The Future of Industrial Competitiveness in East Asia

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This presentation reviews:

- The foci of competition;
- The challenges for firms in selected countries, their strategies; and
- The role for policy

“The old competition drove down the costs and prices of production. The new competition [revolves around] new product development created by the marriage of productivity and innovation.” (Best, 1997). Increasingly firm are engaged in “arms races” centered on innovation. (Baumol, 2002)
Industrial firms in East Asia are locked in fierce competition.

In some product groups, price, quality and delivery are decisive.

In others, innovation, design and after-sales service are critical.
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- Part I: Categories and Characteristics
Foci of Industrial Competition

- Category I – Electronics, white goods, and autos
- Category II – Machinery, other transport equipment, and plant equipment
- Category III – Metallurgical and petrochemical products
Characteristics of Category I

- Pacesetters to industrialize East Asia
  - Subject to rising demand
  - Commodification
  - Rapid innovation
  - Short product cycles
  - Falling relative prices
Characteristics of Category II

- Important for Japan, increasingly for Korea, and in time, for China

- Technological change is slow
- Products differentiated and customized
- Experience and tacit knowledge vital for production
- After-sales services important
- Prices less volatile
- Innovation slow and incremental
- System development and integration a plus for producers
Characteristics of Category III

- Many East Asian countries engaged in producing these commodities

- Production is capital intensive
- Technologies are stable
- Major innovations infrequent
- Prices fairly volatile
- There are frequent worldwide market imbalances
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Part II: Why Are Category I Products Important in East Asia?
Why Category I Products are Important for East Asia?

- Expanding global demand
- Falling trade barriers and declining transport costs are stimulating market growth
- Competition along price, quality, delivery, and technology axes
- Labor intensity of product assembly still high: labor cost, trainability, and flexible use of labor force influence competitive advantage (e.g. China)
Why Category I Products are Important for East Asia?

- Manufacturing efficiency a major consideration
- Industrialized countries shifting production to East Asia, with FDI serving as a conduit for capital and technology
- Relative ease of entry and rapid pace of learning for countries with well developed manufacturing bases
- Scope for incremental process innovation
Why Category I Products are Important for East Asia?

- Also scope for disruptive innovation
- Production is decomposable. Dispersal of manufacturing across East Asia and networking allows ideas to diffuse faster, provides flexibility and lowers costs
- East Asia had an early start with consumer goods, has strong manufacturing capability, and has evolved efficient networks and supply chains
Part III. Firms’ Challenges and Strategies
Major Challenges for Firms

- Entry barriers: capital intensity, high fixed costs, and scale economies in some subsectors
- Rapid technological change
- Costly exit barriers for firms in some subsectors because of sunk costs
- Interconnected industries resist major technology switching, e.g. digital cameras.
Low Technology Products: Firm Strategies

- Garments, footwear, furniture, leather goods etc. competing mainly on the basis of cost; by tapping supplies of low wage workers.

- Steadily improving production efficiency.

- Enlarging access to components, services, technology through production networking.

- Utilizing advances in materials and design.
Mid-level Product Technology: Firm Strategies

- Sustaining cost competitiveness through better logistics and steadily improving quality standards
- Organizing production and incentives to introduce a steady stream of process innovations
- Developing design capability (ODM)
Mid-level Product Technology: Firm Strategies

- Conducting R&D and testing in house or contracting with suppliers of research and industrial extension services
- Actively seeking licensing and joint ventures to raise technological capability
- Diversifying into new production areas for growth and lessening risks e.g. Chaebol and Chinese enterprise groups
High End Firm Strategies

- Innovation intensive mode of competition based on major in-house R&D and continuous experimentation. This can be complemented by an “open innovation system” through partnerships, RJVs, and contracts with universities/research institutes.

- Developing of own brand name (OBM)

- Global marketing strategy and effort to enlarge global market share
High End Firm Strategies

- Creation of a local/global supplier network that works closely with lead firms on product development, use of concurrent engineering a la Toyota

- Expansion into adjacent products/services leveraging strengths in core areas

- Search for disruptive technologies; establishing new standards and seeking first mover advantages
High End Firm Strategies

- Merger/takeover of small firms with promising technologies

- Heavy investment in latest generation plant/equipment to retain production capability and enlarge market share in key areas. e.g. flat screens

- FDI in overseas production and strategic acquisition of foreign companies. e.g. by Samsung, Haier, and Hyundai
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Part IV. Country Specific Challenges
Country Specific Challenges: Japan

- Rising labor and overhead costs makes low-end (and medium-tech) products uncompetitive e.g. in garments, low-end machinery, assembly activities, digital cameras, flat screens

- Shortages of skilled workers in areas such as software, engineering, design and research

- Domestic markets for many existing products saturated and opportunities are overseas

- Lot of small firms exiting, networks shrinking
Country Specific Challenges: Korea

- Rising Labor costs, labor market issues and overheads
- Relatively little R&D by SMEs
- Network of suppliers and component manufacturers not as competitive and innovative as in leading OECD countries
- Few firms engaged in RJVs and capacity to assimilate/adapt technology by smaller firms, weaker than in Taiwan or Japan
Country Specific Challenges: Korea

- Among most chaebol, focus on core activities still lacking. Degree of diversification, and dependence on own tied suppliers still high.

- Universities not contributing significantly to innovation capability: research capacity, commercialization of findings limited. Current role of GRIs uncertain.
Country Specific Challenges: China

- National innovation system is weak and fragmented

- Most firms at the stage of adopting codified technologies. Generally do not conduct R&D in-house. Recent increase in R&D by large firms.

- For assemblers, network of domestic suppliers emerging slowly and quality variable
Country Specific Challenges: China

- Logistics/supply chain management less efficient than among competitors –adds to cost of finished product
- Lacks world class firms able to compete internationally
Country Specific Challenges: Indonesia

- Productivity growth, quality standards and delivery lower than in neighboring competitors
- Difficulties with labor force and rising wages
- Infrastructure constraints e.g. power, pose problems for some firms
- Political risks have slowed FDI in industry and technology transfer
Country Specific Challenges: Indonesia

- IT capability of firms is weak, affects international networking, building of supplier relationships with MNCs

- Firms do not engage in much R&D. Innovation capacity in process activities and design skills are limited (also in Thailand)
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Part V. Policy Options
Policy Options

Use trade and competition policies to:
- stimulate innovation by medium and large firms;
- entry of firms with new process or product technologies;
- induce established firms to branch into neighboring subsectors;
- stimulate organizational changes to promote flexibility, resilience, innovativeness;
- attract FDI
Policy Options

- Strengthen capital markets to minimize risks of crises, reduce costs of raising equity, and increase venture capital financing and build pool of experienced venture capitalists, angel investors.

- Enlarge innovative capability through incentives for R&D; make research universities more of a focus for innovation; provide public support for basic research in selected areas.
Policy Options

- Improve physical infrastructure, services and amenities in key urban centers to attract and retain high-tech industries a la Singapore

- Induce circulation of foreign and expatriate knowledge workers through local universities and research institutes


References


In recent years integration processes in East Asia have gained strength. For nearly 30 years the Association of Southeast Asian Nations (ASEAN) which includes one of the four Asian ‘dragons’ Singapore, as well as NIC (the new industrial countries) of ‘new wave’ – Malaysia, Indonesia, Thailand, Brunei and the Philippines most successfully The success of the mutual cooperation within this group is closely associated with the rapid economic growth of the majority of the ASEAN. Countries, a comparable level of development, mutual trade relations well-established and with long historical tradition, China Competitiveness Index - values, historical data and charts - was last updated on May of 2021. Competitiveness Index in China is expected to reach 5.00 Points by the end of 2020, according to Trading Economics global macro models and analysts expectations. In the long-term, the China Competitiveness Index is projected to trend around 5.00 Points in 2021 and 75.61 Points in 2022, according to our econometric models. 10Y. 25Y. Industrial policy in east asia: in search for lessons. Zenaida Hernandez Revised draft, September 24, 2004. Abstract. One of the most debated questions in the development literature is the role of government intervention in East Asia. However, there has been a heated debate about the contribution of industrial policy to growth in East Asia and the desirability of following similar policies in other countries. The debate begins with the precise notion of industrial policy. Advocates and critics of industrial policies often have different views on what policies fall under the concept of industrial policy; whether industrial policies are all those that promote industry in one way or another, or just those that skew the allocation of resources toward some preferred sectors. It identifies a “back to the future” quality of Latin America’s situation, pointing to the region’s balance of payments constraint and dependence on commodity-like industrial products. JEL Classification: L52, L53, O14, O38, O53, O54, F13 Keywords: Industrial Policy, Competitiveness, East Asia, Latin America. Helen Shapiro is an Associate Professor at the University of California, Santa Cruz, where she teaches in the departments of Sociology, Latin American and Latino Studies, and Economics. The dynamic learning effects from trade in East Asia are also open to dispute. Rodrik argues that in the case of South Korea’s innovative firms, causation may have been from efficiency to exporting, rather than the other way. (2003). Manufacturing Competitiveness in Asia: How Internationally Competitive National Firms and Industries Developed in East Asia (1st ed.). Routledge. https://doi.org/10.4324/9780203986660. COPY. ABSTRACT. There are competing theories to explain the reasons behind the international competitiveness of manufacturing in Asia. Analysing these different theories will bring important lessons, not just for Asia, but for developing economies the world over. This lucid book studies industries and firms in East Asia and examines the major determinants of their economic performance.