



# Primer on Economic Growth

29 September 2020

[www.advocata.org](http://www.advocata.org)

# GDP Definitions

Gross Domestic Product - The monetary value of all finished goods and services made within a country during a specific period.

It is measured in 3 ways

- Production – measures the input costs that contribute to economic activity (estimates the total value of economic output and deducts the cost of intermediate goods that are consumed in the process).
- Expenditure – calculates spending by the different groups that participate in the economy
- Income – calculates income earned by all the factors of production in an economy (wages paid to labor, the rent earned by land, the return on capital in the form of interest, and corporate profits)

# Definition

Nominal GDP - Total Value of Goods and Services Produced in an economy measured at current price levels.

Real GDP – Total Value of Goods and Services Produced within an economy during a given period measured at constant prices. It adjusts for inflation.

Deflator - The GDP deflator is a price index that measures inflation or deflation in an economy by calculating a ratio of nominal GDP to real GDP.

## Structural transformation

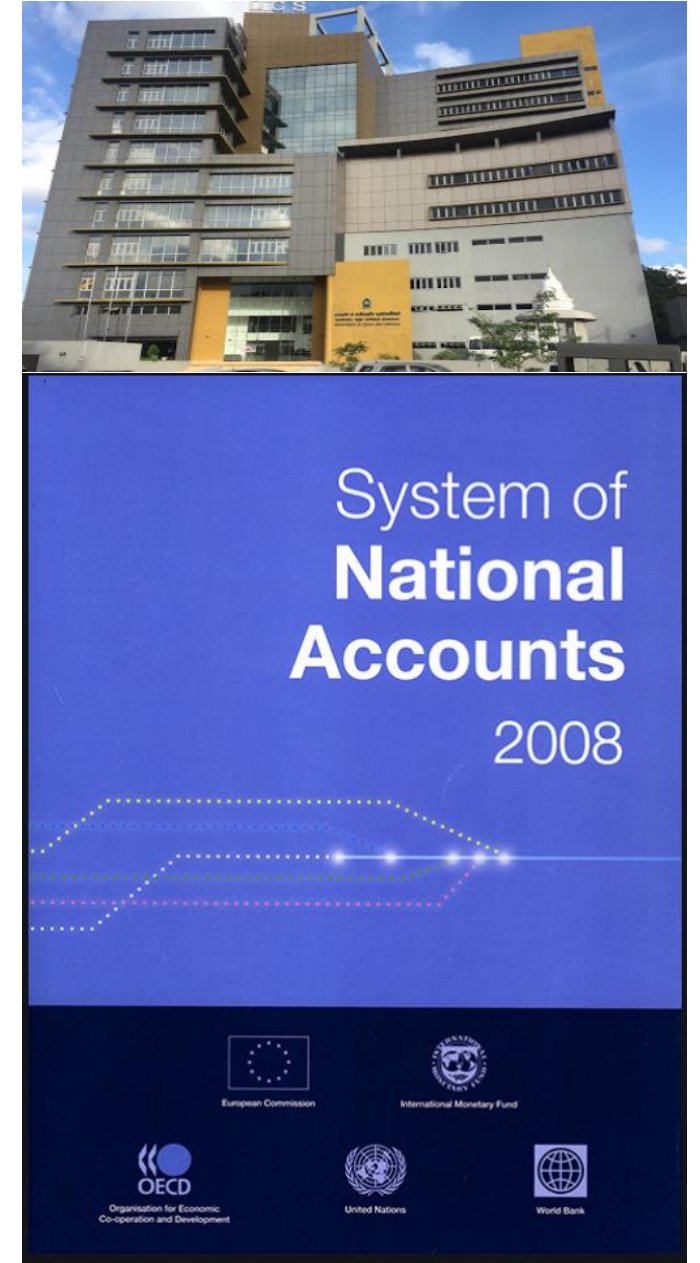
**Structural Transformation** is defined as the reallocation of economic activity across three broad sectors: agriculture, manufacturing and services

# Who Measures and How?

GDP is measured by the Department of Census and Statistics (DCS)

DCS uses the System of National Accounts methodology outlined by the United Nations to compute Sri Lanka's GDP

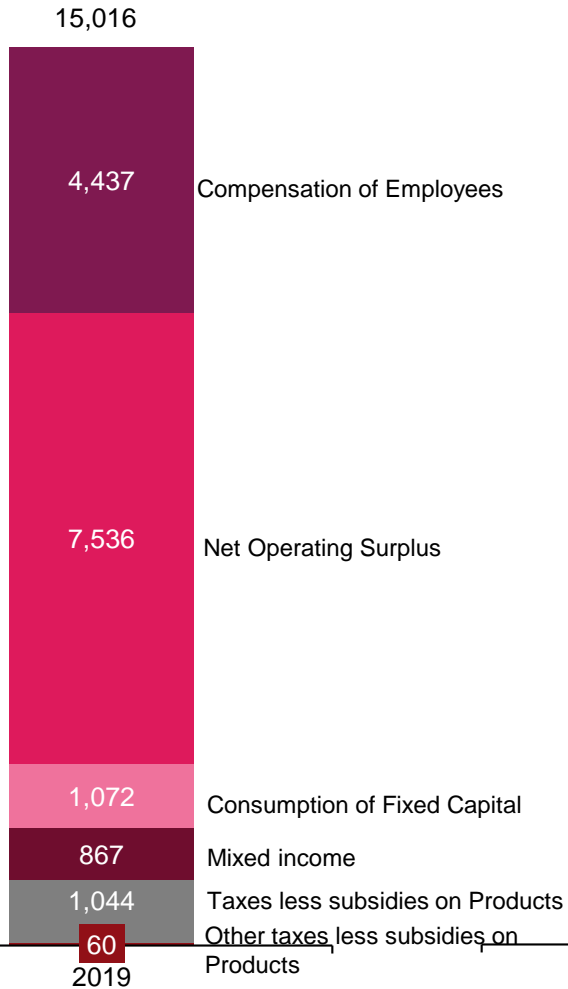
The newest series uses 2010 as its base year, and uses the supply and use table framework to identify how the supply of different kinds of goods and services originate from various domestic industries and from imports



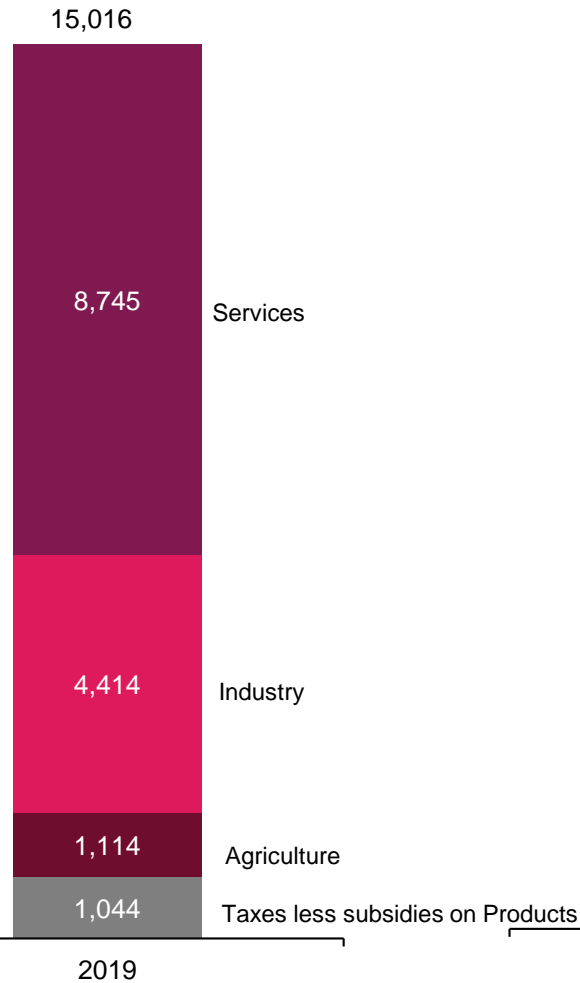
# GDP

LKR ' Bn

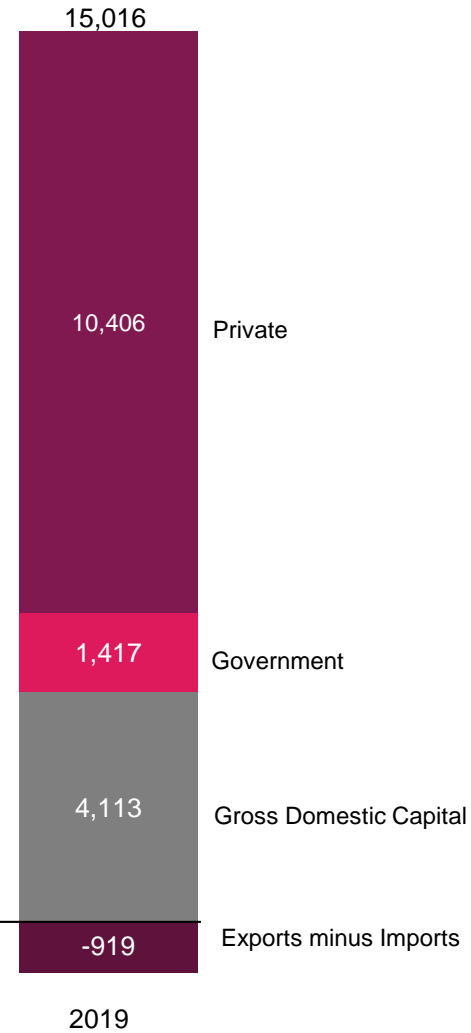
### Income Method



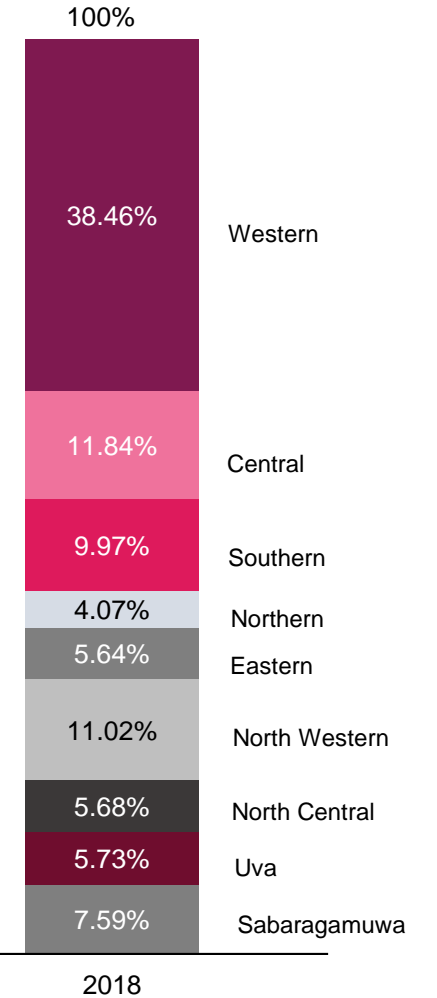
### Production Method



### Expenditure Method



### Regional Contribution



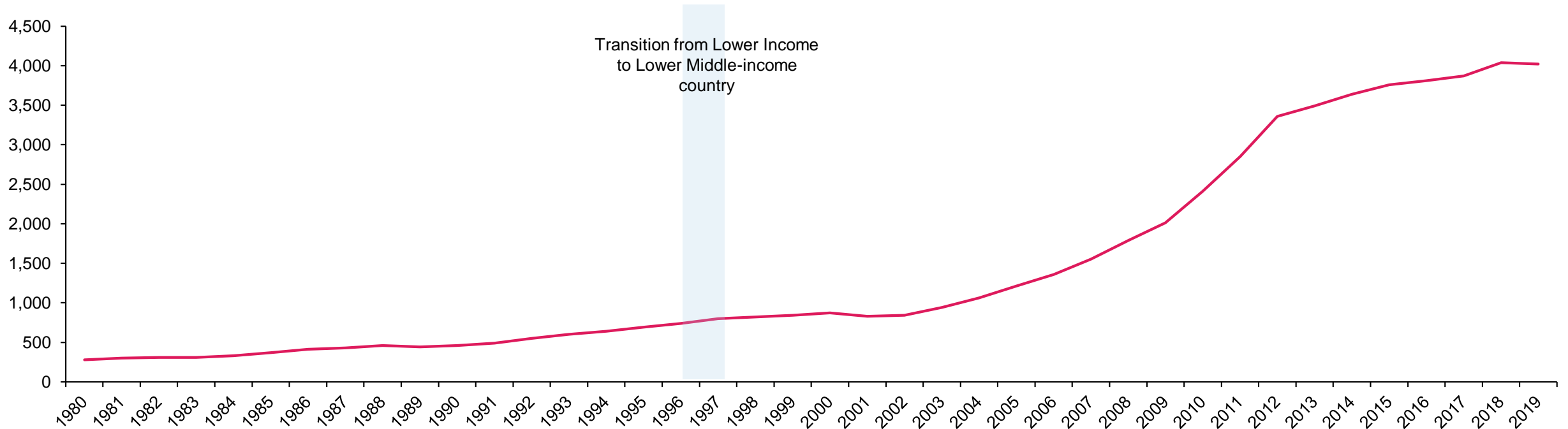
# World bank Classification

The World Bank classifies the world's economies into four income groups — high, upper-middle, lower-middle, and low. We base this assignment on Gross National Income (GNI) per capita (current US\$) calculated using the Atlas Method.

Low income country	< 1,036
Lower Middle-income country	1,036 – 4,045
Upper Middle-income country	4,046-12,535
High income country	> 12,535

## GNI per capita, Atlas method

*GNI per capita for Sri Lanka, Current USD*



# Tea value chain

## Production method:

Agriculture



- Growing tea
- Picking tea



Manufacturing



- Drying the tea
- Packaging the tea



Services = GDP



- Transporting the tea
- Tea auctions



# Is this being measured?



# Expenditure method

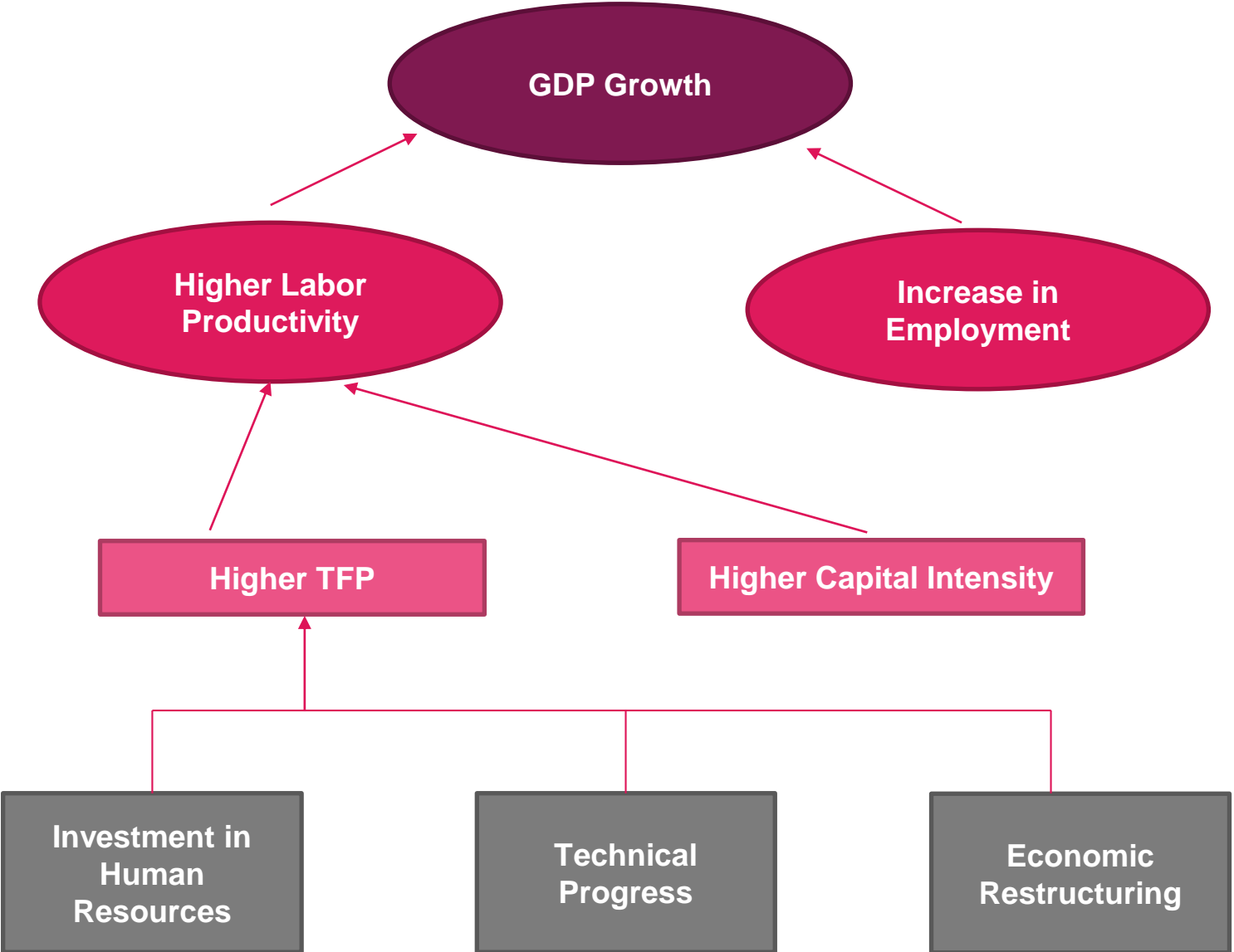
$$\text{Output (Y)} = \text{Consumption} + \text{Investment} + \text{Government Spending} + \left( \text{Exports} - \text{Imports} \right)$$

**(C)**                      **(I)**                      **(G)**                      **(E)**                      **(M)**



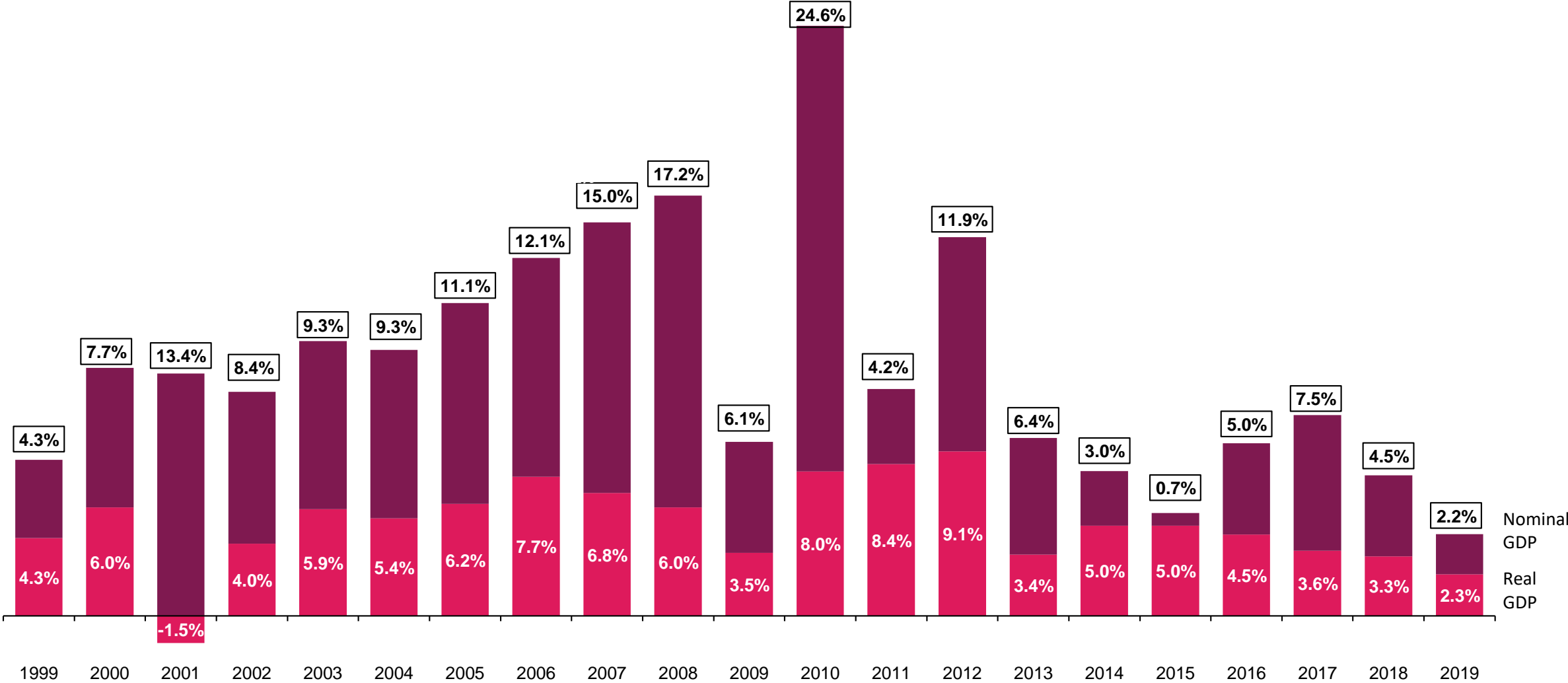
# Economic growth

# How economic growth happens



# Real GDP growth has been declining...

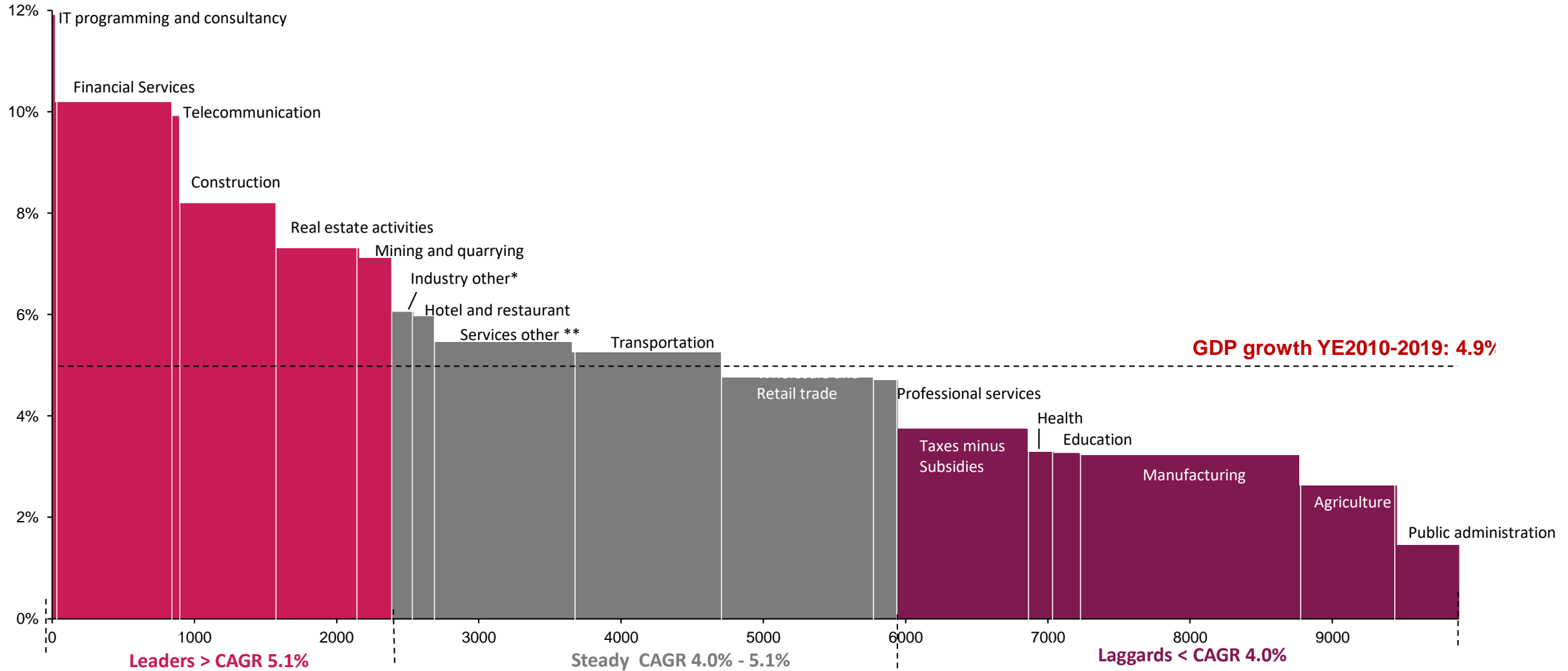
% change



Source: CBSL, Advocata Research

# Sectors driving growth in the last nine years

% CAGR, YE 2010-2019



\*Industry other Includes electricity supply, water collection and sewerage waste treatment and disposal

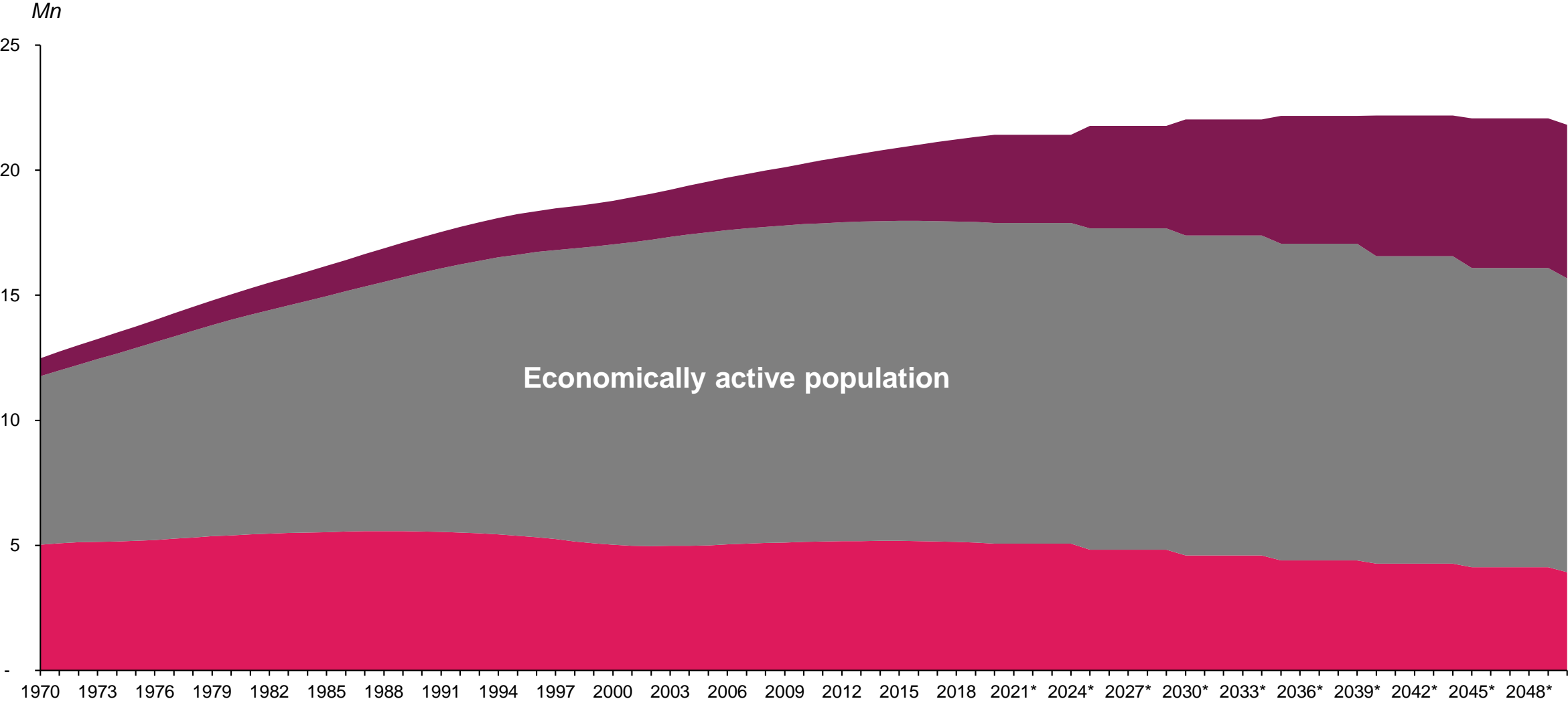
\*\*Services other includes postal and courier activities, programming and broadcasting and other personal service activities

Source: Central Bank of Sri Lanka, Advocata Research



# Labor force growth

# Economically active population grew due to demographic transition



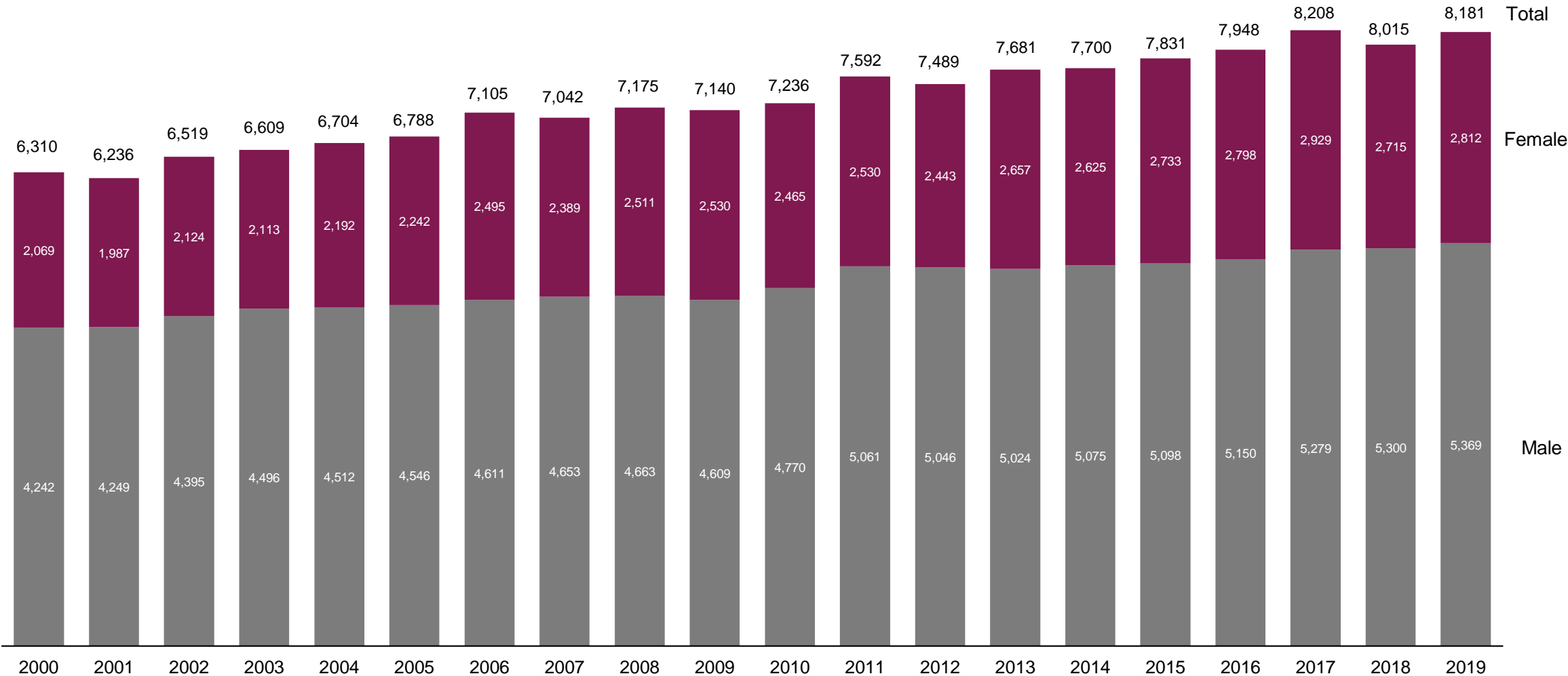
\*Forecast

Source: UN: Department of Economic and Social Affairs, Advocata Research

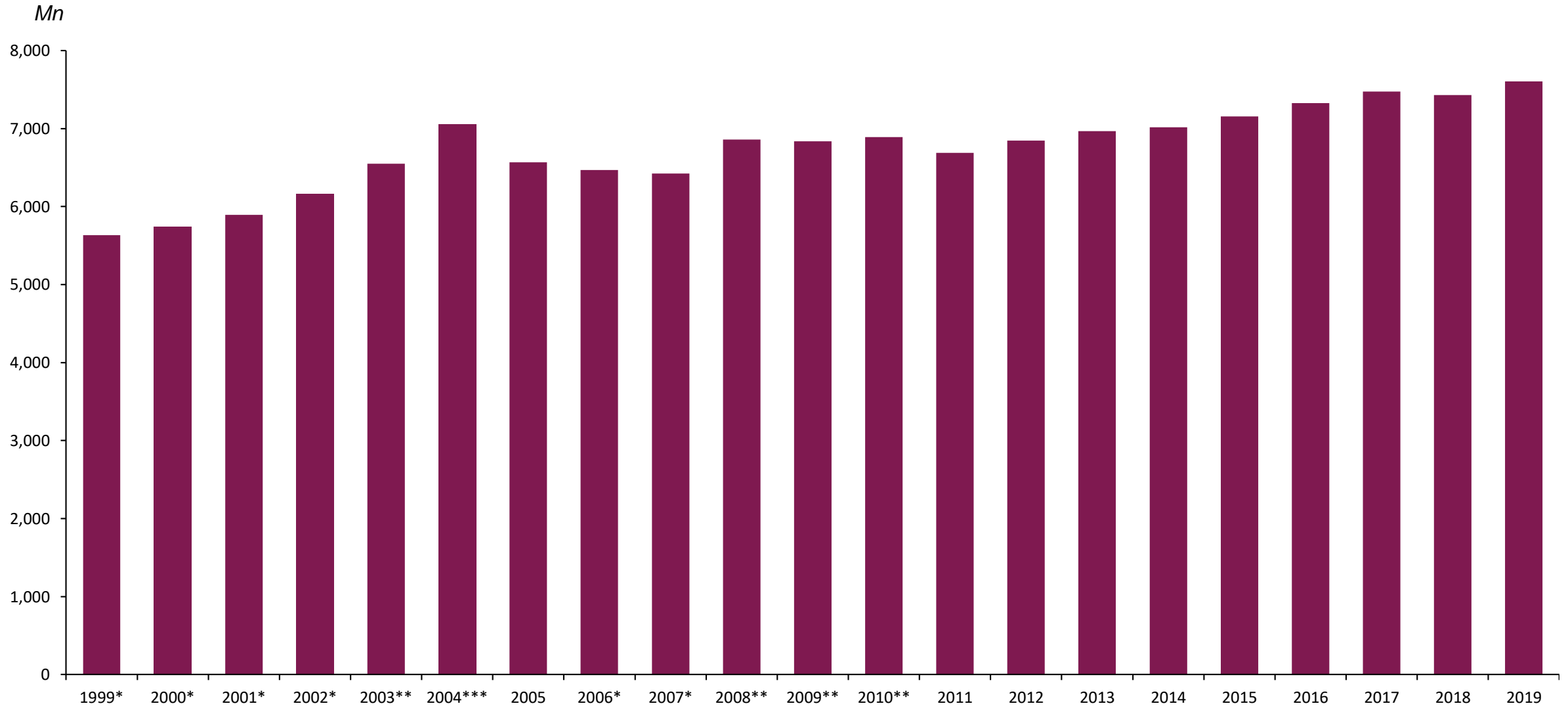


# Female labor force participation is low

In '000's



# Labor force grew



\*Excluding Northern and Eastern province \*\*Excluding Northern province \*\*\*Excluding Mulativu and Kilinochchi districts

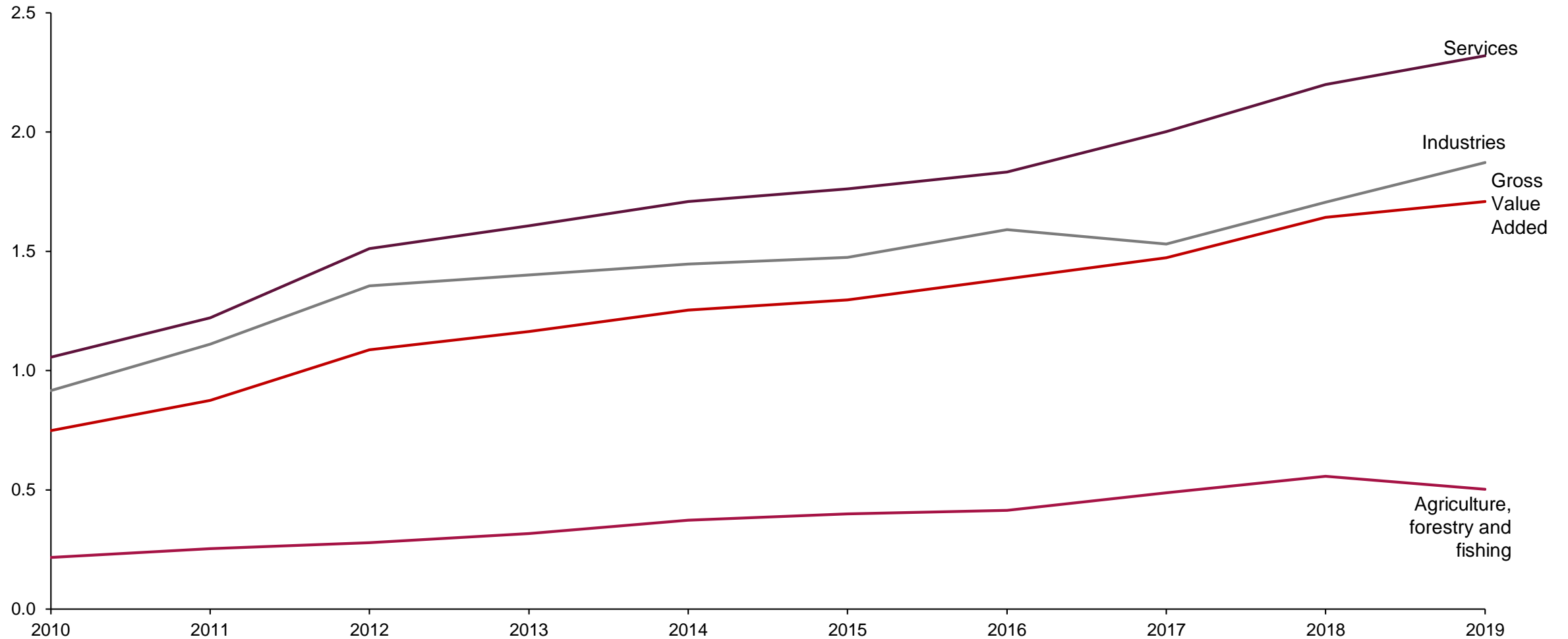
Based on 'alternative estimates' which adjust for number of hours of work (+20h per week) and do not consider 'contributing family workers' as employed

Source: Department of Census and Statistics, Advocata Research

# Worker productivity

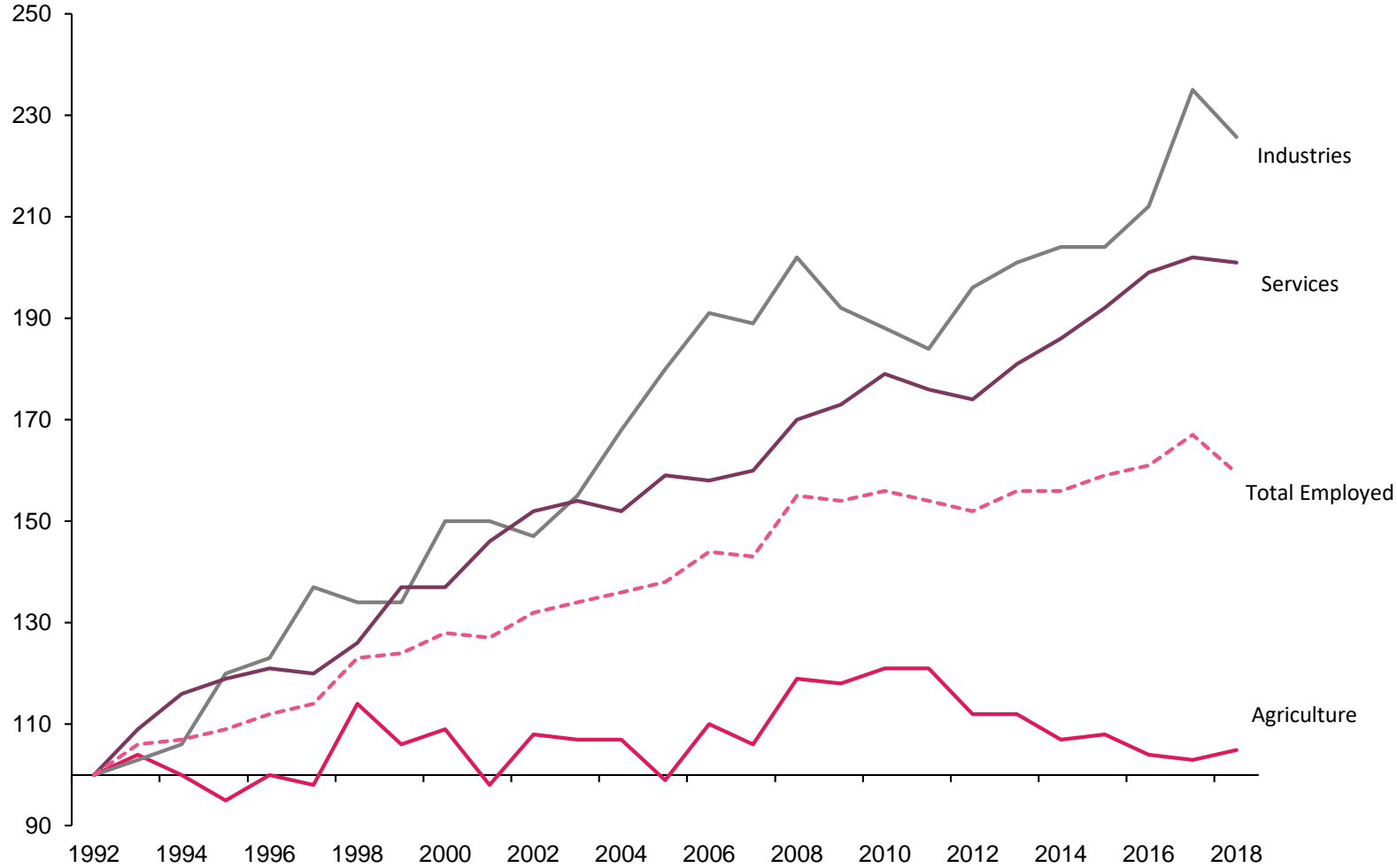
Deterioration in agricultural productivity brought down GVA per worker

*Value added per worker*



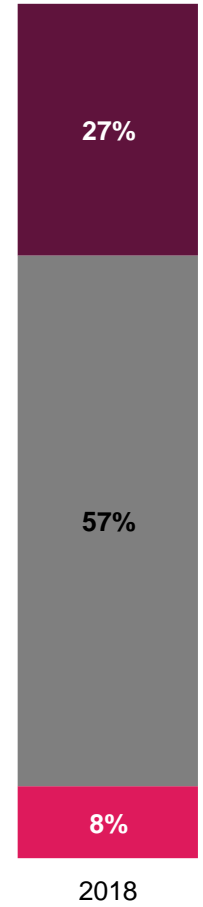
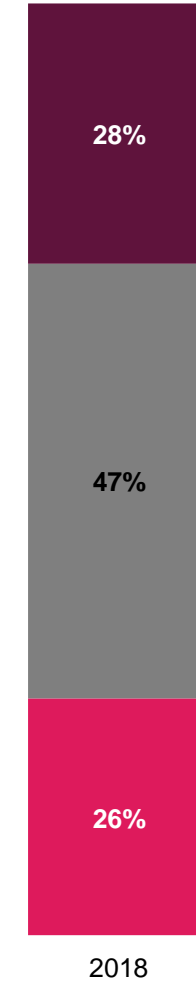
# More productive segments of the labor force contracted in 2018

**Sector wise employment**  
Index 1992=100

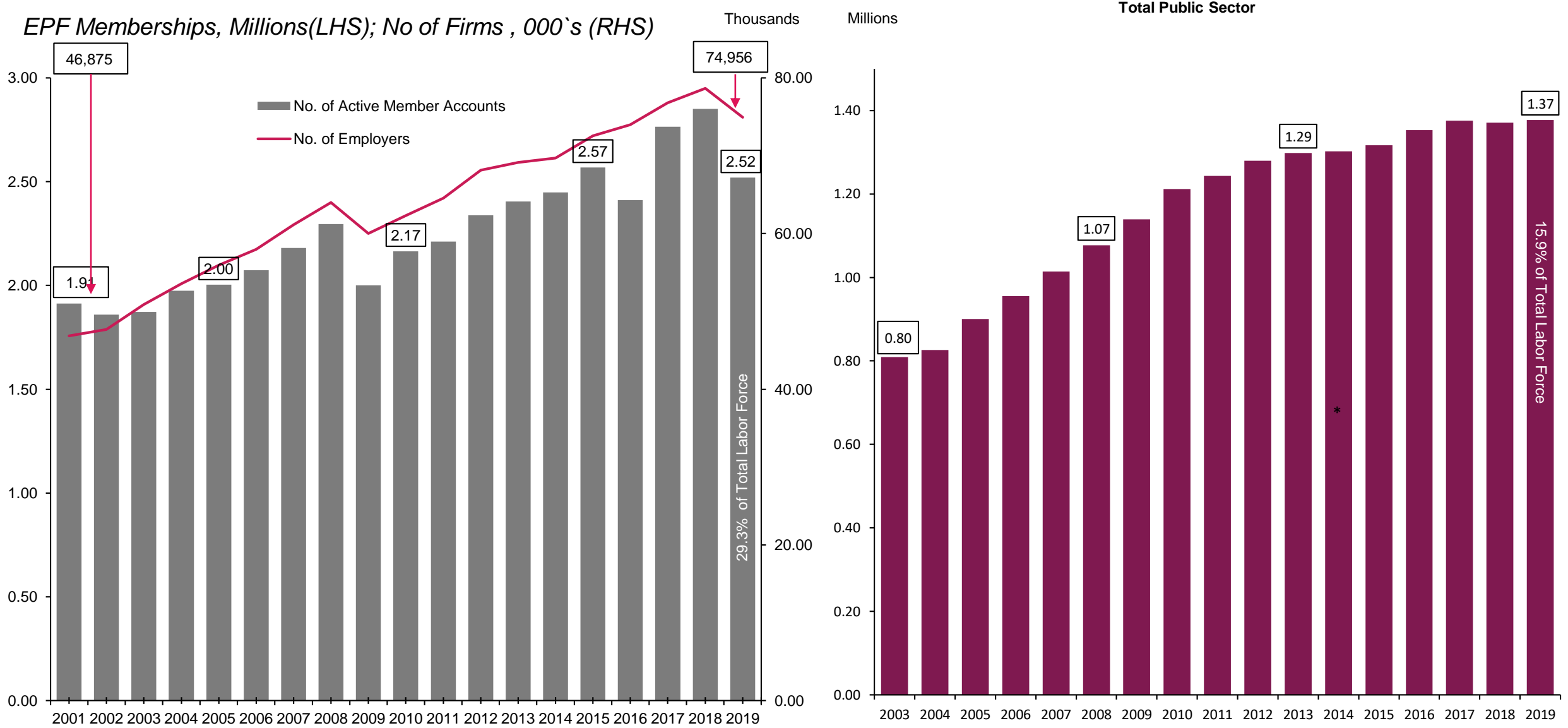


**% Share of Employment**

**% Share of GDP**



# Formal Sector Employment – both private and public



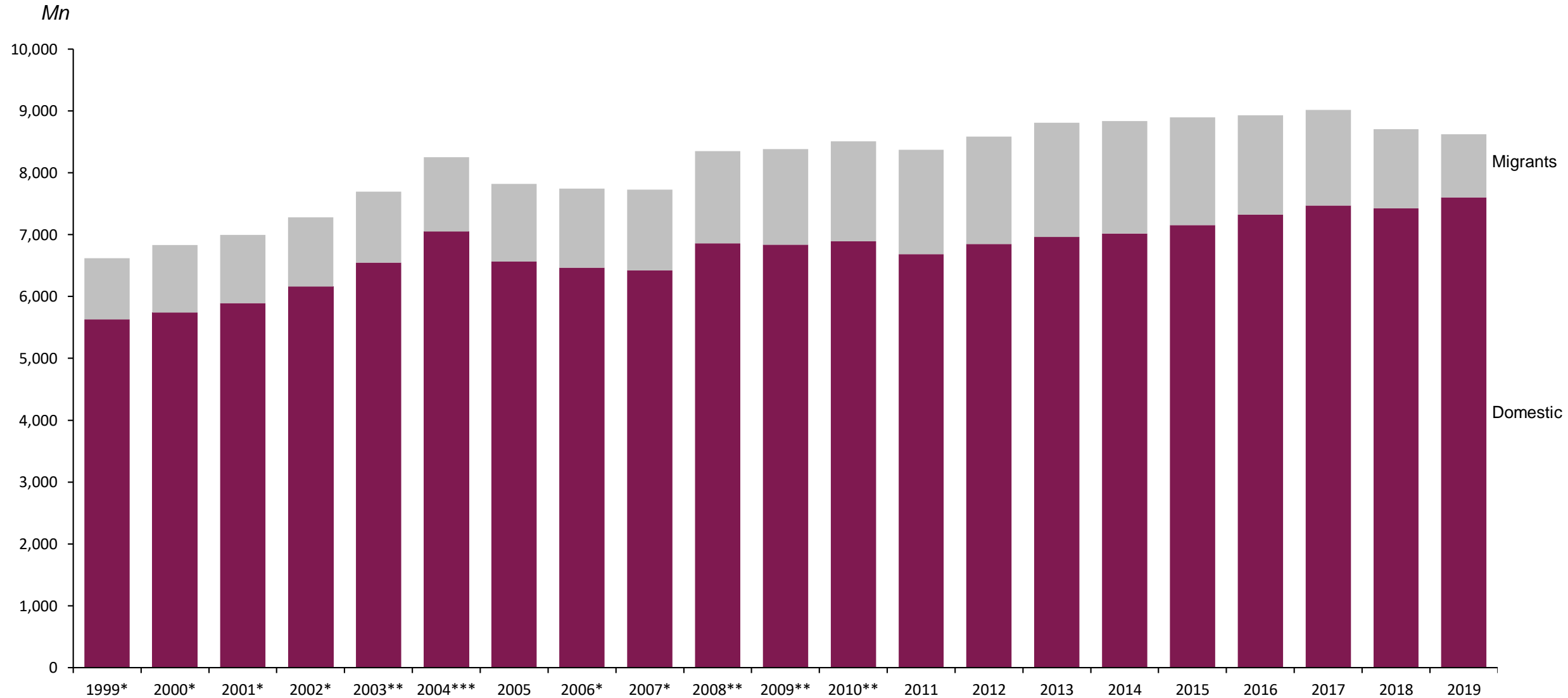
Source: Ministry of Finance, CBSL, Advocata Research

# Sector wise employment: white collar segments have been growing

Share of employment by main industry group, LKR Mn'



# Labor force plus temporary migrants



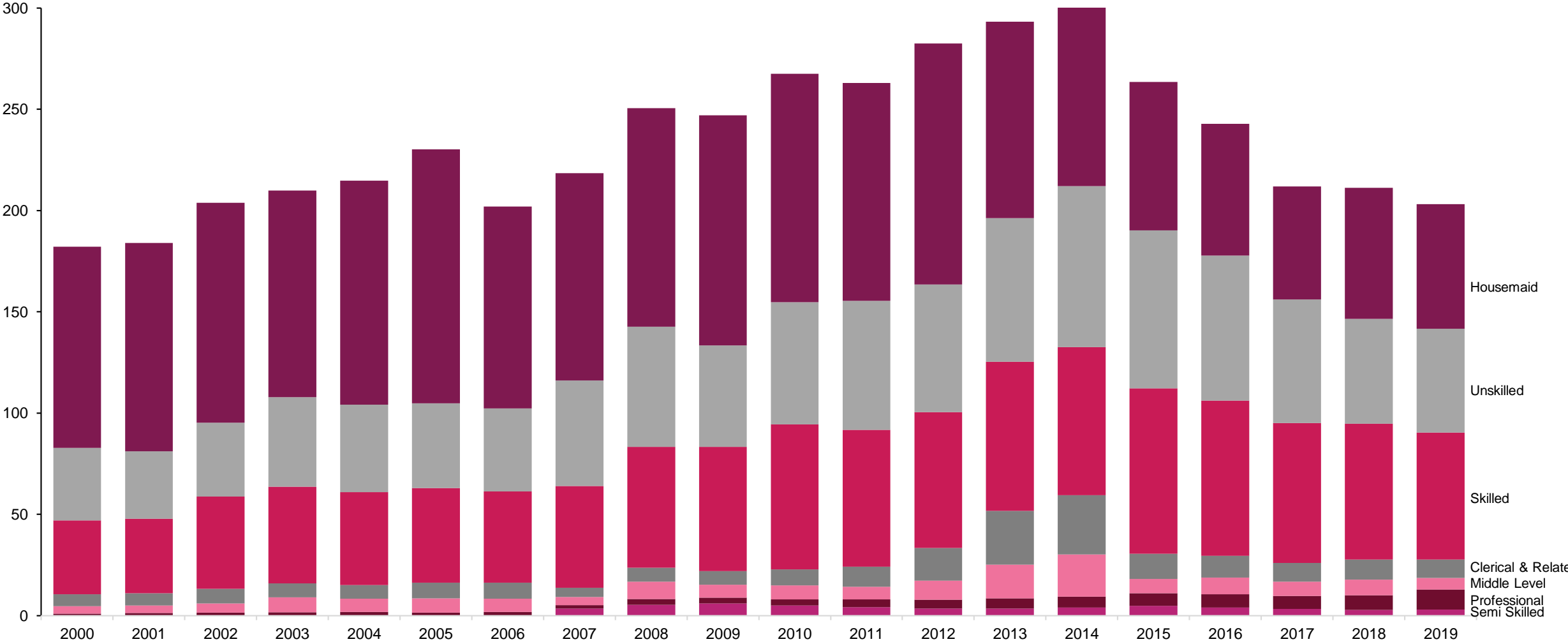
\*Excluding Northern and Eastern province \*\*Excluding Northern province \*\*\*Excluding Mulativu and Kilinochchi districts

Based on 'alternative estimates' which adjust for number of hours of work (+20h per week) and do not consider 'contributing family workers' as employed

Source: Department of Census and Statistics, Advocata Research

# People migrated for work

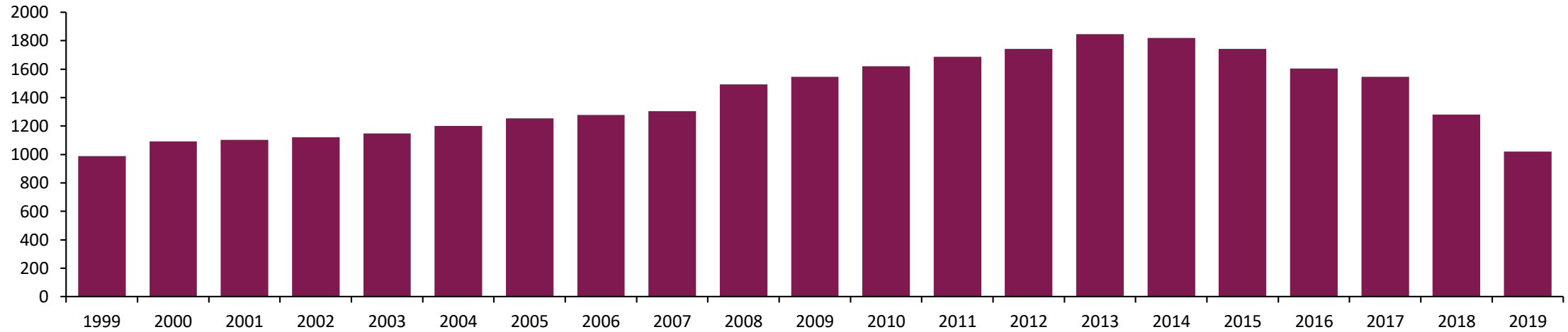
Departures for foreign employment, 000'



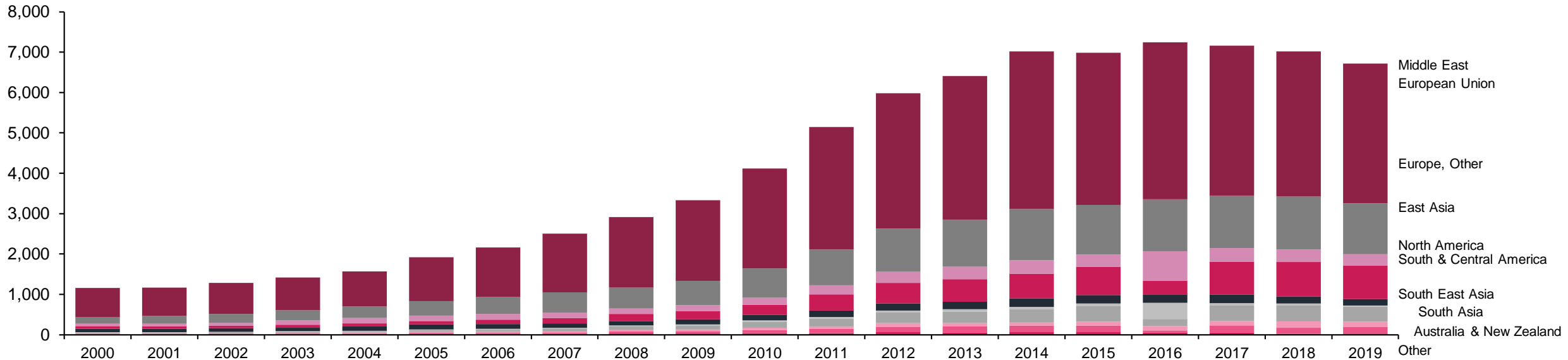


# Migrant labor force increased, bringing in remittances

Estimated stock of migrant labor force, Mn



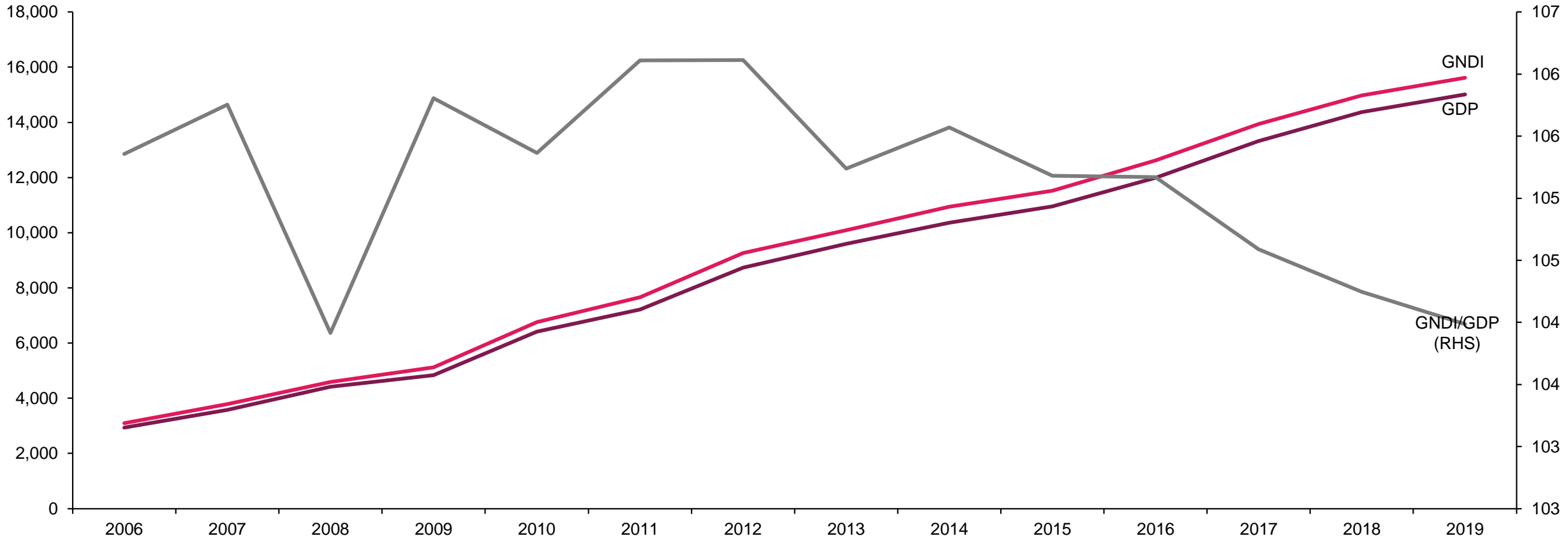
Remittances, USD Mn



# Gross National Disposable Income

Gross national disposable income (GNDI) equals gross national income (GNI) (at market prices) minus current transfers (current taxes on income, wealth etc., social contributions, social benefits and other current transfers) payable to non-resident units, plus current transfers receivable by resident units from the rest of the world.

GNDI, GDP LKR bn (LHS), GNDI/GDP ratio (RHS)



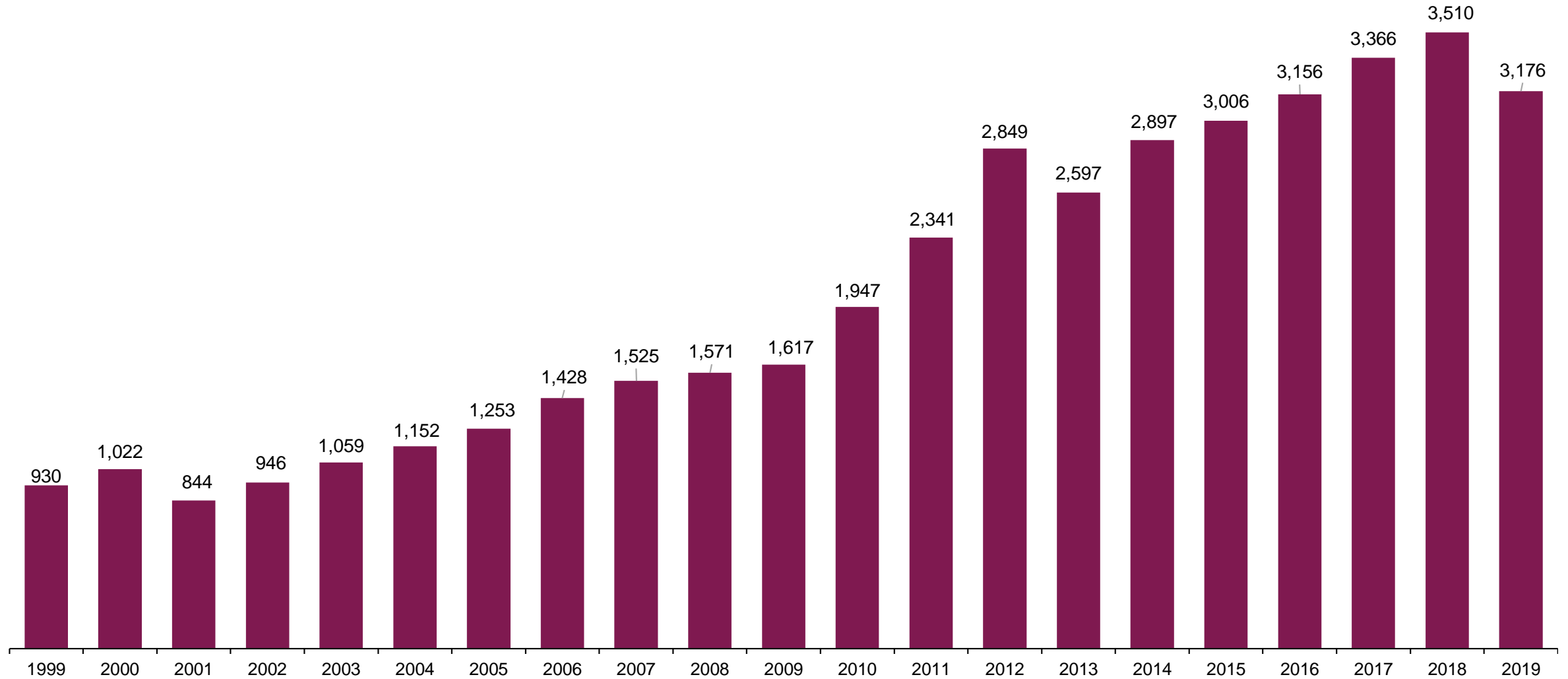
Source: CBSL, Advocata Research



# Capital Investment

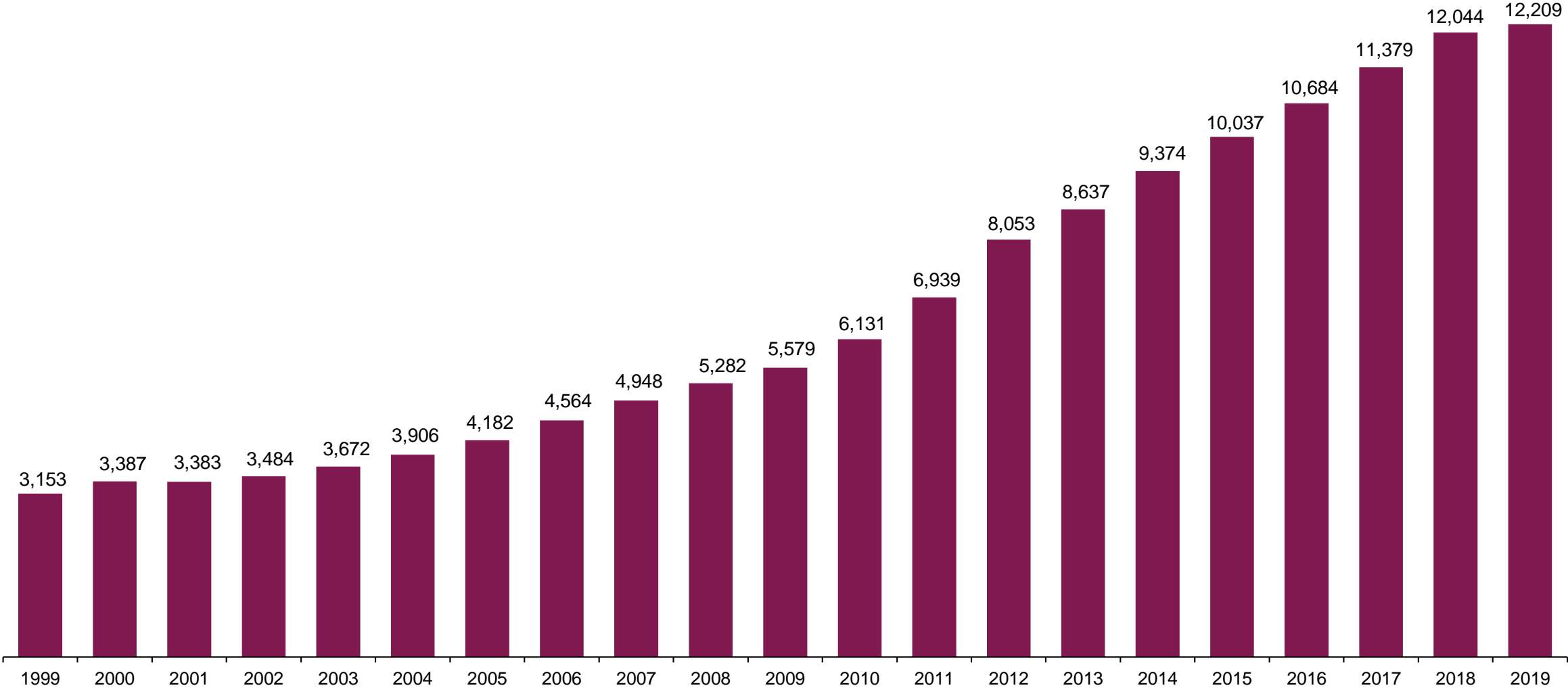
# Total domestic capital formation (investment) grew

*In real terms (2010 base), LKR bn*



# Capital stock increased (perpetual inventory method)

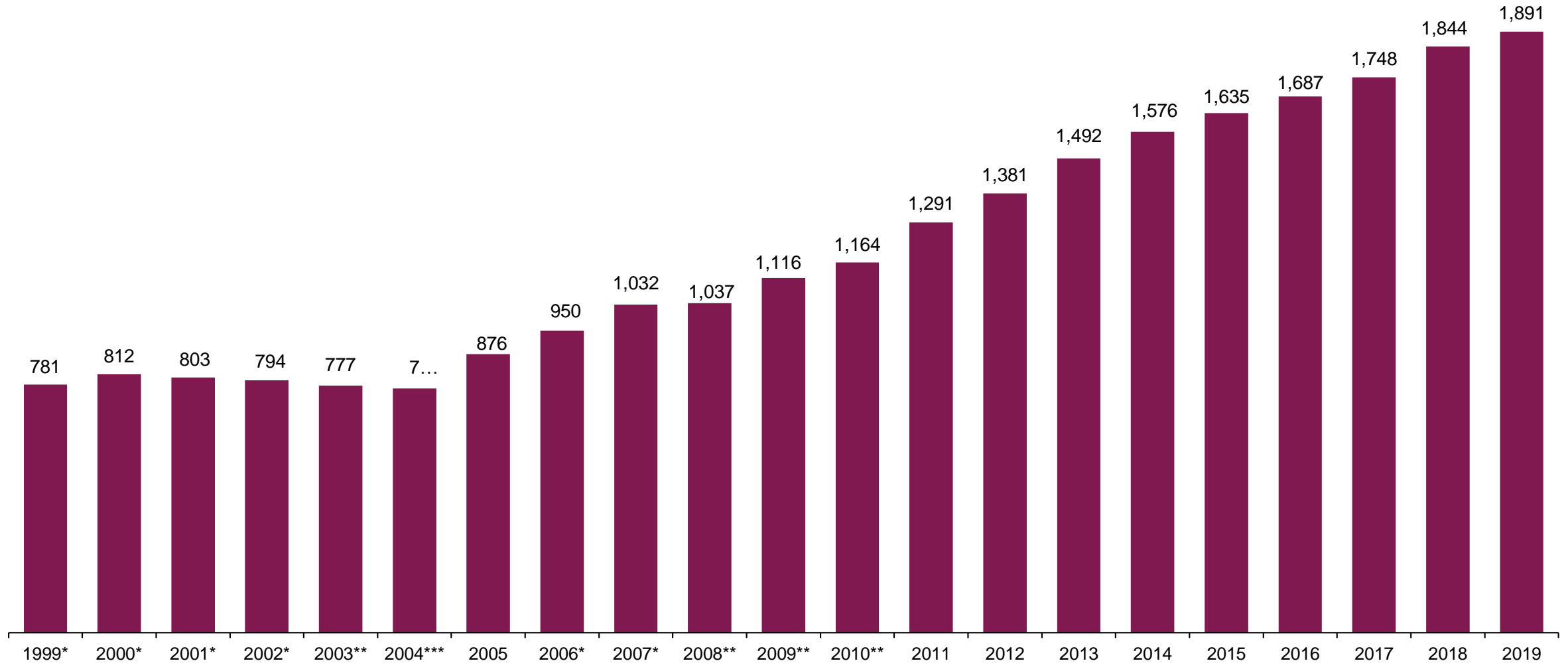
In real terms (2010 base), LKR bn



# Capital intensity per worker increased

## Capital per worker

In real terms (2010 base), '000

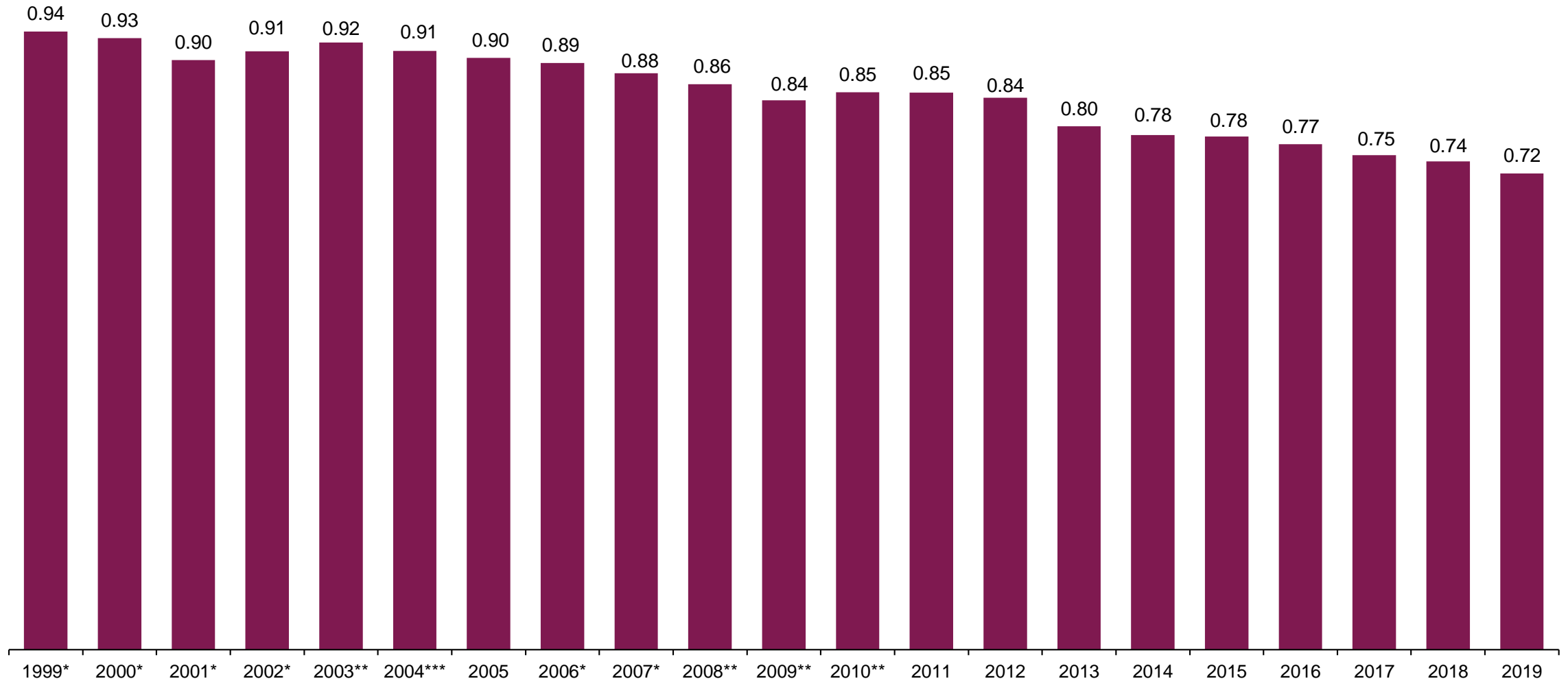


\*Excluding Northern and Eastern province \*\*Excluding Northern province \*\*\*Excluding Mulativu and Kilinochchi districts

Source: Department of Census and Statistics, Advocata Research

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# However capital productivity didnt



\*Excluding Northern and Eastern province \*\*Excluding Northern province \*\*\*Excluding Mulativu and Kilinochchi districts

Source: Department of Census and Statistics, Advocata Research

[www.advocata.org](http://www.advocata.org)



## What drove growth during the last decade?



# Average retail prices

Index 1999= 100



# Urbanization grew

January 2012



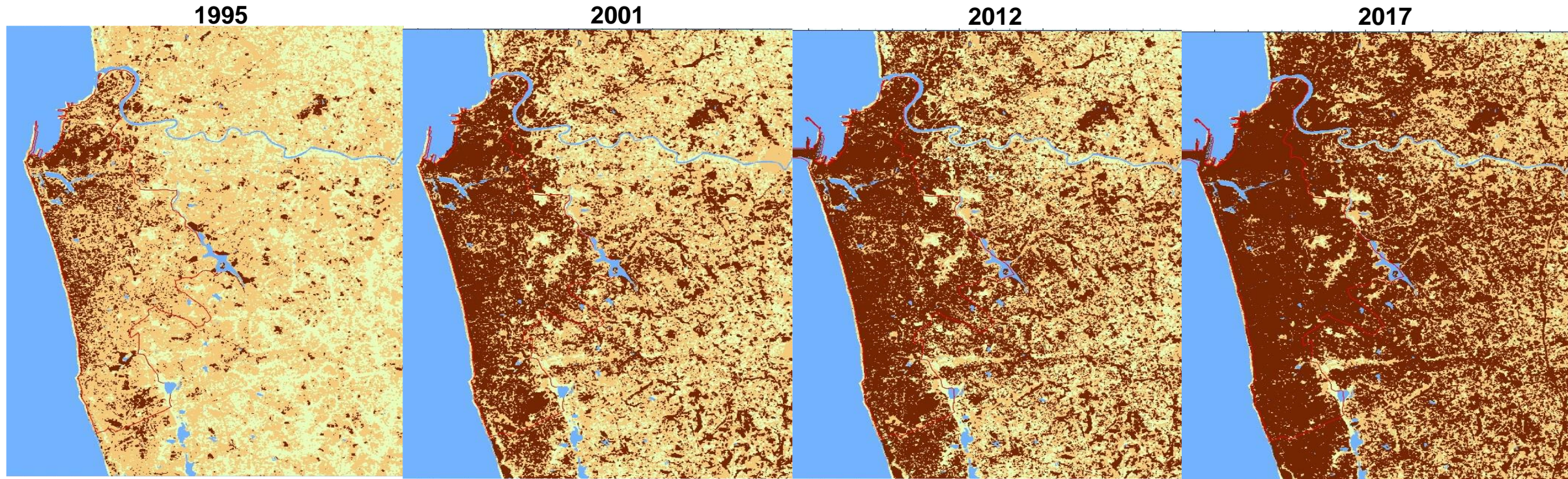
December 2016





# More pronounced in the western province

## Colombo Urban Area



Landsat (15m) - 13 . 07 . 2012  
<https://earthexplorer.usgs.gov/>

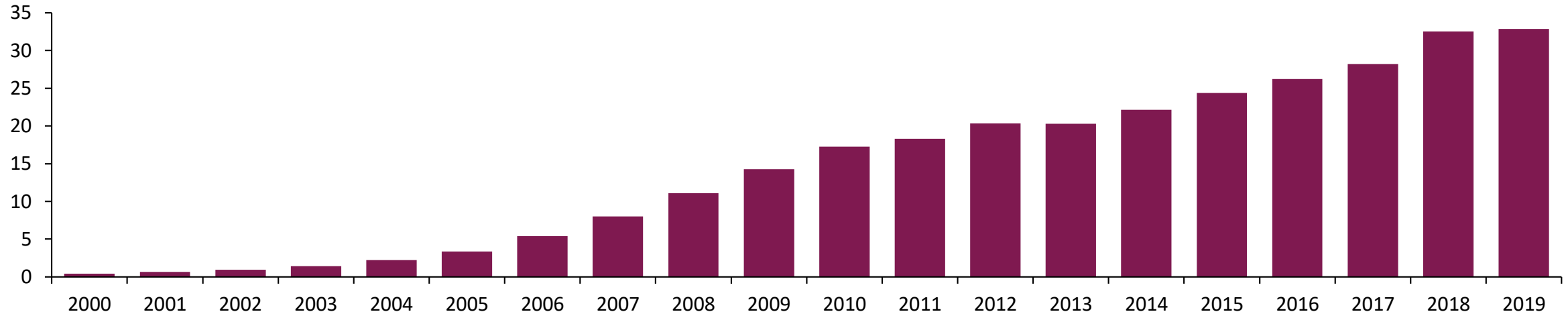
**Legend**

- Colombo/Sri J'pura Kotte/ Dehiwala-Mt. Lavinia
- Water Area
- Urban
- Semi Urban
- Non Built

# Cellular phones and internet penetration grew

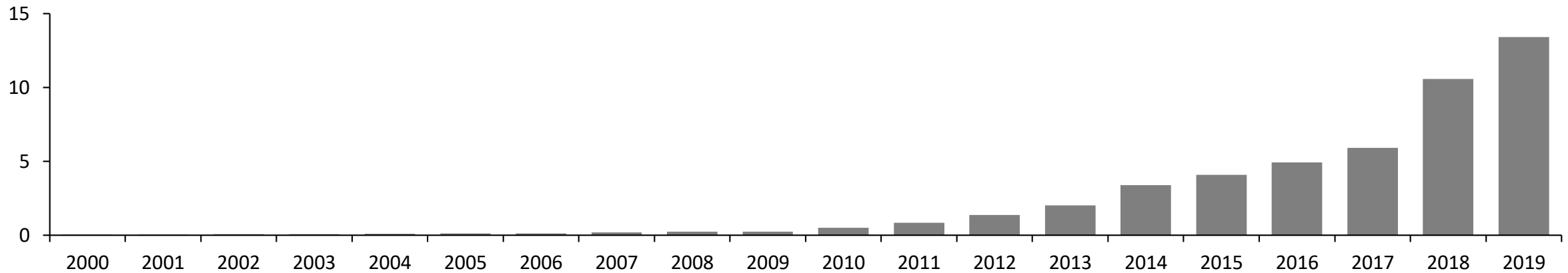
## Cellular phones

Mn'



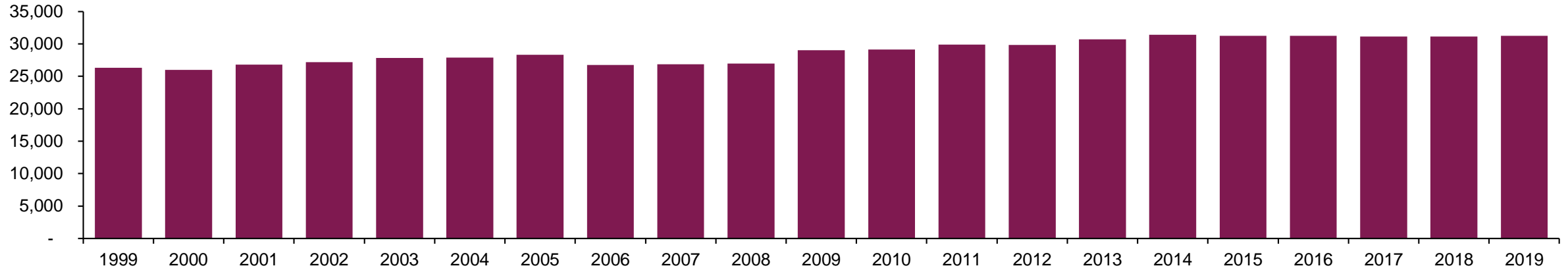
## Internet

Mn'

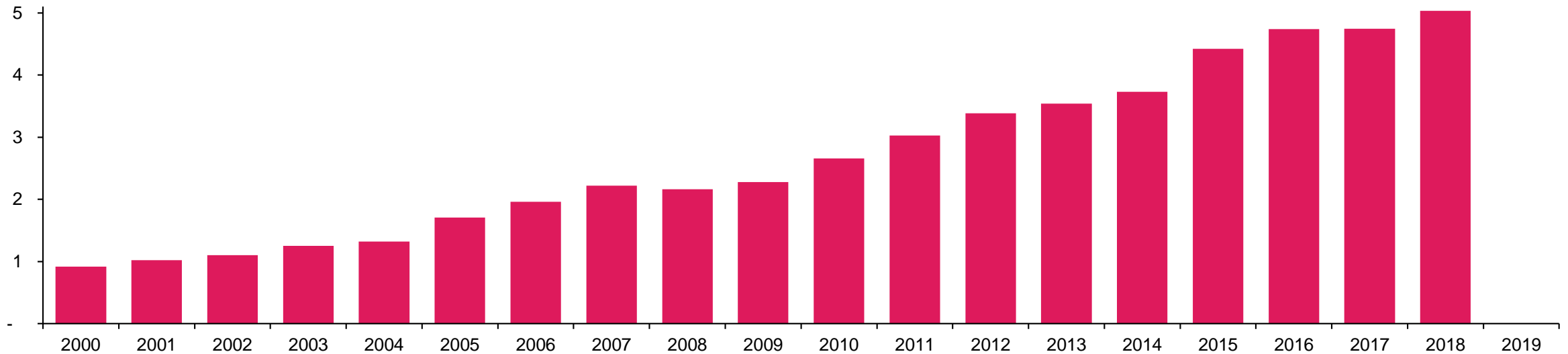


# Vehicle population grew improving mobility

*Transport road network, km'*

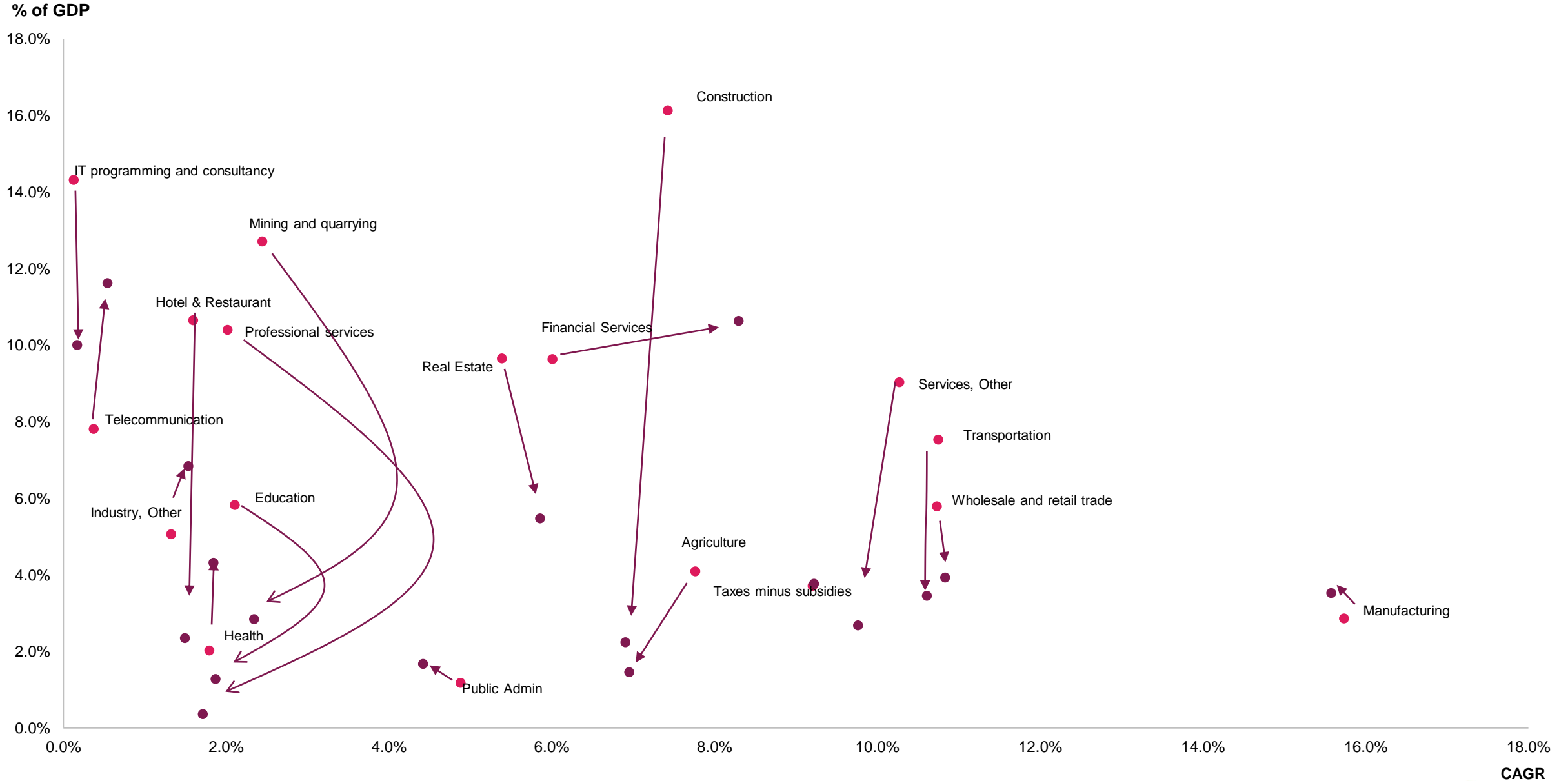


*Motor vehicles all island, Mn'*





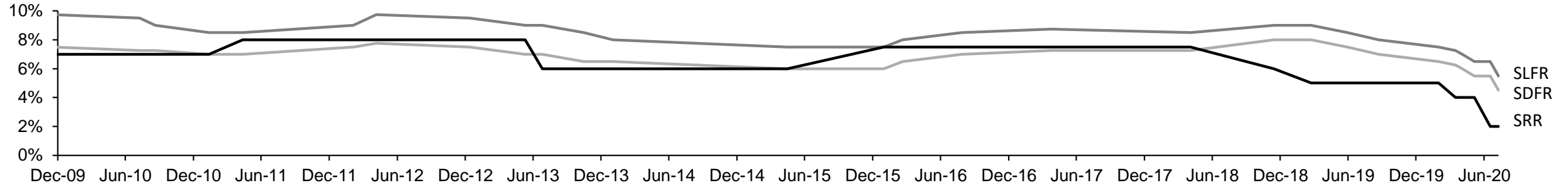
# What drove growth initially was not what drove it recently



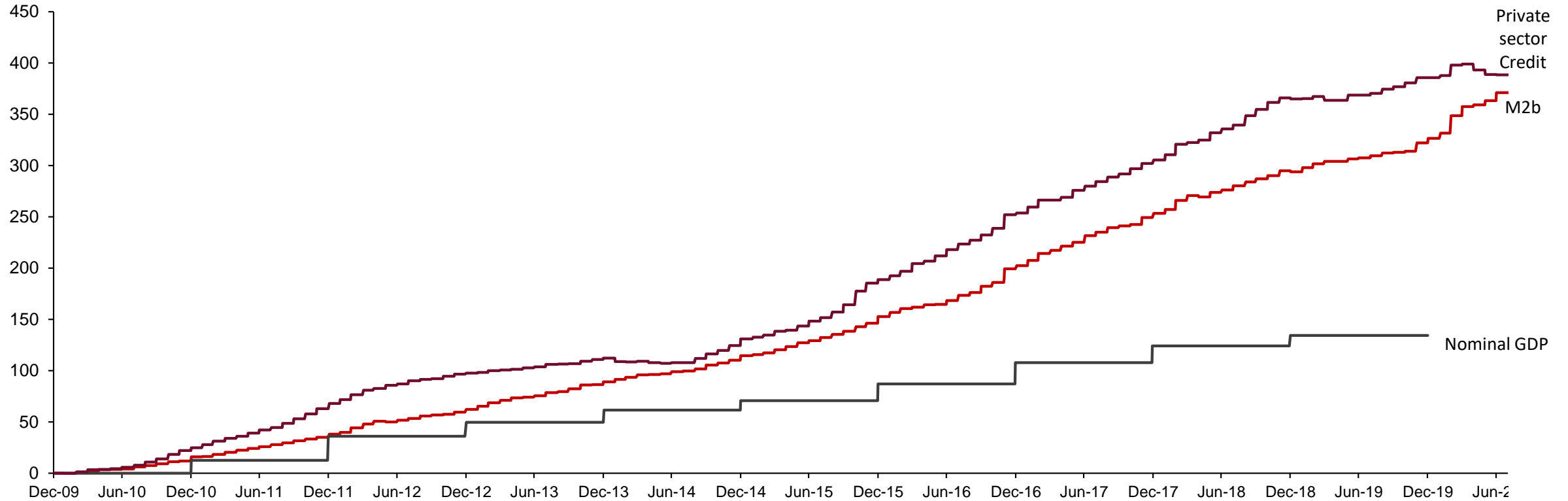


# What happened to credit

# Money growth outstripped GDP



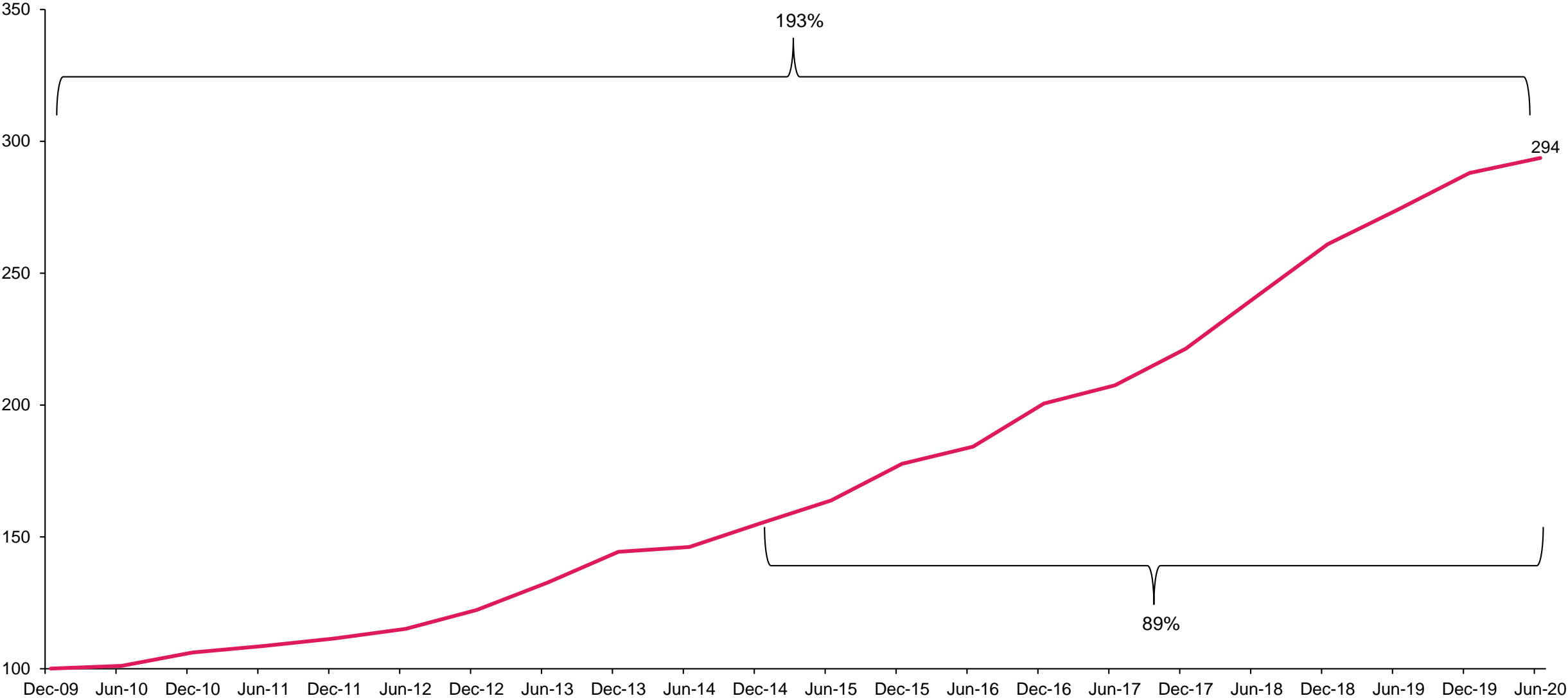
Index Return (December 2009 = 0)





# Could credit growth have driven land prices?

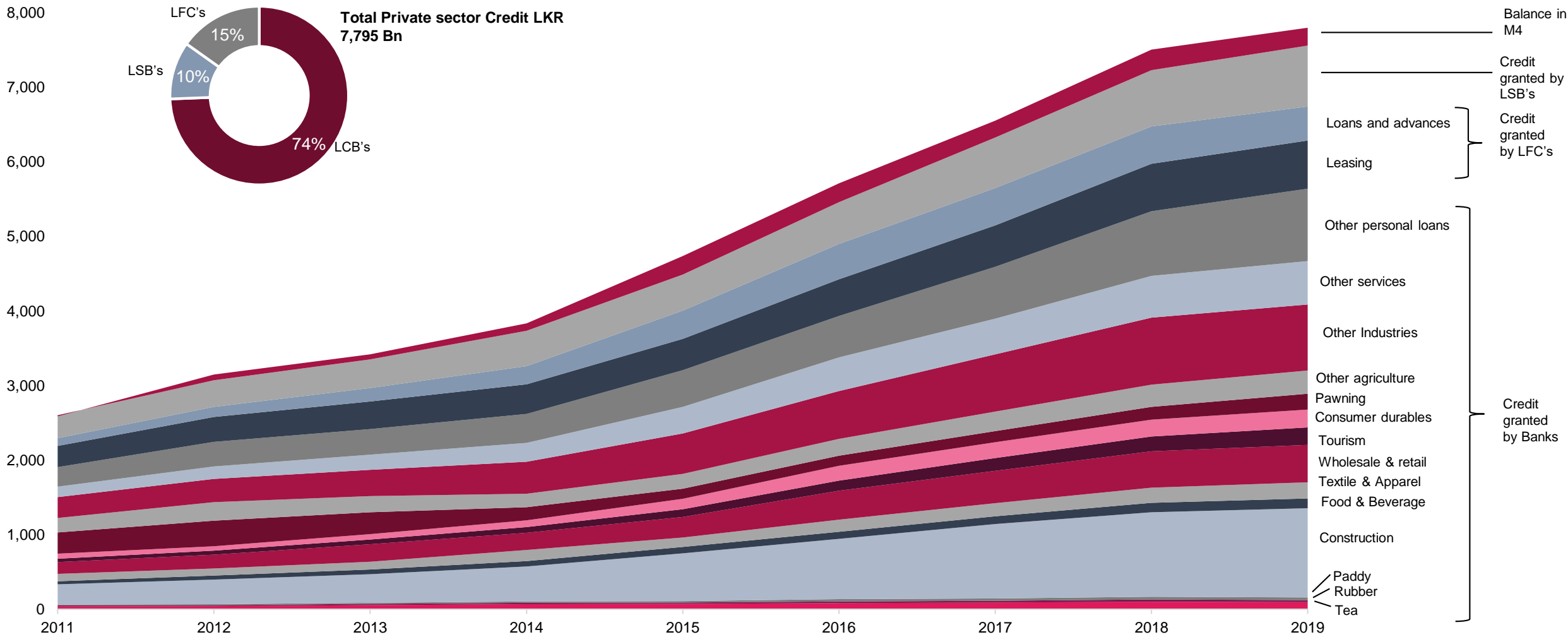
Colombo District Land Price Index, Dec 2009 = 100



# Credit classified under different business sectors could have leaked into real estate

31 December 2019

LKR Billions



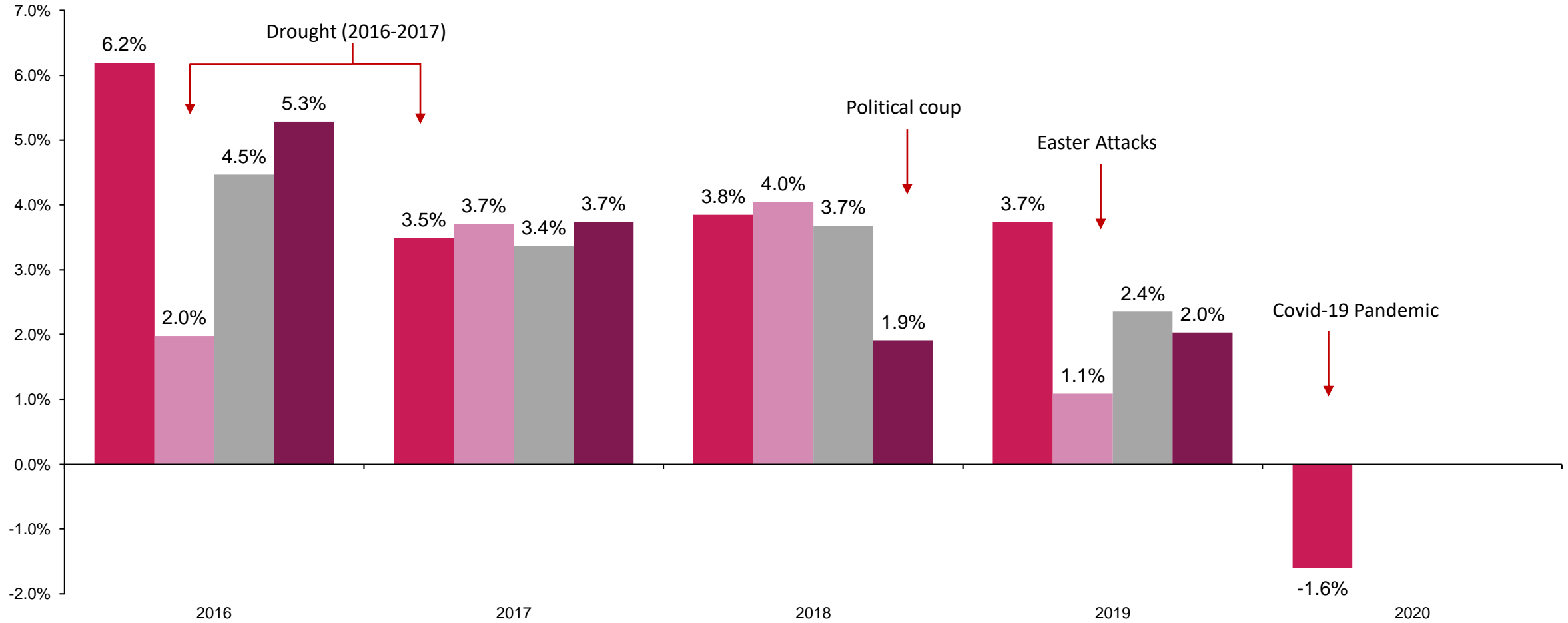
Source: Central Bank of Sri Lanka



# What happened lately?

# Sri Lanka has had four major shocks

GDP, YoY % change

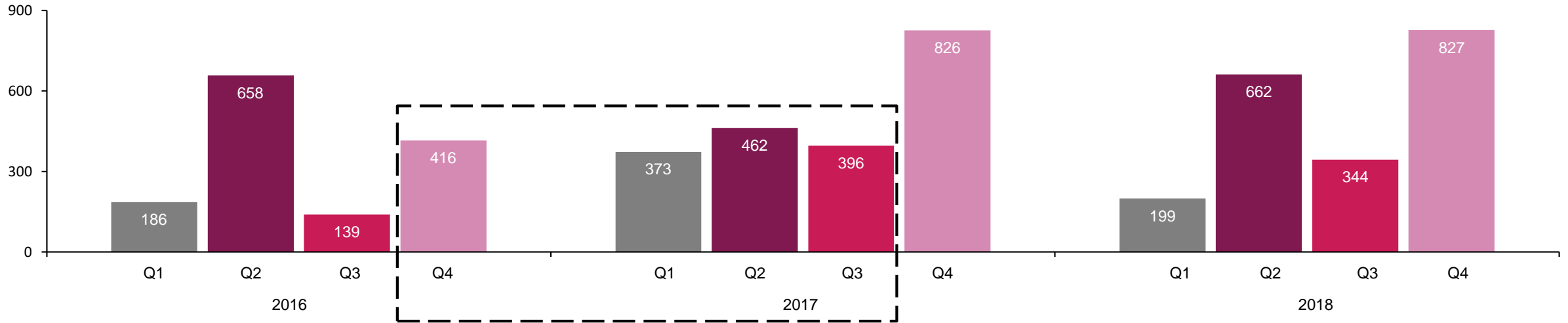




# Droughts (2016-2017)

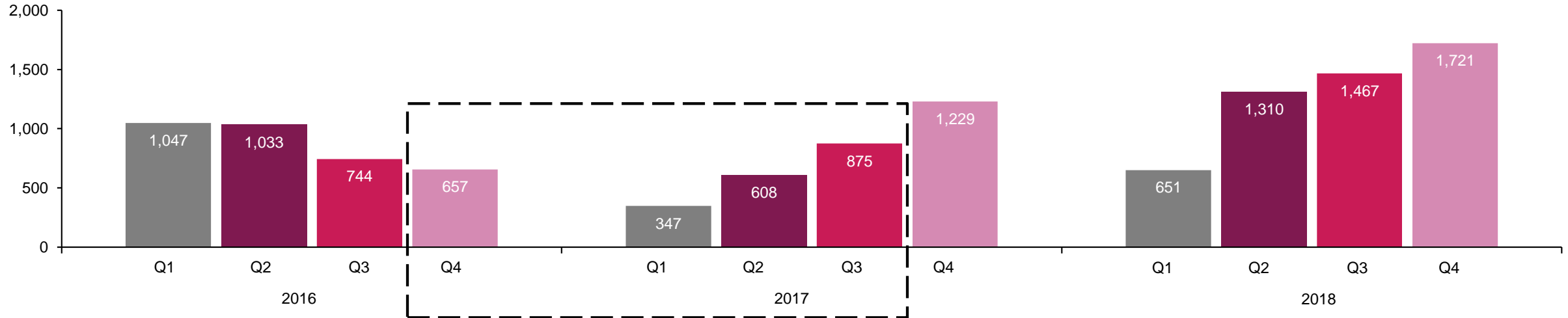
# The prolonged drought impacted rainfall...

Rainfall (mm)



## and hampered hydropower generation...

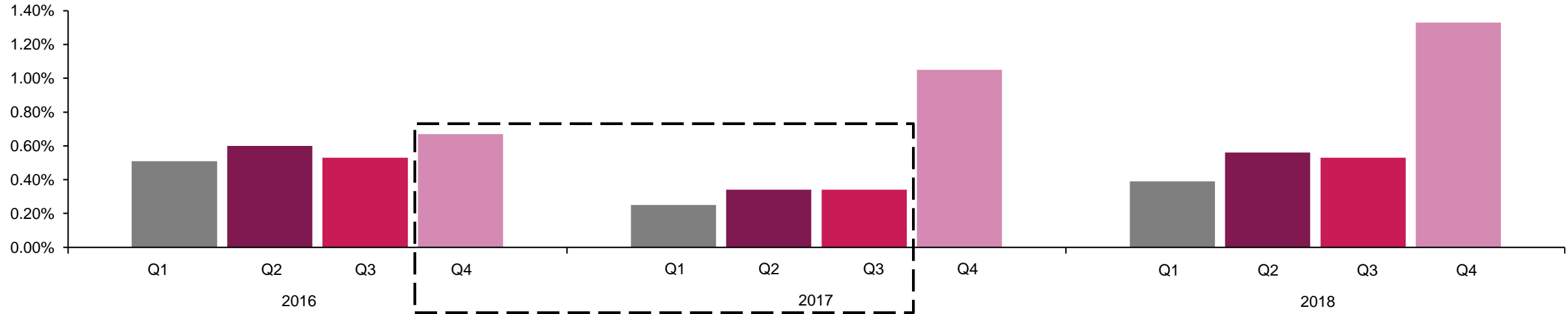
Hydropower generated (Gwh)



# Production levels declined significantly...

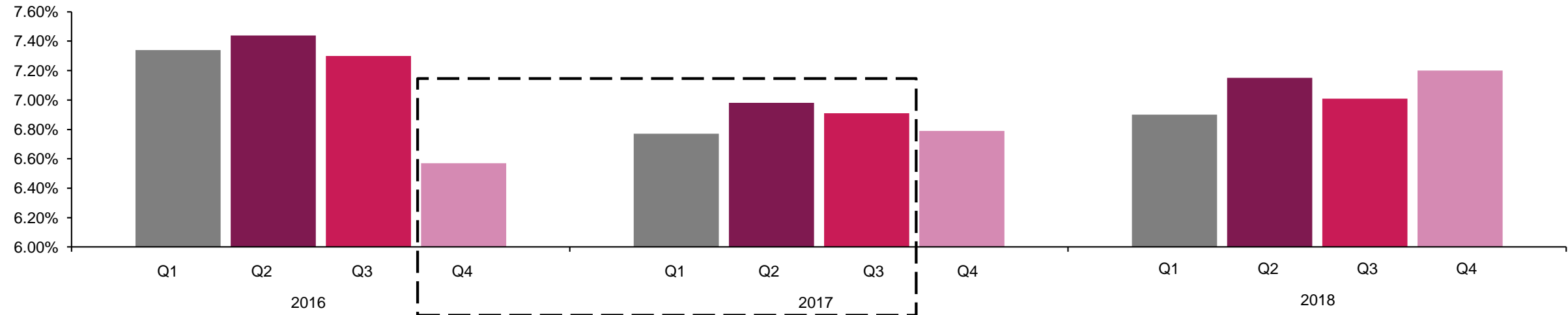
## Growing of rice declined...

% share of GDP



## Subsequently, the share of agriculture to GDP contracted...

% YoY



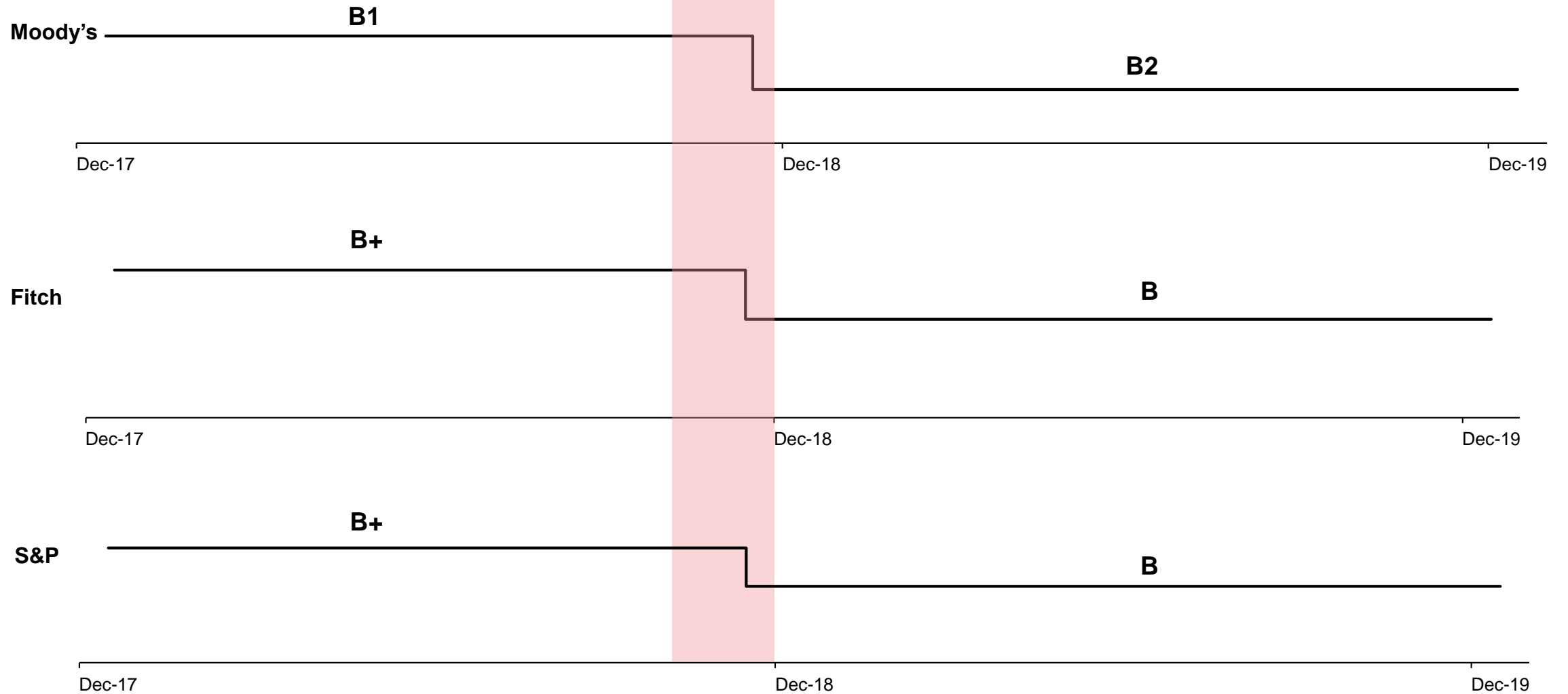


## **Constitutional Crisis (26 October 2018 – 16 December 2018)**



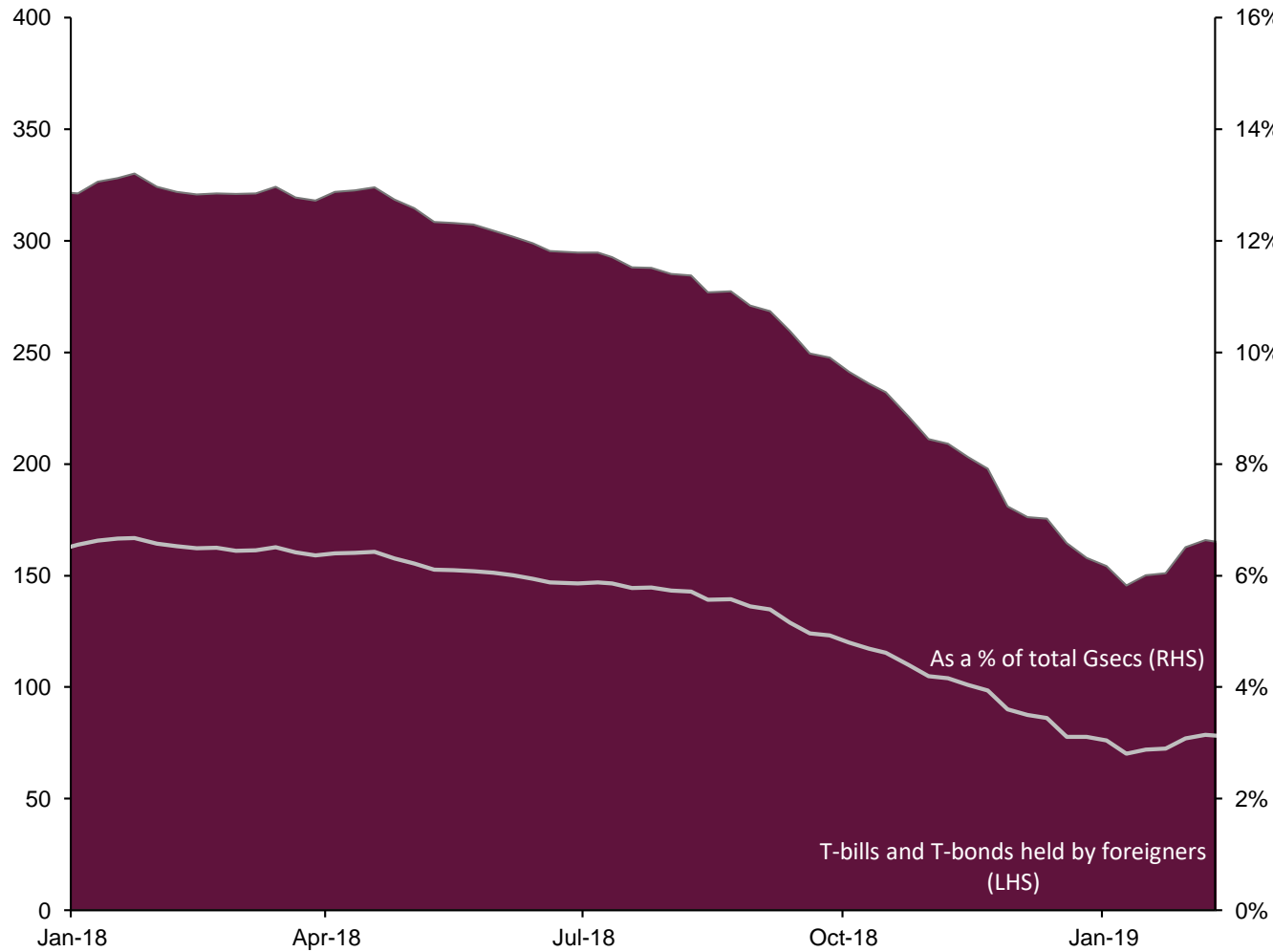
# Fitch, Moody's and S&P downgrade credit ratings...

2018 Political  
coup

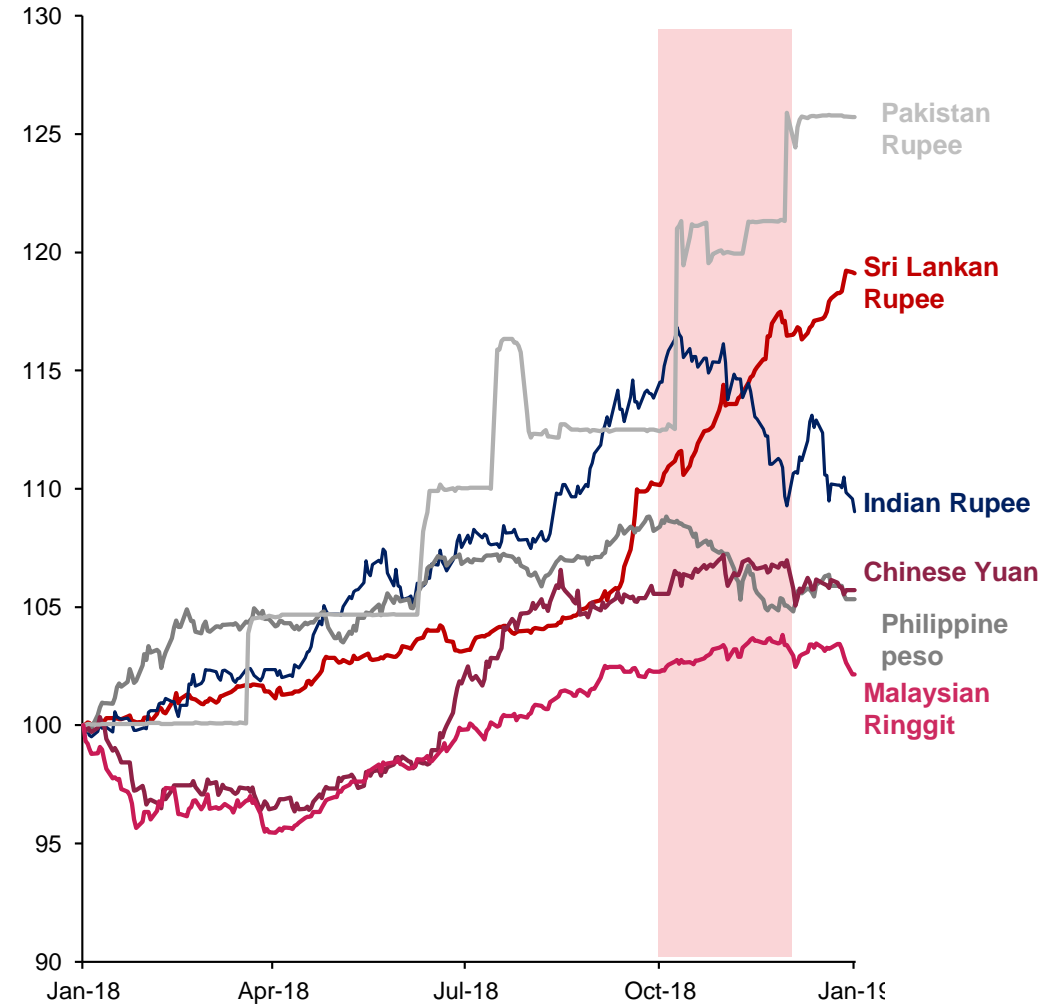


# Outflows from local currency government securities put pressure on the exchange rate...

LKR, Bn(LHS); % of total government securities (RHS)  
% YoY



Movement against USD, Select countries, 2018=100



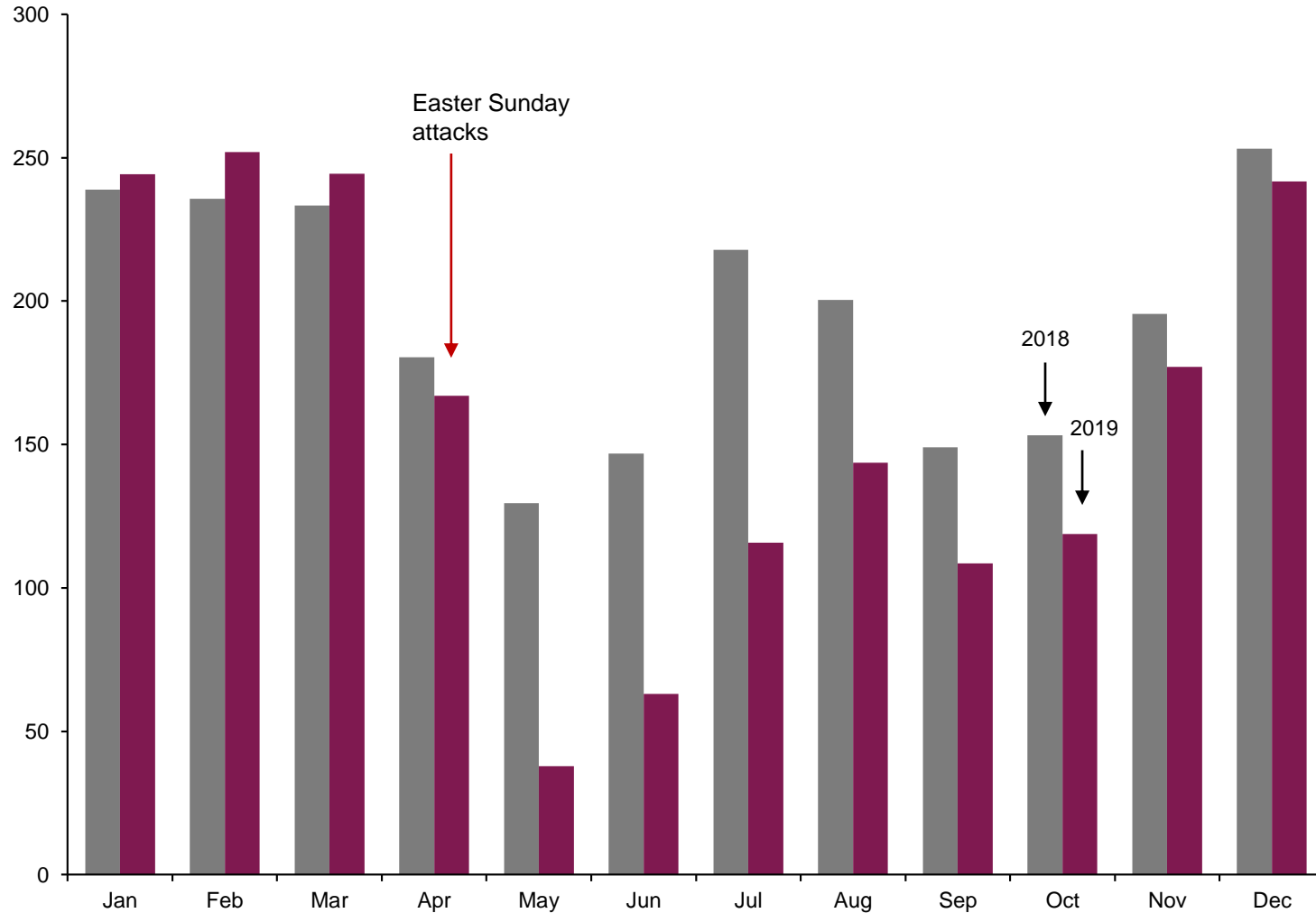


## **Sri Lanka Easter bombings (April 2019)**

# The tourism industry tumbled post the Easter Sunday attacks...

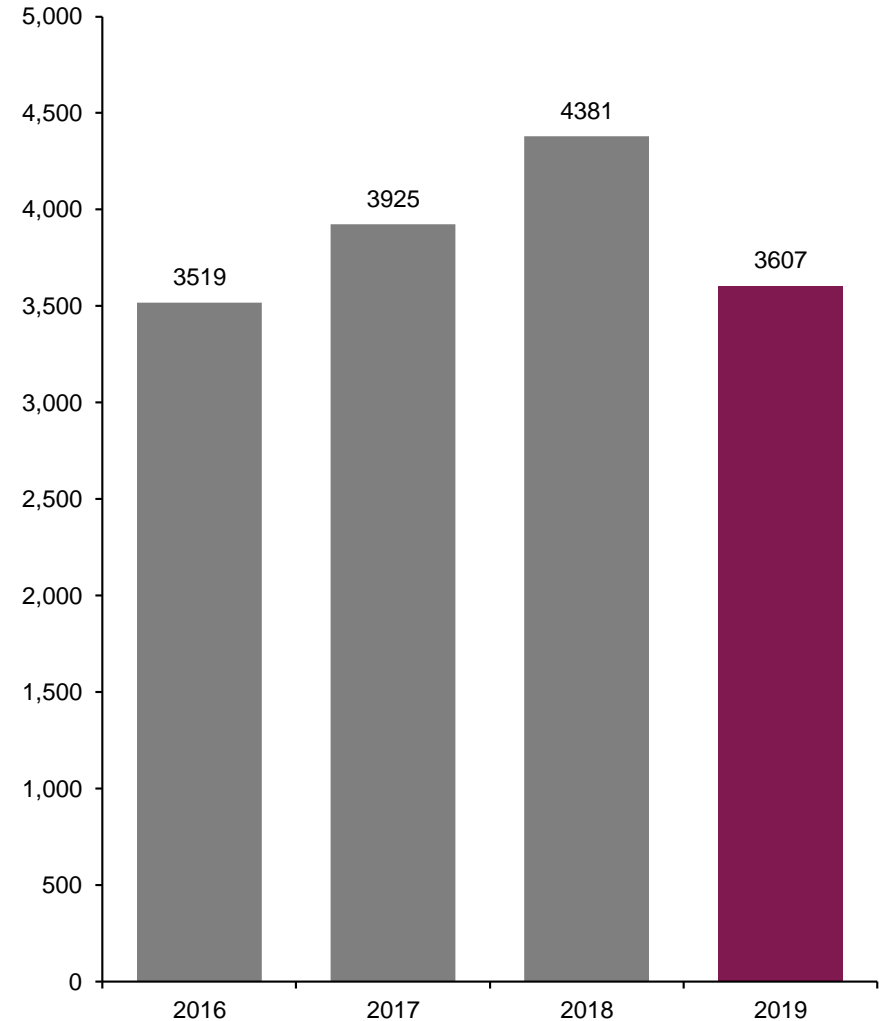
## Tourist arrivals declined in the aftermath of the attacks...

Tourist Arrivals, 000`s



## Consequently, receipts from tourism decreased...

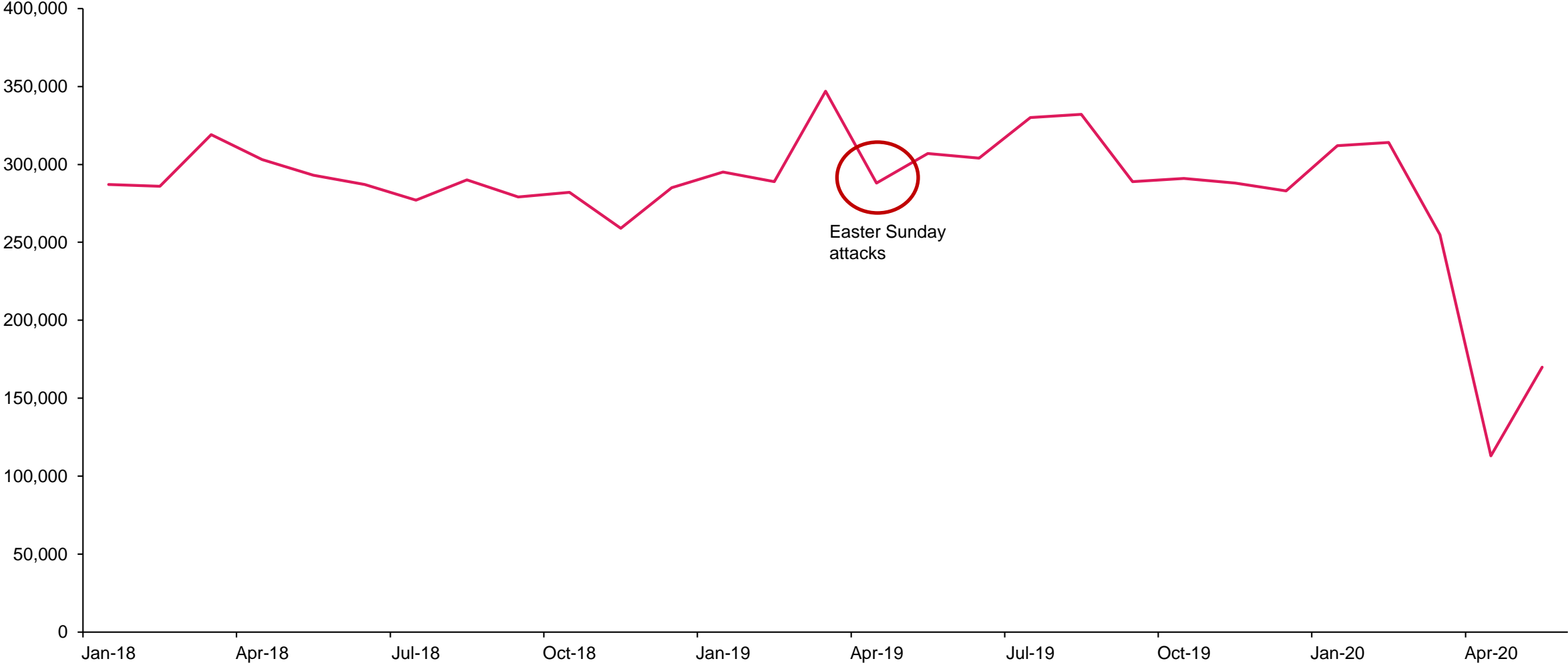
USD Mn




# Mobility reduced

Fuel sales dipped in April 2019 due to limited movement...

Petrol + Diesel sales ('000 MT)

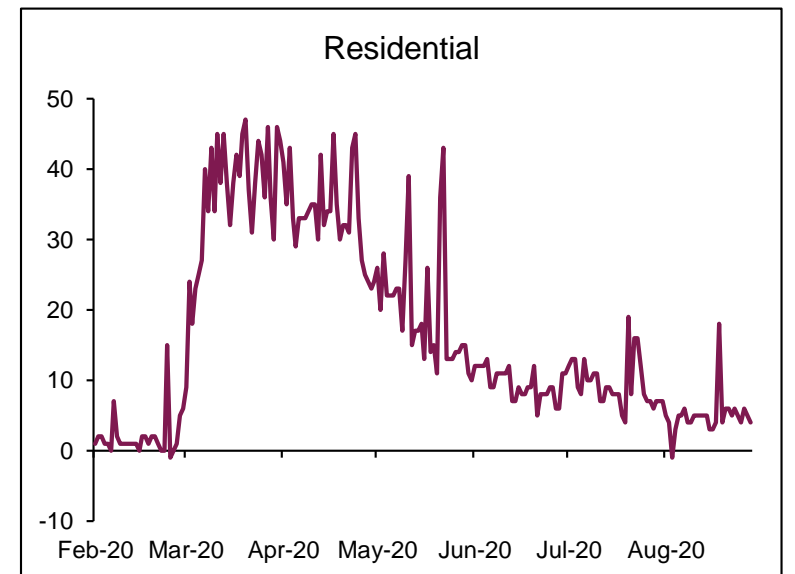
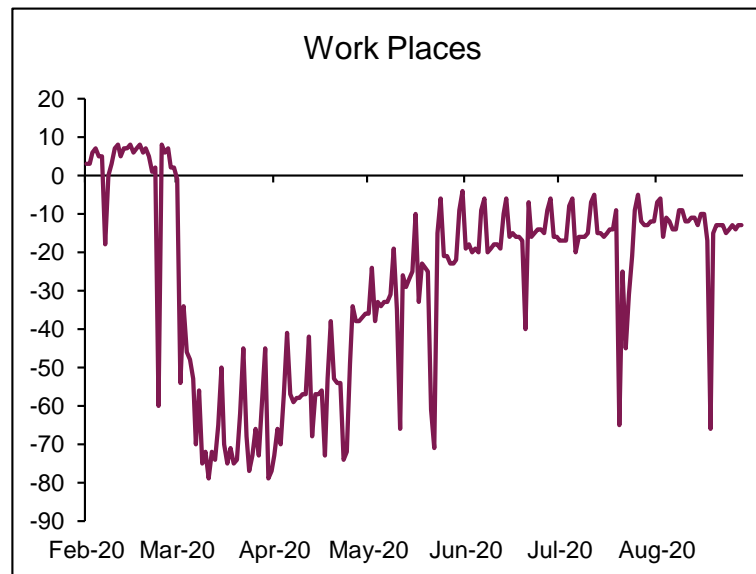
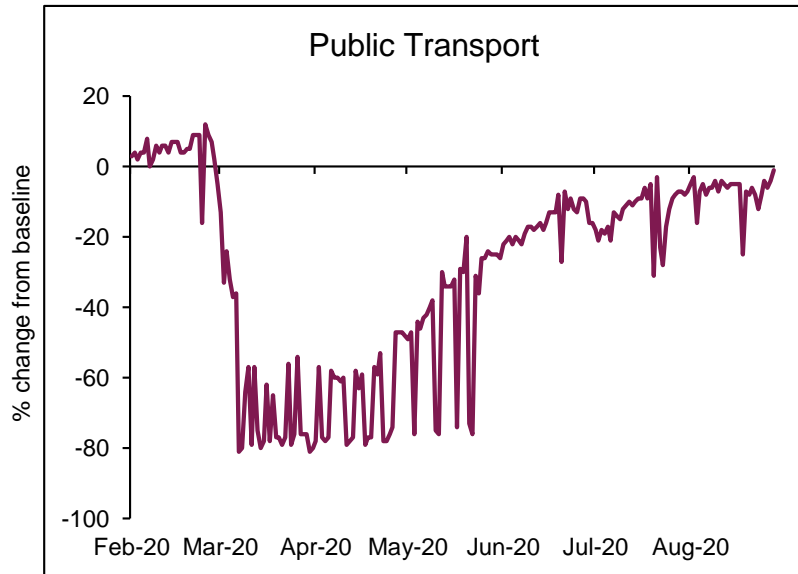
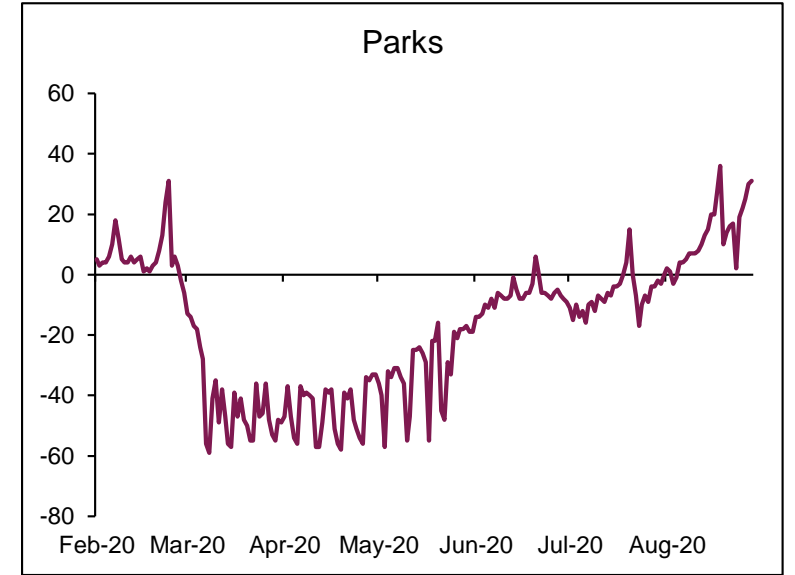
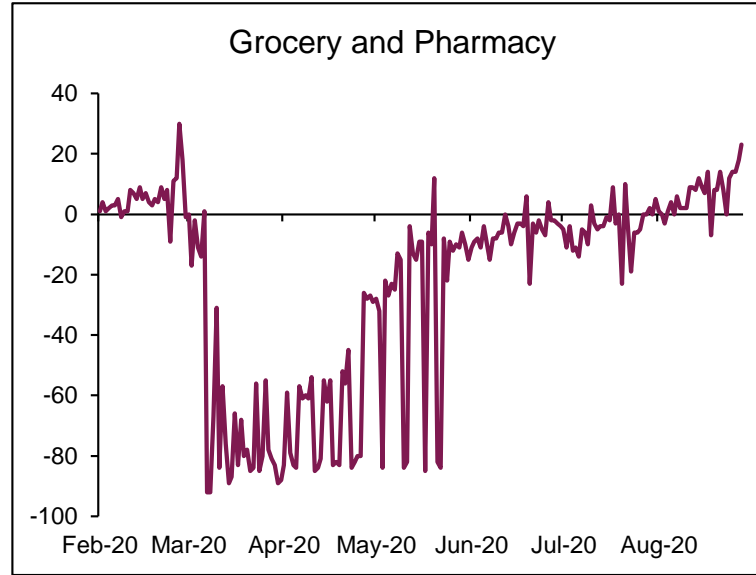
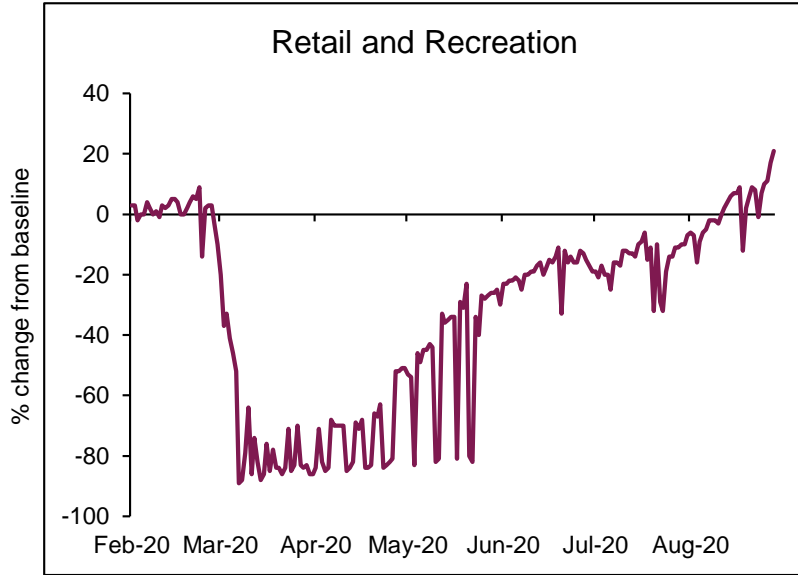


Source: CBSL, Advocata Research



## **Covid-19 Pandemic (May 2020 - current)**

# Movement came to a stop

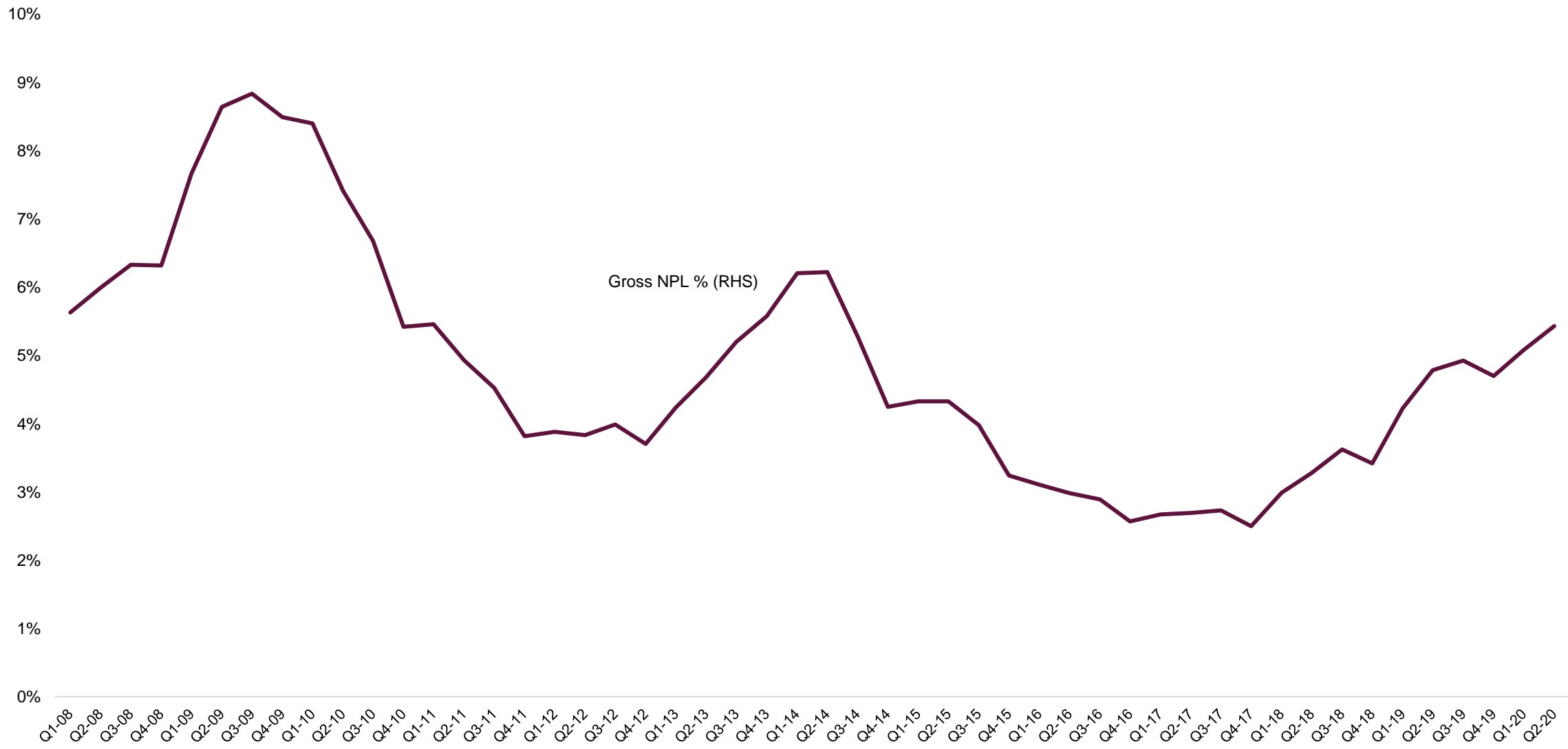


Source: Google mobility report, Advocata Research

# Gross NPL's

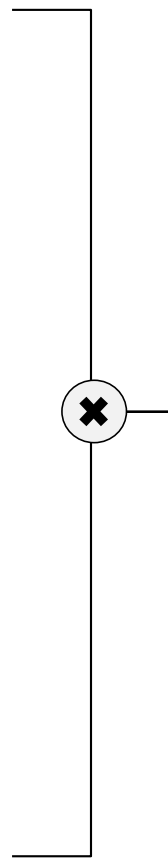
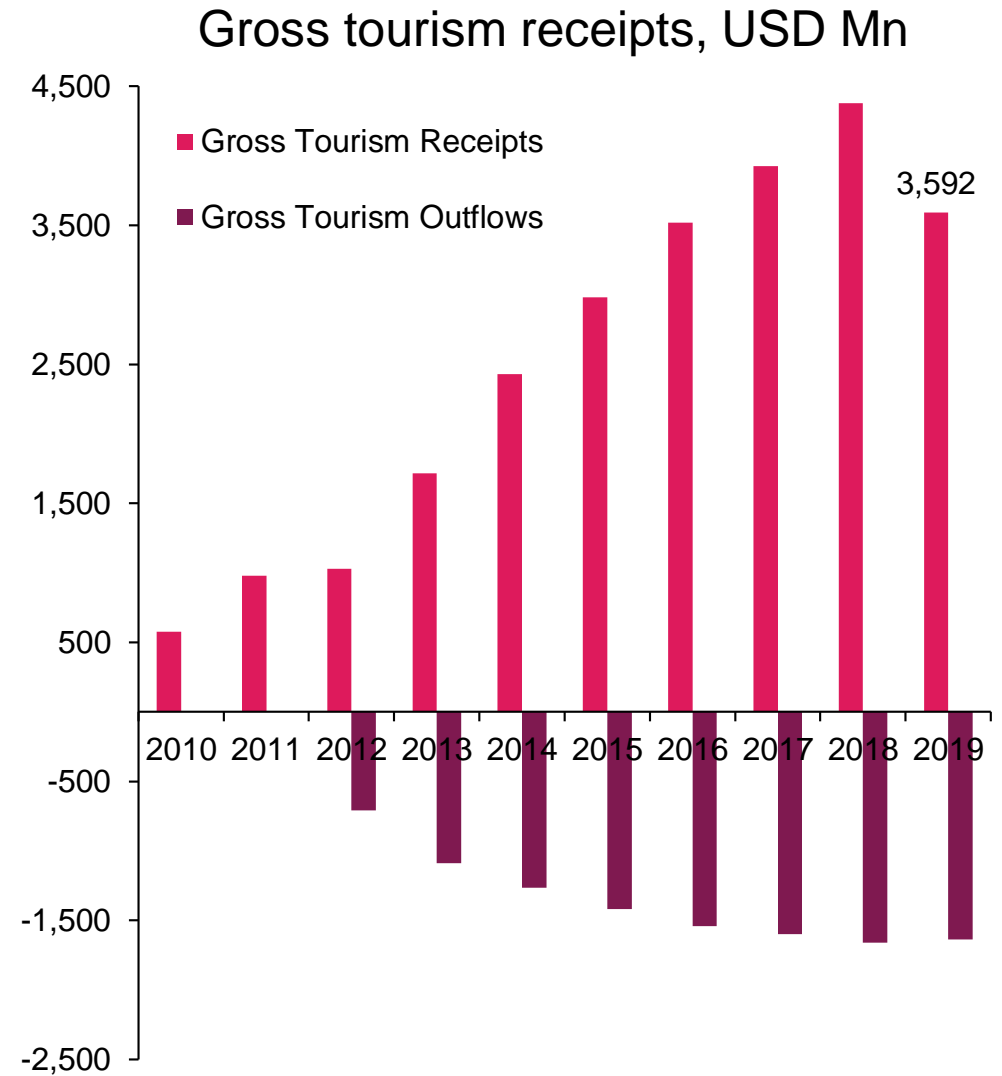
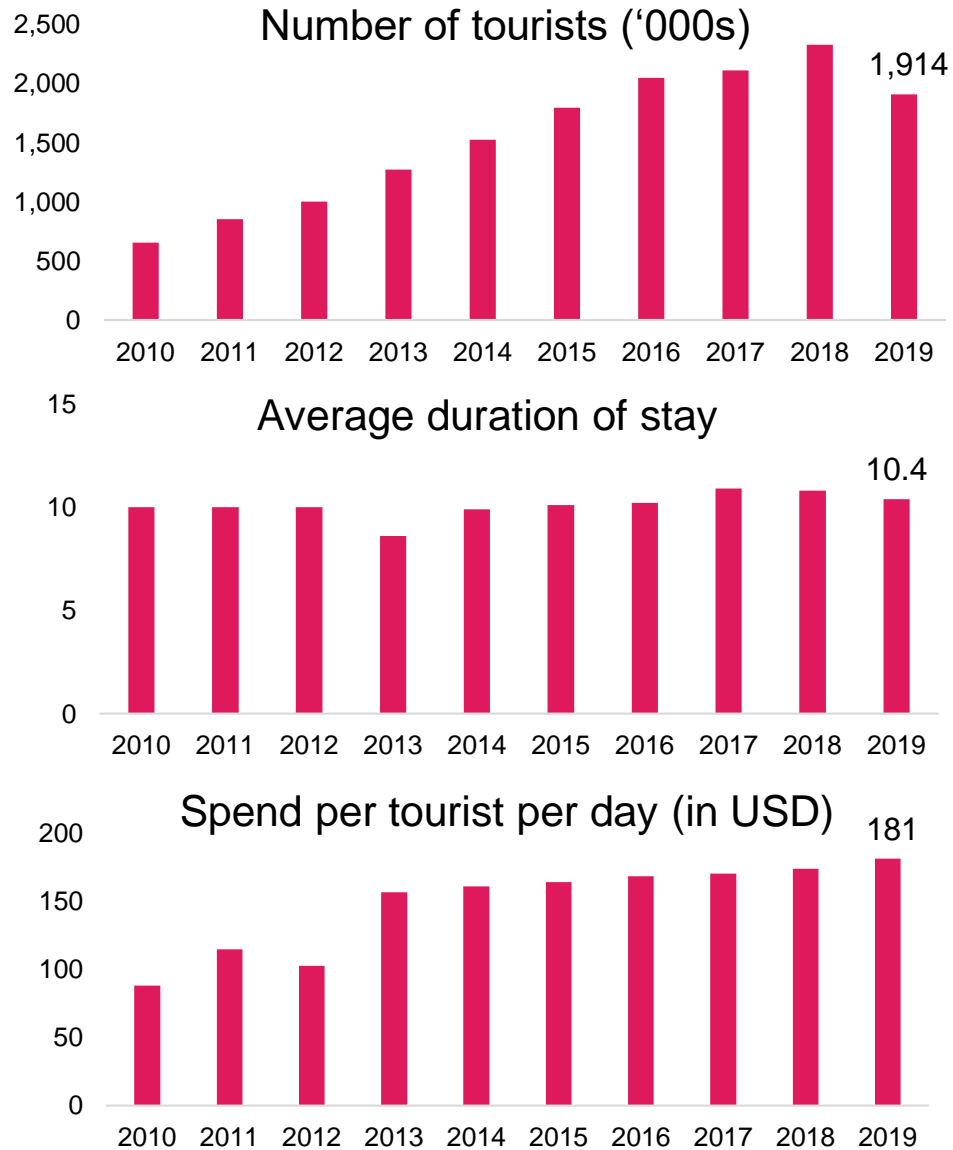
LKR Billions

30 Jun 2020





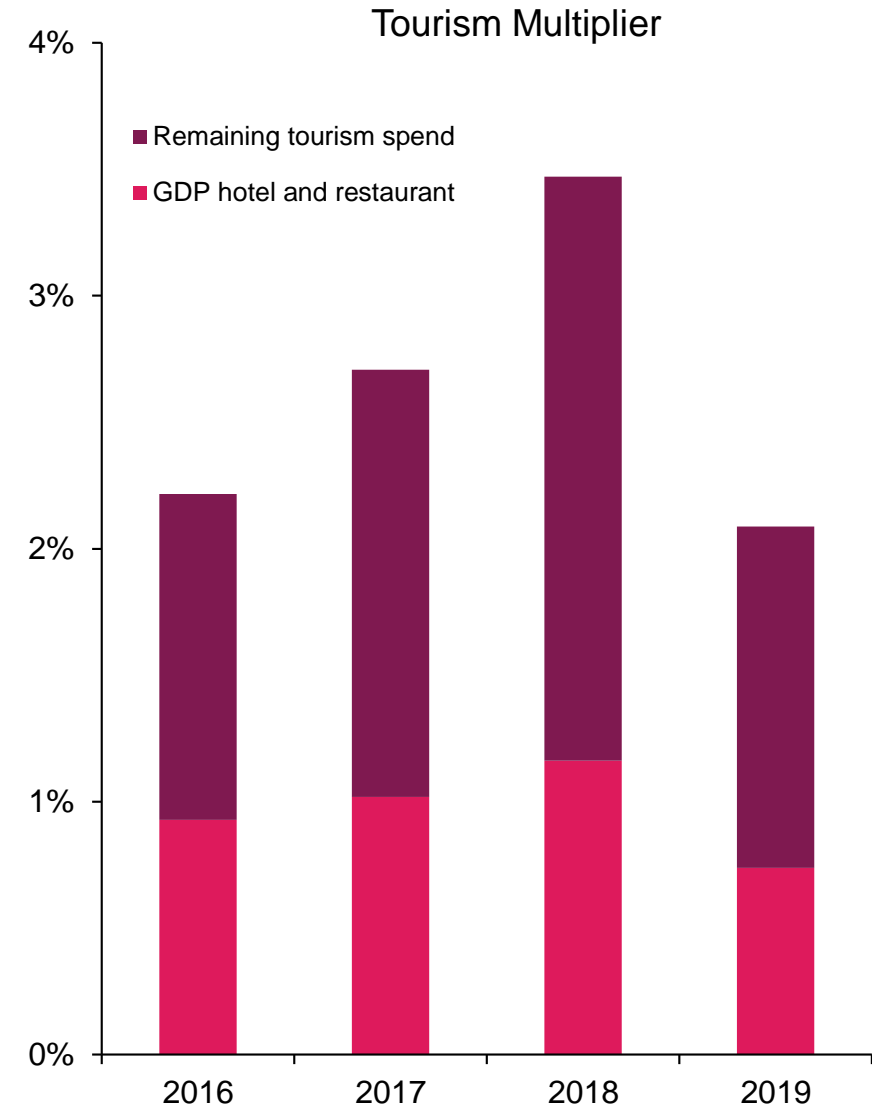
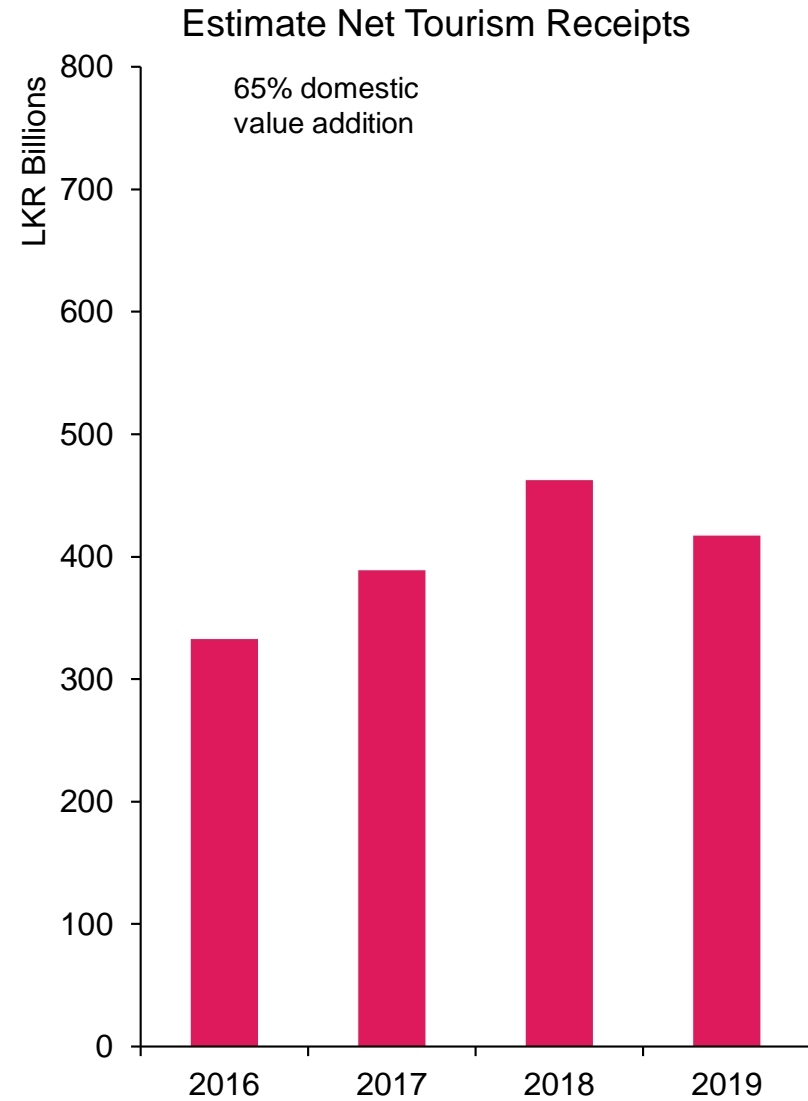
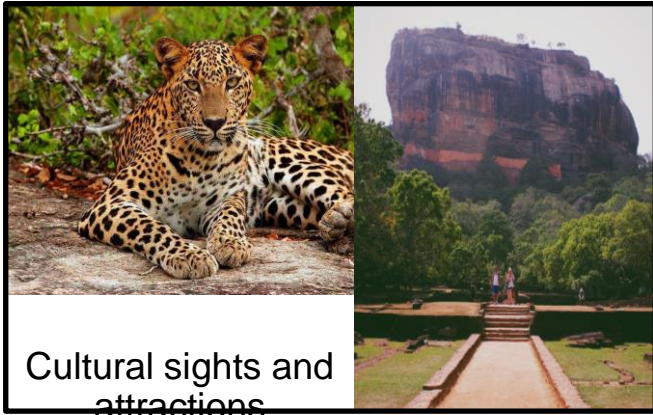
# Average spend per tourist has remained flat since 2017



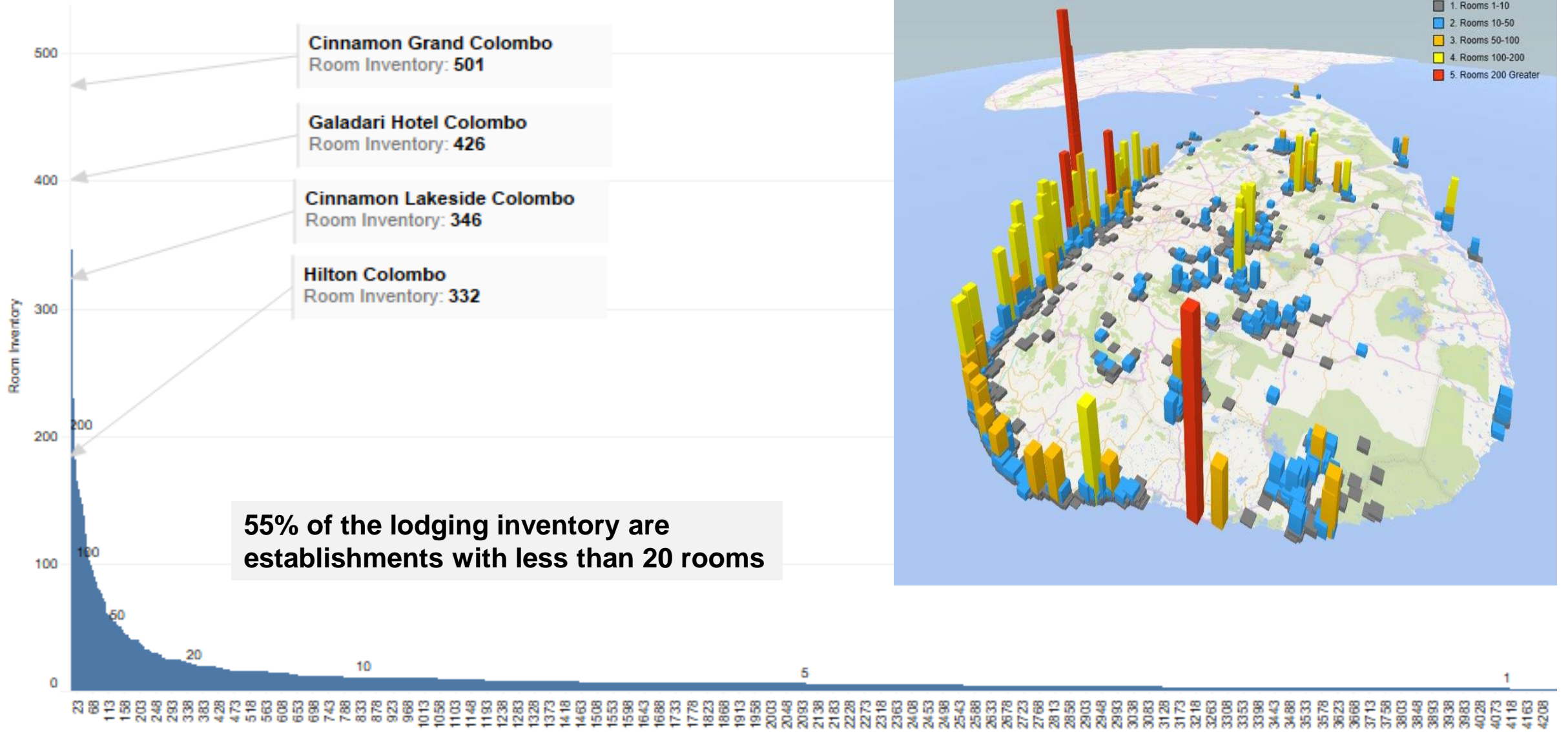
Source: Sri Lanka Tourism Development Authority, CBSL, Advocata research

\* Gross tourism outflows include spending on education

# Estimate of tourism's contribution



# The long tail of lodging inventory



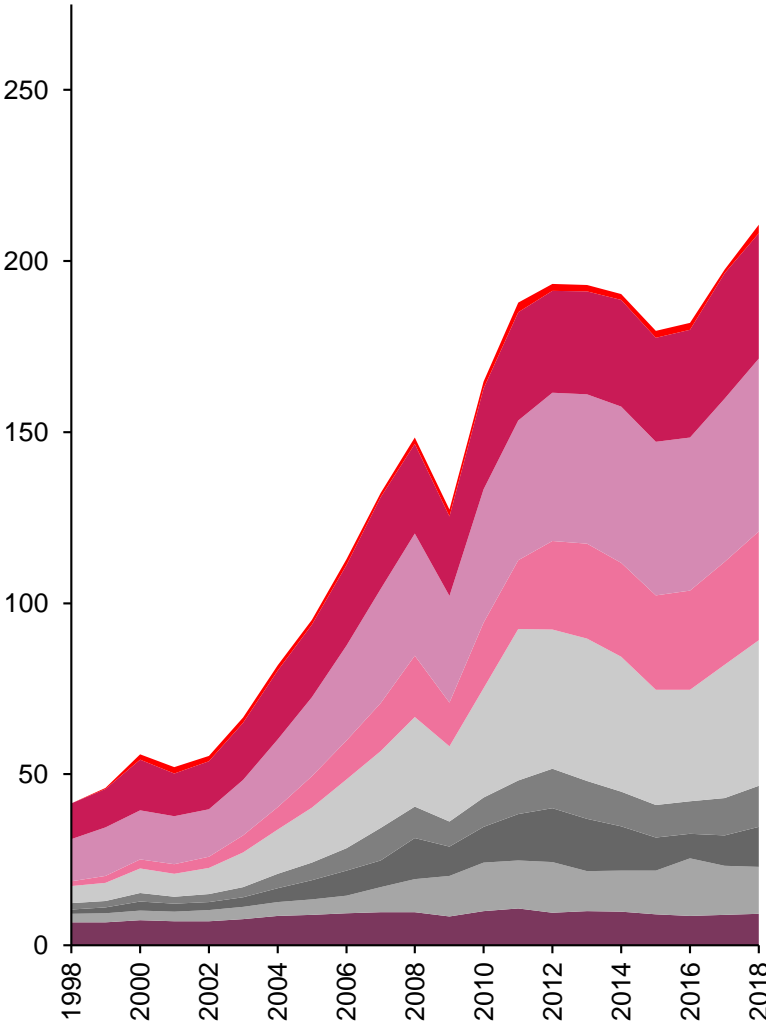


# How do we grow

# Trade dynamics: Thailand

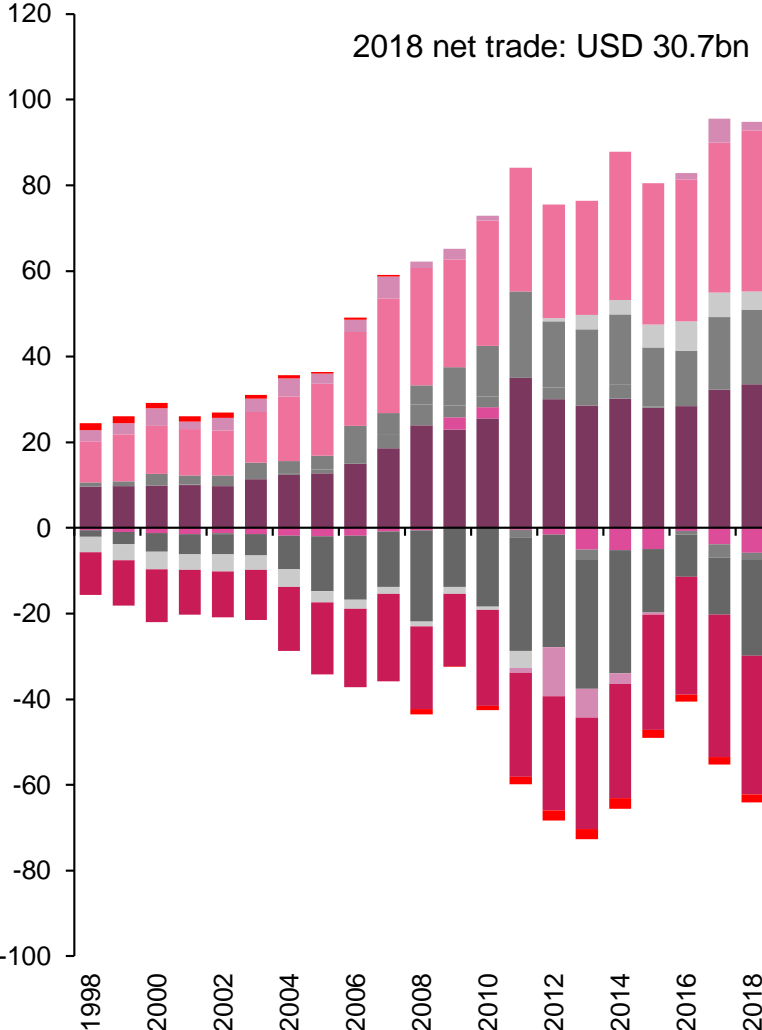
## Exports

USD Bn'



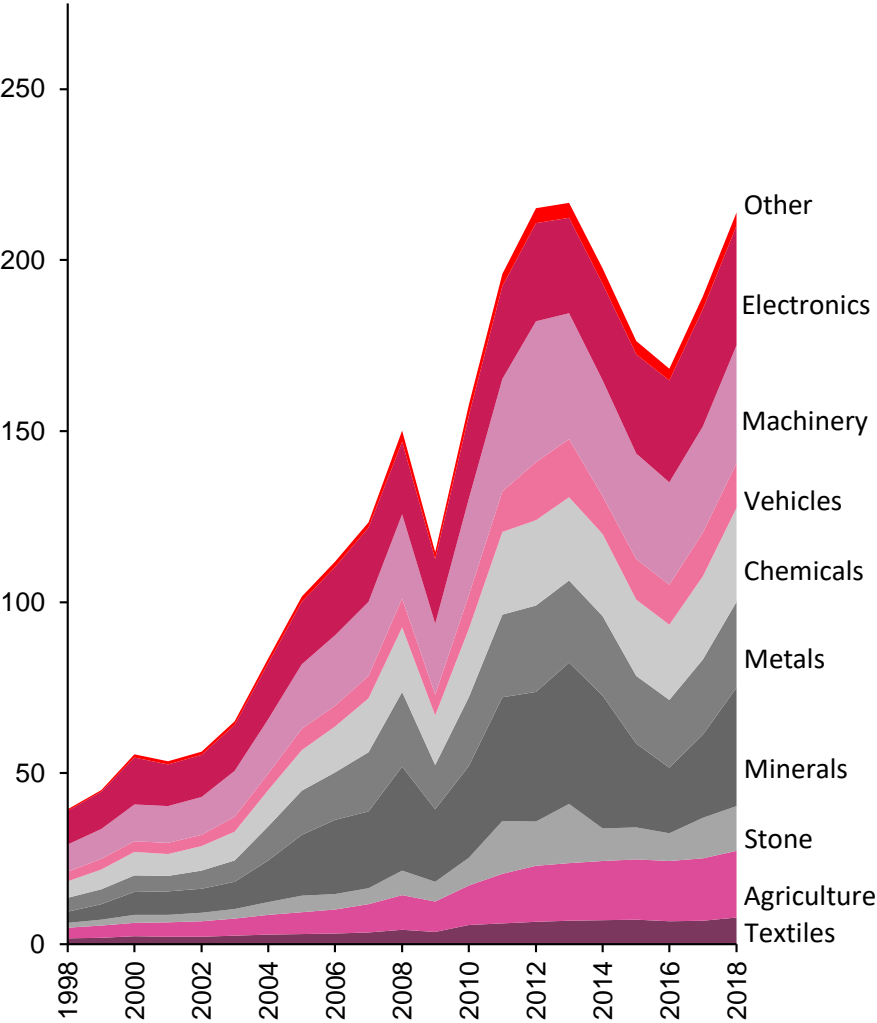
## Trade balance

USD Bn'



## Imports

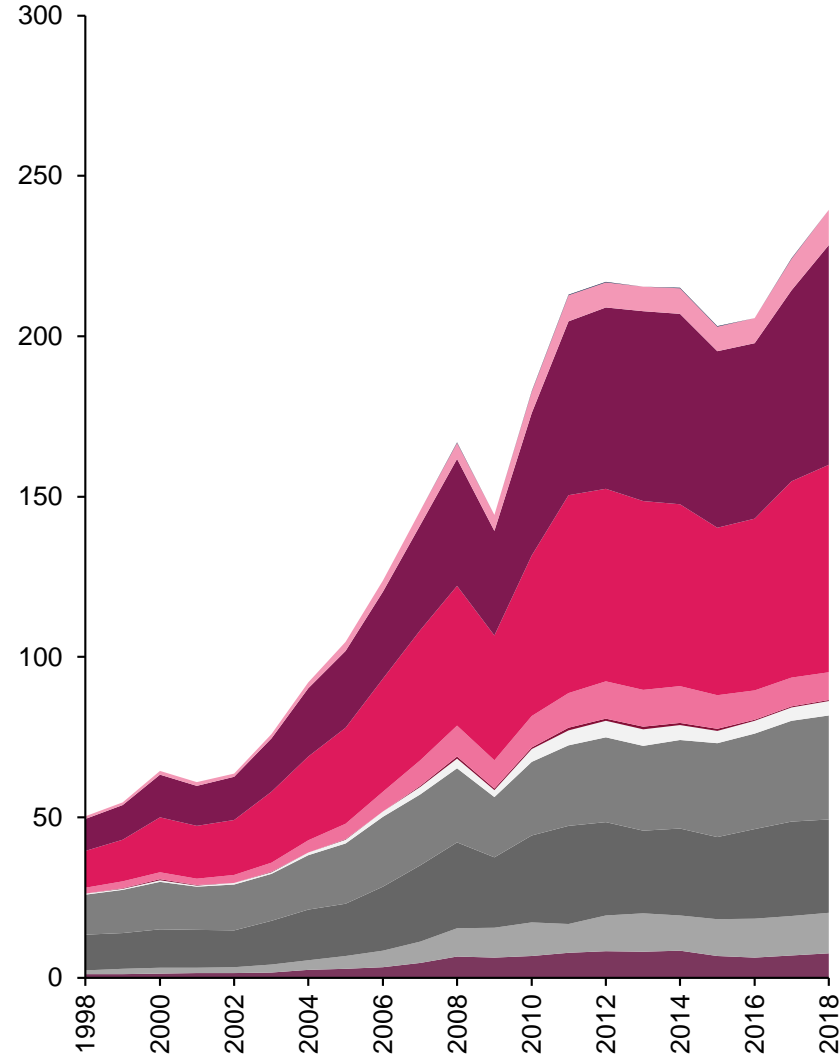
USD Bn'



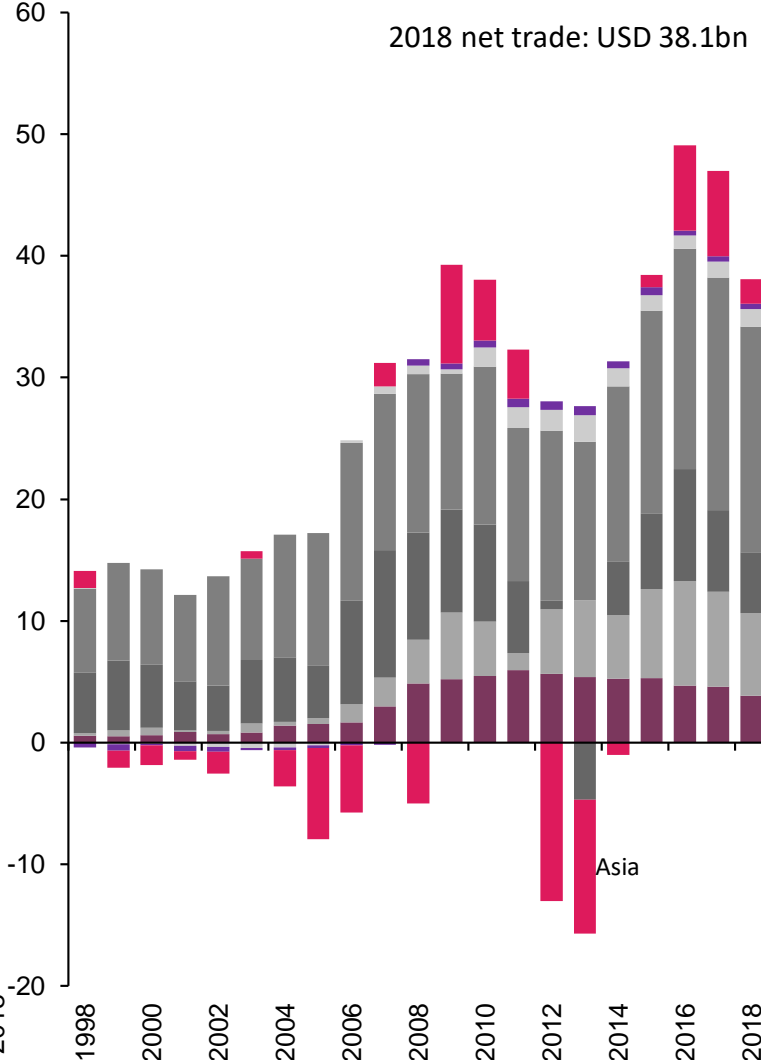
Source: Harvard Economic Atlas, Advocata Research

# Direction of trade: Thailand

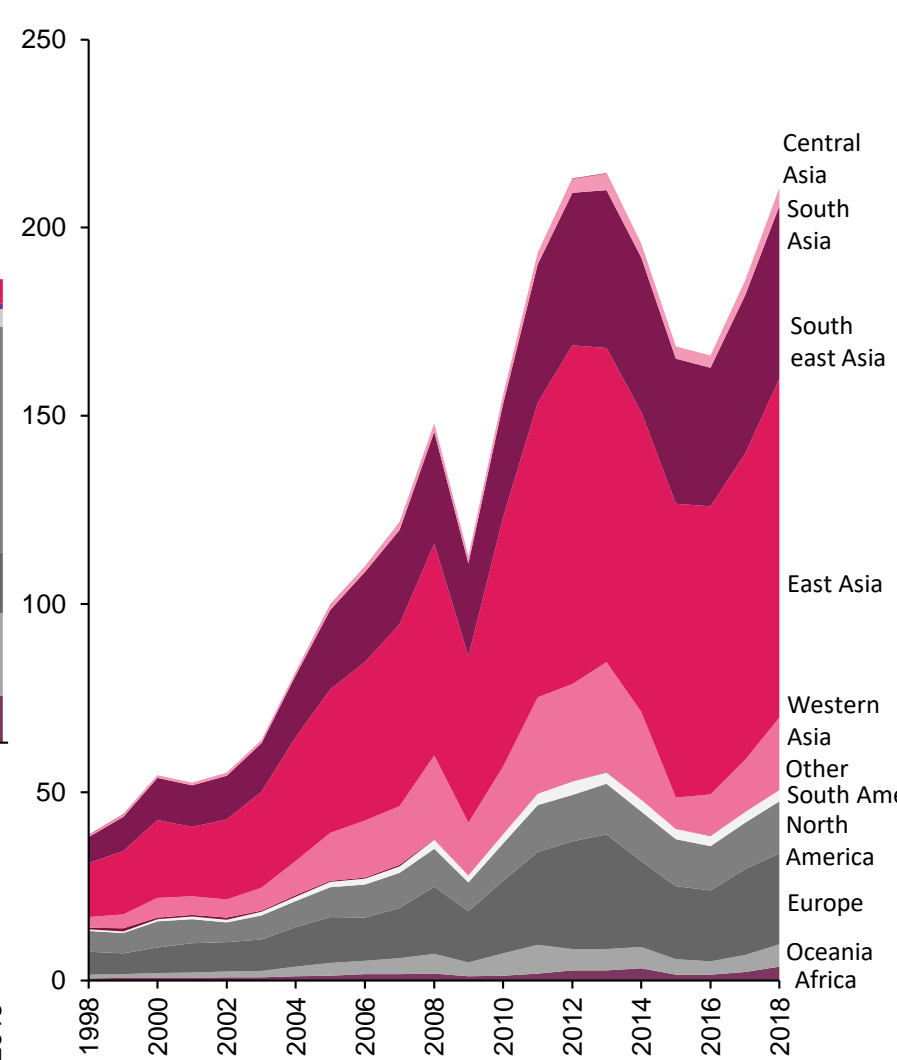
**Exports**  
USD Bn'



**Net trade**  
USD Bn'

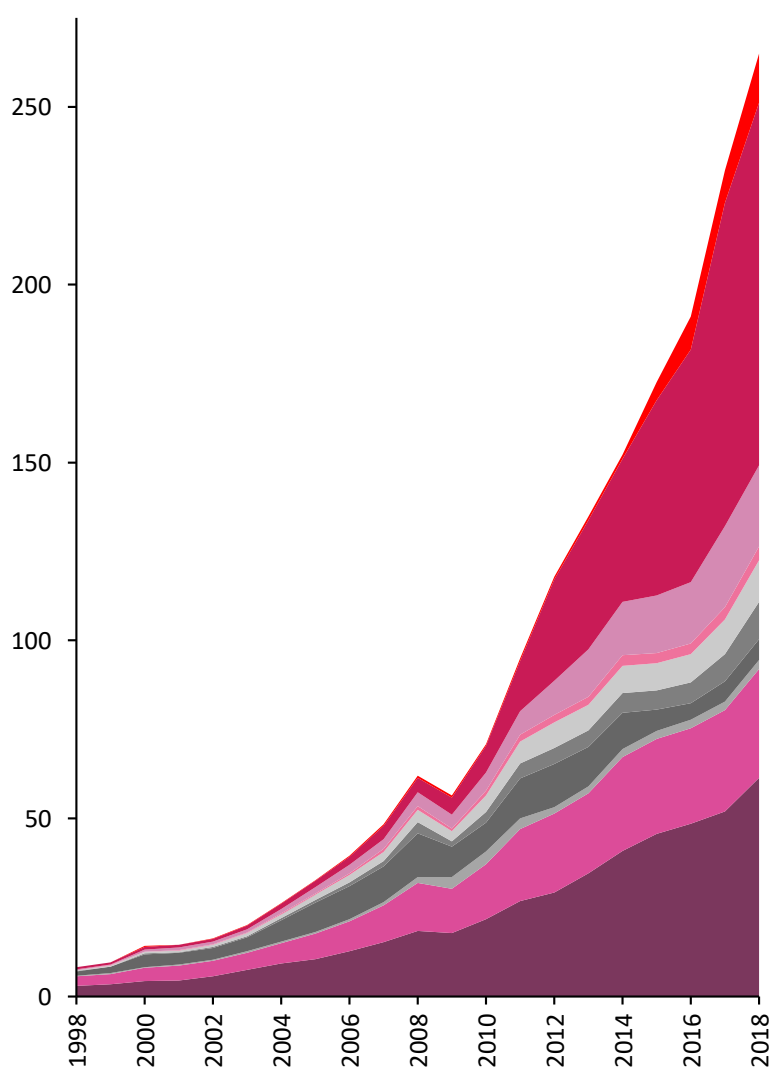


**Imports**  
USD Bn'

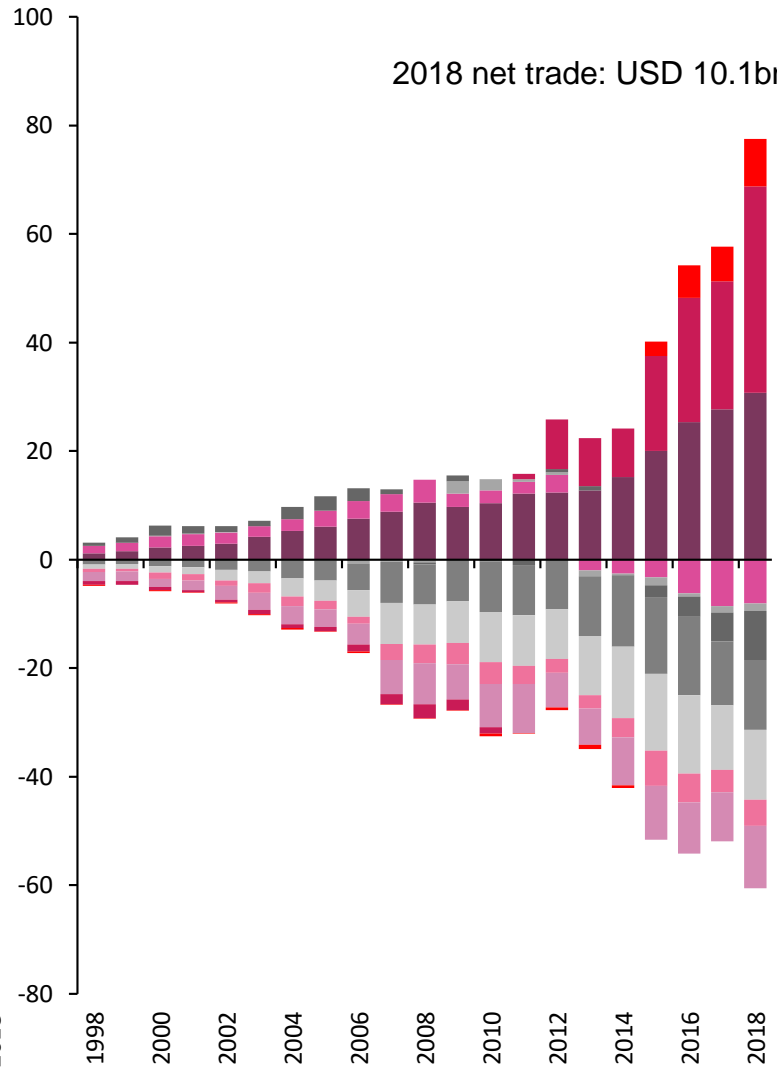


# Trade dynamics: Vietnam

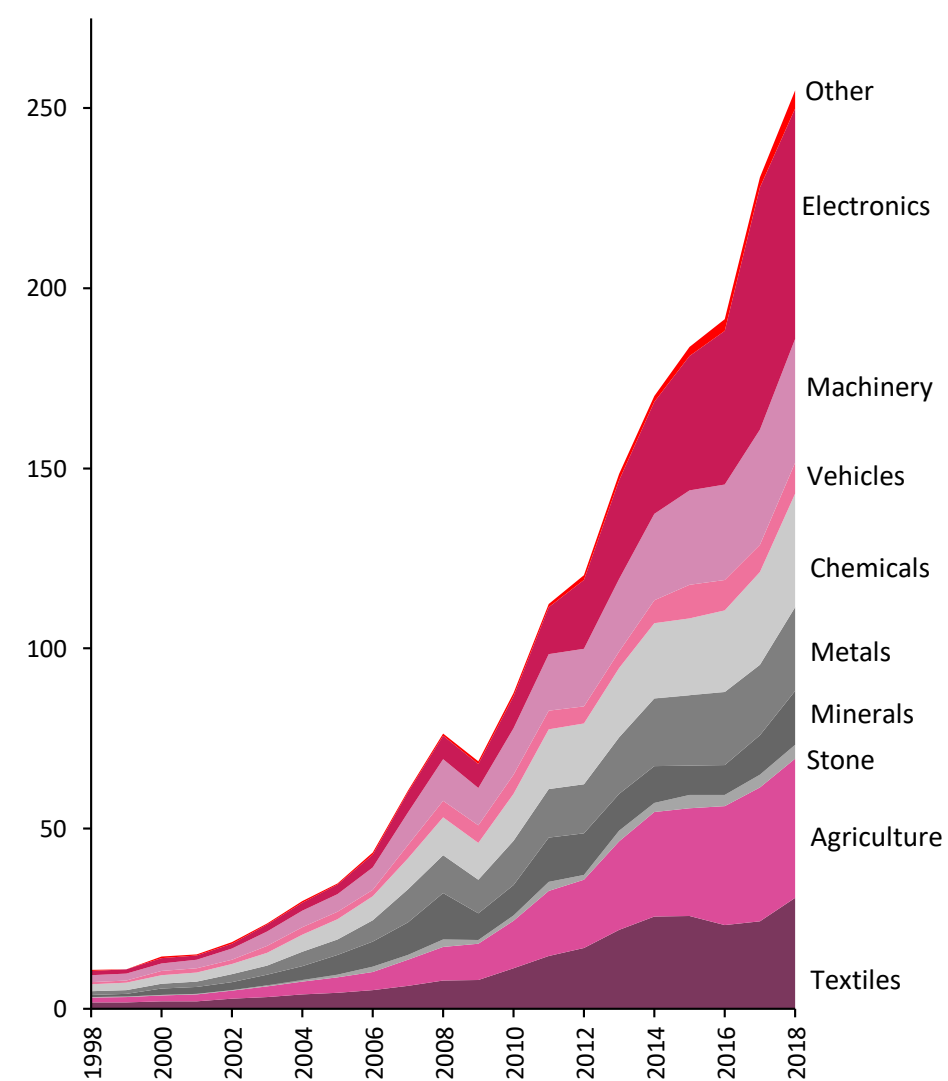
**Exports**  
USD Bn'



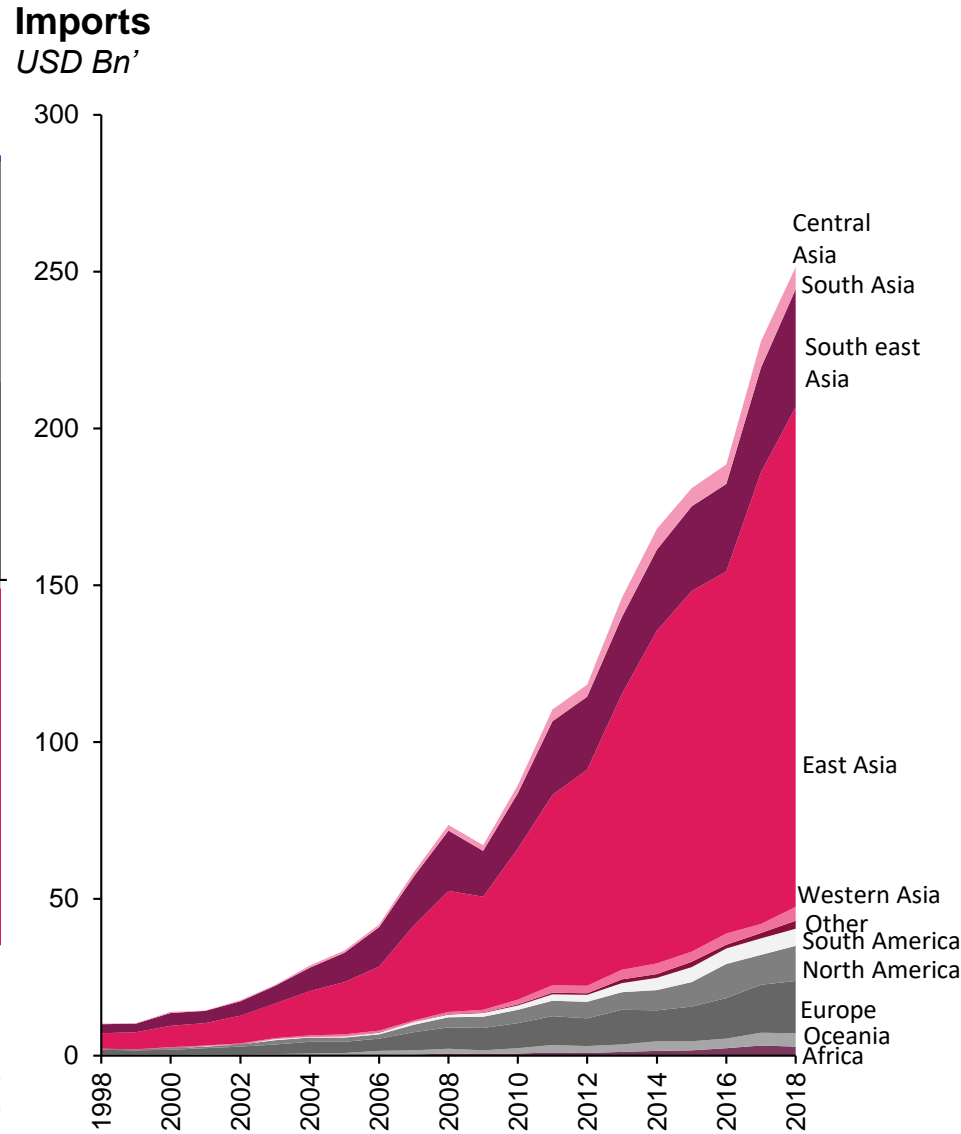
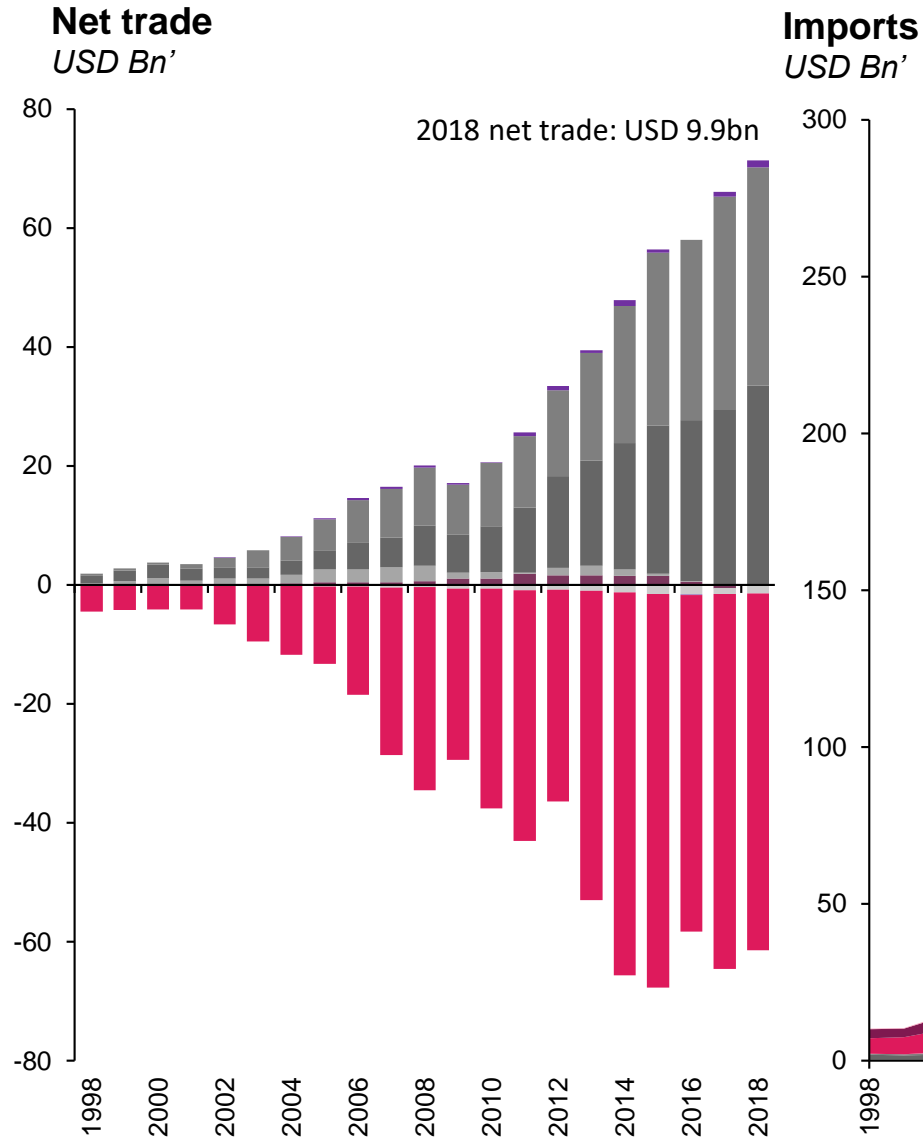
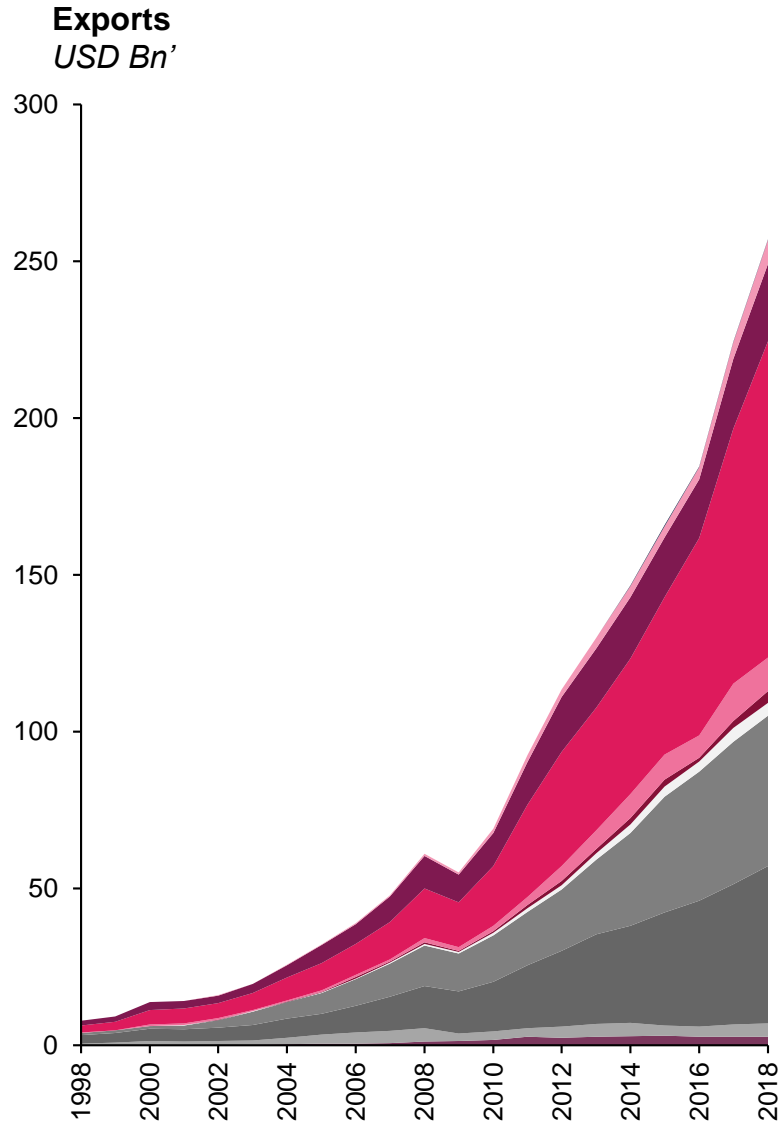
**Trade balance**  
USD Bn'



**Imports**  
USD Bn'



# Direction of trade: Vietnam

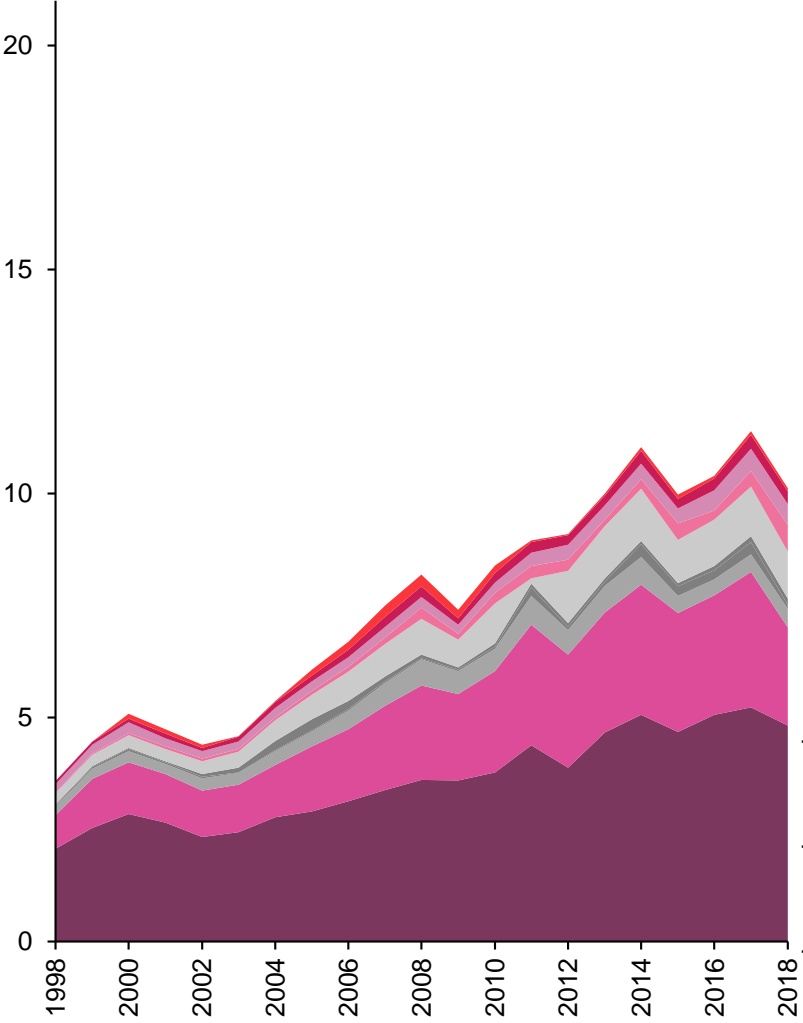




# Trade dynamics: Sri Lanka

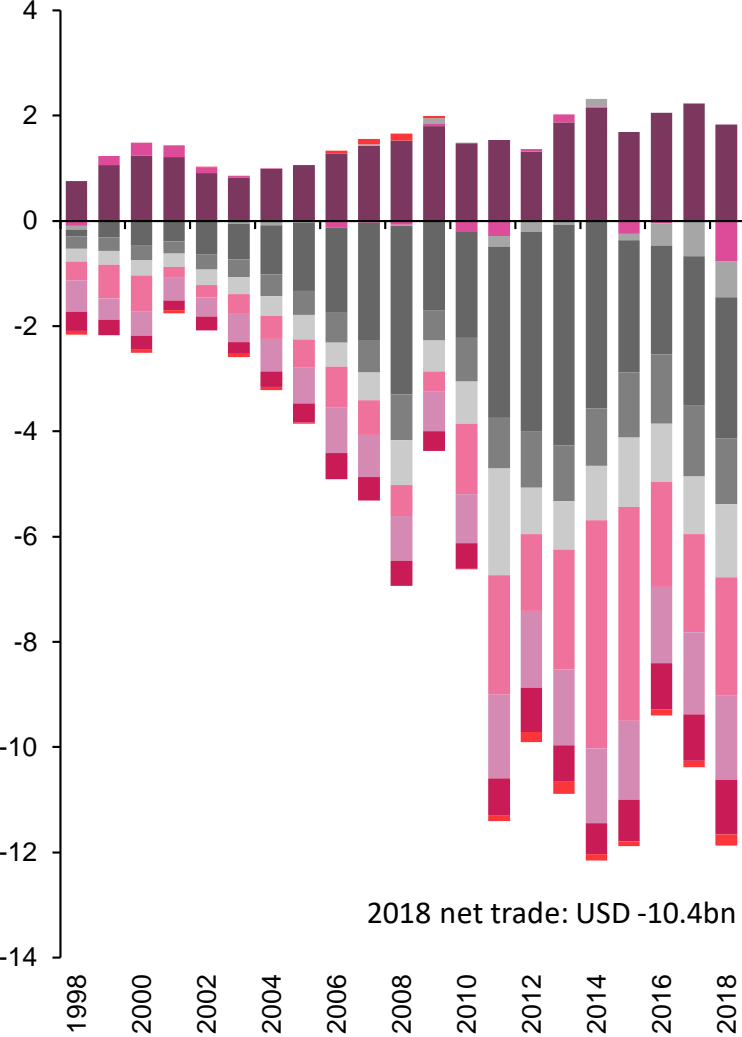
## Exports

USD Bn'



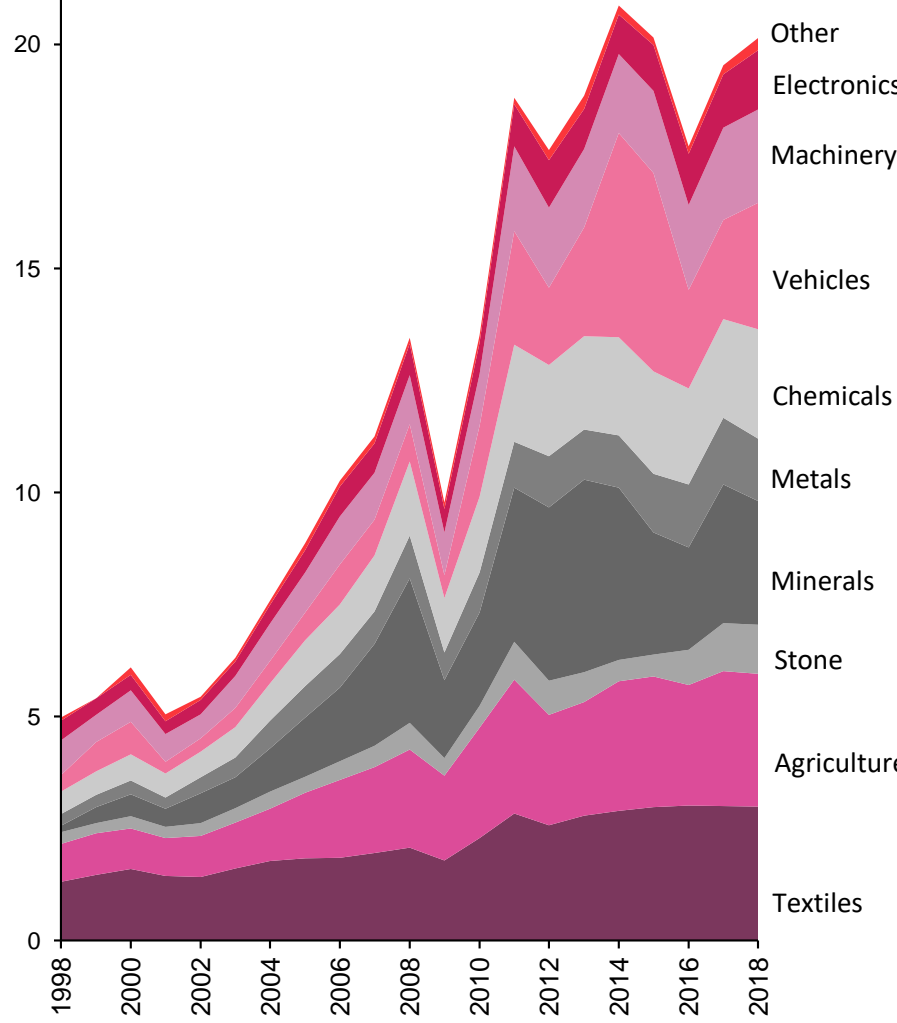
## Trade balance

USD Bn'



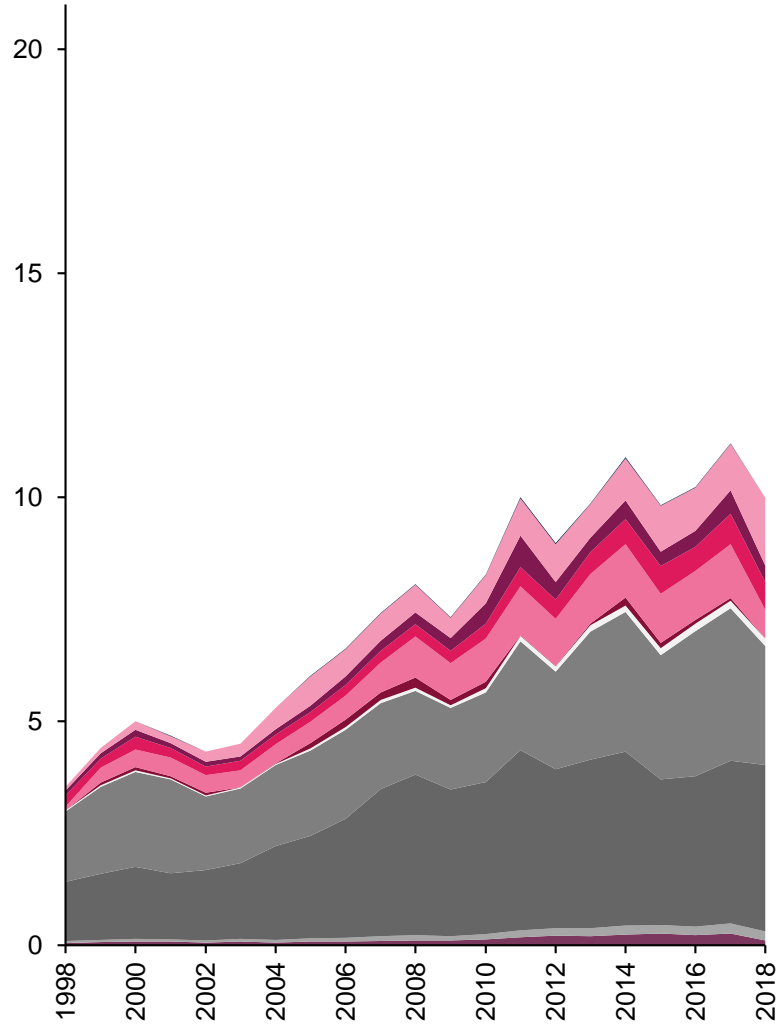
## Imports

USD Bn'



# Direction of trade: Sri Lanka

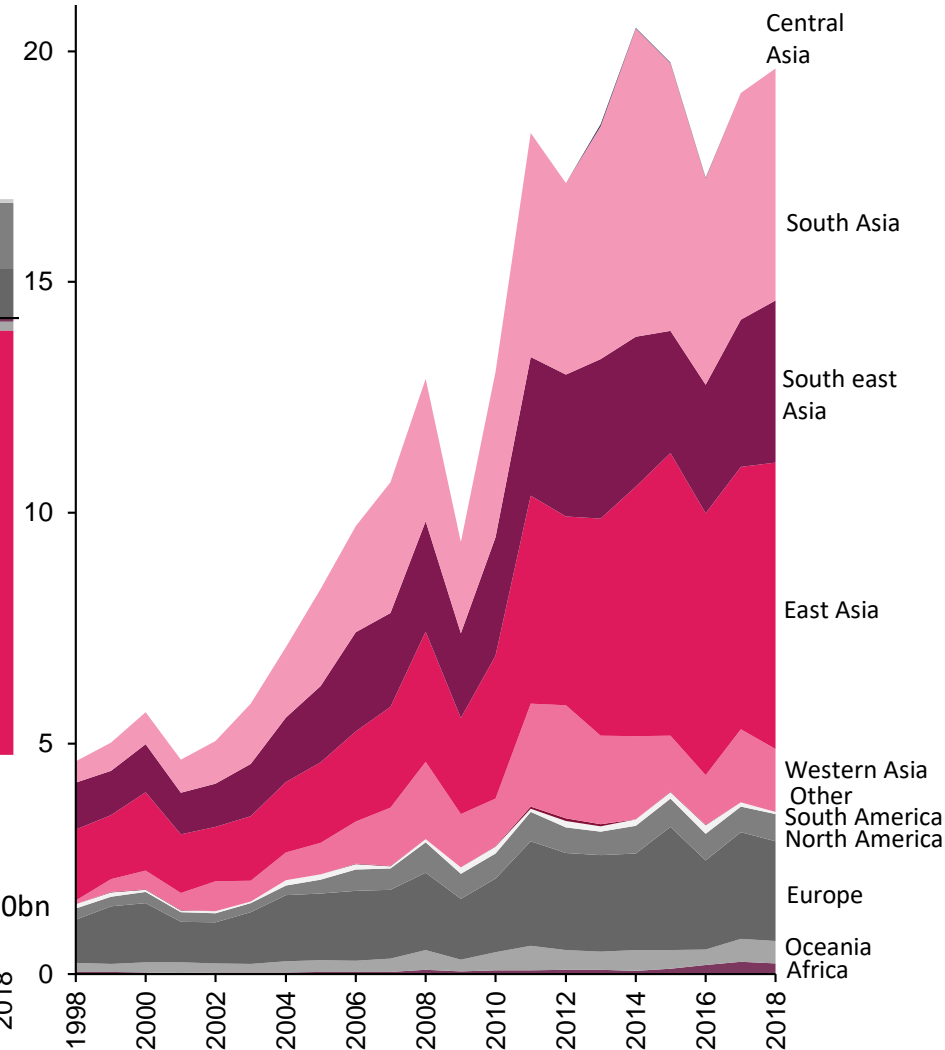
**Exports**  
USD Bn'



**Net trade**  
USD Bn'



**Imports**  
USD Bn'



# Export contribution to growth



# Trade agreements drive exports

## Thailand

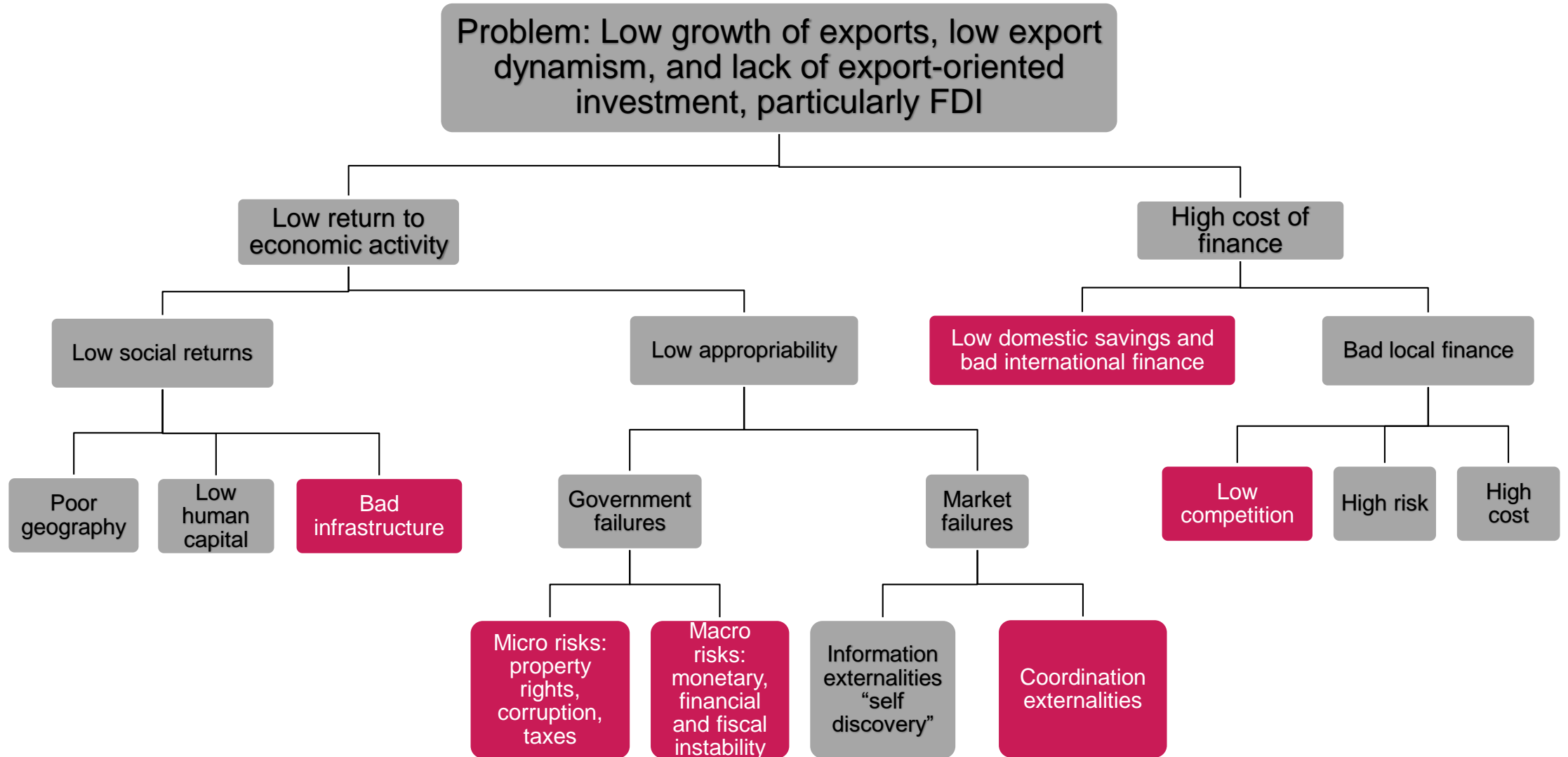
- ASEAN-People's Republic of China Comprehensive ASEAN-Hong Kong, China FTA (2019)
- Thailand-Chile FTA (2015)
- Thailand-Peru FTA (2011)
- ASEAN-India Comprehensive Economic Cooperation Agreement (2010)
- ASEAN-Australia and New Zealand FTA (2010)
- ASEAN-Japan Comprehensive Economic Partnership (2008)
- Japan-Thailand Economic Partnership Agreement (2007)
- ASEAN-Republic of Korea Comprehensive Economic Cooperation Agreement (2007)
- Australia-Thailand FTA (2005)
- New Zealand-Thailand Closer Economic Partnership Agreement (2005)
- Economic Cooperation Agreement (2005)
- People's Republic of China-Thailand FTA (2003)
- Laos-Thailand Preferential Trading Arrangement (1991)
- ASEAN FTA (1993)

## Vietnam

- ASEAN-Hong Kong, China FTA (2019)
- Comprehensive and Progressive Agreement for Trans-Pacific Partnership (2018)
- Viet Nam-Eurasian Economic Union FTA (2016)
- Japan-Viet Nam Economic Partnership Agreement (2016)
- Republic of Korea-Viet Nam FTA (2015)
- Viet Nam-Chile FTA (2012)
- ASEAN-Australia and New Zealand FTA (2010)
- ASEAN-India Comprehensive Economic Cooperation Agreement (2010)
- ASEAN-Japan Comprehensive Economic Partnership (2008)
- ASEAN-Republic of Korea Comprehensive Economic Cooperation Agreement (2007)
- ASEAN-People's Republic of China Comprehensive Economic Cooperation Agreement (2005)
- ASEAN FTA (1993)

## Sri Lanka

- Sri Lanka-Singapore FTA (2018)
- South Asian FTA (2006)
- Pakistan-Sri Lanka FTA (2005)
- India-Sri Lanka FTA (2001)
- Asia-Pacific Trade Agreement (1976)



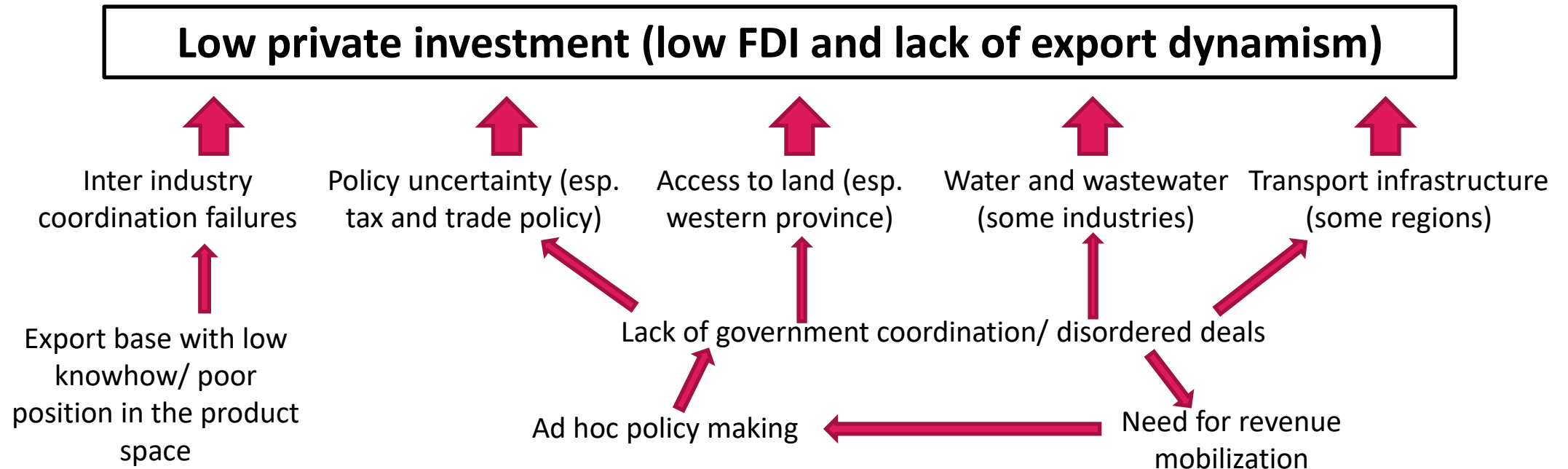
# Summary of key constraints

## Most binding constraints

- Coordination failures
- Access to land
- Policy uncertainty (especially tax and trade)
- Water and wastewater (some industries)
- Transportations (some regions: Colombo & Kandy)

## Non-binding constraints

- Access to finance
- Education
- Health
- Geography
- **Electricity**
- Labor regulations
- Macro-fiscal stability
- Corruptions, courts and crime





The

# SCRABBLE

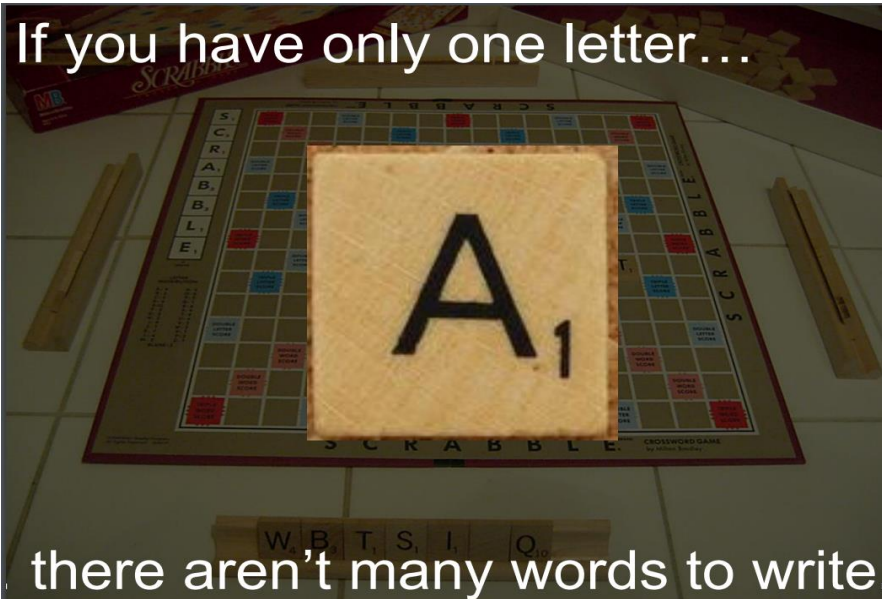


Theory of Economic  
Development...



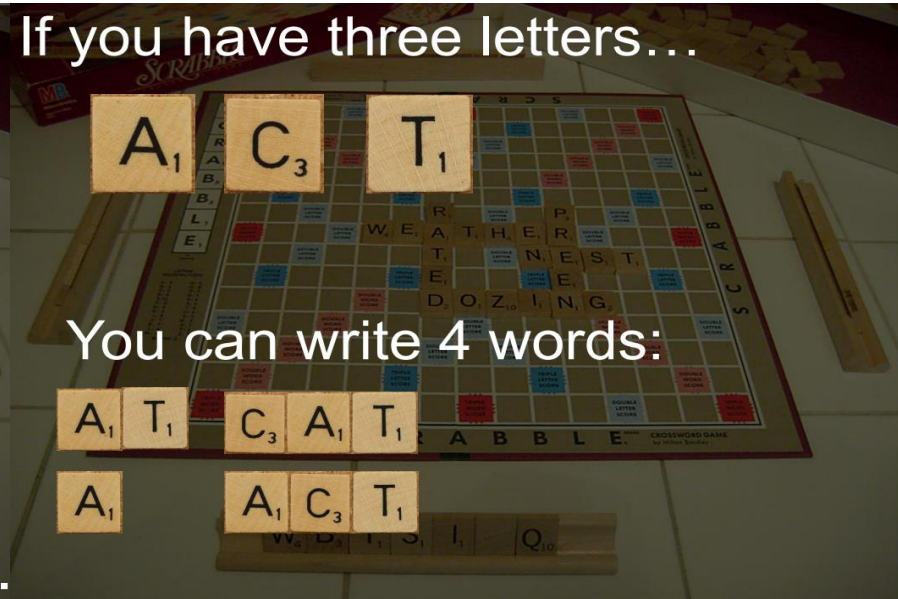
# More complex words are possible if one has more letters

If you have only one letter...



there aren't many words to write.

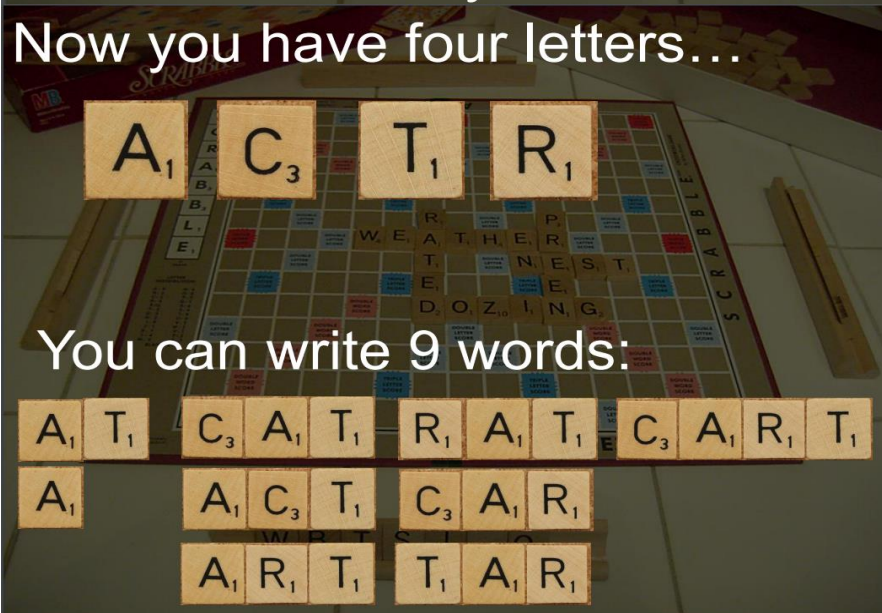
If you have three letters...



You can write 4 words:

ACT, CAT, ACT

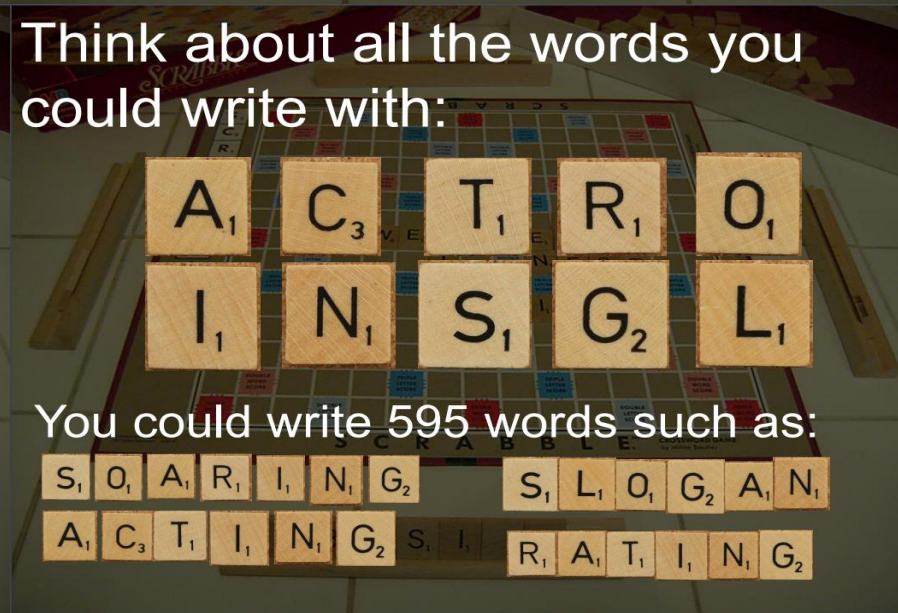
Now you have four letters...



You can write 9 words:

ACT, CAT, RACT, CAR, ACT, CAT, CAR, ART, TART, ART

Think about all the words you could write with:

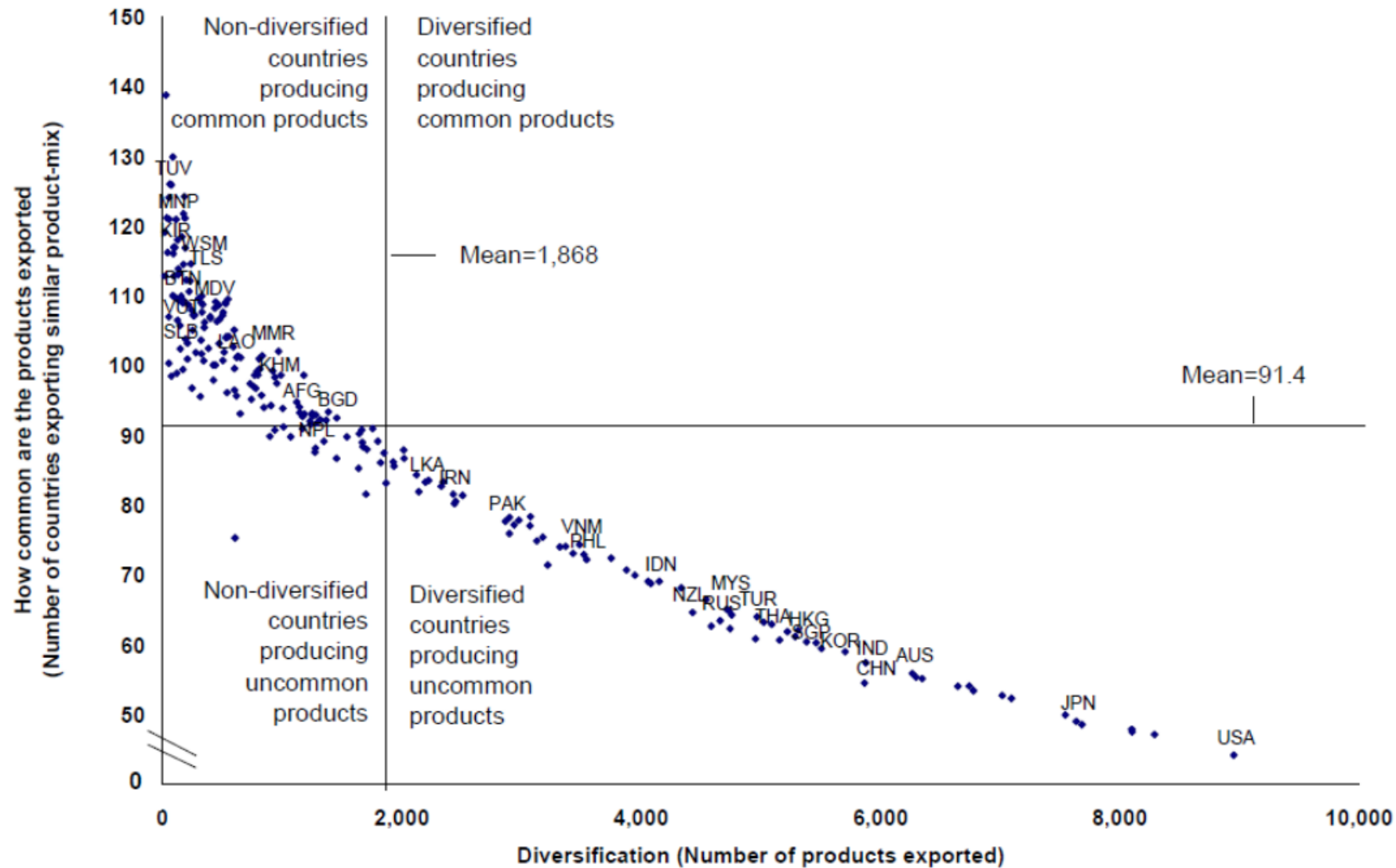


You could write 595 words such as:

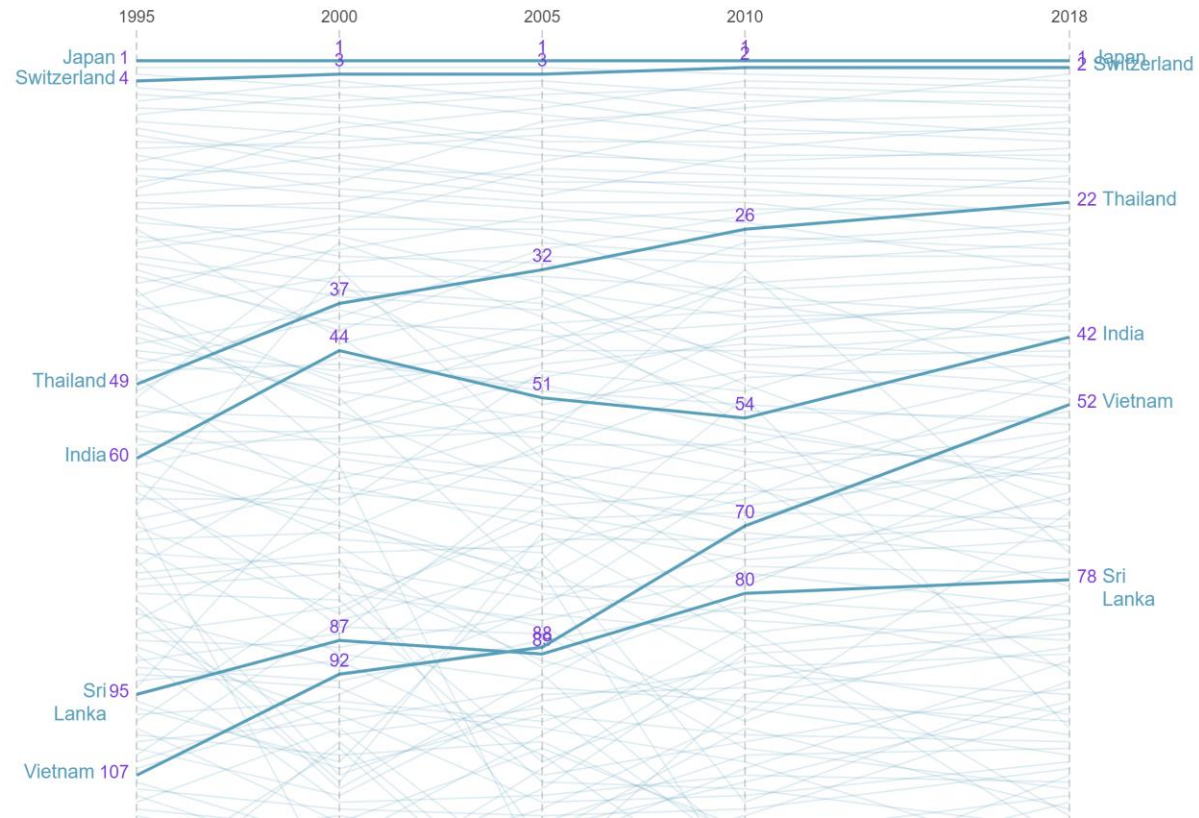
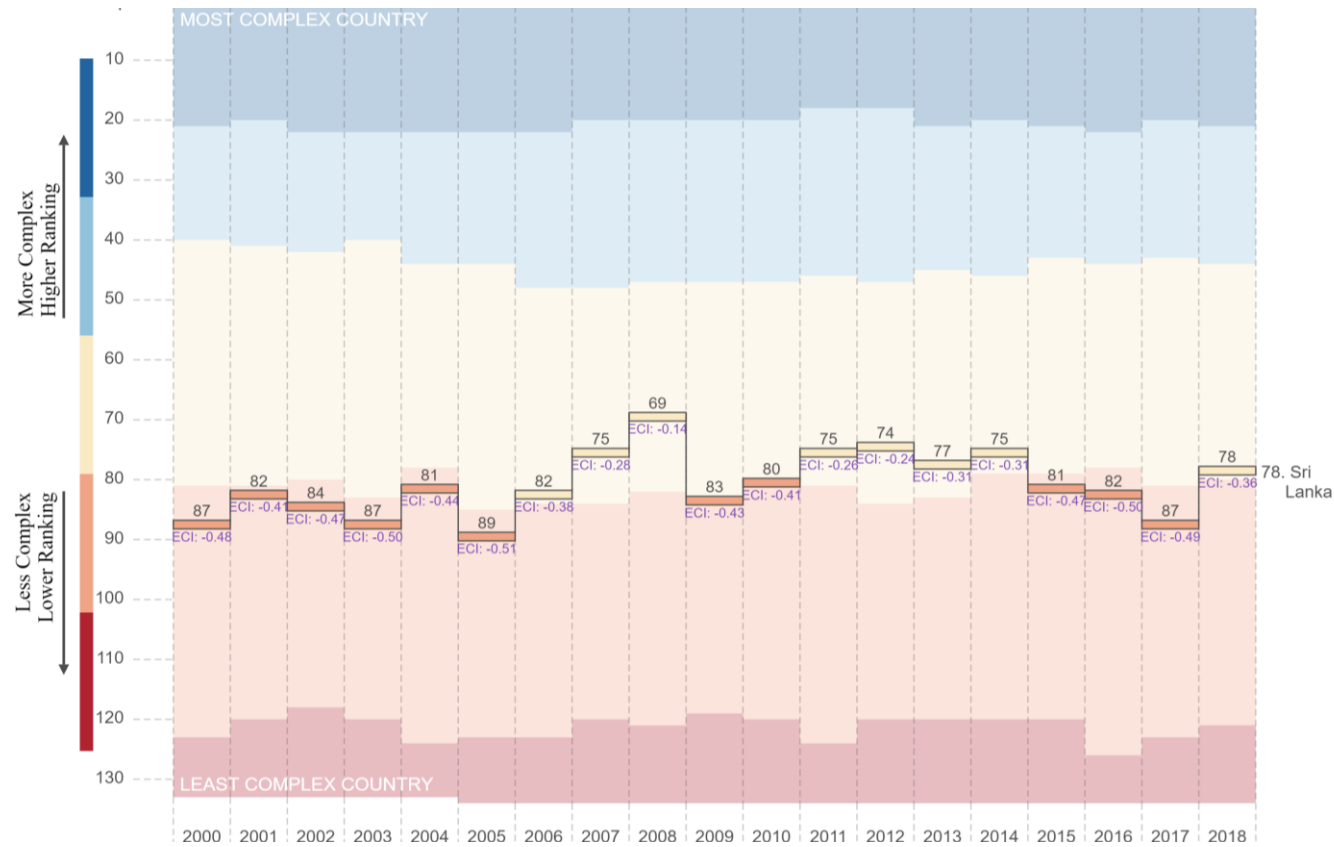
SLOGAN, RATING



# Diversification and ubiquity - 2009



# Sri Lanka Complexity Rankings 1995 - 2018



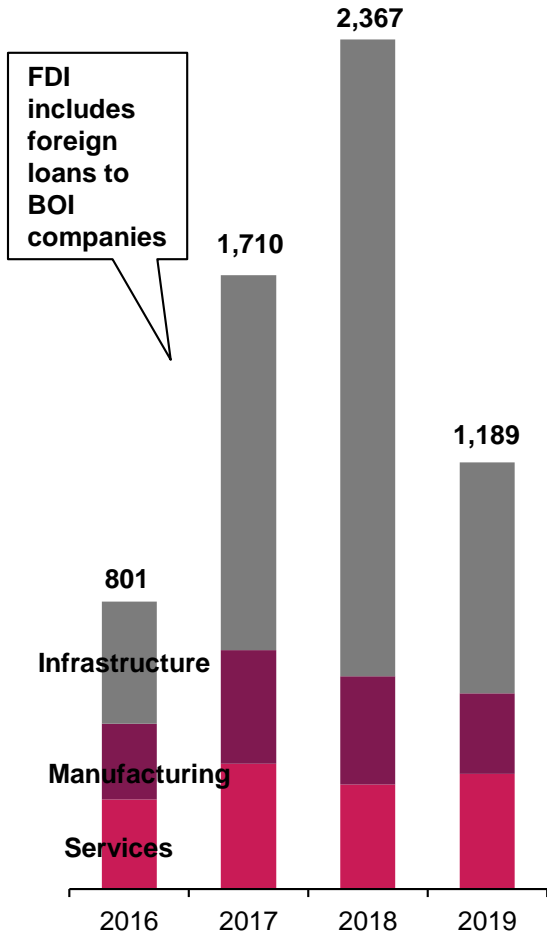
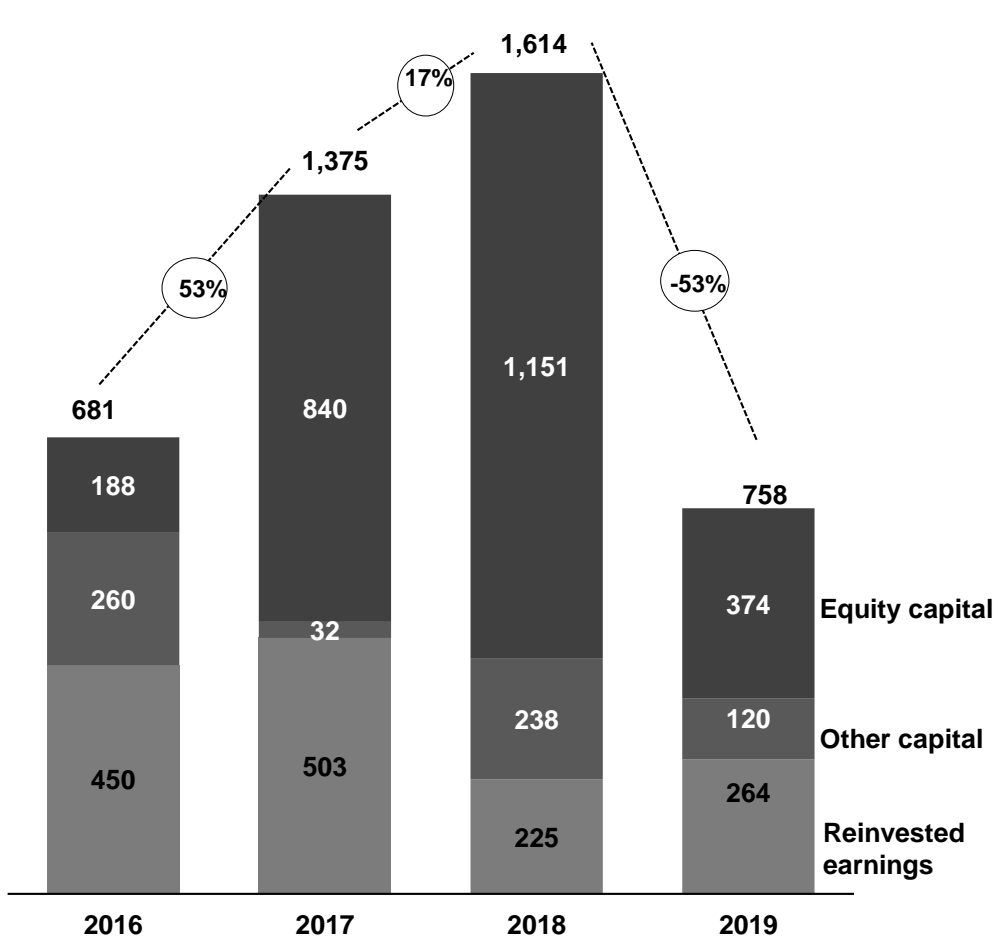
# FDI gaining traction- FDI during 1H-2018 saw a two-fold increase...

FDI fell sharply in 2019 following the political coup and Easter bombings

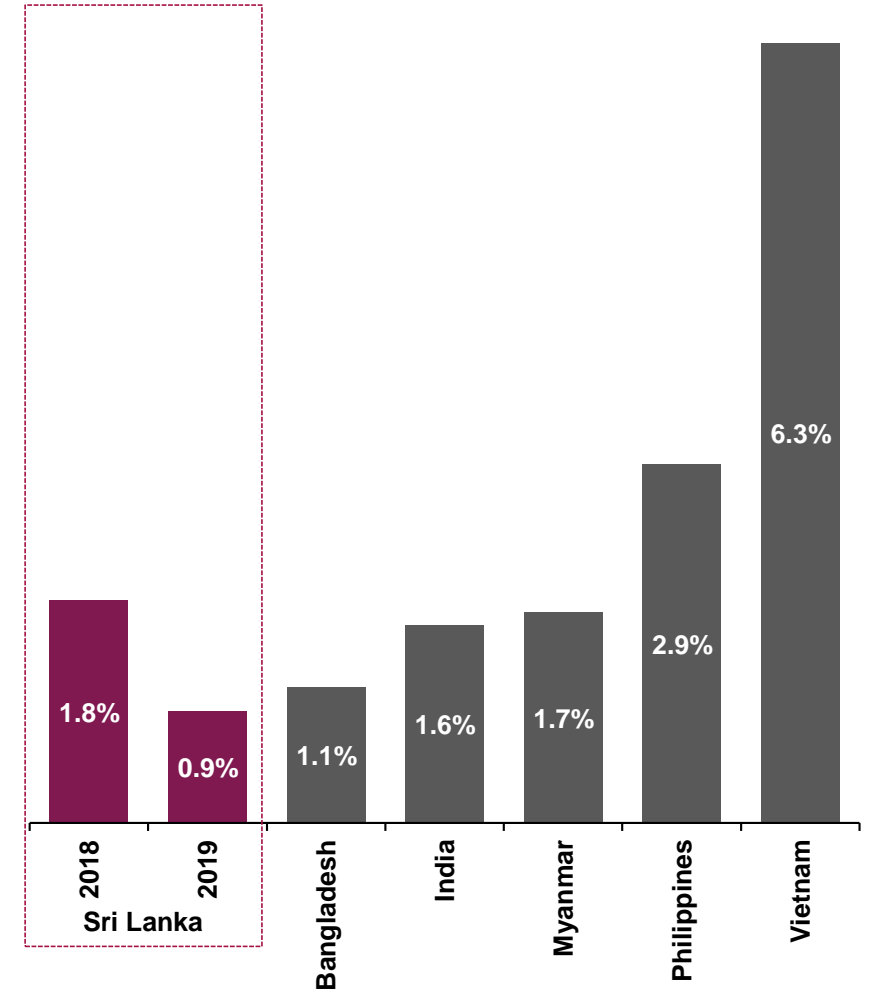
USD mn

However, Sri Lanka ranks amongst the lowest relative to its peers

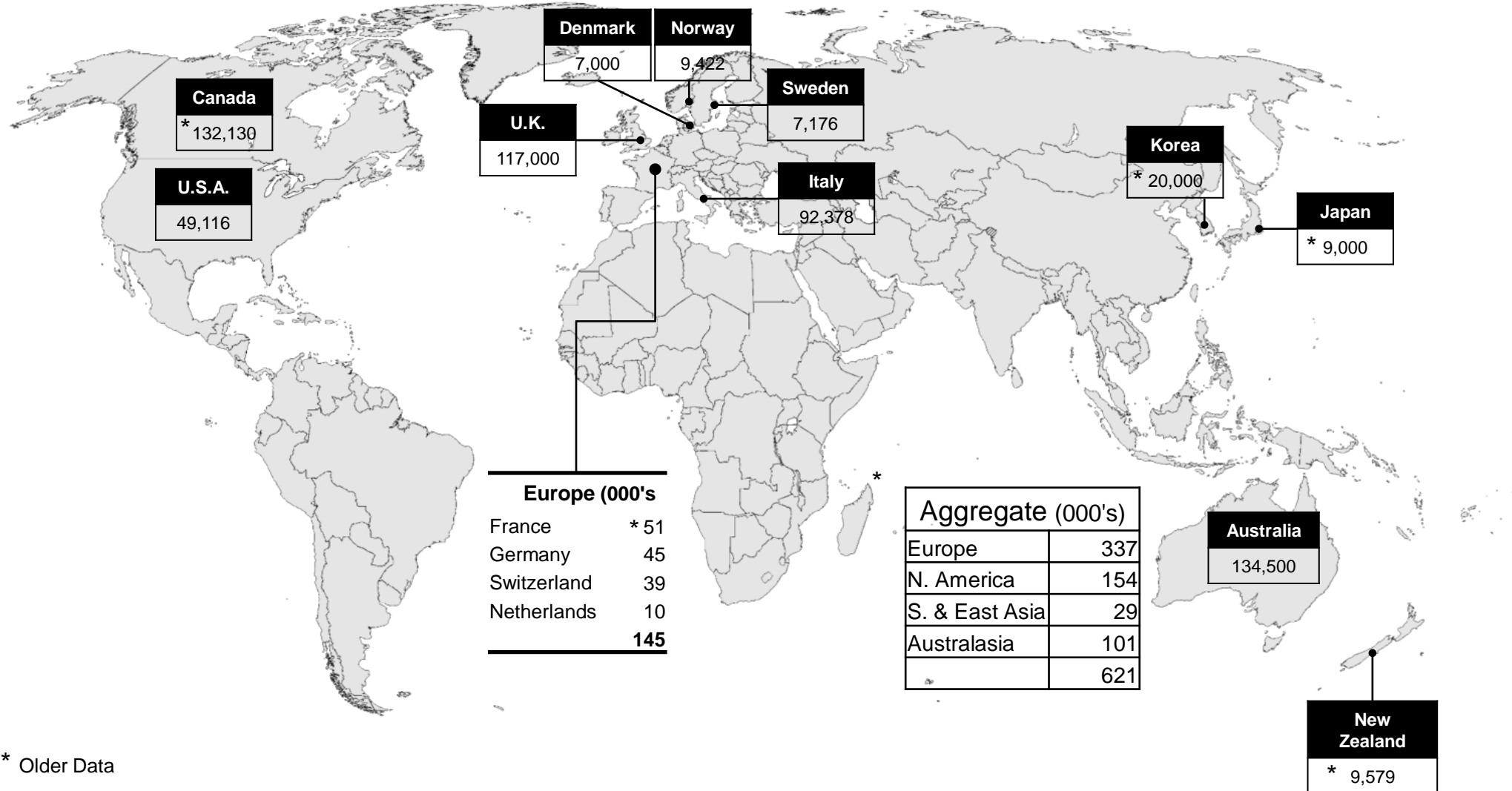
% of GDP



FDI includes foreign loans to BOI companies



# Sri Lankan Diaspora in OECD countries...a source of tacit knowledge



\* Older Data

Source: OECD Migrant database <http://stats.oecd.org/Index.aspx?DatasetCode=MIG>

# FACTOID

(from Klenow and Hsieh, 2011)

- In the US the average employee works in an organization with 100 workers
- India has 4 times the population of the US
- $100 * 4 = 400?$
- In India, the number is 4
- How many personbytes can you embed in a product in a firm of 4 people?
- What does it say about the productivity of micro-enterprises and the informal sector?



# Big business



intimissimi



# Small business

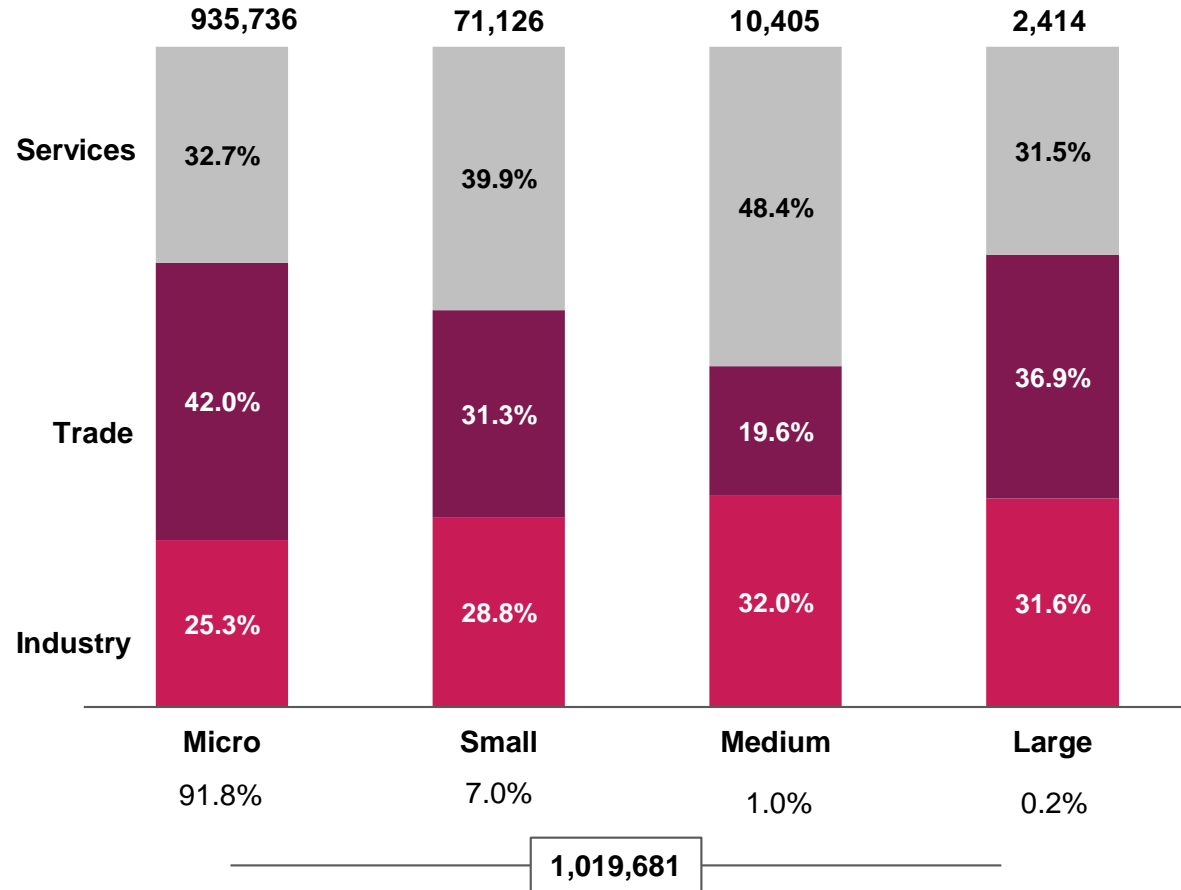


# Most people are engaged in Micro, small and medium enterprises

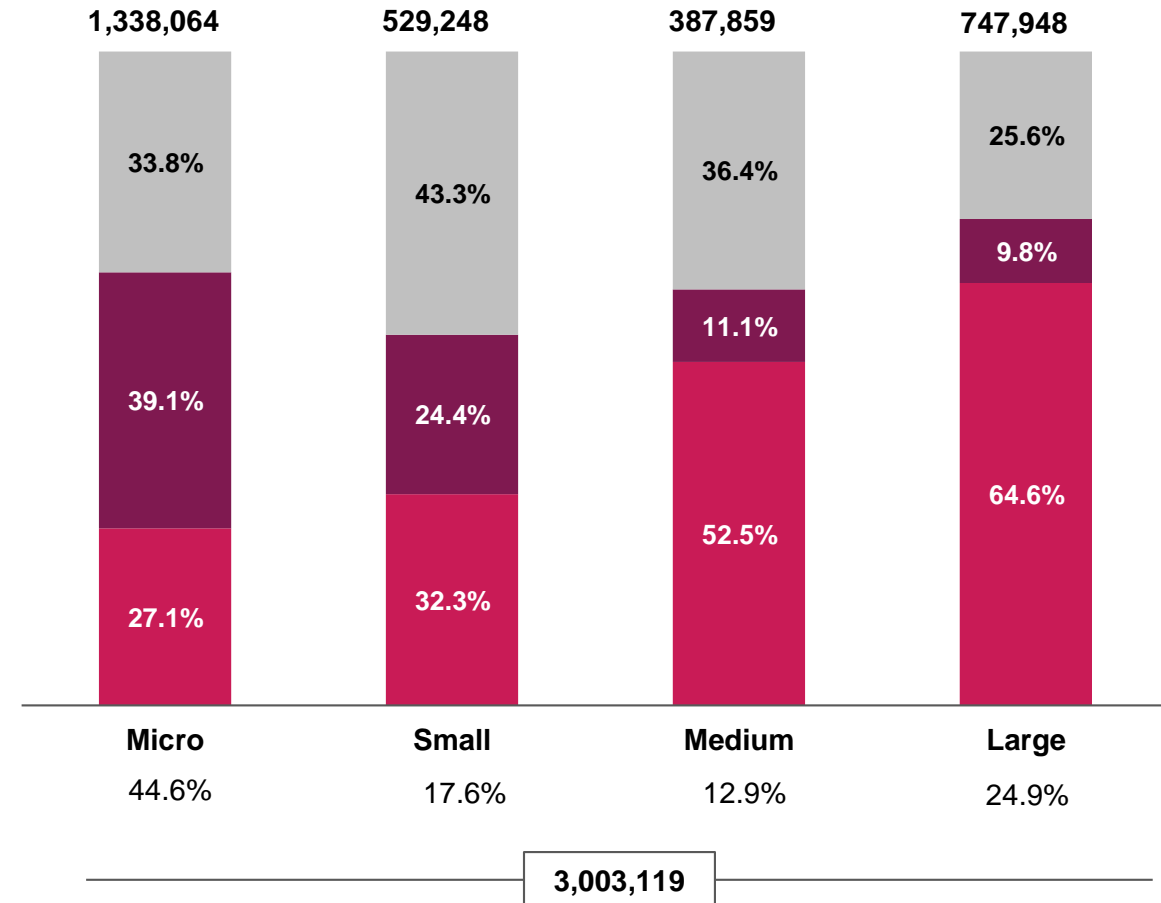
**A significant proportion of all establishments are MSMEs**  
*Nos.; % of total*

**MSMEs generate 75% of total employment**  
*Nos.; % of total*

## Establishments



## Employment



# What do SMEs need?



**Mobility**



**Communication**



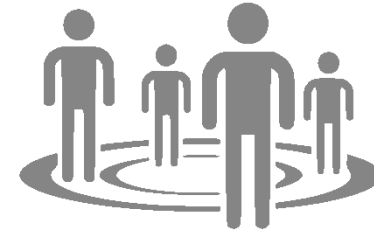
**Management Know-How**



**Access to Credit**



**Technical Expertise**



**Market Access**



**Electronic Payments**



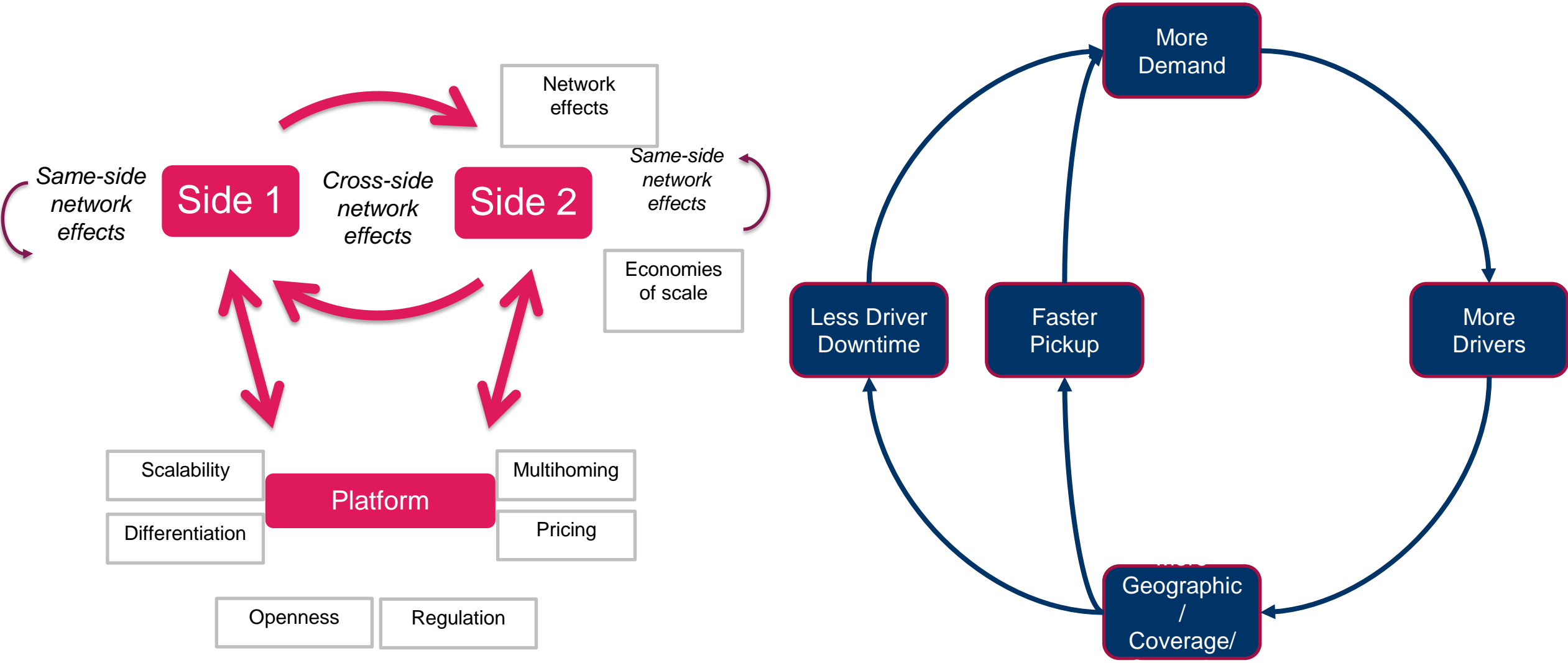
**Regulation**



**Property Rights**



# Illustration of network effect in a two sided marketplace....taxi hailing



# Agricultural crop productivity

## Coconut

Arable land (2014) - **20.6%**  
Domestic production (Mn. Nuts) - **2,623**  
Domestic consumption (Mn. Nuts) - **1,794**  
Avg. number of nuts/tree (per year) - **62**  
Best practice (Ha. Kg.) - **100**

## Rubber

Arable land (2014) - **12.2%**  
Domestic production (Mn. Kg.) - **82.6**  
Domestic usage (Mn. Kg.) - **58.6**  
Average yield (Ha. Kg.) - **800**  
Best practice (Ha. Kg.) - **2000**

## Paddy

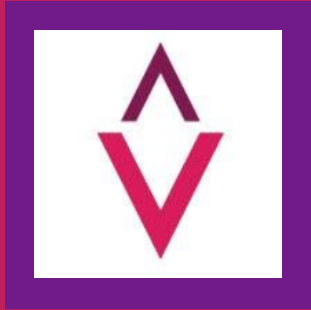
Arable land (2014) - **32.1%**  
Average yield (Ha. Kg.) - **4,443**  
Best practice (Ha. Kg.) - **6,000**

## Tea

Arable land (2014) - **10.7%**  
Domestic production (Mn. Kgs) - **304**  
Exports volume (Mn. MT) - **282**  
Export value (Mn. LKR) - **231,750**  
Average yield (Ha. Kg.) - **800-850**  
Best practice (Ha. Kg.) - **2,500**

## Dairy

Number of milking cows - **423,580**  
Fresh milk production (Liters Mn.) - **477**  
Avg. milk production (Liters per cow per day) - **5**  
Best Practice (Liters per cow per day) - **25**



Thank you