

MAJLIS SYARAHAN UMUM PELANTIKAN PROFESOR

UTeM  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

**26 April 2019** Auditorium  
9.00 pagi - 11.30 pagi Canselori,  
UTeM

**FOREIGN DIRECT INVESTMENT:  
"THE DYNAMIC OF THE ECONOMIC  
ENVIRONMENT IN MALAYSIA"**

**PROFESOR DR. MD NOR HAYATI BIN TAHIR**

Anjuran Bersama  
Fakulti Pengurusan Teknologi dan Teknousahawanan dan  
Pusat Kecemerlangan dan Kesarjanaan Akademik

*Once you are  
at the top of a  
mountain,  
don't forget to  
step down there  
in the muddy*

UTeM  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

## Lecture's content

- Introduction
- Economic Performance
- Performance of FDI
- Technology Transfer
- Effects of FDI
  - Economic Contribution
  - Employment

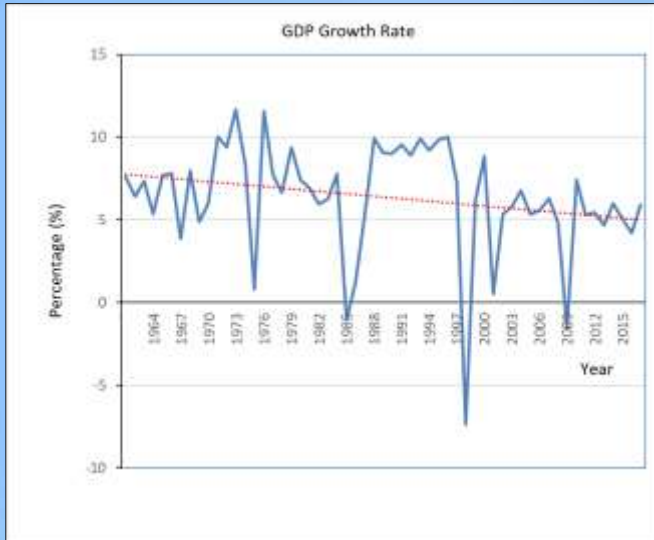
## What is GDP

- GDP is the single number of the **total monetary value of all the finished goods and services produced within a country's borders** (domestically) during a particular time period (quarterly/annually).
- It simply indicates that the country produced goods and services
- Effects of macroeconomic decisions (like macro and micro policy introduction) can also be studied through changes of GDP figures.
- If a particular country opens up the domestic market for foreign investments for economic activities, the effects can be verified by checking how much GDP growth was achieved that attributed to the decision.
- GDP also acts as a standard number that can be used to compare the performance of two or more economies, and acts as a key input for making investment decisions in a country.
- It also helps government to draft the policies, which drive local economic growth.
- Longer periods of negative GDP, which indicates more spending than production, can cause big damage to the economy. It leads to jobs losses, businesses closures, and idle production capacity

## Dynamics of GDP

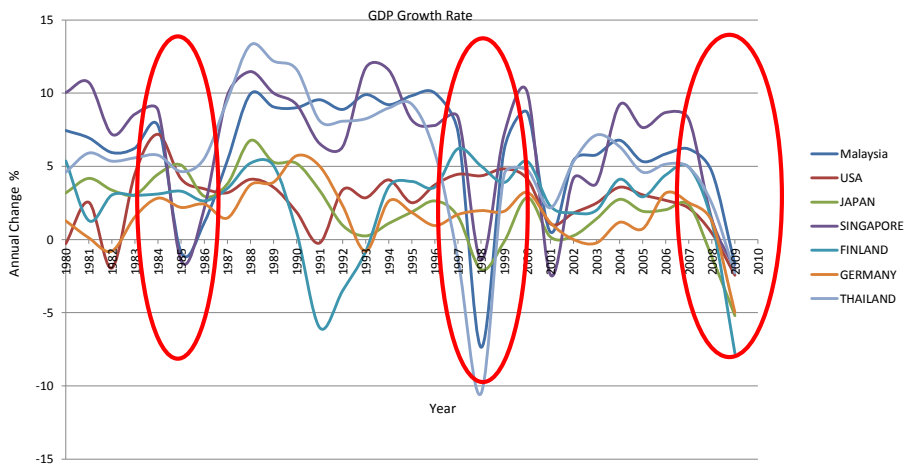
$$\begin{aligned}
 \text{GDP} &= \text{Private Consumption} \\
 &+ \text{Gross Investment} \\
 &+ \text{Government Investment} \\
 &+ \text{Government Spending} \\
 &+ (\text{Exports} - \text{Imports}) \longrightarrow \text{Balance of Trade (BOT)}
 \end{aligned}$$

## GDP Growth Rate



- Ripple with negative trendline

## GDP Growth Rate of selected Country



Source: PJP, 2011

## Pre-economic Downturn of Selected Country

Cycle		Malaysia	USA	Japan	Singapore	Finland	Germany	Thailand
C 1 (1985)	Sustainability (yr)	1	1	2	1	2	2	2
	Spending (% GDP)	70	82	72	59	79	81	65
C 2 (1997)	Sustainability (yr)	2	3	1	1	0	3	0
	Spending (% GDP)	57	84	79	49	-	78	-
C 3 (2007)	Sustainability (yr)	0	0	0	1	0	0	0
	Spending (% GDP)	-	-	-	59	-	-	-

Source: PJP, 2011

Spending is a very important factor to indicate the sustainability of a country and become the buffer of the economic downturn, supported by other factors namely the internal and external factors.

The nation that spends more shows longer sustainability before the economic downturn.

## What is GNP

- It's an extension of GDP
- GNP is the aggregate market value of all goods and services produced by all of its **citizens and businesses** irrespective of their location (local or foreign) during a particular period.
- GNP acts as a superset of GDP, as it factors in the net income from abroad in addition to the GDP

## Key Differences Between GDP and GNP

**Both measure and represent the economic activity of a nation**

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. GDP is within the geographical limits</li> <li>2. GDP measures the monetary value within the country's boundary (local scale), outlines the strength of country's local economy as indicator of country's stability</li> <li>3. GDP is based on location,</li> <li>4. GDP is commonly referred to as the measure of regional output</li> <li>5. GDP numbers usually don't face such computational challenge and remain uniform.</li> </ol> | <ol style="list-style-type: none"> <li>1. GNP extends to other countries/regions for activities performed and net income generated by its nationals.</li> <li>2. GNP represents how its nationals are contributing towards country's economy, performed by the residents of the country (local + foreign), the citizen contribution.</li> <li>3. GNP is based on citizenship.</li> <li>4. GNP is best described as the measure of national output, Higher GNP than GDP indicates that citizens of a country are doing better abroad.</li> <li>5. GNP will consider forex for conversion</li> </ol> |
|--|--|

**If an economy of a nation is a close economy, then GNP = GDP.**

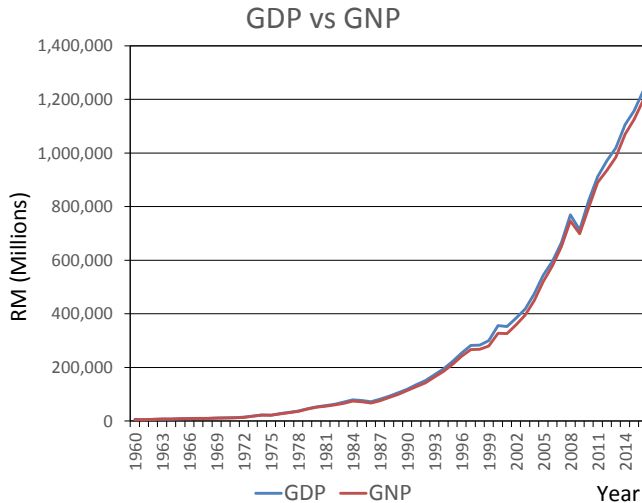
## Dynamics of an Economies

**GNP = GDP**

- + Net income earned by domestic residents/businesses from overseas investments ( $N_{limpt}$ )**
- Net income earned by foreign residents/businesses from domestic investments ( $N_{fexpt}$ )**

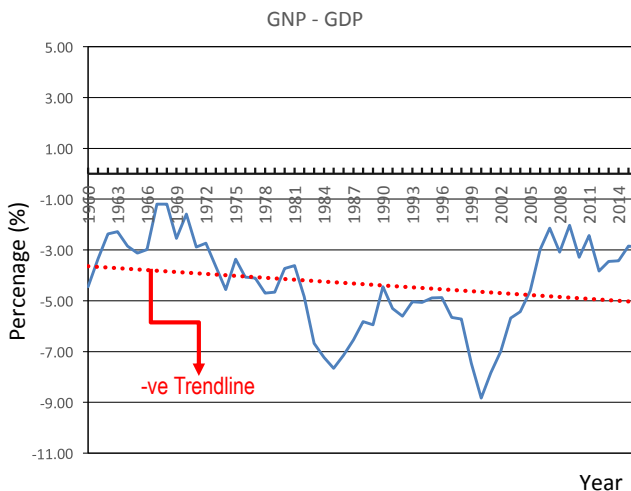
$$\text{GNP} = \text{GDP} + N_{limpt} - N_{fexpt}$$

## GNP vs GDP (Malaysia)



- GDP > GNP
- Aggressive economic activities in Malaysia
- Some ripple in 1985, 1998 and 2008 indicates the economic downturn.
- But, progression happens in the coming years.

## Dynamics of GNP and GDP



$$\text{GNP} = \text{GDP} + (N_{\text{limpt}} - N_{\text{fexpt}})$$

$$\text{GNP} - \text{GDP} = N_{\text{limpt}} - N_{\text{fexpt}}$$

when,  
 $\text{GNP} - \text{GDP} < 0$

means,  
 $N_{\text{limpt}} < N_{\text{fexpt}}$

- Present of external activities by citizen but less contribution to economic growth
- Local export activities by foreign entities are more.

## Endogenous Growth Theory

Endogenous growth theory holds

- that economic growth is primarily the result of endogenous and not external forces.
- **that investment in human capital, innovation and knowledge are significant contributors to economic growth.**
- the long run growth rate of an economy depends on policy measures.
- focuses on **positive externalities and spillover** effects of a knowledge-based economy which will lead to economic development.
- subsidies for R n D or education increase the growth rate in some endogenous growth models by increasing the incentive for innovation.

(Romer, 1986)

## Foreign Direct Investment (FDI)

### Economic definition

- As an investment made by a firm or individual in one country into business interests located in another country

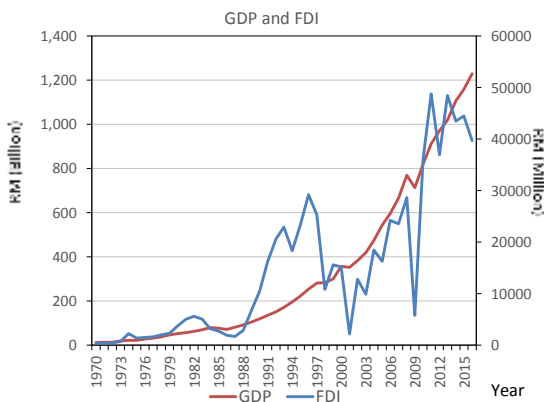
### Definition by Organization for Economic Co-operation and Development (OECD)

- As an investment in a business by an investor from another country for which the foreign investor has control over the company purchased

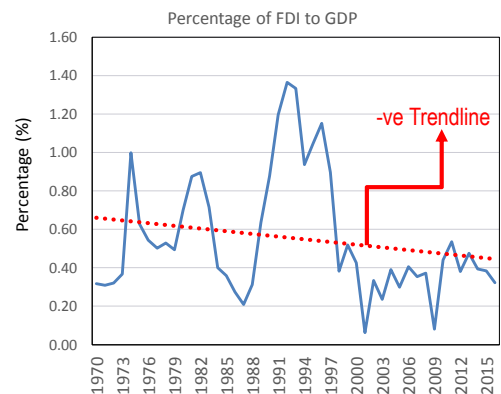
## Foreign Direct Investment (FDI)

- FDI:
  - as a company from one country making a physical investment into another country
  
- Two types:
  - FDI net **inflows** are the value of inward direct investment made by non-resident investors in the reporting economy
  - FDI net **outflows** are the value of outward direct investment made by the residents of the reporting economy to external economies

## GDP and FDI



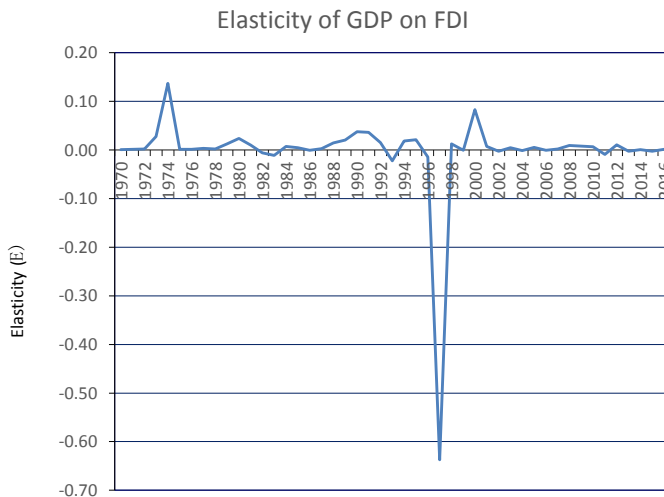
- Both have positive growth
- Rate of growth is dependent to other
  - Either positive or negative growth rate



- Inconsistent growth
- Negative trendline means **GDP growth rate is bigger**
- Indicate the possibility of self sustained by Malaysian economic activities



## Elasticity of GDP on FDI



$$\text{Arc Elasticity } (E_G) = \frac{\frac{\text{Change in } G}{\text{Average } G}}{\frac{\text{Change in } F}{\text{Average } F}}$$

$$= \frac{\Delta G}{\Delta F} \left( \frac{F_2 + F_1}{G_2 + G_1} \right)$$

where, F: FDI and G: GDP

Elastic	Implies
Elastic $ E_G  > 1$	$\% \Delta F > \% \Delta G$
Unitary $ E_G  = 1$	$\% \Delta F = \% \Delta G$
Inelastic $ E_G  < 1$	$\% \Delta F < \% \Delta G$

## FDI Contribution

From the performances, it reflect

- Net growth of import is larger than export shows local export activities by foreign entities are more.
- Negative trendline of FDI growth over GDP means GDP growth is bigger, is an indicator of sustainability of economic activities in Malaysia

Conclude:

- Influx of FDI introduced technology into the country
- Endogenous theory says that spillover happened
- FDI acts as an enabler to the technology development and technology usage in the industry

➔ Technology Transfer

## Technology Transfer

- Process of sharing of:
  - Skills
  - Knowledge
  - Technologies
  - Methods of manufacturing
  - Samples of manufacturing
  - Facilities
- Sharing among all entities including government agencies
- Purpose is to ensure that scientific and technological developments are accessible to a wider range of users – **diffusion**
- Who can then further develop and exploit the technology into new products, processes, applications, materials or services....etc

(Cohen, 2004)

## Mode of Transfer

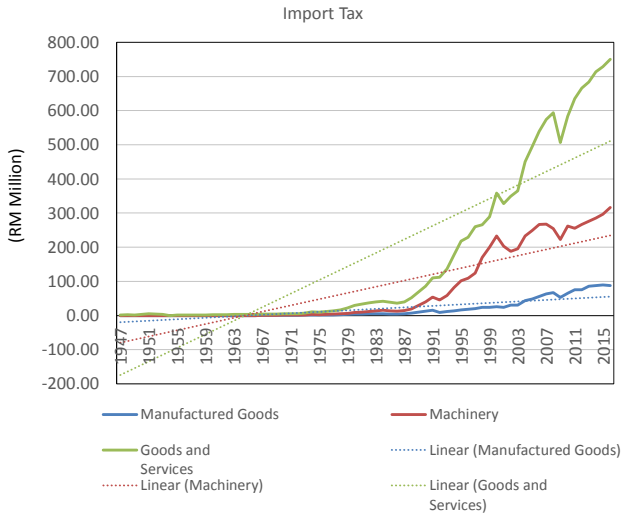
Technology transfer is embedded in, among others:

- Managerial
- Political
- Social
- National context/Agenda
- Intellectual Property Right
- Know-how
- Foreign direct investment
- Licensing and joint ventures that involve the transfer of equipment and materials
- Skilled manpower
- Organizational innovations
- Franchising

- Marketing contracts
- Technical service contracts
- Turnkey contracts
- International sub-contracting
- Technical assistance
- Affiliate
- Licensing
- Business development
- Incubators and research parks
- Information networks
- Design and drawing
- Management contract



# Import Components



Components that reflect the mode of technology transfer:

- Importation of goods and services
- Machineries / Equipment
- Manufactured goods

Trends

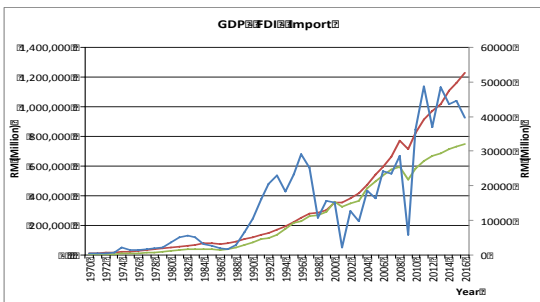
- Positive growth and positive trendlines
- Consistent with the growth of FDI

Implies

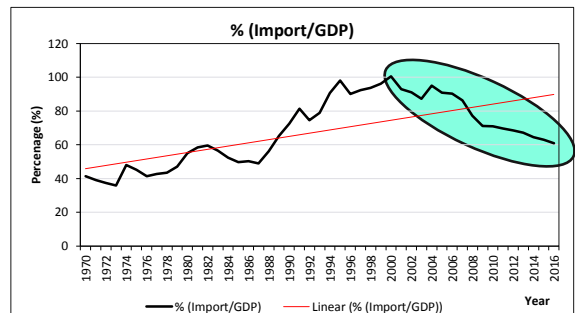
- Knowledge shared through usage of those goods and services
- Knowledge applied for the sustainability of the economic growth



# GDP - FDI - Import



- Growth of import goods and services reflect positive relationship with FDI
- Also shows positive growth relationship with GDP
- Rate of growth of GDP is more than import



- Positive trendline shows the growth rate of import is bigger than GDP
- BUT, since year 2000, % of FDI to GDP shows negative trend that indicates the economic growth based on strong internal fundamental



Locally-sustained economic activities

## What can we say!!!

- We liberalized our financial policy
- We allowed FDI
- Influx of FDI together with technology
- Technology Transfer happened
- Knowledge shared through usage in all economic activities
- We have a strong internal fundamental for economic activities
- As a result, it contributed to the sustainability of economic growth

## Two (2) Issues

- DO OUR STRONG FUNDAMENTALS CONTRIBUTE TO THE INTRODUCTION OF NEW LOCALLY PRODUCED PRODUCT OR SERVICES?

OR

- OUR STRONG FUNDAMENTAL ACT AS ENABLER TO THE SUPPORTING INDUSTRY, THE SMALL SUPPORTING INDUSTRY LIKE SME's?

## Some Characteristics of Technology Advancement

- Capable of specialized function
- For ROI, will only do high value added function
- Task with high precision, efficiency and productivity
- High capital investment
- The needs for highly skilled workers to handle those technology
- Highly skilled workers will get high wages


As a result

- Not all players are capable to sustain
- This will trigger the reduction of number of workers in the industry

BUT, we have excess of foreign workers....WHY

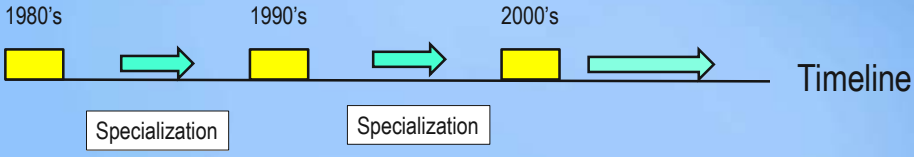


Is this the cost of development




# Implications of Technological Development

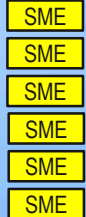
1980's      1990's      2000's



Specialization      Specialization      Timeline




3 SMEs

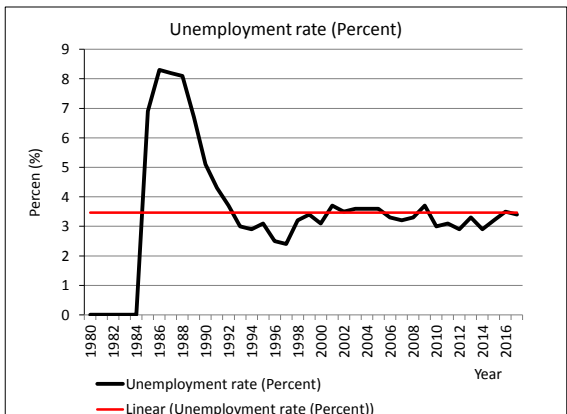


6 SMEs

- Increase of SME as support industry
- Increase the needs of workers
- Usage of technological knowledge as enabler



# Employment

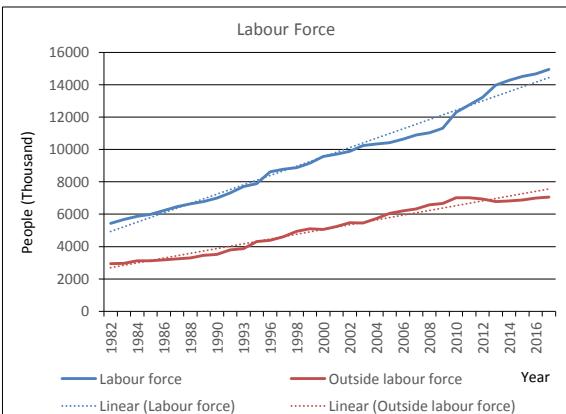


**Unemployment rate (Percent)**

Percent (%)

Year

— Unemployment rate (Percent)  
— Linear (Unemployment rate (Percent))



**Labour Force**

People (Thousand)

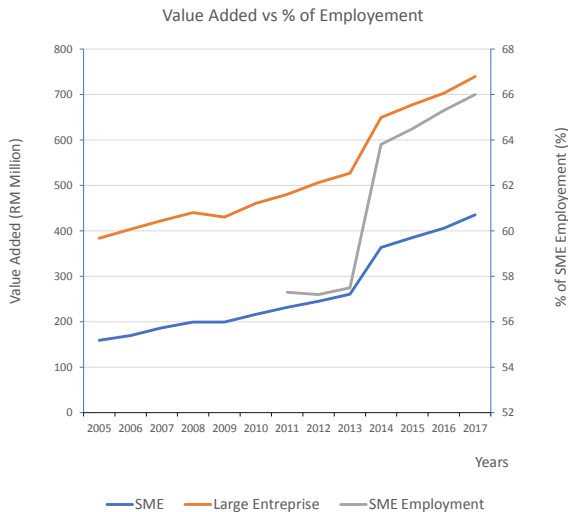
Year

— Labour force      — Outside labour force  
- - - Linear (Labour force)      - - - Linear (Outside labour force)

• Economically at 3.0% means a fully employed status

• The growth rate is about the same

## SME Employment Status: Foreign Workforce

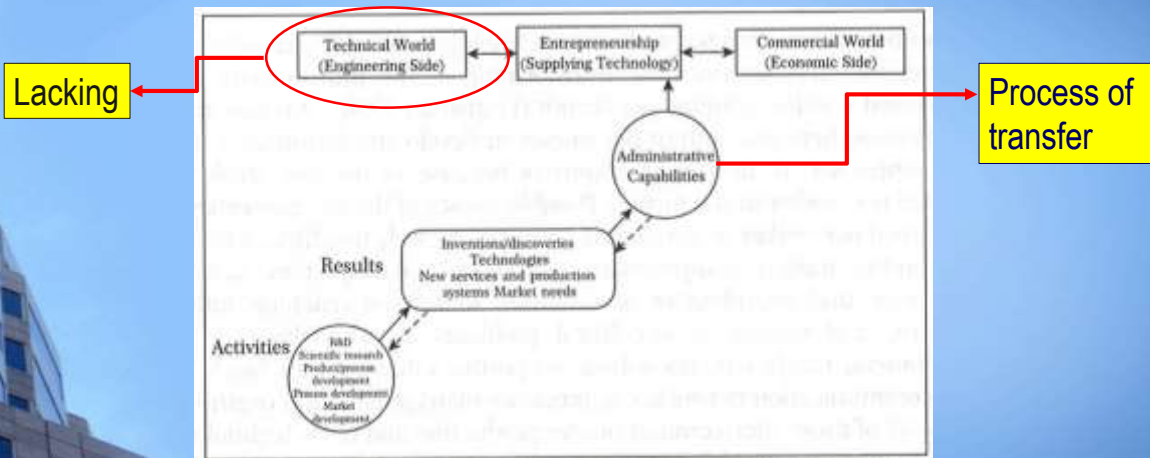


- Growth of large player/MNC create demand only for specialized workforce because of specialization
- Trigger the growth of SME as supporting players
- The growth of SME's demand more workers of all level of skill.
- This supports by importing / hiring of foreign workers

## Where are our Professionals Landed

- Professionals are busy filling the gap of employment at the supporting player (SMEs)
  - This create a non-healthy environment
- They should contribute to research for technological development
- BUT, current national ecosystem for technology production is lacking in some areas, like policy development to support for technology production
  - This will slow down the nation's technological development
  - Lacking of RnD triggered by limited ROI because the market share is too small for investment in research
- Is Malaysia experiencing a saturated economic growth and technological development?

## Technology Growth and Change



Source: Adopted from Cohen, 2004

## Local Foreign Economic Activities

- Influx of FDI as enabler of Technology Transfer
- Economic activities from Technology Transfer
  - Engineering approach
    - Direct technology development
  - Commercial approach
    - Direct technology usage by the workers
    - Indirect knowledge enhancement to the workers

**Lacking**

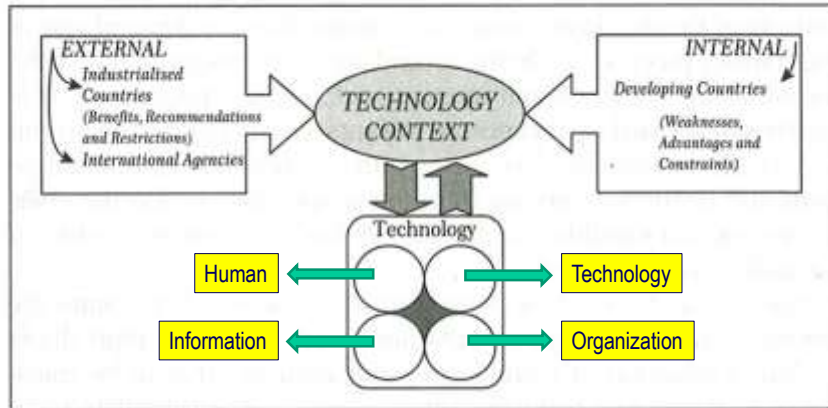
- Creation of fundamental knowledge
- Lacking of RnD by industry

**Overwhelm**

- Technology Transfer happened
- Knowledge repositied at user in tacit form, never been applied
- In aggregate is a wastage



## Leveraging the Technology involvement



Source: Adopted from Cohen, 2004

## Dynamic Component

- Technology
- Human
- Information
- Organization



Are we ready for

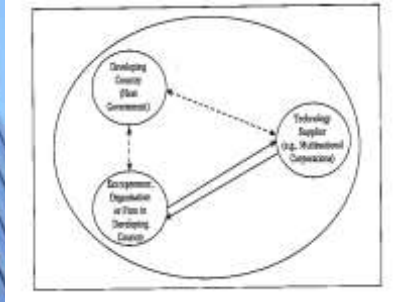
- the best state-of-the-art technology, or
- the 2<sup>nd</sup> or 3<sup>rd</sup> best technology

Depends on:

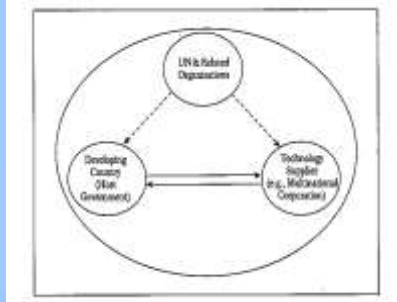
- Technological level
- Technical capability
- Absorption
- Assimilation
- Sub process to internalize transfer

# Triple System Model of Technology Transfer

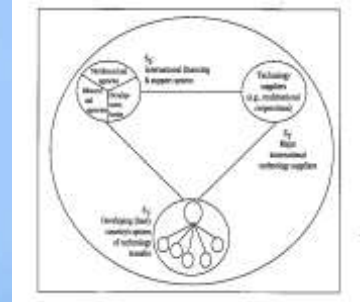
Micro Level Triple System



Macro Level Triple System



Comprehensive and Interrelated Triple System



Thank you