



Supporting Industries: A Review of Concept and Development

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Outline

- Concept of Supporting Industries
- Related Concepts
- Scope of Supporting Industries
- Definition of Supporting Industries
- Development of Supporting industries: international experiences and lessons learnt
- Implications for MOI

1. Concept of Supporting Industries

- An ambiguous term, no unique definition
- Can be a general term or a specific term, up to the users' purposes. Can be studied as an academic term or an empirical term
- The term currently used in Asia originated from Japan in mid. of 1980s
- Its concept changed by time as of the change in policy's purposes

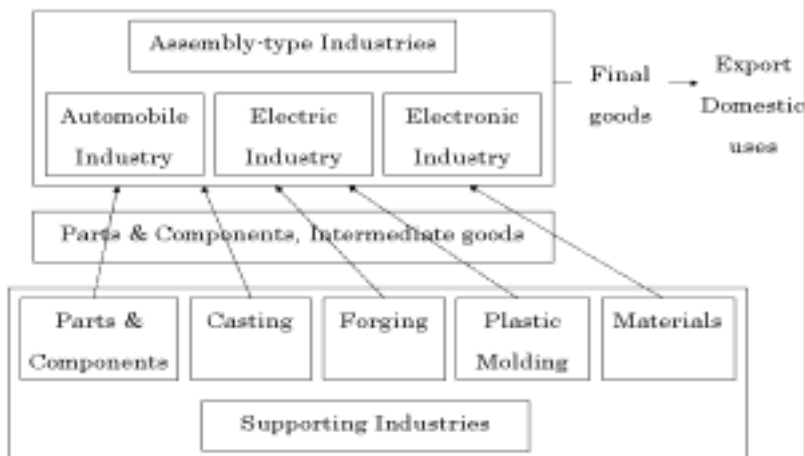
Concept of SI (METI)

- METI used this term first time in the White Paper on the International Cooperation (1985)
 - No specific definition, can be understood as
 - *The SMEs that contribute to strengthen industrial infrastructure in Asian countries for middle and long terms*
 - *The SMEs that produce parts and components*
 - Aim at supporting the industrialization and promoting SMEs in ASEAN4 (Indonesia, Malaysia, Philippine, Thailand)
 - Refer to SMEs that produce parts and components

Concept of SI (METI)

- METI officially defined what SI was in Asian Supporting Industries Development Action Program (1993)
 - *Industries which supply the necessary things such as raw materials, parts and capital goods etc. for assembly type industry (automobile, electric & electronic)*
 - Aim at resolving the bottlenecks in ASEAN4: insufficient infrastructure, shortage of professional working forces and underdevelopment of supporting industries
 - Cover industries that produce intermediate goods and capital goods for assembly type industries

Concept of SI (METI)



Source: JOEA (1994)

Concept of SI (MEI)

- Why did the term appear in Japan in mid. of 1980s and focus on Asian countries?
 - Plaza Accord (1985) → an appreciation of yen value
→ firms shifted their production to the countries with cheaper labor source. However, part & component industries were underdeveloped in developing countries, especially ASEAN4. Thus, the term was used to indicate the lack of such industries in those countries
 - New AID Plan (1987): METI's efforts to promote industrial cooperation between Japan and other Asian countries

第3-4-21表 中小企業の海外直接投資件数

	北 米		ヨーロッパ		ア ジ ア		世 界 計	
	85 年	86 年	85 年	86 年	85 年	86 年	85 年	86 年
製 造 業	39	76	9	18	87	181	137	279
食 料 品	9	6	0	0	11	20	17	27
織 維	0	2	1	1	11	9	12	12
化 学	3	5	1	1	10	13	14	19
鉄・非鉄	7	5	2	0	7	8	16	13
機 械	16	42	2	9	27	80	46	131
そ の 他	7	16	3	7	21	51	33	77
全 産 業	141	265	18	39	145	258	318	599

(備考) 1. 新規証券取得(現地法人の新設, 又は新規資本参加)件数のみを対象としている。

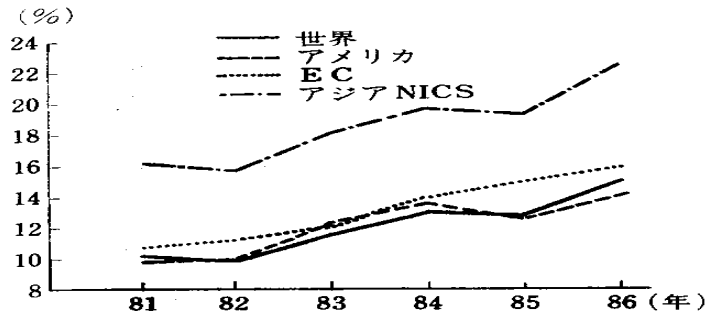
2. 投資件数の中には大企業との共同投資, 個人投資を含んでいる。

3. 業種は投資先企業の業種である。

(資料) 通商産業省調べ

Source: White Paper on International Economy and Trade(1987)

第2-1-21 図 主要地域向け総輸出額
に占める部品輸出額の
割合



- (備考) 1. 部品とは、広く生産工程途上の製品を意味し、例えば、集積回路、自動車部品、航空機部品、コンピュータ部品、通信機器の部品、配電盤・スイッチ類の部品、その他耐久消費財等の部品などを含む。
2. ECについては12か国ベース。
- (資料) 大蔵省「貿易統計」

Source: White Paper on International Economy and Trade(1987)

2. Related concepts

- Ancillary industries
- Part and component industries
- Related and Supporting Industries
- Subcontracting
- Vender

2.1. Ancillary industries

- Used by India as an policy oriented term
- Defined as an industrial undertaking which is engaged or is proposed to be engaged in the *manufacture or production of parts, components, sub-assemblies, tooling or intermediates, or the rendering of service...* to one or more other industrial undertakings... (The Industries Act, 1951)
- Being a subgroup of small-scale industries
- Thus, there's not any specific policy, strategy for the development of these industries

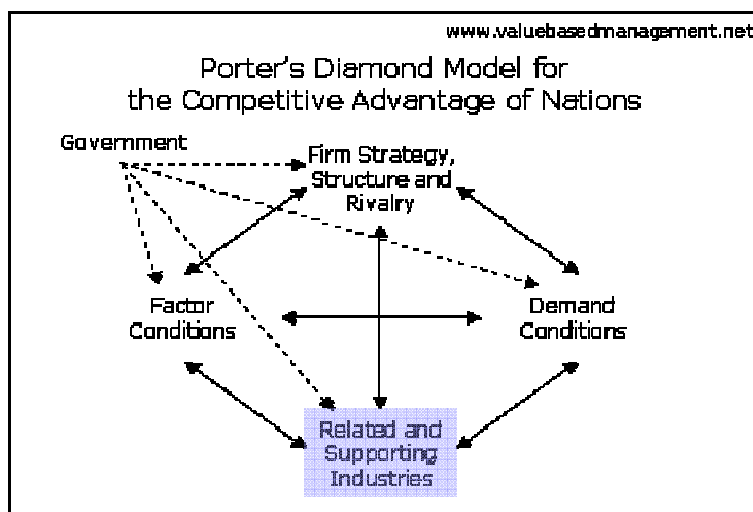
2.2. Part and Component Industries

- A narrow concept, no specific definition
- Can be understood as industries that produce parts and components
- Used in assembly-type industries: motorbike, automobile, electronics
- Can be seen as a part of SI term

2.3. Related and Supporting Industries

- Used in study on the comparative advantage of nations (Porter, 1990)
- An academic concept, being one among four interlinked fundamental factors for comparative advantage in Diamond model
- The model can apply to all industries and all countries/regions
- *The term is defined as the presence or absence in the nation of **supplier industries** and related industries that are internationally competitive (Porter, 1990: 71)*
 - **supplier industries**: create advantages in downstream industries because they produce inputs that are widely used and important to innovation or to internationalization

Related and Supporting Industries (2)



Related and Supporting Industries (3)

- **Factor Conditions:** key factors (skilled labor, capital and infrastructure) and non-key factors (unskilled labor and raw materials)
- **Demand Conditions:** The nature of home demand for the industry's produce or service
- **Related and Supporting Industries:** The presence or absence in the nation of supplier industries and related industries that are international competitive
- **The Strategy, Structure and Rivalry of Firms:** The conditions how companies are created, organized and managed, and the nature of domestic rivalry
- **The role of Government:** Policies implemented without consideration of how they influence the entire system of determinants are as likely to undermine national advantage as enhance it

2.4. Subcontracting

- UNIDO defines subcontracting as an agreement between two parties - the main contractor and the subcontractor. The main contractor entrusts one or several enterprises with the production of *parts, components or sub-assemblies and/or provision of industrial services* necessary for the manufacture of its final product
- Emphasizes the long-term commitments and relationship
- Does not cover in-house or outsource
- Brings pressure, limits scope for bargaining and lower profits → trends to transform into a deeper linkage (partnership) or a looser linkage (independent suppliers)

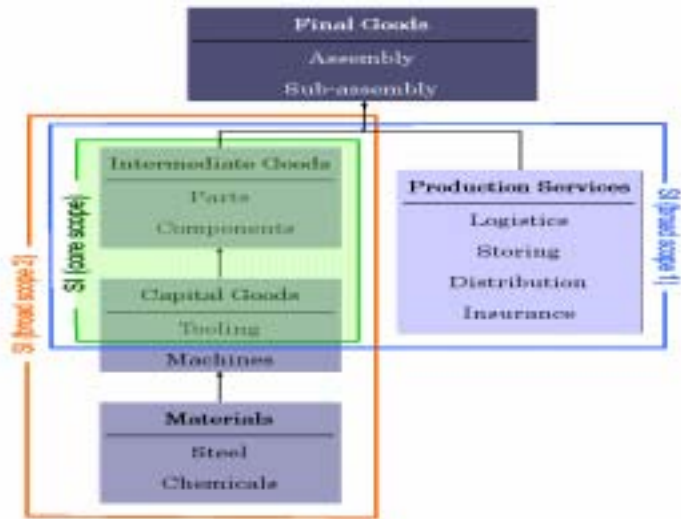
2.5. Vendors

- No specific definition, can be understood as sellers of commodity or service for an industry.
- Widely used in Malaysia and South Asian countries, refers to local SMEs those work as subcontractors of large firms (normally are foreign affiliates).
- Implies individual firms rather than an industry as a whole.

3. Scope of SI

- Main features of SI
 - Policy and strategy oriented term → used by policy makers
 - Scope of SI depends on the policy's purpose. The scope of SI will be decided which industries are covered in the definition of SI
 - SI term refers to industries that supply for domestic users, not for export
- Other tendencies of SI
 - Firms' size and nationality, business architecture
 - Capital intensive, bulky & specific, quick delivery & frequent change

Scope of SI



Scope of SI

■ Purposes of policy decide the scopes of SI

- **Core scope:** the industries supply *parts, components and tooling* to produce those parts and components
- **Broad scope 1:** the industries supply *parts, components, tooling* to produce those parts and components, *and production services*, such as logistics, storing, distribution and insurance
- **Broad scope 2:** the industries, which supply *all physical inputs including parts, components, tooling, machines and materials*

4. Definition of SI

- **Definition:** “Supporting industries” is a policy oriented term referring to a group of industrial activities that supply intermediate inputs (parts, components and tooling to produce those parts & components) for domestic users

* Note: Firms’ size and nationality are not considered in the definition of SI, however, SMEs and local firms are more targeted in policy making process

5. Development of SI: international experiences and lessons learnt

- Localization
- Promotion of linkage between SMEs and large firms, local suppliers and foreign affiliates
- Participate in production network
- Lessons learnt

5.1 Localization

- Local content is required by percentage or product
- Taiwan has applied Local Content Regulation since 1962, required by percentage and succeed in absorption of technology transfer and FDI into part and component industries
- Korea has designated parts and components to be localized in two Five-year Localization Programs (87-91, 92-96), been successful in automobile industry but not in electric & electronic industry
- However, localization are **no longer applicable** due to the rule of WTO (TRIMs Agreement)

5.2. Linkage

- Japan, Korea and Taiwan promoted the linkage between subcontractors, which mainly were SMEs, and large firms
- Thailand and Malaysia attempted to deepen the linkage between local suppliers and foreign affiliates (mainly were Japanese firms)
- UN's organizations also assist developing countries to promote industrial linkage

Linkage

- **Japan's** policies were designed to timely respond to the new context, tried to facilitate and balance benefits between SMEs and large firms, mainly focused on SMEs
 - Law on Cooperatives of SMEs and other Parties in 1949
 - Law on the Prevention of Delay in the Payment of Subcontracting Charges and Related Matters in 1956
- **Korea's** policies were top-down decisions, designated some large firms as the key players
 - SMEs Sub-Contracting Promotion Act in 1975
 - Strategy for the Development of Materials & Parts in 2005
- **Taiwanese** government did not deeply involve in the decision of large firms in choosing their subcontractors, but facilitated them by financial subsidies
 - Core-Satellite System in 1984

Linkage

- Thailand and Malaysia designed some programs to support matchmaking and linkage between local suppliers and large firms (BUILD & NSDC in Thailand and VDP in Malaysia) but did not get desired results
- Main reasons of their unsuccess were:
 - (i) lack of awareness of government's programs
 - (ii) lack of involvement of relevant organizations
 - (iii) mismatch between government's policy and firms' demand
 - (iv) lack of enthusiasm of firms
- Learning from those experiences, Thailand was in cooperation with JICA to design M/P on the Development of SI, and Malaysia designed a new program called Industrial Linkage Program.

Linkage

- UNIDO has been establishing SPXs on a worldwide basis since 1985 for supporting and promoting SMEs, mainly in developing countries.
 - The whole objective of the SPX is to enhance the matchmaking via direct contacts, industry visits, fairs etc.
 - Main industrial sectors covered by the SPX operation are metal-mechanic (81%), plastic-rubber (64%), electric-electronic (47%), and industrial services (33%)
 - SPXs are mainly established in Latin America, China
- UNCTAD introduced a toolkit to promote linkage in the WIR 2001
 - Introduce specific government measures to create and deepen linkages, as well as policies to strengthen linkages
 - Guide to design a linkage promotion program

5.3. Participate in production network

- Trends of global supply chain and specialization require every country to join in regional or global production network (Taiwan specialized in semiconductor, Thailand in automobile parts, and Malaysia in electronics)
- Conditions: strong enough industrial bases and human resources
- Industrial bases (basis technologies): casting, forging, plating, heat treatment, planting, pressing and plastic
- Human resources: industrial skilled workers and managers
 - Teaching Company Scheme in Hong Kong aims to foster university-industry partnership in R&D.
 - The Penang Skill Development Center in Malaysia aims to increase the supply of skilled labor for manufacturing firms in Penang, especially for MNCs
 - Meister system, monozukuri & hito-zukuri in Japan

5.4. Lessons learnt

- Local content requirement no longer can be applied
- Most of part & component suppliers are SMEs, thus the government should pay more attention in the development of SMEs
- Global supply chains are the current trends of MNCs, thus, government should promote the industrial linkages between local firms and MNCs (by learning from international experiences, in cooperation with international organizations)
- Promotion of industrial human resources is the key to develop SI as well as to deepen industrial linkages

Lessons learnt (2)

- Successes in promotion of linkage
 - Quick respond from government to the change of business environment (Japan)
 - Strong enough leading firms (Korea)
 - Strong enough core firms and enthusiasm of firms (Taiwan)
 - Technical and financial supports from governments
- Un-success in promotion of linkage
 - The lack of inter-ministerial coordination (Thailand)
 - The lack of awareness of government's policy (Thailand)
 - Mismatch between government policy and firms' demand (Thailand)
 - Discrimination against type of enterprises (Malaysia)
 - The lack of enthusiasm of firms (Malaysia)

6. Implications for MOI

- For long-term industrial development
 - Annual white paper on industry
 - Industrial database, industrial statistic system
- For improving master plan on the development of SI
 - Definition of SI
 - Coordinate among government organizations and business in policy making
 - Measures to foster the development of SI:
 - Promote industrial human resource: skilled workers and managers (coordinate with MOET, firms, vocational schools, and foreign organizations)
 - Promote linkages between SMEs and large firms / local firms and FDI firms
 - Strengthen the development of SMEs

Thank you very much