

III. Professor Donald R. Lessard: " 'Value Added' Globalization: From Manufacturer+ to Exporter of Management Services"

- Upgrading Taiwanese Activities: Technological Capabilities vs. Management Capabilities.

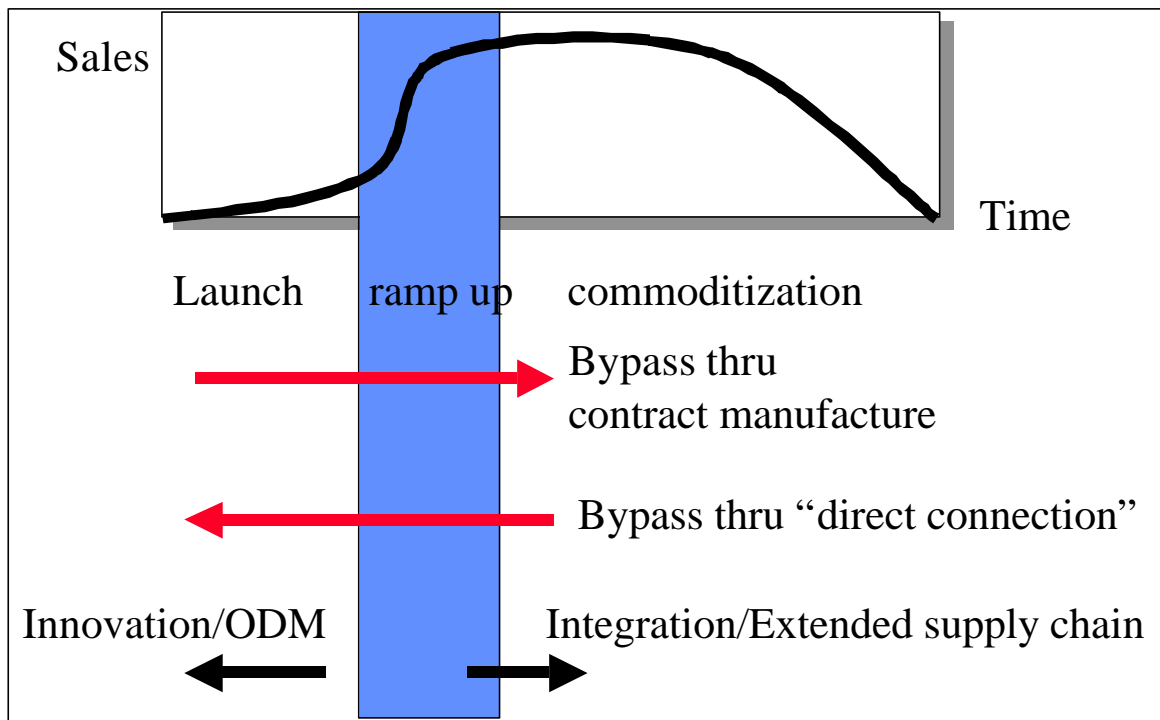
Over the last twenty years, Taiwan has made enormous growth from being a sub-contractor to becoming an Original Equipment Manufacturer (OEM) and an Original Design Manufacturer (ODM). Taiwan is better at adding technological capabilities to labor than it is at management capabilities. A knowledge-based economy is achieved by adding both enhanced management and technological capabilities to core labor. Achieving a knowledge-based economy also means moving from being just a manufacturer to becoming an exporter of management services.

- While Taiwan's strength continues to lie in manufacturing, Taiwan is also becoming more of an exporter of management services.

Becoming a global headquarters, for example, is to become an exporter of management services because it means managing, promoting, researching and developing, doing logistics and finance on behalf of operations that occur elsewhere.

Nevertheless, Taiwan's policy structure provides enormous support to technology-based and engineering-based manufacturing. Its policies have not traditionally supported the growth of management services and could be more helpful to these services' growth.

- As many of Taiwan's key export products mature, it faces a dual challenge. How to extend its competitive advantage in "older" products while at the same time gaining competitiveness in new precuts as illustrated in the following figure.



- What are the major threats to Taiwan in the context of the product life cycle?

The main threat that has driven policy makers and managers over time is that Taiwan will "hollow out" by losing its manufacturing assets. The more serious threat is actually that Taiwan will be "bypassed." This is a threat from lead market countries such as the U.S. and lower cost economies like Mainland China.

An example of Taiwan being bypassed is the recent development in electronics is one-stop-shopping contract manufacturers that take over all the manufacturing activities from brand name marketers and manage and coordinate from Europe, North America, and low cost countries. With the emergence of these firms, brand name marketers do not need Taiwan to provide that coordination.

Another threat to Taiwan's manufacturing are companies who know that they eventually want to tap Mainland China's vast market, and begin producing their

products in Mainland China so as to connect to the market from the beginning production stages. They do not need Taiwan's manufacturing.

- How does Taiwan address the threat of "being bypassed"?

Taiwan must constantly acquire new products to produce throughout their product life cycle. A constant problem is that every product is going to commoditized and, eventually, go away. Therefore, Taiwan must acquire new products to extend its competitiveness and find better ways of capturing new products, and new product life cycles, before other countries grab them.

Taiwan can address the bypassing threat by becoming a design innovator, by designing new products within a particular technology, and by increasing ODM. Taiwan has been successful at this with notebook computers, as the increasingly smaller packaging for notebook computers is Taiwan driven.

Taiwan can fight against the bypassing threat by integrating and extending its supply chain, and by becoming a manager of the global system, as opposed to only the direct producer. That is the competitive challenge for Taiwan and each individual Taiwanese company.

- To become more competitive Taiwan should continue its leadership in ramp-up product engineering and in building trust with lead market players. Taiwan firms have pioneered new models that allow them to relate to clients in lead markets based on a set of interesting global strategies that are highly trust based and must be maintained.
- Taiwan should developed the following capabilities in order attain new sets of product life cycles:
 - 1) Increase product market knowledge, increase listening posts and participation.
 - 2) Increase technological capacity.
 - 3) Increase direct expansion into lead markets.
 - 4) As the manufacturing, sales, delivery, and service process becomes integrated, Taiwan may need to participate directly in those markets, as opposed to being just a supplier to those markets.

- How to extend the Taiwanese "sweet spot":

- 1) Continued supply chain leadership. Taiwan is very good at managing on a low cost supply chain. Taiwan is a manufacturer plus a logistics manager.
 - 2) Taiwan needs increased service competence.
 - 3) Continued direct expansion into lower cost regions like Mainland China, which represents a particular challenge because it is a low cost region and a rapidly growing market.
- Complementary Services: Taiwan should not think of services and manufacturing as totally separate industries but rather as compliments of one another.

Taiwan's policies have been friendly to technology based manufacturing, yet protective and security oriented towards other services. As Taiwan moves forward in its business model from the manufacturing base, it must realize that many services are complementary to manufacturing: design capabilities, supply chain capabilities, finance capabilities, market sensing capabilities, marketing service capabilities, general management capabilities with global operations. All of these involve an increasing and diversifying knowledge base and require a broadening of the educational base in engineering and science, as well as deepening the management and organizational disciplines.

- Taiwan faces a glass ceiling in upgrading because it still does not have world-class financial capabilities. While its product engineering capabilities and logistics global integrations capabilities are world-class, its financial capabilities limit Taiwan's overall potential.
- Finance is one of three necessary complimentary services that Taiwan must develop in order to not "be bypassed". There is a need to change Taiwan's mindset associated with finance from "how do we avoid being hallowed out" to "how do we avoid being bypassed".

To finance an OEM Taiwan needs world-class working capital finance and the ability to finance the core risk finance, which are the capital equipment and the design. Because of Taiwan's supply chain management innovations, it has cut down the need for working capital.

To finance an ODM the same things are required as OEM plus you need to

attract creative, technologically deep, market savvy employees. To attract such people you need a value recognition outlet and a strong stock market, so that a firm can offer those people stock options that have value.

As an innovator and integrator, Taiwan should improve in risk finance, cross border M&A, and in its ability to make complex long-term contracts.

- Taiwan must upgrade its finance to be a complement to manufacturing, logistical and innovative activities.

Taiwan must shift government role from air traffic controller to airport builder. Taiwan has a huge financial bureaucracy where international transactions must be approved by the government. The government must stop scrutinizing every little financial transaction.

There is a need to develop finance as a complement to manufacturing and as a compliment to the globalization of Taiwan companies, so that those companies don't have to go to Singapore or elsewhere to base their international operations. Without a world-class financial system, you will drive away your manufacturing base.

In upgrading Taiwan's financial system it should not try to capture unrelated finance business, but rather focus on not driving manufacturing away due to the lack of these capabilities.

- The following elements are critical in upgrading Taiwan's financial system:
 - 1) Supply Chains—Eventually a tremendous proportion of the financial transactions will be seamlessly integrated into the sale of goods and services.
 - 2) Secured Finance—The securing of finance through the flow of goods is a natural service for Taiwan to provide between risky countries and the countries to which it sells its product. Taiwan has an advantage because of its leadership position in the physical movement of goods.
 - 3) Secured Collection—We are moving towards a world of encrypted cash-on-delivery where cell phones become the mechanism by which micro-transactions are made, where one does not receive a service until it has been paid for, and where credit disappears as a key factor in the supply chain. Taiwan needs to examine whether the regulation of the financial

sector will allow this integration. There should be a common set of standards for the imbedding of financial services, so that financial services can be sold based on the assets that Taiwan already offers in the manufacturing processes.

- 4) Stock Options—If you are going to use high-powered finance to attract exceptionally educated employees you have to offer them compensation in the form of valuable stock options. As Taiwan globalizes its operations it will have to find ways to carry these incentives to other countries.
 - 5) Value Recognition—Global valuation and the ability to have initial public offerings in the best context. Taiwan would be better off if all companies were listed on New York Stock Exchange or the NASDAQ, and not on the Taiwan Stock Exchange.
 - 6) Mergers & Acquisitions—Taiwan firms have succeeded in domestically consolidating, but will have to consolidate with other global players to survive. Taiwanese firms' ability to issue shares for making acquisitions will be important as newly issued shares are the currency of this new economy,
- There are four key elements of a knowledge-based economy:
 - 1) Knowledge Capital—This means educated individuals. Taiwan is already very much a knowledge-based economy in this sense.
 - 2) Institutional and Regulatory context—Taiwan's institutional and regulatory context for supporting manufacturing capabilities is very proactive and one of the better ones in the world.
 - 3) Application of Information Technology—The application of information technology in Taiwan is reasonably good.
 - 4) Innovation Capability—Taiwan's innovative capability must strengthen. This could be strengthened through a course on Tech Based Entrepreneurship between MIT and Taiwan.
 - In terms of finance, Taiwan is less developed in each of the previous four components of a "Knowledge-Based Economy". As Taiwan moves towards the OEM/ODM Integrator and Innovator Chart, it must develop more and more complementary services and quickly add these capabilities to its core manufacturing abilities.

Government in the Global Competition

Moderator: Paul S. P. Hsu

Panelists: Morris Chang, Lester C. Thurow, Donald R. Lessard,
Sheng-cheng Hu, Yen-shiang Shih, Yun-Peng Chu

Paul S. P. Hsu: Taiwan is at a crossroads in terms of government policies and hopefully this panel will help all of us discuss the choices as to which direction to follow. Will each member of the panel speak for five minutes on this topic?

Morris Chang: The government's role in globalization should be that of an airport builder, not an air traffic controller. The government should be responsible for building society's infrastructure, including education, enforcing the rule of law, fostering a culture that is conducive to economic development, and facilitating globalization. The government should not interfere in the daily operations of business. By buying stock in businesses and then selling within two years, the government interferes with the stock market's normal market mechanism. The government's talks about "bailouts" are also interferences with normal market mechanisms.

The "go slow and be patient" policy towards investing in Mainland China, that is supposedly "for your own good", is blatant government interference in private businesses' decisions. Sometimes national security presents a need for government interference in business decisions however, the government must understand all the ramifications of its actions. If not, the results of government interference in businesses may damage the national economy, and in turn damage national security, achieving the opposite effect of what was originally intended.

Sheng-cheng Hu: Echoed Professor Donald Lessard's argument that the government should be an airport builder, rather than an air traffic controller. Economies compete by accumulating human capital, by attracting skilled labor from abroad, and by promoting research and development.

Taiwan's labor-intensive production is moving to Mainland China despite Taiwan's "go slow and be patient" policy. The result is that approximately fifty percent of Taiwan's direct investment abroad has been in Mainland China. Taiwan is not "hollowing out" because for every labor-intensive company that transfers to Mainland China, another

high-tech company establishes itself in Taiwan. Due to high-tech investment in Taiwan, it is now the world's third largest producer of LCD monitors.

It is worrisome that the recent movement of capital to Mainland China is not to take advantage of low wage labor, but rather to take advantage of its ample supply of skilled labor. Given this, the government must invest in Taiwan's human capital. To achieve an enhanced pool of human capital, the government must first invest in education that concentrates on teaching the ability to analyze, innovate, create, and integrate, rather than teaching technical skills. Secondly, the government must promote and invest more in research and development so that companies will come to Taiwan to harness its concentration of upgraded human capital.

Yun-Peng Chu: Please refer to the attachment.

Donald Lessard: Going forward, finance activities associated with the purchase or sale of manufactures(e.g. pre-financing, credit, currency, country, and credit risk management) will increasingly be directly imbedded in the transaction flow. One of the potential advantages of a small economy is institutional innovation. It would be to Taiwan's advantage if it decided to become the world's pioneer in B-to-B and B-to-C transactions of imbedded finance.

In the future, Taiwan will need more investment not only in human capital, but also in the institutional and regulatory infrastructure. What would the regulatory infrastructure have to be like in order for Taiwan to become the world leader for imbedding finance in physical transactions, both to make payments on the delivery of goods by suppliers and the collection on delivery of goods by purchasers? This could be a challenge for Taiwan.

Lester Thurow: There are four basic components for a country to be an airport builder, instead of an air traffic controller: an educated populous; infrastructure that includes rules and regulations; investment in research and development; and, the ability to generate social attitudes that embrace globalization. An important part of "building the airport" is fostering a society with constructive attitudes. Another measure of the success of an "airport builder" is whether a country can cope with "crashes" without "shutting down the airport".

One way to think about "hallowing out" is to consider who is making profits. Japanese computer companies build millions of computers, but Intel and Microsoft are

the companies who financially profit from the Japanese PC industry. Taiwan needs to figure out how to make these sorts of profits.

In order to prevent "being bypassed", Taiwan firms must consolidate with other global corporations before it is too late.

Donald Lessard: To avoid "being bypassed", Taiwan firms must consolidate in global capital markets and obtain secondary "passports", that is company registration and stock market listing,, as Taiwanese passports are not ideal for acquiring other companies. The Taiwanese government should allow all companies to obtain dual passports, in order to encourage them to consolidate globally. To avoid "being bypassed" Taiwanese firms must change their business models to match their global industries.

Paul S. P. Hsu: Is Taiwan "hollowing out" or "being bypassed"?

Lester Thurow: Taiwan is afraid of being corrupted by Mainland China. However, Taiwan is going to corrupt Mainland China by importing capitalism, because it is the only system that works. Entrepreneurship in Asia exists in Taiwan and not in Mainland China.

Morris Chang: Taiwan is currently loosing its manufacturing industry and will "hallow out" if it fails to upgrade and quickly transition into a knowledge-based economy. This issue must be confronted and the private sector must lead the way however, the government must lay the foundation for these changes to occur.

Yun-Peng Chu: Taiwan must focus its anxieties about "hallowing out" towards upgrading its industries. However, Taiwan should be concerned with whether there are enough emerging industries and competitive products for it to maintain a leading position in the scheme of globalization.

Paul S. P. Hsu: What if the Taiwan government adopted policy, in addition to Financial Holding Companies, that established regular holding companies? In Chinese these are referred to as "industrial holding companies". If these holding companies were transparent, recorded their worldwide assets and investments, held shares of their investments globally, including investments in Mainland China, had the capability of going public in Taiwan, and provided attractive incentives, would this steer Taiwan away from "hollowing out"?

Donald Lessard: An ordinary holding company policy is a necessary condition for upgrading Taiwan's industries. A holding company law is important because it allows companies to operate without the government scrutinizing each business transaction, however it is only part of the solution because Taiwan still needs to upgrade.

Lester Thurow: Taiwan's goal is to catch up with wealthy countries' per capita income. Taiwan is a success story because in half a century, it is half caught up with wealthy countries, but it still has half way to go. In order to catch up, Taiwan needs to change its strategy.

Morris Chang: Given the economic incentives that capitalist systems provide, countries need thorough laws to govern people's greed. However a thorough legal system does not always prevent people from breaking the law. In addition to laws, a capitalist society must also promote social values as another check against excessively greedy people who wander too far. Laws only punish people once the damage has been done, but values help people to make better choices.

There is danger in the widening gap between the middle-class and very rich due to the stimulus of the capitalist system, human greed, an insufficient set of social values in society, and inadequate laws and poor execution. A complete set of laws did not prevent Enron from collapsing. The United States has the most complete set of laws in the world, therefore "an Enron" can happen anywhere, including in Taiwan. Without an adequate set of social values, Taiwan may enter an age of "Robber-Barons", capitalists who exploit opportunity to get rich at the expense of others. Robber-Baronism is apparent in the United States' Enron case, and we need to prevent it from occurring in Taiwan.

Sheng-cheng Hu: A natural consequence of Taiwan's push toward a knowledge-based economy will be increasing inequality in income. As Taiwan moves towards achieving a knowledge-based economy it needs to think about how to enlarge the winner's circle, so that a maximum number of people can benefit from the country's economic growth.

Lester Thurow: Social norms must balance laws. Enron would not have happened if it were located in Chicago, because it would have been treated and regulated as a commodity-trading firm. The social mores in Texas are different from

other parts of the United States, which is why Enron and the Savings and Loans scandal both occurred there. Texas has various examples supporting an environment of social norms where it is okay to cheat the law. You must have a set of social norms that tell people that you should not break the law.

The moral of the story is that "Enrons" are going to happen, and you must be capable of cleaning up the mess without shutting down the airport. Part of this means punishing lawbreakers, so that taxpayers will give you money to clean up the mess.

Donald Lessard: The biggest challenge for an economic system is to move forward with globalization without leaving its society behind.

Paul S. P. Hsu opened the floor to a Question and Answer Session:

- A question regarding policy and Cross-Strait relations was generally addressed by the panel:

Yun-Peng Chu: The Cross-Strait relationship is one of the most sensitive issues in government policy and there is no foreseeable change in the current policy unless the issue of economic development and national security is clearly sorted out. The national security side is more cautious towards investing in Mainland China than the economic development side. However, without economic development, there would be no national security for Taiwan. There should be an open debate on this topic.

Lester Thurow: Mainland China is not growing in at eight percent. It is a big Enron, riddled with lousy accounting, hidden debts, and corruption. Local mayors, who do not want to sacrifice their political careers, constantly report exaggerated economic growth and inaccurately measure Mainland China's eight percent growth rate. The truth is that no one knows how fast it is growing, so it is impossible for Taiwan to be steamrolled by Mainland China.

However, the idea that Taiwan's Cross-Strait economic policies can control Mainland China's development is absurd. Taiwan should focus on how to use economics to maintain positive relations with Mainland China. Countries that are economically dependant on one another do not go to war with each other.

Paul S. P. Hsu: The Taiwan government should not try to stop local companies from expanding into Mainland China. It is up to individual companies to conduct their own

risk analysis and decide for themselves whether it will be profitable to expand into Mainland China. However, the government should entice Taiwan business to contribute some portion of their earnings back into Taiwan's economy. A practical way to do this is to allow the establishment of holding companies.

Donald Lessard: The engine of Taiwan's growth will continue to be Taiwan's firms. However, the Taiwan government must not be so protective that it keeps foreign firms out.