STRATEGY FOR VALUE CREATION AND APPROPRIATION IN A GLOBAL CONTEXT

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ABSTRACT
The development and growth of Taiwan's industries, especially the semiconductor and electronics industries, has been emphasizing overwhelmingly on cost-leadership innovation and strategy. Although such capital-intensive, volume-driven and cost-down strategies have been successful measured by industrial and economic growth, but the amounts of value created and captured in global value chain and innovation networks are insignificant. We apply the framework of creation and capture of value to analyze the industrial value creation strategy in newly industrialized countries for the last four decades. We examine their past industrial policy and business strategy, and argue that the transformation of policy and strategy must gear toward creating and capturing higher value in the global innovation network. Several managerial and policy implications are also discussed.

BACKGROUND AND CHALLENGES

Global market expansion enabled firms in newly industrialized nations such as Korea and Taiwan to achieve economies of scale and learning economies that further lower the product unit cost. Although such capital- or scale-intensive, volume-driven and cost-leadership strategies have been very successful measured by indigenous industrial development and overall economic growth, the amounts of value created and captured by most Taiwanese and Korean firms in the global value chain and innovation networks are insignificant (e.g., Linden, et al., 2009; Dedrick, et al., 2010 and 2011; and Kraemer, et al., 2011).

The development and growth of Taiwan's industries, began with the textile and consumer goods industries (e.g., footwear) and later the R&D capital and high-technology intensive industries such as semiconductor and electronics industries (e.g., personal computers, DRAM, flat panel display, and various electronic components and devices) have been predominately emphasizing on low-cost strategy (i.e., Porter's cost-leadership generic strategy (Porter, 1980)). Such industrial development model has been taking advantage of learning and transferring technologies from advanced countries and building a flexible domestic production networks in order to participate in various segments of global supply chain. This type of economic development model relied on foreign direct investment and technology transfer. Although the original equipment manufacturing (OEM) and design model (ODM) have been successful, the amounts of revenue and profit depend solely on the "left over" of the global supply chain. Under such industrial development strategy, companies must relentless pursue low-cost strategy to cut down operation costs and maximize the labor productivity in order to increase profit. However, the challenge is when industrial development has grown to a certain stage, multinational corporations (MNCs)

will be reluctant to further transfer advanced technologies and know-how for fear of helping to create future competitors. In addition, MNCs may divert their FDI to other emerging countries and force companies in newly industrialized nations compete with the low-wage competitors in the emerging countries.

In addition, the newly industrialized nations of Korea and Taiwan now are facing a "hollowing out" of their industry because manufacturing has been moving to the developing nations (e.g., China, Thailand, Vietnam, and Malaysia) in order to maintain the low-cost way of production. Balwin (2011) argues that the advance of information and communication technologies (ICTs) has significantly lowered the costs of coordinating global supply chain and become increasingly economical to geographically separate various value creation stages. Such "unbundling" of production enables companies in emerging economies join global supply chains and grow rapidly. Developing nations no longer need to build a domestic supply chain like Korea and Taiwan did before. Therefore, the newly industrialized nations face a very different set of policy challenges.

The meaning of global competitiveness is the ability to create and capture higher value in the global supply chain network. Companies must create high value through innovation, in order to move up on the global supply chain. However, pursuing cost-leadership strategy is not the only strategy to maximize value creation. The cost-leadership strategy has been serving well for South Korean and Taiwanese companies since it entered the global supply chain networks in 1960s. In the face of competition from the developing countries, should governments in the newly industrialized nations encourage their industrial companies continue emphasizing cost-leadership innovation in components and joining the supply chains of U.S. and Japanese companies? Alternatively, should their governments institute complementary policies that encourage architectural innovation (Henderson and Clark, 1990) and global brand management (e.g., Ozsomer, et al., 2012) in order to assist industrialized firms in moving up the global value chain?

Dedrick, et al. (2011) argue that the greatest returns in global value chains accrue to the brand-name firms that orchestrate them. However according to *Interbrand*'s 2011 ranking of the Top 100 global brands (*Interbrand*, 2011), only four emerging-market brands make the list: South Korea's Samsung (ranked No. 19) and Hyundai (61), Mexico's Corona beer (86), and Taiwan's HTC (98). However, HTC brand was replaced by KIA in the 2012 ranking (*Interbrand*, 2012). Although moving up the global value chain by creating global brands or innovation in new product architectures has always been the recommended strategy for companies in the newly industrialized nations. Nevertheless the results have been disappointed (e.g., BenQ) or less satisfactory (e.g., Acer and Asus). Korean and Taiwanese firms still have a long way to go in order to compete head to head with MNCs in developed countries. We apply the value creation framework to study the conditions for moving up the global value chain by pursuing architectural innovation and global brand management.

ANALYTICAL FRAMEWORK

The value-price-cost (V-P-C) framework is applied to analyze the decision to move up the global value chain by introducing premium or brand name products or services. First, consumer's "perceived use value" (V) is defined by Bowman and Ambrosini (2000) as the subjective valuation of consumption benefits by a consumer (i.e., the maximum willingness to pay for a firm’s products or services); Next, the "exchange value" (P) is defined as the price paid for the use value in a market exchange (i.e., the purchase price). Finally, the production cost (C) of the producer also considers the opportunity cost of alternative uses of given resources. The V-P-C framework shows that consumer receives a surplus of value minus the price (V – P), and the product or service supplier receives a profit of price minus cost (P – C). Therefore, value creation is defined as the difference between the benefits enjoyed by a firm’s customers and its cost of

production and delivery (i.e., V – C). Lepak et al, (2007) extend the value creation and appropriation framework and make a case that the process of value creation will differ based on whether value is created by an individual, an organization, an industry or society.

At the industry level, value creation processes include innovation and new firm creation, capital investment, market competition, and the establishing and enforcing laws and regulations (e.g., anti-trust, health, and safety) (Lepak, et al., 2007). On the other hand, organizations create value through R&D investment, knowledge creation, and the implementation of structure and systems that provide incentives for innovation and employee trainings.

To analyze the effect of moving up the global value chain through branding (i.e., developing and managing a global brand), Table 1 displays the use and exchange value, as well as cost of both branded and generic products.

Table 1. Value Creation of Premium Products or Services

Economic exchange	Use value **V**	Exchange value **P**	Cost **C**	Consumer Surplus **(V – P)**	Firm's Profit Margin **(P – C)**	Value Creation **(V – C)**
Premium (or branded) product or service	V_B	P_B	C_B	$(V_B - P_B)$	$(P_B - C_B)$	$(V_B - C_B)$
Generic product or service	V_G	P_G	C_G	$(V_G - P_G)$	$(P_G - C_G)$	$(V_G - C_G)$
Differences	$V_B >>> V_G$	$P_B >> P_G$	$C_B > C_G$	>	>	>>

Customers choose to purchase branded products or services if he or she enjoys a higher consumer surplus than buying generic products or services, i.e., $[(V_B - P_B) - (V_G - P_G)] > 0$ or $[(V_B - V_G) - (P_B - P_G)] > 0$. The perceived benefit differential (i.e., $V_B - V_G$) must be greater than the price differential in order to convince consumer to pay a higher price for a brand name product. Consumers' goal is to maximize $(V_B - V_G)$ and minimize $(P_B - P_G)$, i.e., they would like to enjoy the maximum perceived benefits of consuming a brand name product, and would like to see the price differential is minimal. From the firms' perspective, if they can maximize $(V_B - V_G)$ or if they are able to create higher perceived benefits than the firms sell generic products, they will be able to charge a higher P_B, i.e., to max $(P_B - P_G)$. As long as $[(V_B - V_G) - (P_B - P_G)] > 0$, consumer will continue buying premium products and services.

From the producer's perspective, a firm's decision for branding a product or service depends on whether $[(P_B - C_B) - (P_G - C_G)] > 0$ or $[(P_B - P_G) - (C_B - C_G)] > 0$, i.e., a branded product allows firm to charge a higher price and at the same time, to be able to cover the higher cost of production and marketing. There are two effects need to be considered when making the decision to move up the global value chain by introducing their own brand.

Perceived Benefit Effects

a. If $(P_B - P_G) > 0$, premium product or service providers are able to charge a higher price due to higher customer's perceived value increases consumer's willingness to pay (WTP) for the premium products (i.e., $(V_G - V_B) > 0$).
b. If higher price positively influences the perception of quality or status, and inversely influences the perception of value and willingness to pay. As a result, brand enhances the price effect and increases the demand for the premium product.

Cost Effects

a. If branding activities increase costs, i.e., $(C_B - C_G) > 0$, but as long as $[(P_B - P_G) - (C_B - C_G)] > 0$, firms will continue promoting the brand.
b. If the direct cost of branding and production is higher than producing the generic products, i.e., $(C_B - C_G) > 0$, and such higher cost sweeps away the positive price effect (i.e., $(P_B - P_C) > 0$) and makes total effect negative, i.e., $[(P_B - P_G) - (C_B - C_G)] < 0$, then firms would not continue the branding efforts because consumers' perceived benefits do not increase higher enough to justify paying a higher price premium to cover the higher cost of branding.
c. Brand equity or reputation may offer opportunities for licensing, product line extension, and/or diversifications. Therefore, the indirect cost and revenue effects may attribute to a higher perceived customer benefit and reduce cost due to economies of scale and scope.

IMPLICATIONS

Economic and industrial growth in the newly industrialized nations have been slowing down significantly, comparing to the high growth rates just a decade ago. To keep growing the economy in a faster rate, Korea and Taiwan will need to develop and implement brand new strategies from a clean slate in order to create and capture higher values in the global supply chain network. As a country moves toward the technological frontier, the growth of industry and economy must come from innovation and entrepreneurship as well as learning from the previous mistakes than from transferring technologies and improving on the successes of other developed nations.

According to our analytical framework, industrial companies in Korea and Taiwan must be able to create higher perceived customer benefits (i.e., willingness to pay for a higher price for their products or services) through architectural innovation or global brand management and be able to cover the additional R&D investment and marketing costs in order to make the transformation successfully. It requires a persistent long-term large capital commitment and a corporate culture of innovation and entrepreneurship. In addition, Chattopadhyay, et al. (2012) argue that emerging-market companies need to define a market segment in which they have a chance of becoming world-class. Old fashion brand-building strategy must be supported by innovative products and processes that generate strong consumer interest. Companies that made fortunes manufacturing things may not be suited to brand management. It requires a radical transformation of corporate culture from the traditional cost-leadership and rigid OEM/ODM mindset of red ocean strategy to create high value-added and fast growth blue ocean strategy (Kim and Mauborgne, 2004). Alternatively, if companies are unable to create higher customer perceived value (and hence, willingness to pay a higher price) to offset the higher R&D and marketing costs of global branding and architectural innovation, it would be better off for them to join the global supply chains of MNCs and focus exclusively on component innovation (e.g., Ho Hai Precision Industry Company) and improve the appropriability regime (Teece, 1986) of their products in order to capture more value.

REFERENCES

Baldwin, R. (2011). "Trade and industrialization after globalization's 2nd unbundling: How building and joining a supply chain are different and why it matters." Working Paper 17716, National Bureau of Economic Research.

Bowman, C. and V. Ambrosini (2000), "Value creation versus value capture: Towards a coherent definition of value in strategy", *British Journal of Management*, Vol. 11, pp.1-15.

Chattopadhyay, A., R. Batra and A. Ozsomer (2012). *The New Emerging Market Multinationals: Four Strategies for Disrupting Markets and Building Brands*, New York, NY: McGraw-Hill.

Dedrick, J., K.L. Kraemer and G. Linden (2010). "Who profits from innovation in global value chain? A study of the iPod and notebook PCs." *Industrial and Corporate Change*, 19(1), pp.81-116.

Dedrick, J., K.L. Kraemer and G. Linden (2011). "The distribution of value in the mobile phone supply chain." *Telecommunications Policy, 35(6), pp.505-521.*

Henderson, R. M., and K.B. Clark (1990). "Architectural innovation: The reconfiguration of existing
product technologies and the failure of established firms. *Administrative Science Quarterly, 35*(1), pp.9-30.

Interbrand (2011). *Interbrand Best Global Brands 2011* [Online]. Available at http://www.interbrand.com/en/best-global-brands/best-global-brands-2008/best-global-brands-2011.aspx

Interbrand (2012). *Interbrand Best Global Brands 2012* [Online]. Available at http://www.interbrand.com/en/best-global-brands/2012/Best-Global-Brands-2012.aspx

Kim, W.C. and R. Mauborgne (2004). "Blue ocean strategy." *Harvard Business Review*, 82(10), pp. 76-84.

Kraemer, K.L., G. Linden and J. Dedrick (2011). "Capturing value in global networks: Apple's iPad and iPhone." Working Paper. [Online]

Lepark, D.P, K.G. Smith and M.S. Taylor (2007), "Value creation and value capture: A multilevel perspective", *Academy of Management Review*, Vol. 32, pp. 180-194.

Linden, G., K.L. Kraemer and J. Dedrick (2009). "Who captures value in a global innovation network? The case of Apple's iPod." *Communications of the ACM*, 52(3), pp.140-144.

Ozsomer, A., R. Batra, A. Chattopadhyay and F. ter Hofstede (2012). "A global brand management roadmap." *International Journal of Research in Marketing*, 29, pp.1-4.

Porter, M.E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, New York, NY: The Free Press.

Teece, D.J. (1986). "Profiting from technological innovation: Implications for integration, collaboration, licensing, and public policy." *Research Policy*, 15, pp.285-305.