

GROWING LOCAL ROOTS, WEAVING GLOBAL LINKS

OPPORTUNITIES AND CHALLENGES FOR THE MANUFACTURING SECTOR IN SOUTHEAST ASIA

Yves L. Doz

The Solvay Chaired Professor of Technological Innovation, Professor of Strategic Management (Emeritus)

INSEAD

Fontainebleau, France

Email: yves.doz@insead.edu

Abstract

As the region develops rapidly, manufacturers in Southeast Asia are faced both by pressures on the part of foreign investors and key customers to “re-shore” some activities or to move some others to low-cost locations. The growing concern about relying on China on the part of Western firms may open a window of opportunity for them to upgrade their participation in global supply chains, creating and capturing more value. This calls for firms and governments to develop locally rooted ecosystems and have them contribute to global supply networks. We outline specific action domains and policies for governments to help develop such ecosystems.

Introduction

Emerging economies in Southeast Asia are facing a dual challenge: The continuation of a “race to the bottom” on the part of some multinational companies (MNCs) and global brand companies and the risk of a growing “re-shoring” of more complex manufacturing activities. As labour costs grow in these emerging economies, the dual challenge can undermine their success in the world economy.

However, they are also presented with an opportunity: the tensions between the West and China have led many firms to reconsider their investment and supply chain policies in China and now favour Southeast Asian economies. This provides an opportunity for local economies to achieve a “step change” in their position in the world economy.

The challenge

Our research in rapidly catching-up economies suggests that growing strong local roots and weaving effective global

links offer a key to countering these dual risks and taking advantage of the opportunity to attract and upgrade foreign investments as well as orient local firms with higher value contributions to global supply chains. The precedent of Singapore, although now old, is instructive here. Following independence in 1965, Singapore had transformed itself from relying on ship repairs, an activity inherited from British colonial times, to invest in becoming a transshipment hub for Southeast Asia and a manufacturing centre for electrical and electronics industries. By the 1990s, Singapore realized that its future development depended on becoming a knowledge magnet for these industries (to which pharmaceutical and biological industries were later added). Just remaining a manufacturing centre carried the risk of falling prey to a “race to the bottom” on the part of footloose MNCs. So, key public policy priorities were attracting higher-value activities and anchoring them in Singapore.

Building strongly rooted local industrial ecosystems

Let us start with an example. Singapore had developed a strongly rooted ecosystem around the manufacturing of ink-jet printer cartridges that became a prototype for developing knowledge hubs in other industries. Rather than just being satisfied with Hewlett Packard (HP) having located a plant for printer cartridges and running it, the head of HP undertook to attract complementary companies. Most obviously, he encouraged ST Microelectronics, already present in Singapore, to make printing heads locally. But HP also attracted chemical and plastic part suppliers, like Du Pont and BASF, for ink and other cartridge components. Local Singaporean companies were called to provide plant equipment such as conveyors and other machinery. From generation to generation of cartridges, Singapore became the engineering hub within HP, supporting other plants in Ireland and Puerto Rico. HP also started developing printers in Singapore. Knowledge and know-how spill-overs helped develop a stronger industrial base in Singapore.

Viet Nam has been building a strong, locally rooted ecosystem in consumer electronics, with components for products such as smartphones and laptop computers. However, Viet Nam has been confined to supplying relatively low-tech components to Samsung and others. The fact that Foxconn and other major suppliers to global brand companies, such as Apple, Google, Dell and HP, all are starting assembling plants in Viet Nam may open the opportunity for developing and progressively upgrading a deeply embedded local innovation ecosystem.

Proximity to Shenzhen (China’s Silicon Valley) allows the progressive integration of local operations in Viet Nam – locally

or foreign-owned – into efficient supply networks. It also allows MNCs to hedge their bets when facing an uncertain and ambiguous future relationship with China. These factors should allow Viet Nam to move up the value chain, as Singapore did decades ago, and increasingly position itself in the “sweet spot” between research and mass manufacturing.

A key conclusion emerging from our research was the importance of building a local ecosystem, comprised of both local firms and MNC subsidiaries, to increase the embeddedness of the MNCs’ local operations, upgrade the skills of local suppliers and partners and operate at intermediate levels of engineering and development between research and mass production. Research, we observed, remained mostly rooted in the home base of the MNC (or in some developed lead countries), and mass manufacturing was highly mobile and risked being caught in a “race to the bottom” (of low-wage locations) or moves towards “re-shoring”. In a value chain between the two, manufacturing and research, a growing economy like Singapore’s may create a local knowledge cluster.

Local suppliers, complementors, key customers (local or multinational), as well as government investment in education, training and skills advancement all contribute to building locally rooted ecosystems that allow a country to move “up” towards higher value-creation activities. The richness of the ecosystem is made all the more valuable with the evolution of technology (for instance, from one product generation to the next) and competence-enhancing innovations. The local connectedness of various companies’ operations makes the ecosystem increasingly robust. Local knowledge-creating institutions, such as universities and public sector labs also provide further anchors to the ecosystem. Speed and agility, for instance, in providing access to test equipment and allowing quick real “in-market” tests for new products or services, also contribute to the uniqueness of the developing local ecosystems. Value chain orchestration

skills – for example local logistics and outstanding container terminal management capabilities in Singapore – are often harder to imitate than specific manufacturing or engineering skills. Local knowledge integration skills also allow a particular location to become a magnet for innovations melding knowledge from multiple sites. The greater the knowledge complexity and the more capability-enhancing the magnet’s technologies, the stronger and more resilient the magnet is likely to be. Local experience builds global expertise.

Building global links: Connecting with the world

However, not all MNCs may play the game. We labelled the major challenge to this knowledge cluster development process the “long-thin-arm syndrome”: activities of MNCs locally take place as if they were at the end of a long, thin arm – narrowly focussed, weakly embedded, with managers oriented more towards the rest of the MNC than towards making the best of the local ecosystem. Each thin arm operates separately, with little local contacts, as a mere executant in a global value chain. In contrast, we observed entrepreneurial subsidiary managers patiently cultivating local contacts and building local embeddedness, but these were relatively few, and often – whether successful in their efforts or not – these managers left the MNC for new ambitious challenges. They outgrow what the MNC could offer them.

An action agenda: Local roots and global links

From a public policy standpoint, four action areas stand out. First comes the need to identify, assess and leverage existing knowledge already available in the country for specific industries, in particular knowledge that lies between research and mass production and is deeply rooted in collective tacit skills in MNCs’ local operations or local companies.

Second, a government may act as a catalyst for local knowledge accumulation, for instance, through incentives for

multinational companies to collaborate with local firms or public sector institutes. Considering what elements of knowledge would benefit most from co-location and targeting these as the missing pieces in building local ecosystem “puzzles”, allows to selectively focus these efforts and encourage complementors (like ST Microelectronics for HP in Singapore) to invest locally.

Third, increasing the number of local linkages via networking initiatives should also be a priority to overcome the “long-thin-arm syndrome”. MNC subsidiary managers may see developing local links as opportunities to add more value to their mother company and gain a bigger role in its future development.

Fourth, facilitating searching for and connecting with sources of knowledge away from the country and deliberately strengthening the role of local units in the selected MNC networks can be another positive contribution of the government. This also leads to the identification of interdependent complex knowledge clusters that could be deeply rooted in the country. Industry experts can identify the rooted knowledge core of each industry. Sources of “sticky” (tacit, collective, embedded, process-based) knowledge on which the whole industry depends are potential knowledge cores and knowledge elements that benefit from being co-located with the knowledge core can also be identified. Links between “sticky” knowledge elements benefit the most from co-locations and allow local ecosystems to create and capture value in a global industry. This also provides an early perspective on cross-industry linkages as a way to define an ecosystem based mainly on knowledge links between its members and on the types of knowledge required for the ecosystem to be effective at creating and distributing value.

Conclusion

Considering locally rooted ecosystems that developed global links suggested that national development policies need

Growing Local Roots, Weaving Global Links

to operate both at the macroeconomic level (where most policy discussions take place) and at the “micro” level that of specific knowledge clusters, ecosystems and individual firms, at least in small

economies and cities. Specific policies can significantly contribute to the development of such ecosystems, but their success also requires entrepreneurship, both from MNC subsidiaries and local companies.

Instead of the traditional subservient model advocated by some MNC heads (“Think global, act local”), we suggest its reverse is needed, that is, to adopt a “Think local and act global” mindset.