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Quarterly Economic Report Q4-2017

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Quarterly Economic Report

Q4-2017

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economy 2018 survey	

Please kindly help us to complete the following survey to let us know your opinions which will be very useful in improving our Quarterly Economic Reports to you.

The survey can be both accessed via link and QR code below. We thank you in advance for your time and kind opinions.

https://az1.qualtrics.com/jfe/preview/ SV_5bzw4pAN106yJg1?Q_CHL=preview

or





Dear our valued clients,

We are very pleased to release the Quarterly Economic Report Q4|2017 to you. It is a part of our constant endeavors to provide valuable insights to our clients. This report is compiled with high-level update and summary of the market conditions and impactful economic highlights. Thereby, we hope this report will bring you a greater understanding of the business environment and additionally provide support with your decision-making processes and strategic development for your business.

The global economy has gradually recovered from a long period of a slow growth path. An economic rebound in advanced and developing economies has assisted in strengthening this recovery. Although, uncertainties and risks such as US protectionism, Brexit and political tensions between powerful countries still pose significant challenges on the medium-term outlook.

In 2017, the global economic growth is estimated at 3.6%, which has considerably improved from 3.2% in 2016. For Asia, an economic rebound in advanced and some developing economies resulted in the economic growth of 5.5%, which relatively improved from 5.4% in the previous year as a result of a large number of public infrastructure investments in many countries. This essentially assisted in sustaining a robust growth momentum in the region. The global economic recovery, as well as the increase in export activities, have played an important role in directly improving Thailand's economy and stimulating other major industries. The continuous effort from the government through public infrastructure investments, especially the Eastern Economic Corridor (EEC) initiative is crucial in driving public and private consumption. Accordingly, Thailand's economy is expected to grow at 3.6% in 2017. However, the high level of household debt still remains an obstacle that will slow down the economy.

On behalf of Deloitte Thailand, we very much look forward to supporting you in the dynamic and changing business environment. If you have any questions or inputs, please do not hesitate to contact us at Deloitte. On the next page, we would like you to complete our electronic survey about your overall satisfaction in our Quarterly Economic Report and your views towards Thailand' economy in 2018 which will be helpful for us to keep improving continuously.

Best Regards,

Subhasakdi Krishnamra Country Managing Partner

Executive summary





Executive summary

World Economy

• After the long period of struggle to escape from a slow-growth path, the Global economy is now getting back on track. While high-income economies appear to be gathering momentum owing to the prolonged accommodative monetary policies and the improvement of economic fundamentals, other emerging markets and developing economies continue with their recovery. This is aided by an increase in trade volume and commodity prices. It is forecasted that the global GDP growth will grow 3.6% in 2017 and 3.7% in 2018, compared to 3.2% in 2016.

Euro Zone

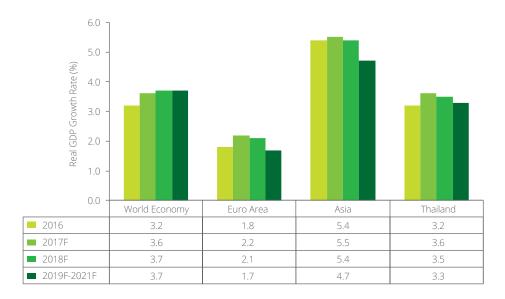
- Overall, the European economy has performed significantly better than expected this year. The GDP growth is estimated to expand by 2.2% in 2017 and 2.1% in 2018, which was mainly contributed by healthier fiscal condition, improvement of domestic consumption, a rise in trade among member countries, and decreasing rate of unemployment.
- The monetary stance will remain across much of the region. Meanwhile, the economic reform has continued to progress in many countries, though some challenges such as a political fragmentation still lie ahead.
- Investment is also resilient amid favorable financing conditions and considerably brightened economic sentiment.

Asia

 Asia's economic growth is forecasted to expand by 5.5% this year due to an economic rebound in advanced and some developing economies. A large number of public infrastructure investments in many countries will help in sustaining a robust growth momentum in the region. Private consumption and spending remain a core contribution to the Japanese economic growth. Meanwhile, the improvement of the manufacturing industry in India has positively influenced their economy.

Thailand

• GDP growth is predicted at 3.6% in 2017 compared with 2.7% on average in the last five years owing to external demand and public investments. However, the high level of household debt still remains a limitation which prevents rapid expansion of the economy. Public infrastructure investments by the government will continue to attract both private domestic and foreign investments.



Southeast Asia Economic Review 2017

♦ Thailand

Thailand

Economic Review 2017

National

Reform Review

Executive

Summary

O Topical Views

from Our

Expert

Business Survey:

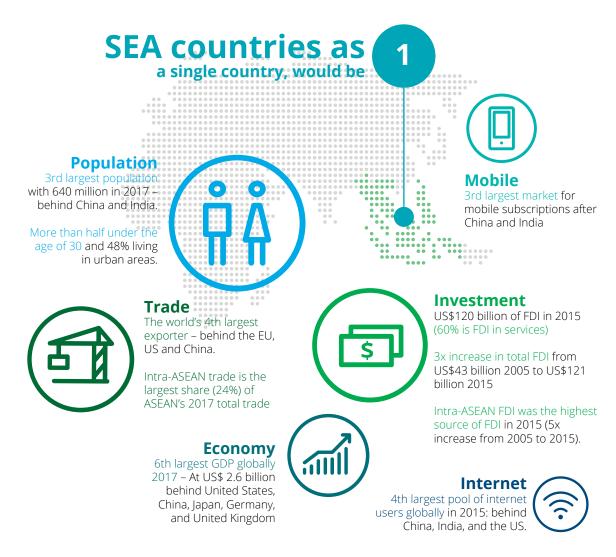
Industry Sector

Update

Disruptive Innovation

Survey

ASEAN in the global economy



Source: ASEAN Secretariats, IMF, WorldBank, Internet Live Stats (http://www.internetlivestats.com/), and Simon Kemp. (2016). Digital in 2016. We Are Social.

Flows to manufacturing activities remain the major regional investment

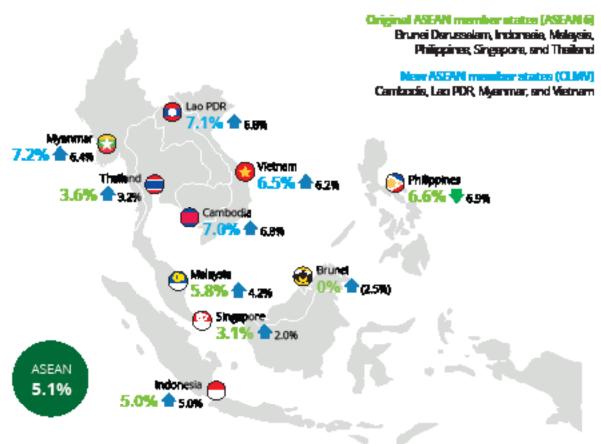
Flows of FDI to ASEAN by source country in major economic sector, 2015



Source: : ASEAN Secretariat

The region expanded robustly with GDP growth beyond estimates owing to high commodity prices and healthy global demand.

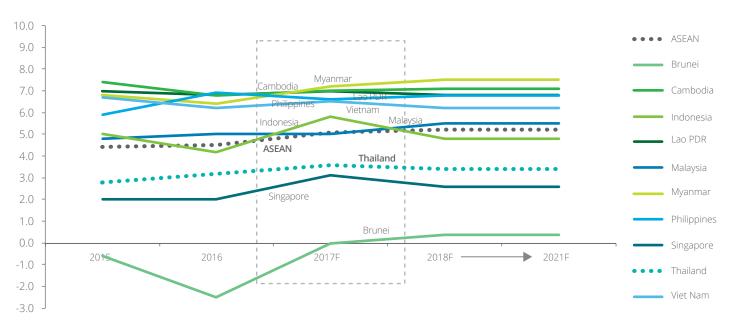
ASEAN GDP growth in 2017



The growth projection of South-East Asia countries will be broadly stable as upside and downside risks remain balanced

Regional economic growth in 2017 will be driven by growing private and public consumption, robust infrastructure investment and accommodative monetary policies.

Real GDP growth rate of ASEAN economies from 2015 - 2021F



Real GDP growth rate	ASEAN	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
2015	4.4	(0.6)	7.0	4.8	7.4	5.0	6.8	5.9	2.0	2.8	6.7
2016	4.5	(2.5)	6.8	5.0	6.8	4.2	6.4	6.9	2.0	3.2	6.2
2017F	5.1	0.0	7.0	5.0	7.0	5.8	7.2	6.6	3.1	3.6	6.5
2018F-2021F	5.2	0.47	6.8	5.5	7.1	4.8	7.5	6.8	2.6	3.4	6.2
Trend	•	①	①	(-)	•	①	①	•	•	•	•

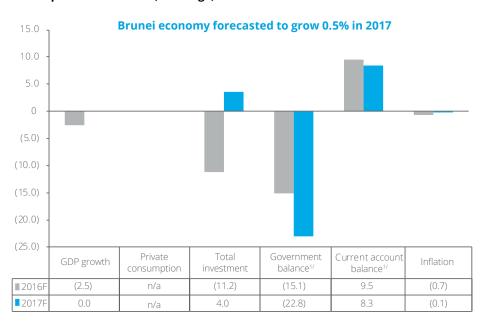
Sources: ADB, EIU, IMF, NESDB, & Research Houses



Brunei's GDP growth is heavily influenced by the performance of oil and gas sector, which has been impacted by planned and unscheduled maintenance works and agreement to maintain production cut with OPEC.

- Real GDP growth is anticipated at 0% in 2017 compared to -2.5% in 2016 as a result of the increase in global oil prices. However, the rising oil prices is likely to mitigate the reduction in production volume due to maintenance works of aging facilities.
- An agreement signed with OPEC and non-OPEC oil exporters to maintain oil production cut in December 2016 to March 2018 may be renewed which will lead to a strong recovery in 2018 in terms of production volume.
- Government spending will fall in line with the recovery in global fuel prices. Meanwhile, a small recovery in investment and private consumption spending supported by falling unemployment are predicted over the forecasted period.

Real expenditure on GDP (% change)



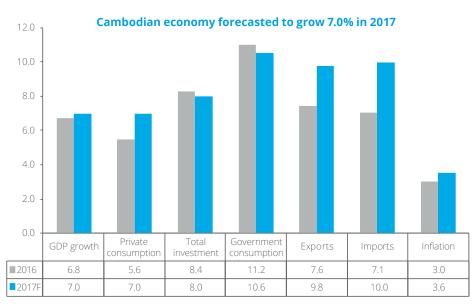
Sources: ADB, EIU, and IMF 1/ % of GDP



In 2017, a strong household spending amid rising in salaries will help in stimulating private consumption and maintaining the GDP growth

- The adjustment in minimum wages scheduled in 2018 will help in stimulating the private consumption, however, wages adjustment will also potentially impact thin margin businesses.
- The investment activity will be slowed down as a result of tighter US monetary policy and a volatile political situation.
 Gross fixed investment growth is anticipated at 6.7% on average during 2018-2022 in comparison to 10.6% during the past four years.
- The headline growth during the forecasted period remains fragile due to the economic uncertainties in the US and the UK, Cambodia's largest and second largest export markets respectively. Nonetheless, overseas infrastructure projects from the China-led Asian Infrastructure Investment Bank will continue to support, albeit not fully, the investment activities.

Real expenditure on GDP (% change)

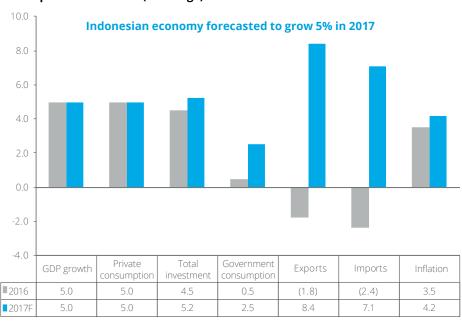




Private consumption will still remain healthy owing to stable price conditions, low credit costs, and the expansion of formal-sector jobs and social welfare.

- Private consumption, the biggest component of Indonesia's GDP, will continue to grow steadily thanks to moderate inflation rate, low credit costs, expansion of formal-sector jobs, and improvement of social welfare.
- Exports are likely to be impacted by a slowdown in China's economy in 2018 and a cyclical downturn in the US in 2020 as these two are the major destinations of Indonesia's exports.
- The headline growth during the forecasted period remains fragile due to the economic uncertainties in the US and the UK (Cambodia's largest and second largest export markets). Nonetheless, overseas infrastructure projects from the China-led Asian Infrastructure Investment Bank will continue to support, albeit not fully, the investment activities.

Real expenditure on GDP (% change)

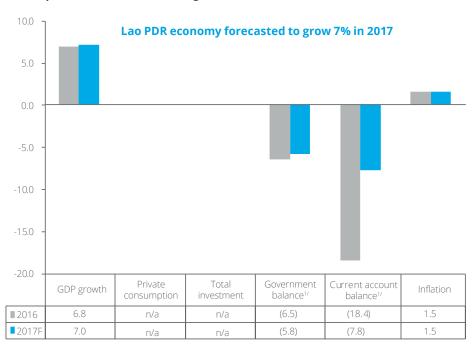




A large number of construction projects underway will stimulate investment spending and real GDP growth for the next two years.

- Real GDP will grow robustly at 7% in 2017.
 The economy still benefits from close
 economic ties with Thailand, rising tourist
 arrivals and higher remittance from Laos
 workers in Thailand.
- The development of transport infrastructure and power sector will create positive effects on Laos' regional interconnectedness in the long term such as mega-railway project from Kunming in China to Vientiane which is planned to be completed in 2021.
- Although close economic ties with
 Thailand will lead to positive growth in
 food processing and retail trade, the
 slowdown in the Chinese economy
 will cause a weak demand for Laos'
 commodity exports. Another challenge
 to the economic growth is that the
 country remains vulnerable to external
 headwinds, given its twin deficits on the
 current and fiscal accounts.

Real expenditure on GDP (% change)



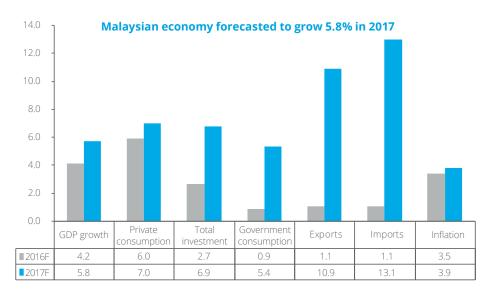
Sources: ADB, EIU, and IMF 1/ % of GDP



A steady expansion in the manufacturing and services sector will support the GDP growth together with a strong external demand for agricultural products.

- A country's GDP growth is forecasted that to be less favorable in 2018 to 2020 than in 2017 due to an economic slowdown in China and US, the main importers of Malaysia's largest category export.
- A steady expansion in the manufacturing and service sectors will continue to support growth during the forecasted period. It is also expected that growth in the agricultural sector will bounce back due to stronger external demand for rubber and palm oil, which are Malaysia's key export products.
- Accommodative monetary and fiscal will continue to support private consumption, the key contribution to Malaysia's GDP growth, throughout the forecasted period. Nevertheless, a slowdown in the Chinese economy will result in a decline in demand for Malaysia's products, especially, electronic and electrical goods.

Real expenditure on GDP (% change)

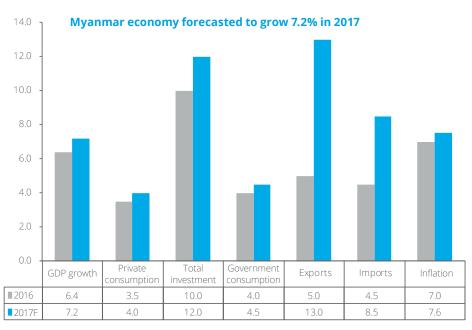




The rise in wages and access to finance will strengthen private consumption, while exports will face temporary decline due to an economic slowdown in China in 2018

- Myanmar will continue to economically outperform other countries in the region, with real GDP growth forecasted at 7.2% in 2017 and average 7.3% a year in 2018-21. The economy will be mainly underpinned by foreign investment, especially in infrastructure, manufacturing, and energy, together with a slight recovery in global energy prices.
- Wages in Myanmar are rising rapidly along with the access to financial help in supporting domestic demand. Therefore, private consumption is predicted to be strong during 2018 to 2019 and 2022 to 2023.
- A temporary decline in export growth is forecasted at 7% in 2018 as China's economic growth continues to slow down. In the meantime, a rapid growth in imports will subtract economic growth from 2017 onwards.

Real expenditure on GDP (% change)

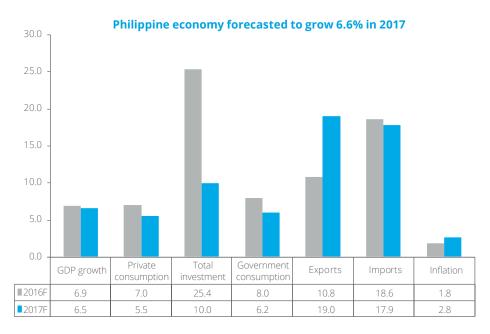


Philippines

Private consumption is expected to remain healthy from the inflows of remittances. However, investors still concern about political stability and administrative security which undermine investment.

- It is predicted that GDP will grow by 6% per annum from 2018 to 2022 which is slightly slower than the average growth of 6.5% during 2013 to 2017, due to a moderate slowdown in investment. This slowdown reflects investors' concerns towards administrative security, political situation, and the general slowdown in economic reform.
- Private consumption is expected to remain healthy throughout 2022 at 5.8% averagely. This will be supported by inflows of remittances as Mr. Duterte approved the establishment of Overseas Filipino Bank to facilitate these inflows.
- Philippines' exports of goods and services will remain fairly healthy during 2018 to 2022. The business-process outsourcing (BPO) is heavily geared towards the US which the economy is expected to pick-up in 2021 to 2022.

Real expenditure on GDP (% change)

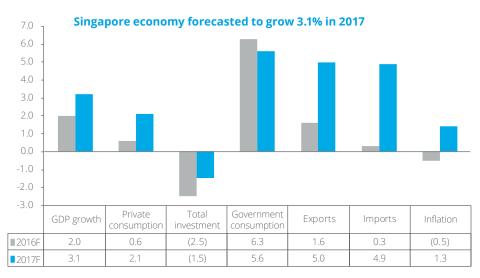


Singapore

The country has shown a good sign of recovery, driven by improved private consumption and growth in exports. However, export performances still heavily rely on China and US as its largest trade partners.

- Singapore is an export-oriented economy which highly relies on China. Therefore, in 2018, the efforts of bringing debt levels to be under control by China will have an impact on Singapore's export performance as China is its largest trade partner.
- Singapore is being challenged by China in exporting electronics and engineering tools as China continues to be a rising competitor and moves up the electronics value chain.
- Singapore is often affected by the unexpected global growth trajectories.
 Although the external outlook has shown some uncertainties, including the US protectionist policies and tighter monetary condition in China, which continues to pose a challenge to the economy.

Real expenditure on GDP (% change)

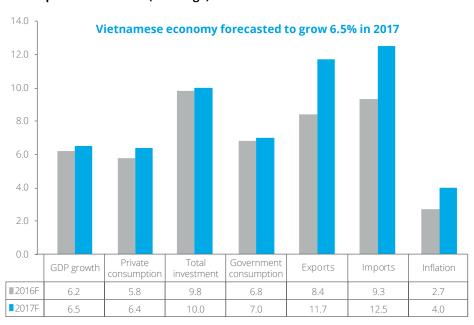




Vietnam is one of the fastest-growing emerging markets in the region driven by robust private consumption, favorable government policies to attract investment inflows.

- Vietnam's GDP is forecasted to grow by 6.5%, slightly improved from 6.2% in 2016. Domestic demand will still remain robust in 2018 benefited from significant wage increase and constructive government policies to stimulate privatesector investment.
- With forecasted GDP growth rate,
 Vietnam is one of the fastest-growing
 markets in the region. The economy
 will be supported by healthy private
 consumption and spending by a large
 number of tourists.
- Export-oriented electronics sector will keep its growth momentum partially due to the migration of low-cost export manufacturing from China.

Real expenditure on GDP (% change)



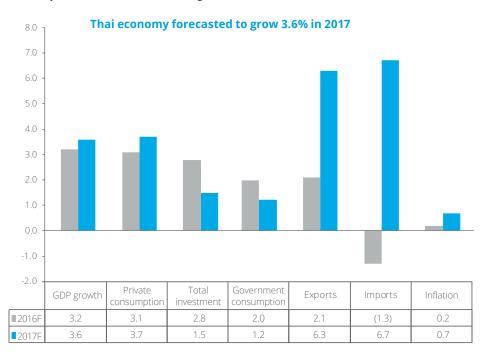




High levels of household debt will still be an obstacle which prevents rapid expansion of Thailand's economy. However, public infrastructure investments by the government will attract private domestic and foreign investments.

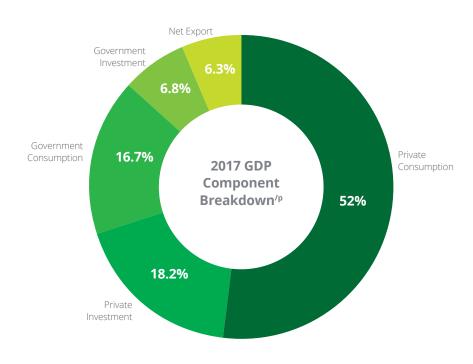
- GDP growth is predicted at 3.6% in 2017 compared with 2.7% on average in the last five years owing to external demand and public investments.
- Private consumption, which is the main contribution to Thai economy's GDP, is likely to expand in line with the improvement of income.
- The net contribution to overall growth from the external sector will remain positive until 2021 as imports continue to rise more quickly than exports.
- Private domestic and foreign investment will keep their growth momentum owing to Thailand's public infrastructure investment drive.

Real expenditure on GDP (% change)



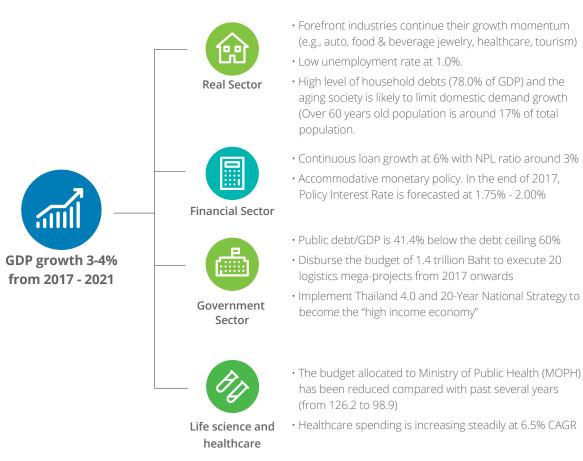
Exports (excluded imports) remain the biggest component of Thailand's GDP in 2017 followed by private consumption and investment.

- The increase in commodity prices in the world market contributed to exports in all categories, especially manufacturing and agricultural products.
- The expansion of household consumption and increase in the number of tourists are expected to remain strong which in turn help mitigate the negative effects of an external downward trend in the coming years.
- The external sector continues to grow due to a recovery in global demand.
 Merchandise exports of both agricultural and industrial products will gradually increase; however net contribution from the overall growth is forecasted to be negative as imports of goods and services rise faster than exports.
- Some risks and uncertainties from external factors such as the exchange rate volatility, geopolitical tensions, the monetary policies trends in major economies, the US protectionist policies, the aftermath of Brexit, and the sluggishness of Chinese economy will limit Thailand's growth potential during the forecasted period.



Sources: BOT, NESDB, & DTTJ Estimates /p preliminary data

Overall economic fundamentals remain strong with positive outlook over the medium- and long-term



Sources: BOT, NESDB, PDMO, & The Royal Thai Government Note: Latest data from the above agencies with cut-off date of April 4, 2017.

Thailand 4.0 is a long-term vision to transform the country from heavy manufacturing into high-value-added and innovation-driven economy.



1. Infrastructures Development

The government aims to develop fundamental infrastructures in order to attract investors to choose Thailand as a location to run businesses such as **EEC**. This will help in growing the country's economy and enhancing competitiveness.



2. Target Industries

Industries which have high potential to grow in the future are defined and grouped along with an allocation of resources to support these industries. There are four groups of industry; Bioeconomy, Electronic and Robotic parts, Aviation related, and Medical.



3. Enterprises

SMEs, entrepreneurs, and start-up companies will be a key player to drive innovations and new technologies through collaboration with governmental agencies and big companies. This is a way to transform from traditional manufacturing into high-value-added and innovation-driven economy.

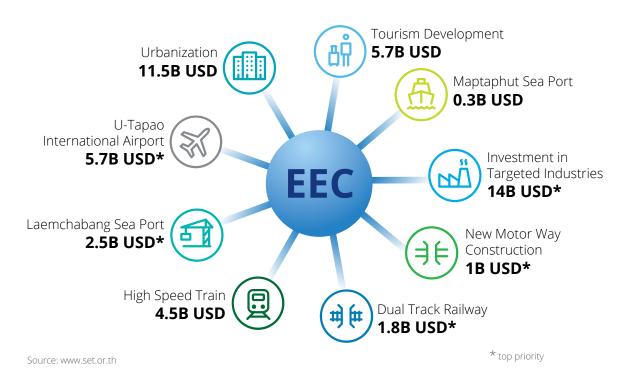


4. People

To cope with technologies and innovations, workers must be well prepared to possess critical skills. They will be required to deal with specific tasks rather than repetitive tasks which can be executed by utilizing technologies.

Eastern Economic Corridor is part of Thailand 4.0 strategy to develop basic infrastructures of the country

It is anticipated that the global economic expansion will shift towards Asia more. Thus, EEC is a priority to be executed with the support of Thailand 4.0 roadmap.



Eastern Economic Corridor (EEC) is a project to enhance Thailand's competitiveness as it is located at the best strategic location in the region and has a potential to be a center of the regional economy.



In terms of the foundation, EEC has various advantages to be established as an economic area.

- Establishment of 29 industrial estates with 50,500 million USD investment and 3,768 manufacturing factories.
- The center of automobile and aviation industry with the investment of 12,500 million USD.
- The location of top 5 in Asia petrochemical with 13,000 million USD investment.
- Developed 21 industrial estates with 2,345 Hectares land and 6 developing industrial estates with 2,431 Hectares land.
- Significant market size and buying power from China, India, and Southeast Asia.
- A central of tourism and manufacturing destination.



Escalating businesses in Thailand

Z ³	Telecommunications and Information Technology	The policy of the government in favor of all mobile operators as Digital Economy is being promoted in National Strategy. An alliance between mobile operators and business counterparties including banks (i.e. FinTech) will play essential roles in driving the growth of telecommunication industry.
(Medical services	An Increasing number of global population and the trend toward aging society will drive the need for medical services. Also, the growth of medical technology is critical in supporting the needs.
	E-Commerce	The support from the government in Thailand 4.0 roadmap and the significant increase in the number of smartphone and social media users in Thailand is likely to stimulate the growth of E-commerce business.
N	Cosmetics and skincare product	As a consequence of social medias embracement among Thai people, the awareness towards health, physical appearance, and beauty tend to be a key driver for the industry.
A	Petrochemicals	Lower oil prices directly contribute to the industry as the manufacturing cost could be reduced considerably. A stable increase in global demand especially in China has ensured the growth of the business.
	Logistics	The constant growth of e-commerce market creates significant benefits to the logistics business which is a critical part of the supply chain. Thus, logistics business tends to grow in accordance with the e-commerce.

Sources: UTCC/Thairath, and compilation of various sources

Selected indicators in Thailand's economy



32.08 THB per 1 USD



Average income **26,973 Baht** per household



Public debt **41.4%** of GDP



Employment rate at **1%** of total population



Household debt **78%** of GDP



Confidence index of consumer at **79.2%** comparing to 74.5% in 2016



Average age of Thai population **38.3 years**



Total new graduates of **1,817,994** entering into labor market

- Vocational certificate 183,233 (10% of total new graduates)
- High vocational certificate 161,924 (8.9% of total new graduates)
- Bachelor degree 377,003 (20.7% of total new graduates)

Sources: BOT, NESDB, PDMO, and Deloitte researches Note: The information was as of January 12, 2017.



Thailand's current politics and administration system



The National Council for Peace and Order (NCPO)

To maintain peace and security in the country and to ensure a smooth reform process.



The interim Government

To perform public administration duties in both economic and social aspect.



The National Legislative Assembly

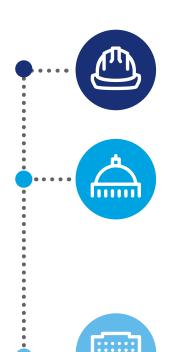
To performs functions of National Parliament, including passing legislations, approving emergency decrees, and approving treaties.

Note: The National Reform Council (NRC) was for undertaking a comprehensive reform of the country and drawing up recommendations for the Constitution Drafting Committee (CDC).

The Constitution Drafting Committee (CDC), which consists of legal experts, academics, former senators, judges, civil servants, representatives from NGOs and the media, is nominated to ensure a truly democratic constitutional monarchy.

NCPO's roadmap to reform Thailand in Stage 2

The National Council for Peace and Order (NCPO) proposed three stages of national administration during the transition period.



Coup d'état on 22 May 2014

Stage One

Bring back normal operations of civil service

May - Jul 2014

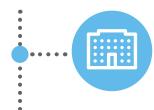
- National security execution and law enforcement.
- Public administration restoration
- Economic master plans.
- The 19th Interim Constitution of Thailand.
- The 2015 Annual Budget Bill of THB 2.6 trillion.

Stage Two

Create an environment contributes to national reforms with NLA & NRC in actions.

Aug 2014 - Sep 2015

- The National Legislative Assembly (NLA) to perform the parliament roles
- The Interim Prime Minister and Government in action
- The National Reform Council (NRC) studied and provided recommendations for Thailand reforms.
- NRC rejected the first draft of the 20th Constitution of Thailand by 135 votes against 105 in favour with 7 abstentions, and in turn, was dissolved on September 6, 2015.



Oct 2015 - Mar 2017

- A new 21-person Constitutional Drafting Committee to propose the new draft of 20th Constitution of Thailand.
- The National Reform Steering Assembly (NRSA) was established, consisting of 200 members to carry out the national reform blueprint proposed by the dissolved NRC.
- Conducted a nationwide referendum of the drafted 20th Constitution of Thailand on August 7, 2016. the majority of the voters (61%) accepted the drafted 20th Constitution of Thailand and also 58% of them allowed the Senate to take part in electing the Prime Minister during the five–year transition period.
- Amended the drafted 20th Constitution in line with the referendum result.

Apr 2017 - Apr 2018 (Approximately)

- Launched the 20th Constitution of Thailand on April 6, 2017.
- Draft, deliberate, and launch the Organic Laws of the 20th Constitution of Thailand.



Stage Three

An election will be held to restore democracy and execute Thailand's reform agenda

May 2018 - Q2/2023 (Approximately)

- Execute general elections the Senate and the House of Representatives.
- Parliament in action.
- Form a new civilian government.
- Execute Thailand's reform agenda during the 5-year transition-period (2019 2023).

Sources: compiled from NCPO, the Royal Thai Government, National News Bureau of Thailand & Thai Local Media and Newspapers

The Interim Government to perform public administration

The Interim Government established under Thailand's Constitution 2017 consists of the Prime Minister (General Prayuth Chan-ocha) and 34 other ministers appointed by the King to perform public administration.

Government priorities

• Accelerating Thai economic growth

- Agricultural reform
- Anti-human trafficking
- Energy and environment sustainability
- Social affairs
- Thailand and the world

Highlights

- The Prime Minister gave a speech on the promulgation of the 20th Constitution of the Kingdom of Thailand on April 6, 2017, and addressed a national plan.
- Thai Government has committed to accelerating Eastern Economic Corridor (EEC) Project and in turn invited local and foreign investors to take part in this priority project:
 - Allocates budget of 6.28 billion Baht to EEC development
 - The adoption of the so-called "Super Fast Track PPPs" to attract investors to the EEC
 - The enforcement of Section 44 to expedite projects in the EEC
 - The EEC Policy Committee has signed an MOU with a Chinese financial institution to provide support for investors participating in the EEC
 - Japanese companies to invest in those targeted new S-Curve industries in the EEC.
- The Prime Minister confirmed to support the development of Micro, Small and Medium Enterprises (MSMEs) to empower the regional economy at "the ASEAN Prosperity for All Summit" being held in Manila, the Philippines.
- The Prime Minister enforced Section 44 to expedite the Thai-Chinese High Speed Railway project on Bangkok - Nakhon Ratchasima route.

Sources: The Royal Thai Government, Thailand's Constitution 2017, National News Bureau of Thailand & Thai local newspapers (The Nation & Bangkok Post)

The National Legislative Assembly (NLA) to take the Parliament duties

NLA established under Thailand's Constitution 2017 NLA consists of 220 members appointed by the King in accordance with NCPO's recommendation.

NLA's key duties

Priority role is to act as the House of Representatives, the Senate, and the National Assembly during the transition period.

- NLA has the power to:
 - Issue the rule on election and perform duties of the NLA President, the NLA Vice-Presidents, and its Committees and meetings.
 - Introduction and deliberation of Bills and Organic Law Bills (i.e. Constitution Related Bills).
 - Monitor and control the Interim Government by making the submission of motions, discussion, making resolutions, and interpellation.
 - Peace keeping and other related matters for the performance of its duties.

Highlights

- NLA continues to deliberate draft organic laws after the promulgation of the 20th Constitution of Thailand on April 6, 2017.
- NLA read, deliberated, and passed several high impact drafted bills during Q2-2017 such as:
 - Labour Protection
 - National Reform
 - National Strategies
 - 2018 Fiscal Budget
 - The Election Commission
 - The State Audit
 - The Setting Up and Procedures of the Administrative Court
 - The Amendment of the Executive Decree on the Secondary Mortgage Finance Corporation.
- Extend the deliberation of two drafted bills:
 - Water Resources
 - Government Savings Bank

Sources: The Royal Thai Government, Thailand's Constitution 2017, National News Bureau of Thailand & Thai local newspapers (The Nation & Bangkok Post)

Topical Views from our expert (IFRS 9)



Views From Our Expert – International Financial Reporting Standard 9 (IFRS 9)



Mr. Chavala Tienpasertkij Audit Partner

Q: What is IFRS 9 and how it is important to businesses?

A: IFRS 9 is a new financial reporting standard which will become effective on January 2019 in Thailand. It primarily concerns with obligations towards the new financial reporting requirements. It will be critical to businesses as it deals with classification, measurement, hedge accounting, and disclosure of both quantitative and qualitative information related the financial instruments. Especially, the impairment assessment of the financial assets will be changed significantly compared to the current practice.

Q: Which types of business tend to be impacted significantly when IFRS 9 is announced to be effective?

A: Financial institutions, consumer loan companies, leasing companies, securities companies, large corporates which involve with financial instruments, and other businesses which operate in financial sector or significantly involve with the financial instruments or products.

Q: What are the main changes that IFRS will bring to the businesses?

A: IFRS 9 adoption will help in enhancing the recognition and measurement of financial instruments in term of its consistency towards investment policies, business model and risk management strategy. For financial institutions, they will have a better recognition credit loss provision for their loan portfolio which will have a better reflection in costs of loans and their credit qualities.

Q: What are key challenges to sustain the performance especially for financial institutions when it comes to the implementation of IFRS 9?

A: Challenges mainly involve with planning aspects of the businesses such as shaping effective strategy, designing efficient business models, having appropriate investing and lending policies, and revisiting the annual credit review processes. These are key activities which financial institutions and other impacted business should take into consideration as they are likely to have high impact on business and financial performance in a competitive financial sector.

Q: From Deloitte's perspectives, what should be prepared by impacted businesses regarding IFRS 9?

A: IT system and data management should be well prepared as various information will be taken into account in regard of IFRS 9. Human capital also shall be educated decently to have clear understandings towards IFRS 9 to prevent potential errors, standard breaching, and operational risks. In addition, communication plans for investors, analysts, and other stakeholders along with financial impact analysis should be conducted in case that capital injection or fund raising is required.

Q: How can Deloitte support those clients who tend to be affected by IFRS 9?

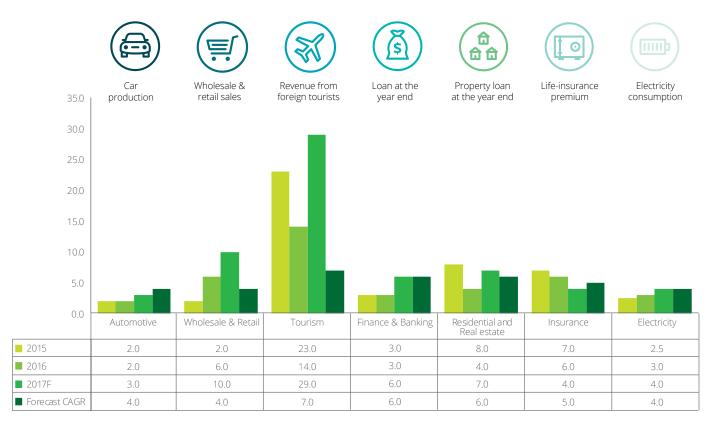
A: Deloitte has a large number of experts having direct experience in IFRS 9. Therefore, Deloitte is able to offer wide range of services to support our clients in preparation of IFRS 9 implementation such as requirement gap analysis, IT system and data gap analysis, high level of financial quantification analysis, credit and loss models development, new system selection, and system implementation advisory. In addition, Deloitte has subject matters in various specific areas based on specific requests from clients.

Q: For less impacted businesses (apart from financial institutions), in what aspects IFRS 9 will affect them in term of accounting and reporting standards? Will there be any complexity and difficulty to comply with the new standard?

A: Even though other businesses apart from financial institutions and finance-related companies will have less impacts on the businesses, but there are several factors to take into account. Investments within a company is also involved with IFRS 9 as it is required the consideration of classification and measurement of those investments. Moreover, hedge accounting also needs to be supported by significant amount of hedge documentations and hedge effectiveness assessment.



Thailand key industries are expected to continue their moderate growth path in 2017



Sources: Compiled from various research houses & agencies (e.g. BOT, EIU, MOC, NESDB, OIE, OIC) & DTTJ Analysis

Thailand key industries are expected to continue their moderate growth path in 2017



Sources: Compiled from various research houses & agencies (e.g. BOT, EIU, MOC, NESDB, OPPO, OIE, OIC) & DTTJ Analysis

in, Consumer and industrial products **Financial Services Life Sciences and** Industry Healthcare Energy and 🔘 Resources Technology, Public Sector Media, and **Telecommunications**





Thai automotive industry in 2017 is forecasted to grow 3% due to rebounded domestic market. Over the long-term, Thailand automotive industry is projected to have an upward moderate growth path driven by the production of new automobile generation.

Situation in 2016

Thai automotive industry in 2016 benefited from export growth, while domestic market remained in a negative mode. Total car production was 1.94 million units or grew by 2% compared to 2015's. Car export volume was 1.2 million units or increased 6% YoY. However, domestic sales during 2016 were 0.78 million units or 4% lower than 0.8 million units sold in 2015 due to the impact of adverse economic factors.

Forecast 2017

Car production is projected at 2.0 million units, growing 3% from 2016. Domestic car sales are forecasted at 0.8 million units or increase 4%YoY due to improved domestic conditions, whilst car export is likely to maintain the growth rate at 3%YoY due to sustained demands in major export markets. Domestic car sales during 11M-2017 grew by 14.6% compared to 2016's thanks to the increase export market in Oceania, Africa, and North America combined with the growth in the domestic market from an investment of private sector.

Long-term trend

As Thailand remains an attractive investment destination in the coming years with a support from the BOI's new investment incentive schemes for an electric and automated vehicle (EV/AV) production and mega-project investments to enhance Thailand's competitiveness, major car producers will continue to deploy their production and supply chain capacity to great effects. As analysts expect that overall global economy will gradually capture an upward growth trend in the coming years, Thailand's car industry is projected to grow 4% over the long-term. However, digital disruption has become major threats, which could significantly shift competitive landscape of automotive industry in the long-term.

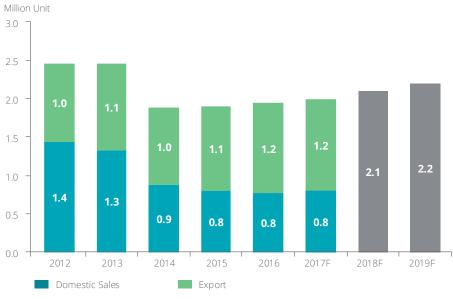
Thailand remains the ASEAN's automotive industry leader in the coming years underpinned by a solid supply chain and a large pool of established facilities.

ASEAN car production volume (2012 - 2016)



- Although CAGR displays negative production growth, Thailand remains the leading car producer of ASEAN with 48% market share.
- Overall, ASEAN car industry in 2016 grew 4% compared to 2015. Car export from ASEAN is expected to grow while domestic demand remains in a contraction mode.

Thailand domestic car sales and export (2012 - 2019F)



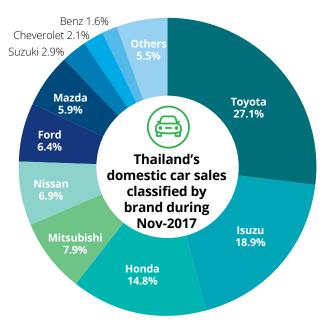
Sources: AAF, FTI, OIE, OICA, & SAT

- During 2016, Thailand produced 1.94 million cars growing 2% from 2015.
 Domestic sales volume was 0.77 million units contracted by 4%YoY.
- Despite the slowdown in both global and domestic car demands, automotive players in Thailand can outperform other regions as a result of an established solid supply chains and a large pool of skilled labours in Thailand. In 2017, Thailand is forecasted to produce 2.0 million car units growing 3%YoY.

Domestic car sales during Nov-2017 expanded by 13.1% compared to the same period of 2016.

Update Thailand Car Market for Nov-2017

- The total number of domestic car sales during Nov-2017 was 0.77 million units risen 13.1%
 YoY, partly because of the unlock of the First-Car Tax Rebate Scheme and heavy promotion campaigns.
- Major Japanese car manufacturers (Toyota, Isuzu, Honda, Mitsubishi, Nissan, Mazda, and Suzuki) together sustain the market leadership in the Thailand car market occupying around 85% of domestic market share.
- However, downside risks of the domestic car market remain evident such as commodity price uncertainty, high level of household debt, and so on.



Source: Toyota (Thailand) Co. Ltd.

Sales volume summary during Q3-2017

	Sales Volume 11M (Nov)-2016	Sales Volume 11M (Nov)-2017	Sales Growth (%) YoY	Market Share 11M (Nov)-2016 (%)	Market Share 11M (Nov)-2017 (%)
Toyota	216,360	208,227	(3.8%)	32.3%	27.1%
Isuzu	127,654	145,108	13.7%	19.1%	18.9%
Honda	97,000	113,305	16.8%	14.5%	14.8%
Mitsubishi	48,789	60,824	24.7%	7.3%	7.9%
Nissan	37,566	52,700	40.3%	5.6%	6.9%
Mazda	38,043	45,098	18.5%	5.7%	5.9%
Ford	35,952	49,428	37.5%	5.4%	6.4%
Suzuki	19,887	21,898	10.1%	3.0%	2.9%
Chevrolet	12,671	15,983	26.1%	1.9%	2.1%
Others	35,862	54,774	52.7%	5.4%	7.1%
Total	669,784	767,345	14.6%	100.0%	100.0%

Source: Toyota (Thailand) Co. Ltd.





Wholesale and retail players will continue their growth strategy in the coming years underpinned by the expansion of tourism, e-commerce, and both modern and tradition traders in urban and country areas.

Situation in 2016

Thailand's consumer goods market was well improved in 2016 due to stable political conditions, rising domestic demands, and expanded tourism industry. Retail and wholesale taken together grew approximately 6% compared to 2015s'. Top players with large capitals continued to adopt marketing promotions, but also expanded their footprints nationwide.

Sources: BOT, BOL Database, EIU, & DTTJ Analysis

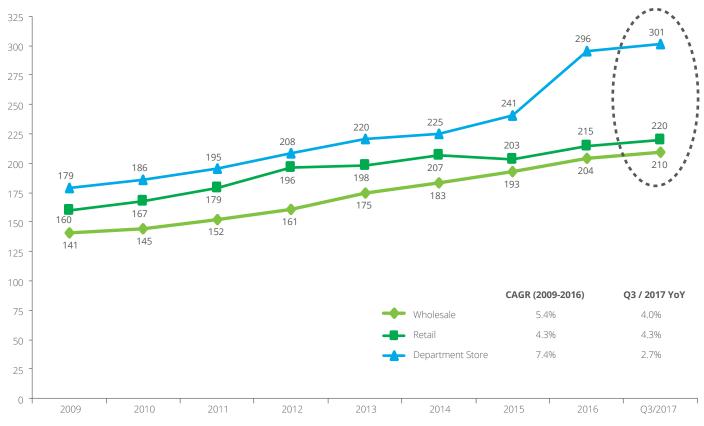
Forecast 2017

Wholesale and retail sales in 2017 continue to experience moderate growth with a combined growth rate of 10% compared to 2016. Major retail players will continue to expand their footprints to cover untapped locations and segments. Consumer product suppliers based on the trading index statistics, continue to deploy sales force loyalty programs via department and convenient stores to boost their sales volumes.

Long-term trend

The Thai government has tried to transform the traditional market to the service-based economy. Private consumption has been bolstered by an expansionary fiscal policy spending on repairing schools, hospitals, and irrigation systems to support job creation in both urban and rural areas. The emergence of AEC, moreover, will open up an opportunity to invest and trade between ASEAN member states. The strong sales performance for the wholesale and retail industry over the long-term is expected to grow around 3-4%.

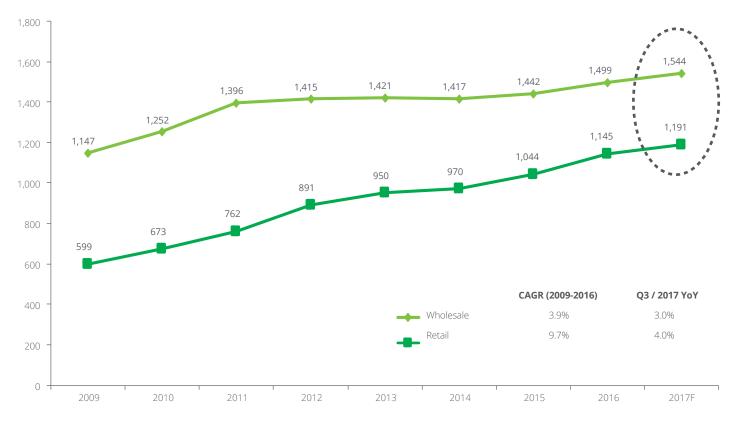
Overall, three major sales channels remain in positive growth mode. In 2016, retailers and wholesalers gained their moderate growth path, while department stores have enjoyed a speedy pace of sales expansion. During Q3-2017, all three sales channels maintained positive growth.



Sources: BOT & EIU

Note: Our analysis covers only wholesalers and retailers of foods and customer package products.

Both wholesale and retail sales in 2017 are projected to grow 3.0% and 4.0% respectively due to improved private and public consumption.



Sources: BOL Database, EIU, & DTTJ Estimates

Note: Our analysis covers only wholesalers and retailers of foods and customer package products.





In 2017, food production volume is expected to grow by 4.5% thanks to a domestic economic rebound. CLMV and other countries in ASEAN are being seen as a promising market for food and beverage sector by many big players.

Situation in 2016

Food production volume was 29.8 million tons dropped 3% from 2015. Export value grew 940.7 billion Baht or grew 2.9% YoY due to rising demand from key export markets. For key beverages, total production volume grew by 0.2%YoY, while total sales volume dropped 0.4% YoY mainly due to a slowdown in domestic demand.

Forecast 2017

Food production volume is estimated at 34.1 million tons which will increase by 3% from 2016. Similarly, domestic sales are expected to grow by 2% thanks to healthier economic conditions within the country than 2016. For the first eleven months, export value was at 915 billion Baht and is expected to reach 986.5 billion Baht or growing by 4.5%. Major growth drivers comprise of increase in public and private consumption.

Long-term trend

Spending on food is anticipated to rise by 1.5% a year during 2018 to 2022 owing to an increase in appetite for ready-to-eat and other high value-added foods. The

demand for food will continue to shift from unprocessed foods in the market to processed foods which are available in hypermarkets and larger supermarkets. Thailand will continue to play a role as an exporter of foods to overseas with more than half of produced foods will be sold abroad. For beverages, the governments have implemented new tax scheme on sugar-sweetened drinks (effective on September 2017) which tends to have a significant impact on beverage sector. Beer and spirit sector is projected to expand in the coming year's thanks to a rebound of economic conditions in many territories of Southeast Asia. Thus, many big companies in Thailand like Singha have invested in their production lines to capture the increasing demand in ASEAN markets.

Food

In 2017, Food industry of Thailand is expected to remain its modest growth momentum although external uncertainties still exist.

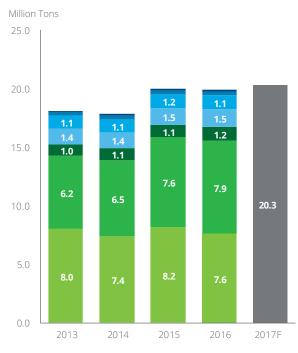
Food Production Volume*

Million Tons 40.0 35.0 Sugar 1.8 1.7 1.7 30.0 Other 1.7 1.5 2.2 2.5 2.2 Grains 25.0 2.0 9.7 Dairy 20.0 Veg. oil 34.1 15.0 Fruit & Veg. 10.0 Fishery 5.0 0.0 2013 2014 2015 2016 2017F



Sources: BOT, OIE, & DTTJ Analysis (Data as of June 2017) * Data were updated by OIE in Q2/2017

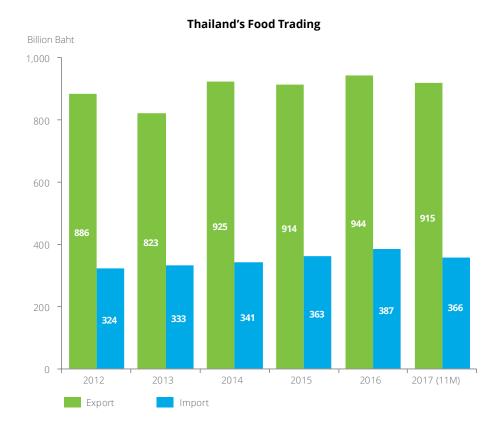
Domestic Sales Volume*



In 2016, domestic food sales were 19.9 million tons contracted by 0.4% YoY. In 2017, it is forecasted that domestic food sales are estimated at 20.3 million tons or increase by 2% compared to 2016s'.

Thailand's food export is forecasted to grow by 4.5% compared to 2016's as a result of slight economic recovery in 2017 which drove global demands.

- During the first eleven months of 2017, Thailand's food export value was 915 billion Baht growing by 6.5% YoY, while food import value was 366 billion Baht or raising 3.3% YoY.
- As a consequence of economic recovery in various regions in 2017, the growth of Thailand's food export is estimated at around 5% compared to 2016s'.
- Thailand's food import is anticipated to grow by 3.0-3.5% compared to 2016s' thanks to strong THB currency.
- Over the coming years, it is expected that Thailand's key players in the food industry (e.g. CPF, Thai Union Group) will continue to expand their footprints using both organic and inorganic growth strategy across the world.

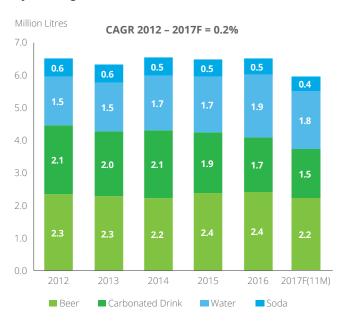


Sources: BOT, OIE & DTTJ Estimate (Data as of Jan 2018)

Beverage

Thailand's beverage production is likely to grow organically although domestic consumption remains saturated owing to the demand expansion in emerging markets in neighboring countries.

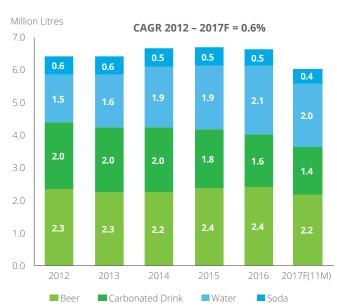
Key Beverage Production Volume



At the end of November 2017, key beverage production volume reached 5.9 billion litres growing by 2% YoY due to favorable domestic economic factors. It is expected that the whole year production volume of 2017 will reach 6.5 billion litres or grows 1.2% YoY.

Sources: EIU, OIE, & DTTJ Estimates Note: data as of December 2016

Key Beverage Sales Volume



Key beverage sales volume was 6.0 billion litres at the end of November 2017. However, it is forecasted that the whole year sales volume will reach 6.7 billion litres growing 2% YoY compared to 2016s'. Domestic growth is projected to remain modest caused by market saturation. On the other hand, overseas sales are likely to expand due to emerging markets in neighboring countries.





Thailand still focuses on "Quality Leisure Destination" vision to drive the tourism sector to gain a higher number of foreign tourists and revenues.

Situation in 2016

Thailand tourism industry performed well during 2016 as a result of stable political environment and the success of the government's tourism campaign. The number of foreign tourists was 32.6 million or grew 9% compared to 2015s'. Total tourism revenue in 2016 was 1.65 trillion Baht or increased 14%YoY.

Forecast 2017

Thailand's tourism strategy is oriented towards growing revenues from foreign tourists, whilst boosting the number of overseas tourists become secondary. The Ministry of Tourism and Sports continues to launch a series of tourism promotions to increase visitor expenditure, the average length of stay, and the overall quality of the visitor experience. It is forecasted that revenue from foreign tourists could reach 1.87 trillion Baht or increase 29%YoY. Similarly, the number of foreign visitors in 2017 is projected at 35.0 million or grow 7%YoY.

Long-term trend

Asian tourists, especially from ASEAN, China, Japan and South Korea are the major contributors to Thai tourism industry over the long-term. Likewise, a trend of global economic recovery and better Thai political condition could boost tourism sector with the potential CAGR of 8%. In turn, it is expected that hotel industry will gain high room occupancy rate above 65%. In the long-run, Thailand adopts "quality tourism strategy", which addresses the so-called "3Rs" (i.e. Repositioning, Restructure, and Rebalance) to enhance both competitiveness and sustainability of tourism industry.

Sources: BOT, Department of Tourism, Tourism Authority of Thailand (TAT), 2016 Thailand Tourism by Minister of Tourism & Sports & The World Tourism Organization (UNWTO)

Total tourist arrivals in 2017 are forecasted at 35.0 million or raised 7.4% compared to 2016s'.

Foreign Tourists 2009 - 2017F

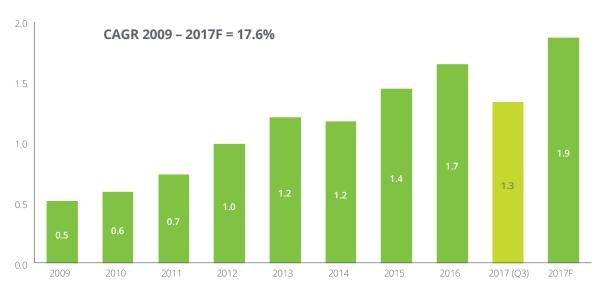


- In 2016, the accumulated number of foreign tourists was 32.6 million growing 9.0%YoY. The first 10 months of 2017, the number of foreign tourists was 28.8 million and hotel room occupancy rate is projected at 68%
- For the end of 2017, it is expected to reach 35.0 million increasing 7.4%YoY and 70% of foreign tourists comes from the Asia-Pacific region.
- Hotel room occupancy rate is projected at 65-70% in line with increasing number of tourists. However, the large proportion of room occupancy remains in major tourist destinations such as Bangkok, Phuket, Chiang Mai, Chonburi and the like.

Sources: Department of Tourism, TAT, The Royal Thai Government, & DTTJ Estimate

Thailand's tourism strategy focusing on "Quality Tourism" continues to drive revenues from foreign tourists in 2017 and contributes to Thai GDP in a large proportion.

Revenue from Foreign Tourists (2009 -2017F)



- During 2016, "Quality Tourism" strategy helped accelerate the growth momentum of tourism activities across tourism supply chain including hotels, airlines, travel agents, restaurants, and so on. In turn, total revenue from foreign tourists was 1.65 trillion Baht raising 14.0%YoY accounting for 9.2% of GDP in the same period.
- For Q3 of 2017 total revenue from foreign tourists was 1.34 trillion Bath rising 6.5% from the same period of 2016
- In 2017, total forecast revenue from foreign tourists is projected at 1.87 trillion Baht raising 29%YoY.
- For the 2016 2027 period, WTTC has maintained the cumulative average growth rate (CAGR) of 6.7%. In turn, WTTC has estimated a direct contribution of 2.71 trillion Baht or 14.3% of total GDP in 2027.

 $Sources: Department of Tourism, Minister of Tourism \& Sports, \ NESDB, World Travel \& Tourism Council 2017 (WTTC) \& DTTJ Estimate$







Total loan in Thailand during 2017 is expected to grow by 6% YoY with good support from accommodative monetary policy and expansionary fiscal policy.

Situation in 2016

As a result of slowing domestic economy and weaker global trade as well as investment sentiment, loan outstanding in the banking system finished at 13.6 trillion Baht, growing 3% from 2015. NPL proportion was 2.8% of total loan outstanding or 0.4 trillion Baht, which is relatively low. However, Gross NPL loan volume in 2016 increased by 14.2% compared to the previous year.

Sources: EIU, K-Research, & SCB EIC

Forecast 2017

As a result of stimulus packages and infrastructure development projects by the government, total loan in Thailand at the end of Q3/2017 was 14.4 trillion Baht or grew by 5.9%. NPL remained at 2.8% of total loan which is still relatively low compared with historical data. The internet and mobile banking have grown rapidly as the trend is shifting towards technology.

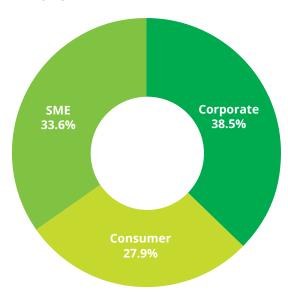
Long-term trend

Total loan outstanding is expected to grow over the next few years with CAGR of 7.4% although some external risks and uncertainties remain. A continuation of

stimulus schemes such as BOI incentives, start-up incentives, Eastern Economic Corridor (EEC), and transportation infrastructure development projects will play an important role in attracting both domestic and foreign investments. Consequently, financial markets in Thailand is expected to grow accordingly. The estimation is a sign of economic recovery after a slowdown economy in the past couples of years. The government will keep encouraging private sector especially SMEs to develop a capability to support Thailand 4.0 roadmap. As a consequence of high levels of household debt at around 78% of GDP will cause banks to remain reluctant on approving consumer lending.

Total loan outstanding at the end of Q3/2017 was 14.4 trillion Baht. Corporate, SME and Consumer loan proportion were 38.5%, 33.6% and 27.9% respectively. Interbank loan accounted for 15.5% of total loan outstanding.

Loan proportion in Q3/2017



Loan growth comparisons

Unit: Trillion baht

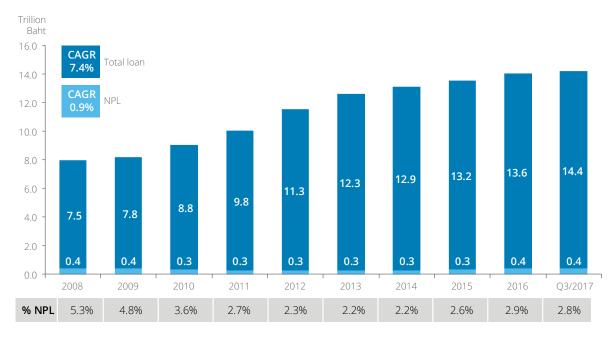
	Q3/2016	2016 (12M)	Q3/2017	%Δ Q oQ	%Δ Y oY
Corporate	5.1	5.0	5.5	(0.8)%	7.8%
SME	4.7	4.7	4.8	1.8%	2.2%
Consumer	3.8	3.9	4.1	5.1%	7.9%
Total	13.6	13.6	14.4	0.9%	5.9%

Source: Bank of Thailand

Thailand's total loan outstanding during Q3-2017 was 14.4 trillion Baht growing by 5.9% YoY or 0.9% QoQ. During the same period, NPL proportion reached 0.42 trillion Baht or 2.8% of total loan increasing 8.8% YoY or 2.9% QoQ.

As a result of stimulus packages, corporate, SME, and personal loan keeps their growth path steadily. This indicates a large number of investments by private sector. NPL proportion is still in a low range at 2.8% compared to 2.9% in 2016 thanks to rigorous credit approval by financial institutions. In 2018, NPL proportion is estimated with a slight increase to 3% as there will be a lot of demands for loans by the private sector to execute projects in preparation of Thailand 4.0 strategy. Financial technology (FinTech) is expected to play a more important role in the coming years, means Thailand financial service industry is likely to be disrupted.

Thailand's total Loan vs. NPL 2008 - Q3/2017



Sources: BOT, EIU, SCB EIC, K-Research, TMB Analytics, & DTTJ Estimates

Note: (1) Total Loan includes both Thai banks' and foreign banks' loan outstanding as of Q1-2017.

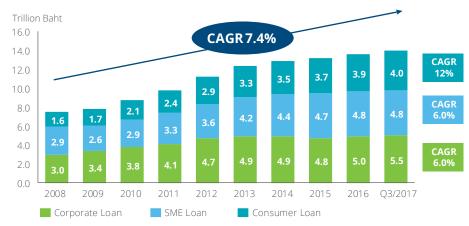
(2) NPL includes both Thai banks' and foreign banks' gross NPL outstanding as of Q1-2017.

Thailand's total loan in Q3/2017 was 14.4 trillion Baht growing by 5.9% YoY.

Selected Financial Statistics as of Q3-2017

Number of	Total
Thai Commercial Bank	15
Foreign Bank Subsidiary & Branch	15
Specialized Financial Institution	8
Foreign Representative	48
Asset Management Company (AMC)	50
Credit Card Company	8
Personal Loan Company	36
Nano Finance Company	25
Credit Card	19.8 M
Debit Card	52.8 M
ATM Card	9.7 M
Personal Loan Account	12.7 M
Nano Finance Account	0.14 M
E-Money Card/Account	44.3M
Internet Banking Account*	18.6 M
Mobile Banking Account*	26.3 M

Commercial bank loan 2008 - Q3/2017



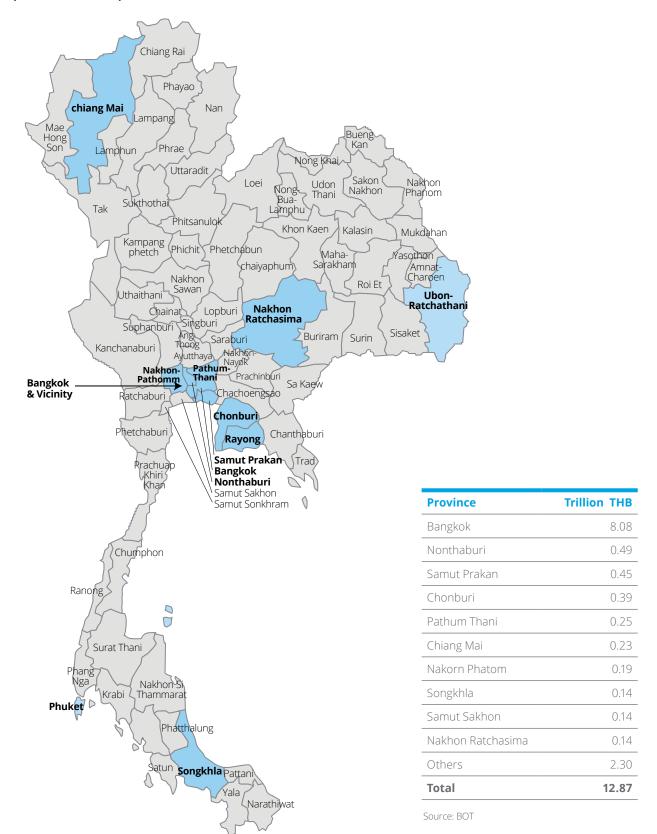
Consumer loan 2008 - Q3/2017



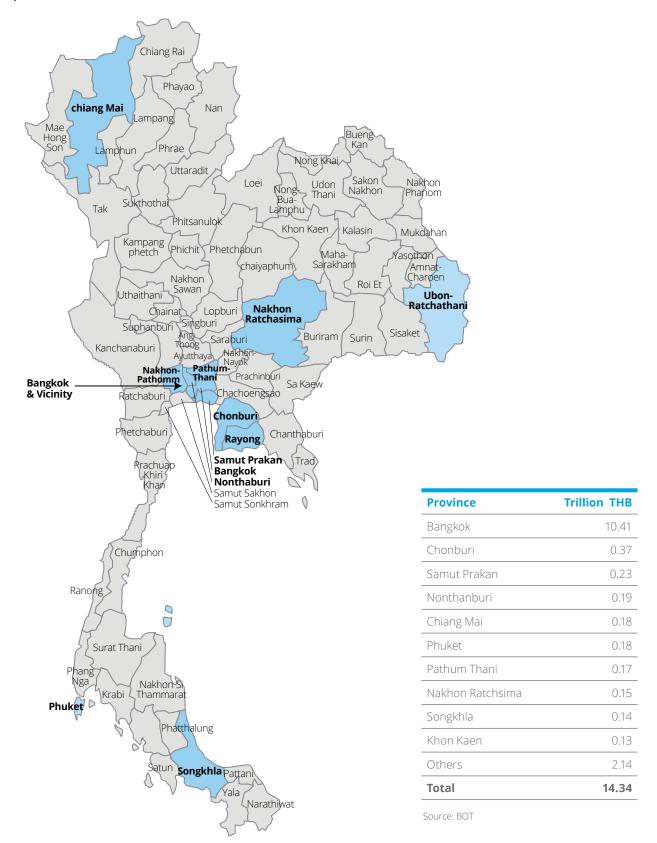
Sources: BOT & DTTJ Estimates

Note: * Data have been revised by Bank of Thailand.

Top 10 Provinces - Deposit



Top 10 Provinces - Loan







An aging society and economic growth are expected to be key factors contributing to the insurance industry in the coming years. Thus, the insurance industry is likely to continue its growth path.

Situation in 2016

A larger insurance policy-holder base and marketing campaigns contributed to life-insurance market which expanded by around 6%YoY. Non-life insurance market grew merely 1.2%YoY affected by adverse external and domestic economic factors including negative export growth, domestic car market contraction, among them.

Forecast 2017

In 2017, life-insurance market expanded by 6%YoY due to a larger insurance policyholder base and marketing campaigns. Non-life insurance market grew at a slower pace at 4.1%YoY. However, the non-life insurance market has improved from 2016 thanks to the sign of economic recovery as well as ongoing infrastructure development projects.

Long-term trend

As a consequence of aging population, life-insurance market in Thailand is expected to maintain healthy growth momentum over the long term. On the other hand, non-life insurance is more dependent on the economic situation and export activities, therefore, it will keep in line with Thailand's economy. Both life and non-life insurance premium are estimated to remain steady in line with Thailand economic growth forecasts in coming years. Market penetration through sales skills, networks, relationships, and promotions will remain crucial for insurance businesses in any economic incident.

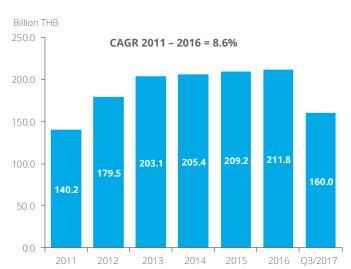
Sources: EIU, Office of Insurance Commission (OIC) & DTTJ Estimates

Both life- and non-life insurance market have expanded steadily and are projected to grow during 2017 by 3% and 2% respectively.

Total Life-Insurance Premium Received

Billion THB CAGR 2011 - 2016 = 11.5% 600.0 500.0 400.0 300.0 536.8 501.4 200.0 100.0 0.0 2012 2013 2014 2011 2015 2016 Q3/2017

Total Non-life Insurance Premium Received



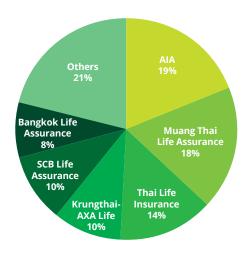
- Life insurance market has grown steadily based on past couple of years at 11.5% CAGR, whereas non-life insurance market has grown at a slower pace at 8.6% CAGR. The stagnation in export activities in past few years was the main reason for slow growth in the non-life insurance market.
- At the end of Q3/2017, total life- and non-life insurance premium grew by 6.2% and 4.1% respectively compared to 2016's owing to improved economic conditions.

Sources: EIU, Office of Insurance Commission (OIC) & DTTJ Estimates

At the end of Q3/2017, AIA maintained its leading position in life-insurance market at 19% out of the 432.7 billion Baht. For non-life insurance, Viriyah dominated the market at 17% out of total market size of 160 billion Baht.

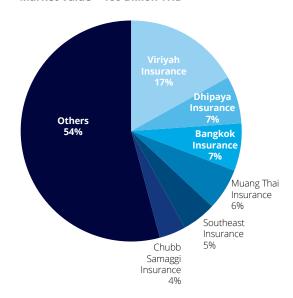
Life-Insurance Market Share

Market Value = 432.7 Billion THB



Non-life Insurance Market Share

Market Value = 160 Billion THB



By the end of Q3/2017, 6 major players of life-insurance dominated around 79% of market share. Life-insurance market in 2016 grew 6.2% compared to 2015s'.

For non-life insurance, 46% of market share belonged to 6 major players. However, the market growth during 2016 to 2017 was in a slow mode at 1.2% compared to 2015s' due to subdued export activities and economic stagnation.

Sources: EIU, Office of Insurance Commission (OIC) & DTTJ Estimates





Residential Real Estate

Rising GDP per capita and accelerating urbanization continue to boost Thailand's real estate sector. However, the growth rate has been limited by NPL threats and concerns about oversupply.

Situation in 2016

Real estate markets were relatively slow down in 2016 affected by several adverse factors such as higher household debt, slow government budget disbursement, and NPL threats. Thus, a lower growth in real estate market was evident. Property credit outstanding by the end of 2016 reached 2.6 trillion Baht or grew 4%YoY.

Forecast 2017

Thailand's property loan outstanding was projected to grow by 7%, especially in Bangkok and vicinity area thanks to the rollout of public infrastructure projects. Likewise, regional mega-project investments including railway double-tracking, motorways, and new mass-transit routes will encourage the growth of property market nationwide.

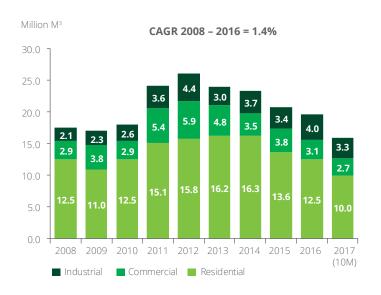
Long-term trend

The forecasted long-term GDP growth of Thailand at 3.0-3.5% amid external and internal risk factors is likely to cause an adverse effect on real estate sector in Thailand. In the wake of higher housing debt, it is expected that lenders will tighten up the mortgage criteria and decelerate the demand for houses. Nonetheless, the ASEAN integrated market should help increase demand for commercial and residential space in Thailand as foreign firms are likely to move their headquarters and some stages of production to benefit a low cost of living.

Sources: BOT, Plus Property, & SCB EIC

Property loan is expected to have a slow growth momentum in 2017 due to the excess supply of property in the market.

Permitted Construction Areas in Municipal Zones



Property Loan Outstanding

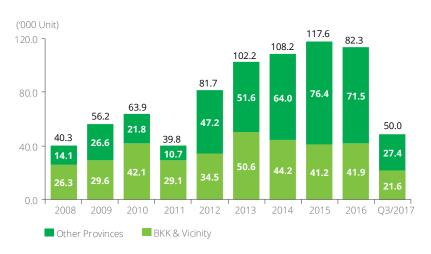


- For the first 10 months of 2017, residential construction areas were contracted by 1.7%, commercial and industrial permitted construction areas were expanded 5.8 and 6% compared to 2016s' respectively.
- However, infrastructure investment and urbanisation in Bangkok and vicinity and major regional provinces are expected to drive the growth of property loan in coming years.

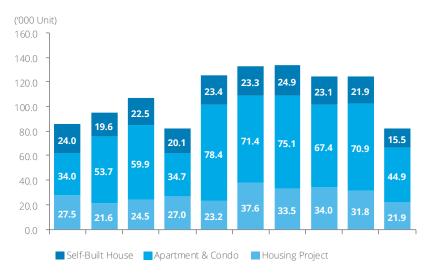
Sources: BOT, GHB, REIC & DTTJ Estimates

Nationwide condominium registration in Q3/2017 was dropped by 40.5%YoY. In the same period, new housing activities in Bangkok and vicinity displays a negative growth by 19.1%YoY.

Nationwide Condominium Registration



New Housing in Bangkok & Vicinity



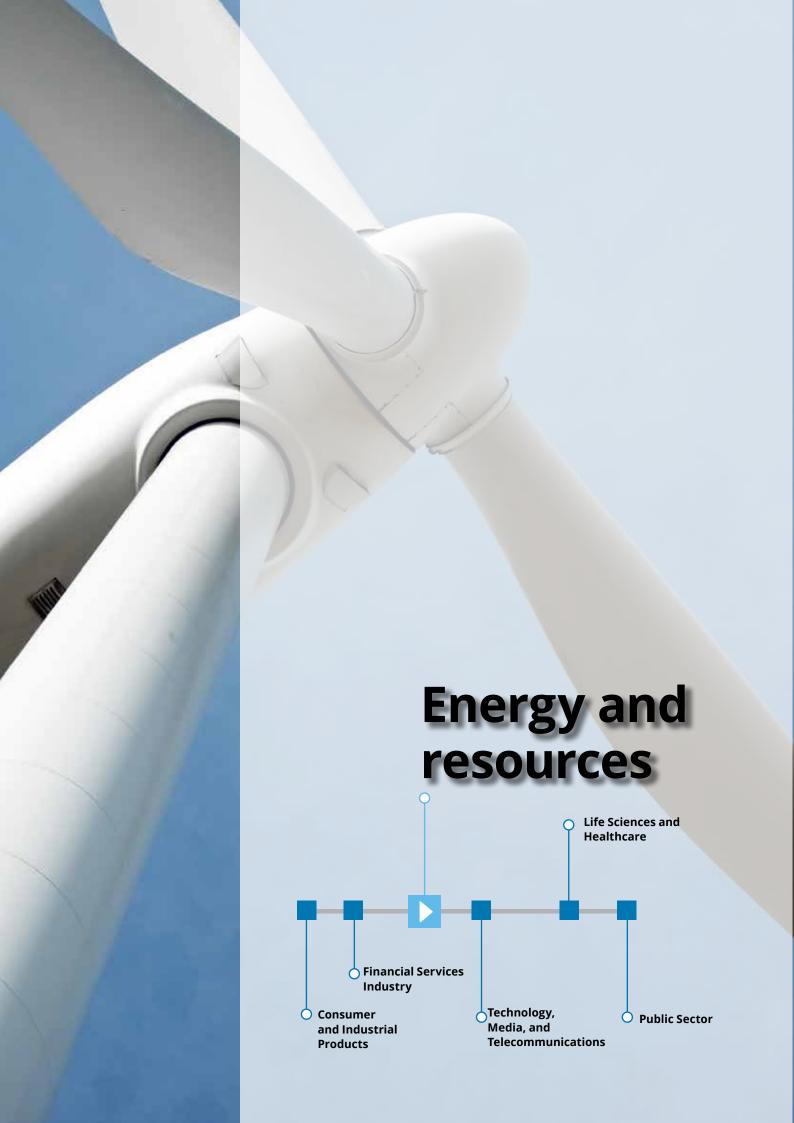
Sources: BOT, GHB, REIC, & DTTJ Estimates

Key Real Estate Landscapes



Key UPC real estate markets

- Chiang Mai
- Chonburi
- Khon Kaen
- Nakorn Ratchasima
- Phuket
- Prachuab Kirikhan (Hua Hin)
- Rayong
- Songkhla (Hadyai)
- Surat Thani (Koh Samui)
- Ubon Ratchathani
- Udon Thani







Electricity industry is expected to grow by 3-4% over the long term in line with Thai economic growth path.

Situation in 2016

Electricity consumption grew by 3.5%YoY despite the Thai slowing economy. The country's gross energy generation and purchase was shifted from 177.8 billion kilowatt-hours (kWh) in 2015 to 184.1 billion kWh in 2016.

Forecast 2017

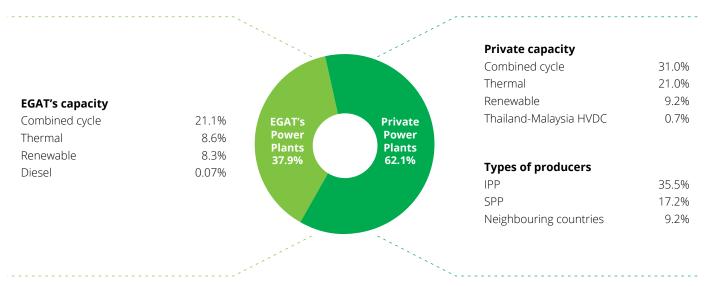
Electricity consumption level is predicted to reach 191.4 billion kWh or grow 4% YoY thanks to both public and private investment as well as the popularity of tourism industry. Large-scale business and household are the major electricity buyer accounting for 65% of total electricity consumption in Thailand.

Long-term trend

Thailand's electricity consumption is forecasted to rise by an average of 4.0% in the long-term in line with Thailand's real GDP growth projection. Fossil fuels remain the major source of electricity generation in the coming years. Nevertheless, the approved Thailand's new Power Development Plan 2015 (PDP2015) will ensure that various sources of power such as renewable energy, clean coal and nuclear power will be used to secure Thailand's power supply from the rising demand in the future.

Private power plans serve approx. 62% of total electricity capacity in November 2017 with the rising proportion of renewable inputs.

Total Electricity Generating Capacity: 42,433 MW



Sources: EGAT & Electricity Generating Company Websites

Note: (1) Thai government has privatized electricity generating industry

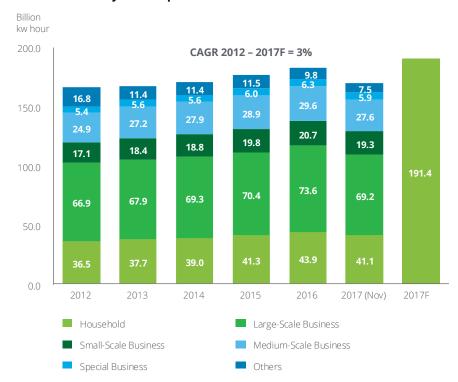
(2) data as of September 2017

(3) MW = megawatt. 1 MW = 1 million watts

The majority of electricity consumption in Thailand stems from both large-scale business and household sector with an average long-term growth rate around 3%.

- During 2016, total electricity consumption was 184.1 billion kilo-watt hour rising 4% compared to 2015s'.
- For the past 11 months of 2017, total electricity consumption has increased 0.3 percent compared to the same period in 2016.
- For 2017, the growth of electricity consumption is forecasted at 4.0% YoY in line with the projected real GDP growth rate of Thailand.
- Regarding PDP2015, fossil fuels remain the major input of electricity generating in Thailand during 2015 - 2020 accounting for around 80%.
- But in 2036, the final year of PDP2015, the proportion of fossil fuel input is projected at 60%, while the use of renewable and other inputs will reach 40%.

Thailand Electricity Consumption



Sources: BOT, EGAT, Energy Regulatory Commission (ERC), Ministry of Energy & DTTJ Estimate Note: kw hour = kilo-watt hour





Fuel consumption has rebounded from a sluggish period in 2016 thanks to the improved economic conditions. However, the major shift towards alternative-fuel and renewable energy will play an important role in dampening the demand for oil in the long term.

Situation in 2016

Economic slowdown affected by unfavourable economic conditions (e.g. domestic car market contraction, low commodity prices) caused a slowing growth of energy consumption. In 2016, commercial primary energy consumption grew 0.7% to 2.1 million bbl/day compared to 1.3% in 2015.

Forecast 2017

A sign of economic recovery contributed to the energy sector as shown by a decent energy consumption growth based on YoY. Thailand remained its position as a net importer of energy to support an increasing demand domestically. Industrial and transportation sector remained the two biggest sectors in the country in term of energy consumption.

Long-term trend

The government is striving to increase the proportion of alternative-fuel with the aim of reducing emission generating. As a result, a raw fuel for both electricity generation and vehicles will shift away from oil, therefore, the demand for oil will be dampened over the coming years. The industrial sector and transportation will remain the main consumer of electricity, however, the major shift in consumption is predicted to be towards residential use.

Source: EIU, EPPO, Ministry of Energy, & DTTJ Analysis

Thailand's energy balance at the end of Q3/2017



Primary energy supply: 107,959 ktoe

Production
 Import
 Export
 Stock
 60,732 ktoe
 59,645 ktoe
 (8,398) ktoe
 (4,020) ktoe





Conversion process: (39,924) ktoe¹

• Transformation (33,082) ktoe

• Own Uses & Losses (6,842) ktoe





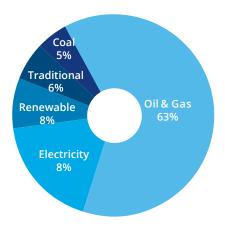
Energy consumption: 68,036 ktoe

• Non-Energy Uses (8,417) ktoe²

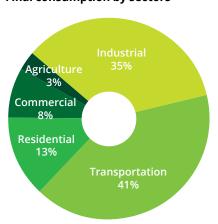
Final Consumption 56,619 ktoe



Final consumption by fuels



Final consumption by sectors

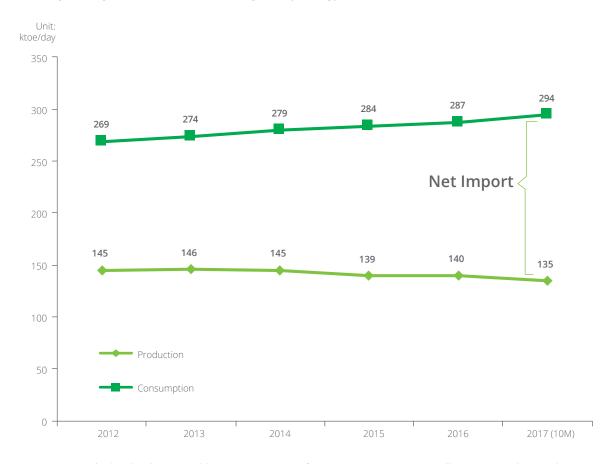


Source: Thailand Energy Balance 2016 by Department of Alternative Energy Development and Efficiency - Ministry of Energy Note:

- 1. Transform raw energy inputs to be usable energy outputs
- 2. Non-Energy Use means raw materials for petrochemical industries ktoe = kilo tonne of oil equivalent. 1 ktoe = 7,256 barrel of oil.

Oil and gas remain the biggest proportion in both total energy consumption and production in Thailand.

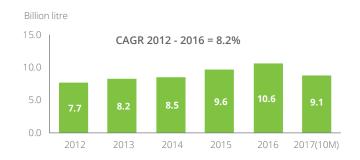
Consumption & production of commercial primary energy



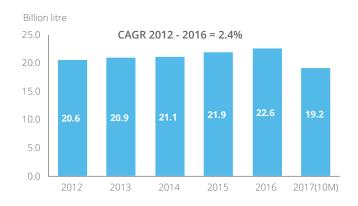
- During 2016, Thailand is the second-largest consumer of energy in ASEAN at 143 million tonnes oil equivalent (mtoe) behind 243 mtoe in Indonesia, but above those of Malaysia (95 mtoe) and the Philippines (54 mtoe).
- Industrial and transportation represented 35% and 41% of total energy consumption in Thailand respectively and are expected to grow in line with economic growth.
- Fossil fuels will continue to dominate Thailand's energy mix. The electricity generated from gas-fired power plants will increase slightly in the coming years as a result of lower costs. Thus, Thailand will import more natural gas.

Diesel and Benzene/Gasohol sales have shown a strong correlation with economic growth as the growth rates are in the similar pace.

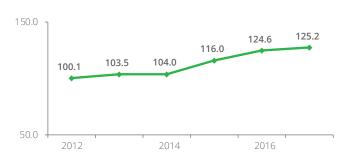
Benzene/Gasohol Sales



Diesel Sales



Fuel index (Base year 2010 = 100)



- From January October 2017, Fuel Index expanded by 2.3%. Similarly, sales volume of benzene/gasohol and diesel during the same period grew 3.9% and 2.4%YoY respectively.
- Sales of Benzene/gasohol has grown more rapidly than Diesel at CAGR of 8.2% to 2.4% respectively.
- It is forecasted that the consumption of both benzene/gasohol and diesel will rise around 5% owing to the increase in car sales and improved economic conditions.

Sources: BOT & EIU Estimates for 2017 Note: ktoe = kilo tonne of oil equivalent. 1 ktoe = 7,256 barrel of oil





(II) Telecommunications

Major mobile operators have made their strategic moves to expand their 4G infrastructure with the concentration on content and Internet service businesses.

Situation in 2016

Competition among major mobile operators concentrated on launching 4G services. Considerable investments in infrastructure and network were undertaken to satisfy NBTC's license conditions. There were marginal changes in market share (e.g. subscribers) among major players mainly affected by marketing campaigns and network coverage.

Forecast 2017

It is expected that intense competition among three major mobile operators continues driven largely by innovative services and marketing campaigns to maintain their competitive positions. The total number of subscribers in the mobile phone market is forecasted at 96 million users or increase 5%YoY. In addition, mobile and Internet banking trend in 2017 will be significantly upward with double-digit growth of transactions and values.

Long-term trend

Thai government policy on ICT will be in favour of all mobile operators as the interim government has committed to promoting the Digital Economy in its 20-Year National Strategy. A variety of newly integrated services especially financial service applications and alliances between mobile operators and business counterparties including banks, non-banks, retailers, and so on (i.e. FinTech) will play essential roles in driving the growth of telecommunication industry.

Sources: EIU, NBTC, & Ministry of Information and Communication Technology (MICT)

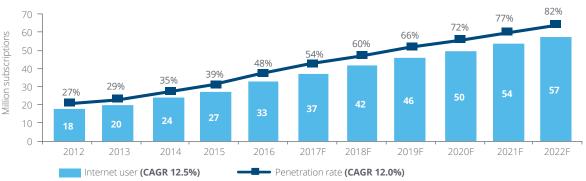
Mobile subscriptions have recovered from 2016 onwards after a bulk of pre-paid sim cards were deactivated. The growth of both internet and broadband services remains on track.

- In the longer term, telecom market growth will be supported by the launch of new services and strong demand for mobile Internet services, particularly in urban areas.
- Digital Economy Agenda by Thai Government will drive Internet and broadband service demands across various sectors in the coming years. Aggressive marketing campaigns for broadband services are underway and competition to extend the customer-base has intensified.

Mobile Trend



Internet Trend



Broadband Trend

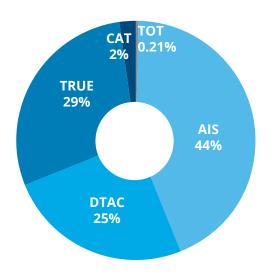


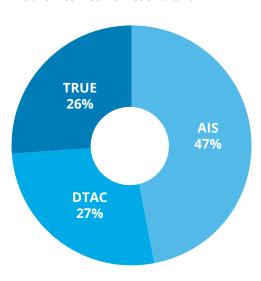
Sources: EIU, NBTC, & Ministry of Digital Economy and Society (MDES)

Intense competition among three major mobile operators continues with innovative services and marketing campaigns to boost advantages.

Mobile Service Market Share 2017F

Mobile Internet Market Share 2017F





- In the end of 2017F, Advanced Info Services (AIS) led the mobile market with 42.2 million subscribers, while Total Access Communication (DTAC) had a 24.2 million and True Mobile followed with 28.0 million.
- Internet and mobile banking are forecasted as the major growth areas in the coming years. Regarding the Bank of Thailand's statistics, Internet and mobile banking transactions in 2016 rose by 29% YoY and 122% YoY respectively.
- Nationwide wireless Internet deployment has been implemented via the "Smart Thailand" strategy, establishing around 400,000 free access points around the country. Likewise, TOT is in charge of developing a national broadband network to connect 24,700 villages with the total budget of 15 billion Baht.

Sources: EIU, Companies' Annual Reports and Websites, & NBTC Note: Market Share Data as of Q3-2016





As a result of the rebound in global and domestic demand, Thailand's electronic outputs improved in 2017 compared to 2016 and it is estimated that the industry will maintain its moderate growth path in the coming years.

Situation in 2016

Overall, electronic industry outputs grew by 6.8% compared to 2015s' due to the rebound of global and domestic demands. Computer and part outputs dropped by 0.3%, while domestic electrical appliances surged 11.9% from the previous period.

Forecast 2017

The market demand for electrical appliance rose by 7.2% thanks to the rebound of global and domestic demands. The manufacturing index of computers and parts increased by 6%, while those for electronic appliances rose by 2.1% from 2016.

Sources: OIE & MOC

Long-term trend

Thailand's electronics industry, especially computer and parts, has been encountering fierce competition and uncertain global demand for a long time due to aggressive moves by smartphone manufacturers which partially be able to function instead of computers. Nevertheless, the Thai government is committed to enhance the competitive ability and promote investment in modern electronic industries in accordance with Thailand 4.0 roadmap. Electronic appliance no longer has competitive advantages as other regions like Vietnam and China are able to minimize the production costs and expand their production capacity which in turn allow them to offer cheaper products than Thailand. Overall, the industry is likely to maintain its moderate growth path in the coming years.

Computers & parts

Global electronic industry still continues a moderate growth path in coming years, but heavily relies on economic conditions.

Global Semiconductor Sales



Personal Computer User



 $Sources: EIU, OIE, Semiconductor\ Industry\ Association\ (SIA), \&\ World\ Semiconductor\ Trade\ Statistics\ (WSTS)$

- The global semiconductor sales in 2017 are expected to grow by 15% from 2016 or reach 389.7 billion USD as a consequence of an economic rebound in many major countries. An expected economic downturn in China and US in 2018 will have a considerable impact. However, the global semiconductor sales will keep modest growth throughout 2019 at 3.8% CAGR.
- According to the information, it indicates that the trend of computer penetration is growing steadily as a result of digitalization. In 2017, there were almost 57 computer users per 100 people and it will keep increasing over the long term especially in under developing and developing countries.
- Apple and Samsung still dominate
 the mobile phone market. Meanwhile,
 there are some new players entering
 the market to steal share from these
 two big players like Huawei and Xiaomi.
 This creates fierce competition in the
 market. However, it also indicates that the
 demand is still increasing over the long
 term.

A sign of recovery in computers and parts sector is evident as a result of trade recovery. However, the sector is in the stagnant phrase caused by technological shifts and innovations.

Production



- MPI and capacity utilization from January – November 2017 were at 78.3% and 60.2% rising by 6% and 6.7% respectively. The numbers demonstrate a slight recovery in computers and parts businesses.
- As a result of trade recovery, MPI, Export, and capacity utilization are projected to improve from 2016's.
- Due to the contraction of computer and parts industry across the world, Thailand can no longer take great benefits from this industry as before. Value has migrated to growing adjacent segments (i.e. tablet, smartphone).

Capacity Utilization



Export



Sources: DTTJ Estimates, Department of International Trade Promotion (DITP) & OIE

Domestic electrical appliances

Domestic electrical appliances industry in 2017 is likely to face a slow growth due to a slowdown in real estate industry which is partly in correlation with the industry.

Production



- From January November 2017, MPI improved slightly thanks to an overall economic recovery which stimulated domestic consumption. In contrast, declining demand in overseas caused the decrease in export value.
- In general, there is a fierce competition in electrical appliances in the domestic market. Refrigerator, television video, and the like are facing a negative growth during the past few years.
- Thailand is no longer attractive in the electronic industry. Thus, Thailand is being seen as a springboard to other parts Southeast Asia particularly CLMV.

Capacity Utilization



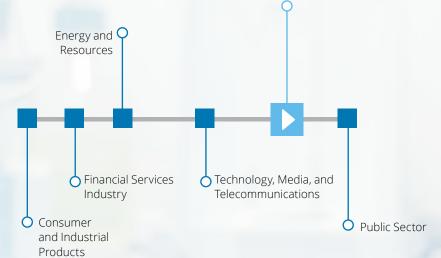
Export



Sources: DTTJ Estimate, DITP, & OIE

Note: Domestic Appliances include several electrical products such as air conditioner, rice cooker, refrigerator, water pot, electric fan and so on.

Life sciences and healthcare







Thailand healthcare sector will continue to grow in coming years underpinned by both government policy and private healthcare providers' growth strategies.

Situation in 2016

Thai government spent the budget of 123.6 billion Baht growing 12.6%YoY to support healthcare policy and initiatives for public healthcare service. Total healthcare spending of Thailand was represented 6.6% of GDP at 948 billion Baht increasing 5.0%YoY.

Forecast 2017

Thai government set up a budget of 126.2 billion Baht increasing by 2.2% compared to 2016's to support healthcare policy and initiatives for public healthcare service. Overall, total healthcare spending of Thailand is 986 billion Baht increasing 4.0%YoY and representing 6.7% of total GDP.

Long-term trend

In 2018, the National Bureau of Budget has announced the healthcare budget of 98.9 billion baht to the ministry of public health decreasing from 126.2 billion baht in 2017. It is anticipated that the government will scale back the public fund for health insurance schemes which first introduced in 2002. Healthcare spending as a proportion of GDP is estimated to reach 6.8% by 2021 due to the increasing trend in aging population, chronic non-communicable diseases, and new technologies related to healthcare services. Both governmental agencies and private hospital chains want to promote Thailand as a medical hub along with tourism destination. Big private healthcare providers will attempt to achieve this aim by seeking for international accreditation with international healthcare organizations.

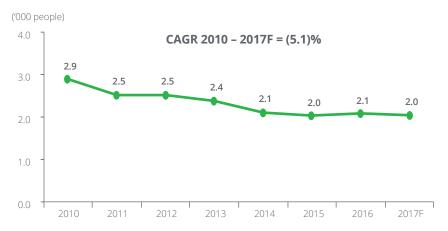
Sources: EIU, Bureau of the Budget, & NESDB

Healthcare budget has been reduced in 2018 due to the need of investments to execute Eastern Economic Corridor (EEC) project.

Thailand's healthcare budget



One doctor per people ratio

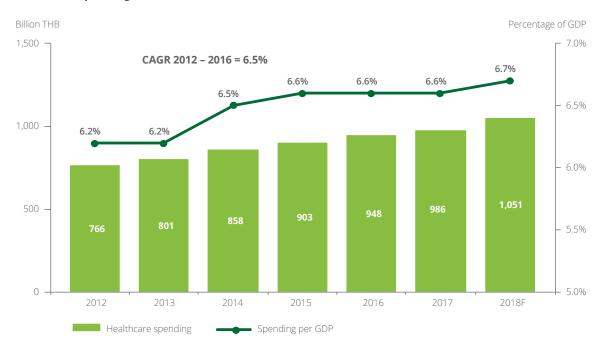


Sources: Bureau of the Budget, EIU, & NESDB

- In 2018, the budget allocated to Ministry
 of Public Health (MOPH) has been reduced
 compared with past several years as the
 government allocated more budget to support
 EEC projects. However, healthcare policies
 and initiatives especially Universal Healthcare
 scheme is still maintained.
- During 2016, one doctor averagely serves around 2,100 patients. One of the lowest ratios in Asia and Australia. However, the ratio is expected to decrease over the long-term partly because of slowing population growth and aging society.
- The government has planned to scale back Thailand's public fund in health insurance schemes which first introduced in 2002. It has been confirmed that the public healthcare system will be more decentralized to improve efficiency under Thailand 4.0 strategy.
- Private hospital groups such as Bangkok Chain and Bumrungrad hospitals have put attempts to turn Thailand into a medical-tourism destination by seeking for international accreditation. There were 61 hospitals and other medical institutions with accreditation from the Joint Commission International with the US-based organization in September 2017.
- BDMS, the leading private hospital group in Thailand, will continue its inorganic aggressive growth strategy to dominate Thailand and ASEAN market.

Healthcare spending in Thailand is forecasted to increase steadily as shown in past several years primarily due to aging population and Universal Healthcare scheme.

Healthcare spending

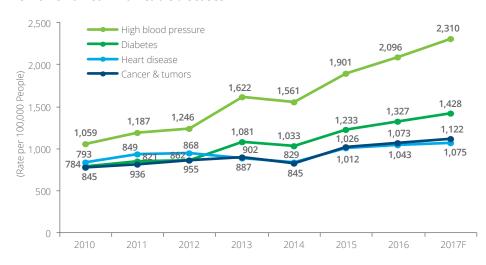


- Thailand spent on healthcare around 6.6% of GDP in 2016 proportionally higher than other ASEAN countries such as Singapore (5.2%), the Philippines (4.7%) and Malaysia (4.2%), but less than Vietnam (7.4%).
- The public sector will still dominate healthcare spending in Thailand. The rolling out of central healthcare funding will cause some categories of care to be no longer free of charge, while people are encouraged to have private health insurance to cover the costs.
- Over the long-term, healthcare expenditure per GDP is projected to rise to 6.8% by 2021 largely affected by an aging population, a growing prevalence of chronic diseases and new technologies.

Sources: EIU & NESDB

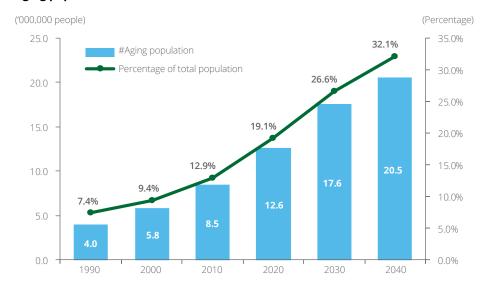
Aging population and the increasing trend of chronic non-communicable diseases will put pressure on healthcare spending over the long term.

Chronic non-communicable diseases



- During 2010 2015, rates per 100,000 population of major chronic non-communicable diseases continued to increase including high blood pressure (CAGR = 10.2%), diabetes (CAGR = 7.6%), heart disease (CAGR = 3.1%), and cancer and tumors (CAGR = 4.6%).
- According to the latest WHO statistics, among low and middle-income countries, heart disease killed around 17.7 people which is the among other noncommunicable

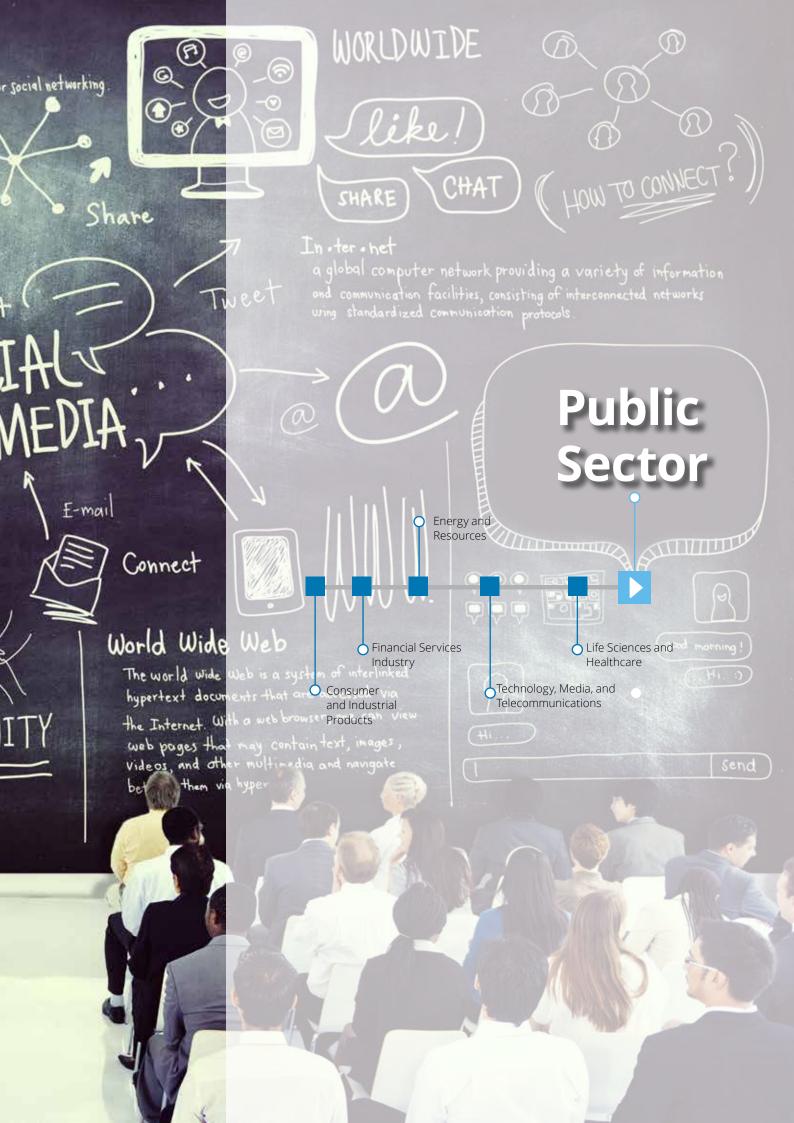
Aging population statistics



- Based on the current situation and historical statistics, it is projected that aging citizens will represent more than 30% of total population by 2040. Birth rate and population growth will still be a critical issue in the long term.
- The government will have to take into consideration regarding aging society issue as healthcare services must be wellprepared to cope with future needs.

Sources: EIU & NESDB

Note: Aging population means those citizens with the age above 60 years old.







To drive economic growth and competitiveness in the long term, fiscal deficit policy is likely to be adopted by Thai government since a large amount of investments are still required.

Situation in 2016

Thai government's expenditure during 2016 was 2.8 trillion Baht rising by 16.7% from the previous fiscal year with a fiscal deficit of 0.4 trillion Baht. However, public debt per GDP was 41.2% dropped from 43.9% in 2015. New competitive incentives by BOI were deployed to attract foreign investors and rejuvenate investments during the transition period.

Forecast 2017

The Thai government has planned to spend around 2.9 trillion Baht, while the expected government revenue is projected at 2.45 trillion Baht with -0.45 trillion Baht deficit accounting for 2.9% of GDP. At this level, the deficit accounting will reach to the new high and the level of public debt per GDP may reach to 45% which is still much lower than the ceiling rate of 60%. Although Thailand's economy is forecasted to recover, some uncertainties in the global economy still remain. Therefore, the government will be committed to executing the infrastructure development projects especially EEC to maintain the growth momentum for the country.

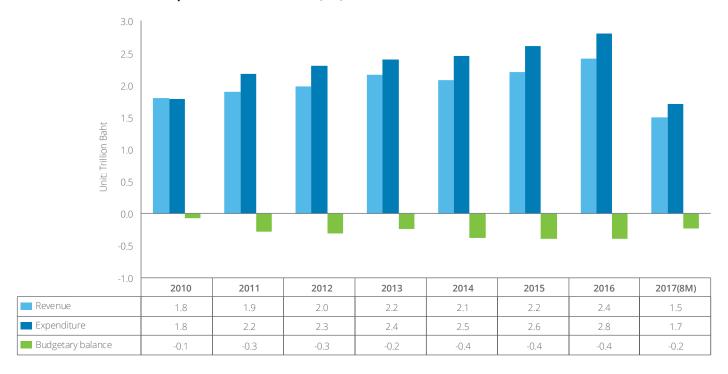
Sources: BOT, Ministry of Finance, Thailand Board of Investment (BOI), and College of Population Studies

Long-term trend

Fiscal deficit in coming years is expected to be deployed partly because of the needs of continuous investments in public infrastructure projects such as the airport, deep seaport, high-speed train, commuter train, motorway, and the like. The EEC project remains in the top priority list of execution to support the execution Thailand 4.0 strategy. The government also plans to encourage the so-called "publicprivate partnerships (PPPs)" to reduce government investment burden and attract foreign investors to Thailand. Nevertheless, an increase in the proportion of the aging population in Thailand over the next decades will put high pressure on both public and private sector. Consequently, expenditures in social welfare and healthcare industry by the government tend to increase.

Public investments are still ongoing, therefore, fiscal deficit will keep continue in the future.

Government Revenue and Expenditure for 2010 – 2017(8M)



As the expenditure of the Thai government is greater than its revenue, the fiscal deficit has become the major tool in financing to meet the spending needs.

Source: Ministry of Finance – The Royal Thai Government

Note: The Royal Thai Government's fiscal year starts from 1 October this year till 30 September next year.

Public Debt remains healthy at 41.4% which is lower than ceiling level of 60%, imposed by Public Debt Management Act.

Public Debt Level Against GDP during 2010 - 2017(10M)



Even there are uncertainties in the global economies especially in China and US which expect to face a slowdown. The government can still deploy deficit fiscal policy to retain the momentum of economic growth in the coming years as the debt level is maintained at 41%, below the ceiling level at 60%.

Source: Ministry of Finance – The Royal Thai Government

Note: The Royal Thai Government's fiscal year starts from 1 October this year till 30 September next year.

The execution of Eastern Economic Corridor (the EEC) projects has been underway to create the next wave of competitiveness under Thailand 4.0.

EEC is a strategic location of Asia-Pacific region

- Strengthen "the existing Eastern Seaboard" to become the world-class economic zone.
- Combine public and private investment budget of 1.5 trillion Baht over 5 year period (2017 2021).
- A comprehensive connectivity and logistics infrastructure (i.e. double-track railway, motorway, airport, deep seaport, industrial estate, and industrial park) covers Bangkok, Chachoengsao, Chon Buri and Rayong.
- 5 priority out of 15 key projects to be kicked-off in 2017 are as follows:
 - U-Tapao Airport;
 - Laem Chabang Port;
 - High speed rail;
 - Target industries (i.e. Bio-Eonomy, Modern Automotive, Electronics, Robotics, Aviation, and Medical Hub) and;
 - New cities.

Source: "Eastern Economic Corridor Development project" Driving Forward... 15th February 2017 by Thailand Board of Investment (BOI)

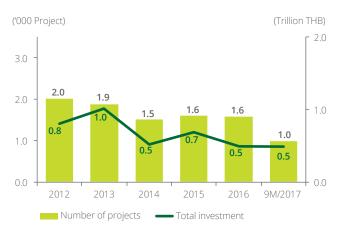


New incentives have been launched by BOI to accelerate private investments in support of Thailand 4.0.

Net applications received by BOI



Promotion certificates issues by BOI



Applications approved by BOI

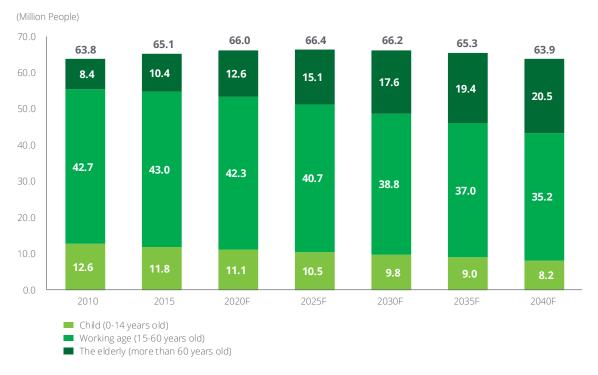


- In pursuit of Thailand 4.0, new investment benefits have been given to investors in targeted industries by BOI in order to support the roadmap towards Thailand 4.0.
- EEC is underway with five main priorities including U-Tapao international airport, Laemchabang port, investment in targeted industries, new motorway, and tourism development.
- In fact, Thailand's BOI investment policy not only provides attractive schemes for investors but also encourage them to deploy Thailand as a springboard to other AEC member states.

Sources: BOI & BOT

The aging society is still a serious issue in Thailand's economy as the reduction of working age proportion will impact on productivity which directly links to GDP growth.

Thailand Demographic Structure (2010 - 2040)



- Based on NESDB projected data, both child and working-age population continue the negative growth years over years with CAGR of (1.4)% and (0.6)% respectively.
- With the moderate population growth rate of 0.4%, it is expected that by the end of 2040 the number Thai population will tie with 2010's level.
- Thai Government has adopted incentive schemes in both tax and non-tax mode to encourage the population growth rate, but also implemented policies (e.g., the elderly fund, the senior citizen health insurance) to support the elderly people.

Sources: NESDB, The Royal Thai Government, & College of Population Studies





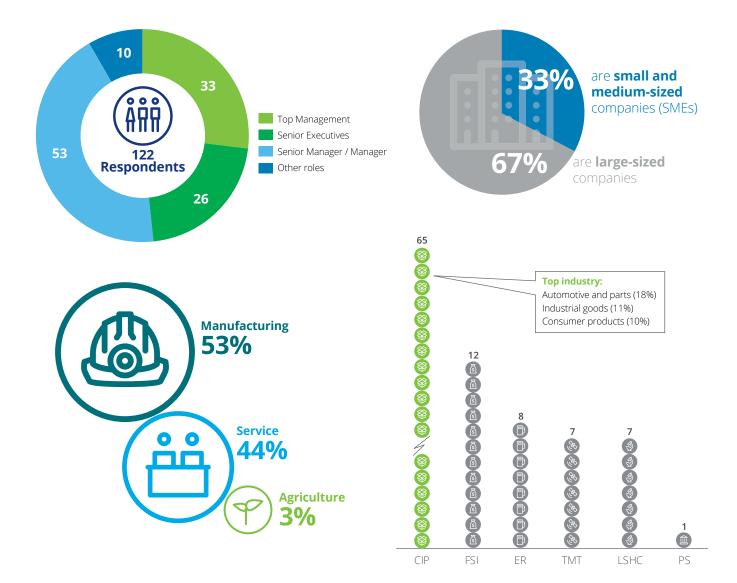
Objectives



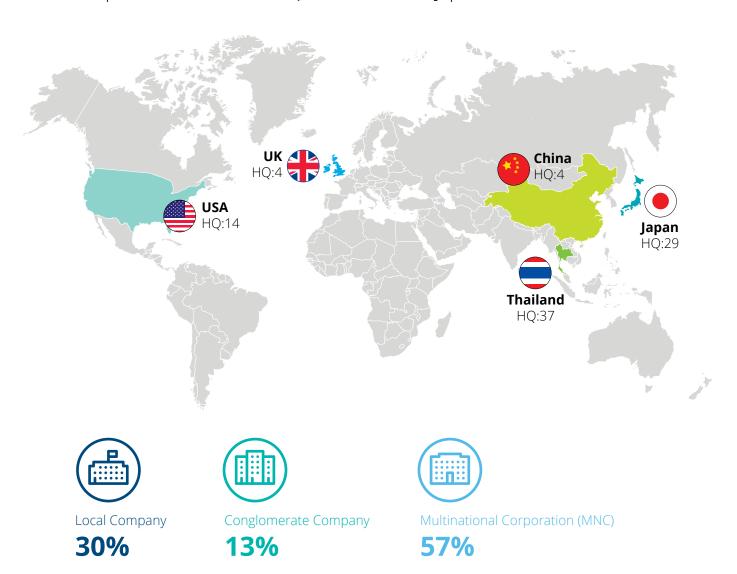
"The reason why it is so difficult for existing firms to capitalize on disruptive innovations is that their processes and their business model that make them good at the existing business actually make them bad at competing for the disruption."

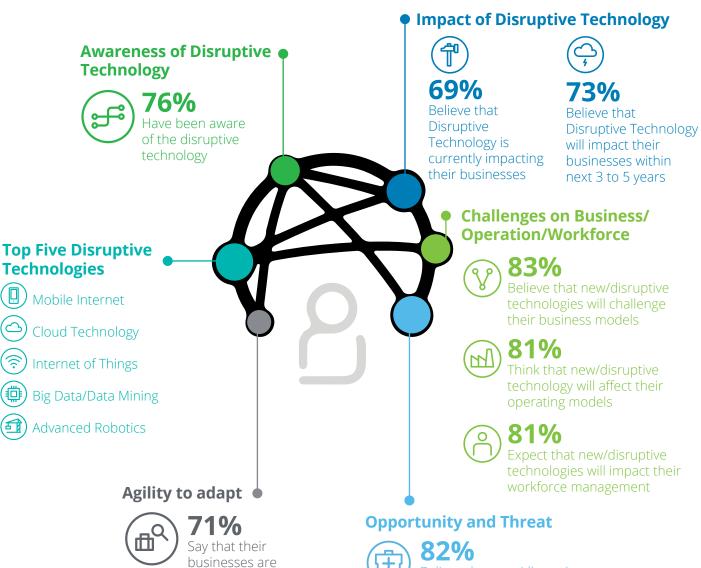
Clayton Christensen
HBS Professor & Disruptive innovation expert

Findings



54% of respondents have their HQ in Thailand and Japan







agile enough to

new/disruptive technologies

embrace

82%

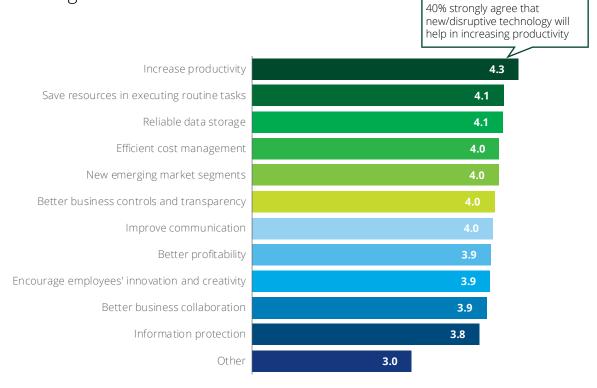
Believe that new/disruptive technology will create **opportunities** for their businesses in the future



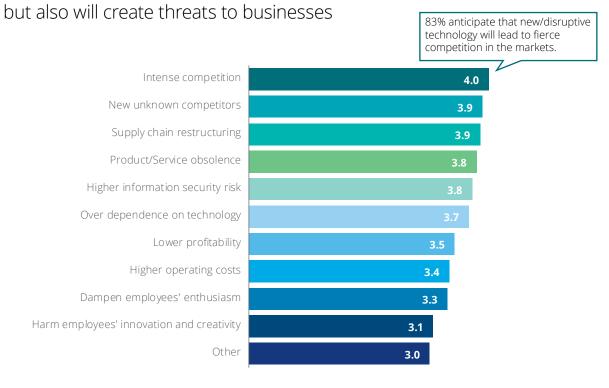
77%

Think that new/disruptive technology will present threats to their businesses in the future

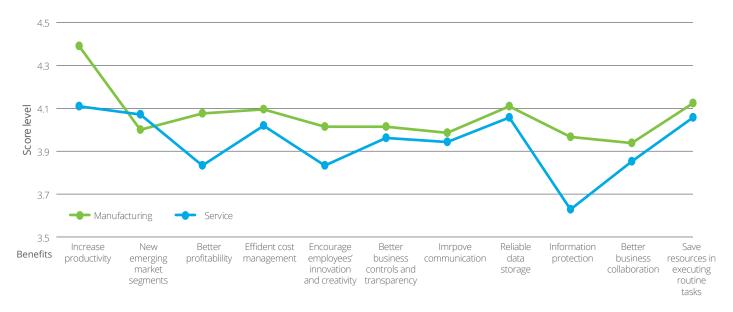
Benefits which believed that new/disruptive technology will bring to businesses



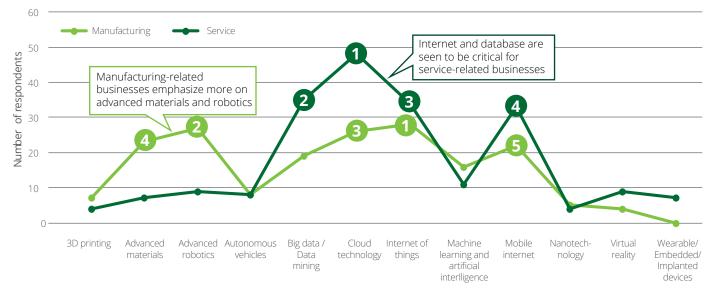
Not only benefits which new/disruptive technology will bring,



Manufacturing-related businesses tend to see more benefits arising from new/disruptive technology than service-related businesses do. However, they are less aware...Why?

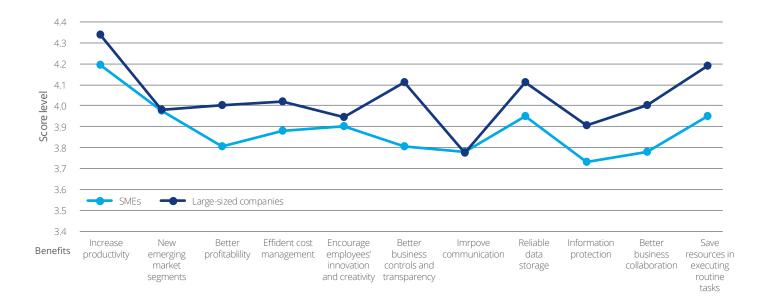


Manufacturing and service-related businesses have different focus areas of disruptive technology, but both of them see the benefits of utilizing internet and database.



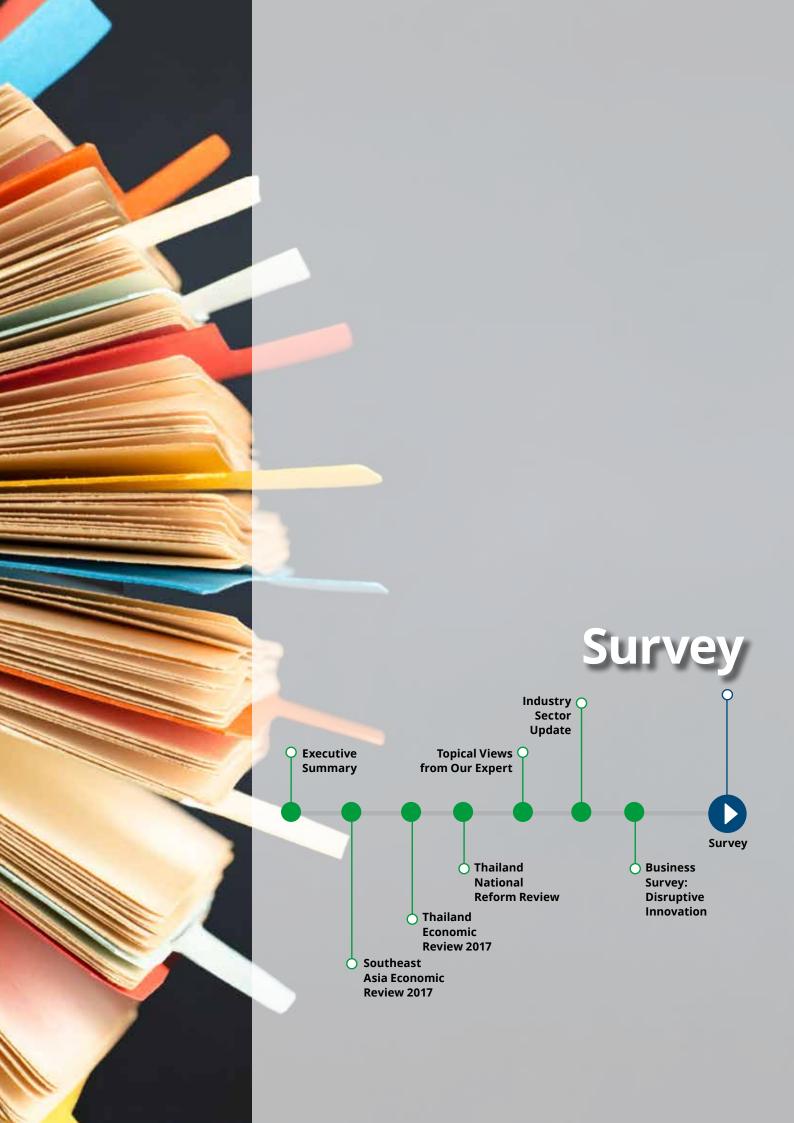
Type of Disruptive Technology

Large-sized companies believe that deploying new/disruptive technology will bring considerable benefits to them than SMEs do



Top 5 most disruptive

		_				
		1st	2nd	3th	4th	5th
	Consumer and Industrial Products		ि			PROPERTY
		Cloud Technology	Internet of Things	Mobile Internet	Big Data/Data Mining	Advanced Robotics
5	Financial Service Industry				िं	İİ
		Mobile Internet	Cloud Technology	Big Data/Data Mining	Internet of Things	Advanced Robotics
	Energy and Resources		<u> </u>	9	ि	①
		Big Data/Data Mining	Cloud Technology	Advanced Material	Internet of Things	Mobile Interne
€8	Telecommunication, Media, and Technology	ि		(
		Internet of Things	Cloud Technology	Mobile Internet	Big Data/Data Mining	Virtual Reality
(Life Science and Healthcare	<u></u>		(I)		ि
		Cloud Technology	Machine Learning and Artificial Intelligence	Advanced Robotics	Big Data/Data Mining	Internet of Things



Please kindly help us to complete the following survey to let us know your opinions which will be very useful in improving our Quarterly Economic Reports to you.

The survey can be both accessed via link and QR code below. We thank you in advance for your time and kind opinions.

https://az1.qualtrics.com/jfe/preview/SV_5bzw4pAN106yJg1?Q_CHL=preview

or



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