From Copycats to Quality
Issues in Leveling Up Manufacturing Industries in Developing Countries

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(GRIPS/VDF)
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General Questions

- Can latecomer countries with weak domestic capability industrialize under globalization?
- What is the pattern of successful industrialization in latecomer countries?
- What is the appropriate industrial strategy in the early 21st century?
- Can government and ODA really help industrialization? How?
Past Industrial Strategies

- Free trade doctrine (19th century UK, IMF&WB)
- Socialist planned economy (USSR, China, Vietnam)
- Infant industry protection (Japan, Korea)
- FDI-led growth but gradual trade and investment liberalization (Thailand, Malaysia, Indonesia)

➔ But today, free trade and investment is required from the early stage of development
➔ Global competition is dynamic and intense (esp. with China)

Development of Motorcycle Industry with import ban, localization requirement and tariff protection

<table>
<thead>
<tr>
<th>Year</th>
<th>Vietnam</th>
<th>Thailand</th>
<th>Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td></td>
<td>1964 Yamaha</td>
<td></td>
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<tr>
<td>1964</td>
<td>Vietnam War</td>
<td>1963 Honda</td>
<td>1965 Suzuki</td>
</tr>
<tr>
<td>1970</td>
<td></td>
<td>1971 Local content restriction (over 50%); ban on construction of new assembly plants</td>
<td>1971 Honda</td>
</tr>
<tr>
<td>1975</td>
<td></td>
<td>1977 Local content restriction (more than 70%); lifting of ban on new assembly plants of 1971; 1978 Ban on importing CBU increasing tariff for parts</td>
<td>1974 Yamaha Suzuki; 1977 Local content restriction with penalty</td>
</tr>
<tr>
<td>1980</td>
<td></td>
<td>1986 Doi Moi</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>1999 Yamaha</td>
<td></td>
<td>1999 Import Liberalization of CBU</td>
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<tr>
<td>2000</td>
<td>2003 Import Liberalization of CBU</td>
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</tbody>
</table>

Source: Kohei Mishima in VDF industry book (2005)
Three Recent Ideas

- **Business architecture theory** (explaining Japan’s manufacturing strength & weakness)
  Prof. Takahiro Fujimoto (Tokyo Univ.)

- **Three-stage industrial development** (stylized fact from extensive empirical research)
  Prof. Keijiro Otsuka & Prof. Tetsushi Sonobe (GRIPS)

- **FDI-led growth + promotion of domestic capability & linkage** (policy proposal to Vietnam)
  Prof. Kenichi Ohno (VDF/GRIPS)

➔ Can we combine these ideas?

References


(1) Business Architecture Theory (Fujimoto)

How parts are designed and connected:

**Integral**—designing unique parts for each product, adjusting interface carefully for high performance

**Modular**—combining common parts available in the market for ease, speed and flexibility

<table>
<thead>
<tr>
<th></th>
<th>Integral</th>
<th>Modular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed</td>
<td>Closed Integral Type</td>
<td>Closed Modular Type</td>
</tr>
<tr>
<td></td>
<td>Japanese motorbike, car, mini-</td>
<td>mainframe computer,</td>
</tr>
<tr>
<td></td>
<td>size consumer electronics,</td>
<td>machining tool, lego (toy blocks),</td>
</tr>
<tr>
<td></td>
<td>game software</td>
<td>etc.</td>
</tr>
<tr>
<td>Open</td>
<td>Open Modular Type</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chinese motorbike, computer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>system, internet products,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>bicycle, etc.</td>
<td></td>
</tr>
</tbody>
</table>
Implication for Business Strategy

- Architectural design of industry & product may change over time and across countries
  - Computer: integral → modular
  - Motorbike: Japan (integral) vs. China (modular)
- For competitiveness, product architecture and organizational capability must match

<table>
<thead>
<tr>
<th>Integral product</th>
<th>Integrated organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modular product</td>
<td>Open organization</td>
</tr>
</tbody>
</table>

- Integral product ↔ Integrated organization: long-term relation, information sharing, integrated decision
- Modular product ↔ Open organization: Decentralization, outsourcing, contract based on low price

Successful Production Partnership

From the viewpoint of business architecture matching,
Japan & ASEAN
USA & China are potentially good partners

Based on Prof. Fujimoto’s presentation modified by K. Ohno
(2) Observed Pattern of Industrial Development (Otsuka & Sonobe)

- A common three-stage pattern was found from extensive empirical research
  Japan, Taiwan, China, India, Philippines, Ghana, etc.

  <Endogenous Industrial Development>
  (1) Initiation
  (2) Quantitative expansion
  (3) Quality improvement

- Each transition may be carried out by merchant-type entrepreneur or engineer-type entrepreneur
**Suggested Policies**

Otsuka & Sonobe propose the following:

- **Initiation**
  - Agglomeration support
  - Model plants
  - FDI attraction

- **Quantitative expansion**
  - Reduction of transaction cost
  - Creating trading posts (ichiba) & industrial zones
  - Technical & vocational training
  - Technical assistance

- **Qualitative improvement**
  - Expanding innovative opportunities
  - IPR protection
  - Higher education
  - R&D in industrial technology

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**Some Comments**

- Vietnam’s problem—how to move from Stage 2 to Stage 3 (prepare for China, FTAs & WTO)
- Africa’s problem—how to start Stage 1 and reach Stage 2
- Should Gov’t assist in every step (VN already has too many copycats)?
- Gov’t failure may be serious due to the lack of information, political pressure, etc
- Need to incorporate impacts of global integration into this framework more fully
(3) FDI-LED Growth & Strengthening Domestic Capability (Ohno/VDF)

Policy advice to MOI & MPI (also by “4J”)

- **Strengthen FDI marketing**—FDI inflow is still below critical level to ignite strong industrialization
- **Indirect competition**—VN can’t compete directly in global markets now; link with FDI to compete!
- **Strategic positioning**—end extensive quantitative targets & join East Asia’s production network
- **Break the glass ceiling**—go beyond agglomeration to achieve production management & design skills

**Vietnam’s Industrial Dualism**

**Domestic Sector**
(Hitherto protected)
- FDI firms supplying domestic market
- Vietnamese firms (SOEs, SMEs, mini-industry groups)
- Missing link

**Export Sector**
(Competitive under free trade)
- FDI assemblers (EPZs, IZs; EPEs)
- Materials & parts
- Assembled products

Global Production Network

Is direct competition possible?
Agglomeration
Initial concentration has an accelerating effect

Fragmentation
International division of labor in parts production & assembly
PB: production block
SL: service link

How to Participate in Asian Dynamism
Become a link in the regional production network by agglomerating a particular process in Vietnam
--New products are always emerging (esp. electronics)
--MNCs are constantly looking for alternative location

Illustration
Building Optimal Regional Links

While localization (agglomeration) is important, optimal localization is not 100%:

- Internalize processes in which VN has dynamic comparative advantage
- Outsource other things from the rest of Asia

If this choice is made incorrectly, VN will lose competitiveness.
VN is ideally located to become a bridge between China & ASEAN (all Japanese business men say so).

Breaking the “Glass Ceiling”

STAGE ONE
Simple manufacturing under foreign guidance
Vietnam

STAGE TWO
Have supporting industries, but still under foreign guidance
Thailand, Malaysia

STAGE THREE
Technology & management mastered, can produce high quality goods
Korea, Taiwan

STAGE FOUR
Full capability in innovation and product design as global leader
Japan, US, EU

No ASEAN countries have broken through the invisible barrier between Stage Two & Three.
Preparing to Go Beyond

- While VN’s immediate goal is *agglomeration*, it should also prepare for *technical absorption*
- VN can become the first country in ASEAN to break through the barrier if its highly skilled labor is combined with
  --Good government policy
  --Good enterprise management
- If this happens, Japan & Vietnam will become ideal production partners for integration-based products

Some Questions for Vietnam

- Continuity from Stage 2 to Stage 3?
- Survival under market segmentation?
- Can government effectively intervene?
- Do these theories say anything new?
Can Locals Survive and Prosper?

- Emerging local enterprises--can they survive global integration & competition?

Lixohaka (motorcycle), Lotus Steel (galvanized steel), Hoa Phat (furniture etc), Sacombank/Dong A Bank (finance), Hai Au (transport), Fivimart (retail distribution), Biti’s (footwear), Vinamilk (SOE: dairy products), Saigontourist (SOE: tourism), SSC (SOE: billet & cold rolled steel), etc

Can they survive by themselves or do they need foreign partnership & support?

Alternative Scenarios

(1) Initiation

(2) Quantitative expansion

Local Firms

FDI & Imports

(3) Qualitative improvement

Domestic firms are major players; or

Domestic firms are minor players; or

Domestic firms are eliminated
Market Segmentation

NOW

Low Quality
Middle Quality
High Quality

Local

FUTURE?

High
Middle
Low

Local

OR

Virtually All Foreign

High
Middle
Low

Can Policy or ODA Help?

- Is it possible (for officials) to distinguish?
  - *Unproductive copycats* (who drive out quality producers and perpetuate low-quality, low-price, no-improvement trap)
  - *Innovative imitators* (who absorb new technology & management and accelerate industrialization)
- Does gov’t know how to intervene effectively?
- Political pressure/connection to distort policy
What Do These Theories Say?

- Similarity & overlapping of 3 ideas (from different viewpoints of theory, empirical study and policy advice)
- Not just quantitative expansion, but leveling up of technology & operation is essential
  -- This is what Japanese FDI & ODA have been saying & doing all along (finding local vendors, training programs, JICA experts, JP-VN Joint Initiative, study in Japan, VDF...)
  -- But these theories put ongoing efforts into a new context and framework
  -- This may help Vietnamese policy makers to think regionally/globally and improve capability

The End