Macro Economics

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Ministry of Finance

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Agenda

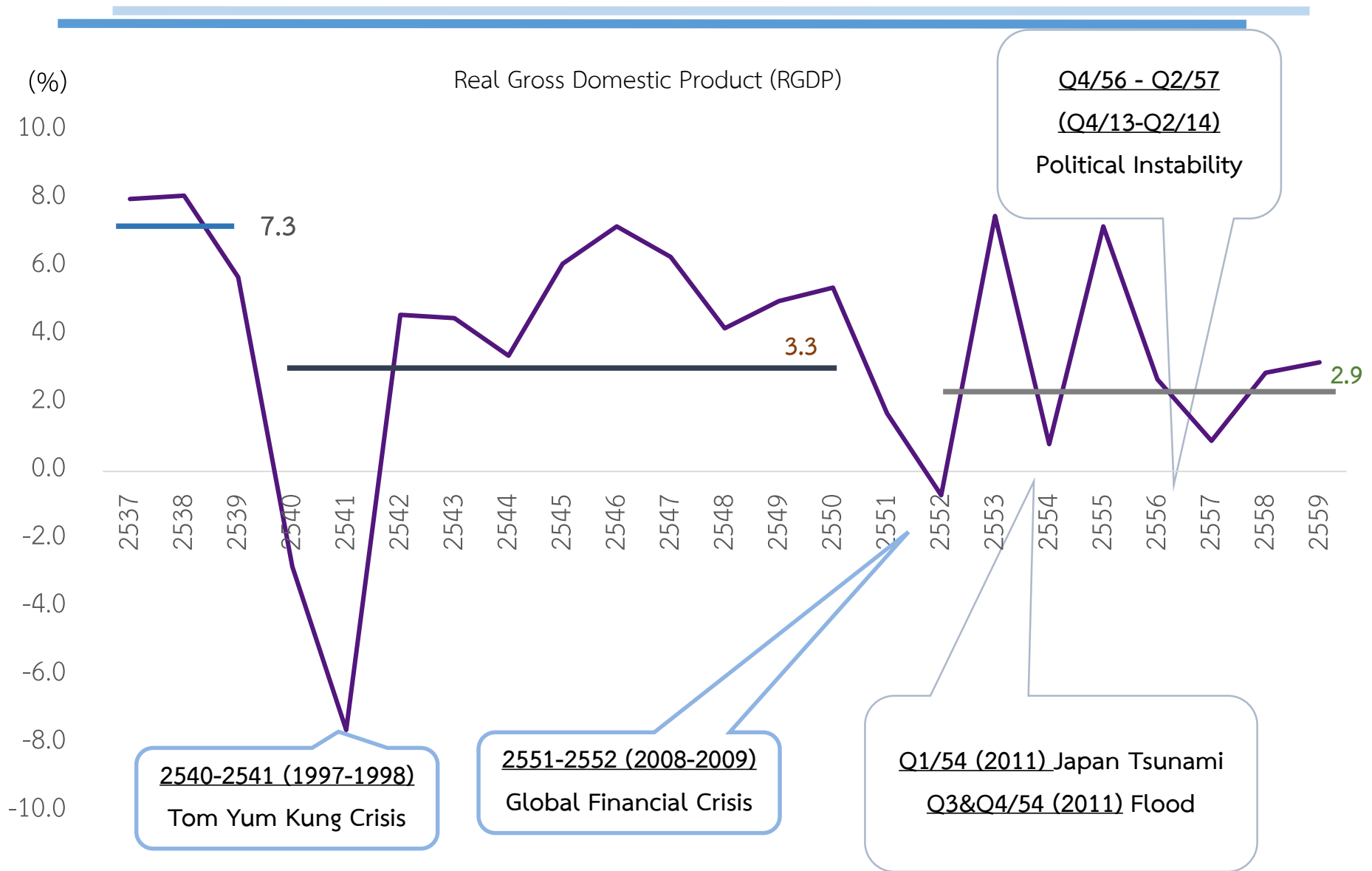 Thai Economy

 Global Economy

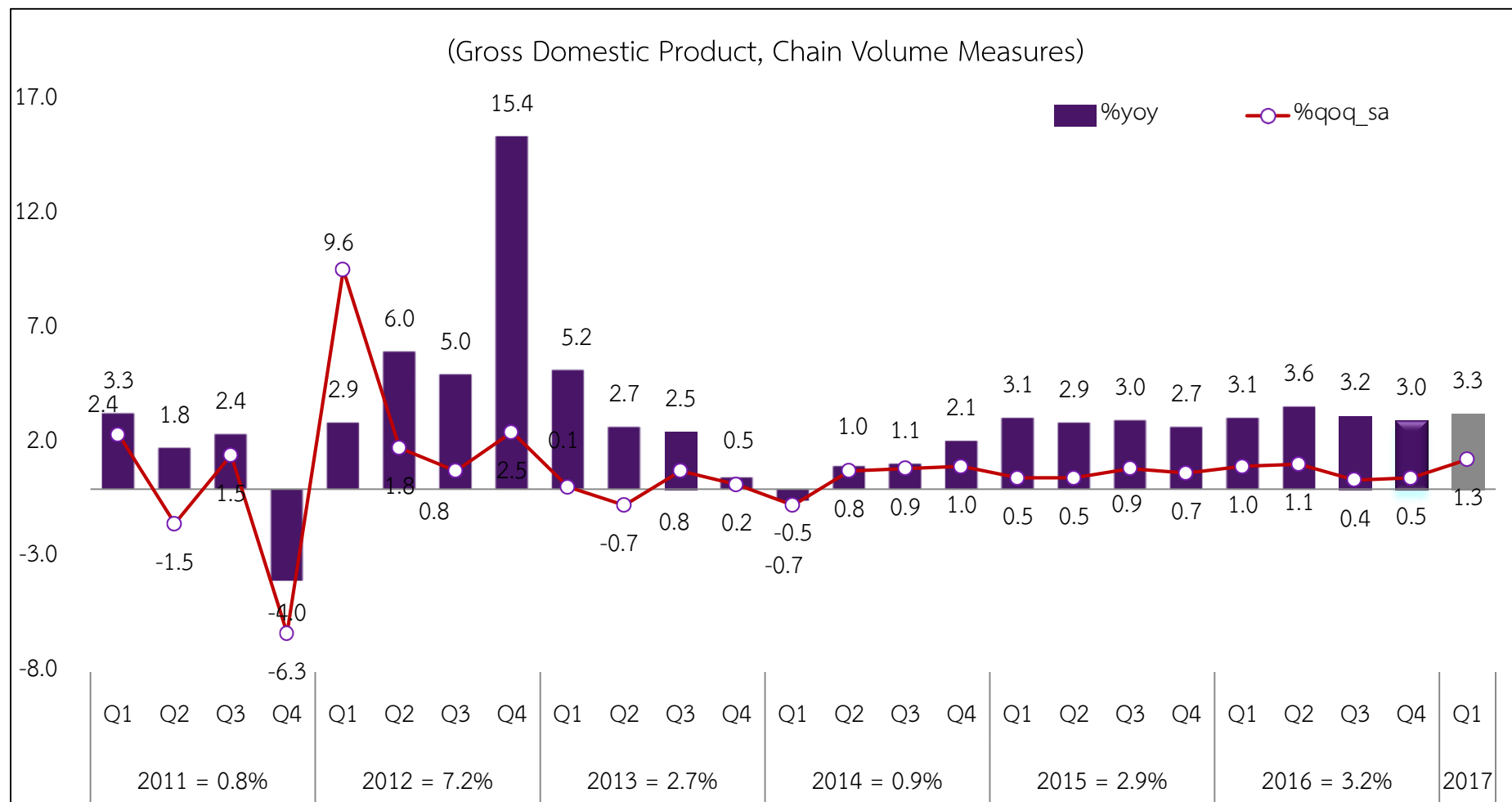 Mega Trend

 Government Policies

Thai Economy

Thai Economy

Real Gross Domestic Product (RGDP)

(%)

Q4/56 - Q2/57
(Q4/13-Q2/14)
Political Instability

7.3

3.3

2.9

2540-2541 (1997-1998)
Tom Yum Kung Crisis

2551-2552 (2008-2009)
Global Financial Crisis

Q1/54 (2011) Japan Tsunami
Q3&Q4/54 (2011) Flood

Source: Office of the National Economic and Social Development Board and calculated by the Fiscal Policy Office
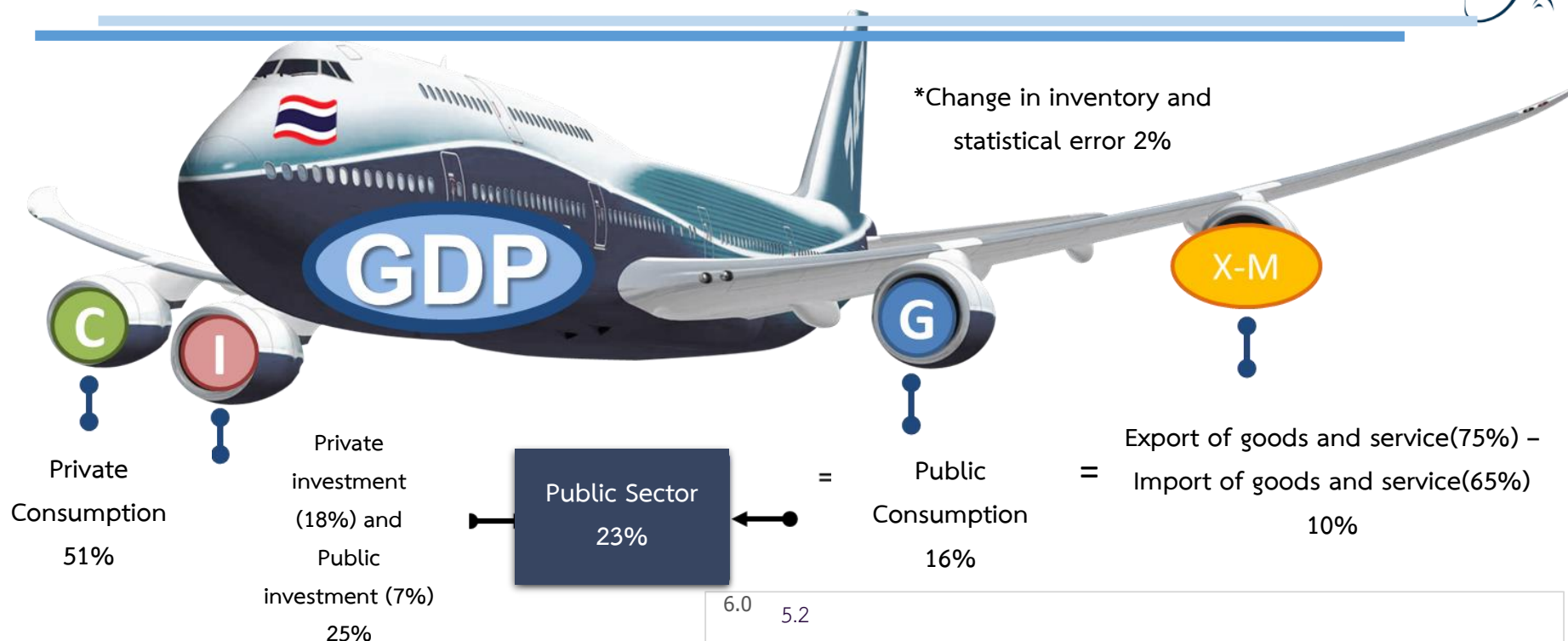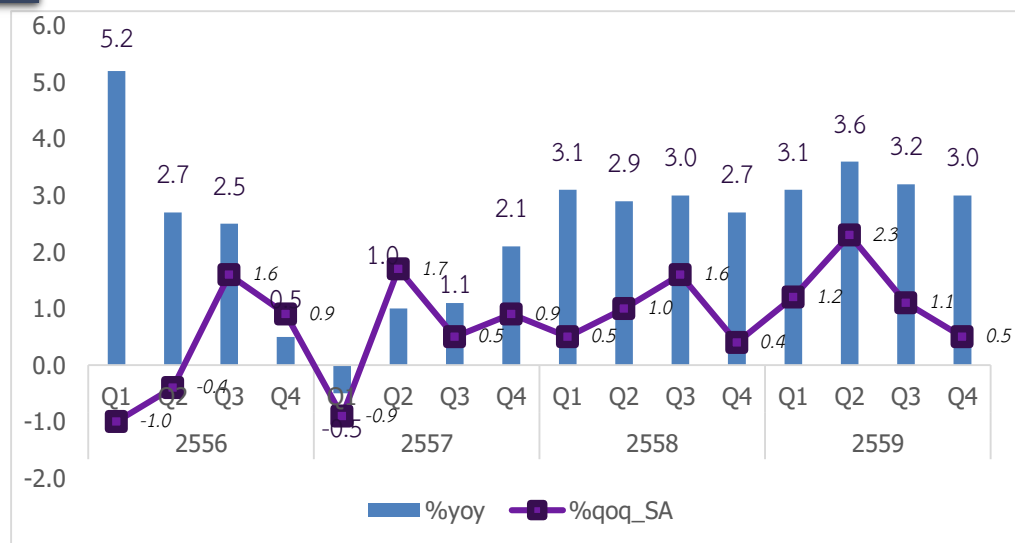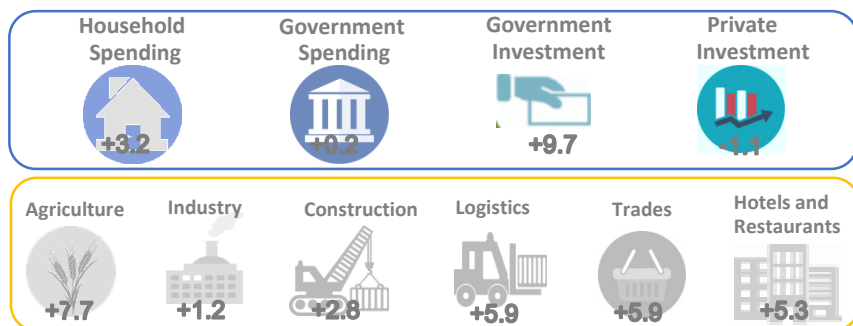
Thai Economy in Q1/2017

Real GDP in Q1/2017 grew by 3.3% (yoy). The main drivers of growth were household spending, government spending and export of goods and service.

(Gross Domestic Product, Chain Volume Measures)

Source : Office of the National Economic and Social Development Board

Structure and Current State of Thai Economy

*Change in inventory and statistical error 2%

GDP

C — Private Consumption 51%

I — Private investment (18%) and Public investment (7%) 25%

Public Sector 23% = G — Public Consumption 16%

X-M = Export of goods and service(75%) – Import of goods and service(65%) 10%

Economic growth rate in Q1/2017

Household Spending	Government Spending	Government Investment	Private Investment
+3.2	+0.2	+9.7	-1.1

Agriculture	Industry	Construction	Logistics	Trades	Hotels and Restaurants
+7.7	+1.2	+2.8	+5.9	+5.9	+5.3

Source : Office of the National Economic and Social Development Board

Chart data (%yoy bars):
2556: Q1 5.2, Q2 2.7, Q3 2.5, Q4 (2.1)
2557: Q1 -0.5, Q2 1.0, Q3 1.1, Q4 2.1
2558: Q1 3.1, Q2 2.9, Q3 3.0, Q4 2.7
2559: Q1 3.1, Q2 3.6, Q3 3.2, Q4 3.0

%qoq_SA line: -1.0, -0.4, 1.6, 0.9, -0.9, 1.7, 0.5, 0.9, 0.5, 1.0, 1.6, 0.4, 1.2, 2.3, 1.1, 0.5
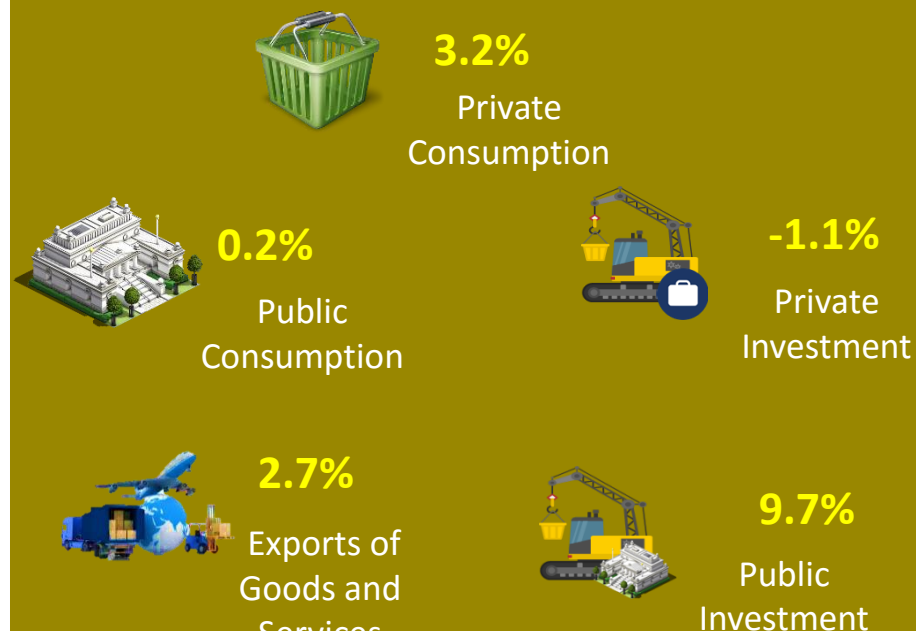
Legend: %yoy, %qoq_SA

Source : Office of the National Economic and Social Development Board and calculated by the Fiscal Policy Office

Thai Economy in Q1/2017 : Demand Side

Economic growth rate : Expenditure Side

Growth (% YOY)	2558	2559	2559				2560
			Q1	Q2	Q3	Q4	Q1
Private Consumption	2.2	3.1	2.8	4.0	3.0	2.5	3.2
Public Consumption	3.0	1.7	9.1	2.4	-5.2	1.8	0.2
Private Investment	-2.2	0.4	2.4	0.3	-0.8	-0.4	-1.1
Public Investment	29.3	9.9	12.9	12.8	5.8	8.6	9.7
Export of Goods and Services	0.7	2.1	4.8	1.0	1.4	1.1	2.7
Import of Goods and Services	0.0	-1.4	-5.2	-2.5	-1.1	3.4	6.0
GDP	2.9	3.2	3.1	3.6	3.2	3.0	3.3

GDP Growth by Sectors in Q1/2016

3.2% Private Consumption

0.2% Public Consumption

-1.1% Private Investment

2.7% Exports of Goods and Services

9.7% Public Investment

Thai Economy in Q1/2017 : Supply Side

Economic growth rate : Production Side

Growth (% YOY)	2558	2559	2559				2560
			Q1	Q2	Q3	Q4	Q1
Agriculture	-5.7	0.6	-2.0	-0.4	0.9	3.0	7.7
Industry	1.5	1.4	-0.2	2.2	1.6	2.2	1.2
Retail Sales	3.9	5.0	4.6	4.7	5.2	5.6	5.9
Transportation	5.1	5.6	6.4	4.2	6.5	5.2	5.9
Real Estate	1.9	1.8	2.2	2.1	1.1	1.9	3.3
Construction	17.0	8.3	11.9	9.9	5.2	6.1	2.8
Hotels and Restaurants	14.6	10.3	12.3	10.8	13.5	4.9	5.3
GDP	2.9	3.2	3.1	3.6	3.2	3.0	3.3

GDP Growth by Sectors in Q1/2016

7.7% Agriculture

1.2% Industry

5.9% Trades

5.3% Hotels & Restaurants

5.9% Transportation

3.3% Real Estate

2.8% Construction
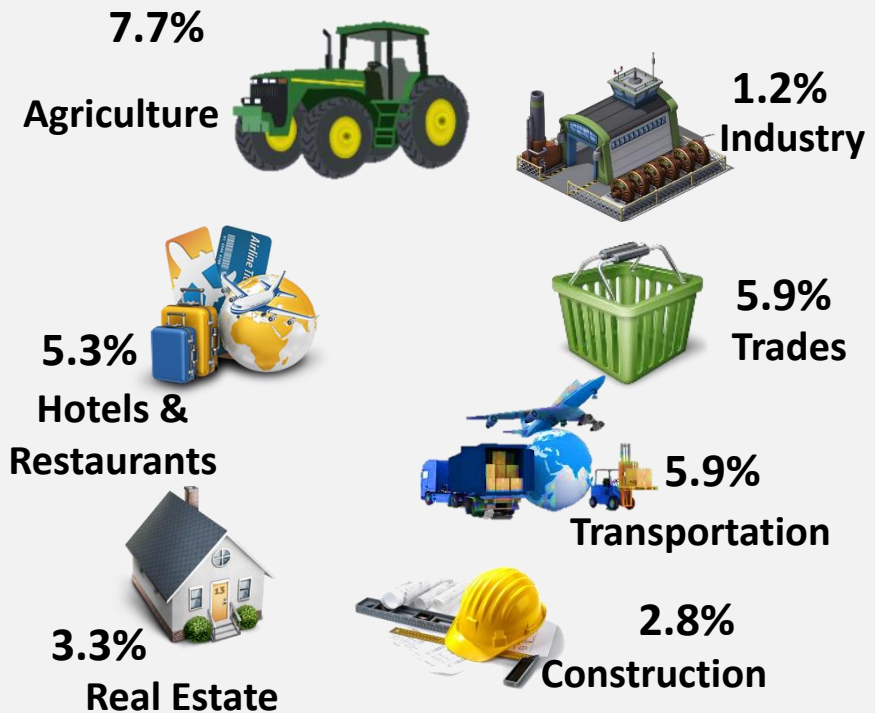
Thai Economic Development : Investment

Legend:
- Share of Private investment to GDP
- Share of Public Investment to GDP

Year	Share of Private investment to GDP	Share of Public Investment to GDP
2536	39.4%	8.5%
2537	40%	10%
2538	41%	10%
2539	40%	12%
2540	28%	13%
2541	14%	10%
2542	13%	9%
2543	14%	8%
2544	15%	7%
2545	15%	7%
2546	17%	6%
2547	19%	6%
2548	21%	7%
2549	20%	7%
2550	19%	7%
2551	20%	6%
2552	17%	7%
2553	18%	6%
2554	20%	5%
2555	21%	5%
2556	20%	5%
2557	19%	5%
2558	19%	6%
2559	18.0%	6.6%

Structure of Thai Exports

% of total export value
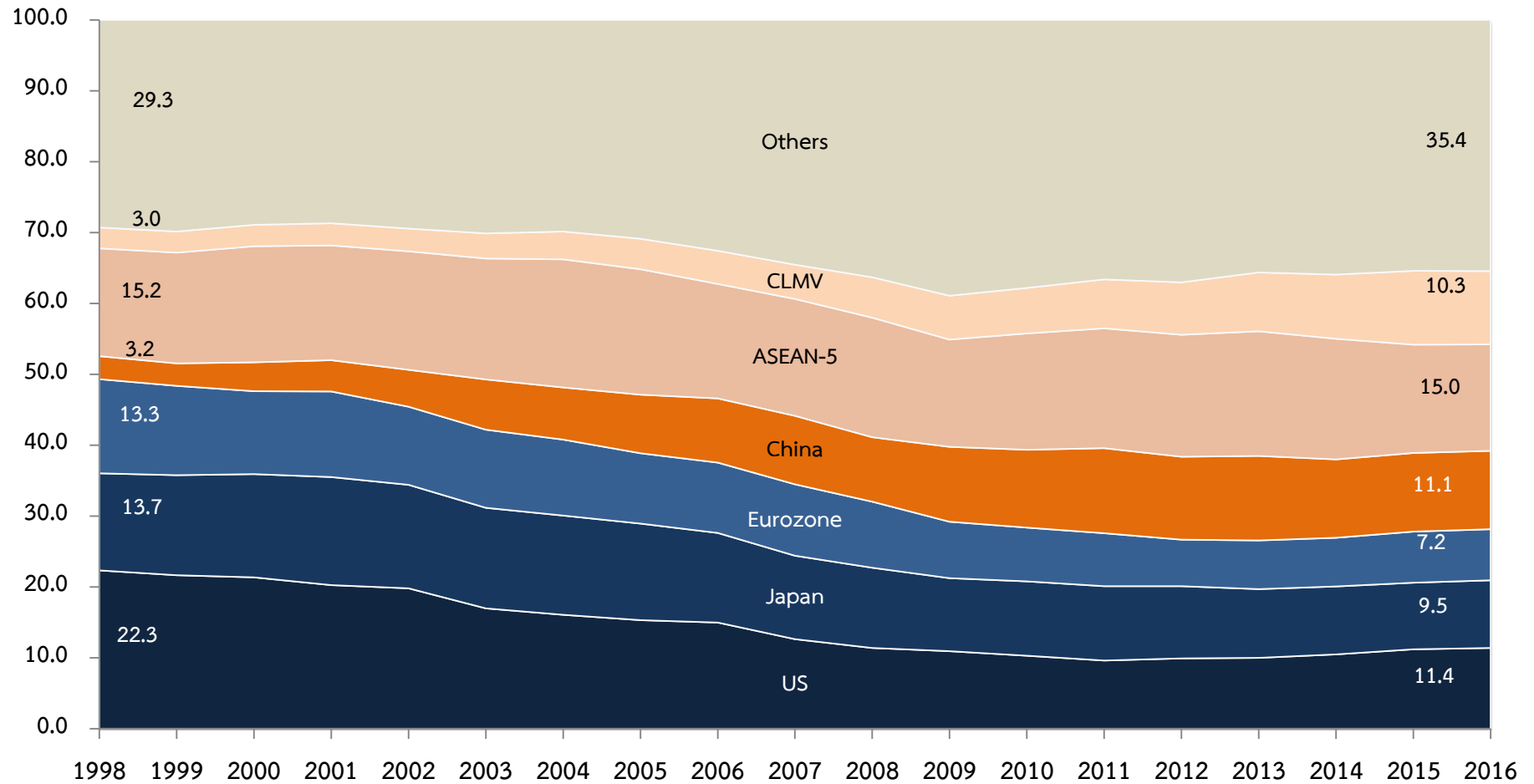
World Competitiveness Ranking 2017

Thailand's Competitiveness ranking : 4 Factors

The Competitiveness Factors	2016	2017
1. Economic Performance	13	10
2. Government Efficiency	23	20
3. Business Efficiency	25	25
4. Infrastructure	49	49

Sub-Factors	2016	2017
Basic	35	34
Technological	42	36
Scientific	47	48
Health and Environment	52	57
Education	52	54

World Competitiveness Ranking in ASEAN

Country		Ranks (2017)	Ranks (2016)	Change	
Singapore		3	4	+1	⬆
Malaysia		24	19	-5	⬇
Thailand		27	28	+1	⬆
Philippines		41	42	+1	⬆
Indonesia		42	48	+6	⬆

Although Thailand's ranking for scientific sub-factor is relatively low, the indicators related to the **investment in R&D and researchers have improved in every factor**, especially the investment in R&D (+4 ranks), Expenditure in R&D of Business Sector/GDP (+10 ranks), and Innovation Capacity (+9 ranks).

Source : IMD World Competitiveness Center

Global Economy

Main Trading Partners' Economies

US

GDP +2.0% (Q1/17)
+1.6% (2016)

Cp
Ip
Cg+Ig
EX

⬆ Q2 Indicators - Strong

CCI 117.9 (May-17)
PMI อุตสาหกรรม 54.9 (May-17)
ว่างงาน 4.3% (May-17)

Japan

GDP +1.3% (Q1/17)
+1.0% (2016)

Cp
Ip
Cg, Ig
EX

⬆ Q2 Indicators - Recovering

ส่งออก +7.5% (Apr-17)
CCI 43.5 (2M/Q2)
นักท่องเที่ยว +23.9% (Apr-17)
PMI อุตสาหกรรม 52.9 (2M/Q2)

Eurozone

GDP +1.9% (Q1/17)
+1.7% (2016)

Cp
Ip + Ig
Cg
EX

⬆ Q2 Indicators - Recovering

CCI -3.5 (2M/Q2)
PMI อุตสาหกรรม 56.9 (2M/Q2)
PMI บริการ 56.4 (Apr-17)

China

GDP +6.9% (Q1/17)
+6.7% (2016)

2017 Growth target
🎯 > 6.5

↔ Q2 Indicators – Slightly Slow Down from Q1

ส่งออก 4.2% (Apr-17)
PMI อุตสาหกรรม 52.1 (2M/Q2)
PMI บริการ 51.5 (Apr-17)

15 Trading Partners – Economic Forecast

15-Country Forecast

	As of Jan 2017				As of Apr 2017		
4.1	3.7	3.7	3.8	3.6	3.4	3.4	3.5
2011	2012	2013	2014	2015	2016	2017f	
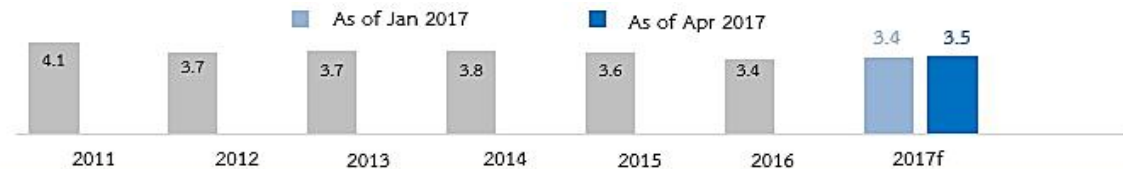
2017

USA
"Strong economic indicators and stimulus package"

Eurozone
"Gradually recover"

Hong Kong
"Stronger export and economic confidence"

Australia
"Stronger export"

Vietnam
"Lower inflation and strong production side"

Singapore
"PMI increased for both industrial and service industries"

Taiwan
"Stronger export and production"

China
Japan
Malaysia
Indonesia
UK
South Korea
India
Philippines

Credit Picture: freepik.com, dreamstale.com, thenounproject

Main Trading Partners: GDP Forecast 2017

Global Economic Outlook	2014	2015	2016					2017	2017F	
			Q1	Q2	Q3	Q4	YTD	Q1	IMF Apr 17	FPO Apr 17
15 Countries (76.3%)	3.75	3.64	3.17	3.29	3.37	3.69	3.39	3.70	3.61	3.51
1.United States (11.4%)	2.4	2.6	1.6	1.3	1.7	2.0	1.6	2.0	2.3	2.4
2.China (11.1%)	7.3	6.9	6.7	6.7	6.7	6.8	6.7	6.9	6.6	6.5
3.Japan (9.6%)	0.3	1.2	0.4	0.9	1.1	1.7	1.0	1.3	1.2	1.4
4.Eurozone (7.2%)	1.2	1.9	1.7	1.6	1.8	1.8	1.7	1.9	1.7	1.7
5.Hong Kong (5.3%)	2.8	2.4	1.0	1.7	2.0	3.2	2.0	4.3	2.4	2.1
6.Australia (4.8%)	2.8	2.4	2.5	3.1	1.9	2.4	2.5	1.7	3.1	2.5
7.Malaysia (4.5%)	6.0	5.0	4.2	4.0	4.3	4.5	4.2	5.6	4.5	4.4
8.Vietnam (4.4%)	6.0	6.7	5.5	5.8	6.6	6.7	6.2	5.1	6.5	6.3
9.Singapore (3.8%)	3.3	2.0	1.9	1.9	1.2	2.9	2.0	2.7	2.2	2.0
10.Indonesia (3.8%)	5.0	4.8	4.9	5.2	5.0	4.9	5.0	5.0	5.1	5.1
11.Philippines (3.0%)	6.2	5.9	6.8	7.0	7.0	6.6	6.8	6.4	6.8	6.6
12.India (2.4%)	6.9	7.5	8.6	7.2	7.4	7.0	7.9	6.1	7.2	6.8
13.South Korea (1.9%)	3.3	2.6	2.8	3.3	2.6	2.4	2.8	2.9	2.7	2.6
14.United Kingdom (1.8%)	3.1	2.2	1.6	1.7	2.0	1.9	1.8	2.0	2.0	1.6
15.Taiwan (1.6%)	4.0	0.7	-0.2	1.1	2.1	2.8	1.5	2.6	1.7	1.8

Trump's Trade Policy

Trade Balance of the US main trading partners

(Average of 2012-2016)

China (338 bn USD)

Japan (71 bn USD)

Germany (68 bn USD)

Mexico (59 bn USD)

Ireland (29 bn USD)

Italy (25 bn USD)

Vietnam (25 bn USD)

Canada (24 bn USD)

South Korea (24 bn USD)

India (22 bn USD)

Thailand (16 bn USD)

Withdraw from Trans-Pacific Partnership (TPP) – in line with the protectionism policies.

Trump's Tax Policy

"GOALS"

THE WHITE HOUSE
WASHINGTON

- Simplify the burdensome tax code
- Provide tax relief to American families
- Lower the corporate income tax rate
- Grow the economy and create jobs

Individual Reform	Simplification	Business Reform
• Reducing 7 tax brackets to 3 tax brackets of 10%, 25% and 35% • Doubling the standard deduction • Providing tax relief for families with child and dependent care expenses	• Eliminate targeted tax breaks that mainly benefit the wealthiest taxpayers • Protect the home ownership and charitable gift tax deductions • Repeal the Alternative Minimum Tax and Death Tax	• 15% corporate income tax rate • Territorial tax system to level the playing field for American companies • One-time tax on trillions of dollars held overseas • Eliminate tax breaks for special interests

UK early election 2017

1 18 April 2017: Announce early UK election which would be on 8 June 2017 (Earlier than original schedule in 2020)

After the announcement, the pound sterling appreciated against the US dollar by 2.2% from the previous day, the highest point in 6 months.

5 Dissolve the parliament on 3 May 2017

6 UK Election on 8 June 2017

19 April 2017: Parliament vote for early election (522 to 13 Votes)

4

Other 16%

Liberal Democrats 12%

2

Conservative 48%

Labour 24%

Receive 2 out of 3 majority votes from parliament members

Poll from YouGov Survey

Or, if a motion of no confidence is passed and no alternative government is confirmed by the Commons within 14 days

Early election is abide by the Fixed-term Parliaments Act 2011 (can be done in 2 cases)

3

Seats
318

326 Seats needed for majority

262

Results

35

12

10

13

| Con | -13 Change | Lab | +32 | SNP Scotland | -19 | Lib D | +3 | DUP N Ireland | +2 | Others |

Impacts due to crisis on the Korean Peninsula

Long term

(2-6 months)

Increase risks of using nuclear weapons which will affect the economy, health and the well-being of the citizens

Economic recession

Medium term

(2-6 months)

World oil price may increase

Trades among countries in Korean Peninsula and Asian region may be ceased, esp. in important shipping areas

Thai exports may be affected which would also impact the economic growth.

Short term

(1-2 months)

Financial sector: This could increase the volatility in the capital market. There may be capital outflow from Asian region to the "safe heaven" region e.g. USA or other safe assets (gold, bond, yen currency)

Tourism sector

Impacts due to crisis on the Korean Peninsula

USA, China, Japan and South Korea are Thailand's main export destinations. Therefore, both exports and economic growth may be affected.

Main Trading Partners	% Share of Thai export (2016)	Value of Thai export 2016 (USD mn)	Value of Thai import 2016 (USD mn)
USA	11.4% (Largest share)	24,495	12,058
China	11.1% (2nd Largest share)	23,810	42,019
Japan	9.6% (3rd Largest share)	20,563	30,678
S. Korea	1.9% (13th Largest share)	4,044	7,273

Mega Trend

4 Important Mega Trend

1 Urbanization

Nowadays, more than half of the world's population are living in urban areas

2 Information Technology (IT)

Rapidly increasing use of IT connection, especially via smart phones

4 Environment

Carbon dioxide emission from economic activities is the main cause of many environmental consequences, such as Elniyo and drought
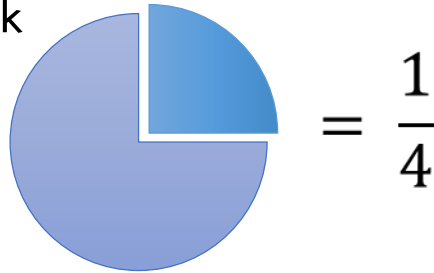
3 Aging Society

Globally, the proportion of the elders to the labor force increases by the rate of 1.03% every year

Thai Internet Usage in The Present Days

Average time spent on the internet usage

45.0 hours/week

6.4 hours/day

$= \dfrac{1}{4}$

Time spent on internet usage (classify by genders)

45.3 hours/week

44.7 hours/week

48.9 hours/week

Time spent on internet usage (classify by areas)

<u>Bangkok</u>

48.1 hours/week

<u>Provinces</u>

44.6 hours/week

Time spent on internet usage (classify by generations)

<u>Gen Z</u>

40.2 hours/week

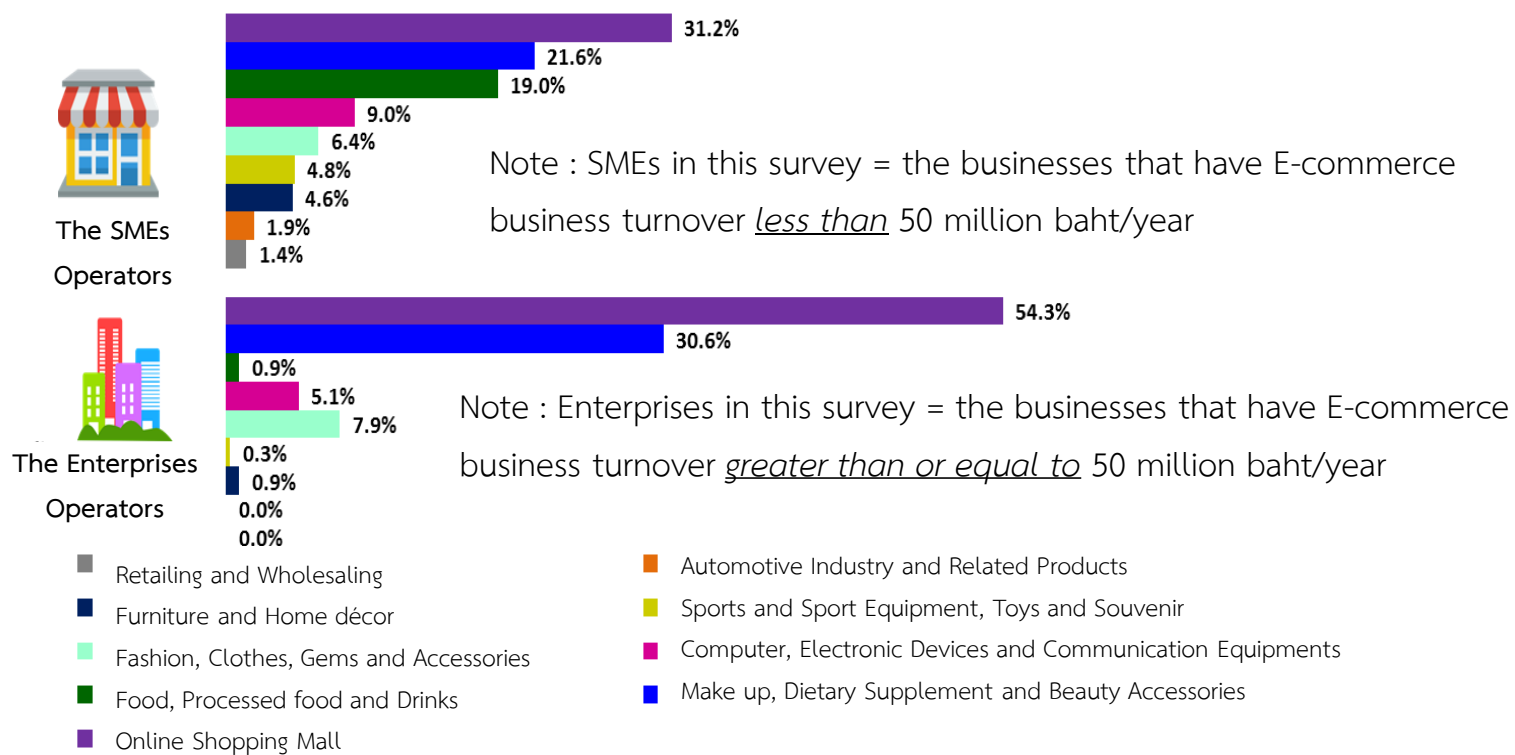<u>Gen Y</u>

53.2 hours/week

<u>Gen X</u>
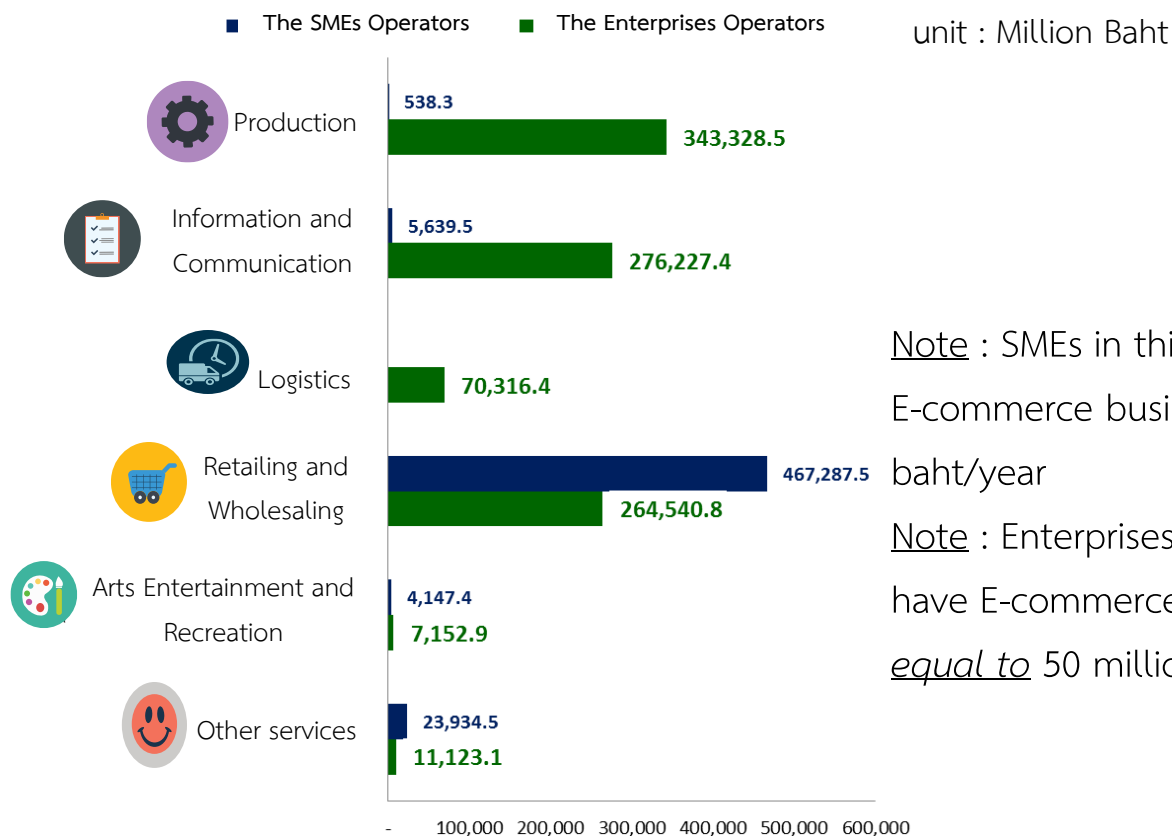
44.3 hours/week

<u>Baby Boomer</u>

31.8 hours/week

E - Commerce

Value of E-commerce in Thailand (%) in 2015 - Classify by Size
(Not included e-Auction)

The SMEs Operators

- 31.2%
- 21.6%
- 19.0%
- 9.0%
- 6.4%
- 4.8%
- 4.6%
- 1.9%
- 1.4%

Note : SMEs in this survey = the businesses that have E-commerce business turnover *less than* 50 million baht/year

The Enterprises Operators

- 54.3%
- 30.6%
- 0.9%
- 5.1%
- 7.9%
- 0.3%
- 0.9%
- 0.0%
- 0.0%

Note : Enterprises in this survey = the businesses that have E-commerce business turnover *greater than or equal to* 50 million baht/year

Legend:
- ▉ Retailing and Wholesaling
- ▉ Furniture and Home décor
- ▉ Fashion, Clothes, Gems and Accessories
- ▉ Food, Processed food and Drinks
- ▉ Online Shopping Mall
- ▉ Automotive Industry and Related Products
- ▉ Sports and Sport Equipment, Toys and Souvenir
- ▉ Computer, Electronic Devices and Communication Equipments
- ▉ Make up, Dietary Supplement and Beauty Accessories

Source : Electronic Transactions Development Agency

E - Commerce

■ The SMEs Operators **■ The Enterprises Operators**

unit : Million Baht

Production
- 538.3
- 343,328.5

Information and Communication
- 5,639.5
- 276,227.4

Logistics
- 70,316.4

Retailing and Wholesaling
- 467,287.5
- 264,540.8

Arts Entertainment and Recreation
- 4,147.4
- 7,152.9

Other services
- 23,934.5
- 11,123.1

- 100,000 200,000 300,000 400,000 500,000 600,000

Note : SMEs in this survey = the businesses that have E-commerce business turnover *less than* 50 million baht/year

Note : Enterprises in this survey = the businesses that have E-commerce business turnover *greater than or equal to* 50 million baht/year

10 Interesting Technologies

1 Internet of Things

There are devices in which information between them can be transferred via a network. These are developed from the wireless technology. They are wireless sensor network (WSN) for devices to connect to each other automatically.

Google Glass

Apple Watch

Smart Home

Smart Cities

10 Interesting Technologies

2 Free storage for individual data

Nowadays, the cost of information storage (Hard Disk Drive/Could Storage) is likely to be on the rapid decreasing trend. Therefore, such storage will become an extra service that related businesses would provide, while businesses would shift to gain from the advertisement functions instead.

10 Interesting Technologies

3 Sharing Economy

Sharing economy has a fast growing trend. It has been started from knowledge sharing (Google) and second-hand goods sharing (eBay). Then, the accommodation and car sharing emerged (Airbnb and Uber, respectively). In addition, with the use of advance mobile applications, sharing economy becomes even more popular.
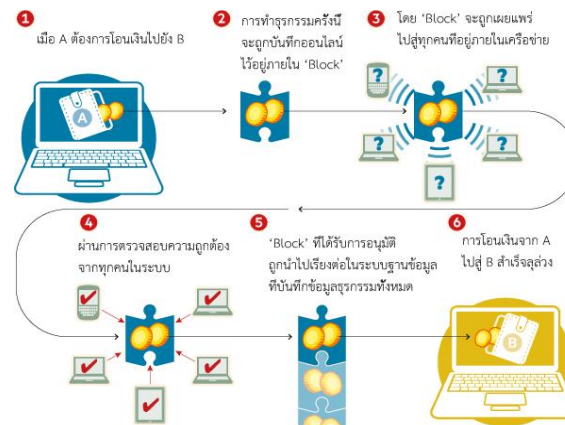
10 Interesting Technologies

4 Bitcoin

The cryptocurrency or bitcoin are operated under the computer network system. For security purpose, the operators use "Blockchain" as the main system for these digital currencies.

10 Interesting Technologies

5 Blockchain

Blockchain is the technology that can link and share individual digital transaction to every other users. The block is analogous to the information and the chain is the linkage system between blocks of information.

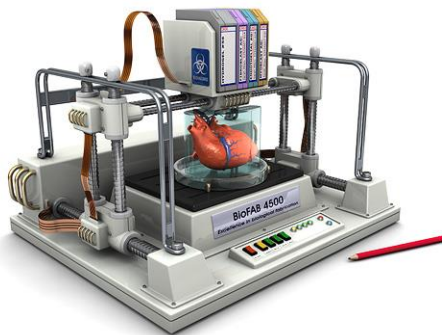*Source: World Economic Forum, Financial Times and Fiscal Policy Office*

In 2027, 10% of the world GDP data will be collected by Blockchain technology.

10 Interesting Technologies

6   3D Printing

3D Printing or Additive manufacturing is a new technique of creating goods by adding the materials bit by bit. The materials may include plastic, aluminum and ceramic.

Not only producing goods, 3D Printing could also "print" artificial organs. This could be called "Bio-printing". For example, artificial bones, hearts and kidney.

10 Interesting Technologies

7 Driverless Cars

On these days, there are driverless car prototypes from Google, Audi as well as other vehicle brand companies. In the future, it is also expected that there will be more driverless cars for commercial purpose as well.

10 Interesting Technologies

8 Implantable Medical Technology

The implantable medical device can be used for the health and behavioral analyses. For example, the heart rate pacemaker.
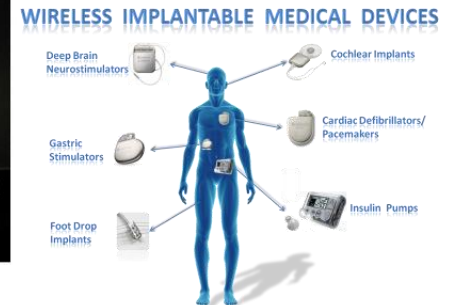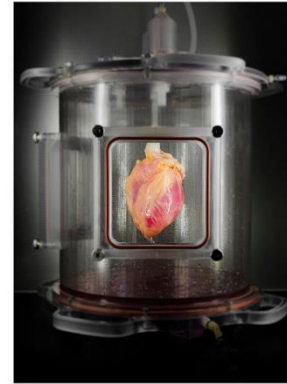
9 Big Data

Big data management technology is especially useful for the government. For example, be able to analyze big data and response to the citizen's demand instantaneously.

10 Interesting Technologies

10 | Artificial intelligence (AI) and Robot & Service

In the future, AI will be used to replace jobs that are functionally clear and repetitive. Moreover, AI can also manage huge amount of complex data. Therefore, it is possible that we may see the use of AI in decision making process.
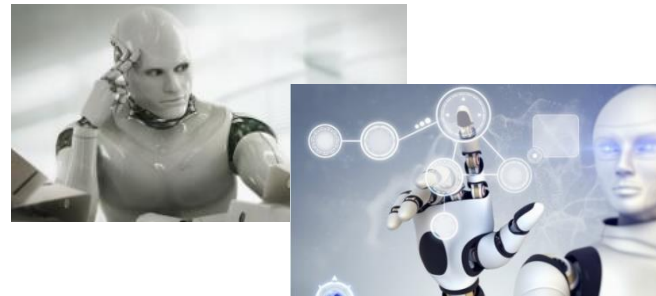
Furthermore, robots will also be functioned in more variety of roles. For example, the use in manufacturing, agricultural, retail and service sectors.

The use of robots for medicine prescription may happen soon, too.

Government Policies

Thailand 4.0

Food, Agriculture, and Bio-tech

Health, Wellness, and Bio-med

Smart Devices, Robotics & Mechatronics

Digital, IoT, and A.I.

Creative, Cultures, and High-value Services

Innovation-Based Economy **4.0**

Heavy Industry-Based Economy **3.0**

Light Industry-based Economy **2.0**

Agriculture -Based Economy **1.0**

TRAP

Middle Income Country

Income Inequality

Imbalance

High-income by **2032**

GDP growth of **5-6%**

Regional center in **10** years

Thailand 4.0 Development Plan

Productive
building economic prosperity through innovation

Inclusive
building social participation

Green Growth
environmentally friendly development

Development Mechanism

3 development mechanism of Thailand4.0

Wealth Distribution

High Income

Environmentally Friendly

Goals

Source : Thailand 4.0 model pursues Security, Prosperity and Sustainability. (Dr.Suvit Maesincee)

Value Based Economy: Less for More

Transforming towards the **Value-Base Economy** based on **Sufficiency economy** philosophy to create prosperity, stability and sustainability for Thailand

Present

More for Less

- Reduce costs/Expand the markets
- Driven by industries
- Emphasize on manufacturing sector

Value added: 2 times

Comparative Advantage

Biodiversity and Cultural Diversity

Future

Less for More

- Innovation
- Driven by technology
- Emphasize on High-tech Services and High-skilled Manufacturing

Value added: 4 times

Competitive Advantage

Innovation and Creativity

Transition to Thailand 4.0

4 Main Goals

Traditional Farming	Traditional SMEs	Traditional Services	Low Skilled Labor
▼	▼	▼	▼
Smart Farming	Smart SMEs and Startups	High-value Services	High Skilled Labor

Model Thailand 4.0
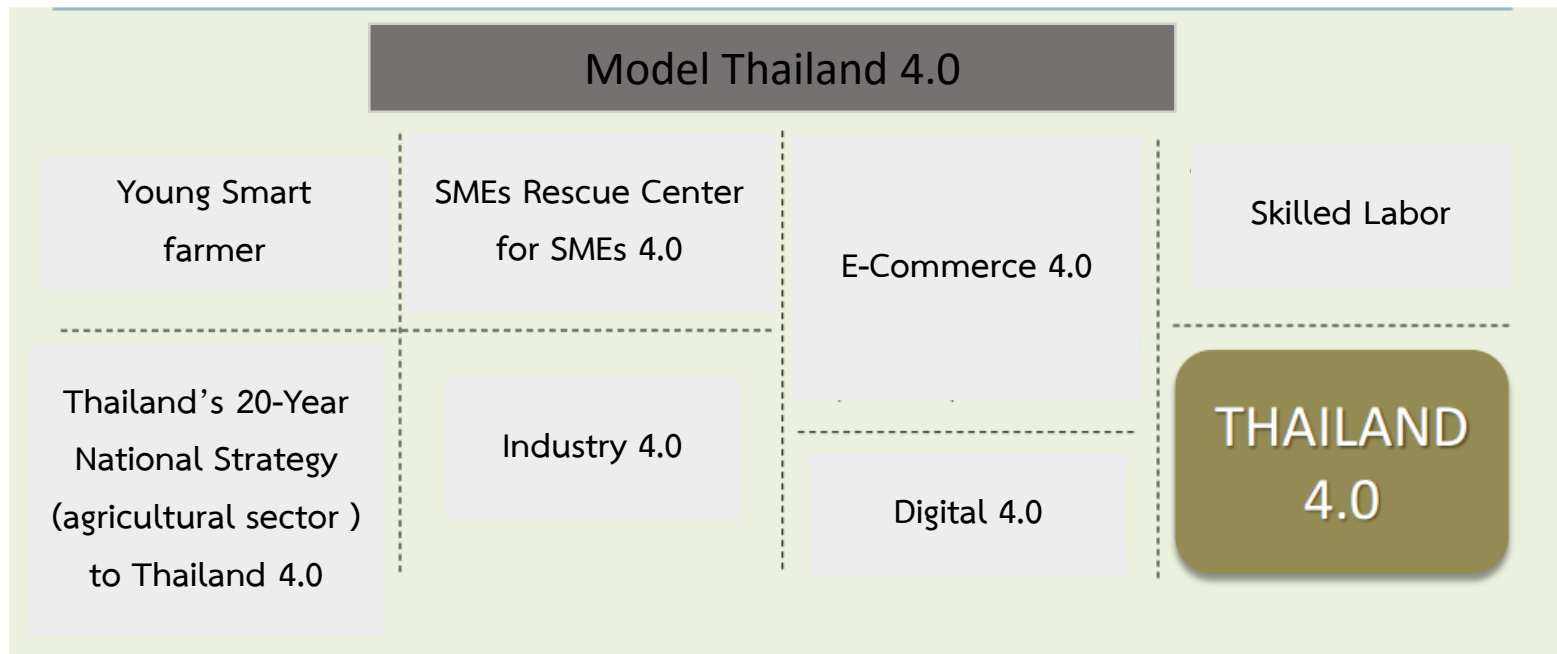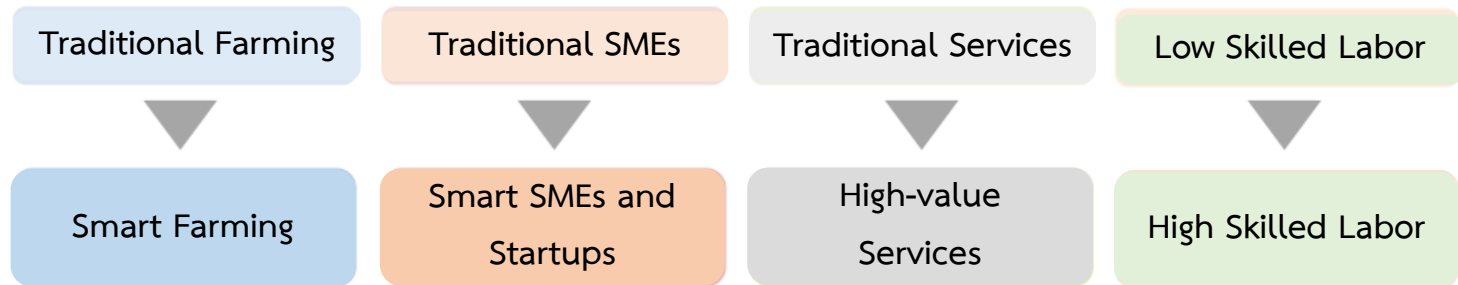
Young Smart farmer	SMEs Rescue Center for SMEs 4.0	E-Commerce 4.0	Skilled Labor
Thailand's 20-Year National Strategy (agricultural sector) to Thailand 4.0	Industry 4.0	Digital 4.0	THAILAND 4.0

The National Competitive Enhancement Act for Targeted Industries

1 Necessity of this Act

Thailand exports is 75% of the GDP, but Thailand has been exports the same goods and services for a long time.

Moreover, the private investment has stayed at 20% of the GDP for around 17 years already.

2 10 Targeted Industries

Upgrade current industries

First S-curve

- Next-generation Automotive
- Smart Electronics
- Food for the Future
- Agriculture and Biotechnology
- Medical and Wellness Tourism

Develop future Industries

New S-curve

- Robotics
- Aviation and Logistics
- Digital
- Medical Hub
- Biofuels and Biochemicals

Provide Soft Loan

Prepare suitable schemes

3 Main idea of the Act (draft)

- Funding amount of 10,000 million baht for R&D and human resource development
- provide tax benefits
- Establish the Committee to drive the policies

4 Future Results

1. Be the regional hub for both manufacturing and service industries
2. Upgraded Potential GDP
3. Be able to become high-income country at the faster pace

Ministry of Finance Policies for "Thailand 4.0"

Eastern Economic Corridor: EEC

Legend:
- Double-Track Railway
- Motorway
- Deep Seaport
- Airport
- Industrial Estate
- Industrial Park

BOI Investment Incentives

Tax Benefits (MOF)

Attracting targeted industries by providing benefits
These industries will be the significant driving forces for Thailand future economic growth

Ministry of Finance Policies for "Thailand 4.0": National e-Payment

Building foundation for digital economy development

Reinforce digital economy development

Improve social welfare management

Reduce cash handling & transaction cost

Enhance efficiency and transparency

PromptPay & Card Usage Promotion	e-Tax	Government e-Payment	e-Payment promotion scheme
• To enable e-Payment using alternative ID • To promote debit card usage	• e-Withholding Tax • e-Tax Invoice and e-Receipt • e-Filing	• To integrate social welfare database • To promote e-Payment for government transactions	• To educate the public with useful information related to National e-Payment

Supporting Research & Development and Innovation

1 Reduce corporate income tax for the expenditure on R&D and innovation

that will be implemented by the SMEs/Startup (Tax deductible: 3 times)

SMEs

Food

Healthcare

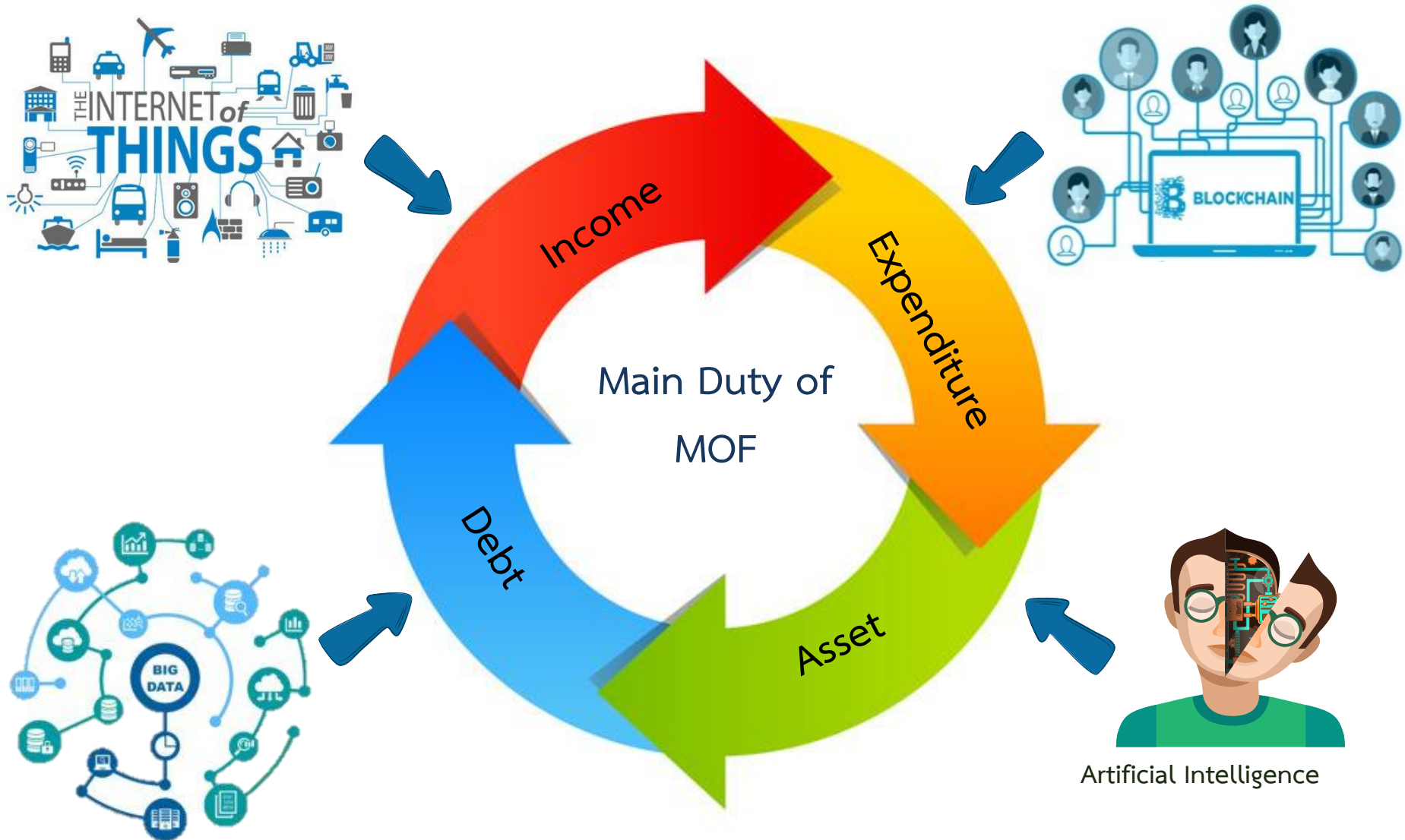Smart Gadget

Digital Technology

Creativity

Supporting Thailand to become a research & development center/

a prototype car performance testing center **2**

In this case, the allowance for depreciation deductible is equal to the total cost (This used to be only less than or equal to 1 million baht) for a prototype car that is used for R&D and performance testing.

Ministry of Finance (MOF) plan for "Thailand 4.0"

THE INTERNET of THINGS

BLOCKCHAIN

BIG DATA

Artificial Intelligence

Income

Expenditure

Asset

Debt

Main Duty of MOF

Thank you

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