

Arbitrage and Outsourcing

15.220 Global Strategy

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What do you do where?

- Full value chain R&D, Market sensing, product development, core man, assembly, marketing (branding, messaging), sales and service
- Deep “front end”
 - Market sensing, product development, assembly (?), marketing (branding, messaging), sales and service
- Shallow front end
 - marketing (branding, messaging)?, sales and service
- Deep “back end”
 - R&D, product development, core man, assembly
- Shallow back end
 - discrete components, products

Concept of “tapping” into advantaged locations

- Efficient production platforms – cost arbitrage
- “Hot spots” – sources of innovation – “you have to be there!”

But *what activities* have to be there?

- Offshore assembly
- Scouts/satellites (picking up knowledge and sending it back to “base station”)
- Knowledge creating unit (e.g. R&D center)
- Business HQ
- Entire value chain
- Plant/platform

It's not just about labor cost

- Companies that outsource production or services to low cost countries should focus on the best value rather than just the cost of labor. Countries that have clusters of related industries can provide improvements along the value chain creating a higher value to the company that it outsourcing than those that focus on the cost of one element of the value chain alone. This is very important with products that have high quality standards or require specific raw materials. Bill Harrison

Factor costs and the location of activities

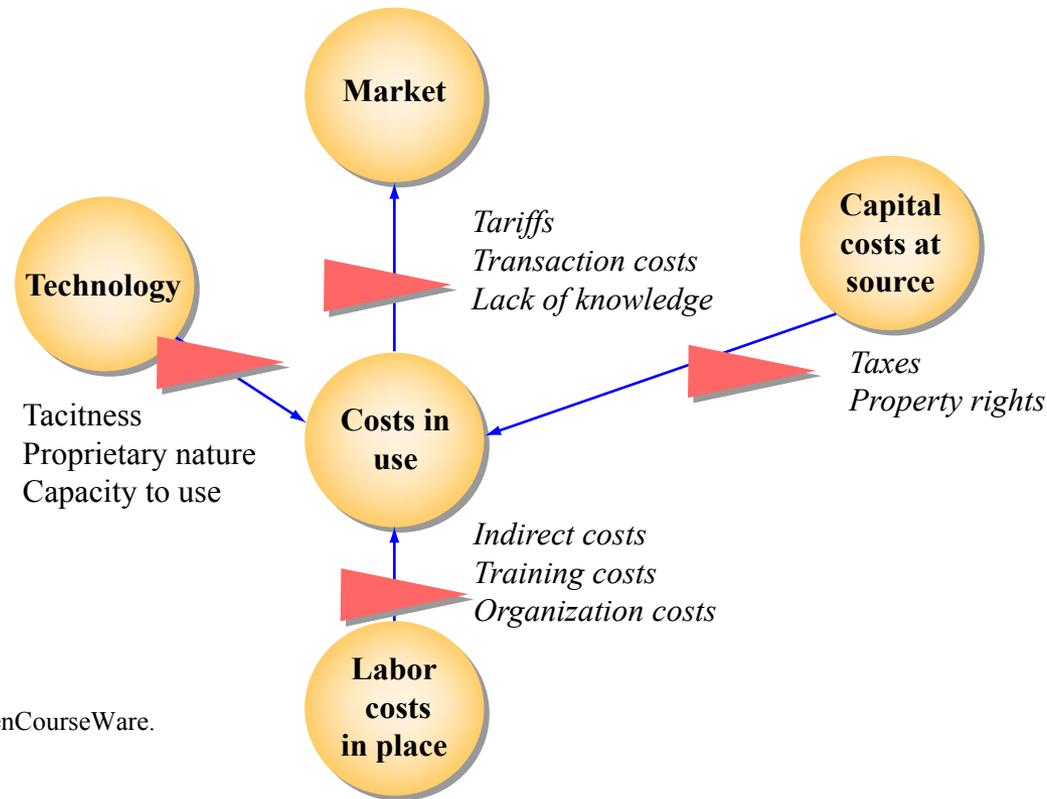


Figure by MIT OpenCourseWare.

Strategic Roles

Reason Competence	Low Cost	Skills and Knowledge	Market
High	Source (deep)	Lead	Contributor
Low	Offshore (shallow)	Outpost	Server

Source: Ferdows 1997

Some examples

- P&W-Singapore
- EPIX US and Israel
- ACD Software
- CISCO
- GE India – Source factory, lead IT function

P&W—Why Singapore

- Market similarity -- S Singapore Airlines is a demanding customer. Given the globally competitive nature of the airline industry, there are many market similarities between P&W GSP's business in Singapore and its customers in other countries.
- National Advantage--Having a leading global airline was a natural draw of Singapore. In addition, the highly-skilled and productive labor with a strong work ethic makes the total landed cost of the Singapore worker very competitive, even when compared with Chinese workers who receive low salaries. SVP Jim Keenan also remarked that the workforce in Singapore has embraced lean manufacturing principles that has even offset higher wages than in other parts of the world.
- Scale Economies -- Very capital and skills-intensive business. Once a location has shown that it is able to shine ... companies ...often re-invest to continue to upgrade the operations and reap economies of scale.
- Global Regimes / National Regulation -- Since Singapore is a small country, ...(it largely) follows the regulations of the Federal Aviation Administration of the U.S. and the same agencies for Europe and Japan. This helps P&W to easily operate in Singapore and abide by the international regulations that govern this business. In addition, the Singapore government has continuously strengthened its pro-business environment to be supportive of foreign investors.
- To further quote P&W's SVP Jim Keenan, "Nowhere have we found an employee base that takes ownership for continuous improvement more so than in Singapore. An optimal cost structure does not include only low wage rates. It also includes efficiency, and it includes relationships between government and business that make a country an easy place to do business. I would rate Singapore at the top of the list for being effective in strengthening all those areas."
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- As a result, Singapore has become very much like Pratt & Whitney's Hartford-of-the East (Hartford, CT is P&W's Global Headquarters). From its sister home-base in Singapore, Pratt & Whitney is able to enjoy arbitrage due to location-advantages from several sources, as explained above, as it competes in the aircraft engine repair market.

EPIX Pharmaceuticals

- EPIX Pharmaceuticals maintains two laboratories. One is in Lexington, MA; the other in Ramat Gan, Israel. The technology to discover new drugs using computer models of protein-receptors and chemicals was developed at Tel Aviv University, and it is the first step in EPIX's R&D process. Rather than try to transplant the technology to the US, the computer modeling ("computational chemistry") lab was maintained in Israel, and tightly integrated with the medicinal chemistry and biology groups in Lexington with IT systems. The site is a key part of the EPIX value chain, which ends with intellectual property that is licensed to large pharmaceutical companies. In the context of EPIX, it is a lead unit that is integral to product development.

Student responses removed due to copyright restrictions.

How They Do It at Cisco

- Outsourcing in Cisco, Boxborough MA is done in 2 ways:
- 1. Contracting fixed price work agreements with a small number of prescreened firms from India such as Wipro, TCS etc.
- 2. Moving engineering work to Cisco branch office in Bangalore, India.
- Typically ongoing maintenance agreements (bug fixing, new releases with minor feature modifications) are handed out to Wipro etc whereas new development efforts are moved to the Bangalore branch office.
- Some skills are easier to find in India - such as Web based development etc. while some others such as kernel development are hard to find so the skills required often form the basis for these outsourcing decisions.
- While at the Cisco Security Agent team, I also witnessed an Indian team being put together from scratch. It all started off with a VP of Engineering (of Indian origin) who decided to move back to India. He gradually put together a team in the Bangalore office and brought them up to speed over a period of 1 year, allowing them to fix bugs in the core product. Another year later, when a Linux version of the product was needed, this team had enough skills and proven expertise (gained from maintenance activities) to undertake this task. This team in Cisco, Bangalore appears to have been established as a "contributor" and then grown into a "source". Much grooming and leadership has gone into making this team competent and skilled. Now the team reports to a manager here at Boxborough, MA and continues to independently manage the Linux migration effort.

GE in India

http://www.gecareers.com/GECAREERS/jsp/india/workingatge/gebusinesses_pop.jsp#

- Today, the majority of GE's businesses world-wide have a presence in India — aircraft engines, broadcasting, capital services, lighting, medical systems, industrial systems, plastics, power systems and transportation systems — either through a joint venture, a wholly-owned subsidiary, a strategic alliance or a business development and customer support presence.
- India businesses help drive GE's four corporate initiatives — globalization, services, six sigma quality and e-business. GE has experienced success in sourcing products, services and intellectual talent from India for global businesses:
- GE pioneered the concept of software sourcing from India through Offshore Development Centres across the country, which now account for approximately 5% of India's software exports. **(Offshore >> Source and Lead)**
- The John F. Welch Technology Center is India's first and largest industry multi-disciplinary research centre. This strategic investment by GE will provide critical technology, research and development for GE's diverse global businesses.
- Medical Systems, Motors and Lighting supply finished products to the global GE system. **(Source)**
- Power Systems, Industrial Systems and Appliances source parts and components from suppliers for use in operations outside India. **(Offshore)**
- Medical Systems, Appliances, Aircraft Engines, Industrial Systems, Power Systems and Transportation Systems develop and provide design and engineering services, and analysis for GE global businesses. **(Source)**
- GE Capital Services caters to the diverse needs of a global business through its outsourcing services which include transaction processing, finance and accounting services, call center services, customer fulfillment activities and processes, data modeling and analytics support, managed IT services, software solutions and e-learning. **(Offshore)**

Responses

- Corporate
 - Full life cycle costing
 - Focus on core competencies
 - Define “citizenship”
- National
 - Infrastructure
 - Training
 - Align tax systems
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Questions for ICICI

- Should ICICI “Go International” or should it focus on the retail business in India? Why?
- Which customers /products / countries should ICICI focus on?
- Which capabilities are common to these different international thrusts, which differ? Which countries represent the best bases for these “capabilities platforms”?
- What mode of entry (direct, jv, license, white label) should ICICI follow in its international expansion?
- How can ICICI best match its capabilities and its international business model?