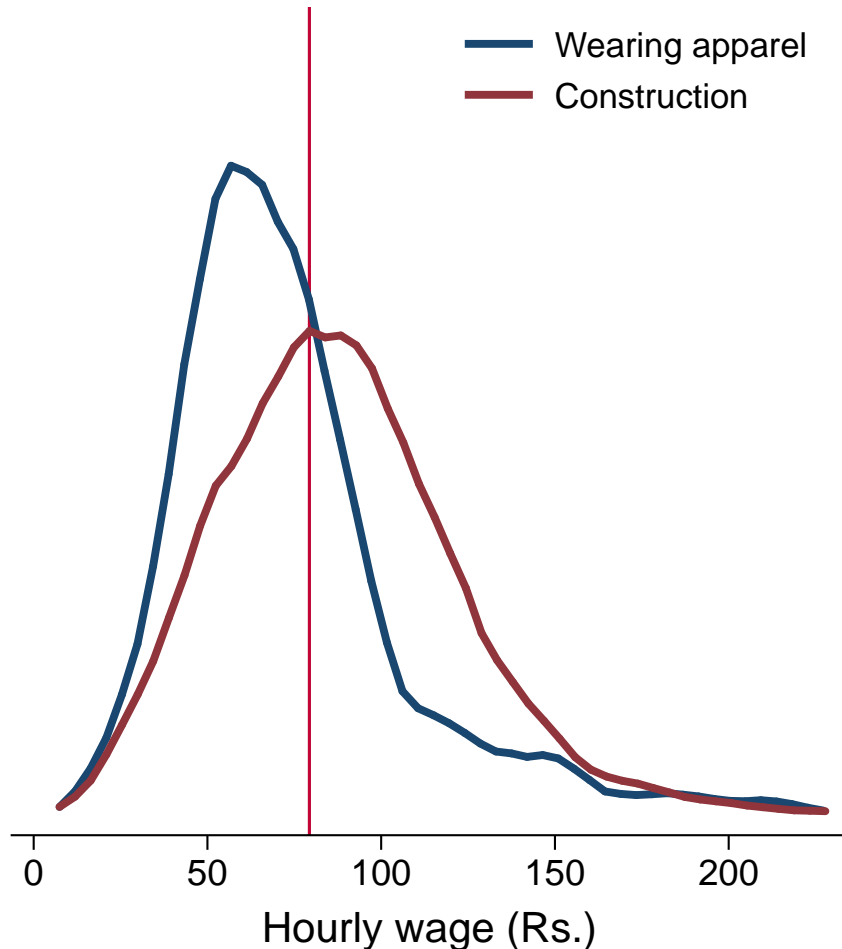
Global Share of Women's Undergarments Exports (Net) in 2014



GDP per capita (USD) in 2014

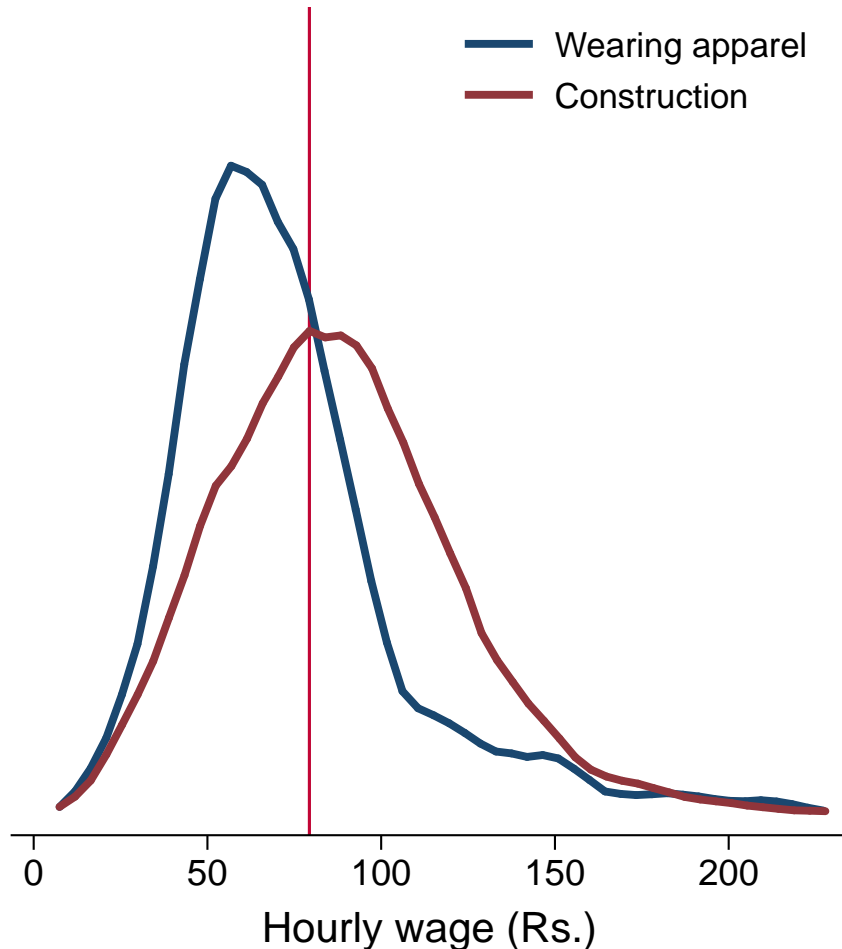


Wages in Sri Lanka's main export industry are now lower than for most other jobs. Without diversification beyond garments, export growth cannot keep pace.

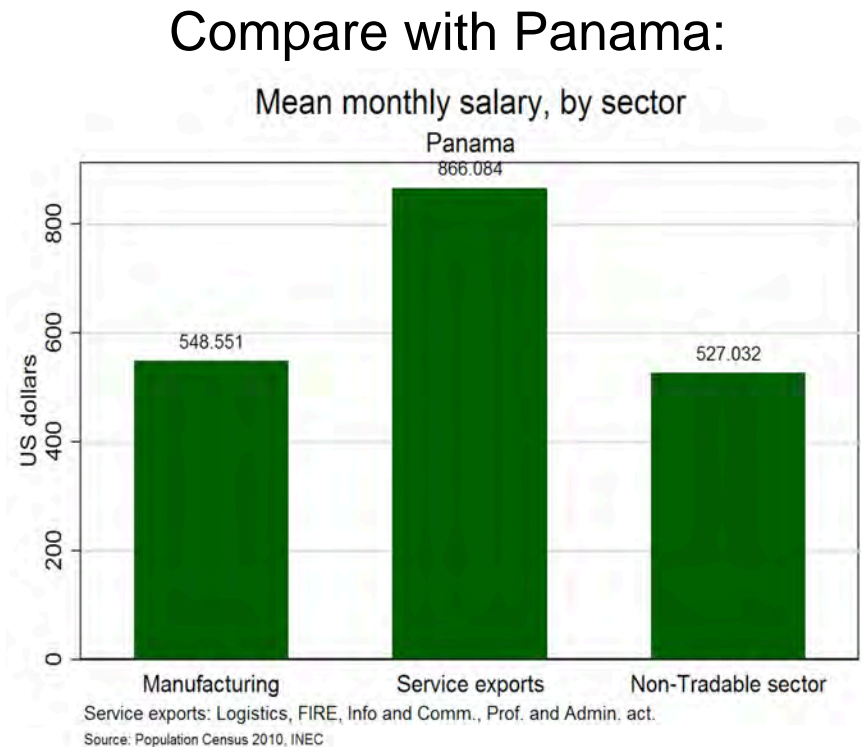


Note: Red reference line indicates the national median wage.

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- To sustain higher growth, expand exports needs to expand faster to cover for the growth in imports

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- The problem is that Sri Lanka's export industries pay low wages and compete with low wage countries

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- In many ways, Sri Lanka is doing well
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- To sustain higher growth, expand exports needs to expand faster to cover for the growth in imports
- Exports are not growing fast enough because they have not diversified beyond a set of traditional goods: tea, rubber and garments
- The problem is that Sri Lanka's export industries pay low wages and compete with low wage countries
- How can Sri Lanka increase its exports by diversifying into higher-productivity industries that can afford higher wages?

**HOW DO COUNTRIES AND
REGIONS DEVELOP HIGHER
PRODUCTIVITY INDUSTRIES?**



*Presented to the H. Austell Public Library
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AN

INQUIRY

INTO THE

NATURE AND CAUSES

OF THE

WEALTH OF NATIONS.

By ADAM SMITH, L.L.D. F.R.S.

WITH

A LIFE OF THE AUTHOR.

ALSO,

A VIEW OF THE DOCTRINE OF SMITH, COMPARED WITH THAT OF THE
FRENCH ECONOMISTS; WITH A METHOD OF FACILITATING THE
STUDY OF HIS WORKS; FROM THE FRENCH OF M. GARNIER.

IN THREE VOLUMES.

VOL. I.

LONDON:

PRINTED FOR J. MAYNARD, PANTON STREET, HAY-
MARKET; AND F. ZINKE, 448, STRAND.

1811.

Malawi

\$226 per capita



Haiti

\$819 per capita





Morocco

\$3,108 per capita

Poland

\$13,431 per capita

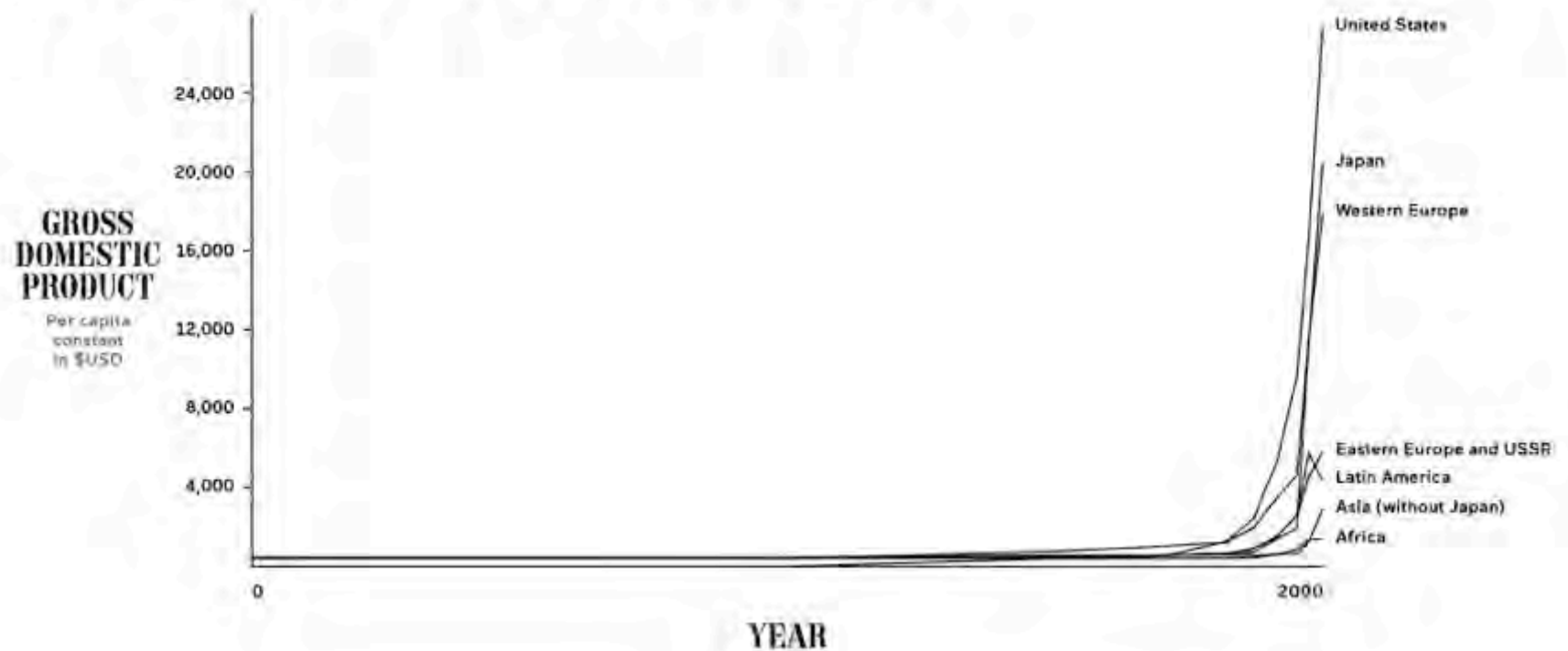


Singapore

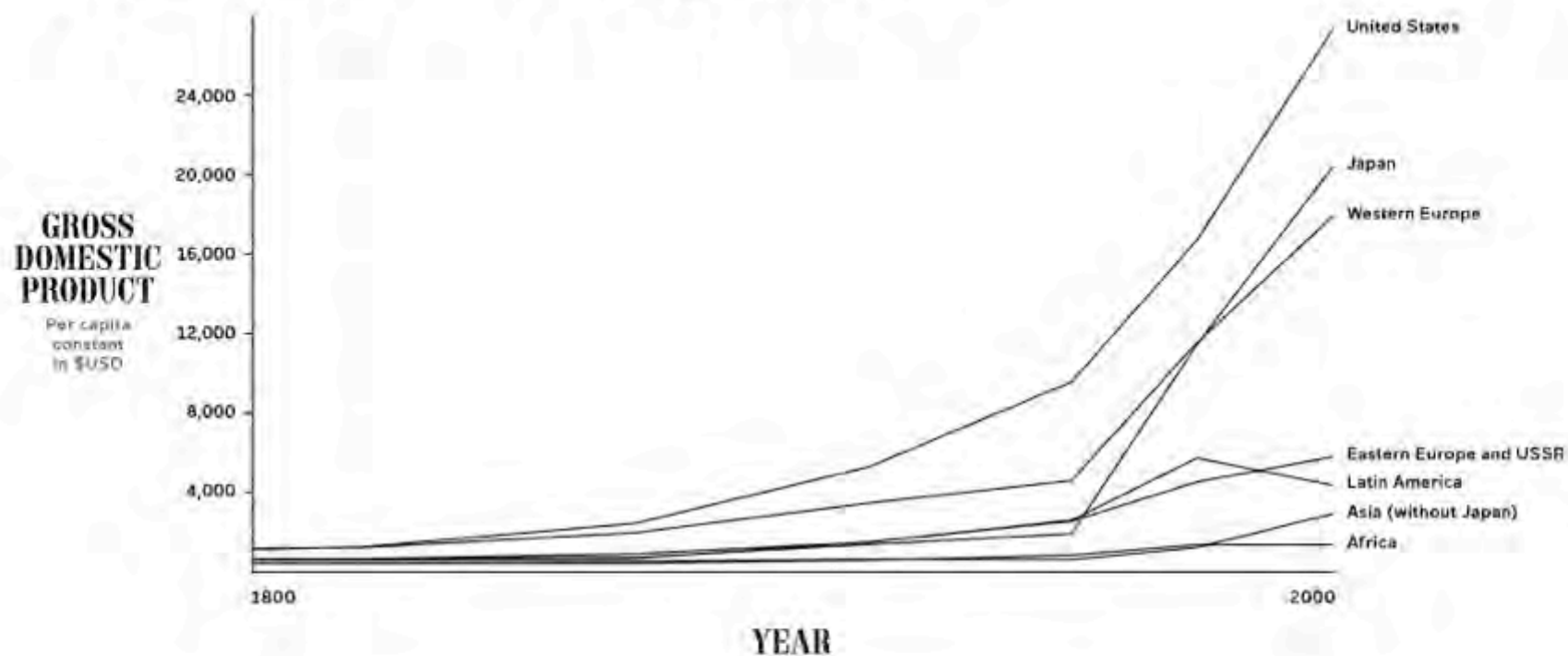
\$55,182 per capita



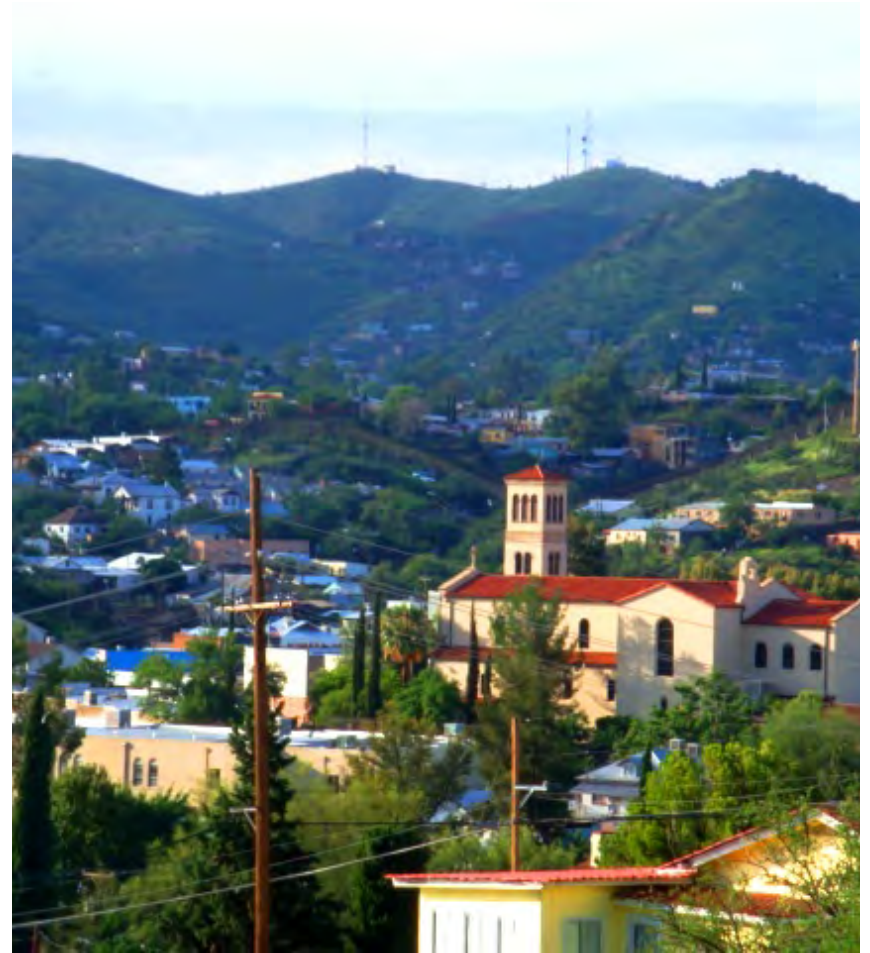
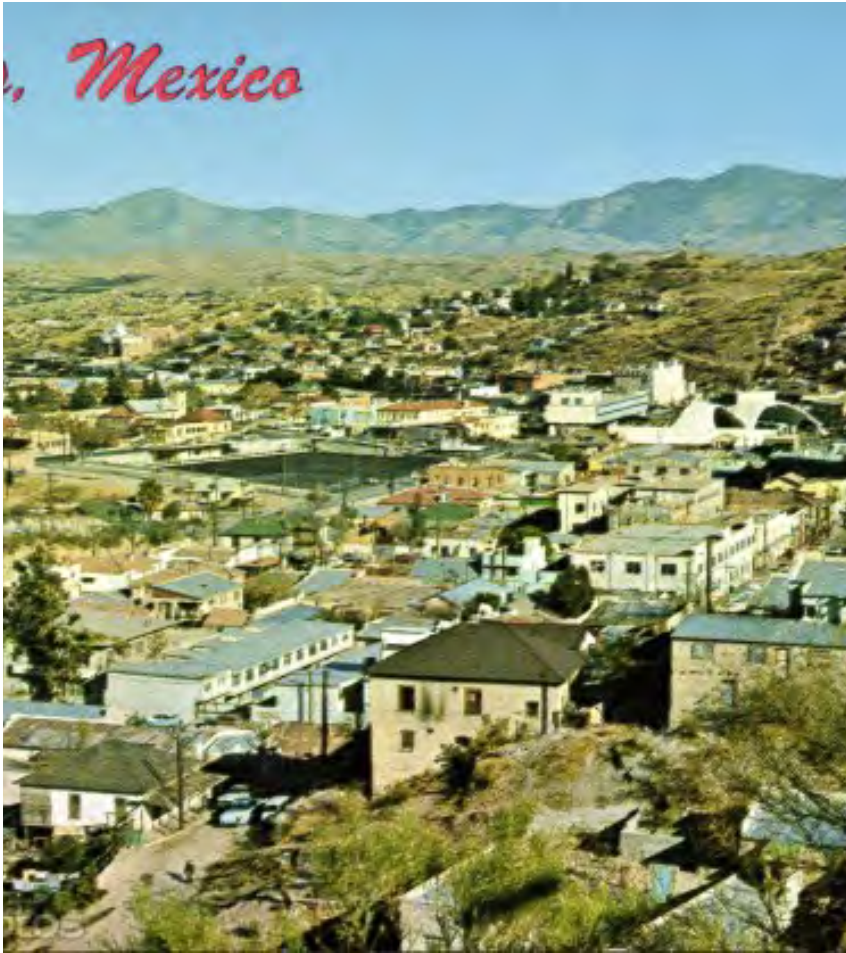
The Great Acceleration



The Great Divergence



The two Nogales



Guerrero

\$5,281 per capita



Sinaloa

\$10,945 per capita



Guanajuato

\$20,827 per capita



Nuevo Leon

\$42,281 per capita











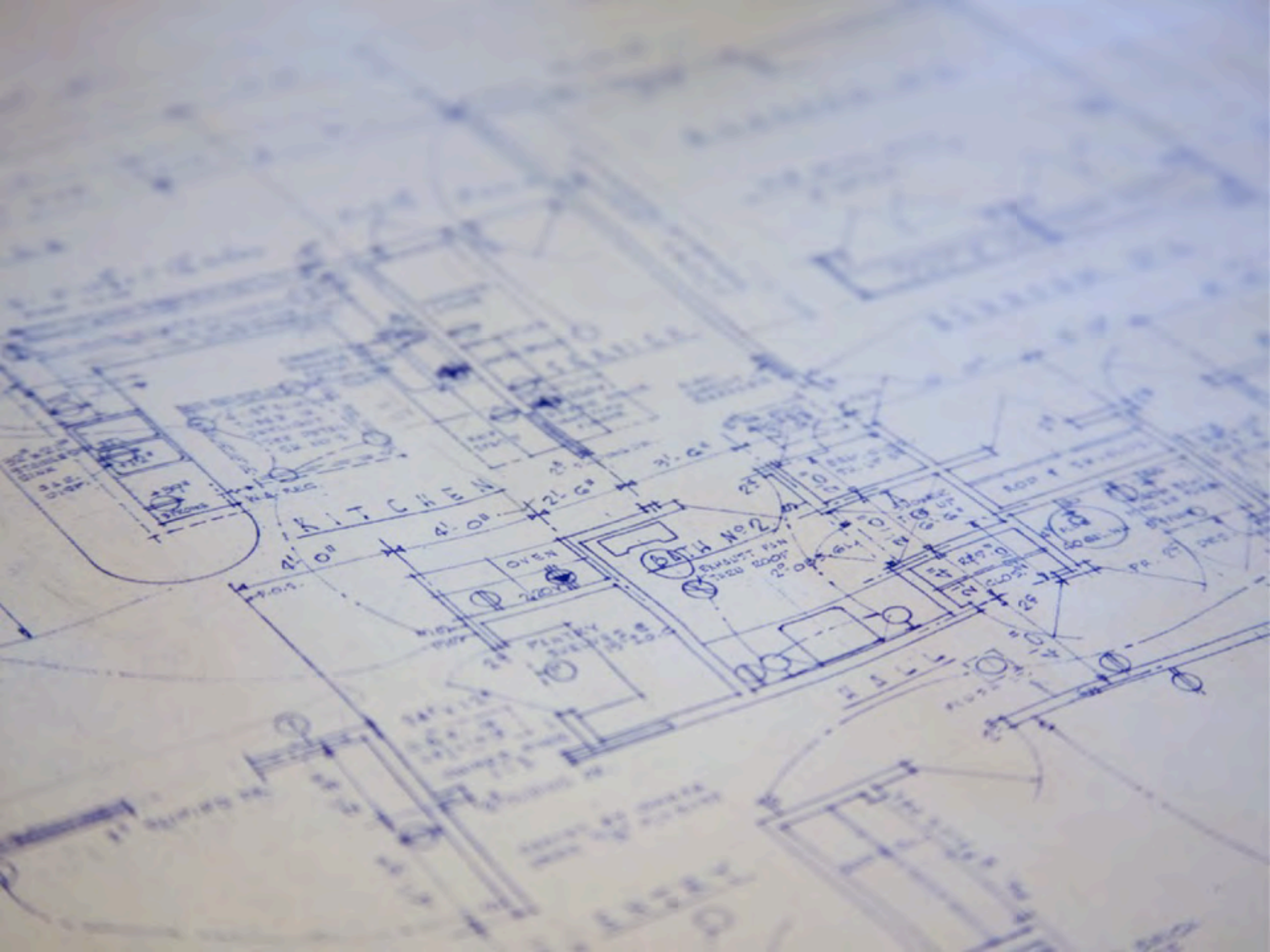
















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Lift (force)

From Wikipedia, the free encyclopedia

For other uses, see [Lift \(disambiguation\)](#).

A **fluid** flowing past the surface of a body exerts a **force** on it. **Lift** is the **component** of this force that is **perpendicular** to the **oncoming** flow direction.^[1] It contrasts with the **drag** force, which is the component of the surface force **parallel** to the flow direction. If the fluid is air, the force is called an **aerodynamic force**. In water, it is called a **hydrodynamic force**.

Contents [hide]

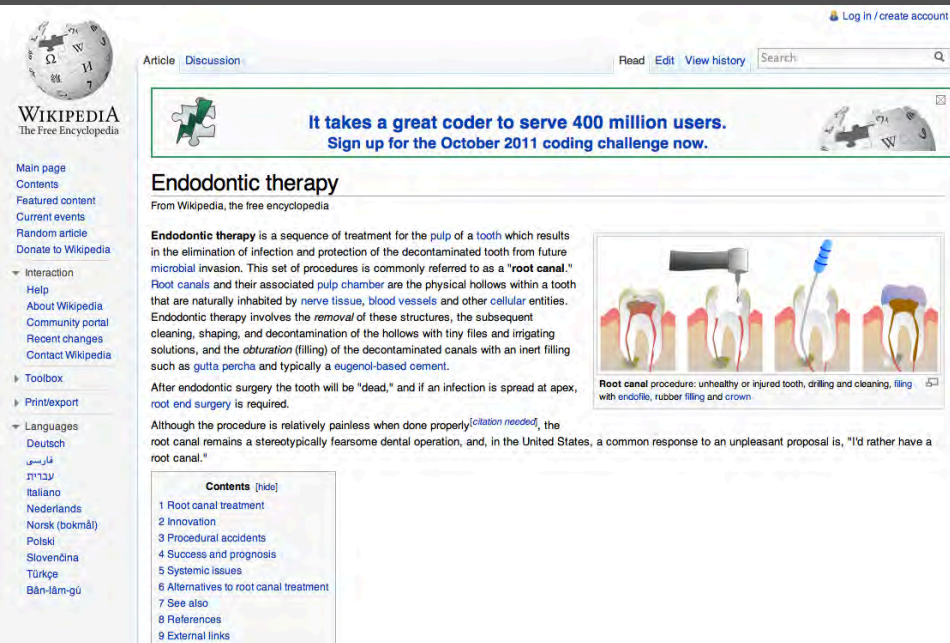
- Overview
- Simplified physical explanations of lift on an airfoil
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 - Limitations of deflection/turning
 - Increased flow speed and Bernoulli's principle
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 - Limitations of explanations based on Bernoulli's principle
- Basic attributes of lift
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 - Airfoil shape
 - Air speed and density
 - Lift coefficient
 - Pressure integration
- A more comprehensive physical explanation
 - Lift involves action and reaction at the airfoil surface and is felt as a pressure difference
 - The airfoil affects the flow over a wide area around it
 - The pressure differences and the changes in flow speed and direction support each other in a mutual interaction
- The understanding of lift as a physical phenomenon
- Mathematical theories of lift
 - Navier-Stokes (NS) equations
 - Reynolds-Averaged Navier-Stokes (RANS) equations
 - Inviscid-flow equations (Euler or potential)
 - Linearized potential flow
 - Circulation and the Kutta-Joukowski theorem
 - Momentum balance in lifting flows
- Lift of three-dimensional wings
- Viscous effects: Profile drag and stalling



Boeing 747-8F landing

What do you do when your tooth hurts?

What do you do when your tooth hurts?



The screenshot shows the Wikipedia page for "Endodontic therapy". At the top, there's a banner for a coding challenge. The article text explains that endodontic therapy is a sequence of treatment for the pulp of a tooth, involving the elimination of infection and protection of the decontaminated tooth. It mentions root canals and pulp chambers. An illustration shows the steps of the root canal procedure: drilling, cleaning, filling with endofill, rubber filling, and a crown. A table of contents is visible on the left side of the article.

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Endodontic therapy

From Wikipedia, the free encyclopedia

Endodontic therapy is a sequence of treatment for the **pulp** of a **tooth** which results in the elimination of infection and protection of the decontaminated tooth from future microbial invasion. This set of procedures is commonly referred to as a "**root canal**." Root canals and their associated **pulp chamber** are the physical hollows within a tooth that are naturally inhabited by **nerve tissue**, **blood vessels** and other **cellular** entities. Endodontic therapy involves the *removal* of these structures, the subsequent cleaning, shaping, and decontamination of the hollows with tiny files and irrigating solutions, and the *obturation* (filling) of the decontaminated canals with an inert filling such as *gutta percha* and typically a *eugenol-based cement*.

After endodontic surgery the tooth will be "dead," and if an infection is spread at apex, *root end surgery* is required.

Although the procedure is relatively painless when done properly^[*citation needed*], the root canal remains a stereotypically fearsome dental operation, and, in the United States, a common response to an unpleasant proposal is, "I'd rather have a root canal."

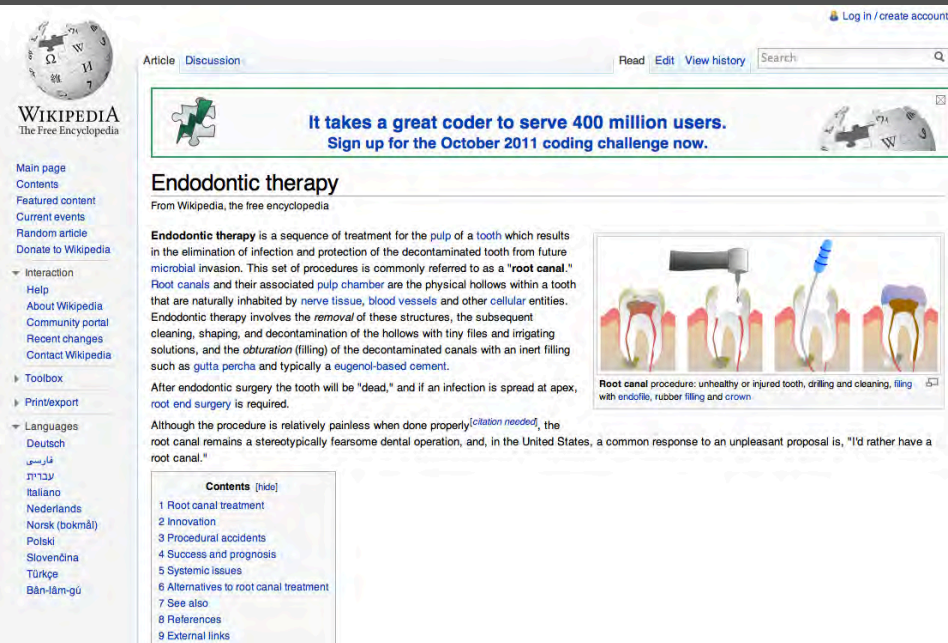
Contents

- 1 Root canal treatment
- 2 Innovation
- 3 Procedural accidents
- 4 Success and prognosis
- 5 Systemic issues
- 6 Alternatives to root canal treatment
- 7 See also
- 8 References
- 9 External links

Root canal procedure: unhealthy or injured tooth, drilling and cleaning, filling with endofill, rubber filling and crown

Search the web and fix it
yourself?

What do you do when your tooth hurts?



The image shows a screenshot of the Wikipedia article titled "Endodontic therapy". The page layout includes a top navigation bar with links for "Article", "Discussion", "Read", "Edit", "View history", and a search box. Below this is a banner for a coding challenge. The main content area starts with the title "Endodontic therapy" and a sub-header "From Wikipedia, the free encyclopedia". The text describes the procedure as a sequence of treatment for the pulp of a tooth, involving the elimination of infection and protection of the decontaminated tooth. It mentions the removal of pulp tissue, blood vessels, and other cellular entities. The procedure involves cleaning, shaping, and decontamination of the hollows with tiny files and irrigating solutions, followed by obturation (filling) of the decontaminated canals with an inert filling such as gutta percha and typically a eugenol-based cement. A diagram illustrates the root canal procedure: an unhealthy or injured tooth is drilled and cleaned, then filled with endofill, rubber filling, and a crown. Below the diagram, it states that after endodontic surgery, the tooth will be "dead," and if an infection is spread at apex, root end surgery is required. A note mentions that although the procedure is relatively painless when done properly, the root canal remains a stereotypically fearsome dental operation. A table of contents is provided at the bottom left, listing sections like "1 Root canal treatment", "2 Innovation", "3 Procedural accidents", "4 Success and prognosis", "5 Systemic issues", "6 Alternatives to root canal treatment", "7 See also", "8 References", and "9 External links".

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Endodontic therapy

From Wikipedia, the free encyclopedia

Endodontic therapy is a sequence of treatment for the pulp of a tooth which results in the elimination of infection and protection of the decontaminated tooth from future microbial invasion. This set of procedures is commonly referred to as a "**root canal**." Root canals and their associated pulp chamber are the physical hollows within a tooth that are naturally inhabited by nerve tissue, blood vessels and other cellular entities. Endodontic therapy involves the removal of these structures, the subsequent cleaning, shaping, and decontamination of the hollows with tiny files and irrigating solutions, and the obturation (filling) of the decontaminated canals with an inert filling such as gutta percha and typically a eugenol-based cement.

After endodontic surgery the tooth will be "dead," and if an infection is spread at apex, root end surgery is required.

Although the procedure is relatively painless when done properly^[*citation needed*], the root canal remains a stereotypically fearsome dental operation, and, in the United States, a common response to an unpleasant proposal is, "I'd rather have a root canal."

Contents

- 1 Root canal treatment
- 2 Innovation
- 3 Procedural accidents
- 4 Success and prognosis
- 5 Systemic issues
- 6 Alternatives to root canal treatment
- 7 See also
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Root canal procedure: unhealthy or injured tooth, drilling and cleaning, filling with endofill, rubber filling and crown



Search the web and fix it
yourself?

...or look for a dentist

Knowhow needs to be in brains





Who has more knowhow?













THE COMPANIES

U.S.

Boeing
Spirit
Vought
GE
Goodrich

CANADA

Boeing
Messier-Dowty

AUSTRALIA

Boeing

JAPAN

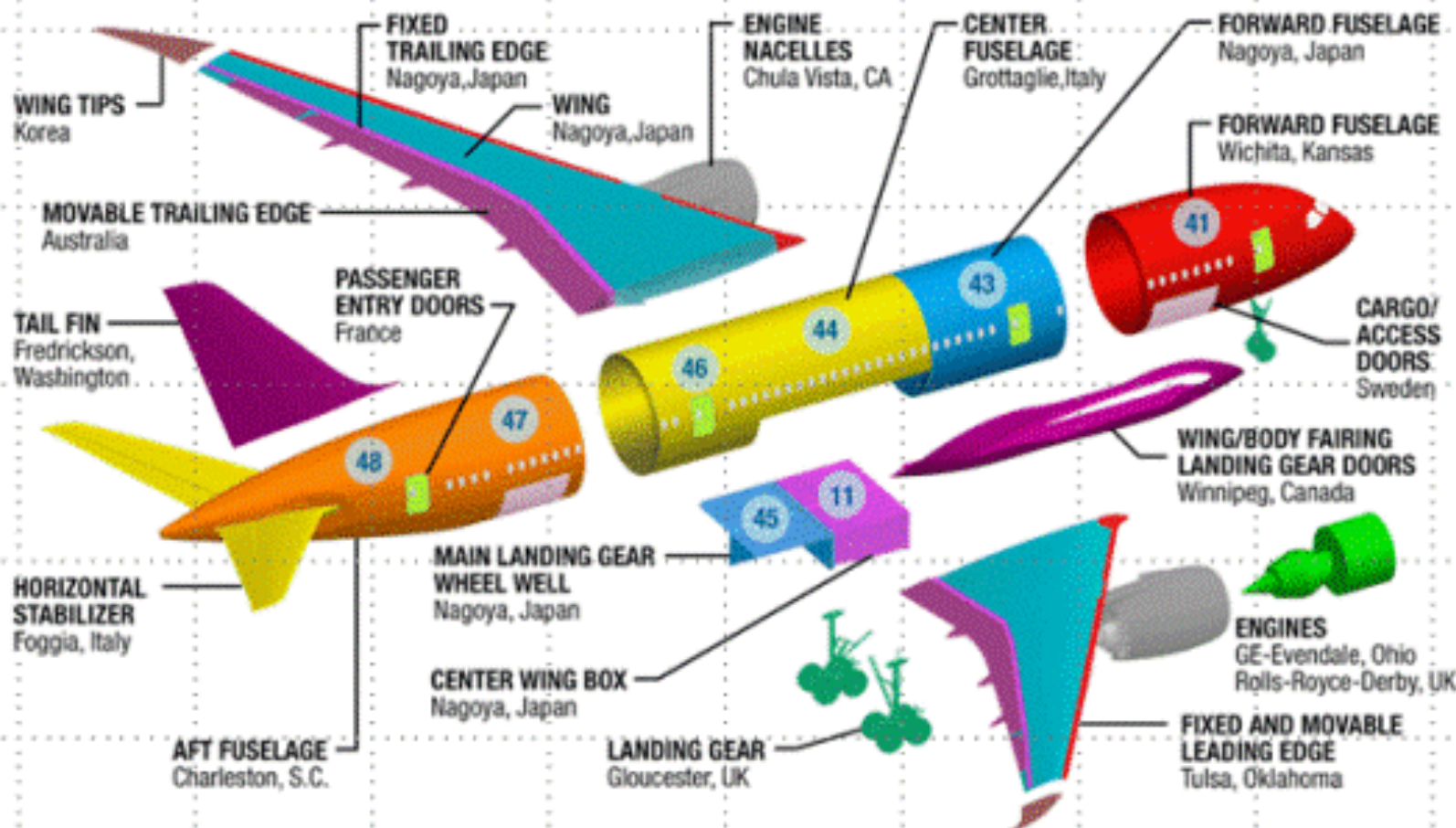
Kawasaki
Mitsubishi
Fuji

KOREA

KAL-ASD

EUROPE

Messier-Dowty
Rolls-Royce
Latecoere
Alenia
Saab











AMERICA'S FAVORITE WORD GAME

The

DELUXE TURNTABLE

SCRABBLE

CROSSWORD GAME

FEATURING
ROTATING
BOARD

*Theory of Economic
Development...*



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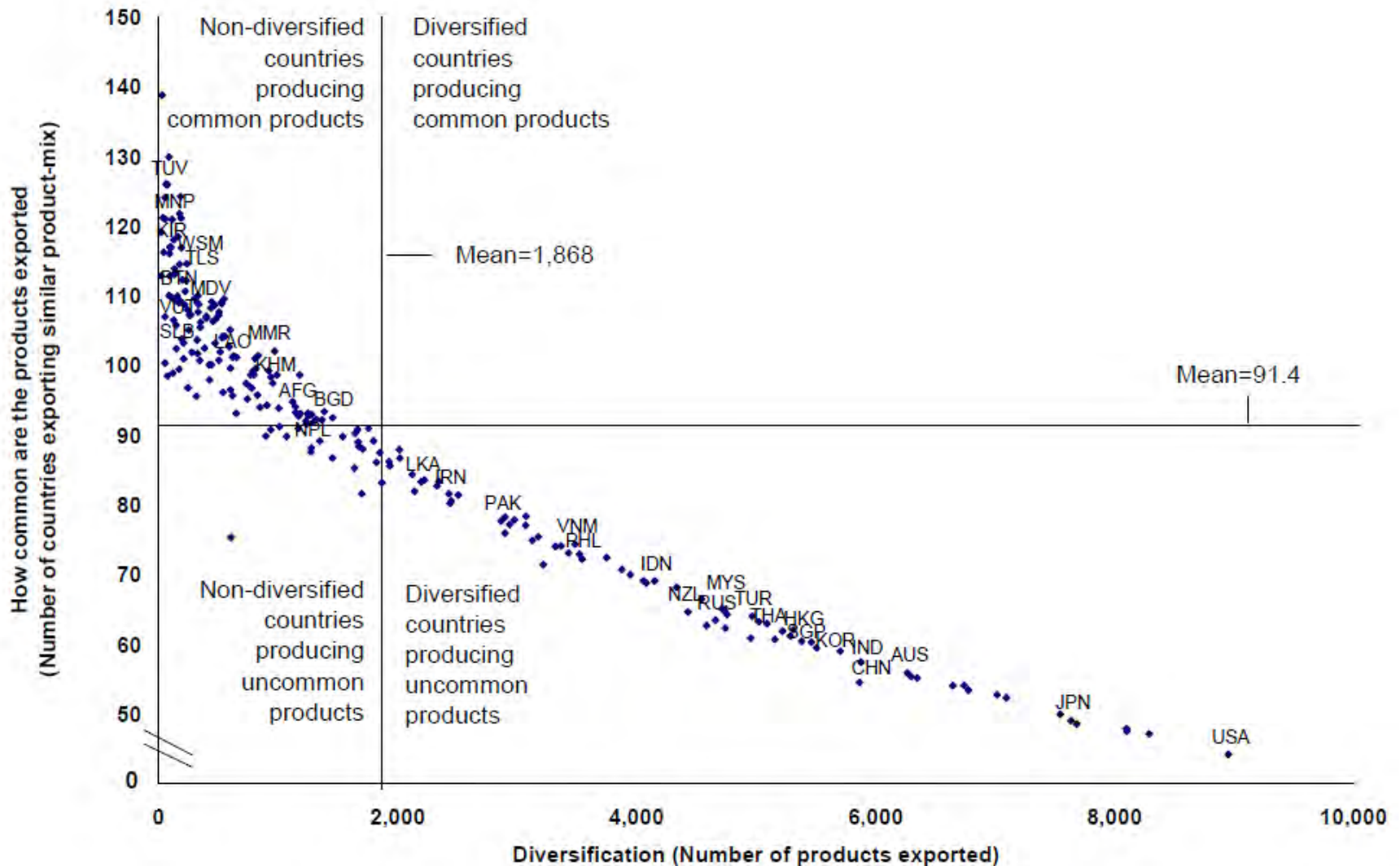
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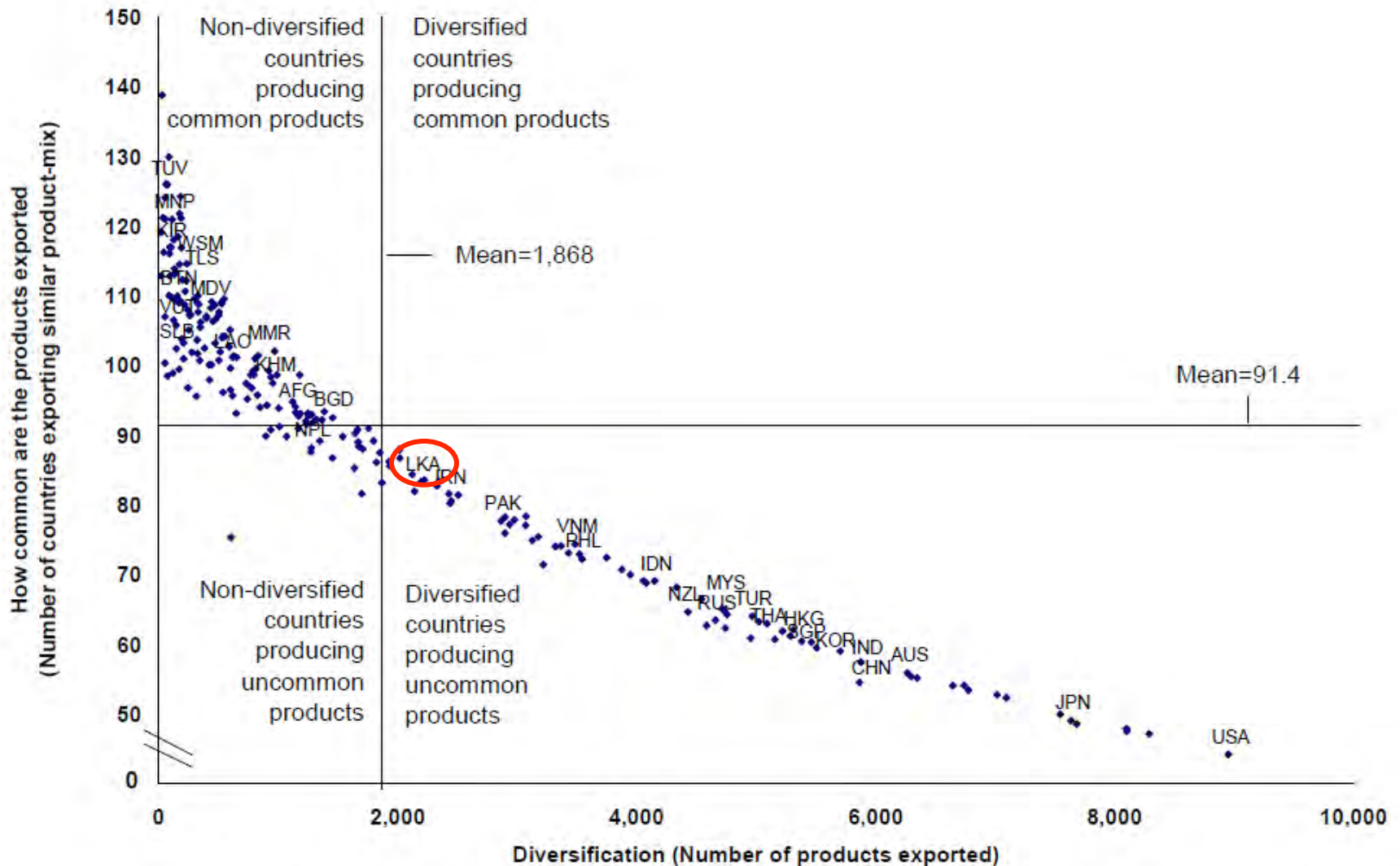
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Diversification and ubiquity - 2009



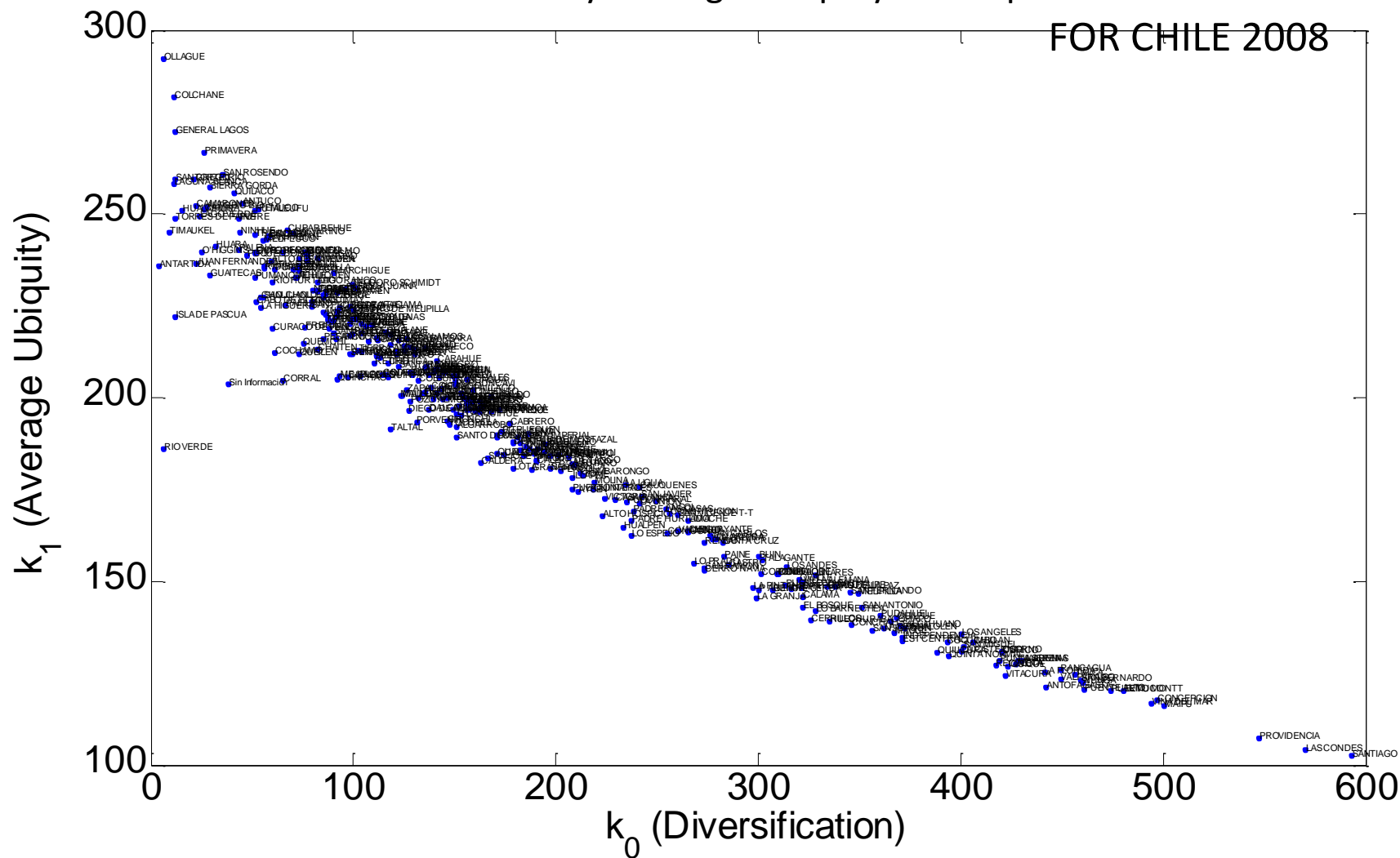
Diversification and ubiquity - 2009



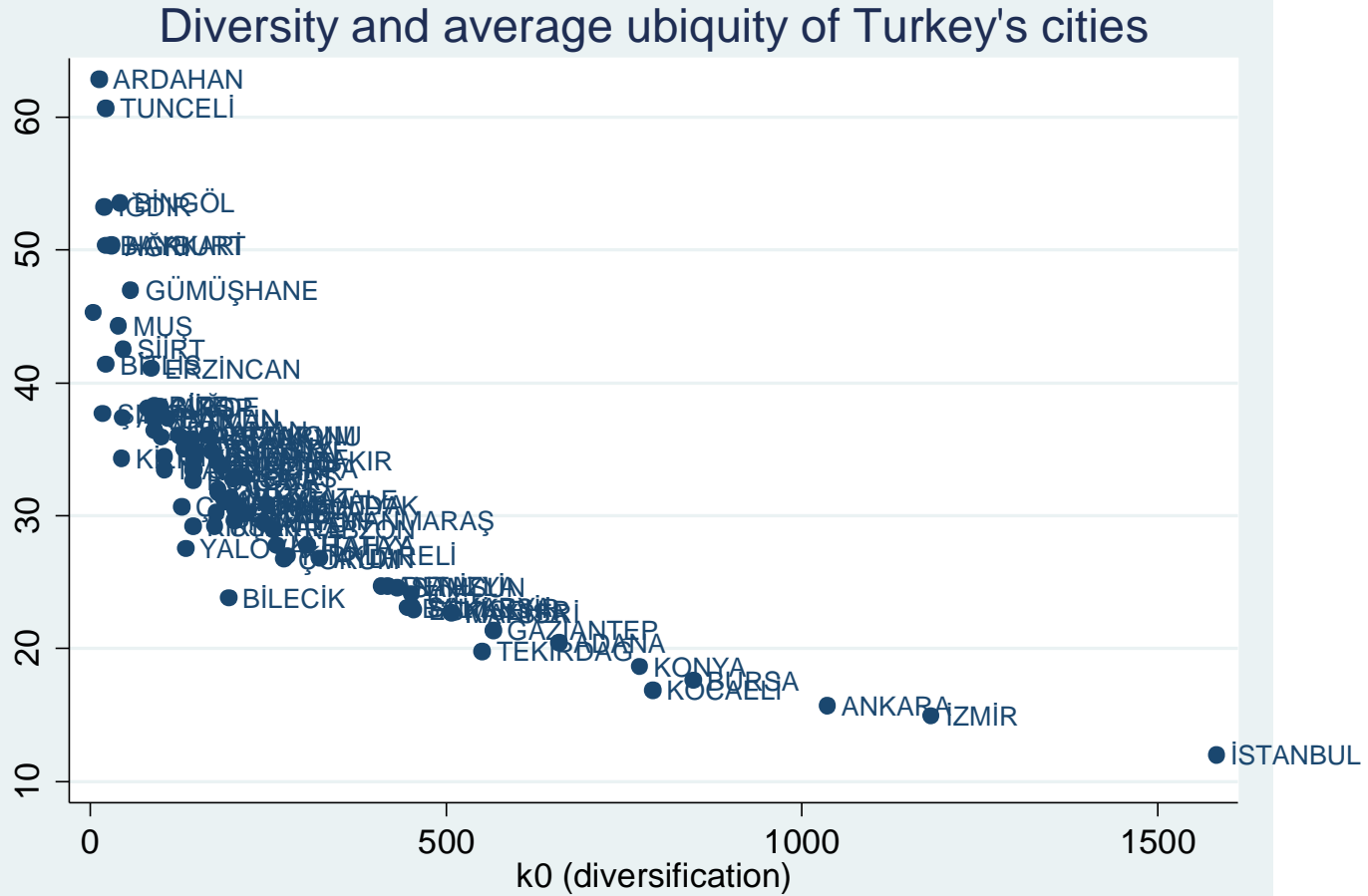
It also works within countries: Chile

Diversity-Average Ubiquity Municipalities

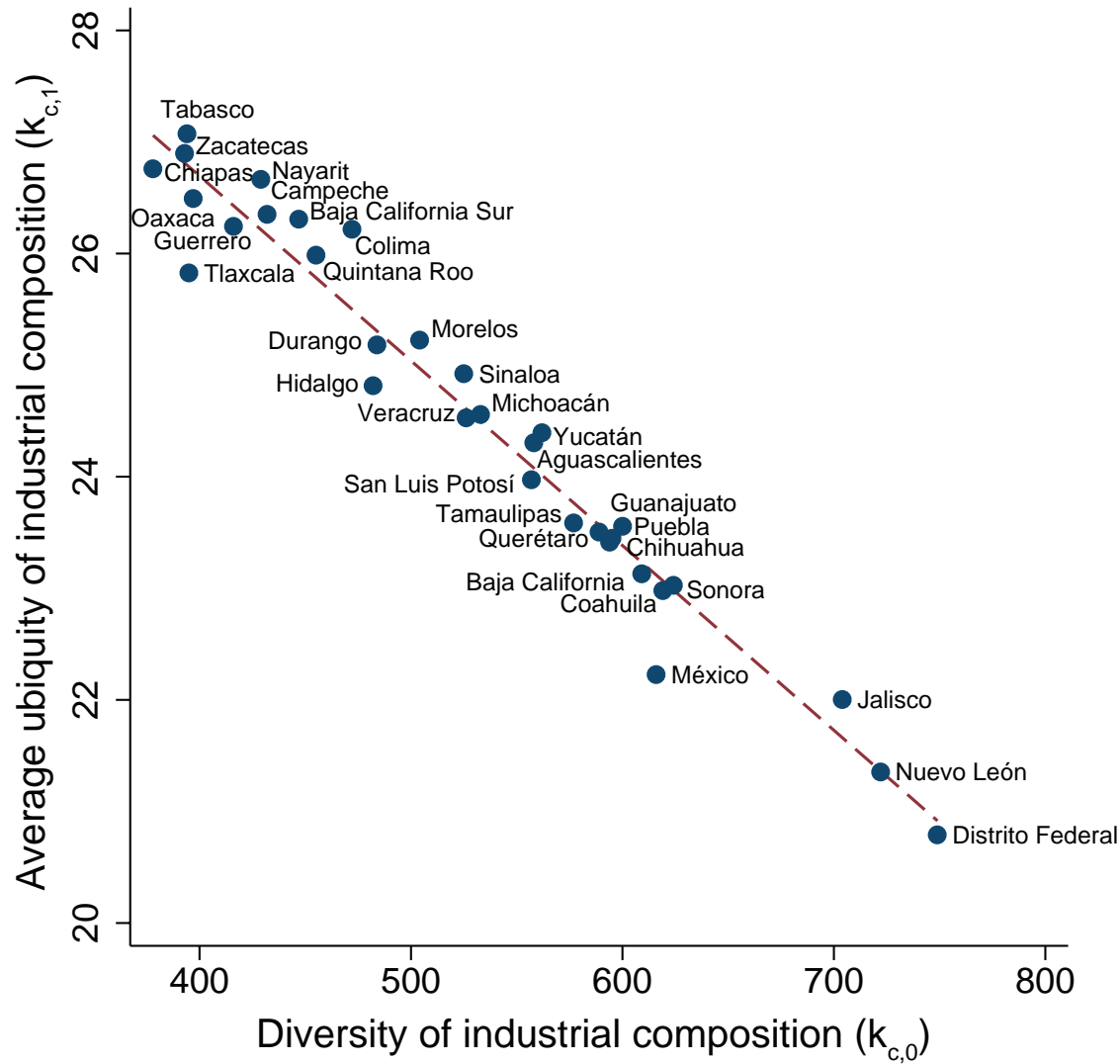
FOR CHILE 2008



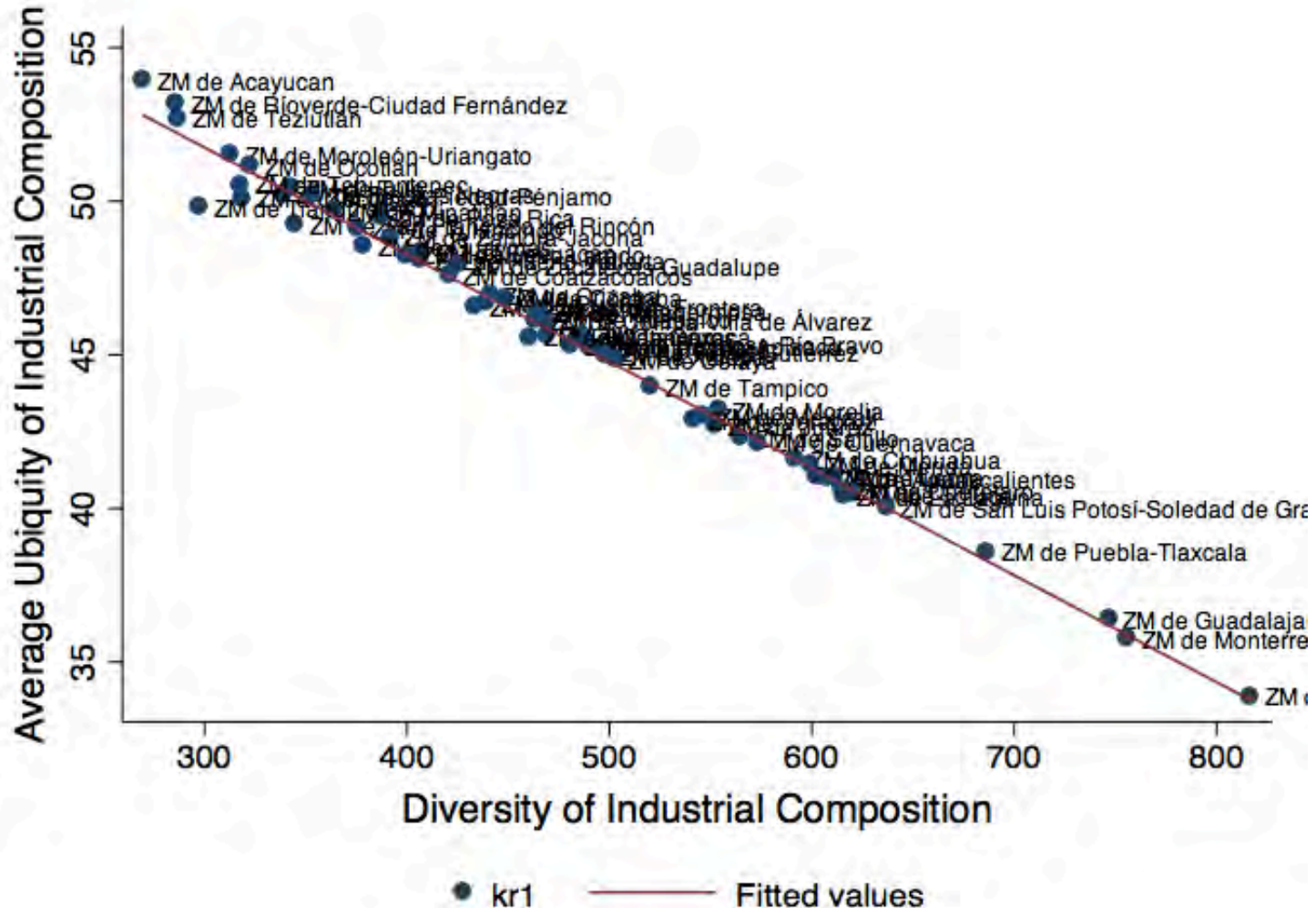
...Turkey



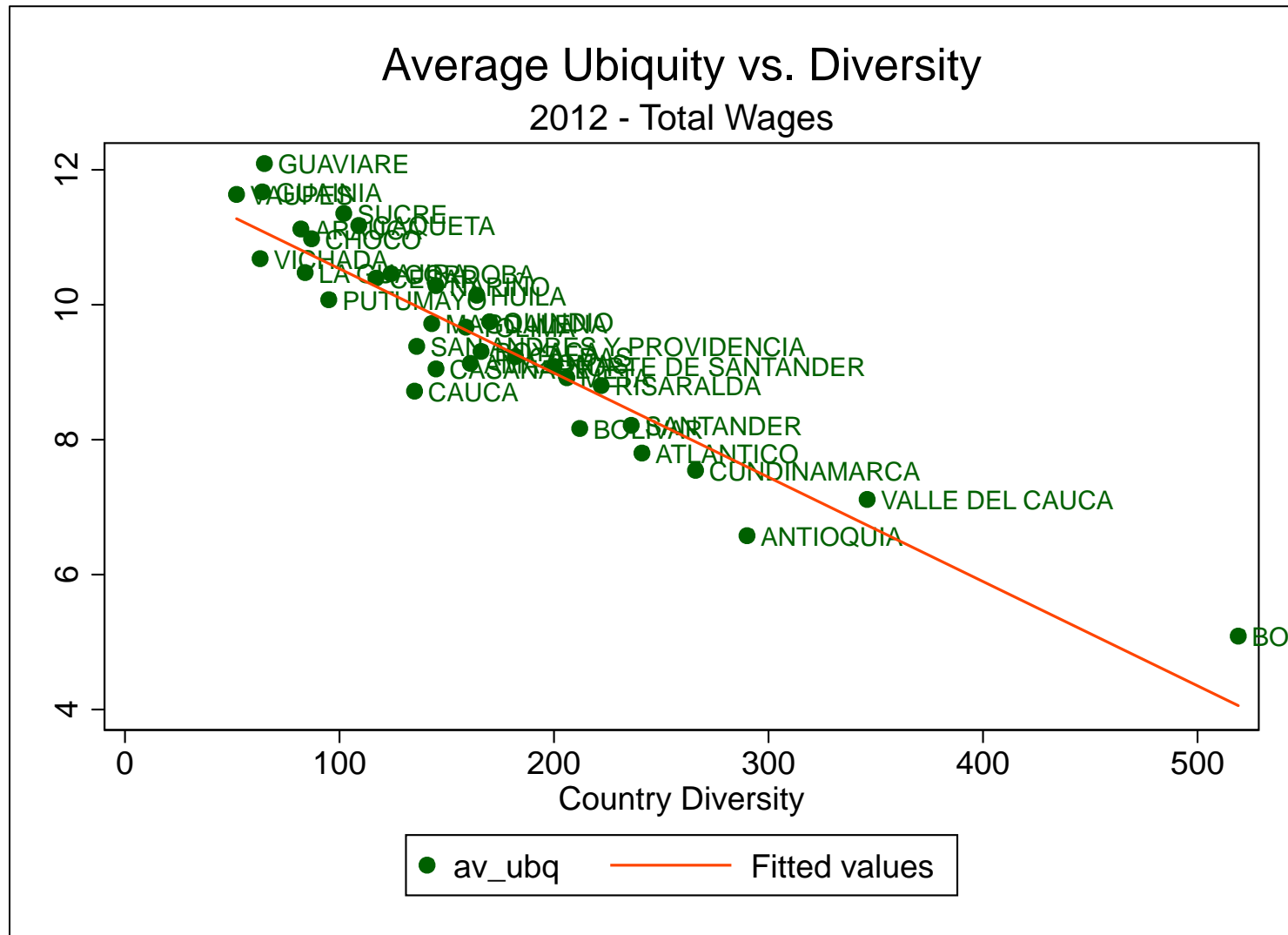
Mexican states



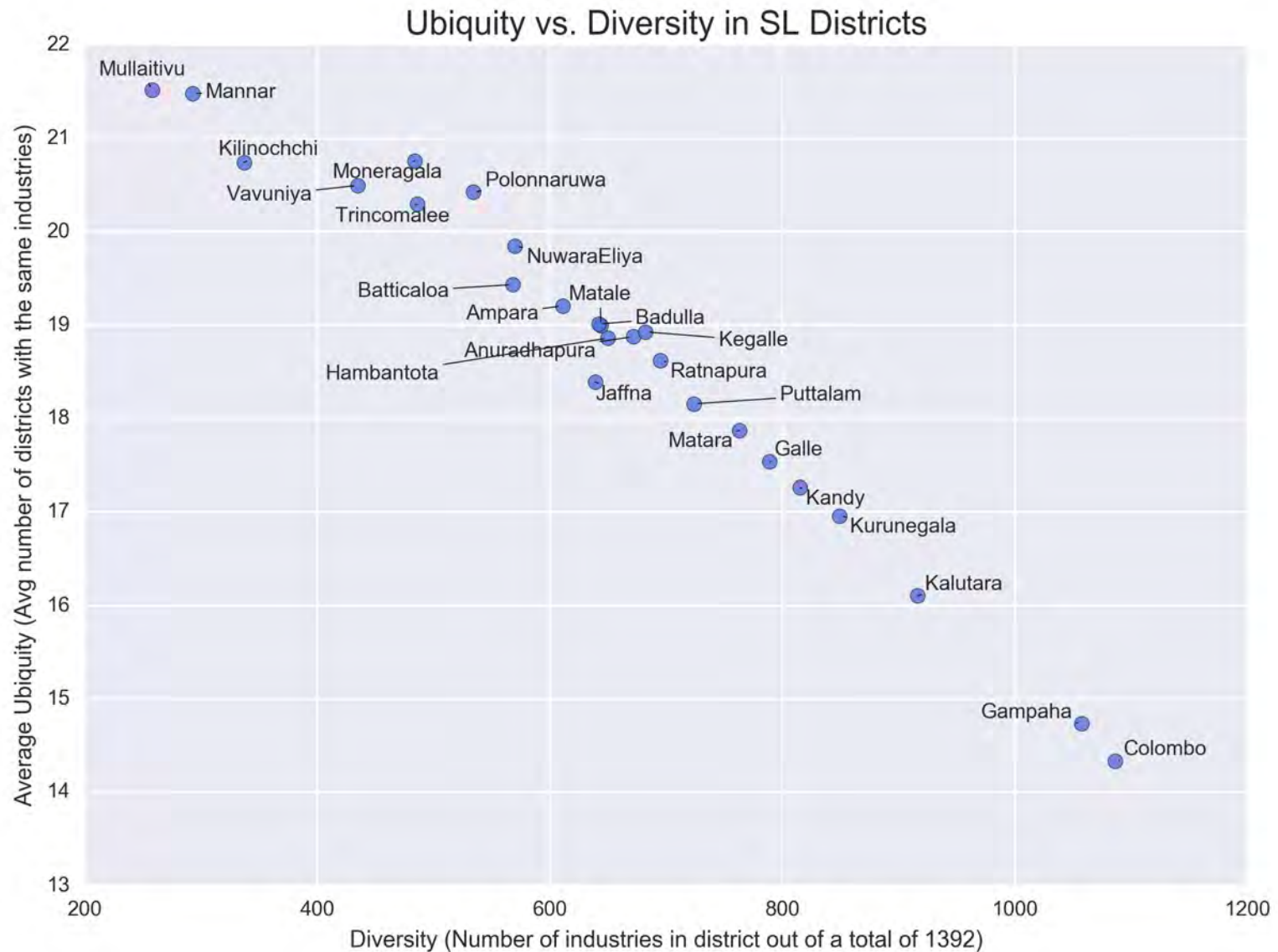
Mexican cities



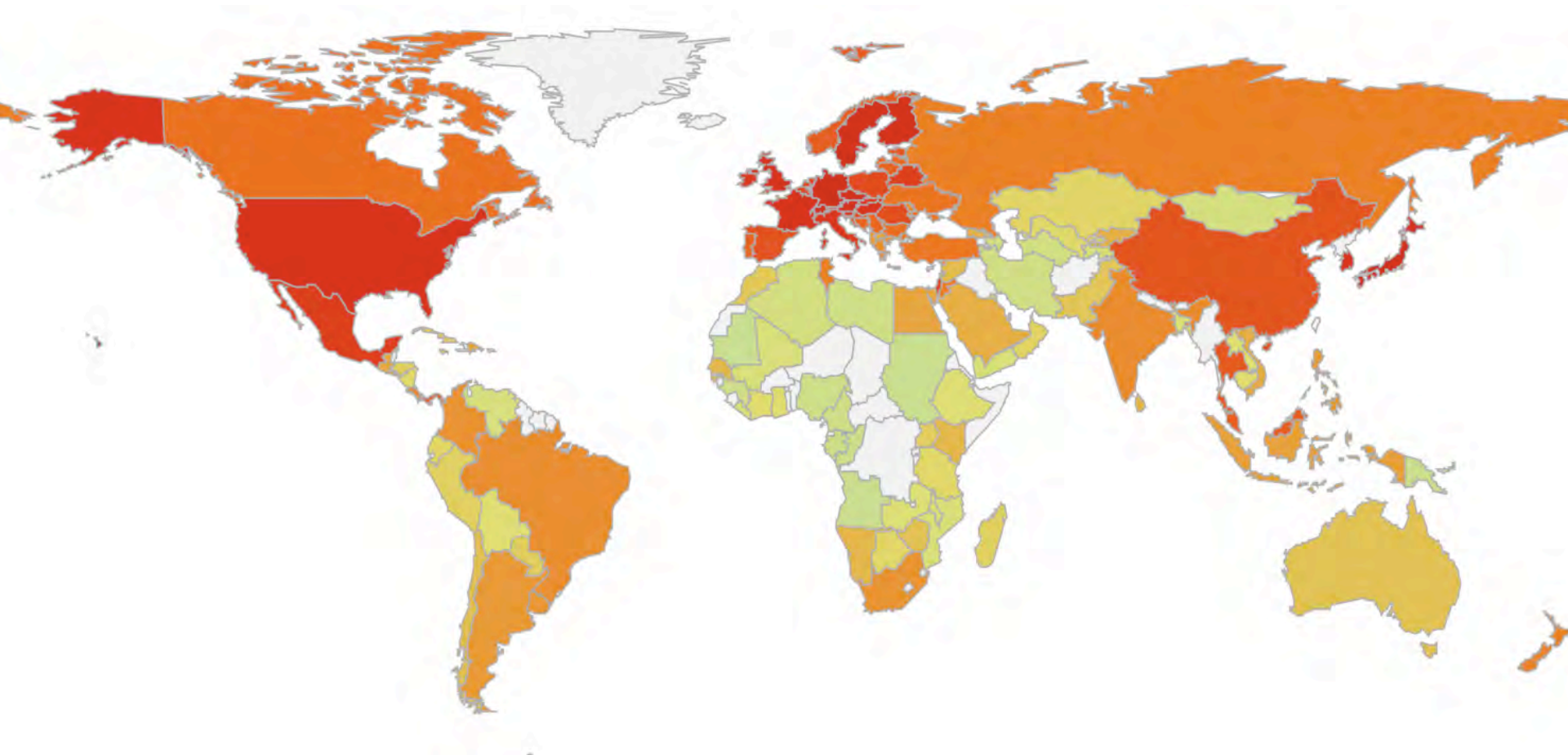
Colombian departments



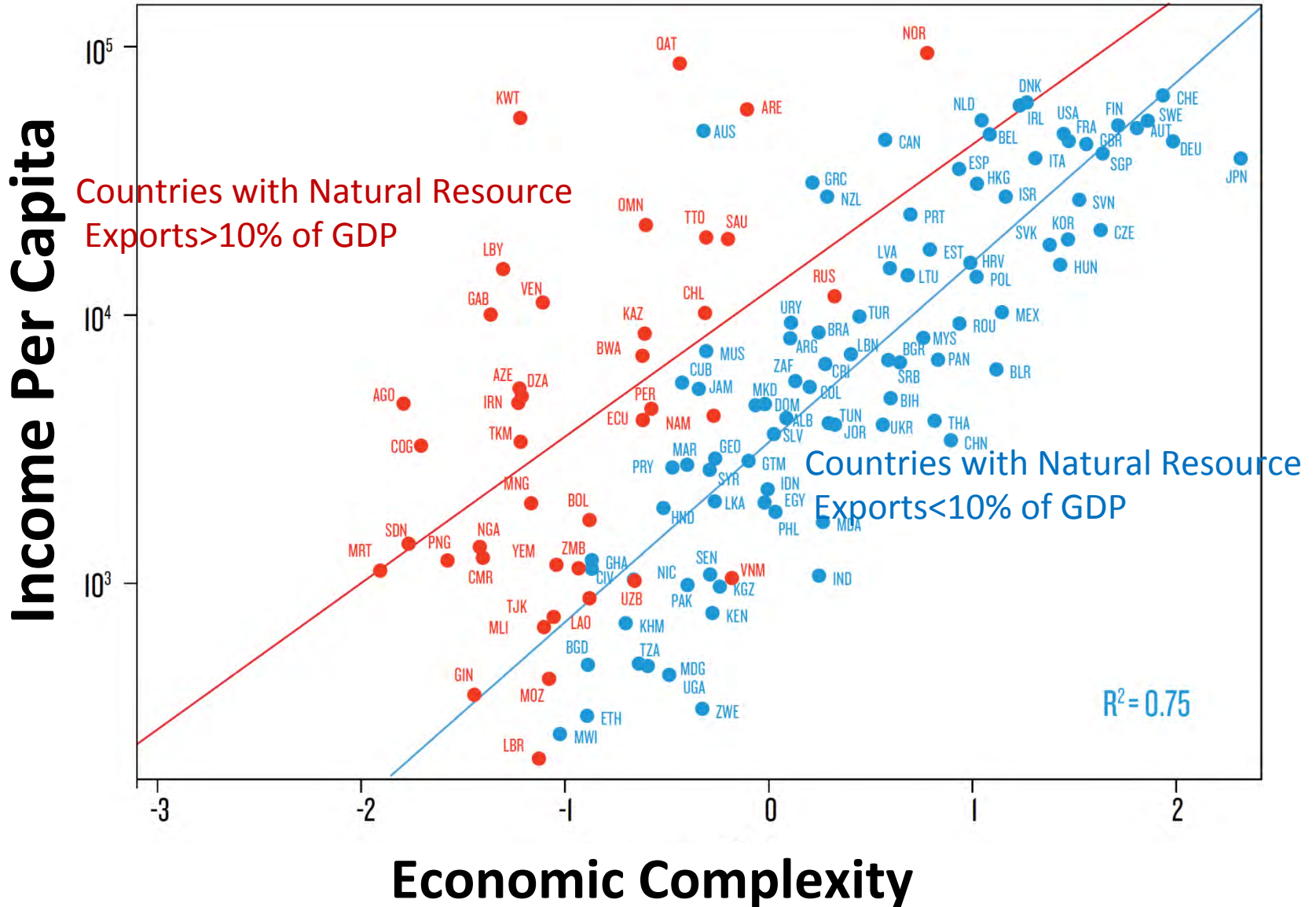
And it works for Sri Lanka



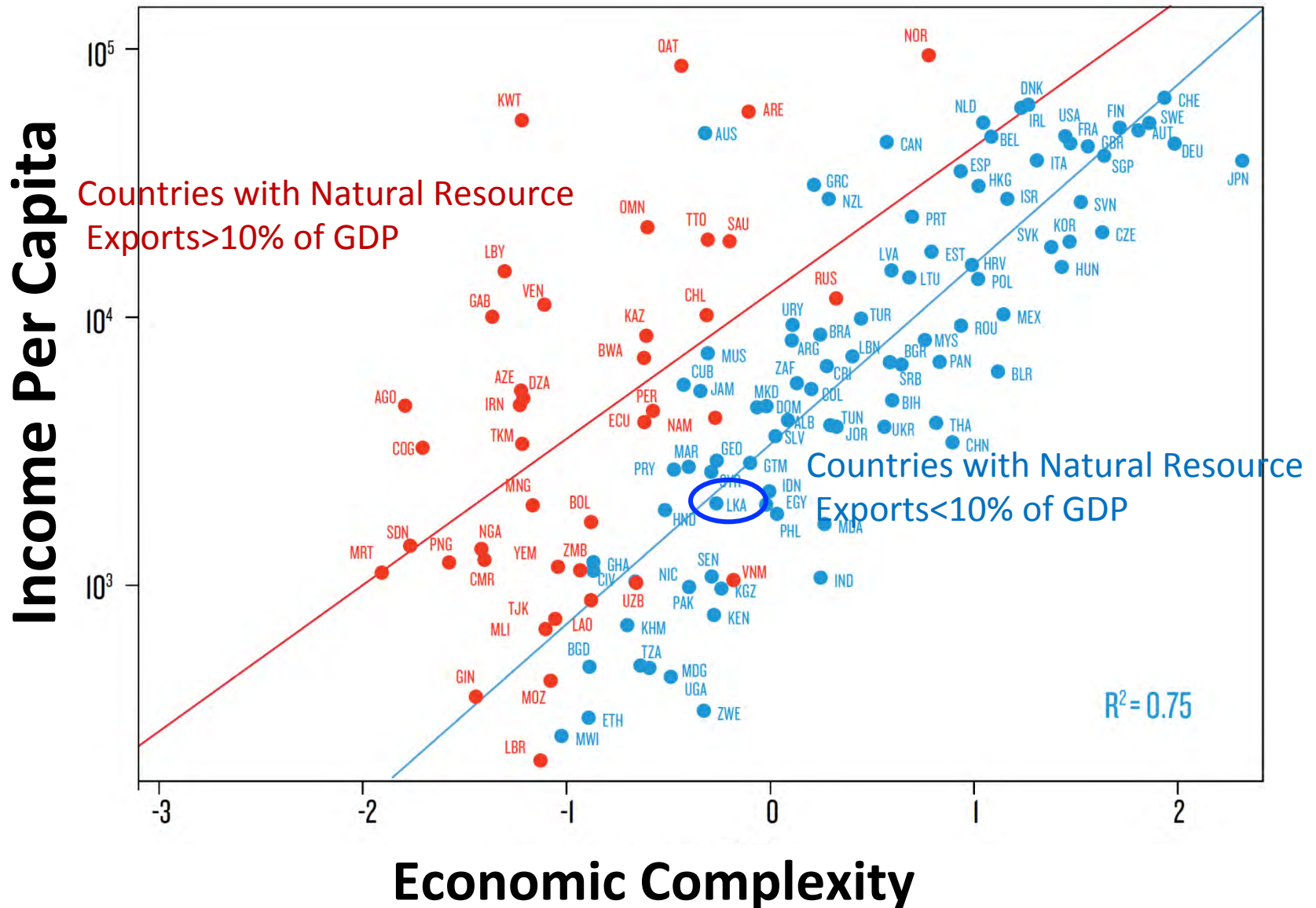
Economic Complexity Index

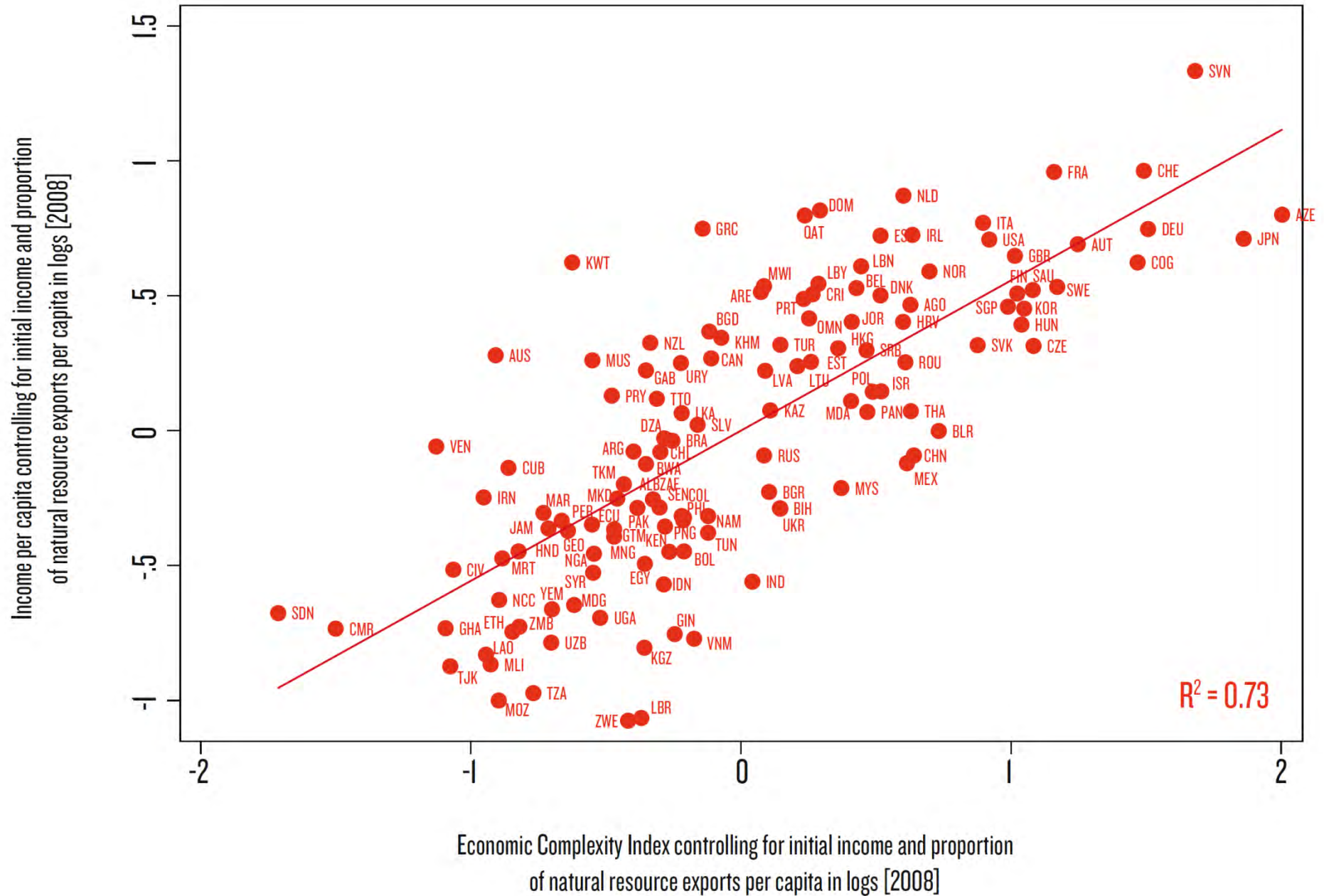


ECI correlates with GDP per capita

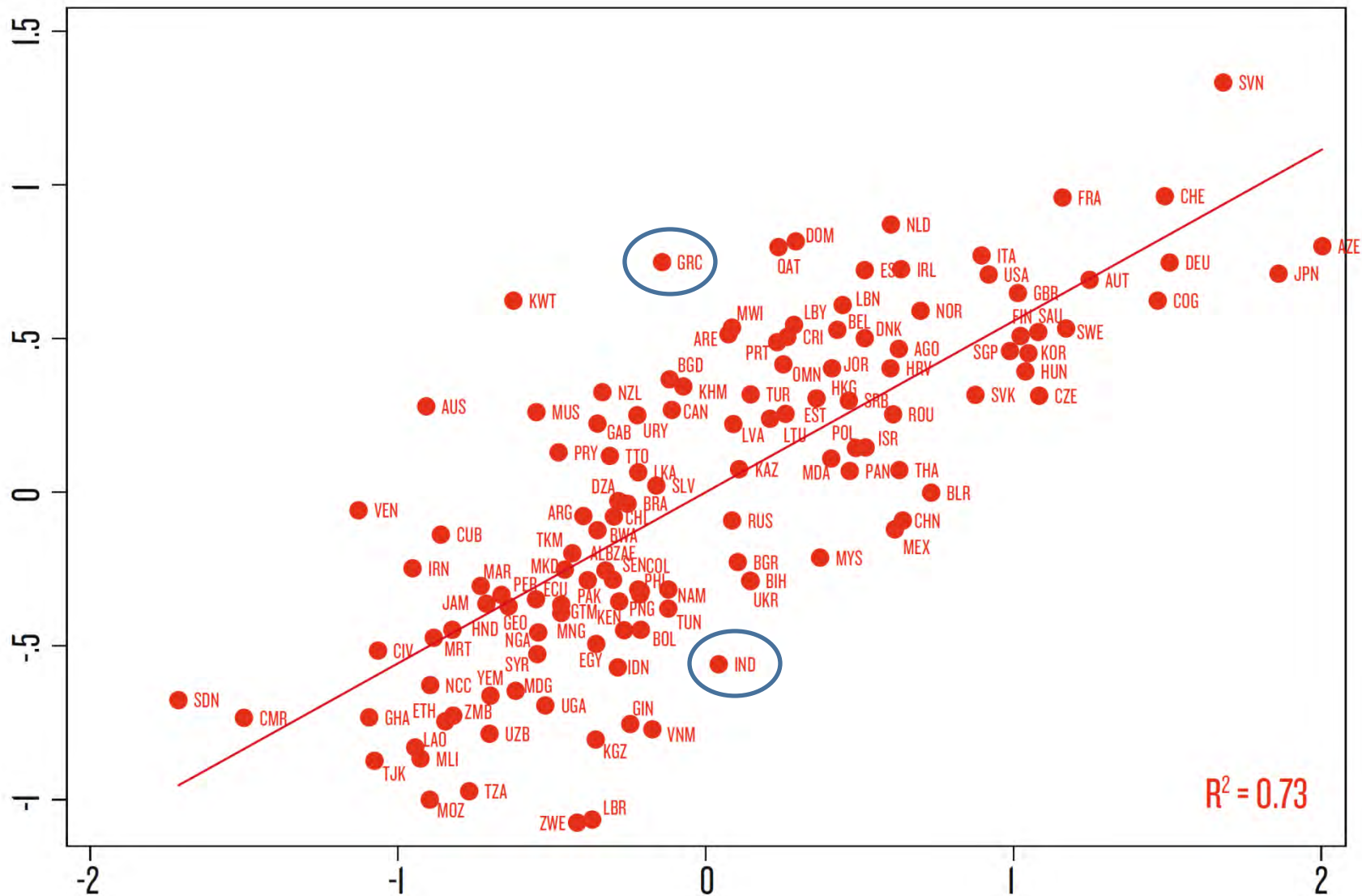


ECI correlates with GDP per capita

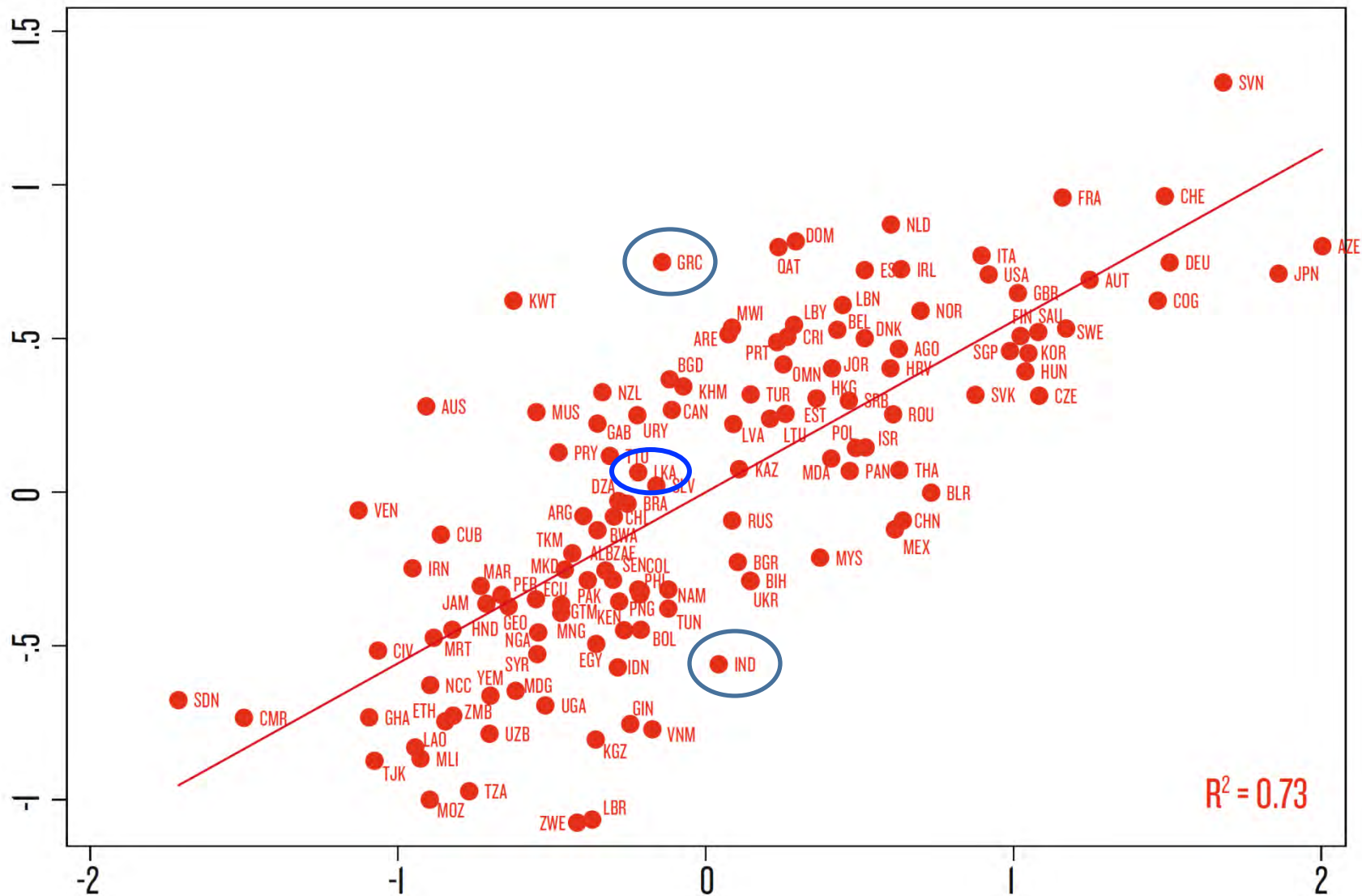




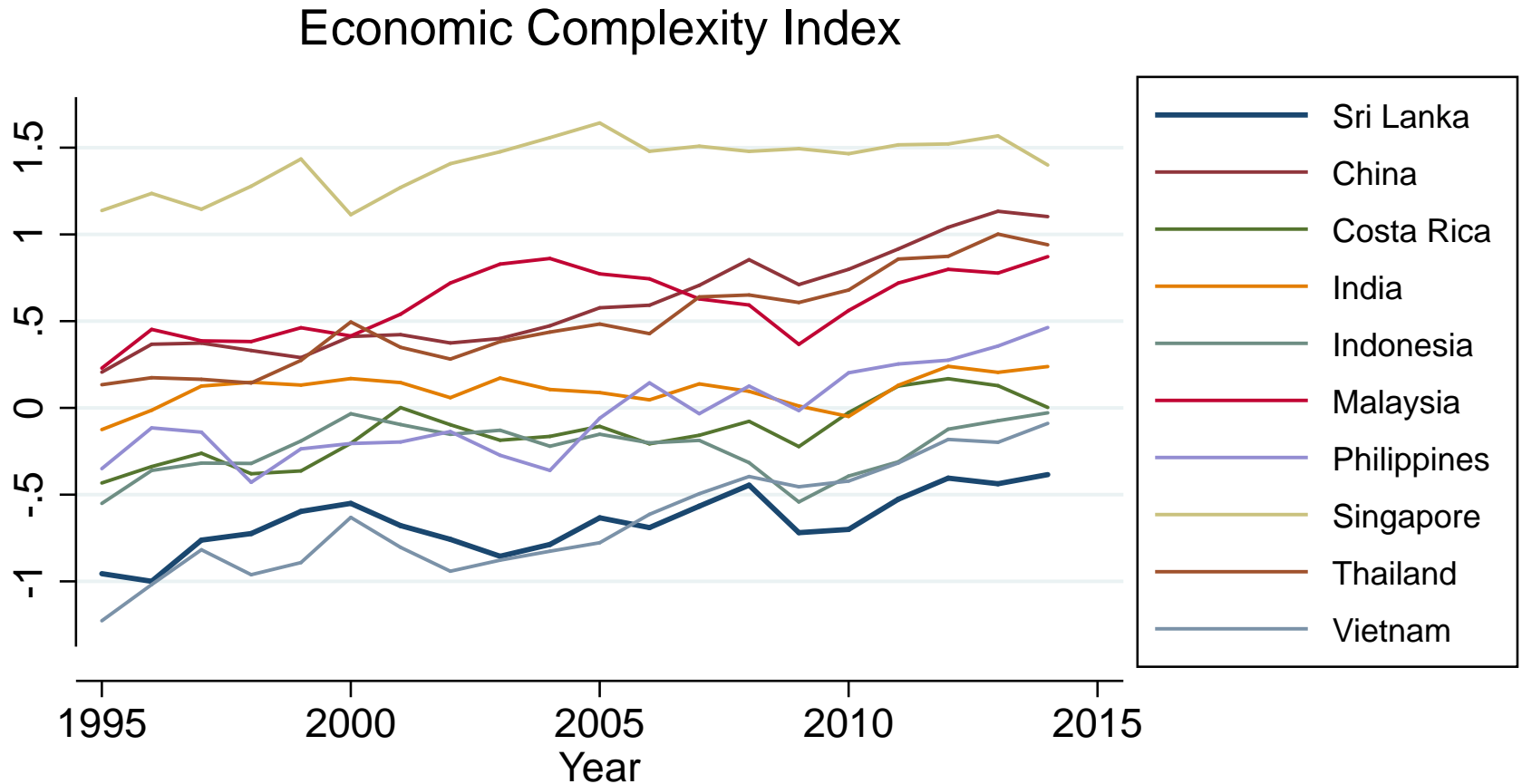
Income per capita controlling for initial income and proportion
of natural resource exports per capita in logs [2008]



Income per capita controlling for initial income and proportion
of natural resource exports per capita in logs [2008]



Sri Lanka's economic complexity is low and it is evolving at a slow pace.



Data source: Atlas of Economic Complexity

How do
economies
learn?

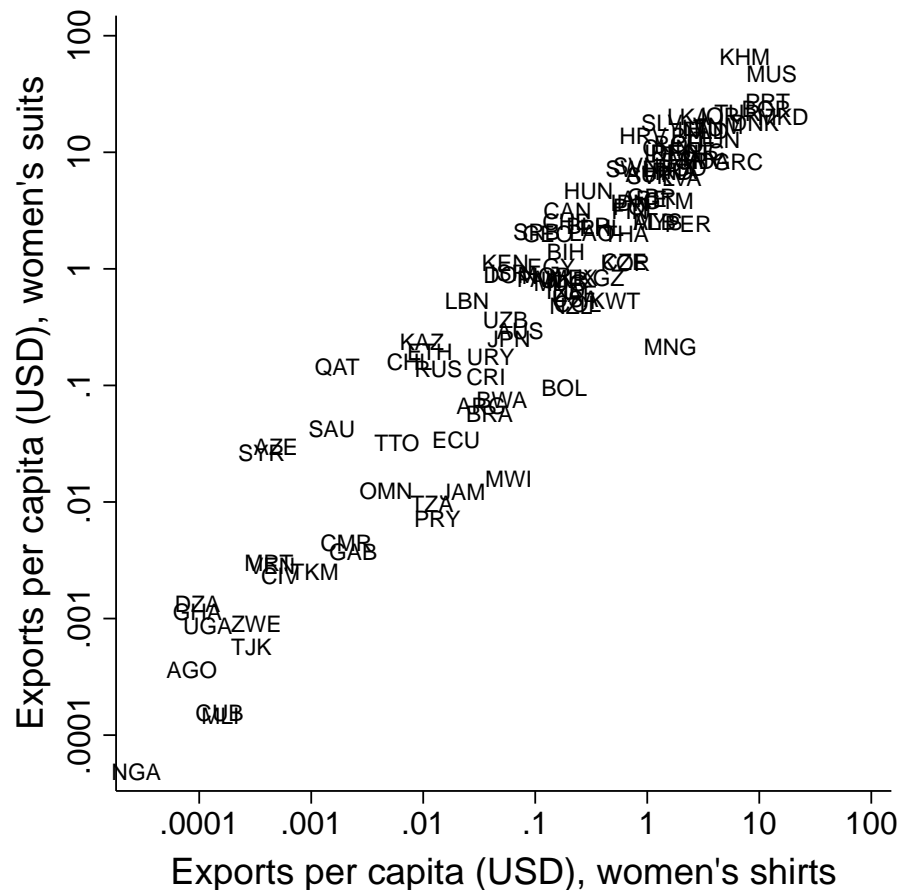




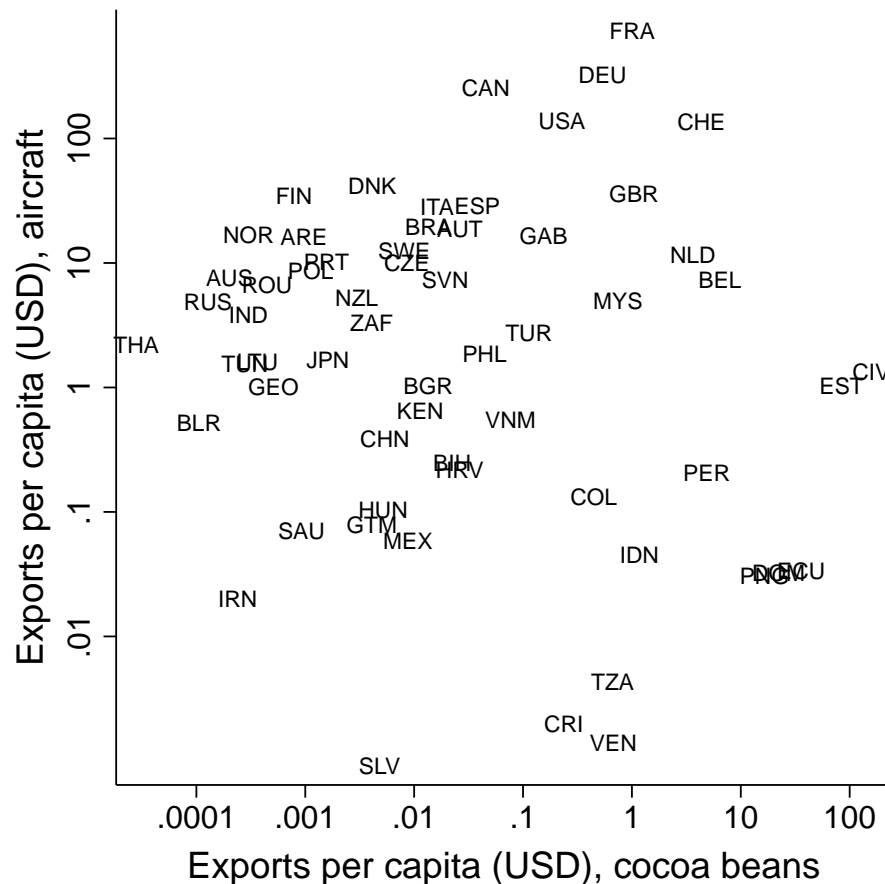
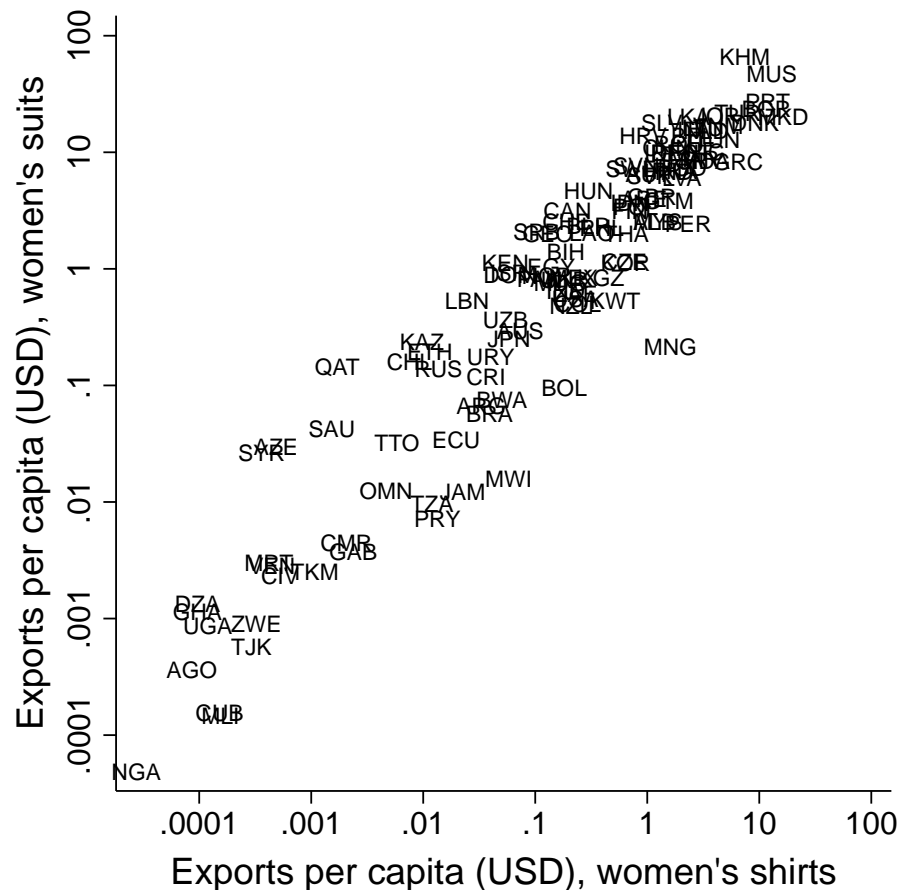
Mapping out the Forest

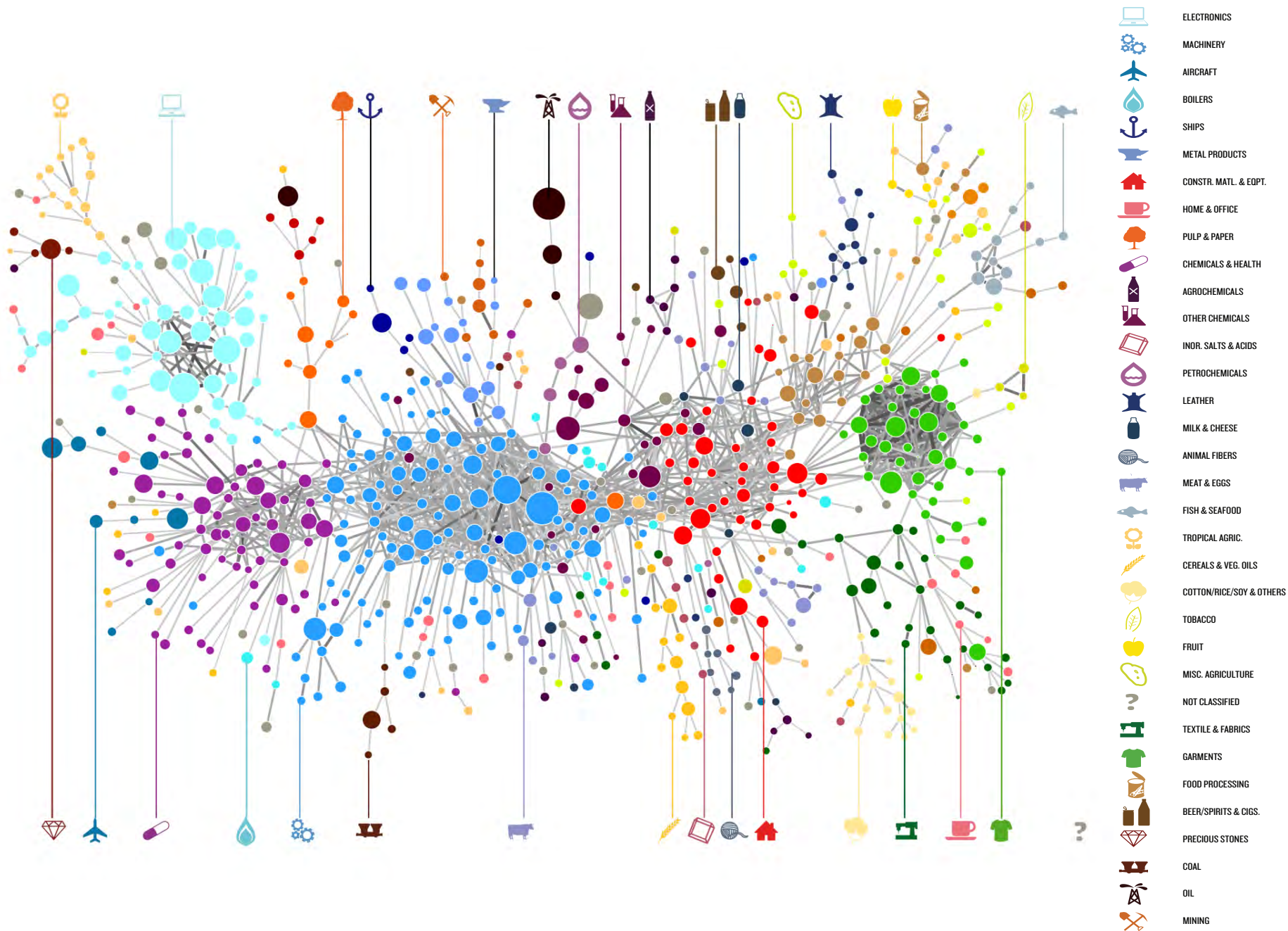


Some products tend to be exported together...
...others not so much

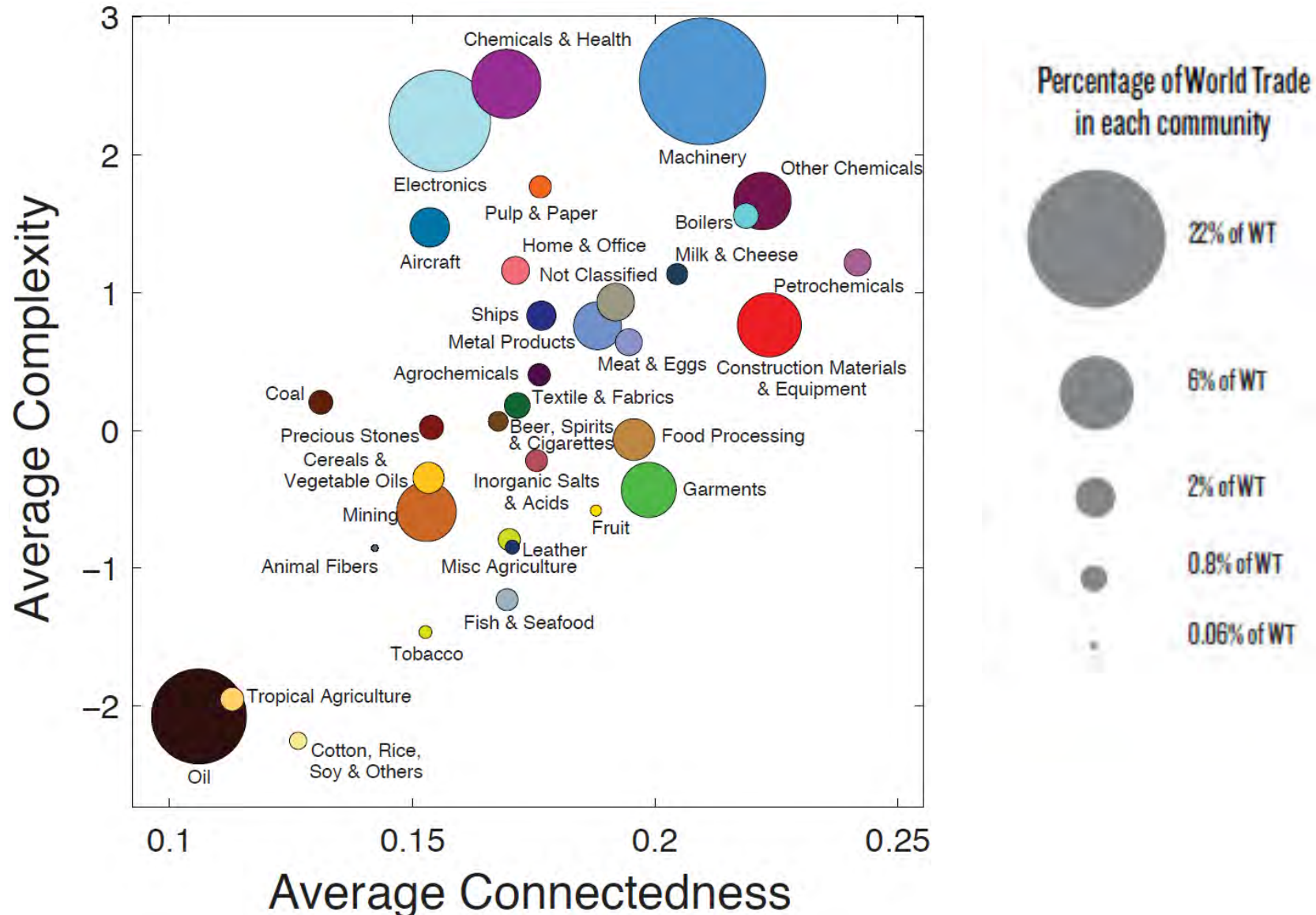


Some products tend to be exported together...
...others not so much





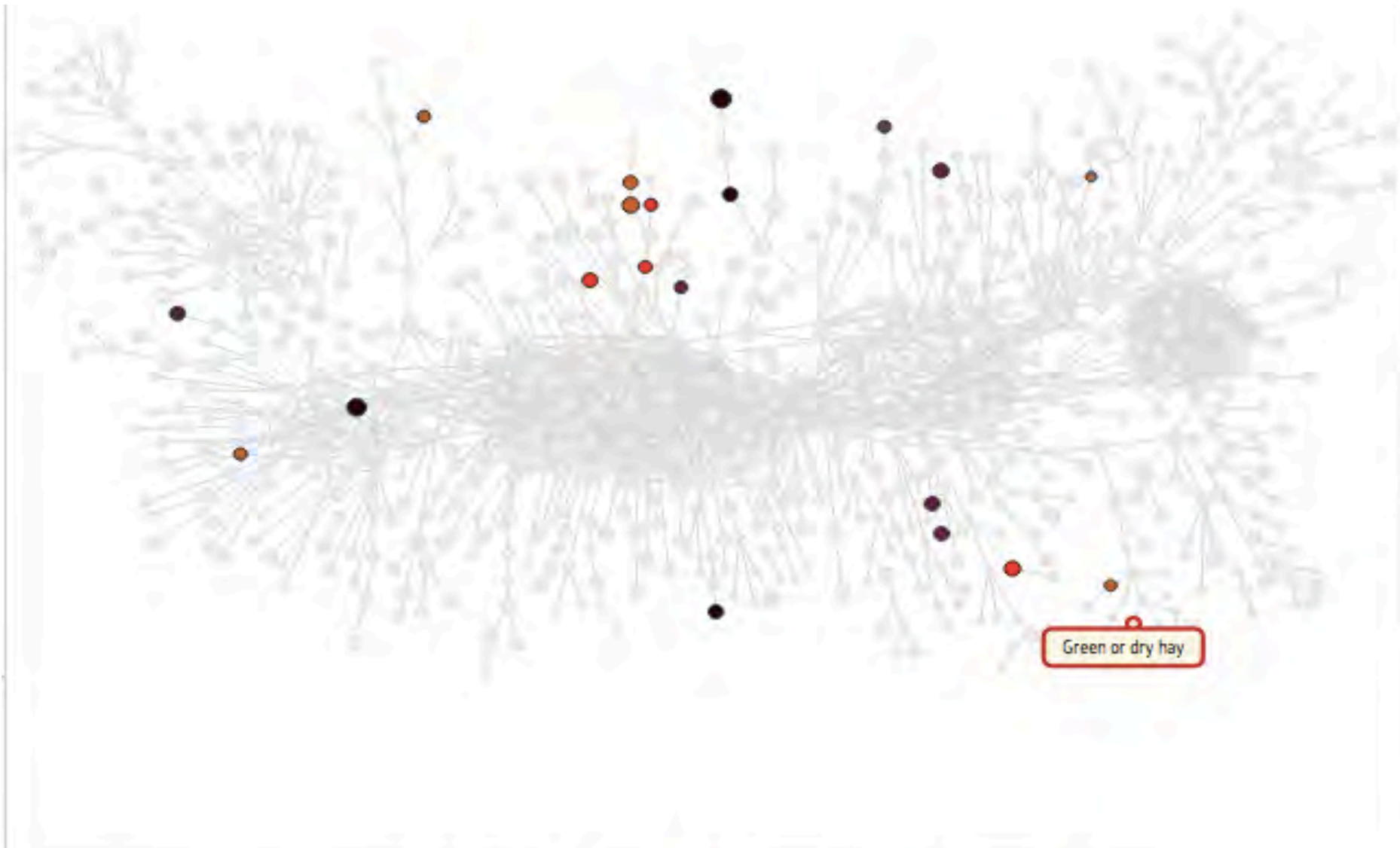
Community characteristics: Complexity, Connectedness and Market Size



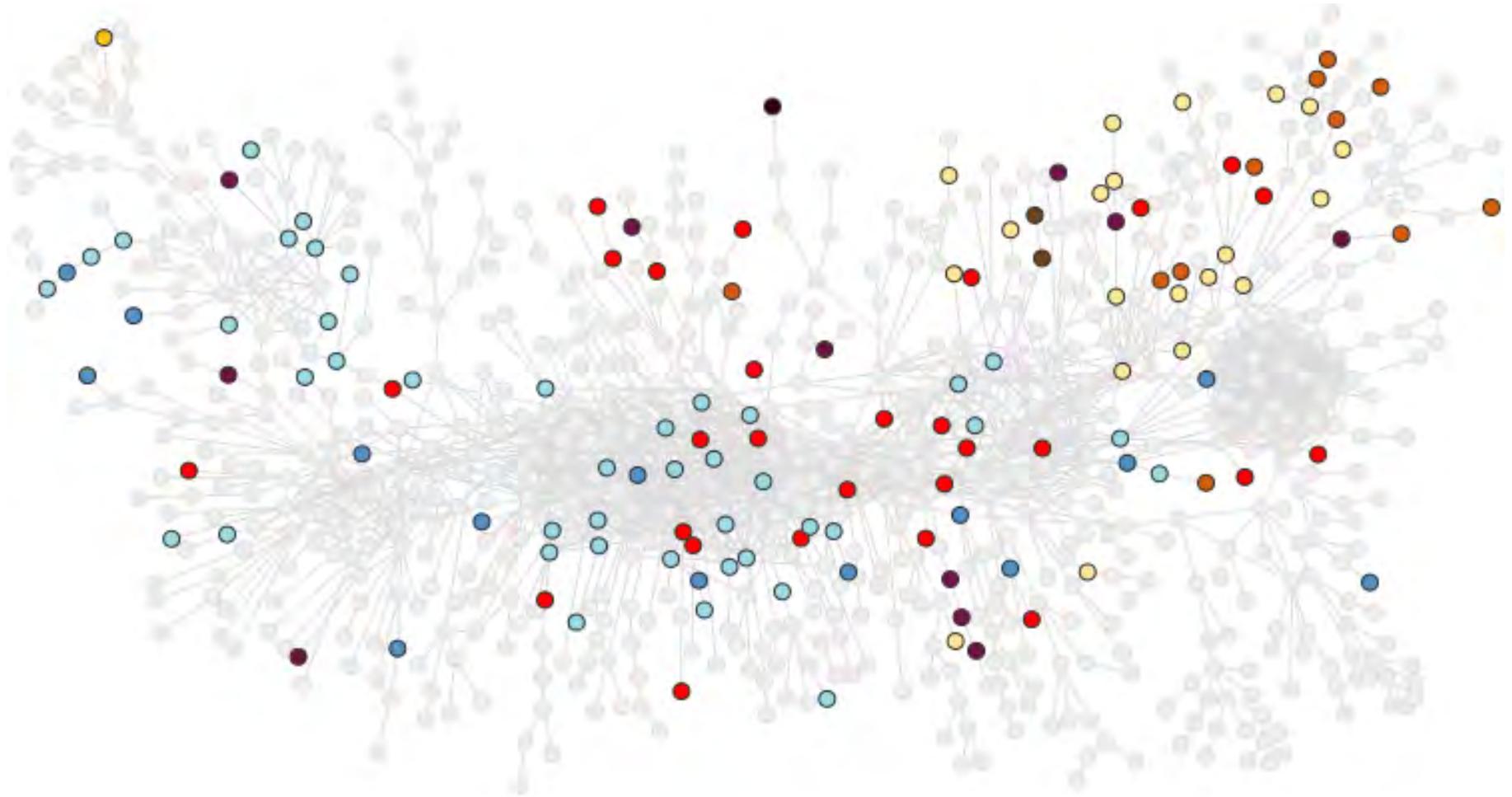
Where are the monkeys?



Venezuela 2013



Mexico 2013



Venezuela 2014

Petroleum oils, crude

77%

Petroleum
oils, refined

17%

0.92%

0.24%

0.29%

0.16%

0.34%

0.32%

0.16%

0.26%

Gold

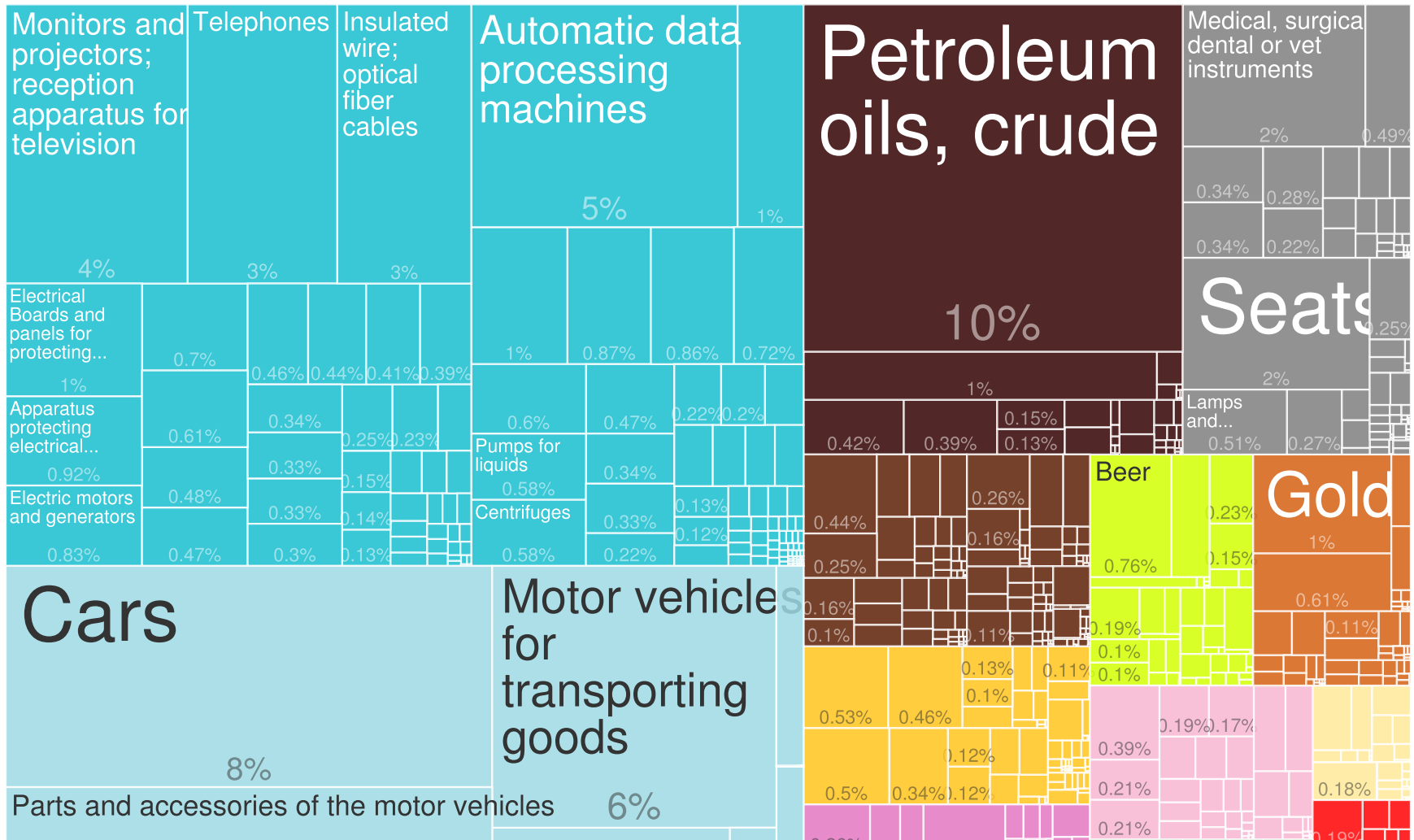
0.84%

0.1%

0.68%

0.11%

Mexico 2014



How do monkeys jump?



A tale of two countries

GHANA



THAILAND



1962: Roughly equal income

GHANA



\$295

THAILAND

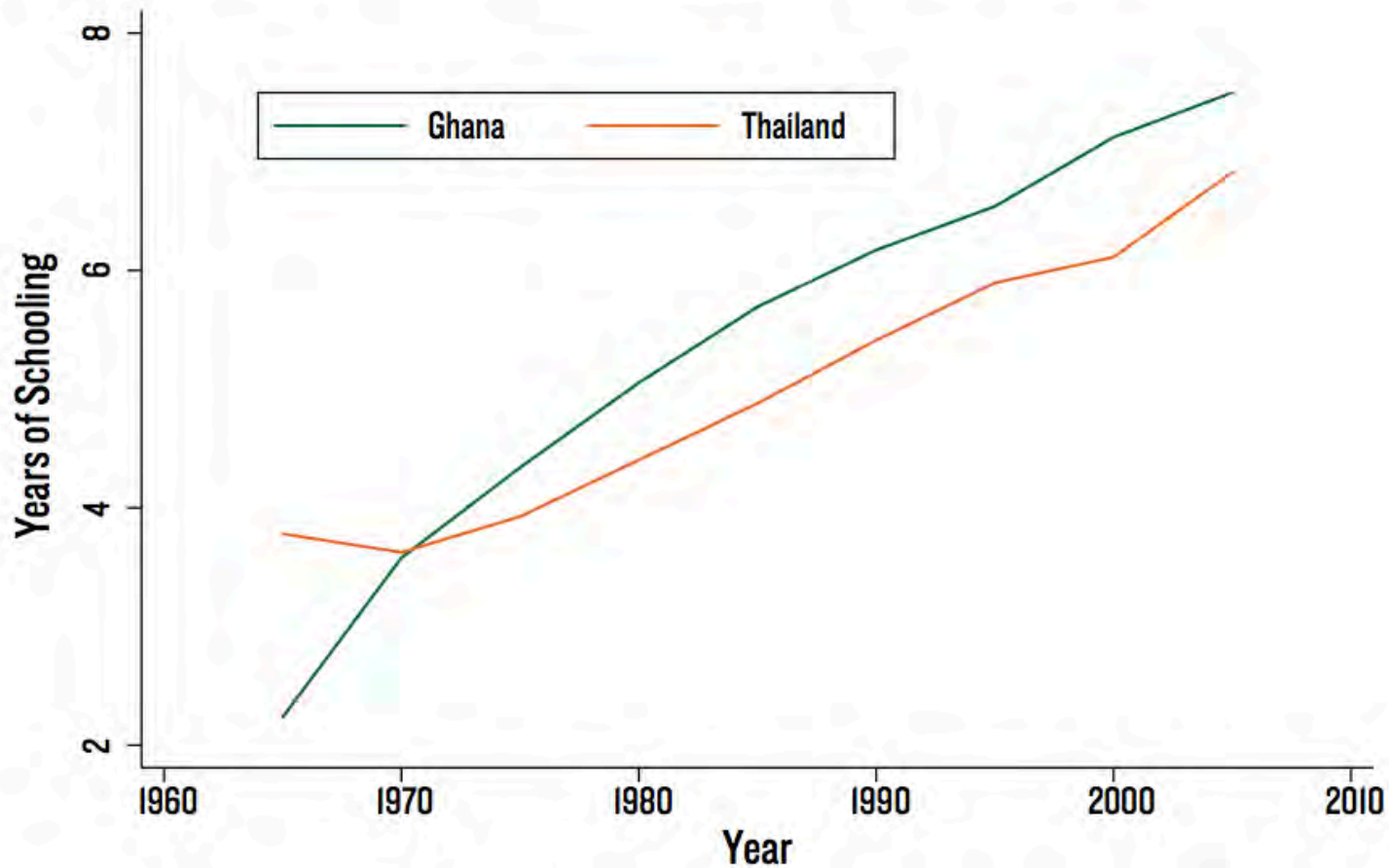


\$363

GDP per capita (constant 2000 US\$)

Human capital story:

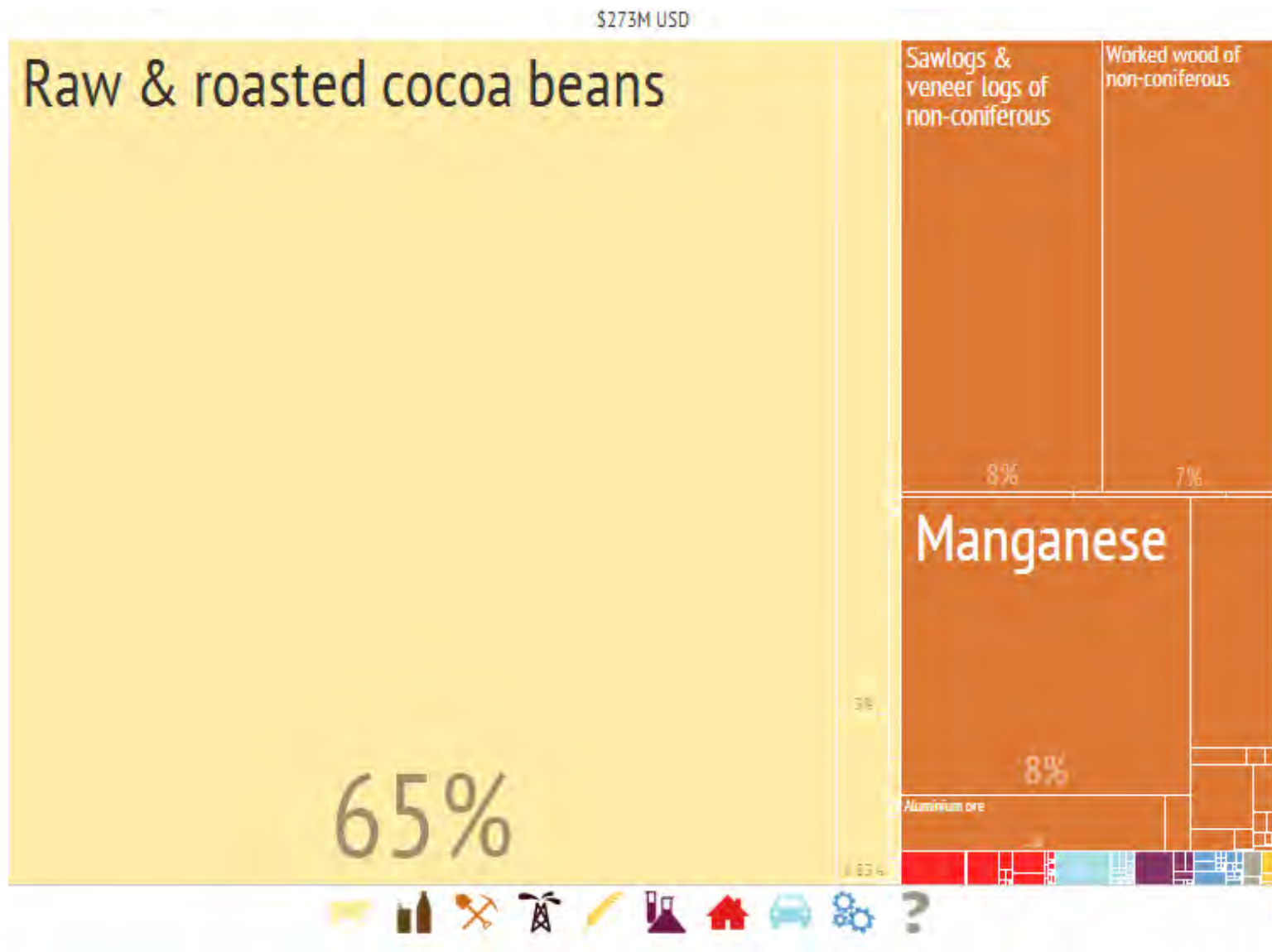
► Years of schooling of Thailand and Ghana as a function of time.



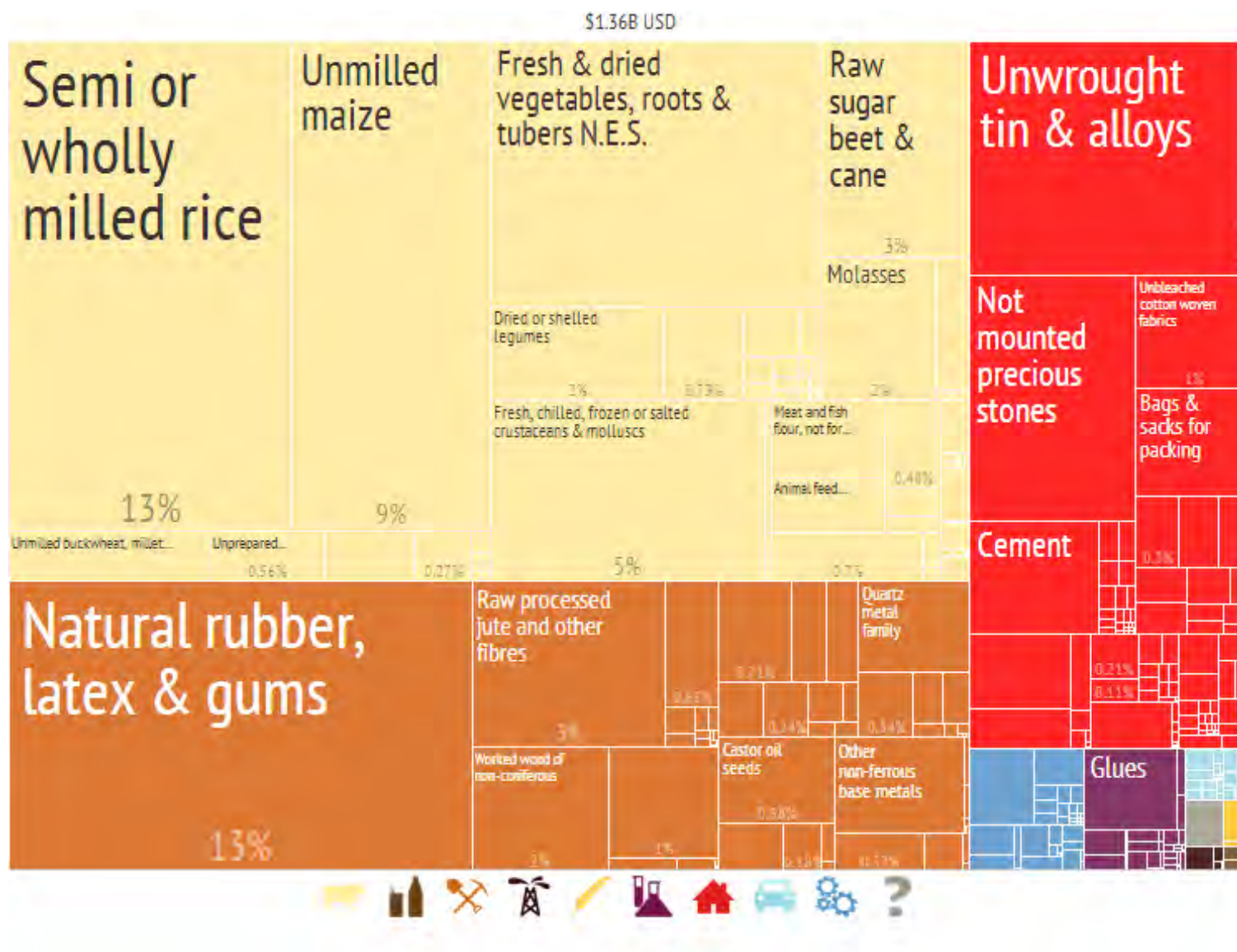


GHANA

Ghana's exports in 1962

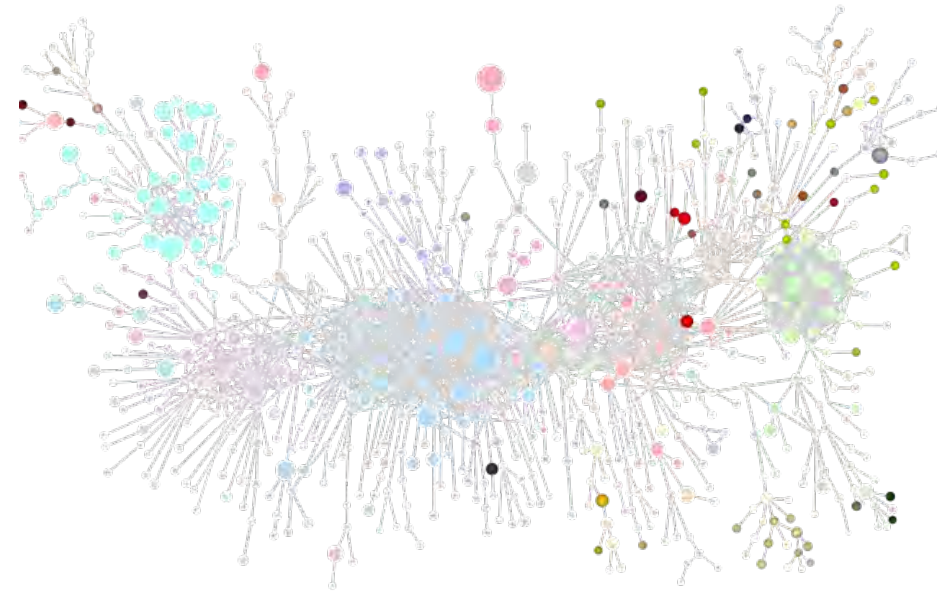


Thailand's exports in 1962



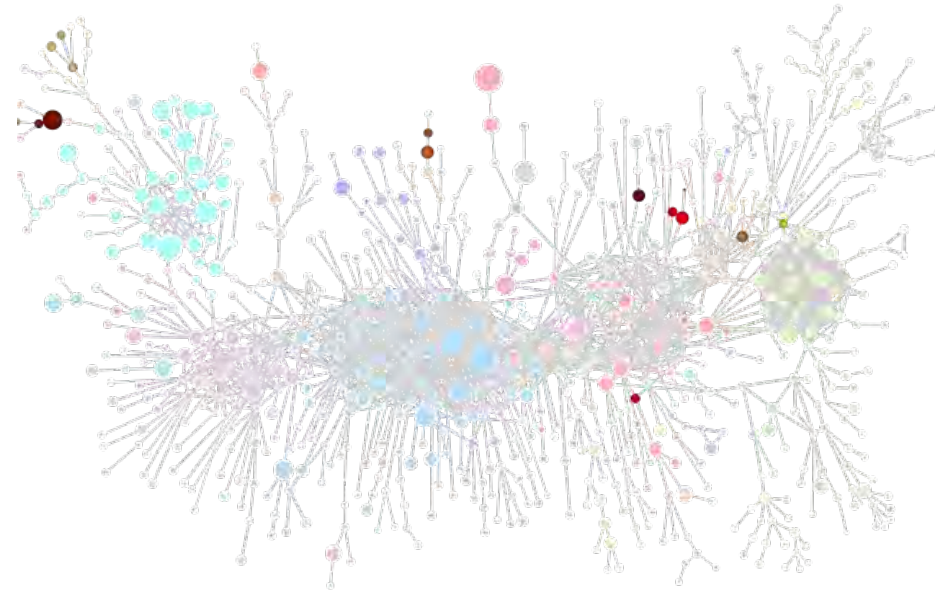
Thailand vs. Ghana in the Product Space 1965

Total Value: \$615,728,000



Thailand

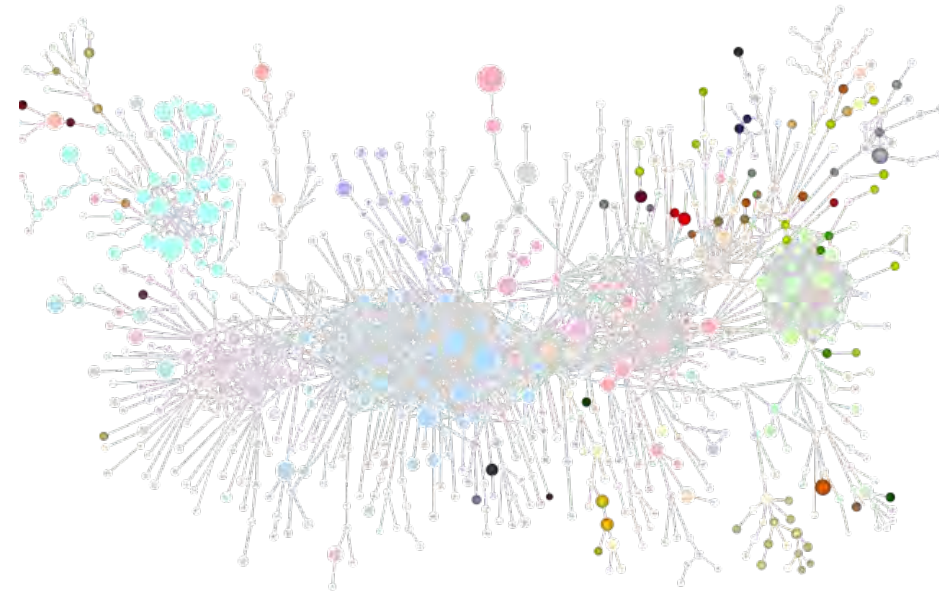
Total Value: \$294,604,000



Ghana

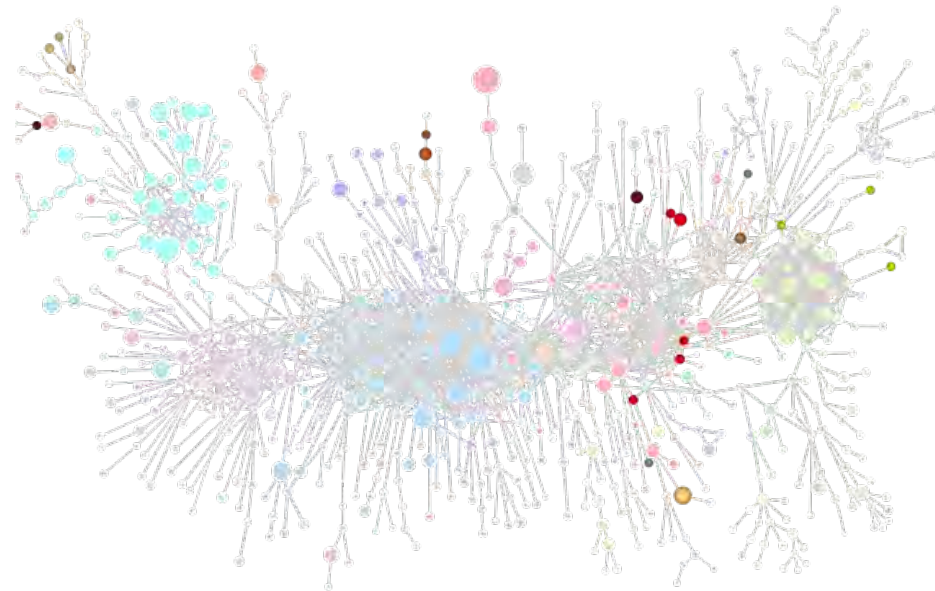
1970

Total Value: \$721,421,000



Thailand

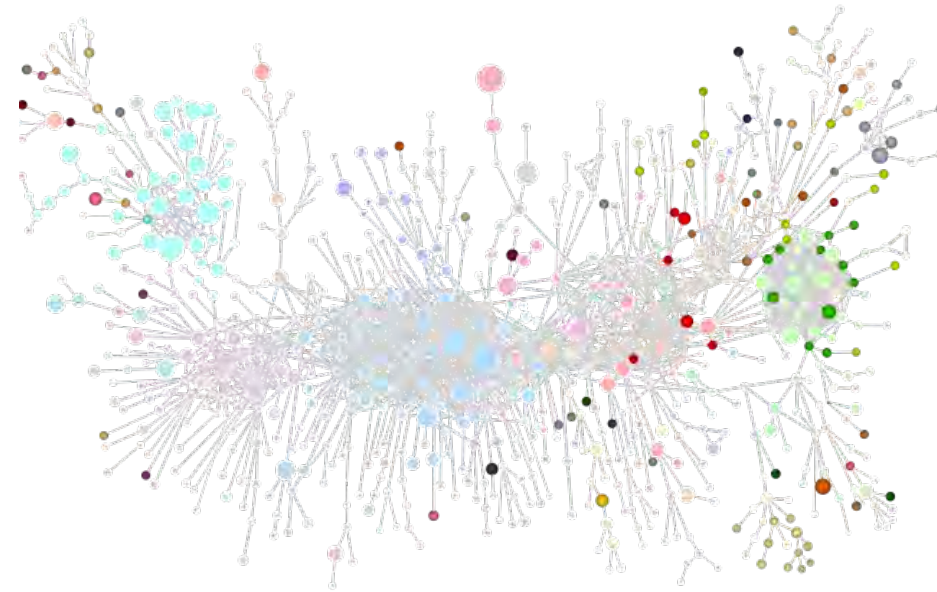
Total Value: \$432,140,000



Ghana

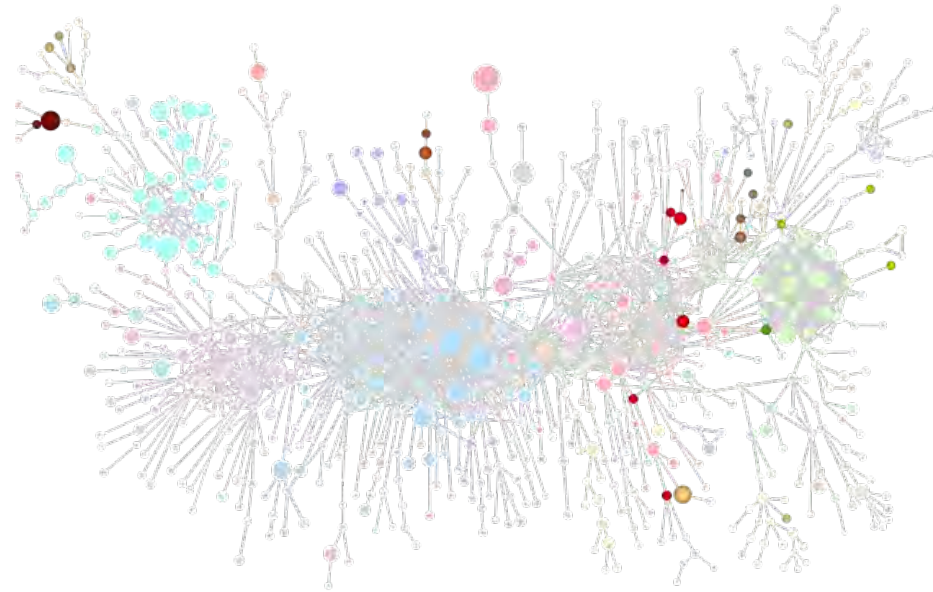
1975

Total Value: \$2,238,988,000



Thailand

Total Value: \$818,766,000

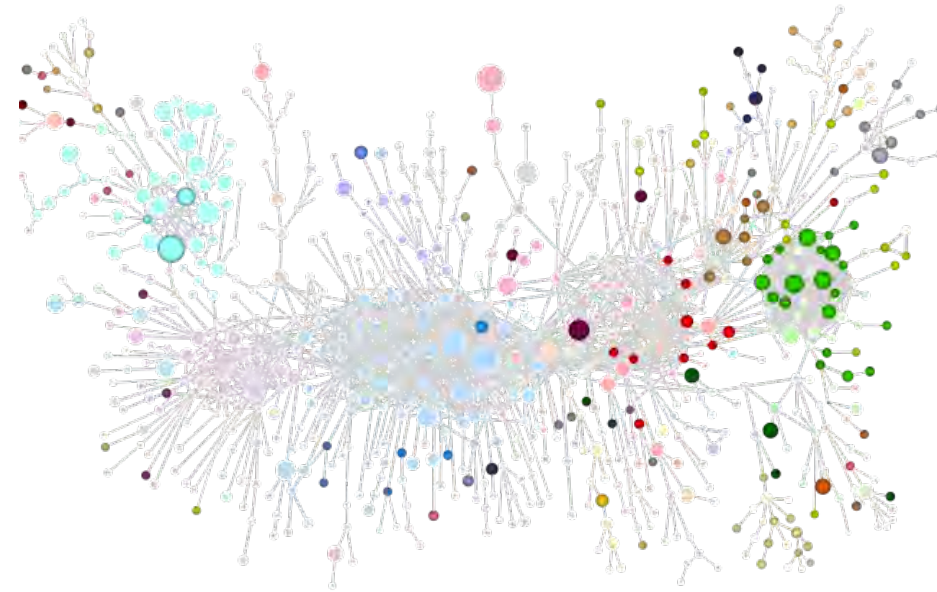


Ghana

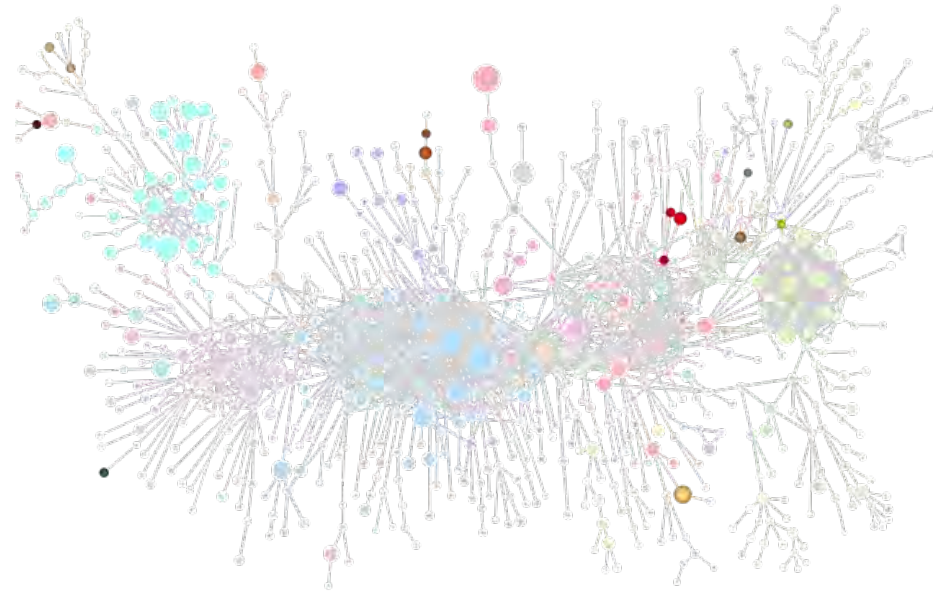
1980

Total Value: \$5,980,038,000

Total Value: \$1,017,767,000



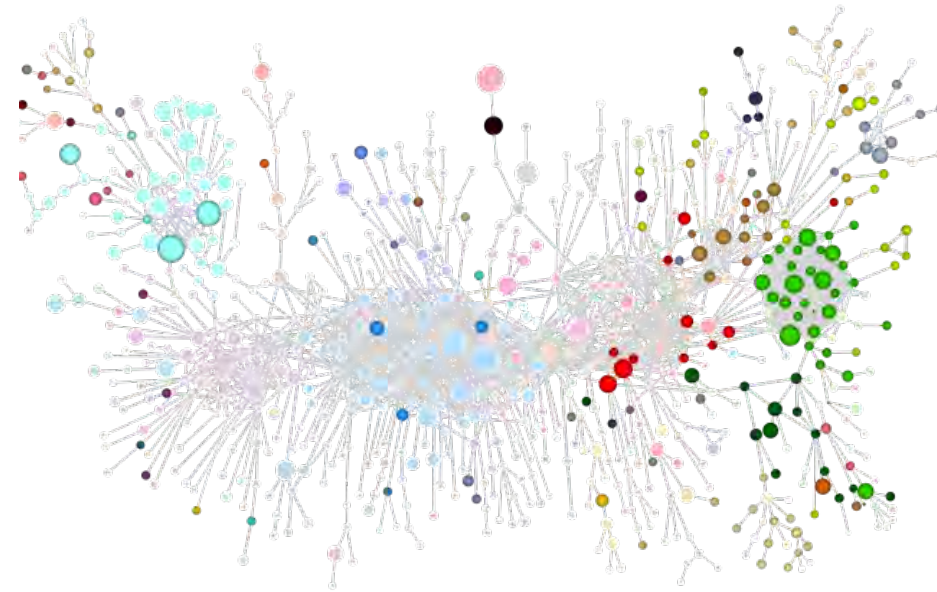
Thailand



Ghana

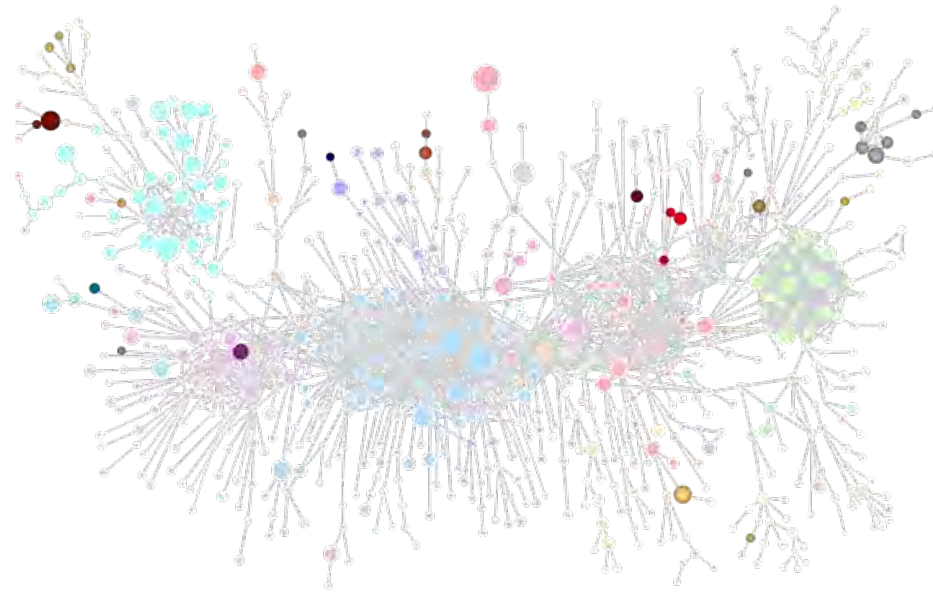
1985

Total Value: \$7,354,613,137



Thailand

Total Value: \$462,524,204

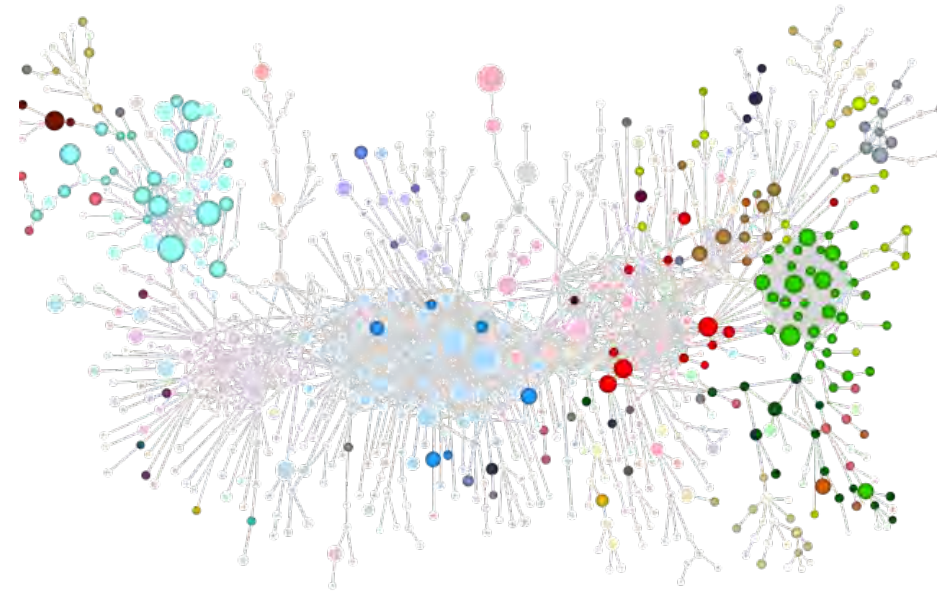


Ghana

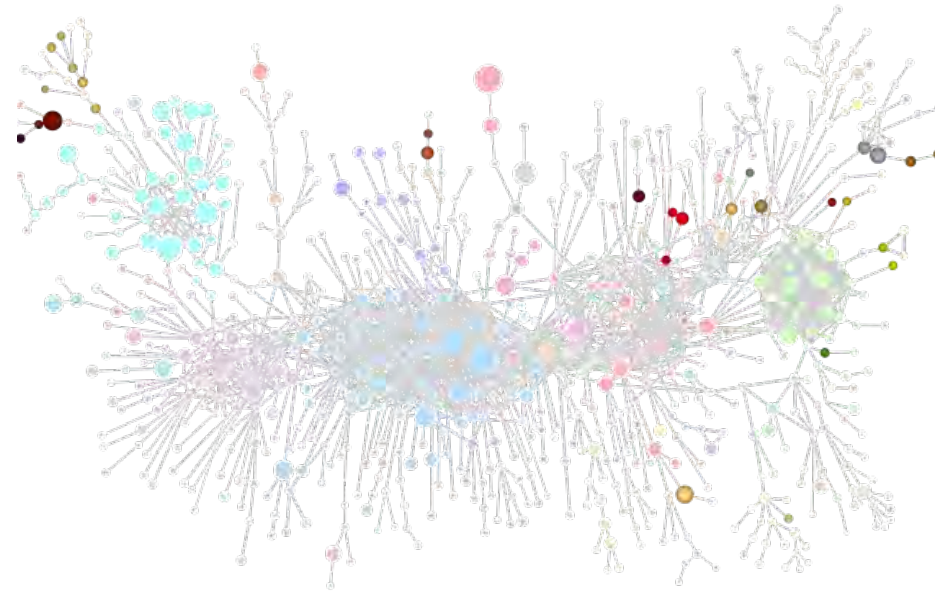
1990

Total Value: \$21,914,013,991

Total Value: \$1,086,328,204



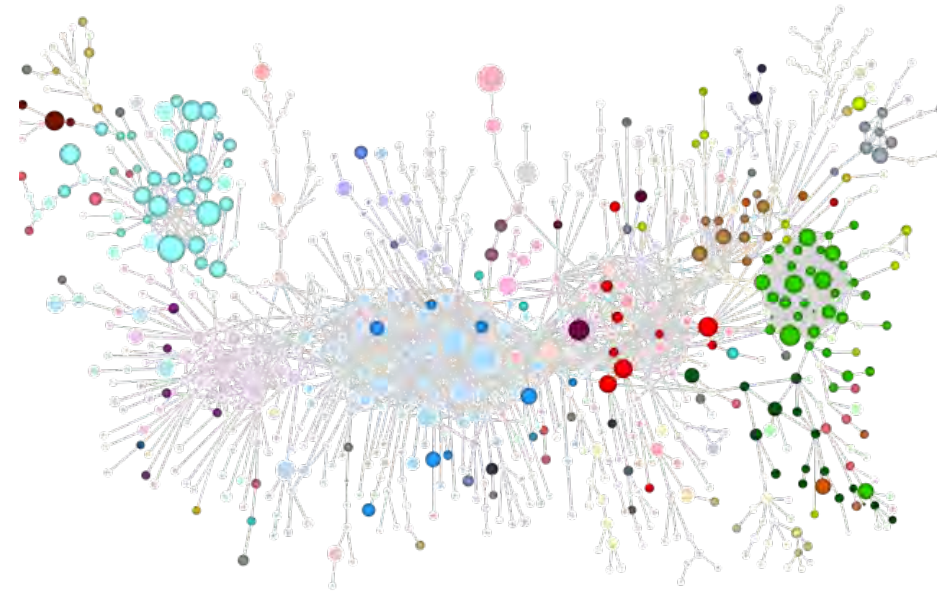
Thailand



Ghana

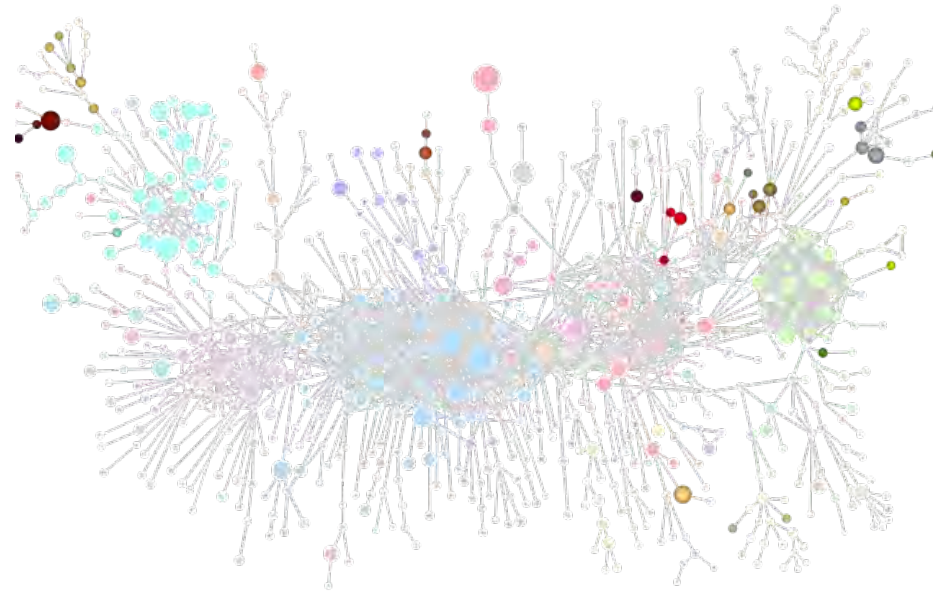
1995

Total Value: \$50,644,730,628



Thailand

Total Value: \$1,294,057,269

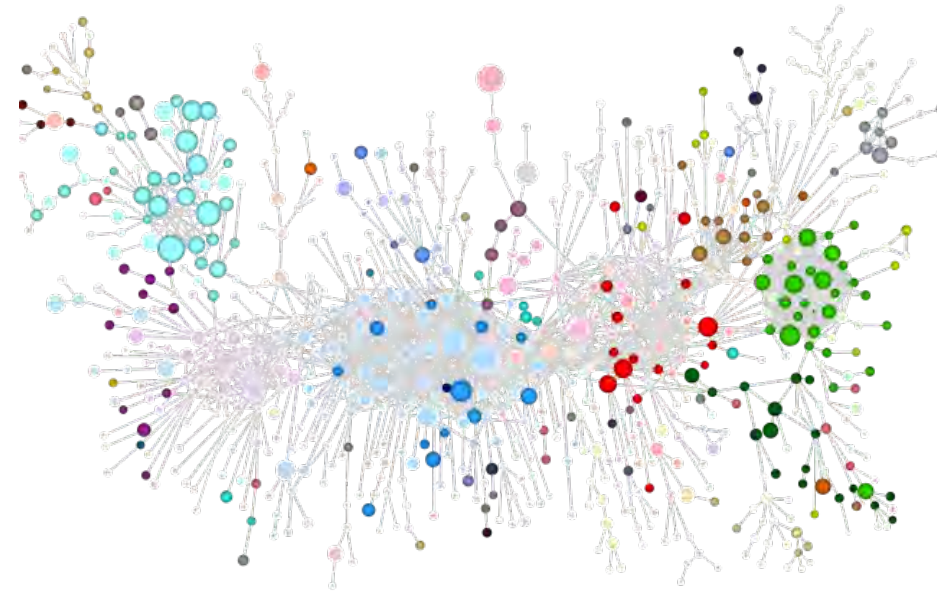


Ghana

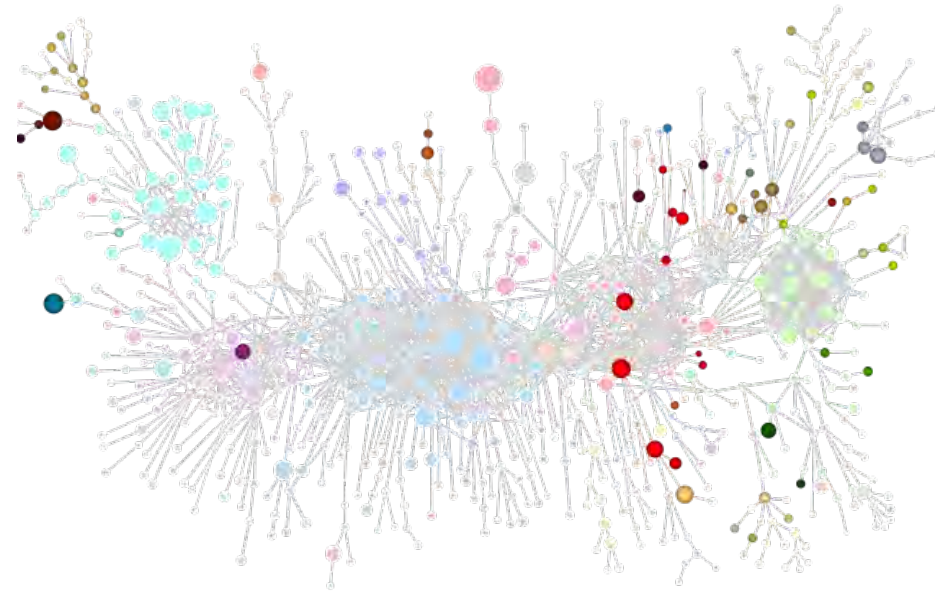
2000

Total Value: \$67,126,271,442

Total Value: \$1,206,161,694



Thailand

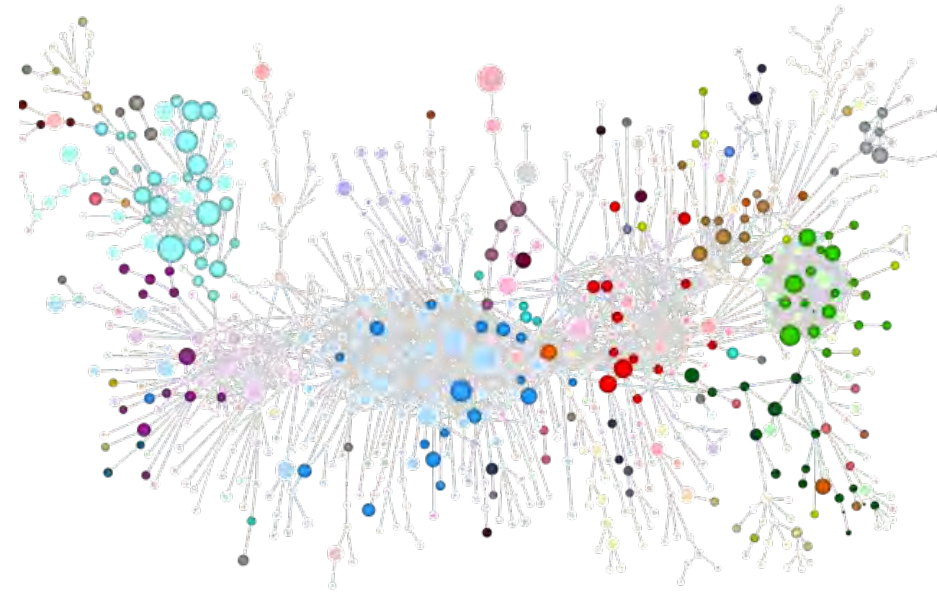


Ghana

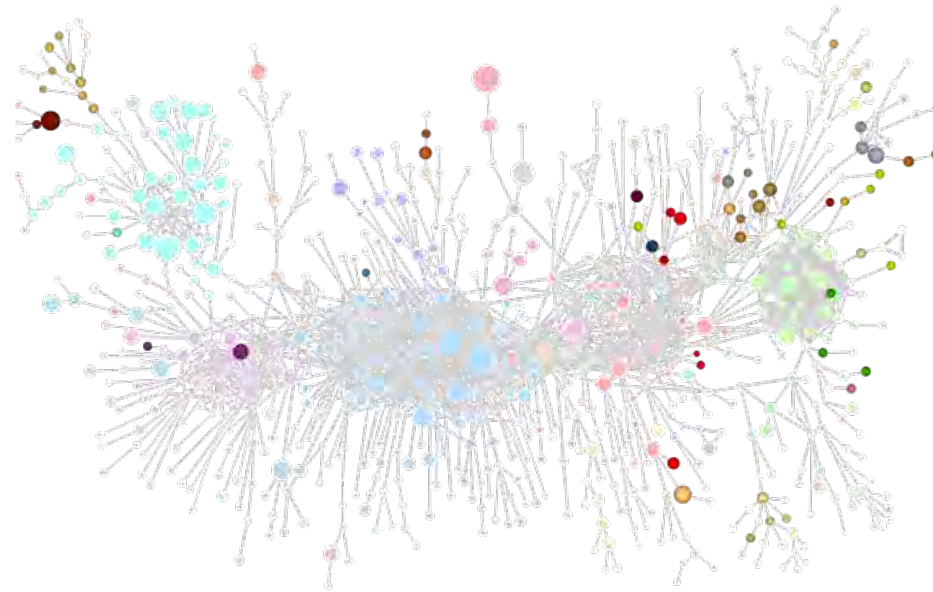
2005

Total Value: \$111,099,204,052

Total Value: \$1,871,625,725



Thailand

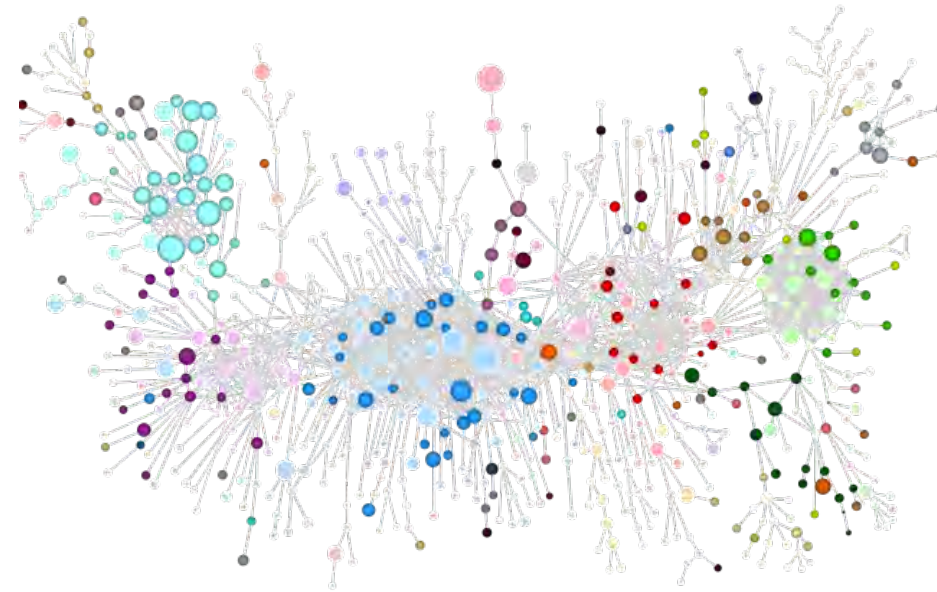


Ghana

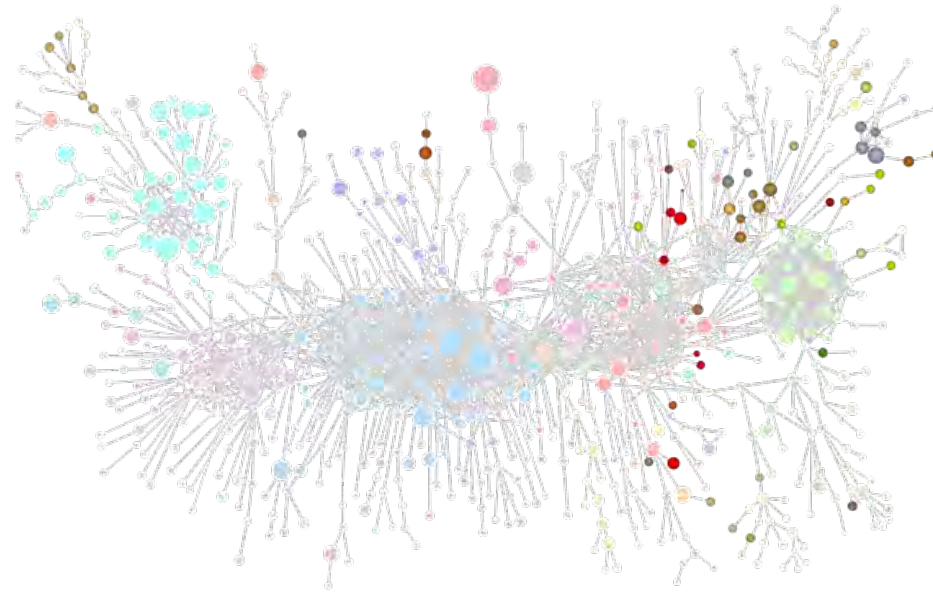
2010

Total Value: \$186,564,165,927

Total Value: \$4,052,850,523

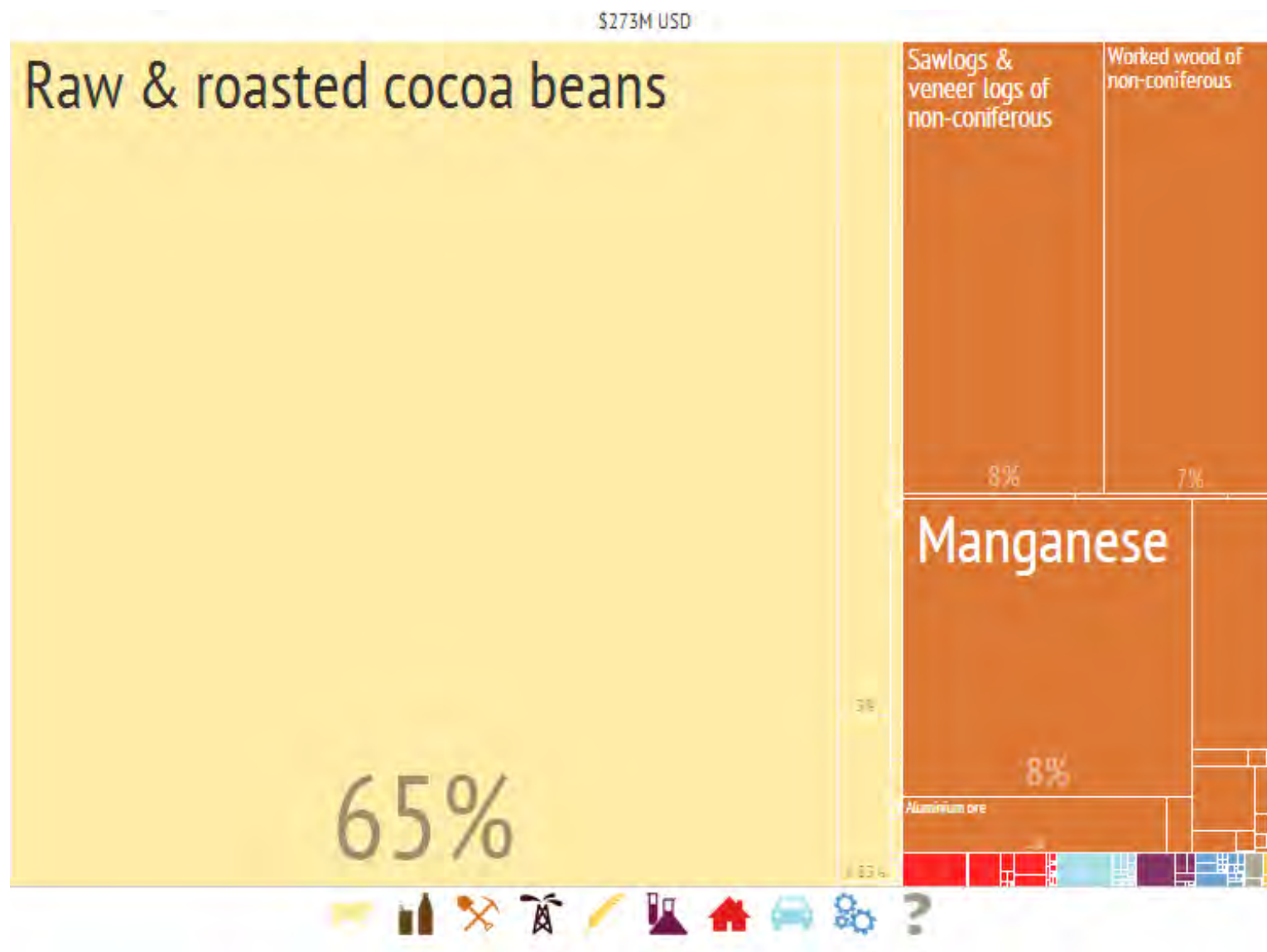


Thailand

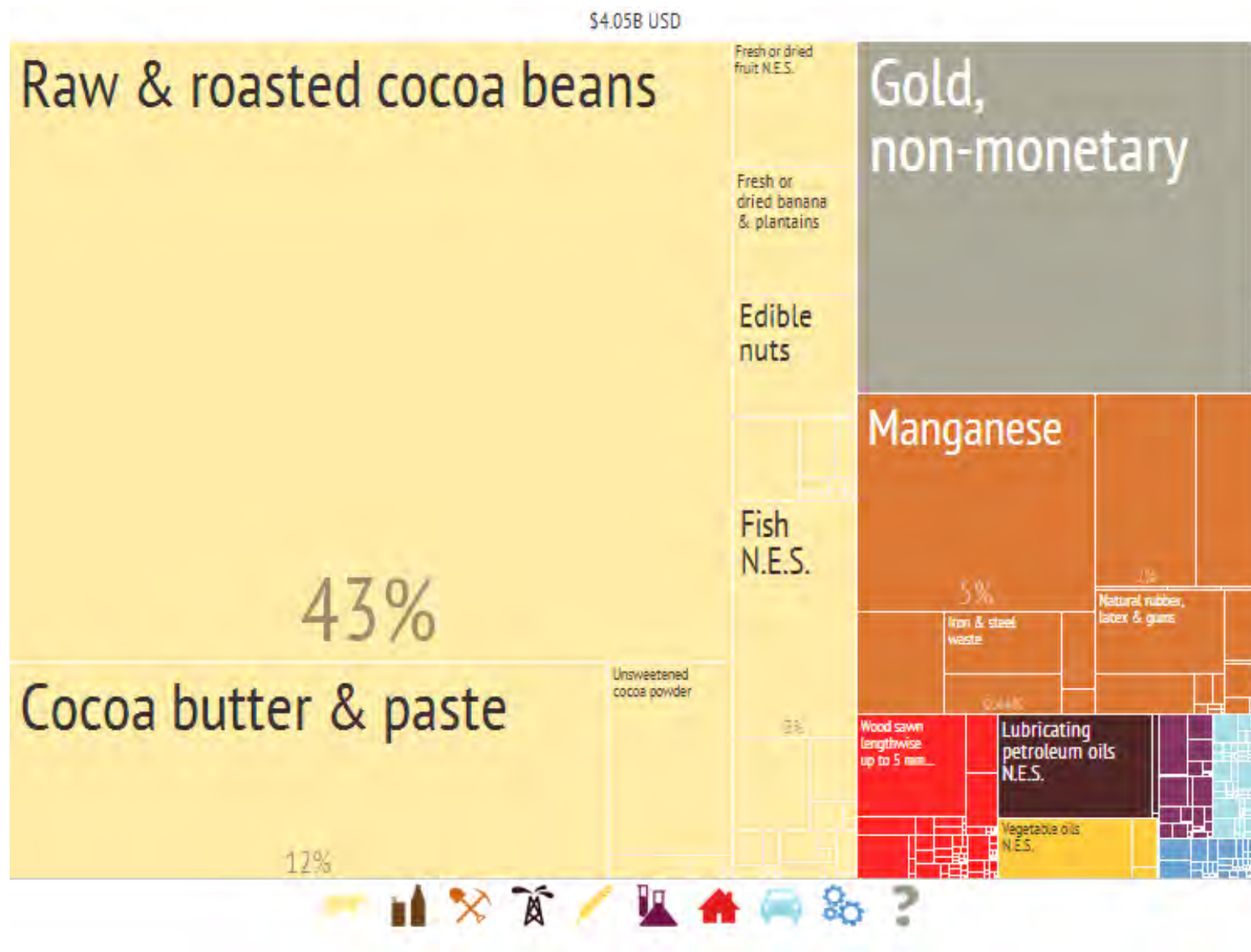


Ghana

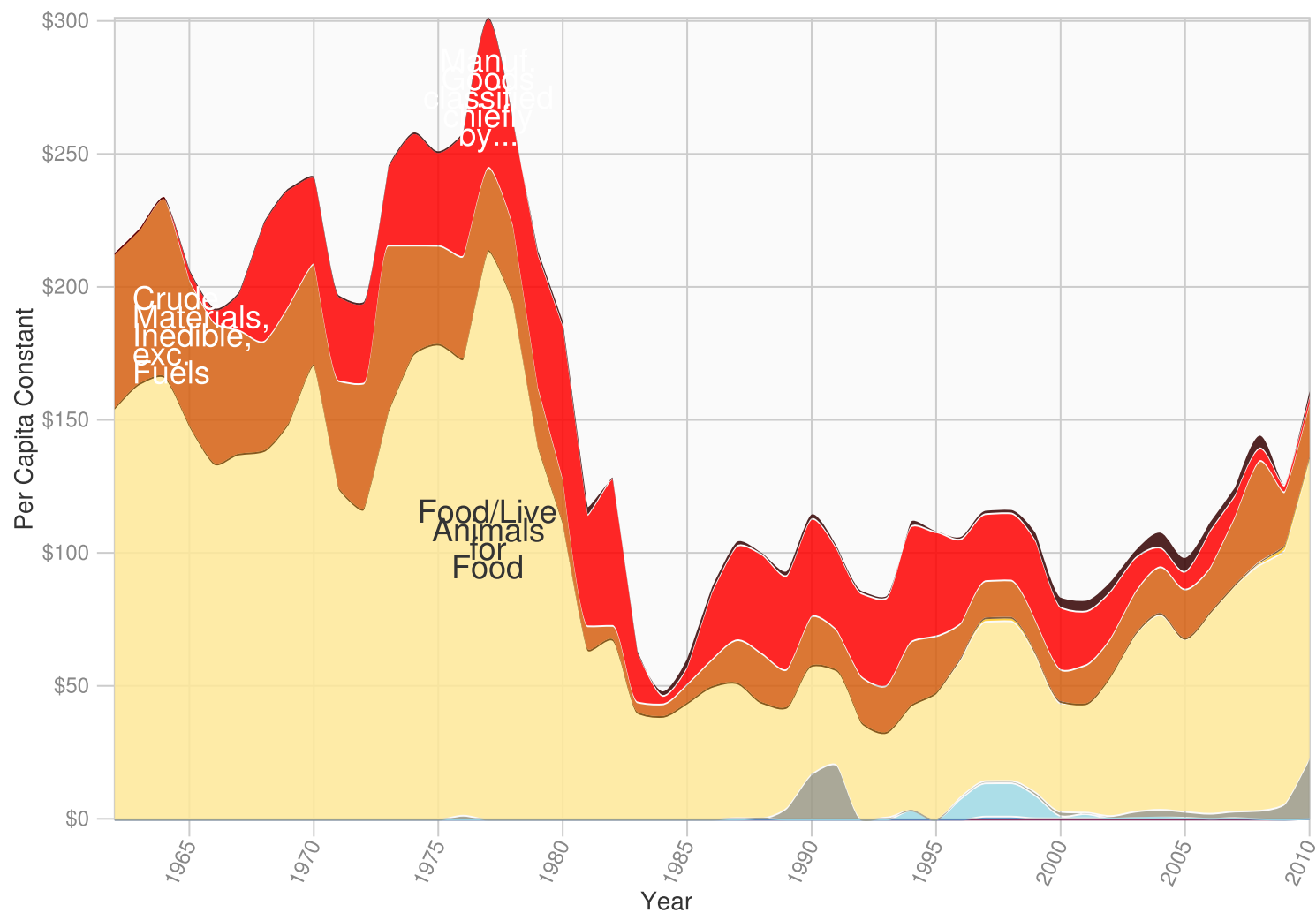
Ghana's exports in 1962



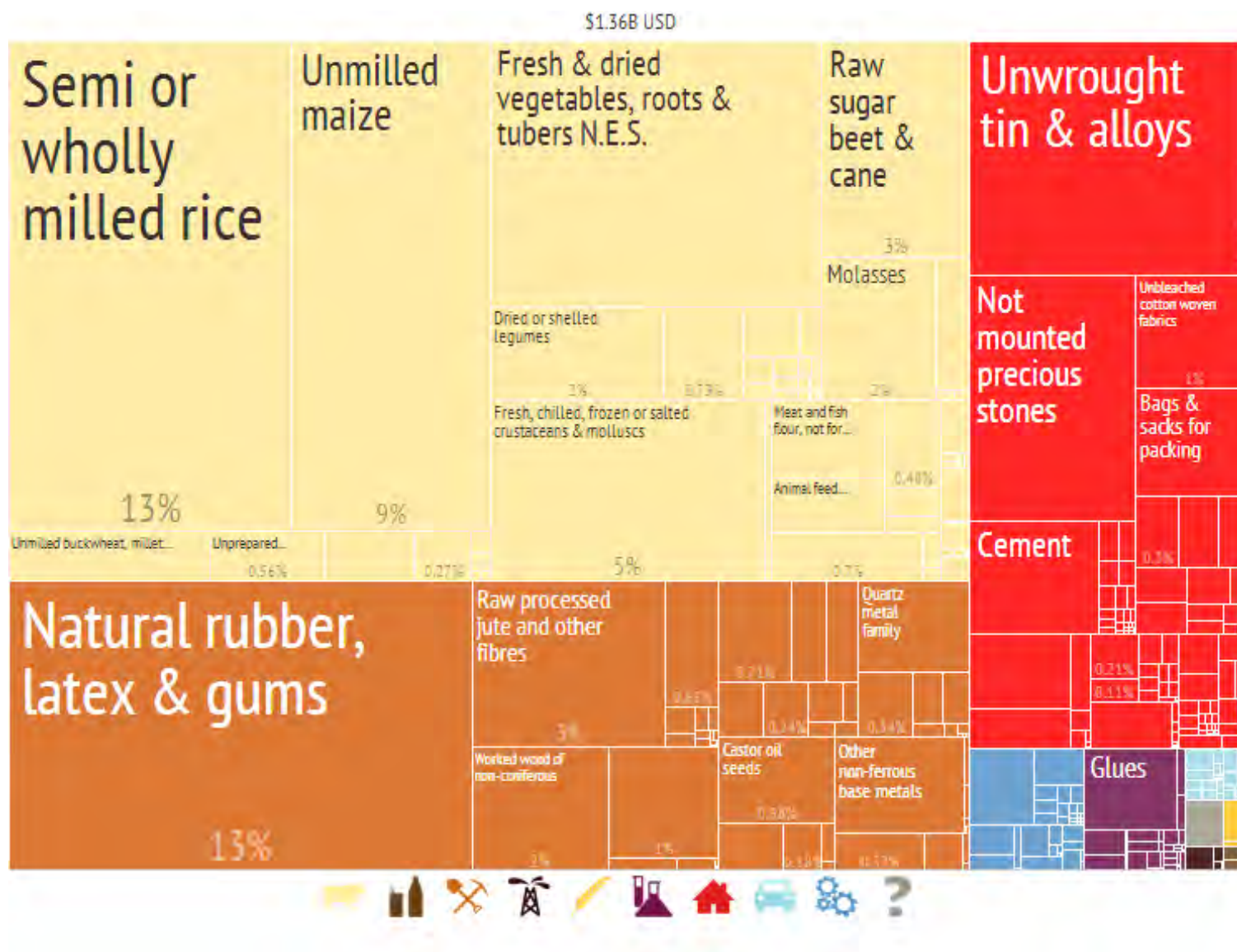
Ghana's exports in 2010



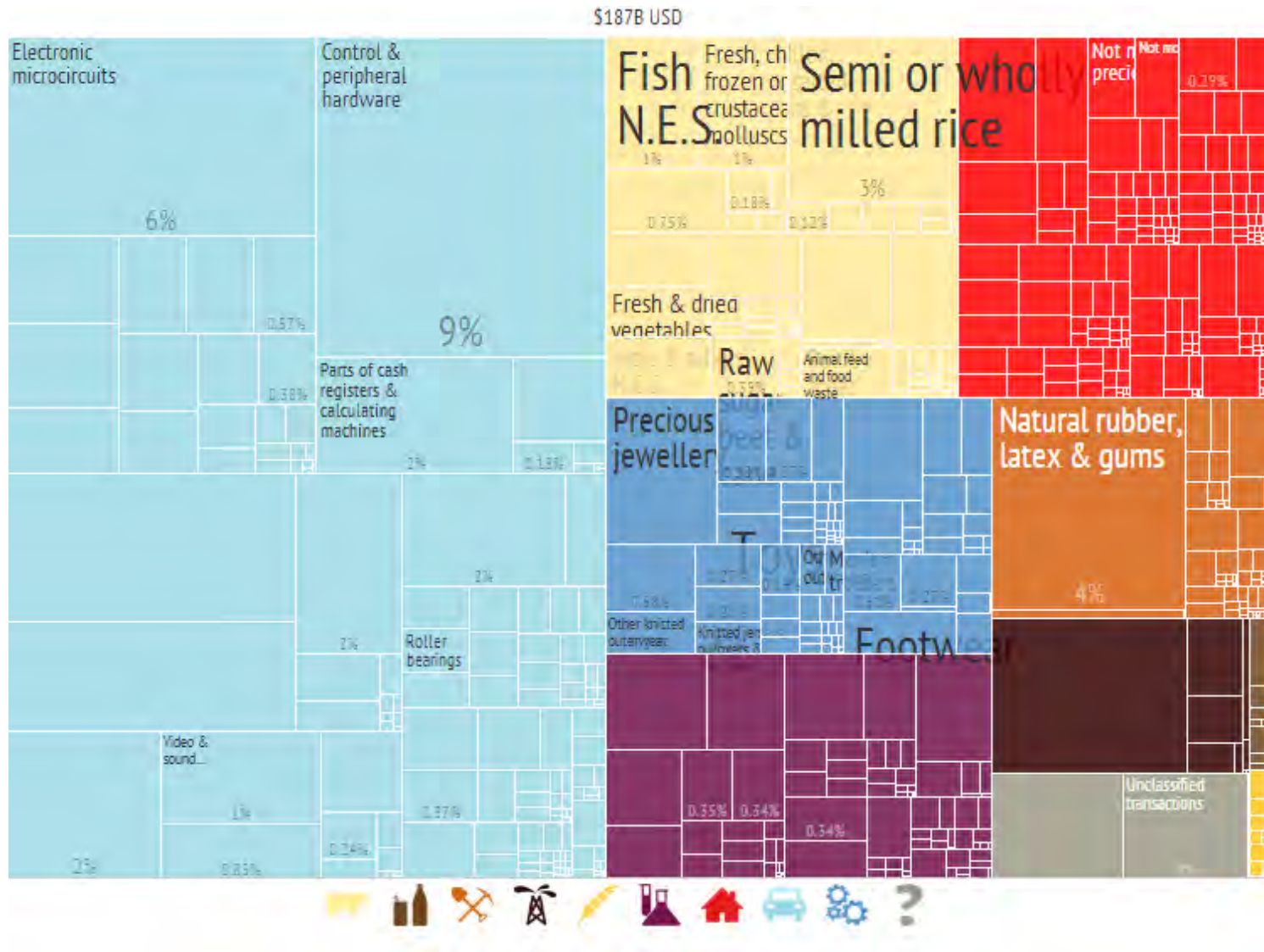
Ghana's exports per capita at constant 2005 prices



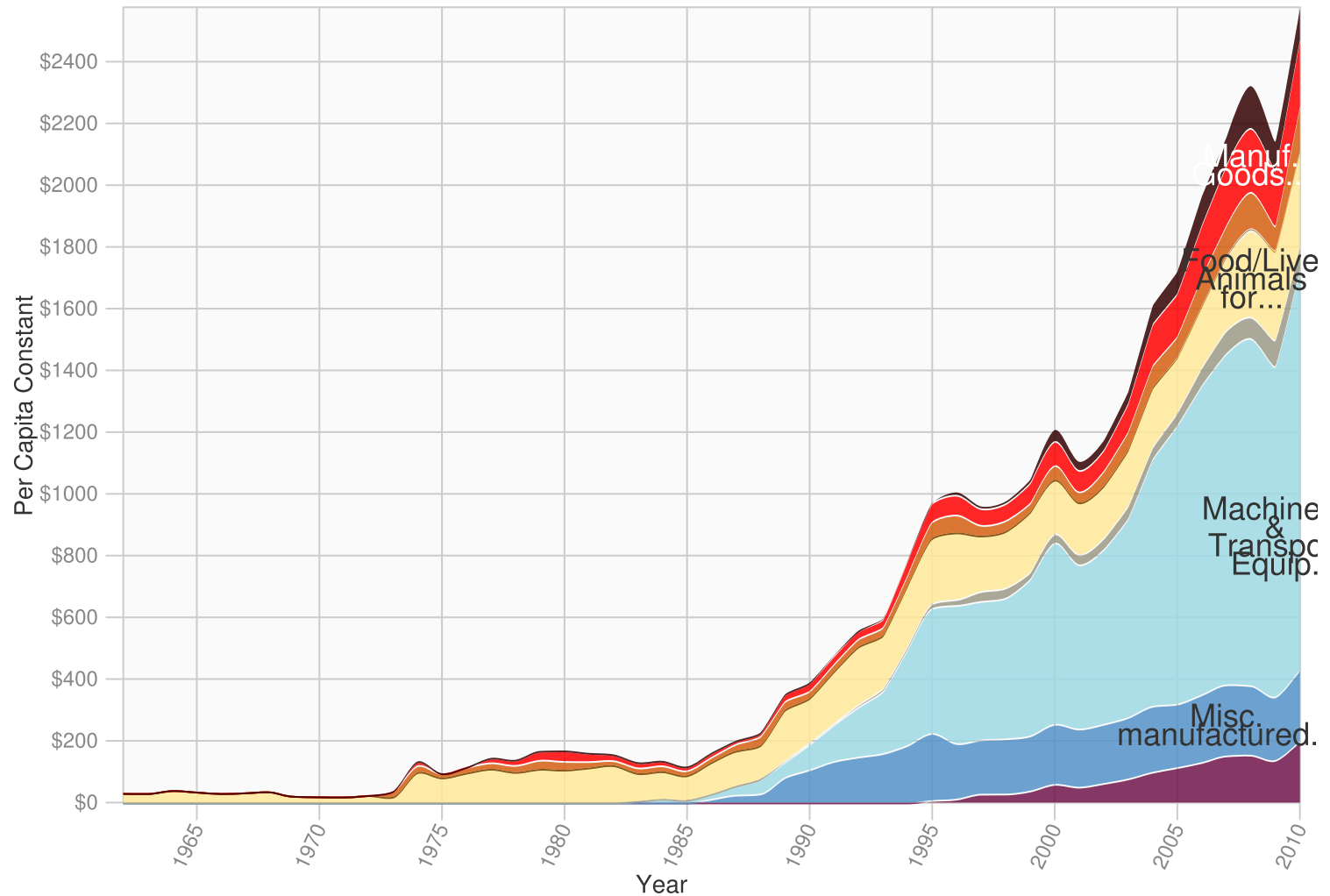
Thailand's exports in 1962



Thailand's exports in 2010

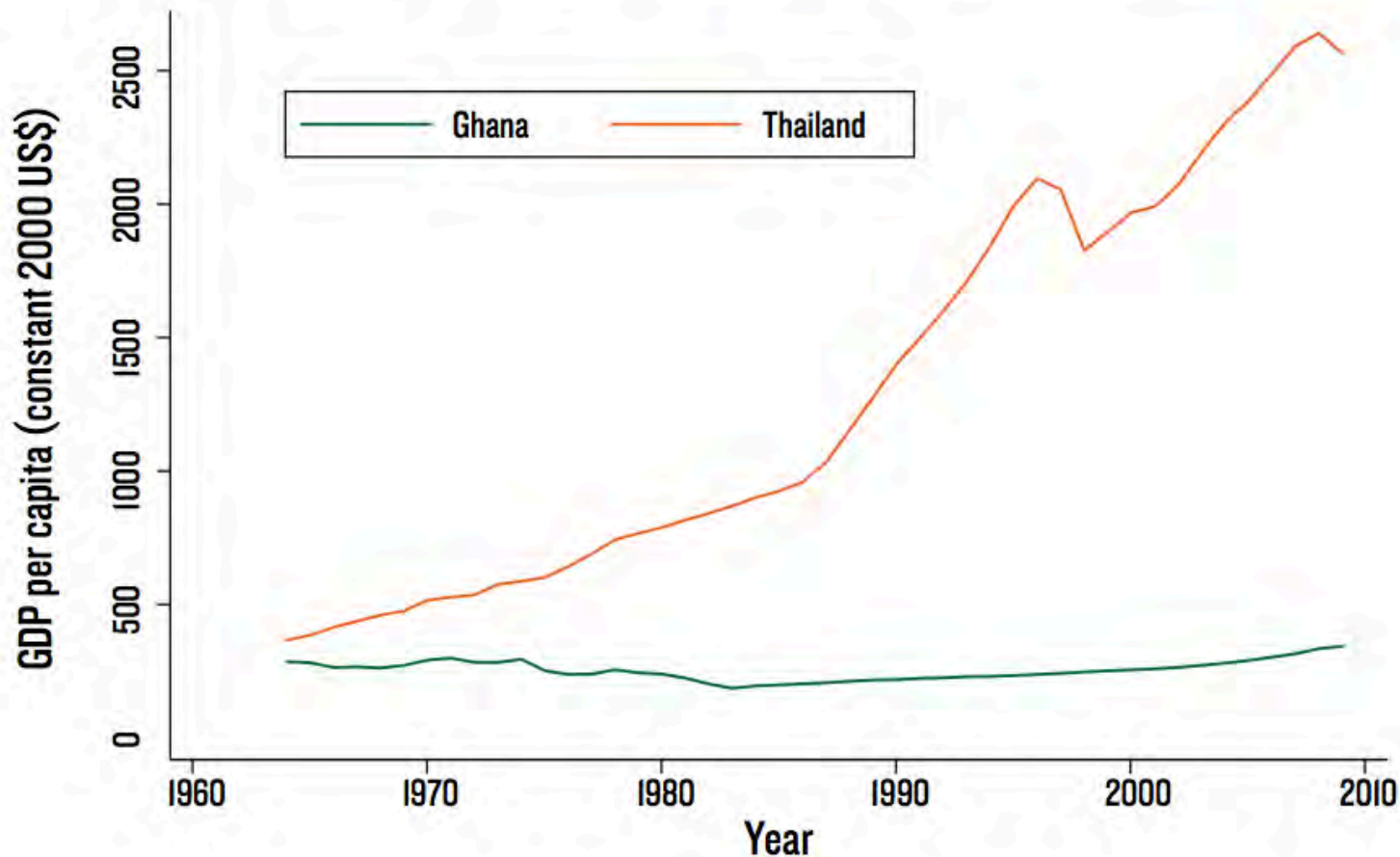


Thailand's exports per capita at constant 2005 prices

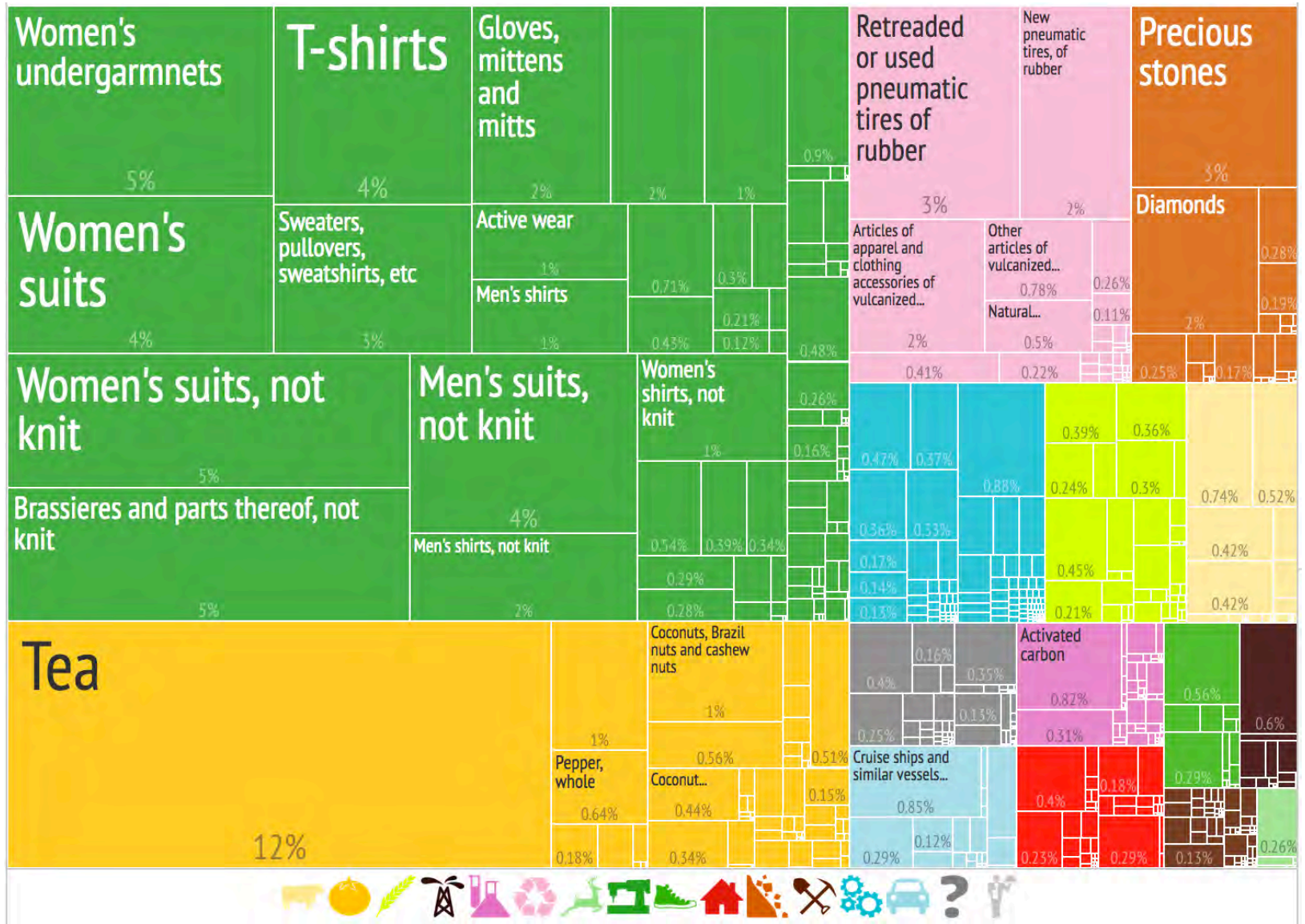


Divergence, big time

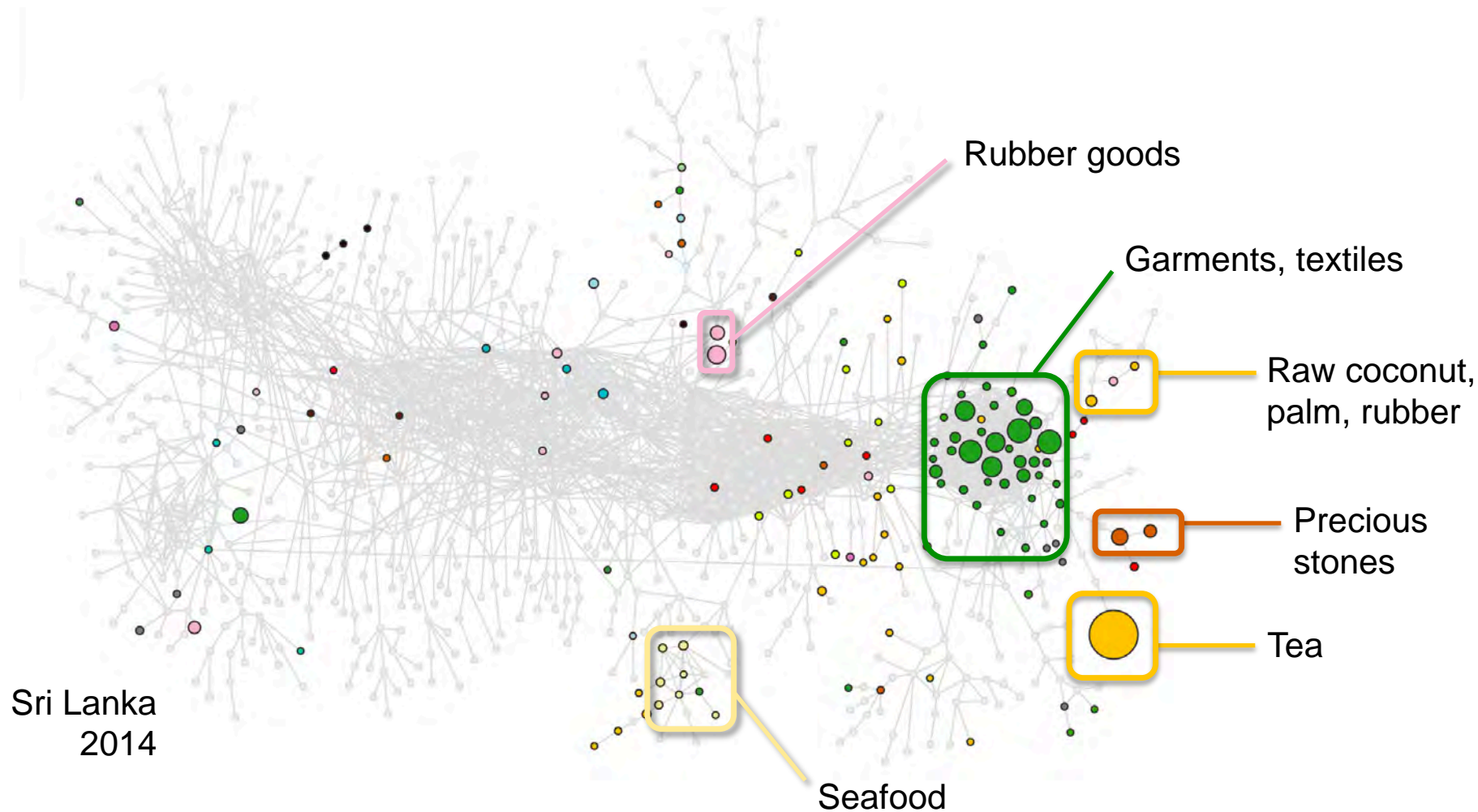
► Evolution of the GDP per capita of Thailand and Ghana as a function of time.



Sri Lanka 2014

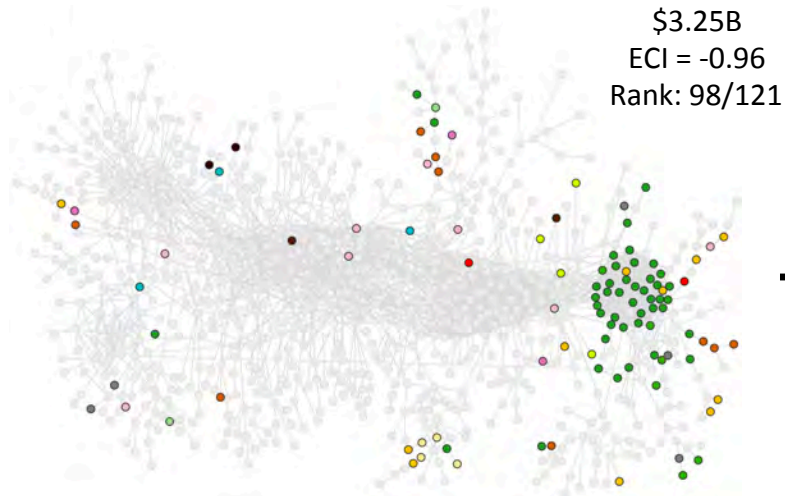


Sri Lanka in the Product Space: Current clusters are saturated. Most new export opportunities are in empty clusters, with few related industries.

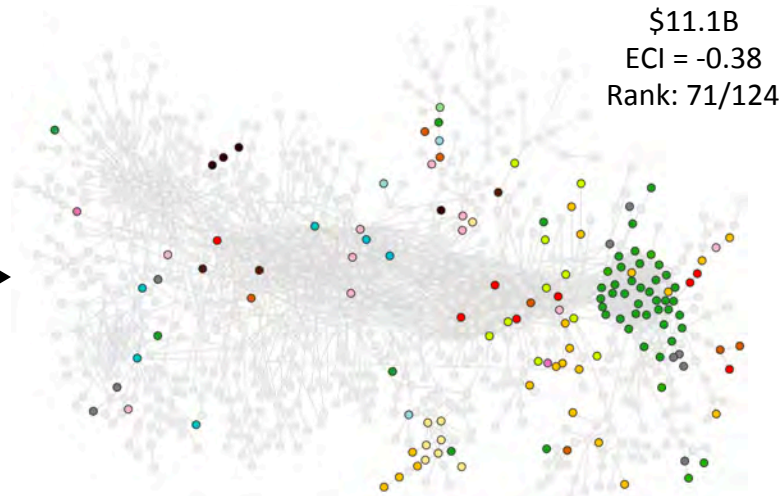


Sri Lanka is not on the path of Vietnam

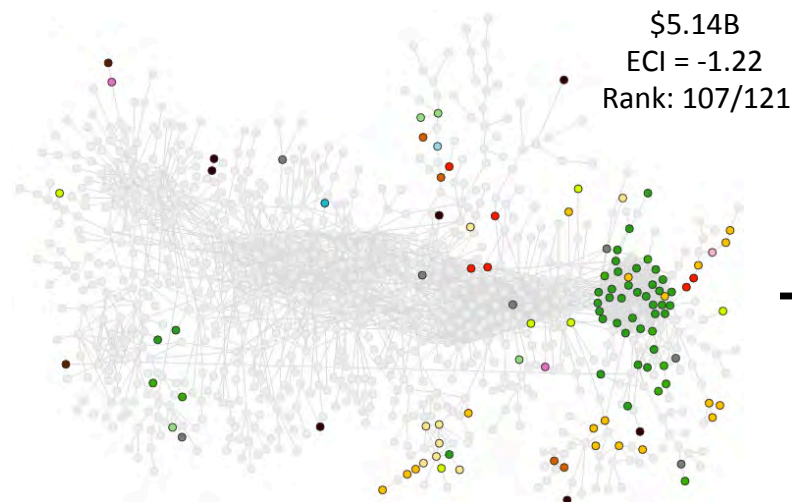
Sri Lanka's Exports, 1995



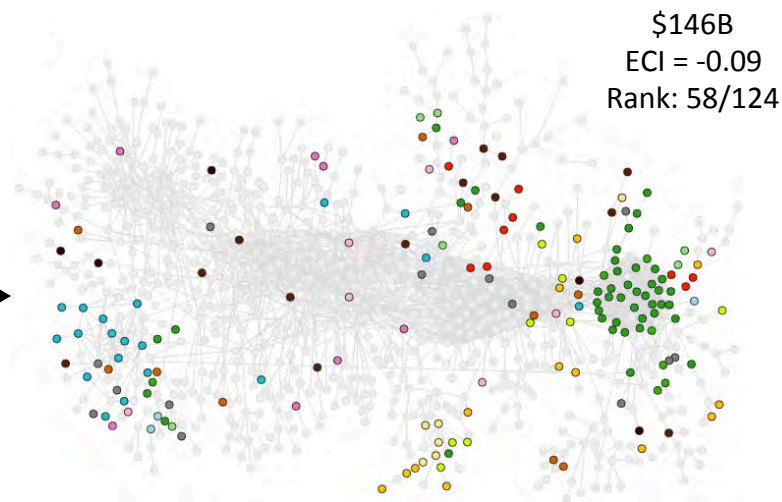
Sri Lanka's Exports, 2014



Vietnam's Exports, 1995

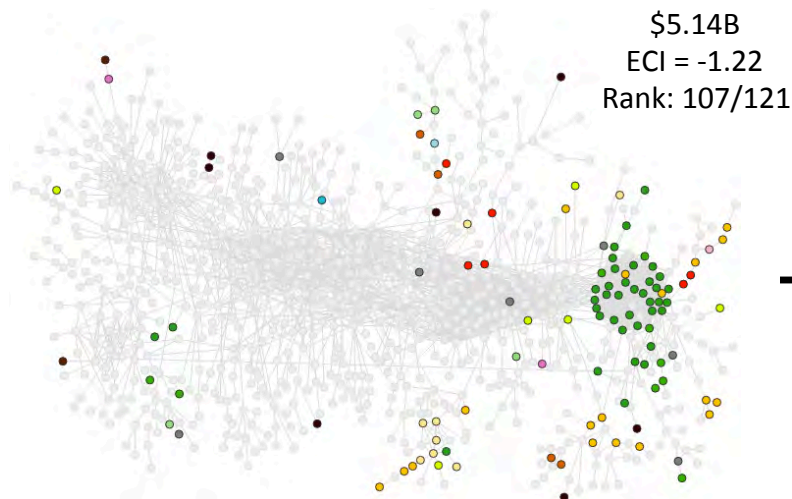


Vietnam's Exports, 2014

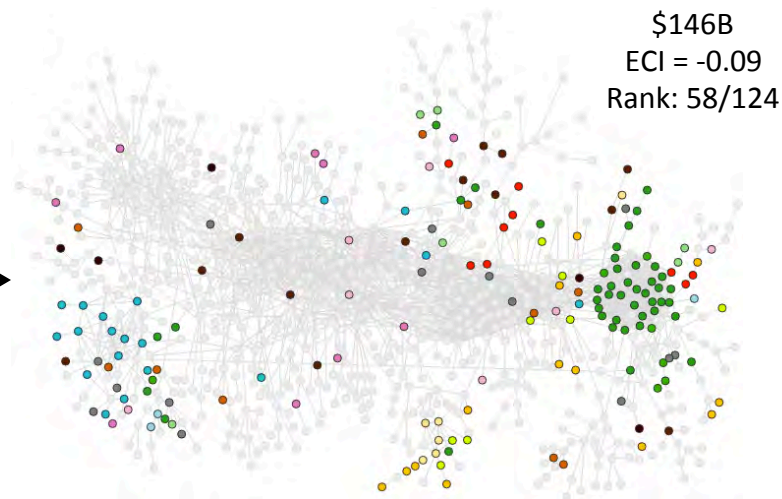


...or the path from Vietnam to Thailand

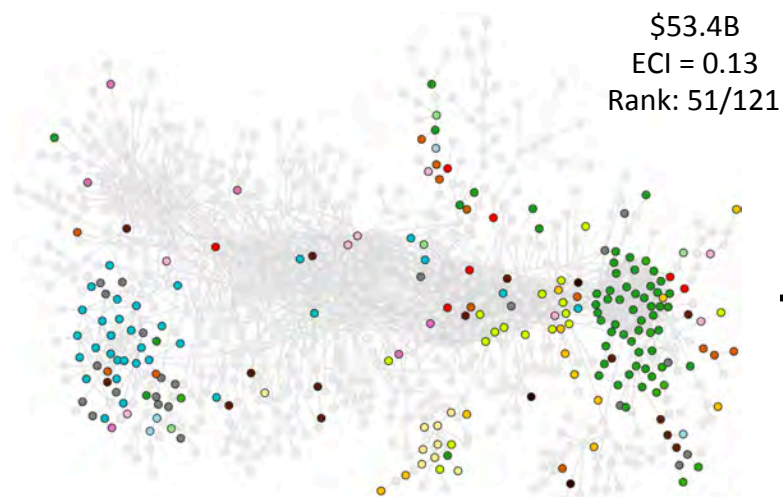
Vietnam's Exports, 1995



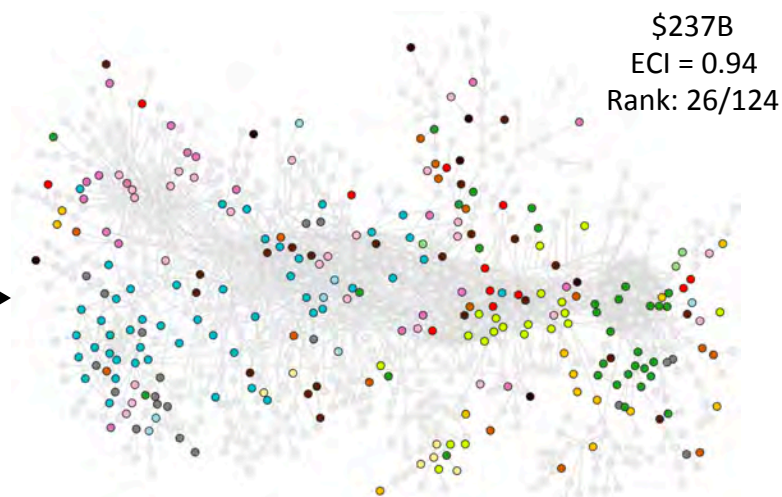
Vietnam's Exports, 2014



Thailand's Exports, 1995

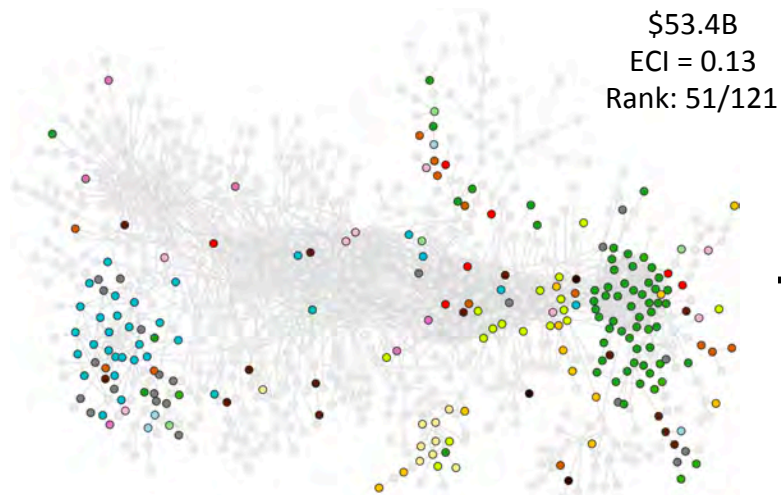


Thailand's Exports, 2014



...or the path from Thailand to China

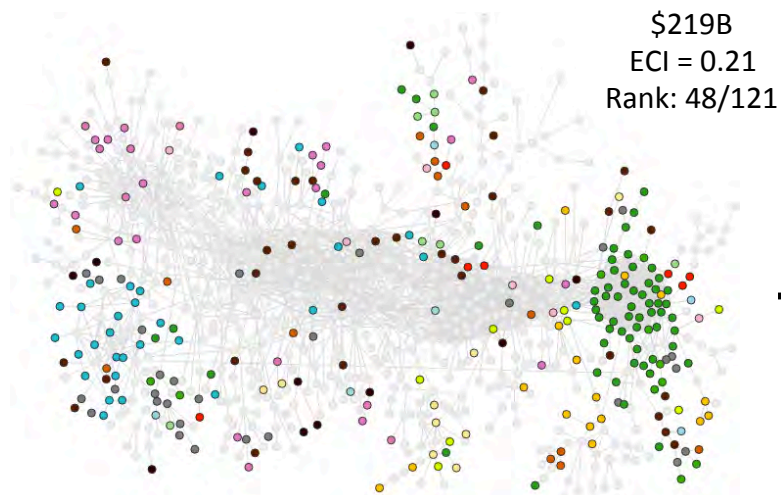
Thailand's Exports, 1995



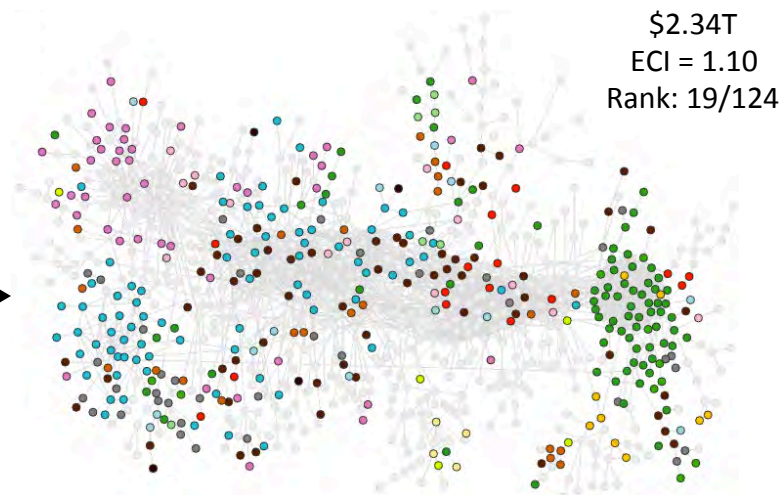
Thailand's Exports, 2014



China's Exports, 1995

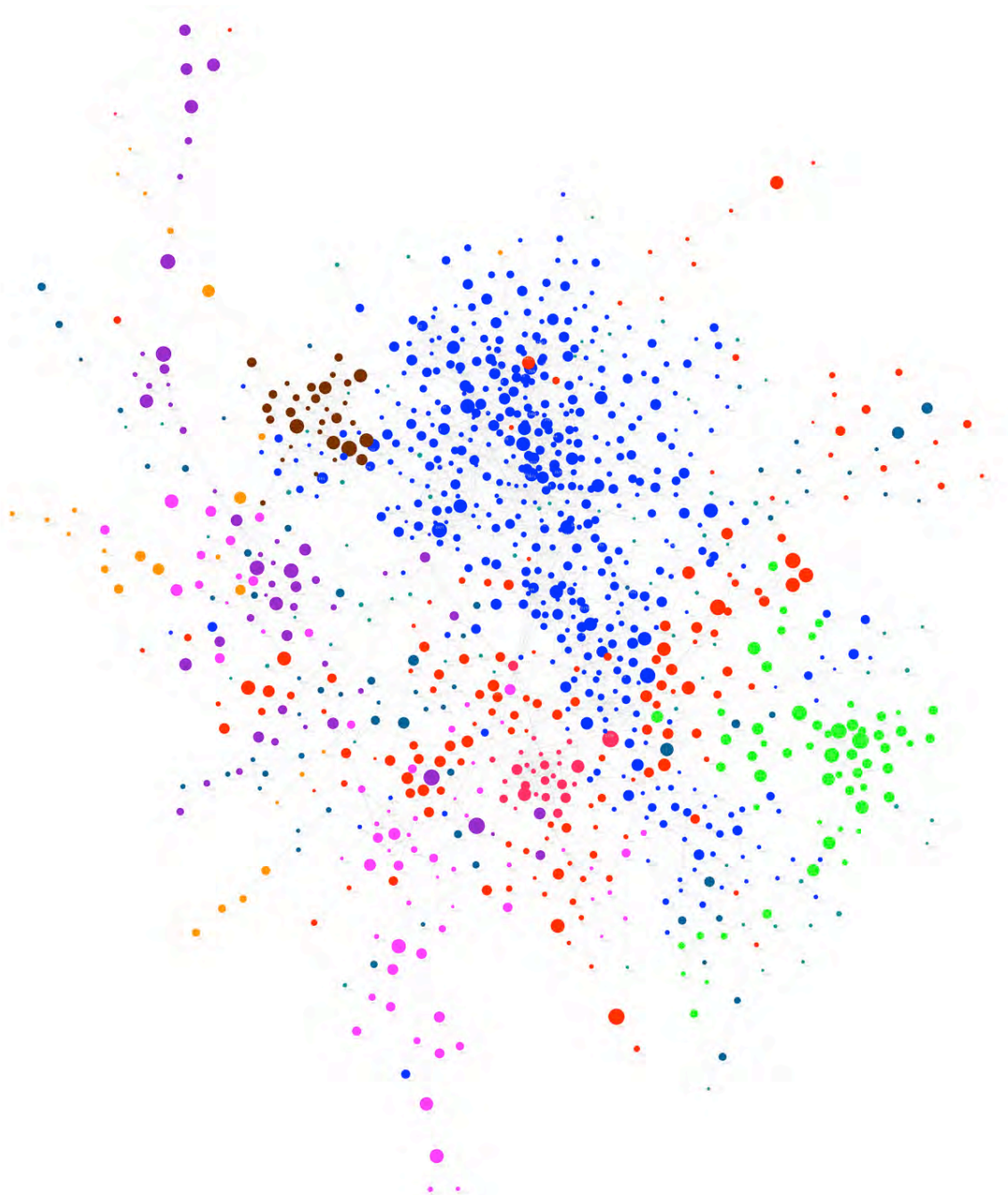


China's Exports, 2014



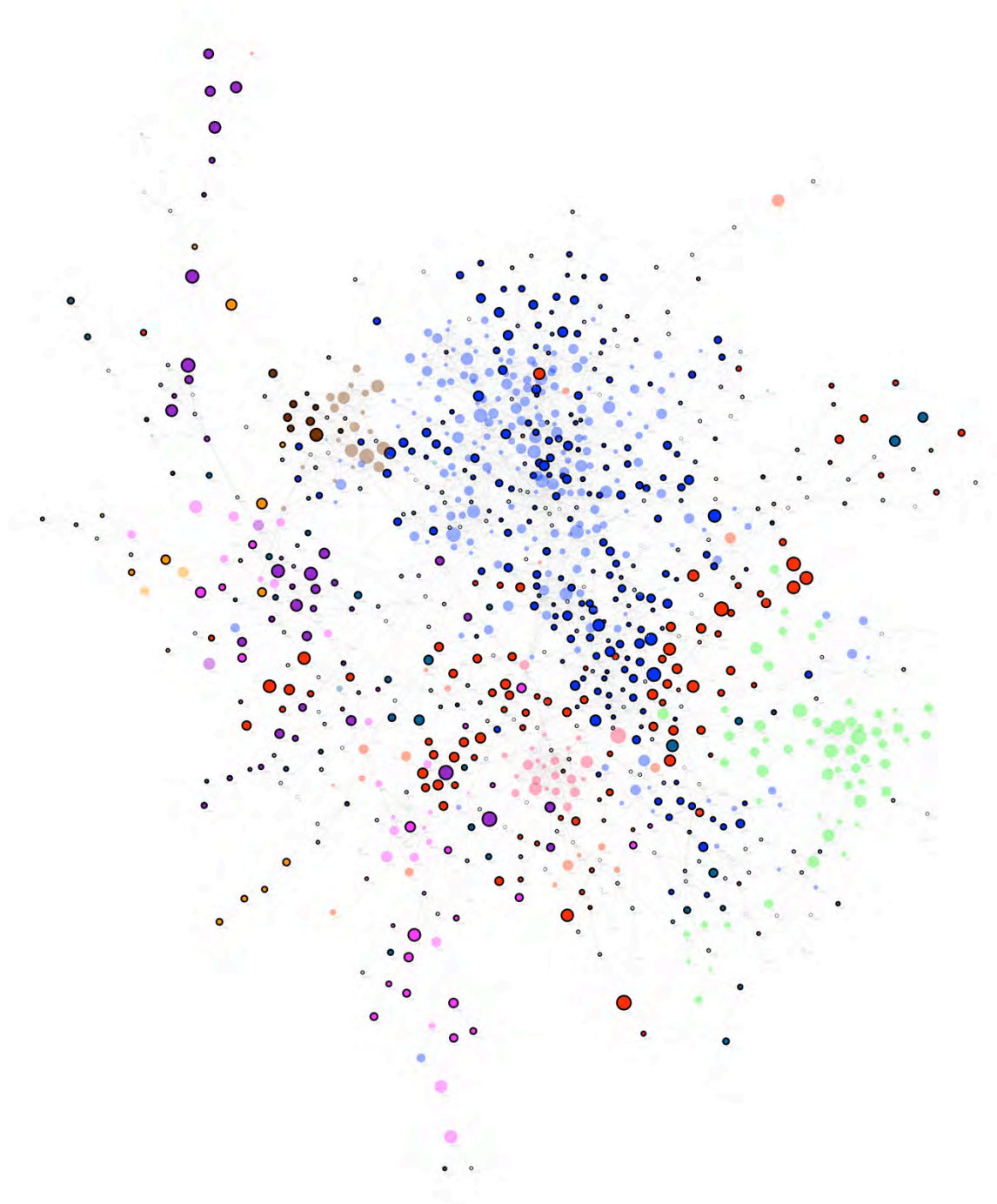
New research: the Industry Space

Maps the
relationships
between all
domestic activities,
including services



- Agriculture, Forestry, Fishing
- Construction
- Finance, Insurance, Real Estate
- Manufacturing
- Mining
- Public Administration
- Retail Trade
- Services
- Transport & Public Utilities
- Wholesale Trade

Colombo District



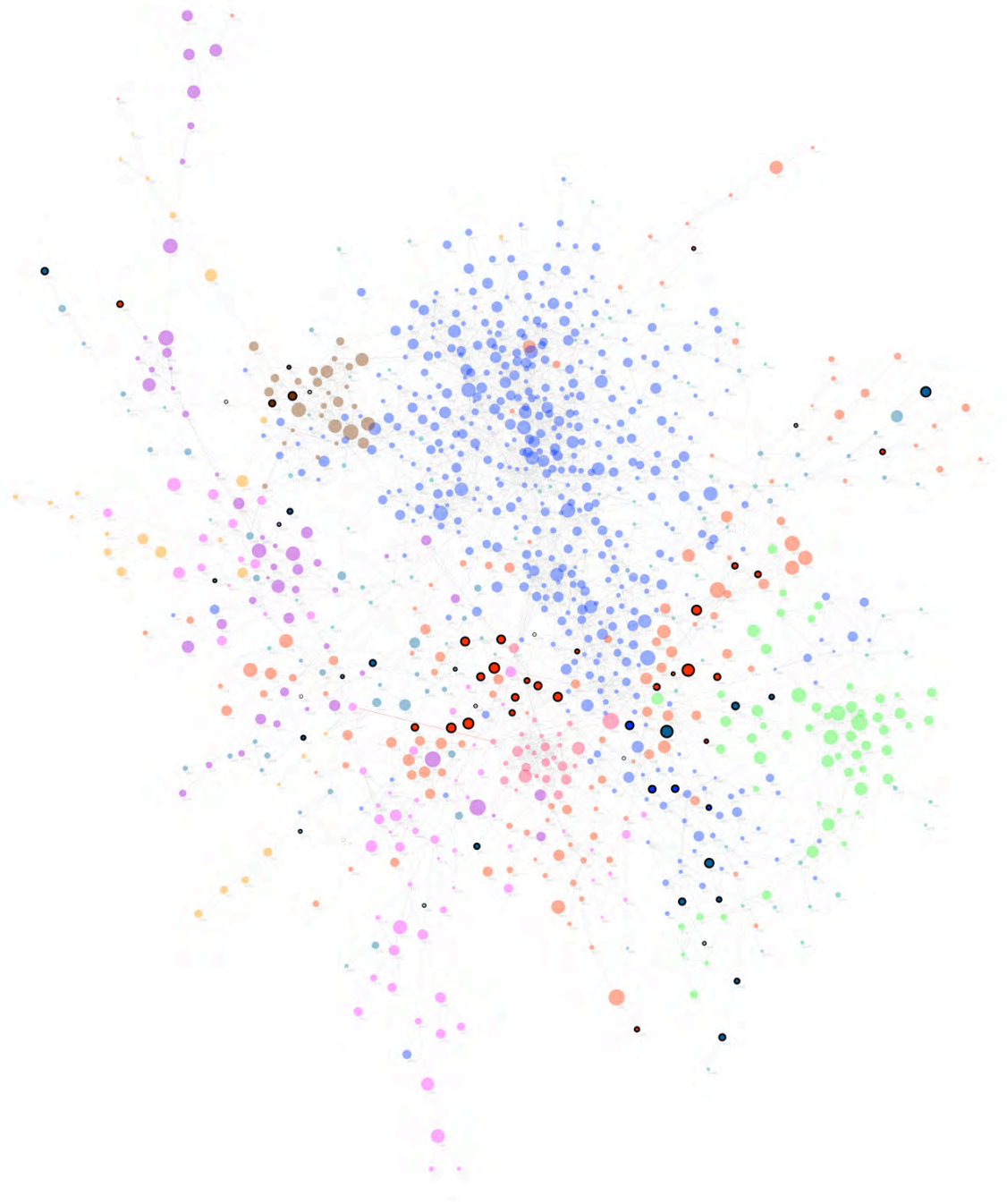
- Agriculture, Forestry, Fishing
- Construction
- Finance, Insurance, Real Estate
- Manufacturing
- Mining
- Public Administration
- Retail Trade
- Services
- Transport & Public Utilities
- Wholesale Trade

Kandy District



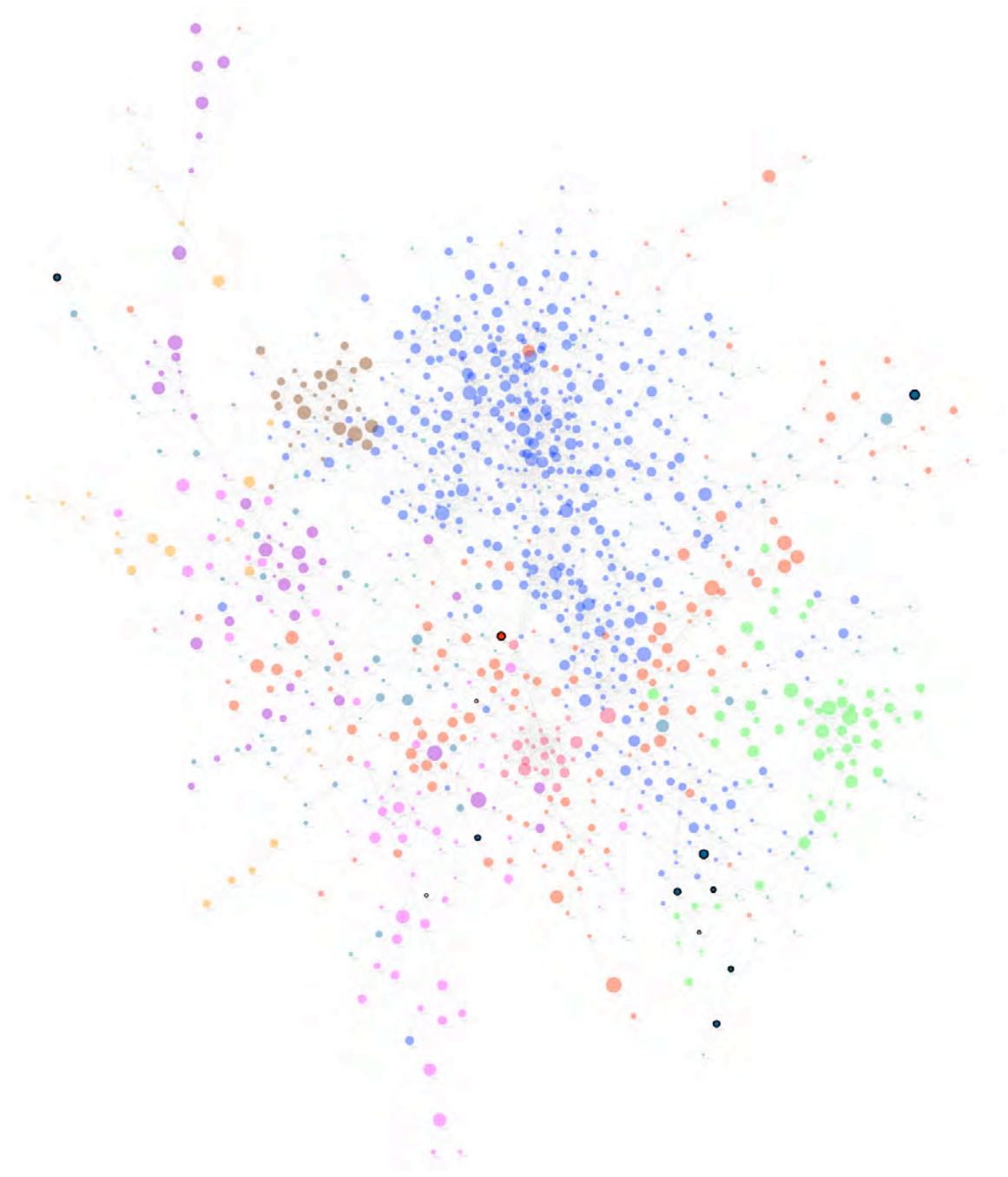
- Agriculture, Forestry, Fishing
- Construction
- Finance, Insurance, Real Estate
- Manufacturing
- Mining
- Public Administration
- Retail Trade
- Services
- Transport & Public Utilities
- Wholesale Trade

Trincomalee District



- Agriculture, Forestry, Fishing
- Construction
- Finance, Insurance, Real Estate
- Manufacturing
- Mining
- Public Administration
- Retail Trade
- Services
- Transport & Public Utilities
- Wholesale Trade

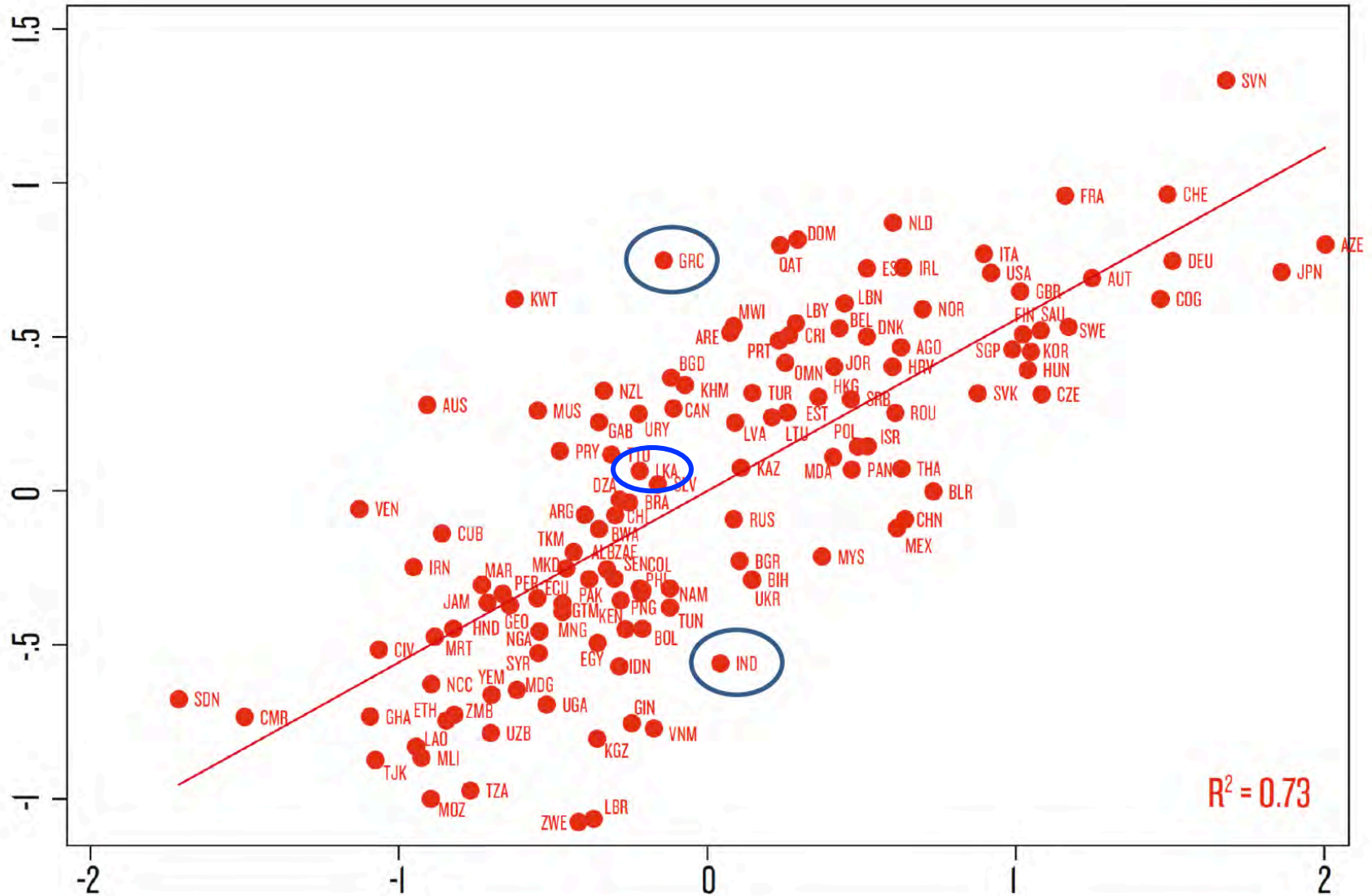
Mullaitivu District



- Agriculture, Forestry, Fishing
- Construction
- Finance, Insurance, Real Estate
- Manufacturing
- Mining
- Public Administration
- Retail Trade
- Services
- Transport & Public Utilities
- Wholesale Trade

How do we
explain
growth?

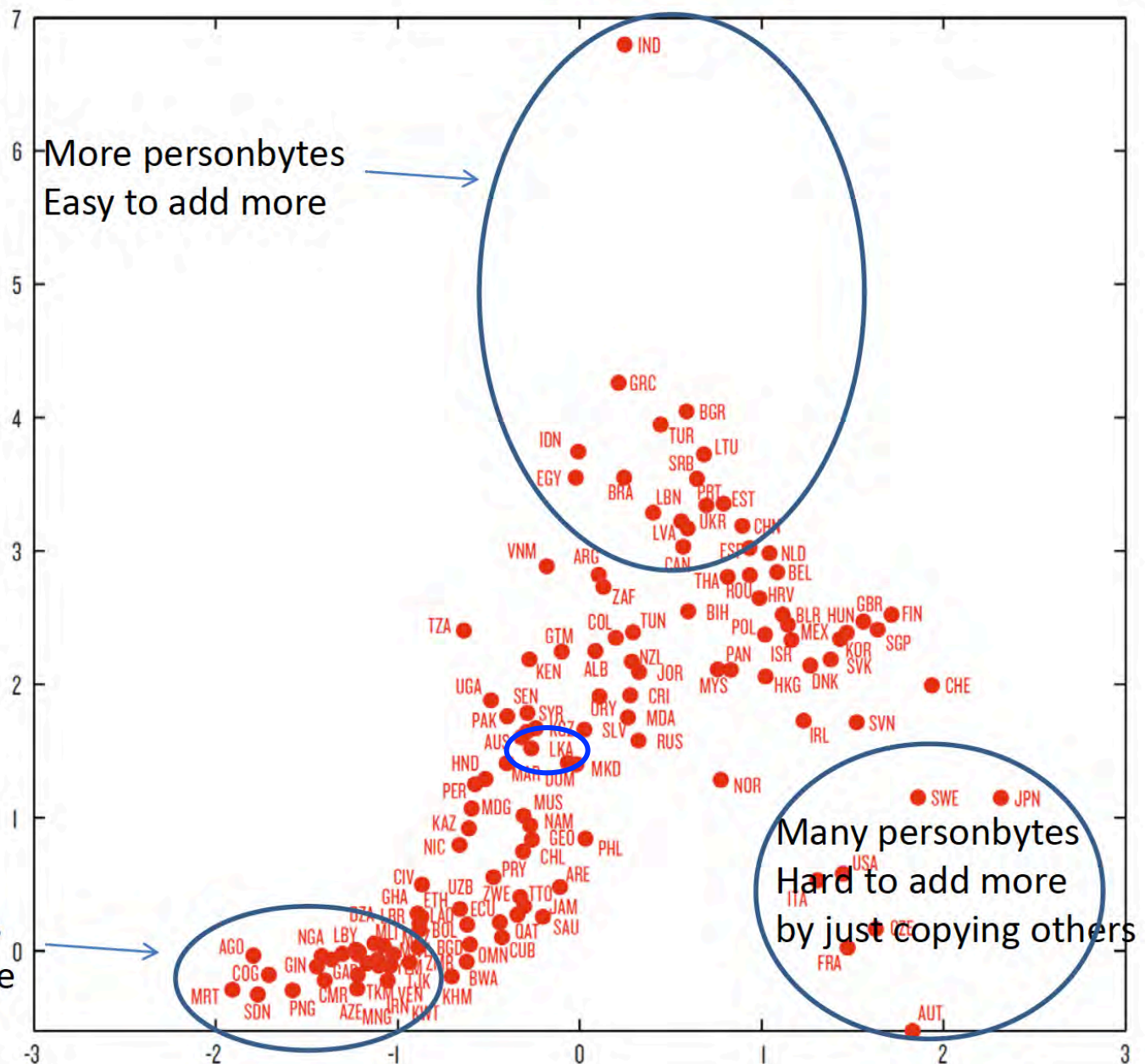
Income per capita controlling for initial income and proportion
of natural resource exports per capita in logs [2008]



Economic Complexity Index controlling for initial income and proportion
of natural resource exports per capita in logs [2008]

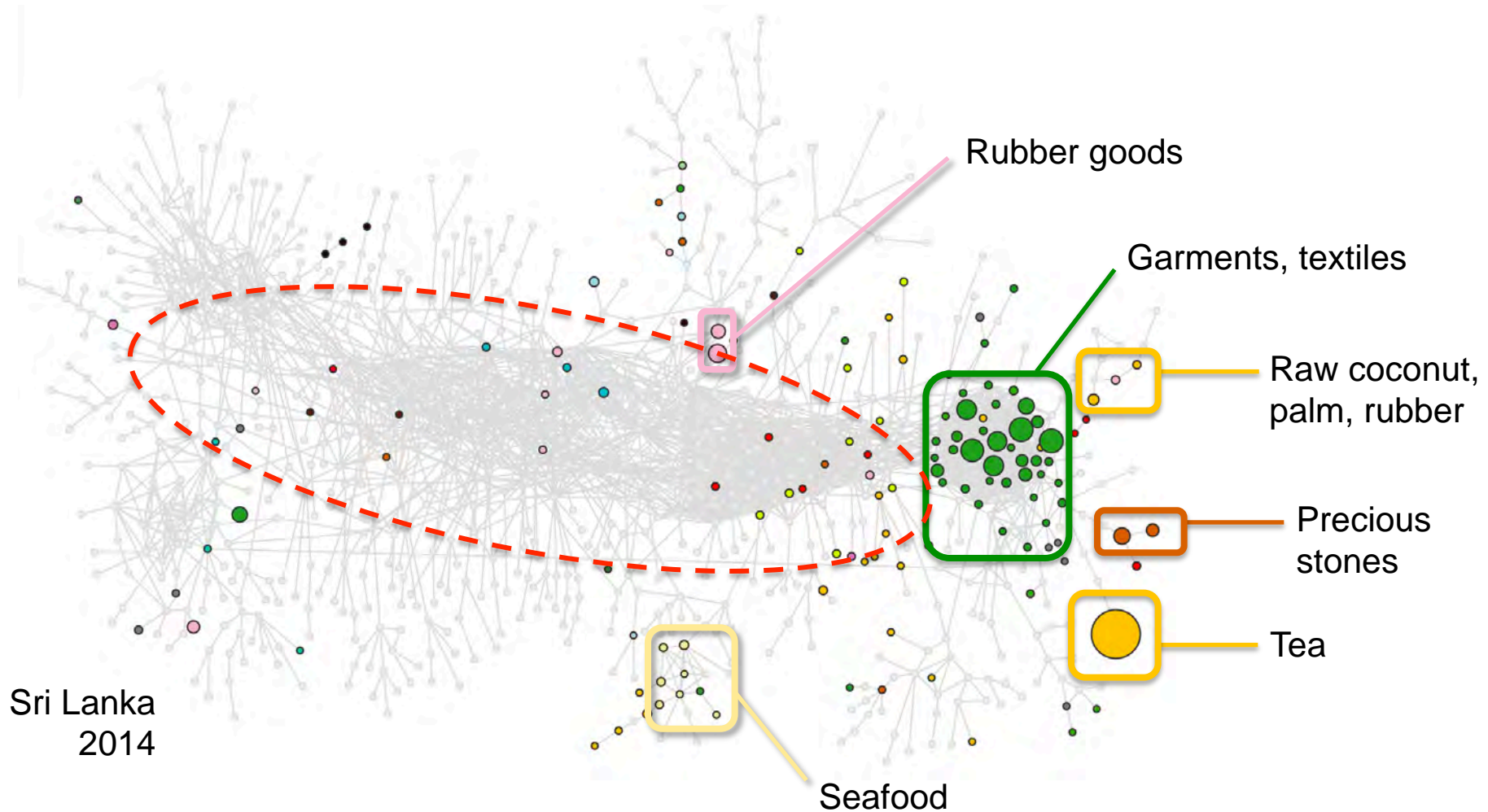
How close are
you to other
good products?

Few personbytes
Hard to add more

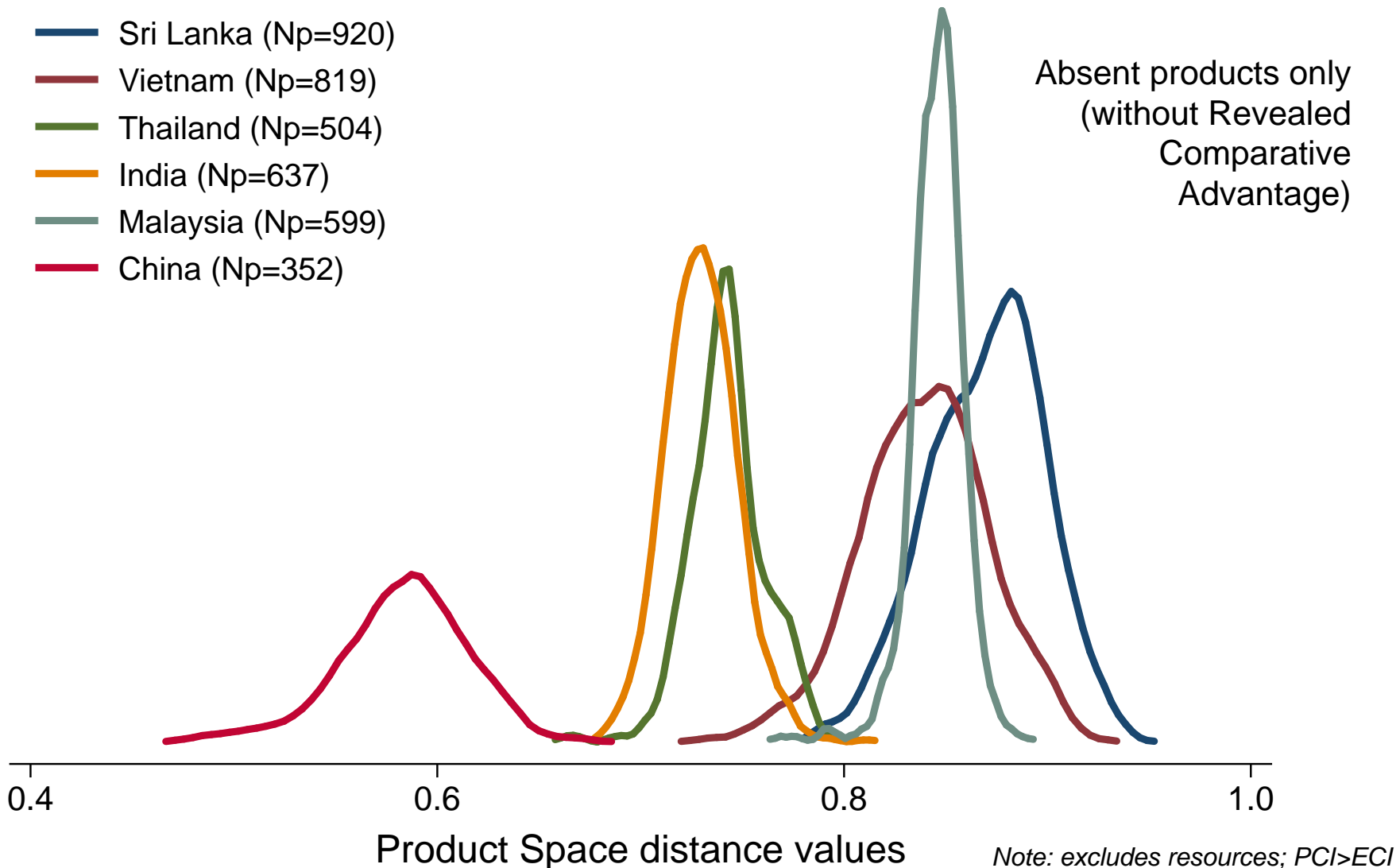


How many personbytes you have?

Yet nearly all new products are highly “distant” from Sri Lanka’s current comparative advantage



Yet nearly all new products are highly “distant” from Sri Lanka’s current comparative advantage



Therefore, the path to diversification may lie in helping investors take “strategic bets” on new sectors

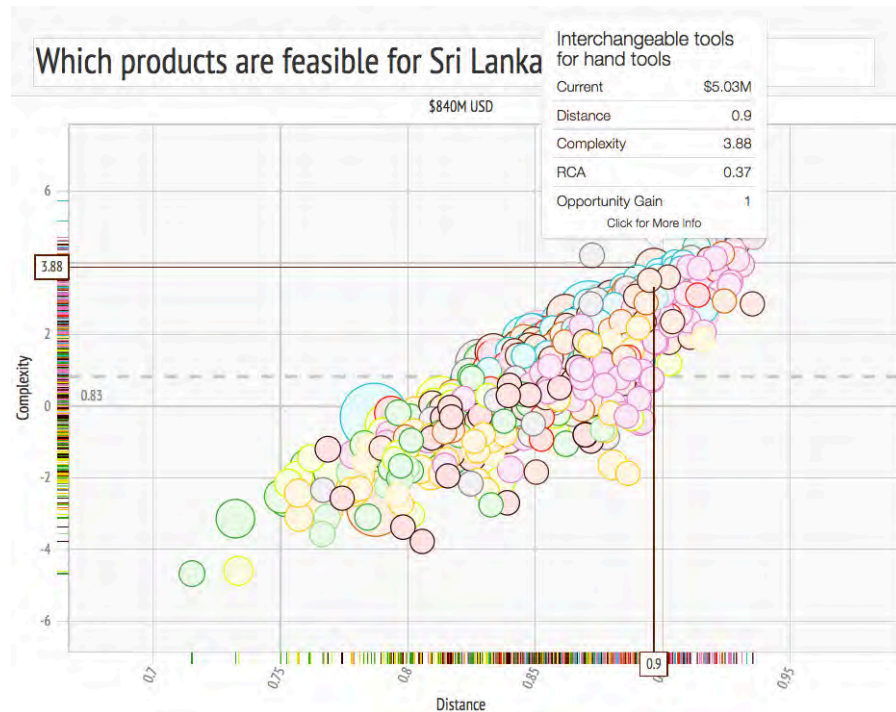


How do you identify potential new sectors?

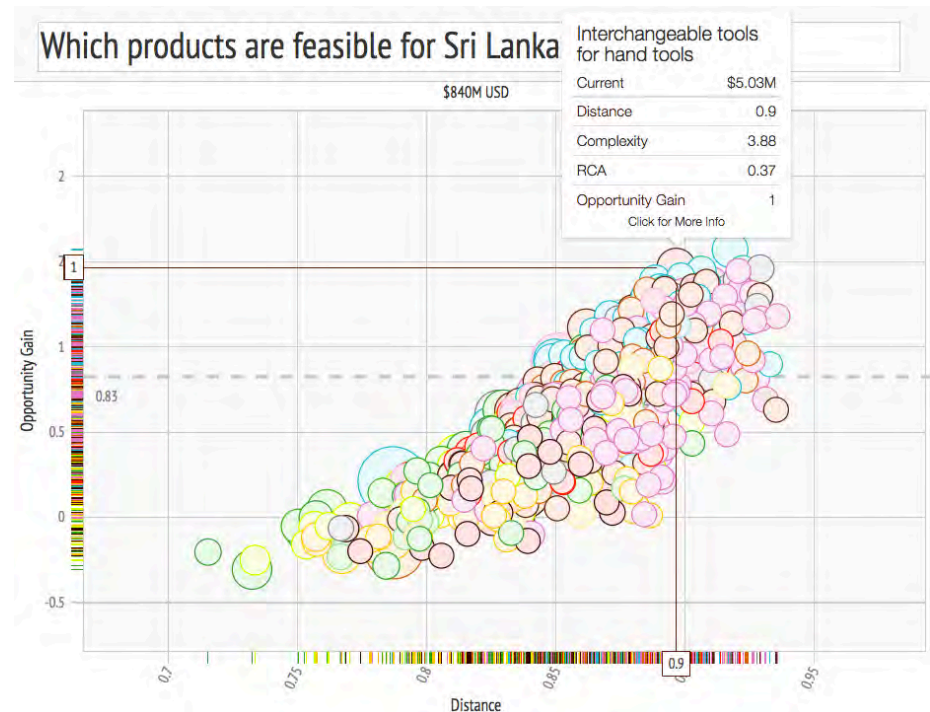
- Distance
 - How far is the industry from the current capabilities of the country or region?
- Complexity
 - How productive is the industry?
- Strategic value
 - How much does the development of the industry facilitate further diversification?

Applying these ideas to Sri Lanka: An efficient frontier between three goals

Complexity and Distance

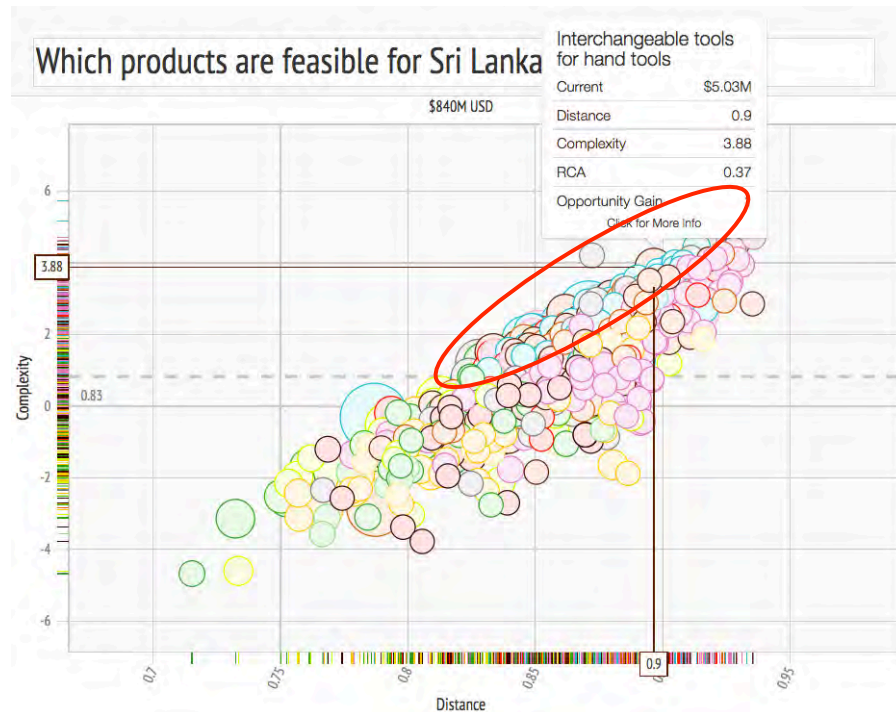


Opportunity Gain and Distance

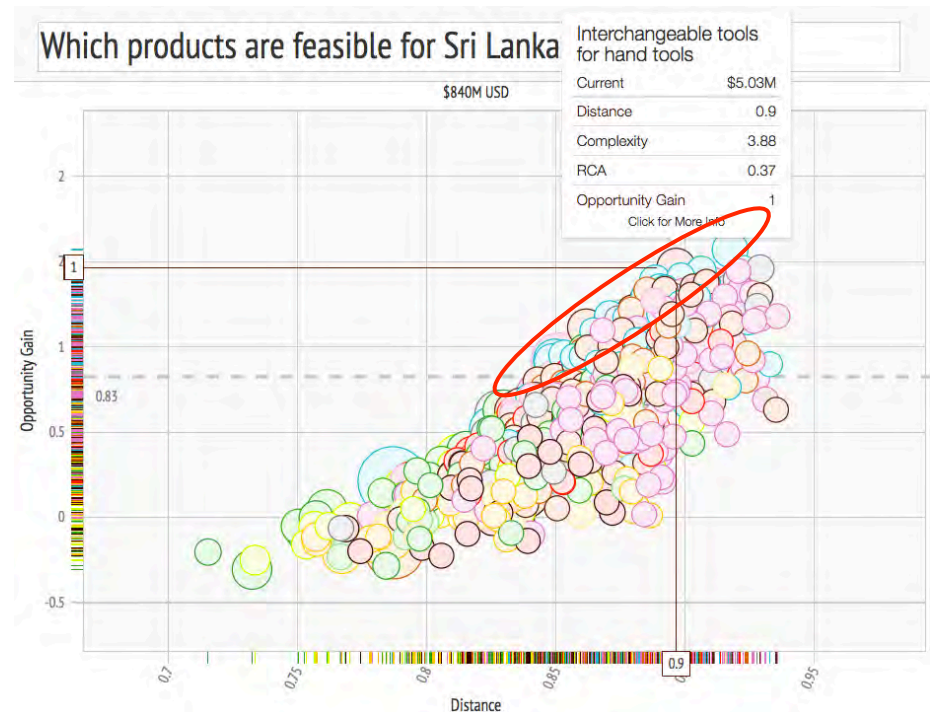


Applying these ideas to Sri Lanka: An efficient frontier between three goals

Complexity and Distance

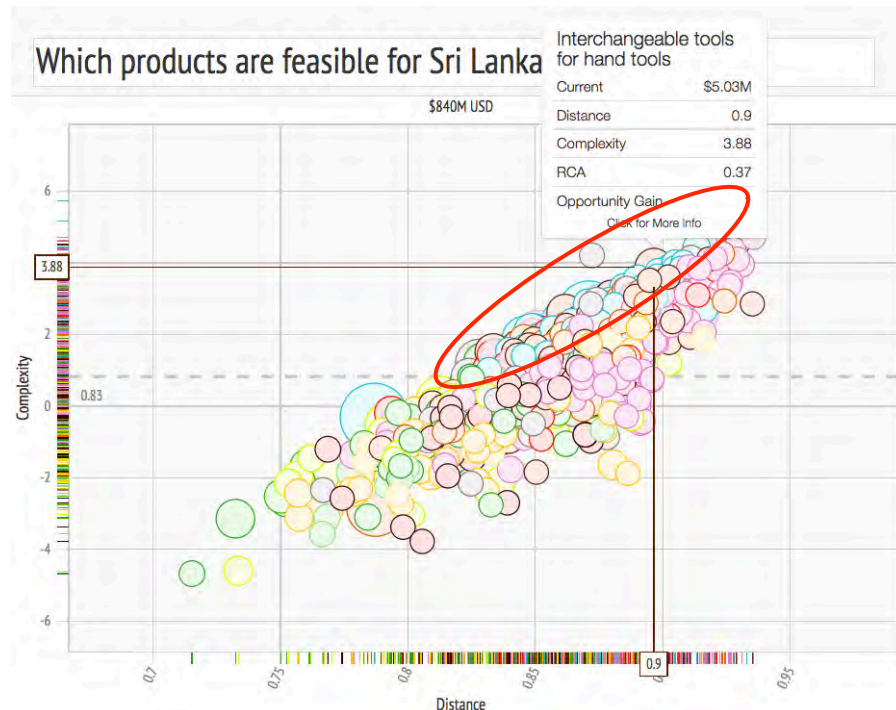


Opportunity Gain and Distance

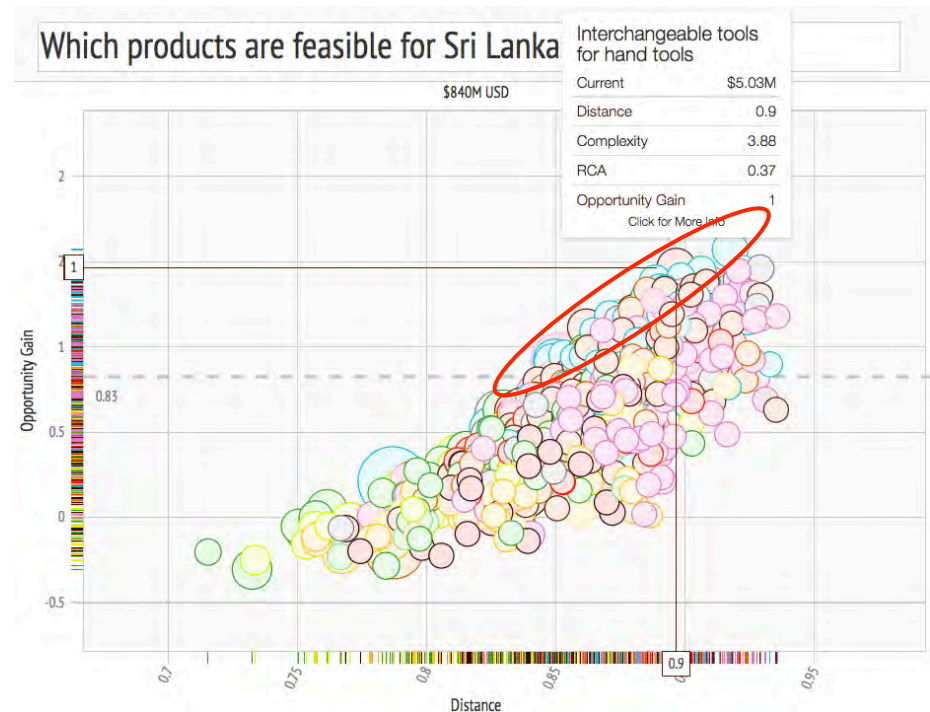


Applying these ideas to Sri Lanka: An efficient frontier between three goals

Complexity and Distance



Opportunity Gain and Distance



A BOI/EDB team is now taking a comprehensive approach...

How does
knowhow
move?

DIFFUSION OF INDUSTRIES

Moving knowledge into brains is hard work...



IT IS MUCH EASIER TO MOVE BRAINS:
DIFFUSION THROUGH MOBILITY



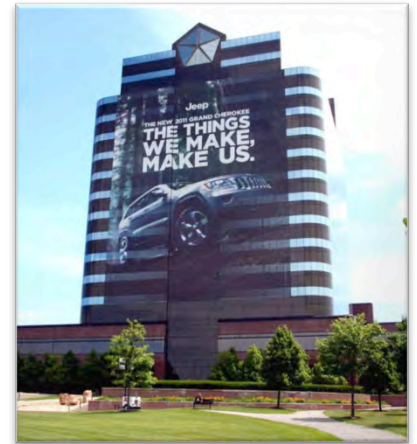
Different mechanisms of diffusion

- Labor mobility between firms
- Immigration
- Diasporas
- Business travel
- FDI

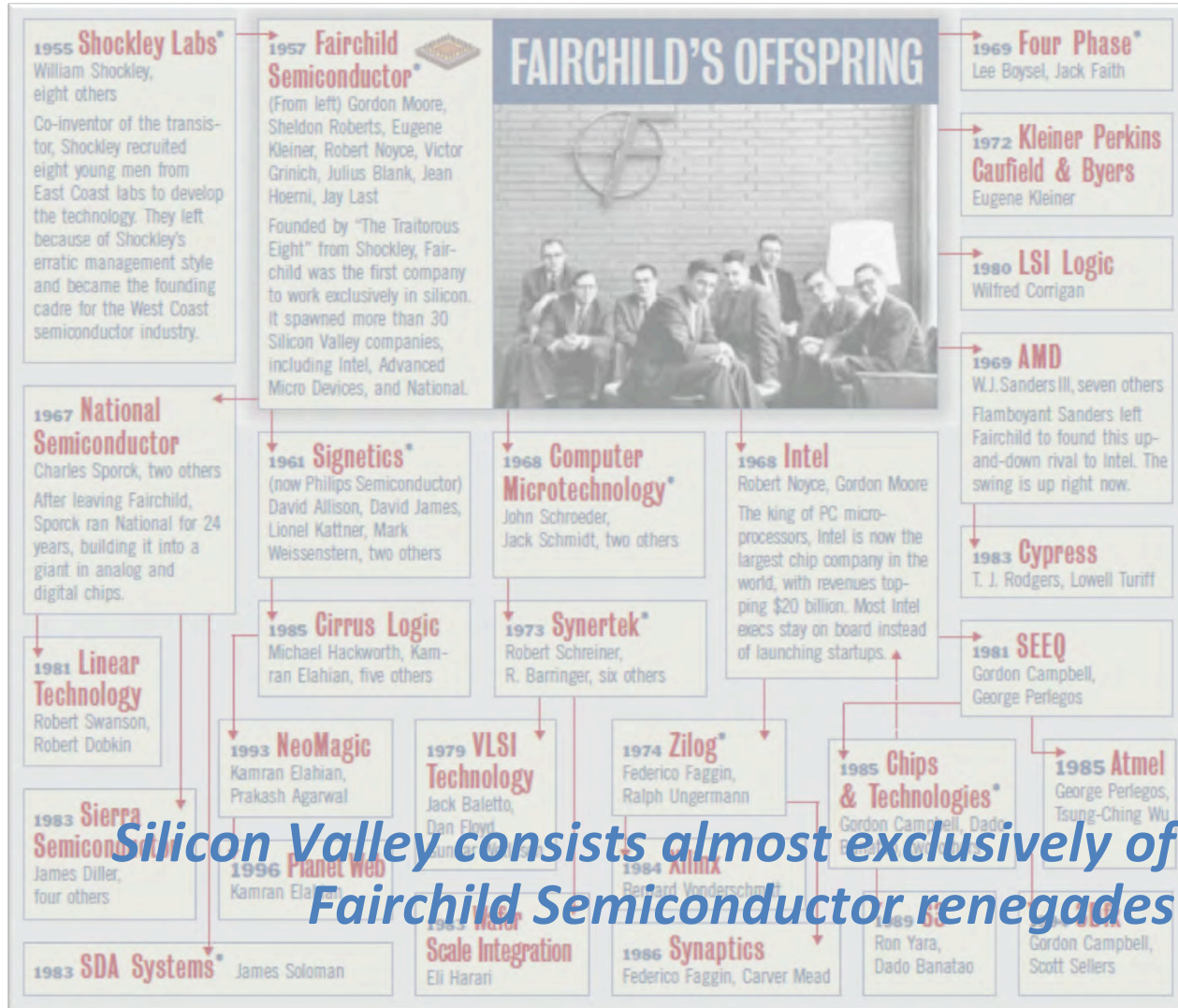
Example 1: DETROIT



*All successful car firms in
Detroit came out of Olds
Motor Works*



Example 2: SILICON VALLEY

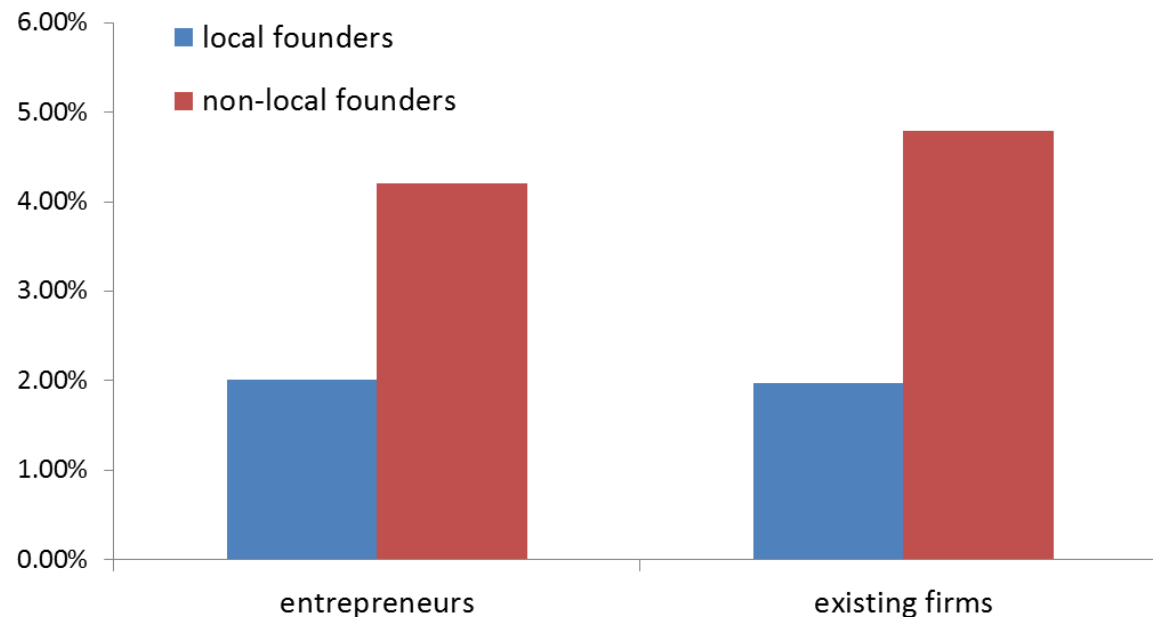


DIFFUSION OF INDUSTRIES

...it is easier to move the brains!

- Neffke/Hartog/Boschma/Henning (2014): Industries diffuse when firms and entrepreneurs move to a region

Share of new establishments that pioneer a local industry
(by founder type)

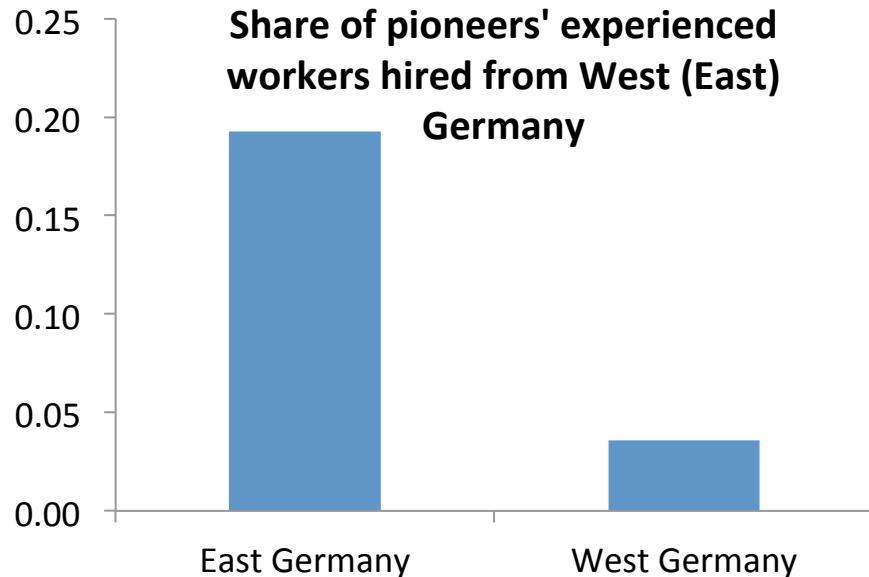


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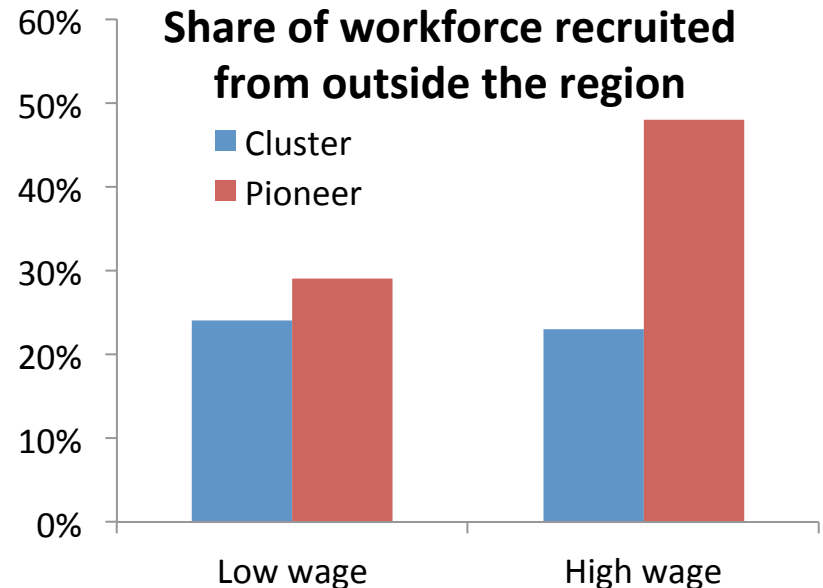
Germany

Hausmann/Neffke/Otto (2013):
Industry pioneers in East
Germany strongly hire many of
their core workers from West
Germany



Colombia

Matté Hartog: First analyses show
that also in Colombia pioneering
requires mobility of experts



DIFFUSION OF KNOWLEDGE ACROSS COUNTRIES

- Products diffuse through migrants

- Bahar and Rapoport (2013)

Franschhoek Valley, South Africa

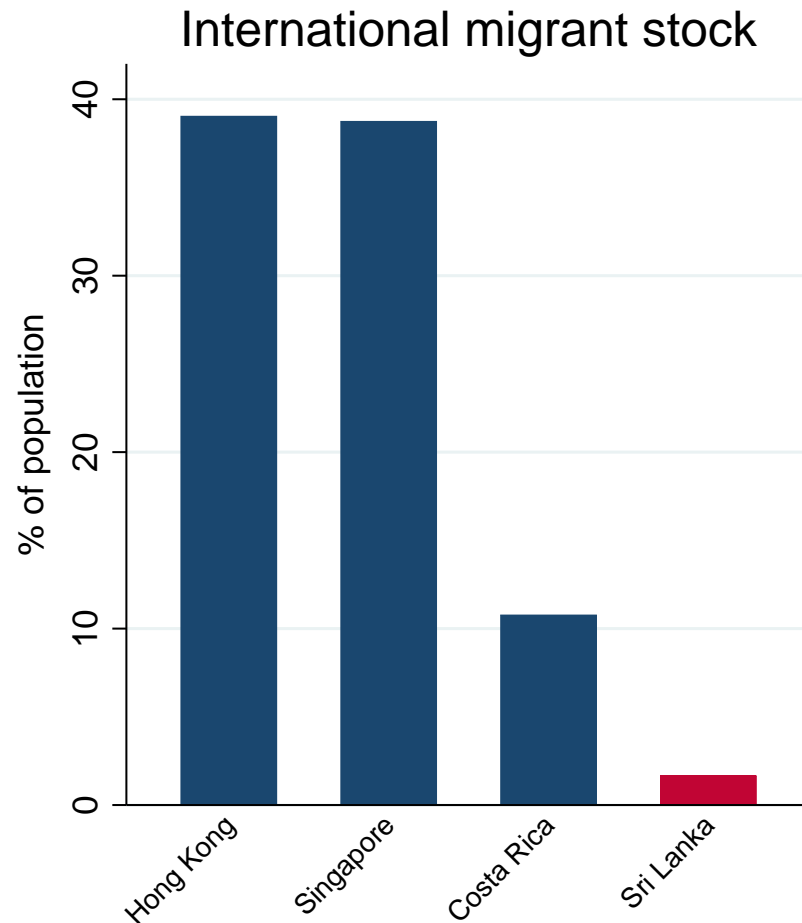


What scope is there for Sri Lanka to learn from immigrants?

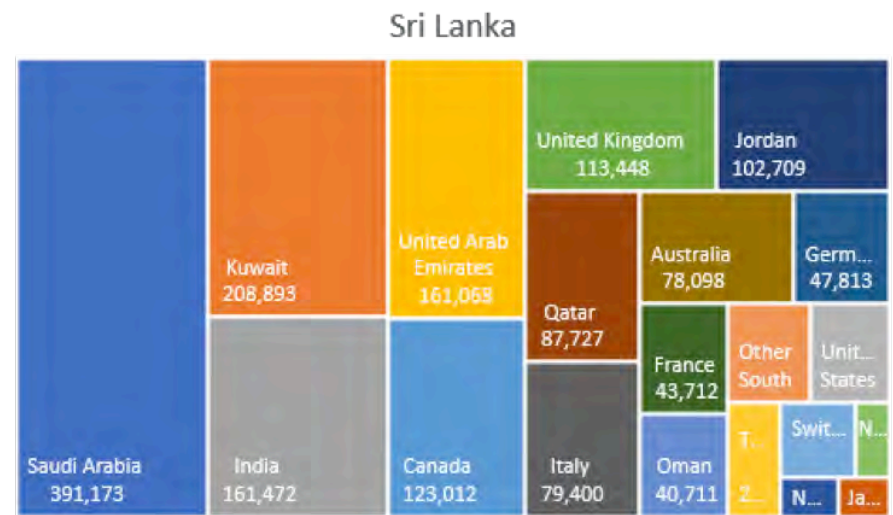
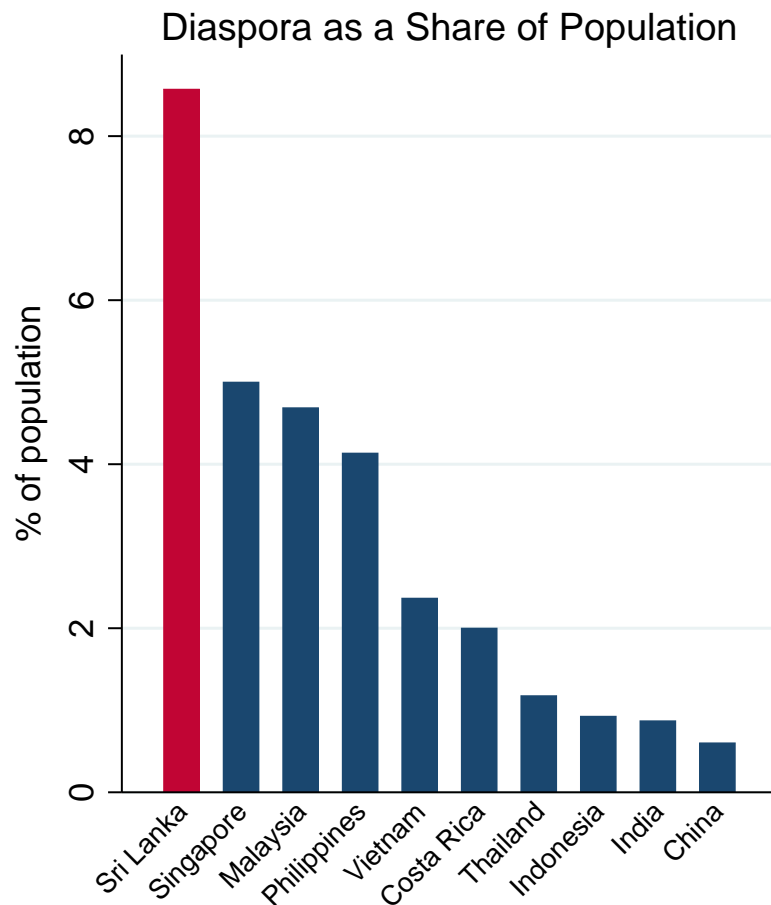
Few residents of Sri Lanka are foreign born. Almost all (99%) come from India.

The BOI has issued less than 5,000 work visas to foreigners in each of the last 10 years.

Elsewhere, Thailand, Malaysia and the Philippines have benefited from large overseas Chinese communities. And China benefited from investment from Hong Kong and Taiwan.

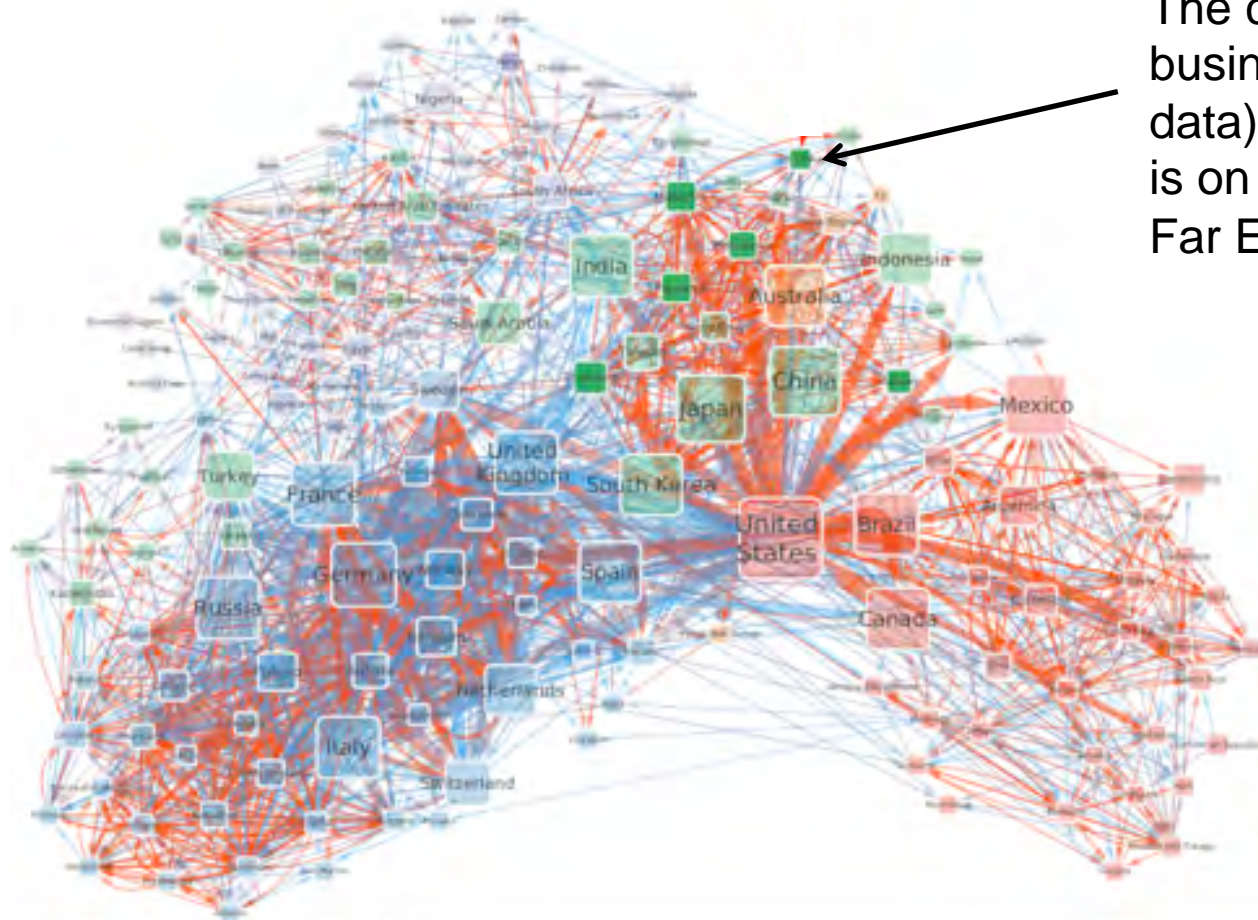


What scope is there for Sri Lanka to learn from its diaspora?



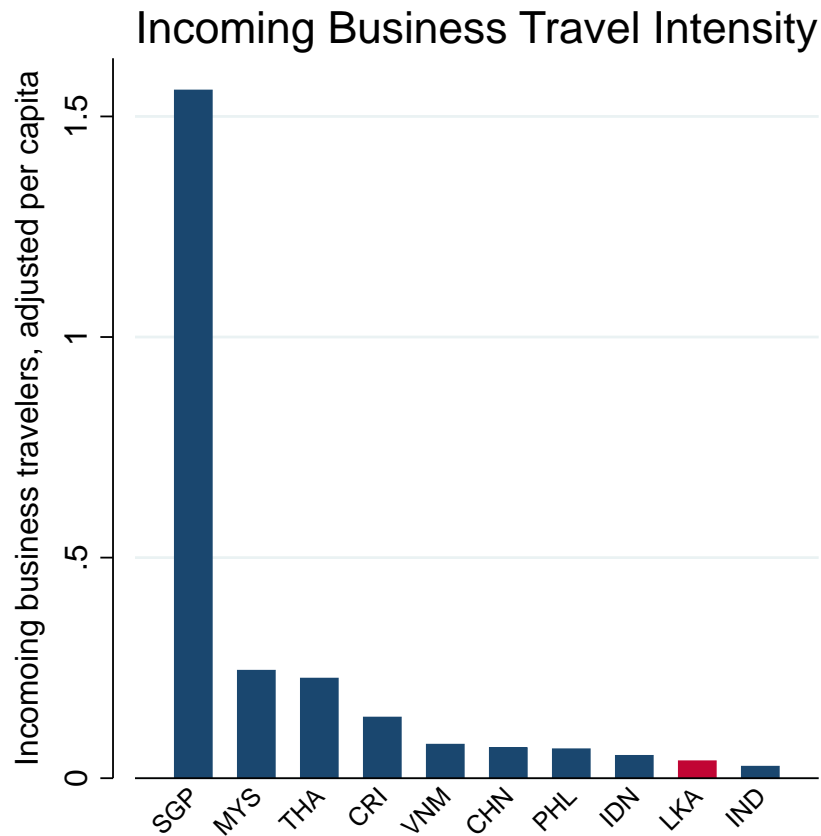
Non-resident Indians were key to India's diversification into ICT and BPO

How does Sri Lanka do in business travel? It is fairly disconnected from business travel networks, but close to a dynamic cluster.



The country space for business travel (using 2011 data) shows that Sri Lanka is on the periphery of the Far East cluster.

Business travel is limited versus comparator countries

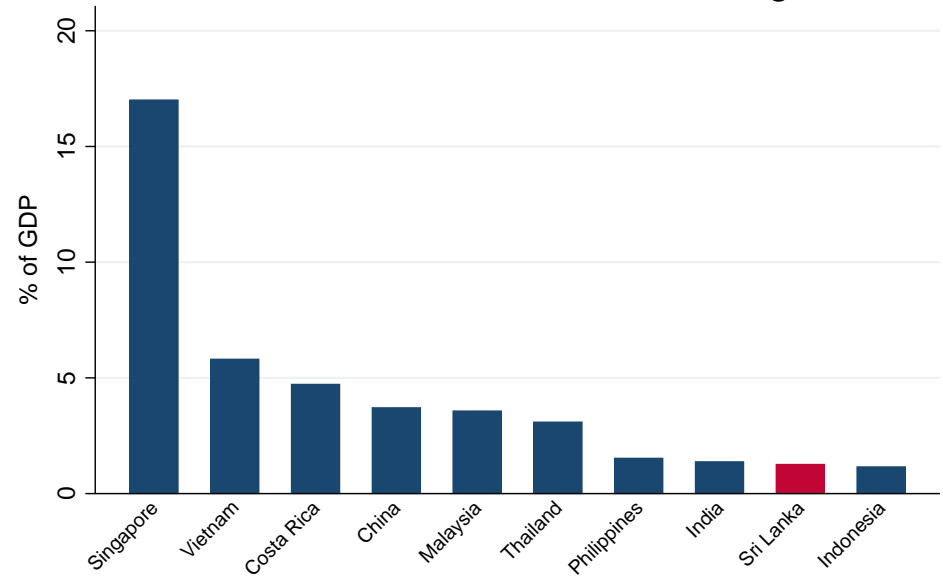


Gaining knowhow through FDI?

Sri Lanka has seen little FDI over last 20 years.

And no sustained increase in FDI after the conflict.

FDI Net Inflows, 1995-2015 Avg.



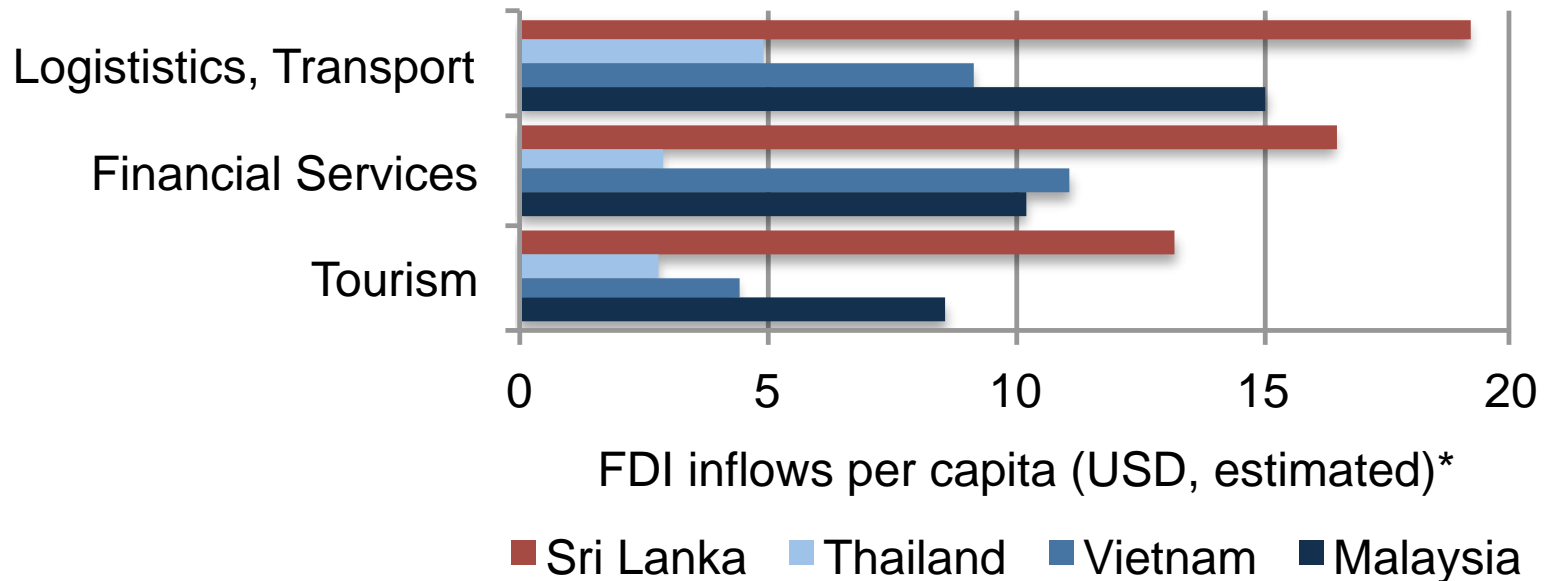
Source: WDI

FDI Net Inflows, Sri Lanka



Source: WDI

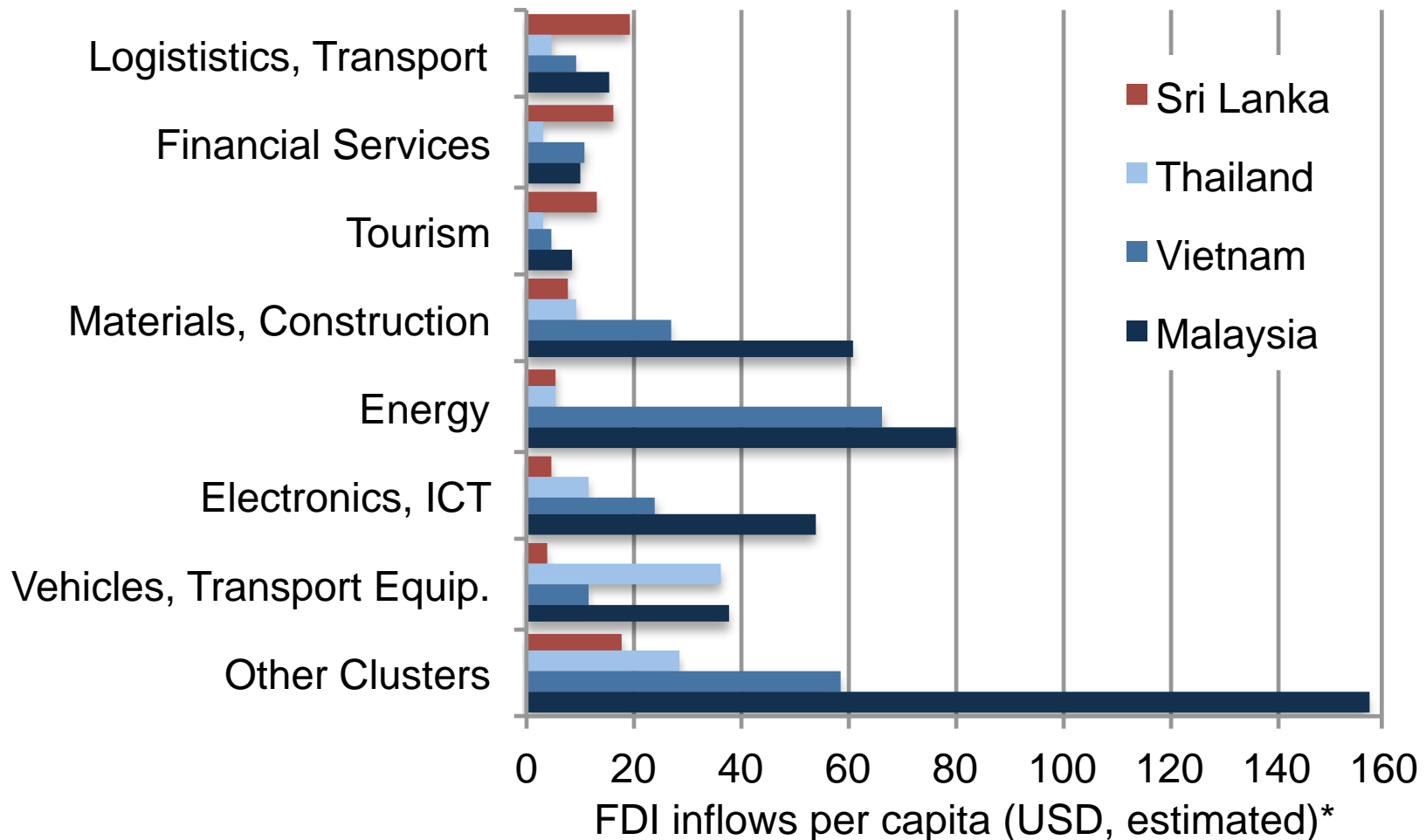
New FDI inflows are high in existing sectors...



Source: fDi Markets, April 2016. Note: dataset is based on estimates of large, high-profile FDI project announcements.

* Estimated capital expenditure per capita, January 2009 – March 2016 (annualized)

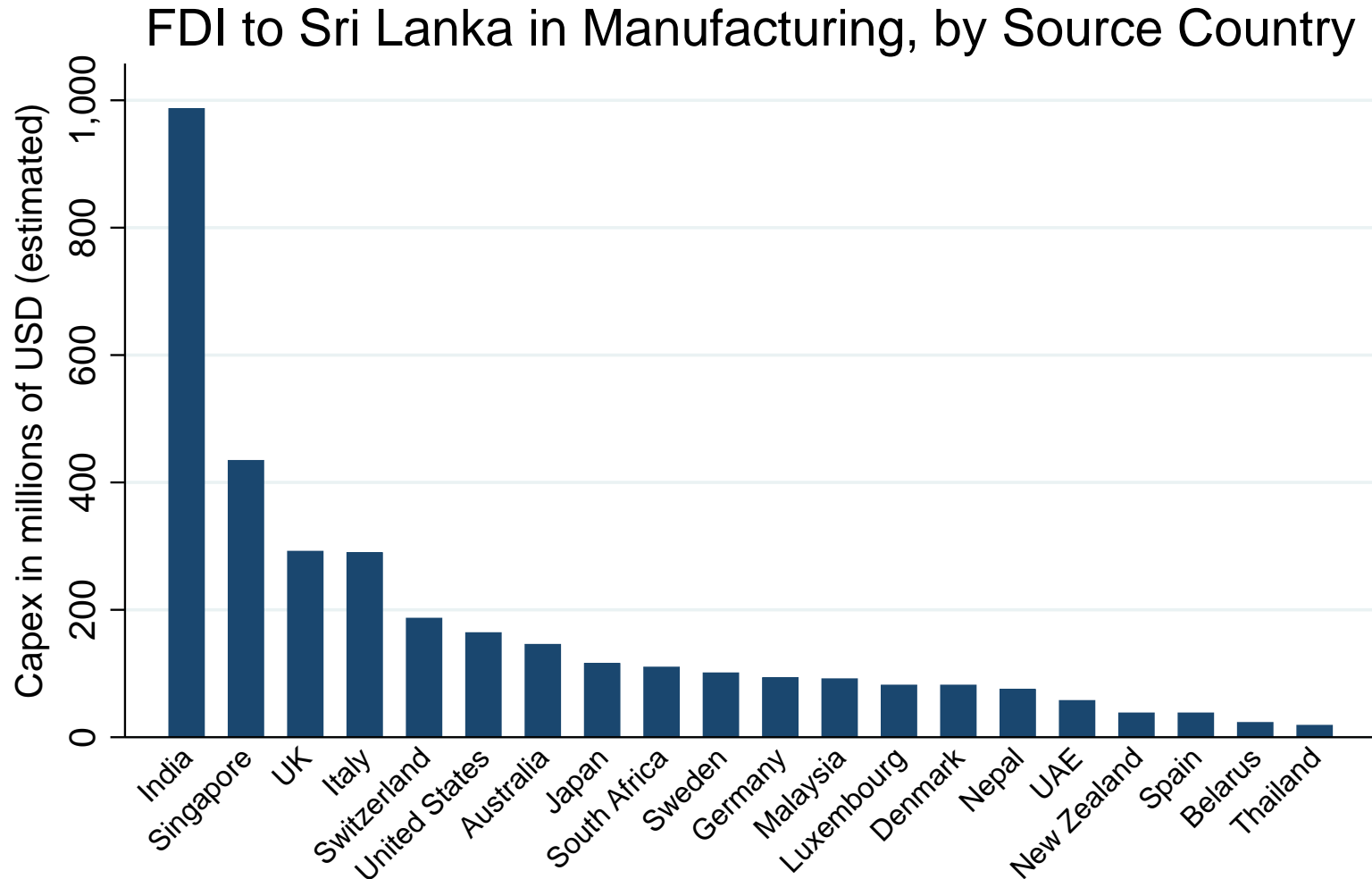
...but peer countries receive the bulk of their FDI from sectors that are mostly absent in Sri Lanka



Source: fDi Markets, April 2016. Note: dataset is based on estimates of large, high-profile FDI project announcements.

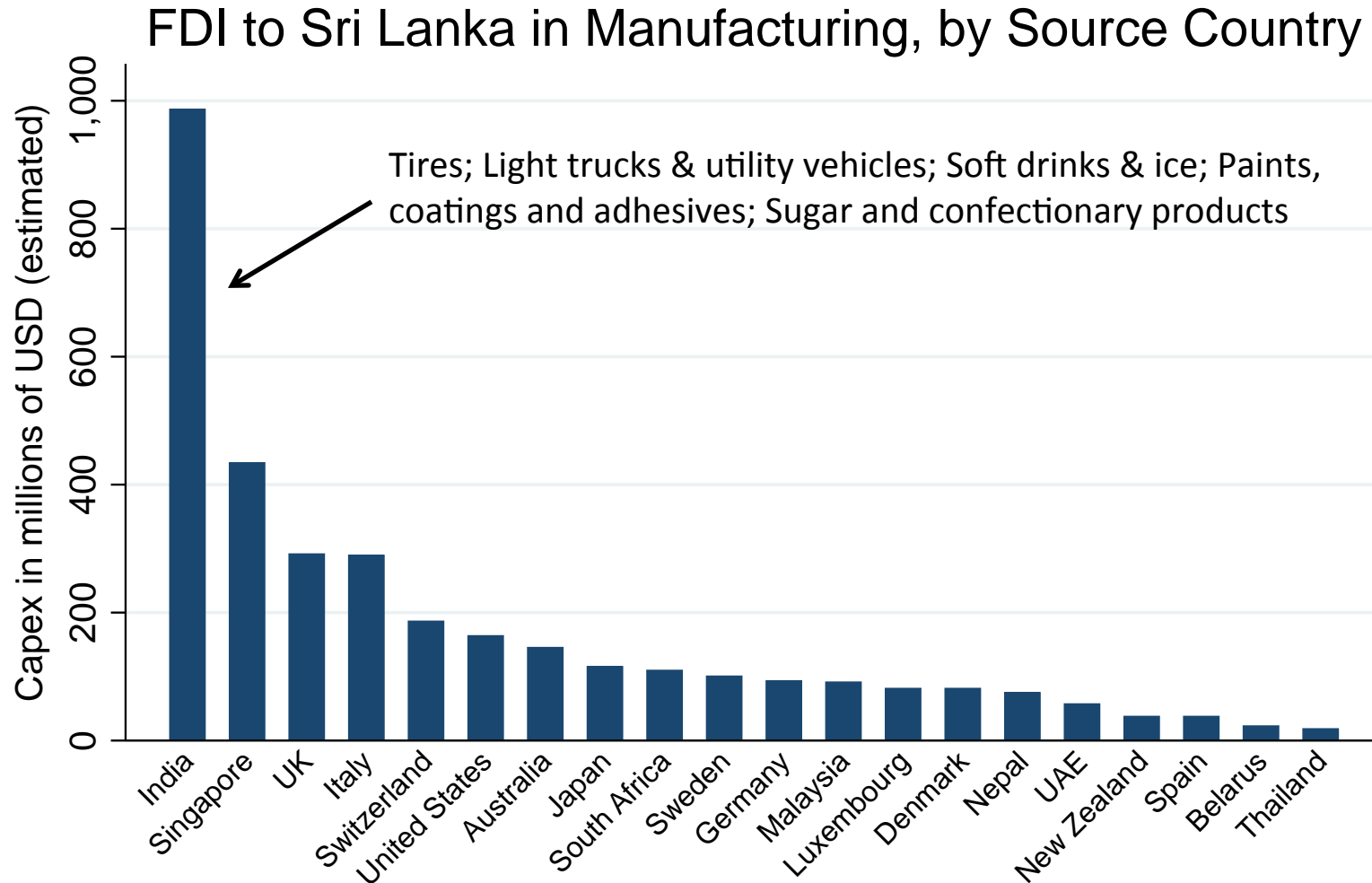
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Who is Sri Lanka learning from through FDI in manufacturing and in what industries?



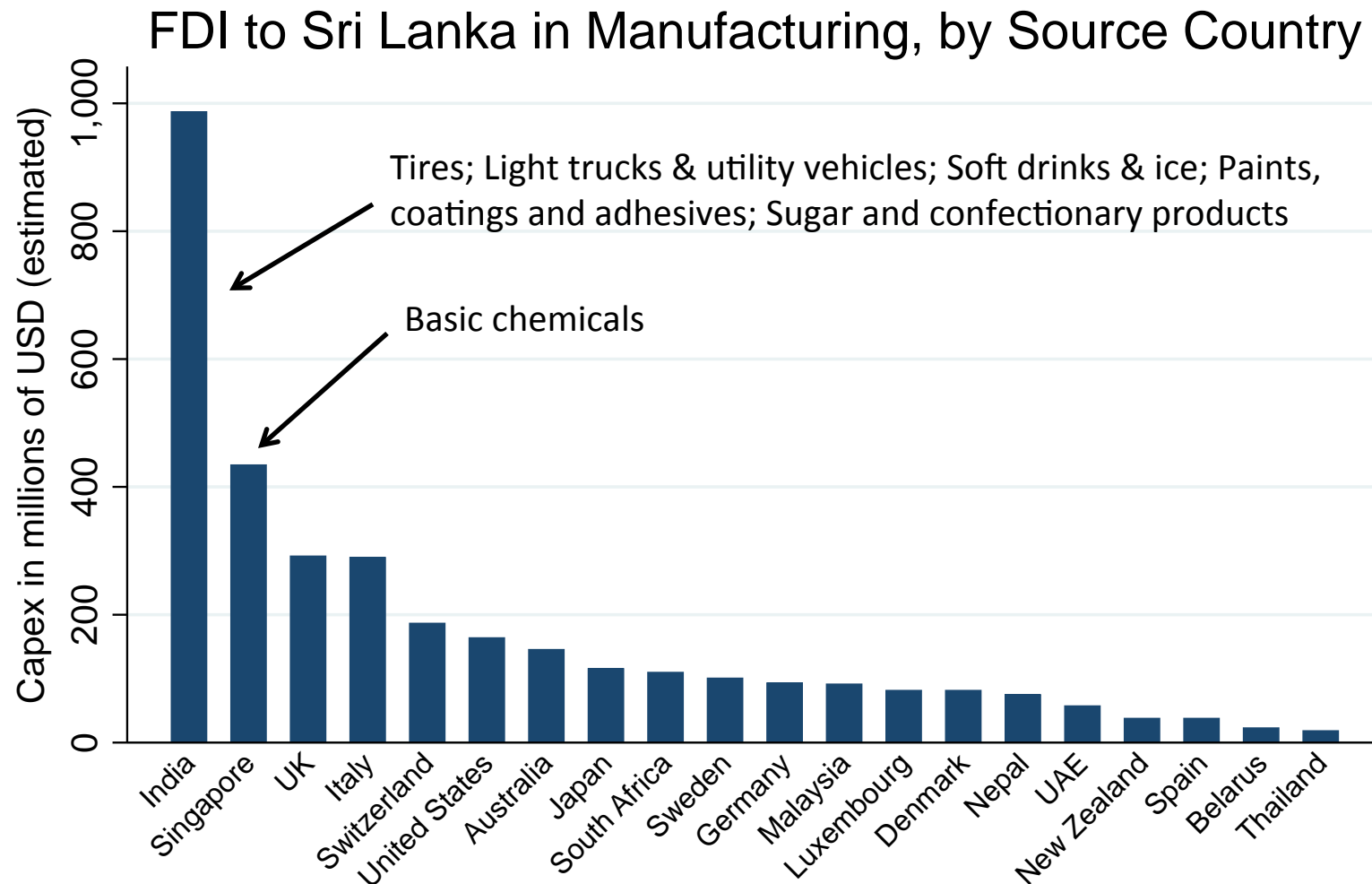
Source: fDi Markets, 2003-2015 cumulative FDI announced in media
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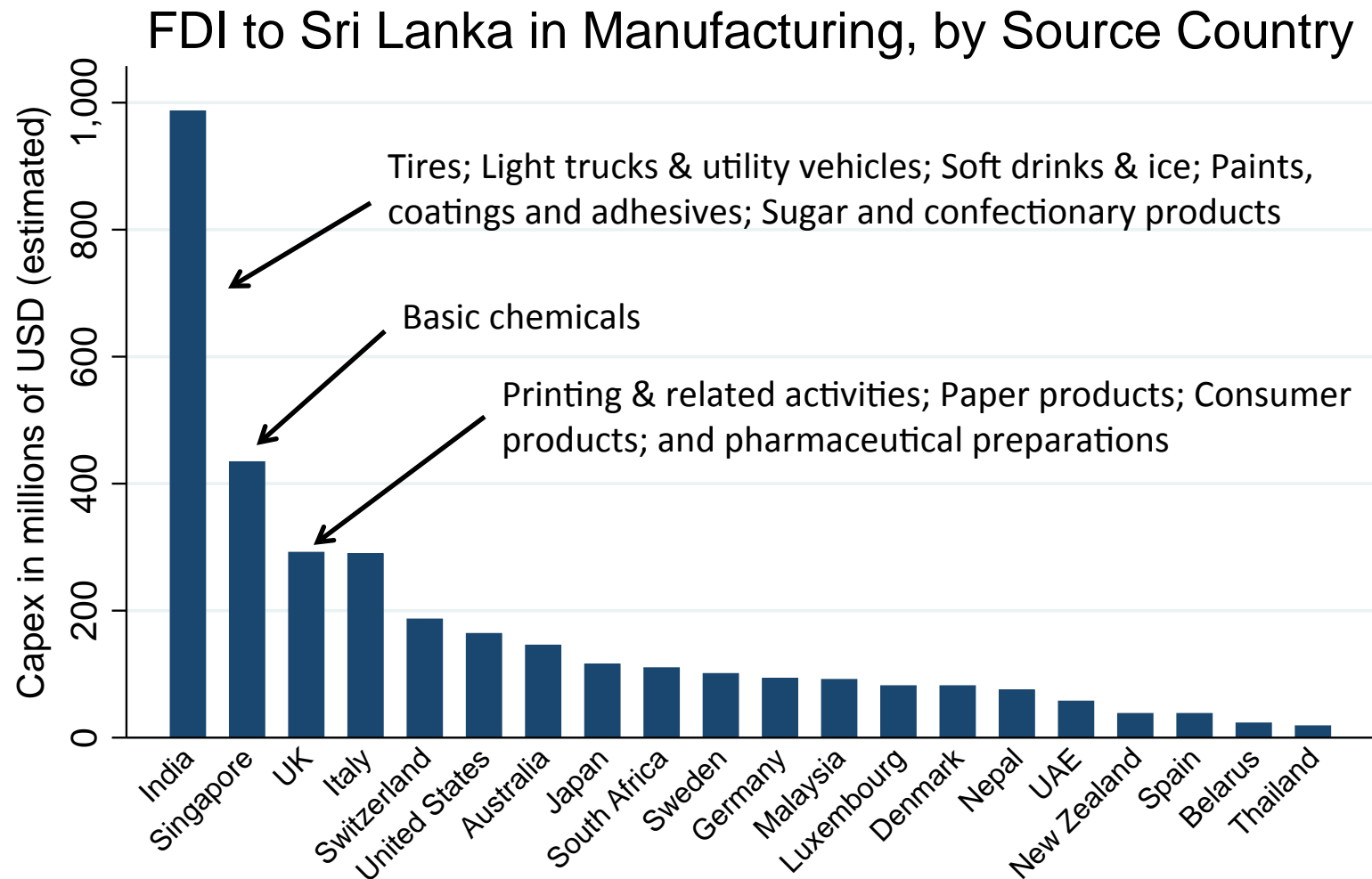
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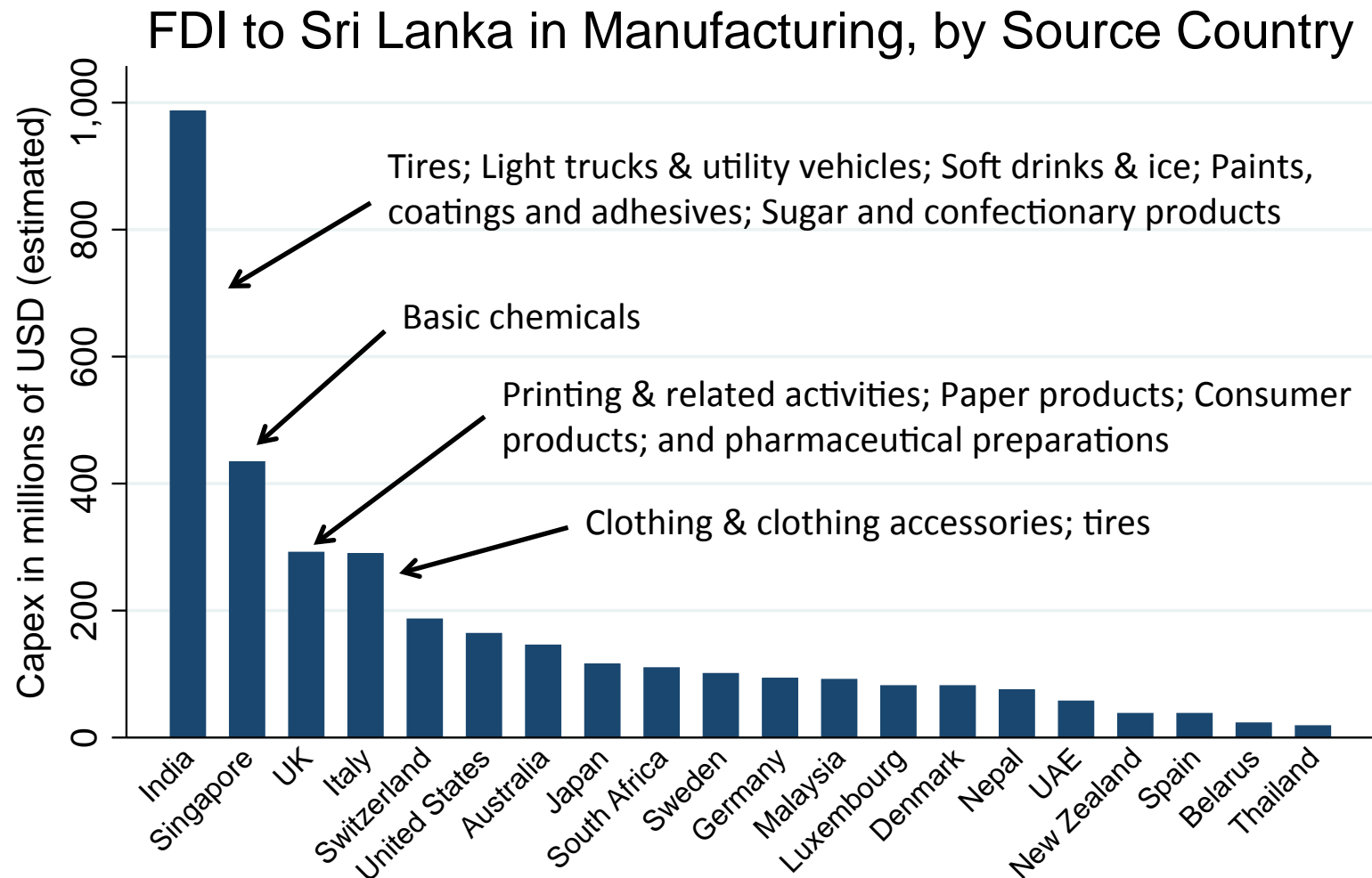
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Is Sri Lanka missing opportunities to learn from neighbors and beyond?

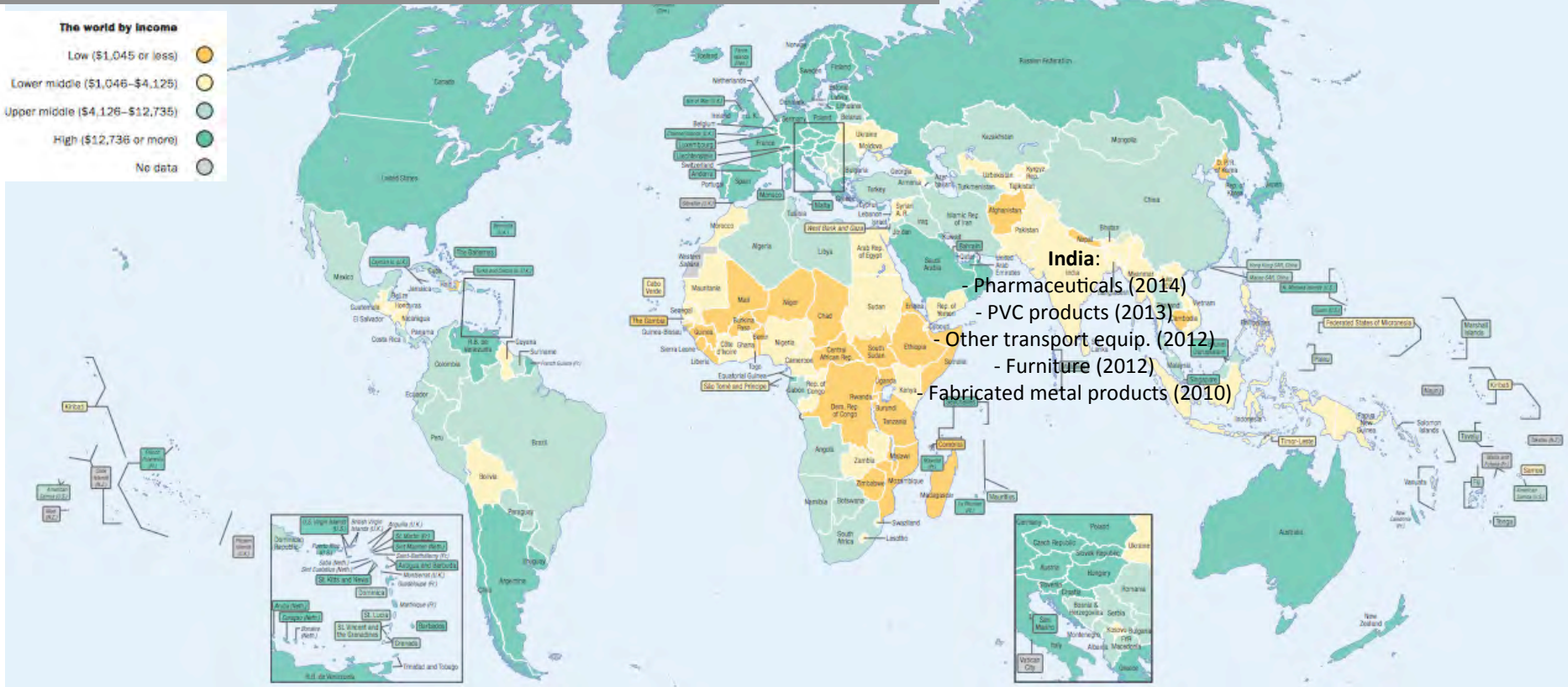
Noteworthy rejected or current applications to the BOI in new manufacturing projects since 2010



Listed are a selection of manufacturing projects (and application years) since 2010 where applications were rejected, have not yet been approved, or have been approved but the company is awaiting BOI agreement. Source: BOI Project List (Section 17)

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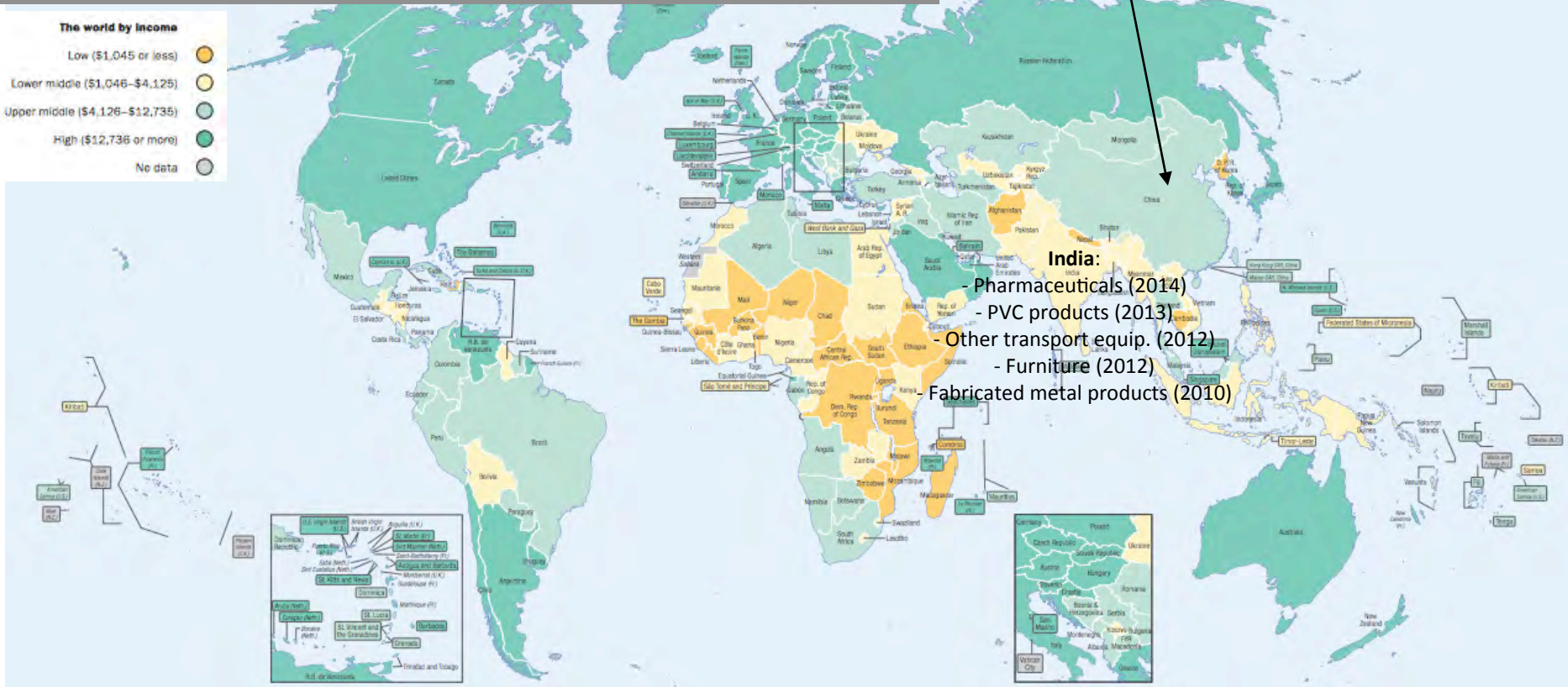
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China:

- Medical and surgical equipment (2016)
- Electrical equipment (2014)
- Motorcycles (2012)
- Pharmaceuticals (2011)
- Other transport equip. (2010)

India:

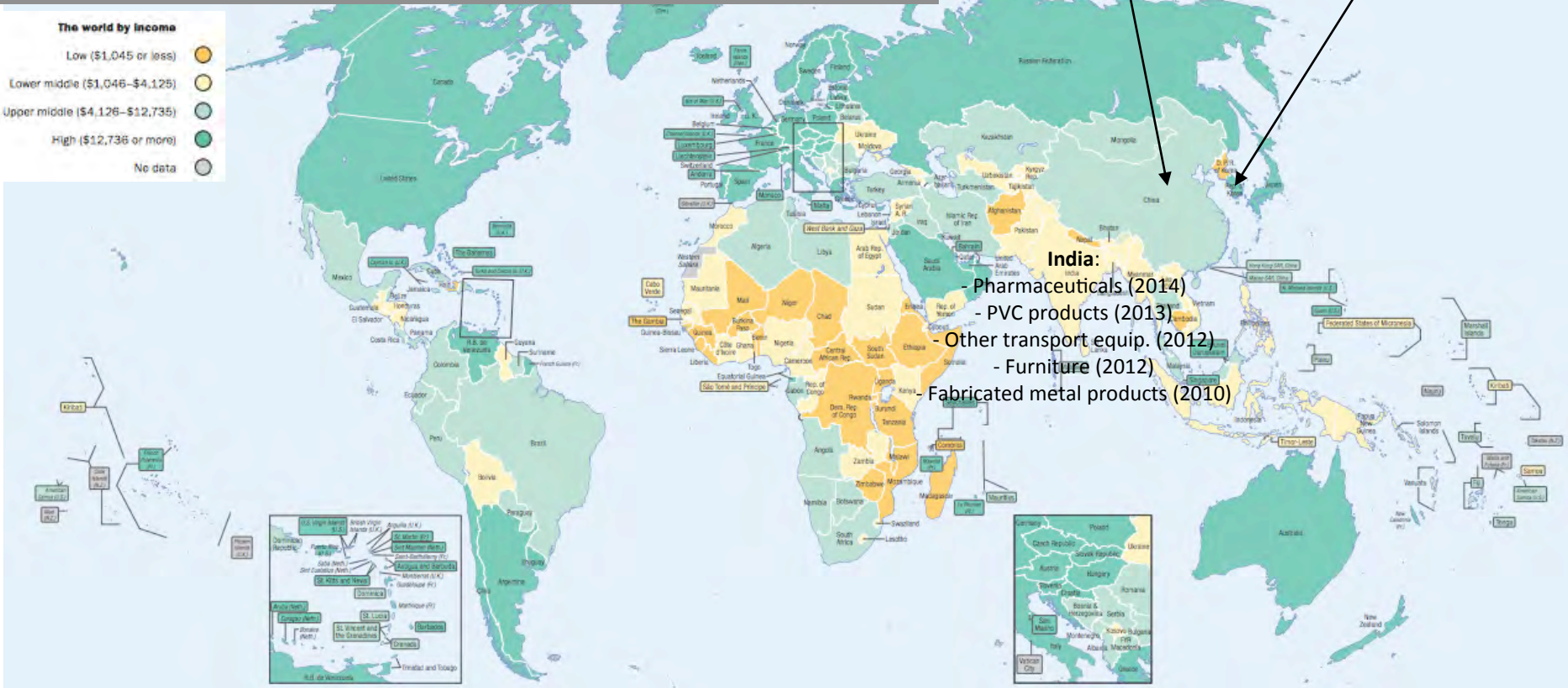
- Pharmaceuticals (2014)
- PVC products (2013)
- Other transport equip. (2012)
- Furniture (2012)
- Fabricated metal products (2010)



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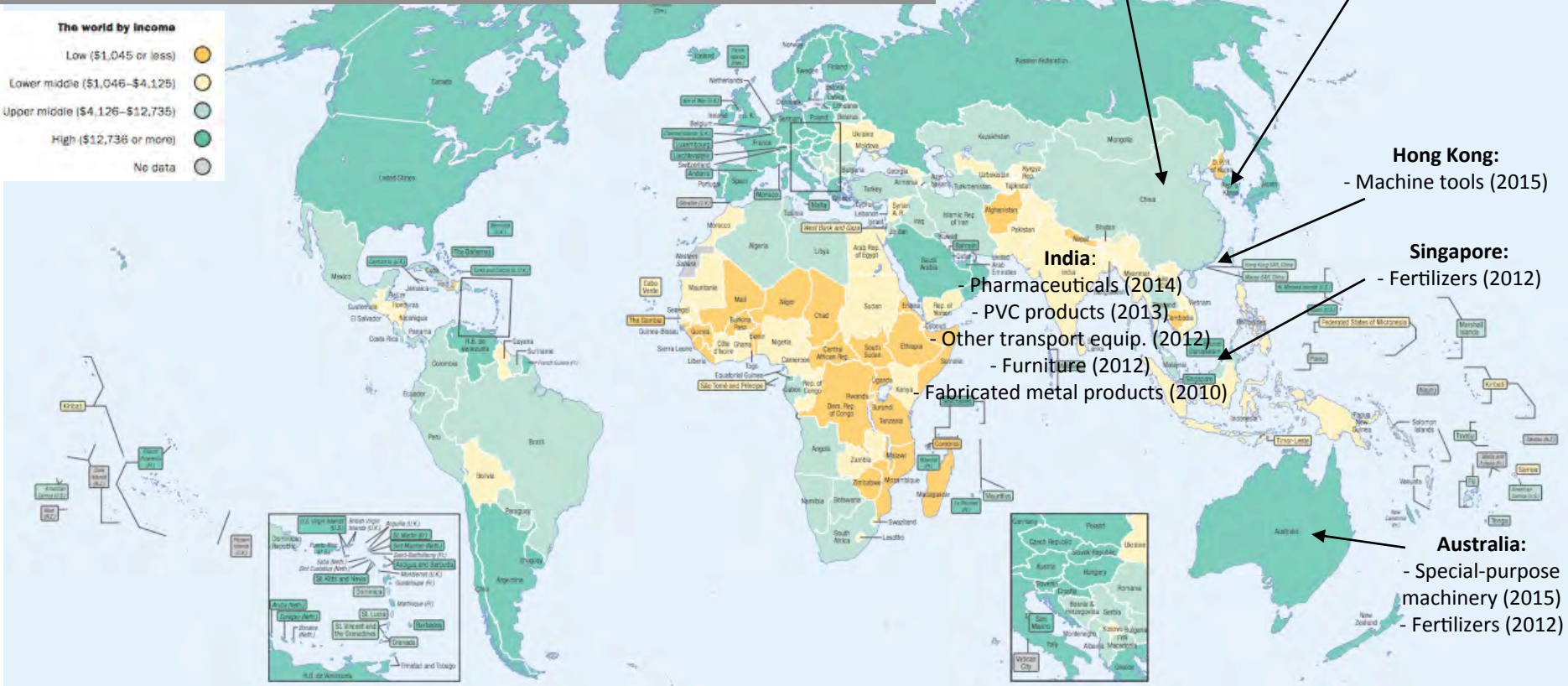
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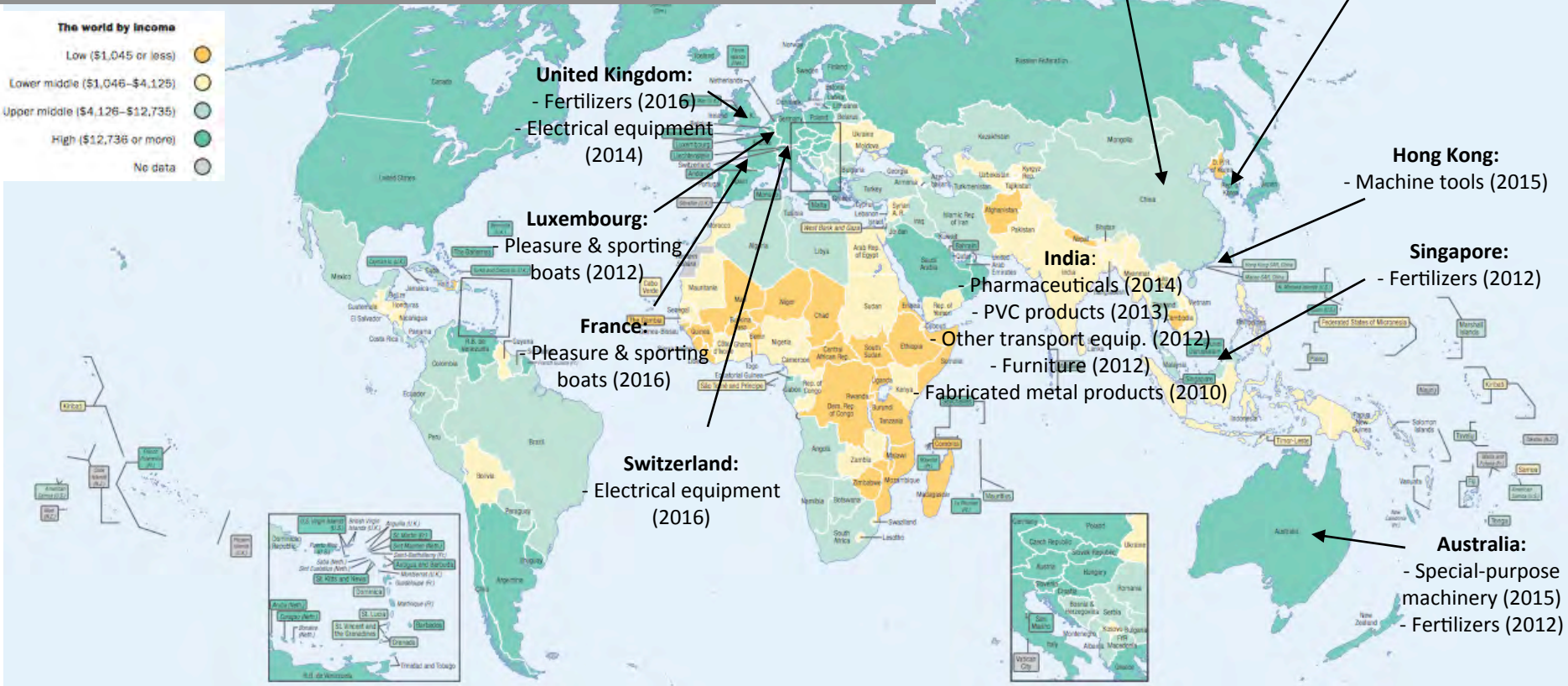
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POLICY IMPLICATIONS

Policy implications

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- Productive development policies for economic complexity

PRODUCTIVE DEVELOPMENT POLICIES FOR ECONOMIC COMPLEXITY

Traditional Industrial Policy

- Investors lack either money or adequate incentives

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- INDUSTRIAL POLICY IS SEEN AS AN INSTRUMENT,
NOT AS A PROBLEM SOLVING MACHINE

New productive development policies

- Markets for key inputs are missing (missing letters)

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- Or how to prompt its supply

The problem

- I know that I don't know

The problem

- I know that I don't know
- But I still need to improve on what I am doing

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- Talking to me is not cheap
 - Participation constraint of others

Two Different Questions

- How can the government organize itself to provide better public inputs **to the monkeys that exist?**

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- How can the government organize itself to provide better public inputs **to the monkeys that exist?**
- How to improve the environment **for the monkeys that don't exist?**

Talking to existing monkeys: some principles

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- In Japan there are over 200 deliberation councils

Talking to the monkeys that don't yet exist

- Need institutions to search the space of possibilities and the related obstacles

Talking to the monkeys that don't yet exist

- Need institutions to search the space of possibilities and the related obstacles
- Beyond the existing firms



Investment promotion agencies 2.0

- Version 1.0 was typically passive
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 - Some adds
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- Version 1.0 was typically passive
 - Regulating foreign investment
 - Some adds
 - Handholding
 - One stop shop
- Version 2.0 involves
 - Conversations that reveal the space of possibilities
 - Direct marketing
 - Problem solving of missing public inputs
 - Creation of solutions
 - Irish IDA
 - Industrial and business space
 - Missing skills

An emerging system of coordinated public sector capabilities needed in Sri Lanka

-  = Area being worked on by a current team, supported by Harvard CID
-  = Potential area for next cohort of teams, supported by Harvard CID

