Thailand 4.0: The Country's Next Industrial Revolution
Executive Summary

Thailand has set its economic transformation goal, which includes:
- Emerge from upper-middle income to high-income country
- More inclusive and balanced growth

To achieve the target, Thailand 4.0 economic model was drafted. It contains 5 key development agendas:

1. Improve the quality of Thai skilled labor
2. Boost local entrepreneurs (SMEs) capabilities
3. Develop new innovative industries
4. Strengthen internal economy
5. Enhance economic ties with ASEAN and global market

Business opportunities for foreign and international investors in Thailand:
- High Value Added Industry
- Infrastructure for Digital Economy
- Logistic and Connectivity Industry
Agenda

Thailand 4.0 Overview

Private Driven Agenda & Business Opportunities

Summary & Recommendation

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Thailand Economic Development Background

**Thailand 1.0**

*Agriculture based* – The economy of Thailand was heavily reliant on the export of agricultural products such as rice.

Thailand has become farming power house of Asia.

**Thailand 2.0**

1st *industrial revolution (Light Industry)* – Thailand’s economy reallocated from agriculture base to light manufacturing, e.g. garment, food processing.

This was the beginning of the industrial revolution in Thailand.

**Thailand 3.0**

*Higher value added industry* – Thanks to rapid inflow of FDI, Thailand was able to

1) Shift to higher value added production country
2) Increase trade with global market

Thailand once was considered as the potentially new tiger of Asia.

**Thailand 4.0**

*Innovative/ value-based industry and high income country* – Thailand will move up to high income country via establishment of an innovative society and industry.

Thailand 4.0 is expected to be the country’s biggest transformation that will speed up the country’s economic growth.

Data Source: draeqa.up.ac.th, thaiembdc.org
Thailand’s economic challenges

Ever since the country’s major transformation in the 90’s, Thailand’s economy has never had any significant structural shifts, resulting in moderate growth until today.

Key Challenges

To break through from upper-middle income to high-income country
- Thai economic growth has been steady at the rate of 3-4% which is below ASEAN standard at around 5%

Inclusive and balanced growth
- Thailand ranked 73rd out of 154th of GINI index* which indicates that the country has moderate wide income gap between the poor and the rich, compared to other countries in the world
- Despite a large amount of FDIs in value added industries, know-how and technological knowledge have not yet been effectively transferred to local SMEs

*GINI index’s country ranking starts from the most income inequality to the prefect equality.

Data Source: draeqa.up.ac.th, thaiembdc.org, worldbank

Thailand’s GDP and GDP growth 1961 - 2016

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**Why Thailand 4.0?**

To address the economic challenges, Thailand 4.0 model was introduced in 2016. It consists of 2 main parts which are 2 core strategies and 3 development frameworks with primary goal of transforming Thailand to innovative and value-based industry and high income country by 2032.

### Development frameworks, named “New Growth Engine”

#### Competitive Growth Engine

“Drive the economy with innovation, intelligence, technology and creativity”

The key areas of focus are including:
- Elevate domestic R&D capacity
- Develop more skilled workers
- Create friendly environment for innovative business

#### Inclusive Growth Engine

“Distribute wealth and income equally throughout the country”

To achieve that target, the government plans to:
- Enhance Thai people's skills and Thai businesses to keep up with rapid innovations and changes at domestic and global levels
- Create the provincial and community economic clusters

#### Green Growth Engine

“Emphasis more on eco-friendly development”

In order to achieve sustainable growth, Thailand will balance the development of economic growth and ecosystem preservation.

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**Core Strategies**

**Strength from Within, and Connect to the World**
**Agendas & Business Opportunities**

*Consistent with the model, Thailand government has determined 5 country’s strategic development agendas to create attractive investment opportunities in certain industries.*

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<th>Agenda Description</th>
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<td><strong>Public - Driven</strong></td>
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<tr>
<td>The industries related to these groups are <em>not yet fully opened for foreign investment</em></td>
<td>Improve the skill of Thai labor</td>
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<td></td>
<td>Promote local entrepreneurs (SMEs)’s capability</td>
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<td><strong>Private - Driven</strong></td>
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<tr>
<td><em>Thailand encourages private sector to invest</em> to elevate its economic capability and competitiveness. In exchange, investors will obtain attractive investment incentives and new market opportunities such as new local markets and intra-ASEAN</td>
<td>Develop new innovative industries</td>
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Develop New Innovative Industries
Thailand aims to transform from “comparative advantage” to “competitive advantage” country in the future through knowledge, technology, and innovation. Thus, the government has set a long term goal to develop 10 Future Industries, which consist of 3 phases.

1. **Current stage of Thailand**
   - Enhance the existing industries’ capability (The First S-Curve)
     - To encourage the 5 key industries’ investors to invest in further innovative technology and R&D to add value and to ease the competitiveness in global market.

   **The First S-Curve industries include:**
   - Next-Generation Automotive
   - Agriculture & Biotechnology
   - Affluent, Medical and Wellness Tourism
   - Smart Electronics
   - Food for the Future

2. **Establish the new industry (The New S-Curve)**
   - To develop the 5 new industries to enhance their capabilities to support future competitiveness

   **The New S-Curves industries include:**
   - Robotics
   - Biofuels & Biochemical
   - Medical hub
   - Aviation & Logistics
   - Digital

3. **Emerge of the high technology value chain**
   - After establishment of 10 future industries, they will fulfill the country with knowledge, creativity, innovation, science, technology, research and innovation, and build upon comparative advantage with

   **“5 Groups of Technology and Targeted Industries”**
   - Food & Agriculture - Biotech
   - Digital & IOT – Embedded Technology
   - Health & Wellness - Biomedical
   - Creative & Culture – High Value Service
   - Smart Devices & Robotics - Mechatronics

Data Source: draeqa.up.ac.th, thaiembdc.org
Government Current Action

1. **Distinctive investment promotions**

To provide investment privileges to encourage the investment in target industries. The highlighted promotion is:

- Corporate Income Tax (CIT) exemption for up to 13 years for high technology-intensive, or R&D businesses.

2. **Drafting new investment laws to increase the country's competitiveness for target industries**

To offer benefits, in addition to investment promotion, in order to compete with other countries in attracting investment projects into target industries. These are some of draft laws:

- Government’s supporting fund to cover the investment costs for R&D, technology, innovation and human resources.
- Import duty exemption for machinery and raw materials as well as providing other non-tax benefits.
Investment Opportunity

In short term, investors may consider first S-Curve industries due to their well-established value chain in Thailand, while tap into opportunities in the new S-Curve when the right time arrives.

**First S-Curve**

**Short Term**
- **Next-Generation Automotive**
  - Electric Vehicle (EV)
  - Vehicle Battery for EV
  - Advanced Vehicle Materials

- **Agriculture & Biotechnology**
  - Organic Farming
  - R&D for exotic crops, seeds and fertilizers
  - Smart Farming

- **Affluent, Medical and Wellness Tourism**
  - International standard hospitals
  - Luxury tourist attractions and services

- **Food for the Future**
  - Food Innovation
  - Functional Food
  - Food Preservation technology

- **Smart Electronics**
  - High technology electronics part production
  - Programming

**New S-Curve**

**Medium - Long Term**
- **Robotics**
  - Robotics for heavy manufacturing such as automotive, food processing

- **Aviation & Logistics**
  - Airplane's spare parts and maintenance service
  - 3P/4P logistic service, cold chain warehouse

- **Biofuels & Biochemical**
  - R&D for advance biofuels & biochemical products

- **Digital**
  - E-commerce
  - Digital content
  - Consumer insights analytics and data center
  - Cyber security, etc.

- **Medical hub**
  - Medical device industry
  - Thai herb industry
Strengthen Internal Economy
## Strengthening the Internal Economy

*Thailand will decentralize the country’s economic development from central to outer regions.*

Thai government has 4 development frameworks:

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<th>Framework</th>
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<tr>
<td><strong>1</strong></td>
<td>To set clear strategic economic position and development plan for each region&lt;br&gt;&lt;br&gt;<strong>Example:</strong> Northern – Agriculture and food innovation region&lt;br&gt;Eastern – Livestock, exotic rice products, sports region&lt;br&gt;Southern – Luxury tourism, food science, and agriculture innovation region</td>
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<td><strong>2</strong></td>
<td>To develop economic structure and internal market system&lt;br&gt;&lt;br&gt;Government aims to develop an integrated online data platform that gathers the country’s production value chain information, and can be accessed by every party</td>
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<td><strong>3</strong></td>
<td>To establish innovation hubs&lt;br&gt;&lt;br&gt;To enhance existing fragmented industry to integrated value chain, the government will be the first mover to sponsor or cooperate with other parties to invest in R&amp;D and advanced infrastructure system such as building <em>smart city</em></td>
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<td><strong>4</strong></td>
<td>To elevate government units to better facilitate regional economic growth&lt;br&gt;&lt;br&gt;Government will improve internal organizations and service capability to better support growth mechanism at provincial level</td>
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Government Current Action: Smart City Project

At the present, the government has launched the pilot smart city development projects in Chiang Mai and Phuket. Meanwhile, Khon Koen smart city project was mainly initiated by private sector.

The goal of “Smart City” project is to have 5 smart cities in Thailand within 10 years. To achieve this target, government has set up 3 phases of development:

- **1-3 years** – smart city feasibility study and prepare the infrastructure
- **3-5 years** – build the smart city center in target cities and test the digital systems such as IoT, cloud data service
- **5-10 years** – implement 5 smart cities

### Chiang Mai

- **Initial Capital Injection:** USD1.1 million
- **Key Areas of Development:**
  - Smart Tourism
  - Smart Agriculture
  - Smart Living

### Phuket

- **Initial Capital Injection:** USD13 million
- **Key Areas of Development:**
  - Smart Tourism
  - Smart Security
  - Smart Mobility
  - Smart Energy

### Khon Kaen

- **Initial Capital Injection:** USD450,000
- **Key Areas of Development:**
  - Smart Mobility
  - Smart Energy
  - Smart Agriculture
  - Smart Education

Data Source: draeqa.up.ac.th, thaiembdc.org, KResearch
Investment Opportunity: Smart City

As Thailand is at the beginning stage of transition, investment in building fundamental infrastructure is highly required for smart city development.

At this stage, the government will develop basic infrastructure to cater to digital and advanced technology platforms.

Foreign or local companies start to join in smart city development projects.

Smart cities have been established in target provinces. Innovative businesses have emerged.

**Short Term**

**Medium Term**

**Long Term**

**Description:**

- At this stage, the government will develop basic infrastructure to cater to digital and advanced technology platforms.

- Foreign or local companies start to join in smart city development projects.

- Smart cities have been established in target provinces. Innovative businesses have emerged.

**Business Opportunity:**

**Infrastructure:**

- Internet Broadband
- **Smart City System** such as Transportation Management System
- Renewable Energy
- Construction Material and Construction Services
- Electrical and Electronic Products and Parts

**Service:**

- System and software consulting service, setting and maintenance
- Cloud service
- Innovation incubation center
- Data center

**Facility:**

- Science and Technology park
- Software park

**High value added production:**

- Embedded system design
- Hi-Tech Industries such as high value E&E products and parts production, AI, IoT
- Research and Development companies
Enhance Economic Ties with ASEAN and Global Market
Integrating with ASEAN and Connecting Thailand to the Global Community

To achieve Thailand 4.0, “connect with the rest of the world” is one of the important factor. Thus, Thailand aims to tie its economy to the global by strategically positioning itself as “Trading & Service Nation” of ASEAN region.

The measures for pushing Thailand to “Trading & Service Nation” are:

1. To attract multinational firms to use Thailand as Regional Headquarters
2. To develop new cluster
3. To develop East Economic Corridor (EEC) policy
4. To develop Special Economic Zone (SEZ) at potential border town
5. To transform Thailand to Logistic Hub
6. To transform Thailand economy to absolute Digital Economy

Data Source: draeqa.up.ac.th, thaiembdc.org
Government Current Actions (1/2)

1. **International Trade Center and International Headquarters incentives**

   To provide investment privileges to encourage multinational companies to set up their regional headquarters or international trade center in Thailand. The highlighted incentives are:

   - CIT exemption on
     - Qualified service and loyalty
     - Treasury support
     - Dividend, capital gain
   
   Income derived from overseas associated firms

   **Outcome:**

   Huawei officially opened the regional headquarters in Bangkok in 2016

2. **Eastern Economic Corridor Project**

   To promote investment in more advanced industries and enhance regional and global connectivity

   - EEC is in the 3 eastern seaboard provinces with total area of 13,285 km² or 30,000 rai
   - The project targets USD45 billion of investment from 2017 to 2021 for new railways and cities, airport expansion, port development and investment in modern industry
   - 80% of funding will come from the private sector, while the government will cover the rest
   - Investment in EEC will be eligible for special incentives

Data Source: KResearch, bangkokpost, bloomberg, aecplusadvisory
Government Current Actions (2/2)

3. **SEZ at border towns**

Thailand is accelerating an adjustment of the Special Economic Zone (SEZ) Development Plan for the improvement of border areas’ economy since the previous one has faced many challenges.

- The first SEZ development phase will continue to focus on Tak, Mukdahan, Sa Kaeo, Trat and Songkla.
- Industrial Estate Authority of Thailand (IEAT), will take the responsibility for developing Sa Kaeo, Tak and Songkhla SEZ.
- While, SEZ development project in Trat and Mukdahan will be in the form of concession for private development firms.

4. **Upgrade Thailand infrastructure**

To promote investment in more advanced industries and enhance regional and global connectivity.

- Enhance and expand the road connection along economic corridors.
- Upgrade existing railway infrastructure and build the new high speed railway.
- Construct new airport (U-Tapao) and move forward Suvarnabhumi phase 2 development project.

Data Source: draeqa.up.ac.th, thaiembdc.org, Keresearch, prachachat
**Investment Opportunity**

In order to connect to ASEAN and global market, Thailand needed the investment and products in logistics and connectivity related industries.

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## Summary and Recommendation

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### Summary

The industry transformation policy that will alter Thailand from “comparative advantage” to “competitive advantage” country in the future through knowledge, technology and innovation.

The policy that targets to distribute economic development throughout the region as well as to reduce income inequalities.

The connectivity to the rest of the world agenda that will tie Thailand’s economy to ASEAN and further global market.

### Recommendation

Investors **should invest in first S-Curve industries** first due to the readiness of domestic value chain and benefit from attractive incentives. EEC is a potential zone to invest in.

Investors have **potential to invest** in fundamental infrastructure as Thailand is now in the 1st phase of the development.

High potential to **invest in high value added logistic and connectivity industries**.
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