Product Development for Country Specific Vehicles in Asia: 
A Dynamic View in Global Strategy

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Purpose

• To explore dynamic aspects of strategy in global product development

• To describe product design and organizational choices for Asian Car, particularly for Indonesia
Road Map

1. Introduction
2. Framework: A Dynamic View
3. General Characteristics of Japanese Automakers and Asia
4. A Case: Indonesian Vehicle
5. Conclusion
Sources of Information for Problem-solving
- Market
- Supplier
- Plant

Price of Problem-solvers
- Engineer

Problem-solving Capability
- Intra-firm
- Inter-firm

Scope Economy in Problem-solving
- PS tools
- Inter-Project Coordination

Environment
- Government Regulation
- Market

Strategy of International PD
- Strategy
- Formation

Product Design
- Resource Config.

Performance
- Execution

Organizational Capability
- Manufacturing
- Supplier
Framework

1. Strategy Choice in International PD
   - Product Design
   - Resource Configuration
2. Dynamic View
   - Adaptation to Environment and Capability
   - Path-Dependent Selection
   - Co-evolution of Strategy, Capability and Environment
Over-adaptation

- Flexible development system generates inflexible models
  - The Adaptation to the Local Production Capability >>> eliminates the pressure
  - The Adaptation to the Local Market Condition >>> isolates local customer
- Over-adaptation against environment
- Asian Crisis revealed the problem
Market Characteristics in Southeast Asia

- Small Market, Rapid Growth
  - Big leap in 1990s
    - 0.8mil (1990) >> 1.5mil (1996) units
- Limit of Income Level
  - Highest of ASEAN 4 amounted only to 1/10 of Japan (GNP per capita)
- Diversified Market Needs
- Tolerant of Product Quality
Localization Policies & Suppliers’ Capabilities

• Import-Substitution Policies
  – Local content regulation leads low productivity and quality

• Limit of Export-Promotion Policies
  – Regional complementation scheme such as BBC, >>> Limited effect

Japanese Automakers’ Capabilities

• Flexible and Agile in Development
  – Early and Integrated Problem-solving
    • Black-box Parts
    • Manufacturing Capability
    • Overlapping Problem-solving

>>> Localize Product Design

>>> Centralize Resource Configuration
Figure 5: Configuration of Development Resource

Figure 7: Automobile Sales in Indonesia
Indonesia: Context of Product Development

- Government Regulation
  - Import substitution and Localization
  - Advantage for Commercial Vehicle
- Market Condition
  - Strong preference for van type commercial vehicles
  - Kijang: the most popular vehicle
  - 387 thousands (97) >> 58 thousands (98)

Product Development of Indonesia Specific Model

- Two cases in 1990s
  - Van type commercial vehicles
  - Expectations for Rapid Growth
  - Fit for the local production environment, low cost, and that met the local needs
  - Need special capability building
  - Revealed over-adaptation problem
Product Design Strategy: “Old Platform Derivative”

• Application of Old Platform
  – Suspension and transmission: unchanged from the first generation
  – Engine: Old facility transferred (60s)

• Locally Adapted Design
  – Van for passenger use (> 7 persons)
  – Utilize the local production technology
  – Evaluation criteria adapted

Resource Configuration

• Centralized for local fitness
  – Model X
    • up to design prototyping >> in Japan
    • after trial production >> in Indonesia
  – Model Y
    • up to Product Engineering >> in Japan
    • after Process Engineering >> in Indonesia
    • Process with High Capability (Exterior Die Making etc.) >> in Japan
Capability Building in "Old Platform Derivative"

- Organizational Innovation
  - Shortening the total lead time
    - not to use the prototype dies
    - front loading of problem-solving

- Specific Capability for the Strategy
  - Unpacking Embedded Information
    - simplified drawing
    - BBP
    - manufacturability

Asian Crisis: Manifestation of “Over-adaptation”

- “Old Platform Derivative”:
  - Good Balance of Global-Local Trade-off

- Economic Crisis of Indonesia
  - Drastic shrink of market (1/6)

- Problem Revealed
  - Relatively Low Quality
  - Isolated Taste
    >> Export Difficulty
What Learned?

- Importance of Dynamic Capabilities
  - Learning organizations may accumulate certain dynamic capabilities in the long run, by which the firm can re-adjust the product strategies quickly to the environmental changes.

Conclusion

1. Strategy Choice in PD of Asian Car
   - “Old Platform Derivative”
   - Centralized Configuration
2. Path-Dependent Selection
3. Co-evolution of Strategy, Capability and Environment
4. Importance of Dynamic Capabilities