



Technology Marketing  
03 knowing macro-environment



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# Marketing flow

**Customer**

- Who is your Customers
- Customers' problem
- Customers' needs

**Business Environment**

- Society, technology, economy, education
- Competition
- Stakeholders

**Your Ability/Resource**

- Technology, design
- Sales force
- Appeal power

Company's Mission, Vision, etc.

**Strategic Planning**

Analyses

Decision Making

- Strategic scope
- Strategic goals
- Key success factors

**Marketing Planning / Product Design**

- Product
  - R&D, Design, Prototyping, Manufacturing
- Price
- Place
- Promotion

Product / service launch

Feedback / control

Go back to the upstream

# Strategy Formulation and Implementation

Strategy Formulation

Implementation

Company's  
Mission, Vision, etc.

Strategic Planning

Analyses

Decision Making

- Strategic scope
- Strategic goals
- Key success factors

Marketing Planning / Product Design

- Product
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# External Environment

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- ▶ Before making new products or services, you should know the external environment
- ▶ An enterprise is affected by the macro-environment and micro-environment
  - ▶ **Macro-environment consists of**
    - ▶ Social, technological, economic, educational, political, legal, environmental forces
  - ▶ **Micro-environment consists of**
    - ▶ five forces of competition (Michael Porter):
      - In-sector, substitutes, supplier, buyers, new entrants
    - ▶ Segmentation and Stakeholders

# Macro-environment

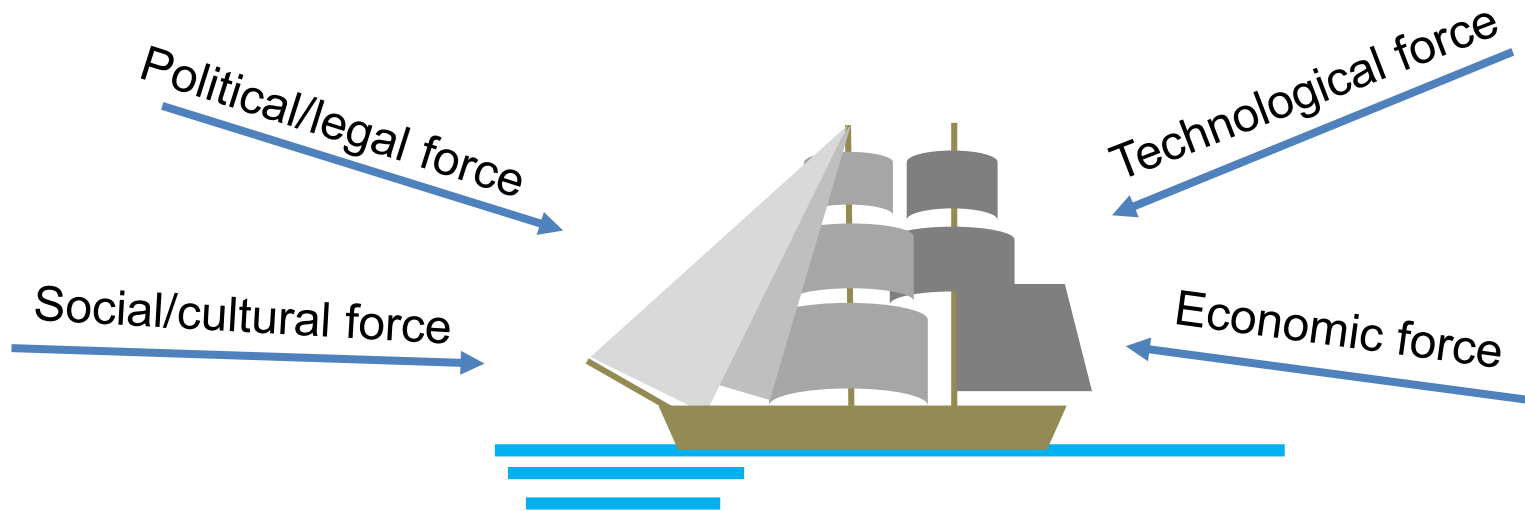
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- ▶ Macro-environment consists of STEEPLER forces:
  - ▶ Social/cultural force
  - ▶ Technological force
  - ▶ Economic force
  - ▶ Educational force
  - ▶ Political force
  - ▶ Legal force
  - ▶ Environmental force

# STEEPLE forces

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- STEEPLE forces affect enterprises as if the wind drives sailing ships.
- There are tailwinds and headwinds.



# Social force (1)

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- ▶ For example, the average family size depends on the country or culture
  - ▶ 2.7 persons live in an average family in Japan
  - ▶ 6.5 persons in Kuwait
- ▶ The family size will influence the preference of cars, house, etc.
  - ▶ A big family wants to have a big car and a big house
  - ▶ A small family doesn't think of the size of a car or house, but thinks of the other things, for example, the performance, good appearance, etc.

# Social force (2)

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## ▶ Eating habit

- ▶ In Western countries, people use knives and forks to eat something
- ▶ In Asian countries, people use chopsticks
- ▶ In the other countries, people eat with their hands



# Technology (1)

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- ▶ New technology expand the variety of lifestyles
  - ▶ Communication
    - ▶ About 100 years ago, many people used postal mail to communicate with distant friends
    - ▶ Now, you can use postal mails, telephones, mobile phones, e-mails, etc.
  - ▶ Transportation
    - ▶ People in the past went to every places by foot
    - ▶ Now, you can ride on cars, buses, motorcycles, bicycles, etc.

# Technology (2)

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- ▶ New technology improves products and services
  - ▶ The discovery of semiconductor materials allowed for important advancements in the field of electronics.
  - ▶ Semiconductors allow to small-scale electronic devices, such as mobile phones, computers, etc.

# Technology (3)

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- ▶ Infrastructure (roads, bridges, electric wires, wireless networks, etc.) is important to spread products and services among the people
- ▶ Roads
  - ▶ If a road is not paved, only tough cars, such as Jeeps, Land Cruisers, etc., can run the road
- ▶ Wireless networks
  - ▶ If wireless networks are not developed, you cannot use your mobile phone

## Streetwise

# How should we solve the problem of dusty roads?

*Most roads in Laos are very dusty and this causes problems for users and those who live along them. While the authorities have regulations and rules on cleanliness, many people break them. This is a matter of public concern and many would like the situation rectified. Vientiane Times asked people for their thoughts on the matter.*

### Amphone Pasanthong

*Ms Noy Khounsilivong, resident of Xaythany district:* There are so many trucks driving through my village every day and more than 500



trucks a day, and this makes the air very dusty. I'm worried about my health and the health

of the people who live along the roads. I have never seen any trucks that have their loads covered, and there are also so many overloaded trucks. This results in more dust and dirt on the roads. It is quite hard to resolve this issue because most of the entrepreneurs still do not seriously respect the regulations and the authorities also don't take strict action against the violators. It would be good if all sectors pay attention to this problem and cooperate to solve it.

*Mr Soulisak, an official in Chanthabouly district:* As we know, the quality of road construction in Laos is low. They always need to be repaired just a few years after they are built. There are many

trucks a month. It will be good if the entrepreneurs have spots to clean the wheels of vehicles to reduce the dirt. The authorities should do more campaigning to make all drivers understand the regulations.

*Ms Phuang Vongphackdy, a resident of Xaysettha district:* I have heard that the police have warned



# Economy

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- ▶ Economic issues are very important to create and sell products and services
- ▶ Economic issues are as follows:
  - ▶ Business cycle
  - ▶ Consumers' income
  - ▶ Level and cost of employees
  - ▶ Inflation rate, exchange rate, taxation
  - ▶ Costs of raw materials

# Economy: Business cycle

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- ▶ A major business cycle is a seasonal cycle
  - ▶ Mineral water sales peak in the summer
  - ▶ Air-conditioner sales also peak in the summer
  - ▶ Air ticket sales peak at Christmas, in New Year's Holidays, etc.

# Economy: Income and expenditure

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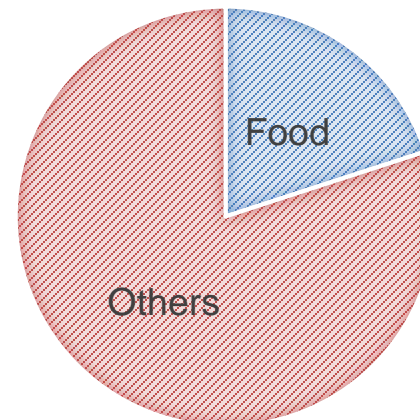
## ▶ Engel's law

- ▶ When your income rises, the proportion of the income spent on food falls
  - ▶ Rich people's food expense is not so higher than ordinary people's food expense
  - ▶ Rich people may spend their money on luxurious goods

EXPENDITURE OF  
AVERAGE PEOPLE



EXPENDITURE OF  
RICH PEOPLE



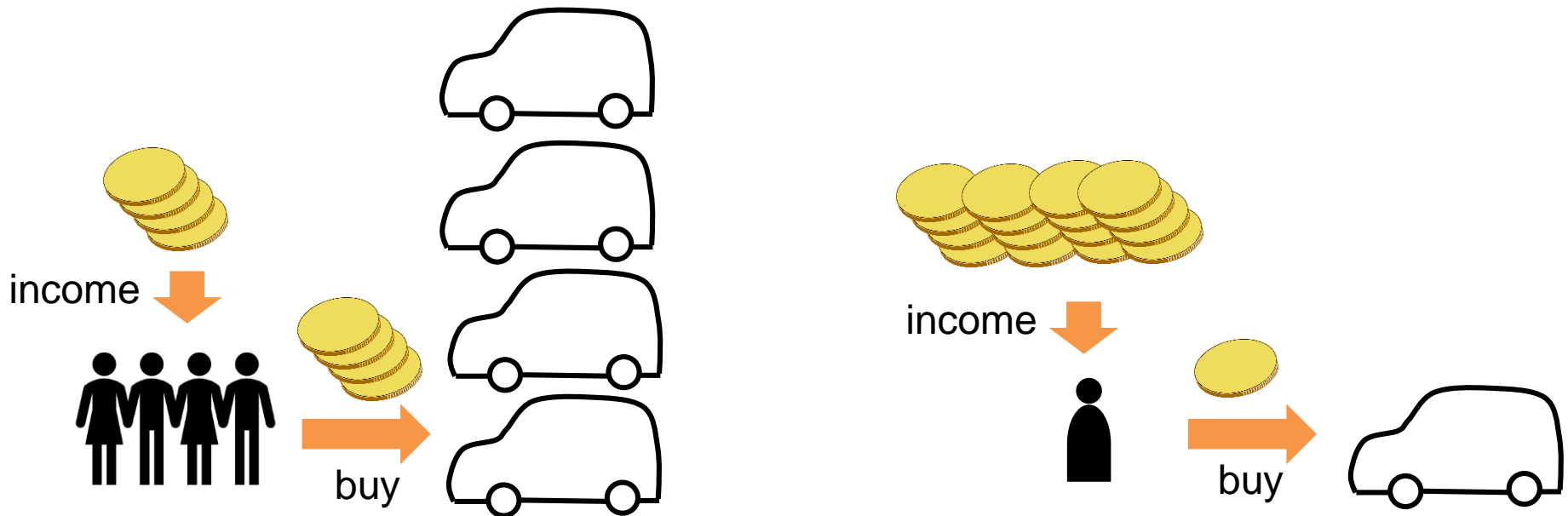
# Economy: Income and expenditure

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## ▶ Wealth distribution

### ▶ Wealth distribution varies from country to country

- ▶ In some countries, there are small number of very rich people and big number of poor people
- ▶ In the other countries, their wealth is distributed rather equally





# Economy: level and cost of labors

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- ▶ Level and cost of employees affect the quality and price of products or services
  - ▶ Consumers want to buy a high-quality product at a lower price
  - ▶ However, how to make it possible?
    - ▶ In the developed countries, the salary of labors is high, but they are well educated and make high-quality products
    - ▶ In the developing countries, the salary of labors is low, but it is difficult to improve the quality of the products

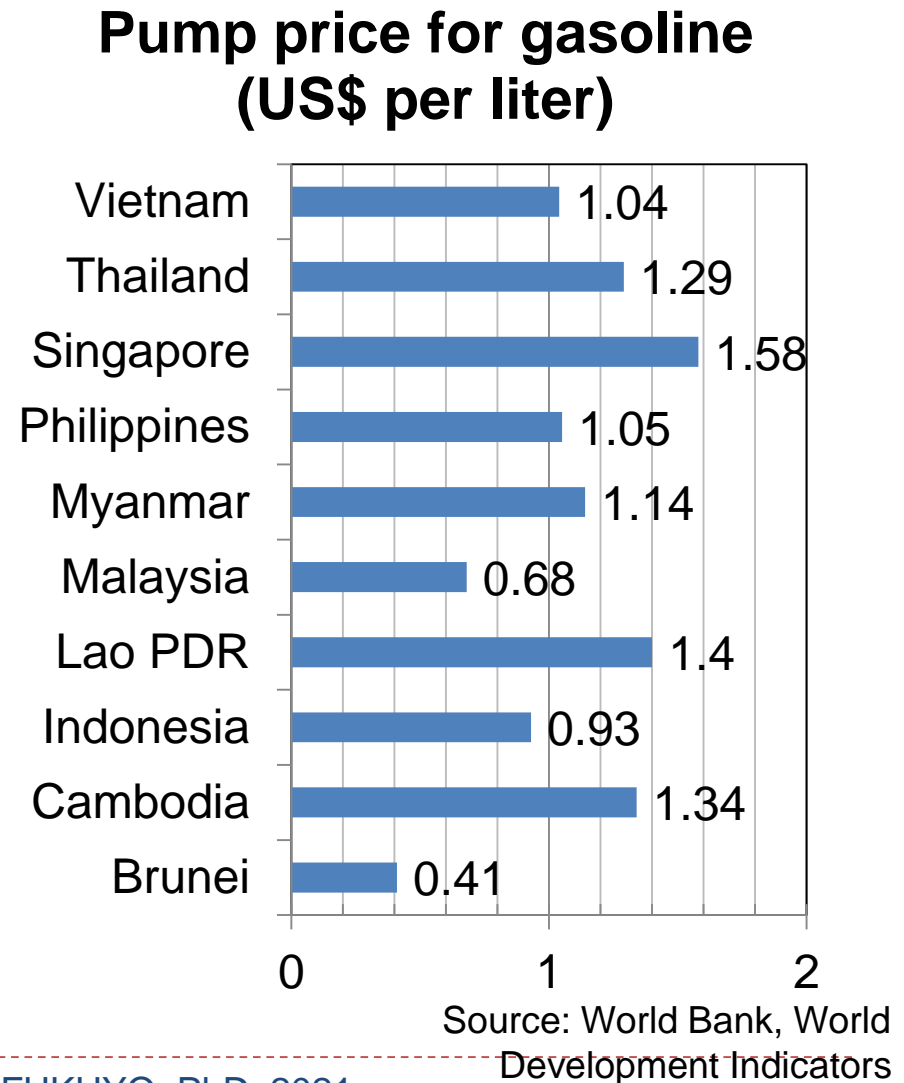
# Economy: Taxation

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- ▶ Taxation affects what people buy
- ▶ In EU countries, car taxes can be differentiated to support the market introduction of fuel efficient and low carbon dioxide (CO<sub>2</sub>) emitting cars.
  - ▶ If a car consumes much fuel and emits much CO<sub>2</sub>, car tax for the car will be higher
  - ▶ If the other car consumes less fuel and emits less CO<sub>2</sub>, car tax for the car will be lower
  - ▶ Which car do you want to buy?

# Economy: costs of raw materials

- ▶ Raw materials are required to create products
- ▶ Costs of oil, steel, etc. varies from day to day and from country to country

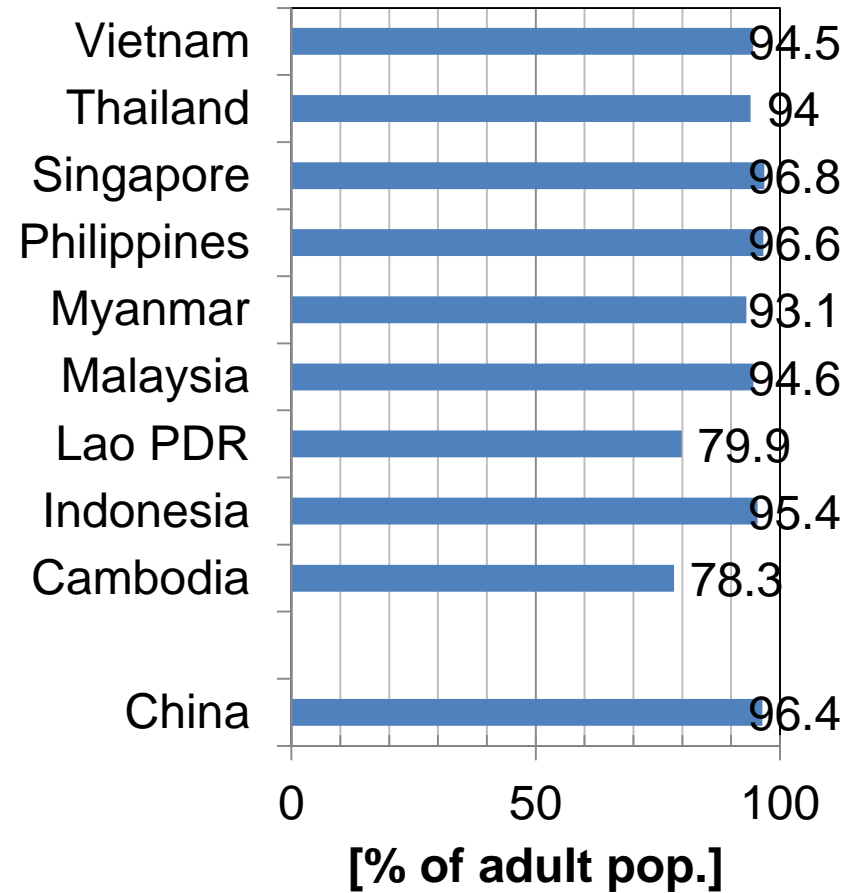


# Educational force

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- ▶ A well-trained and skillful workforce is always required
- ▶ Literacy (ability to read and write) is very important to create complex products and provide sophisticated services

**Literacy rate (2015)**



Source: World Bank, World Development Indicators

# Political and Legal force

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- ▶ In some countries, possession or sale of firearms (guns) is legal
- ▶ In some countries, smoking in public places is illegal
- ▶ Before starting your business, you should know the politics and legislations

# Environmental force

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- ▶ Environmental protection is now one of the most important issues for business person
- ▶ Don't emit pollutants
  - ▶ Pollutants will damage animals, plants and human health
- ▶ Reduce CO2 emission
  - ▶ Increasing CO2 emissions would lead to global warming

# STEEPLE analysis

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- ▶ Purpose of STEEPLE analysis
  - ▶ To identify critical issues to be considered for the decision-making
- ▶ This analysis consists of four headings
  - ▶ STEEPLE element
  - ▶ Issue
  - ▶ Potential impact and implication
  - ▶ Comments and actions

# Example of STEEPLE analysis: Electric motorcycle in the emerging countries

<b>STEEPLE element</b>	<b>Issue</b>	<b>Impact / implications</b>	<b>Comments / actions</b>
Social / cultural			
Technological	Integration Infrastructure	Not complicated Electricity is required	Easy to fix
Economic			
Educational			
Political	Traffic policy Transport policy		
Legal	Driver license Distribution license		
Environmental	CO2 emission	Not consuming gasoline	



# Example of STEEPLE analysis: Nepalese cuisine (Nepali restaurant)

<b>STEEPLE element</b>	<b>Issue</b>	<b>Impact / implications</b>	<b>Comments / actions</b>
Social / cultural	Recognition of Nepali cuisine Tastes  Food staff	Difference from Indian cuisine Someone dislikes hot taste Someone cannot eat meat	Tell the characteristics of Nepali cuisine Adjustment of taste Vegetarian menu
Technological	Cooking process Food staff	How to cook, How to get food staff	Making recipes Food imports
Economic	Price	Is it expensive to eat Nepali cuisine?	Reduce costs
Educational	Cook	How to get a cook?	Recruit Nepalese?
Political/Legal	License	License to cook, open restaurant	
Environmental	Garbage		

# Literature

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1. Tony Curtis: Marketing for engineers, scientists and technologists, Wiley, 2008