

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

Taka Fujimoto and Yasuo Sugiyama

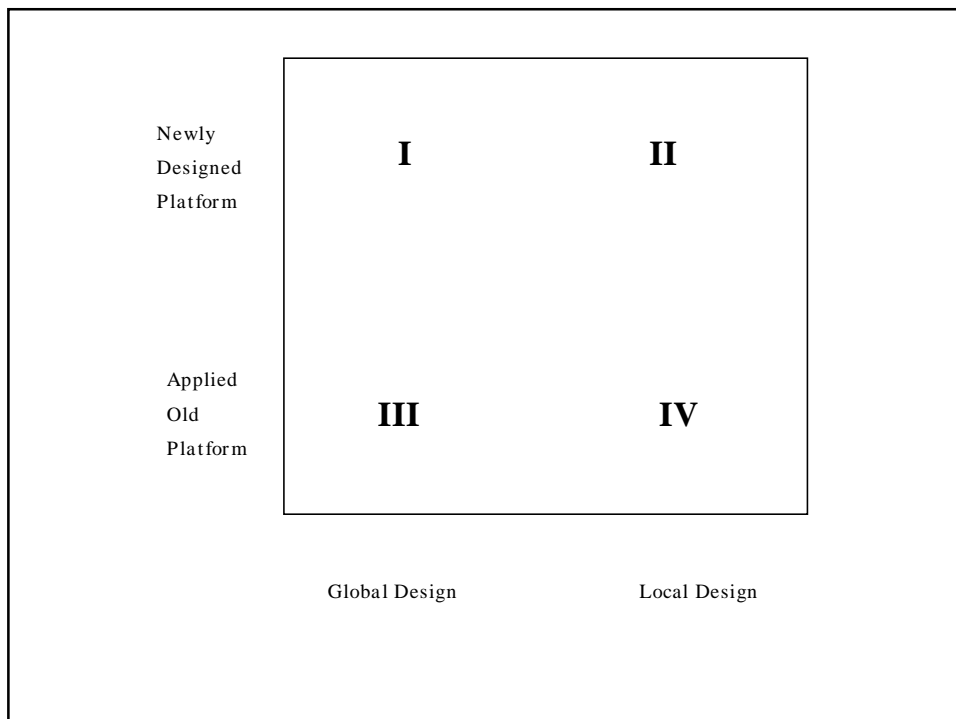
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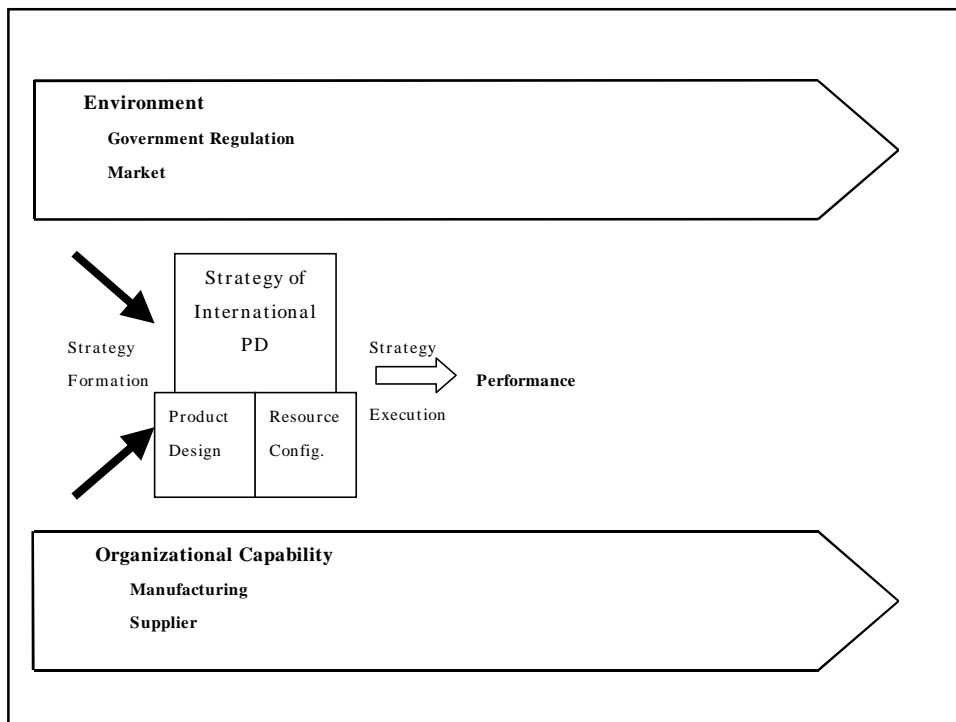
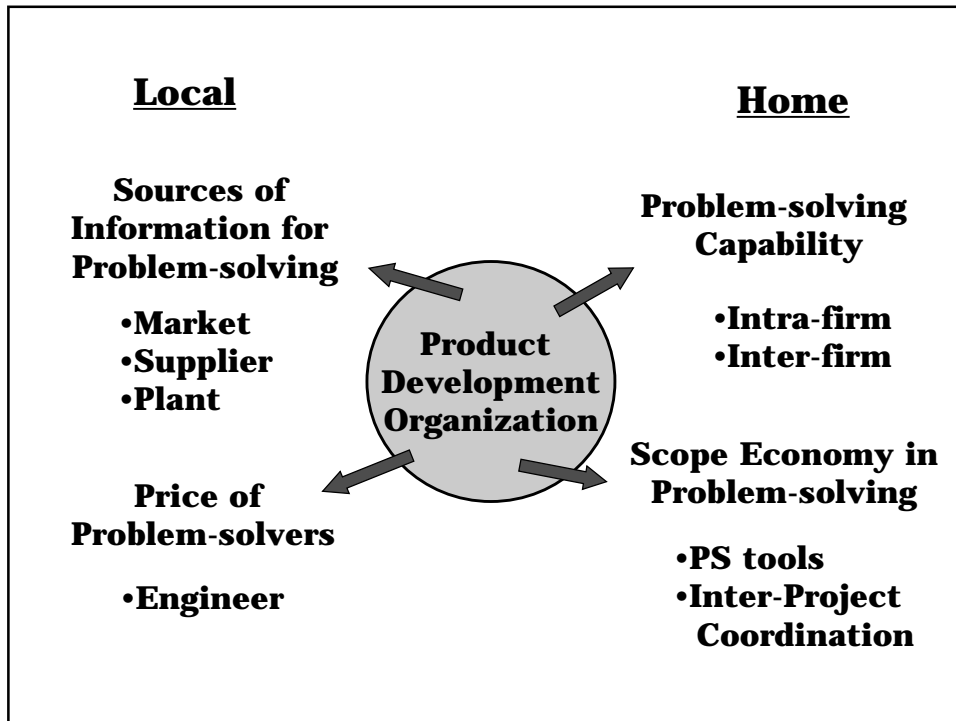
Purpose

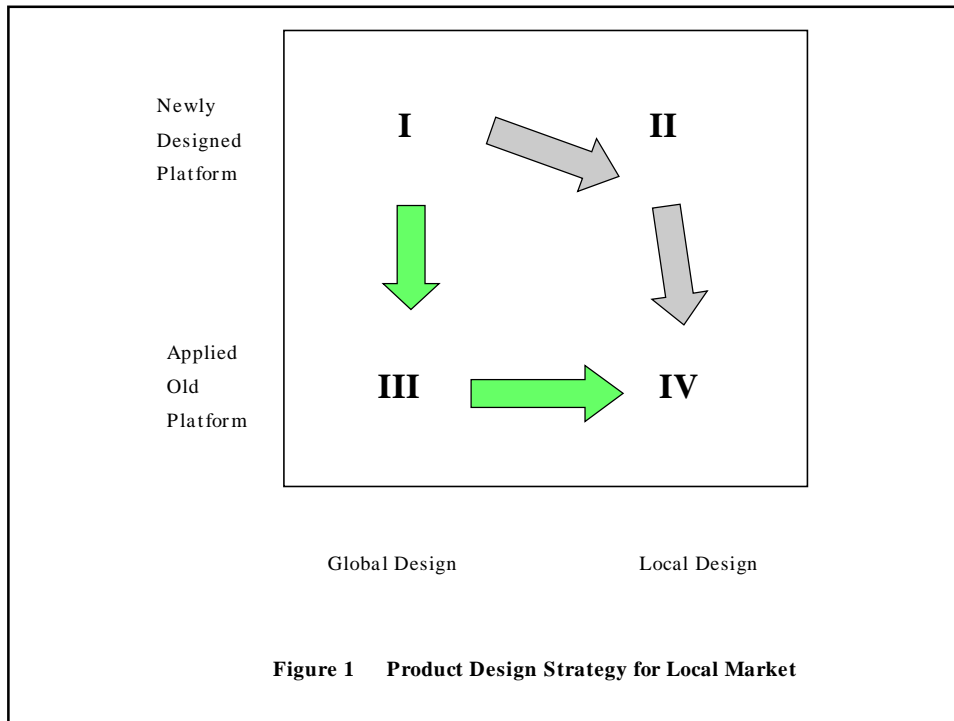
- **To explore dynamic aspects of strategy in global product development**
- **To describe product design and organizational choices for Asian Car, particularly for Indonesia**

Road Map

1. Introduction
2. Framework: A Dynamic View
3. General Characteristics of Japanese Automakers and Asia
4. A Case: Indonesian Vehicle
5. Conclusion

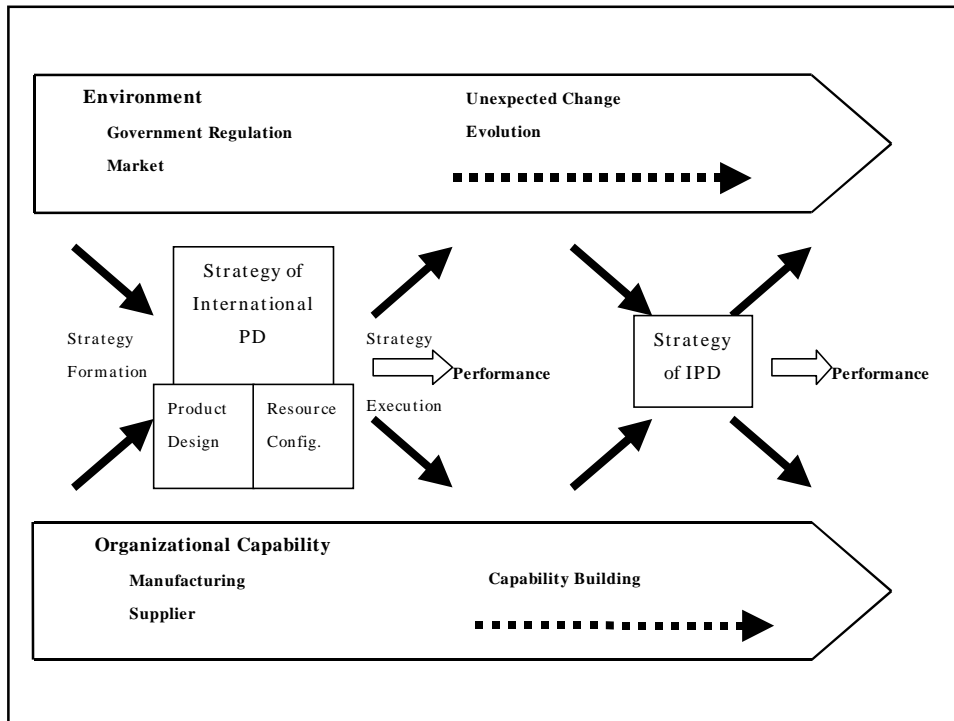






Framework

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

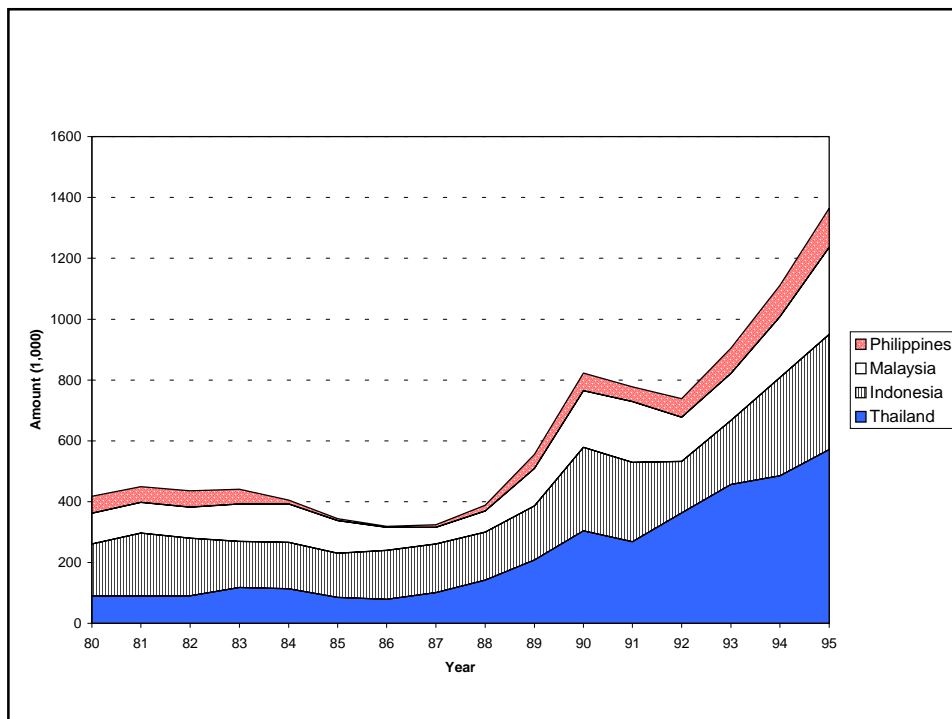


Over-adaptation

- **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**



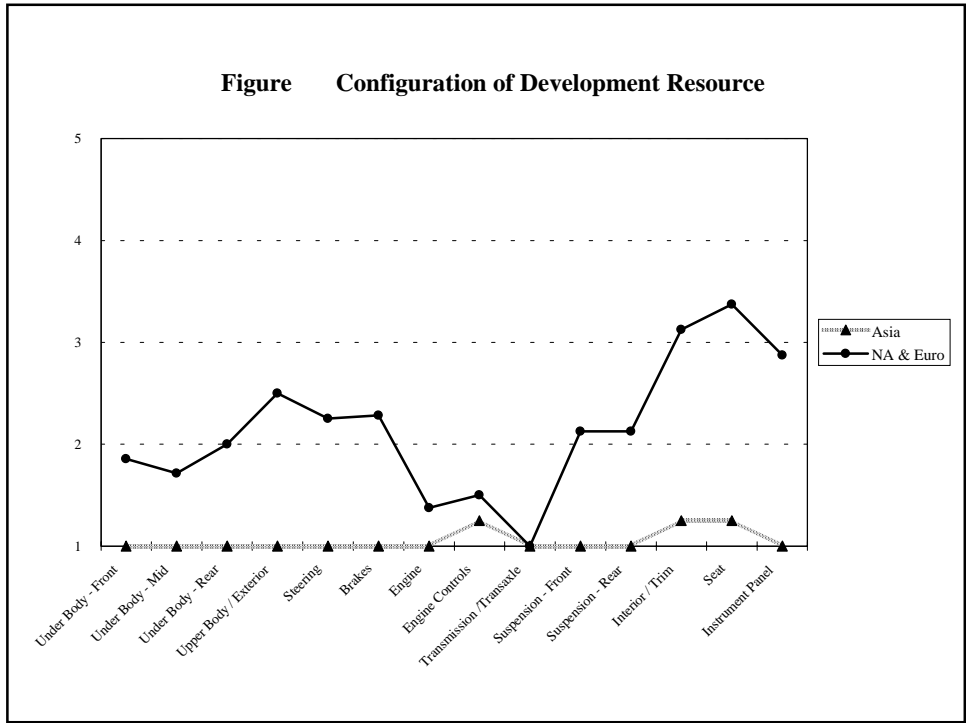
Localization Policies & Suppliers' Capabilities

- **Import-Substitution Policies**
 - Local content regulation leads low productivity and quality
- **Limit of Export-Promotion Policies**
 - Regional complementation scheme such as BBC, >>> Limited effect

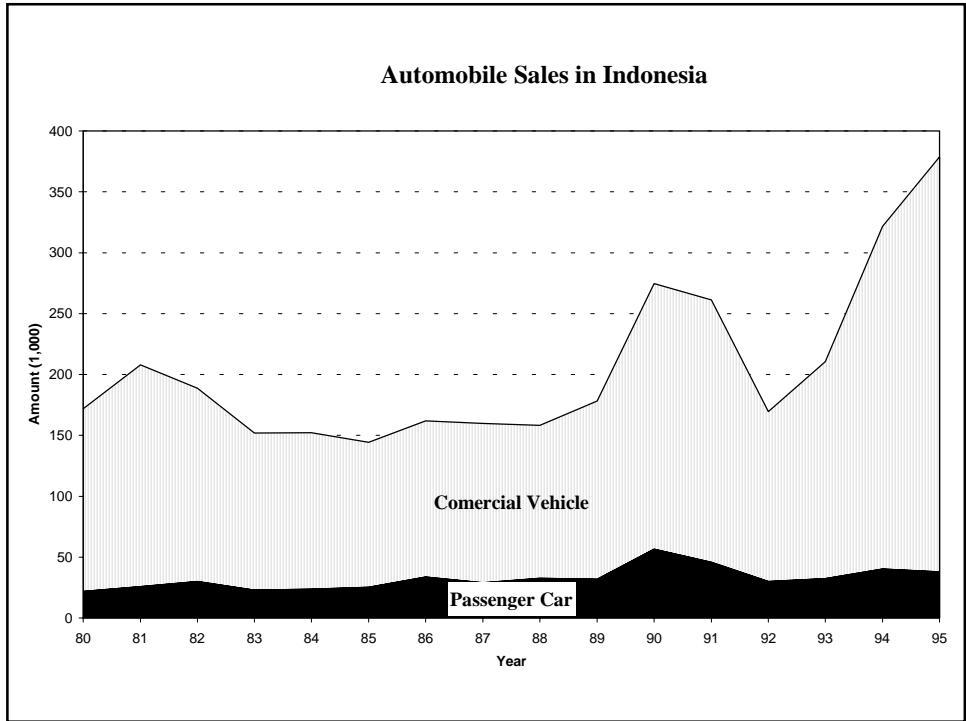
Japanese Automakers' Capabilities

- **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 Configuration of Development Resource



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**