

**Explaining the Rise of East Asian Multinationals:
State-Industry Links, A Stages Model of Structural
Change, and Japan as a Precedent Setter**

Terutomo Ozawa

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Terutomo Ozawa
Professor Emeritus of Economics
Colorado State University



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Explaining the Rise of East Asian Multinationals: State-Industry Links, a Stages Model of Structural Change, and Japan as a Precedent Setter*

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Terutomo Ozawa

Professor Emeritus of Economics

Colorado State University

ABSTRACT

This paper examines state- and industry-linkages in the course of the rise of multinationals in emerging markets by drawing on East Asian experiences. Multinationals are both a creature and an instrument of industrial structural change that characterizes the process of economic development. In order for emerging markets to initiate and sustain catch-up industrialization, they need government involvement to spark a takeoff and nurture their own multinationals so that they can exploit overseas business opportunities at each stage of structural change. Hence, a stages model of growth with five tiers of industry is adopted as an overall analytic. In this regard, Japan set two precedents in (i) transplanting low-wage production abroad via outward FDI as a catalyst for industrial upgrading at home (i.e., what may be called “comparative advantage recycling in low-wage production”), and (ii) combining its resource-seeking FDI with economic cooperation in emerging host economies (i.e., development-oriented resources diplomacy). The precedent of low-wage production transplantation was followed by the NIEs and has just begun to be replicated by China. The precedent of FDI-cum-economic cooperation was likewise followed by South Korea and Taiwan and is currently most actively repeated by China in its efforts to secure overseas minerals and fuels.

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1. Introduction

Emerging markets' multinational corporations (MNCs) are currently a hot topic of research by international business scholars, who basically explore issues at the micro (or micro-micro)-level (e.g., MNCs' business strategies, operational efficiency, and organizational/ managerial capabilities). In contrast, this paper focuses on macro-level issues concerning the birth of MNCs at, and their role in, different stages of catch-up industrialization, state-and-industry links at home, and international relations in political economy. Since the process of development involves structural changes that result in the rise and fall of industries, the birth (and the decline) of multinationals in various industries needs to be examined in terms of such a *structural* context. There is, however, little such growth-based theory of multinationals.¹

Our basic premise here is that new MNCs are spawned *not* by any emerging economy but only by successfully catching-up economies. The rise of multinationals thus has to do with the rapidity of economic development; *the faster an emerging economy catches up, the more rapid the rise of its MNCs and the greater the variety of industry in which they appear*. Indeed, the phenomenal rise of East Asian multinationals in recent years derives from their home economies' swift catch-up growth and technological progress.

East Asia has seen a string of fast catch-ups and the rise of indigenous MNCs ever since the end of World War II, initially in Japan, then in the NIEs, and most recently in China. It is worth stressing that all these economies' catch-ups have been *initiated and led by their governments*, so much so that their governments have been characterized as “developmental states” (Johnson, 1982)—and as “state capitalism” in the case of China. Structural rigidities and market failures were once rampant across East Asia, hindering economic takeoff, especially in the wake of World War II (WWII), the Korean War, and the disastrous experiment of Communist central planning in China. These disruptive conditions have led to determined state involvement and neo-mercantilist pursuits, though the region has grown increasingly and strongly more outward-focused and market-oriented. Furthermore, in an age of globalization in which international production (MNCs' production abroad) gains on international trade and becomes more dominant than the latter, MNCs, both foreign and homegrown, in emerging economies are expected to serve as a critical instrument of catch-up. However, catch-up-focused economies in particular clearly see the value of their *own* indigenous multinationals in promoting industrialization at home. Also, East Asian growth has become increasingly integrated at the regional level,

¹ True, the investment development path (IDP) theory (Dunning, 1981, 1986) explains foreign direct investment (FDI), both inward and outward, as a function of economic development, but not specifically as a function of transformation in industrial structure. Its aim is to study changes in the (net) balance of FDIs—and not the specific industrial patterns of emerging market multinationals per se, which are our focus of analysis. How a variety of multinationals emerge as an outcome of industrial structural change is, however, presented in terms of the IDP theory in a chapter by Ozawa (1996) in conference volume edited by Dunning and Narula (1996).

engendering regional agglomeration. At the hands of MNCs, global supply chains have been built and are more concentrated in East Asia than in any other regions.

This paper is to shed light on how East Asian multinationals have come into existence in a variety of industry as a result of rapid structural changes that gave birth to new industries. Such a process can be best captured as a progression of stages. Hence, a dynamic stages model is called for in order to provide an overall analytic. The following section (Section 2) discusses how multinationals are born as a result, but simultaneously as a facilitator, of economic development-- first in general historical terms and then more specifically in the light of successfully industrialized East Asian economies. It is emphasized how proactively their governments were involved in initiating catch-ups and nurturing homegrown MNCs, deviating from market-based capitalism to such an extent of being even called “developmental states” and “state capitalism.” Section 3 introduces a dynamic stages model *a la* Schumpeter that can explain the nexus between catch-up industrialization and the birth of homegrown multinationals that facilitate structural transformation. Section 4 brings in some specific experiences of Japan, South Korea, Taiwan, and China to show how the stages model serves as an overall analytic. Also, it analyzes how Japan mapped out new approaches to (i) industrial upgrading (away from low-wage manufacturing toward higher value-added one) via outward foreign direct investment (FDI), and (ii) promoting resource-intensive heavy industries at home through state-and-industry collaboration in its resources diplomacy. These approaches set the precedents that would be replicated, albeit in differentiated ways, by other East Asian economies. Section 5 sums up our analysis.

2. Multinationals as a Creature, and an Instrument, of Industrial Structural Transformation

MNCs from any market (developed and emerging alike) are basically a creature of structural change at different growth stages in their home economies. Historically, structural upgrading (a result of establishing brand-new goods/industries and shedding existing old ones through the Schumpeterian process of creative destruction) has been driven by major breakthrough innovations, each of which entails a cluster of incremental technological supplements and refinements, resulting in a paradigmatic shift of industrial structure. And innovations are spurred by entrepreneurs and R&D-focused enterprises, many of which eventually expand their businesses abroad as multinationals in pursuit of opportunities to exploit their firm-specific advantages—as well as to acquire foreign assets and resources, both tangible and intangible.

The predecessors of present-day multinationals can be traced back to Europe’s chartered trading and colonizing companies (such as Russian Company, East India Company, and Virginia and Plymouth Companies) of earlier centuries (the 15th through early 18th centuries) (McNulty, 1972). In those days such chartered companies were seeking monopoly rents from the trade privileges granted by kings and rulers, and their commercial activities were intended to pursue their home countries’ mercantile interests in order to run trade surpluses and fill national coffers

with bullion. In other words, these primordial multinationals were a vital instrument of growth under mercantilism, which considered an accumulation of precious specie the source of national wealth. Their economies were still largely in an agrarian/pastoral state and bent on protecting and promoting what little craft-based goods they had developed. (As seen below, interestingly, similar approaches have more recently been taken by successful East Asian economies, which were once primary-sector dominant and whose catch-up strategies were often criticized as *neo-mercantilist* as they pro-actively promoted exports and jealously protected their national industrial base they had established, thereby accumulating foreign reserves. Some of their multinationals, many of which are state-owned in China, often deliberately operate overseas in their national interests.)

The pre-industrial economic conditions that once prevailed during the mercantilist period were, however, drastically altered as a result of the Industrial Revolution in Britain and its subsequent unilateral adoption of economic liberalism (free trade and capital flows). Overseas business operations worldwide became more industrially oriented, more market-driven, and more private-profit-focused (rather than national-gain-focused). Above all, in the wake of the Industrial Revolution a progression of rapid technological and structural changes began to occur in a number of countries—first across Europe, then in the United States, and later in Japan and Russia. *And each stage of industrial transformation entailed a different set of needs and opportunities for overseas business expansion.* The overseas commercial activities of early industrializers were *initially aligned with their national interests.* More recently, however, there has been a widening chasm between national and private interests, concerning technology transfer and domestic employment in particular on the part of currently advanced economies. In other words, private and national interests tended to diverge as an economy developed, thereby altering business-state relations. Conversely, catch-up focused emerging economies are, however, bent on absorbing advanced technology as a national effort by using their own multinationals for such purposes—that is, through cooperation between state and industry.

2.1. A fusion between state and business: Developmental states and state capitalism

National development strategies have been most ardently pursued by successful East Asian economies--first, Japan, then, the NIEs (Singapore, Taiwan, and South Korea)², and most recently, China. There are good reasons why both Japan and the NIEs, in particular, were once called “developmental states,” the concept introduced by Chalmers Johnson (1982) in connection with his study on “the Japanese miracle”--and also known as “hard states” in the discipline of international political economy. The use of *industrial structural policy* is a hallmark of developmental state. It is a state-industry nexus that is created by the political leadership of

² This excludes Hong Kong, which is a free-market economy with minimum government intervention. Yet under its policy of “positive non-interventionism,” the government has been indirectly and skillfully supporting private businesses in terms of providing up-to-date infrastructure and information to facilitate structural change and economic growth.

development-bent government under which economic activities are orchestrated for the sake of national economic development via guided industrial upgrading. In essence, this developmental state model (originally, Japanese style) is basically a bureaucratic/ technocratic elites-led industrial structural policy for catch-up by capitalizing on the market forces of global capitalism. In the words of Johnson,

[Industrial structure policy] concerns the *proportions* of agriculture, mining, manufacturing, and services in the nation's total production; and within manufacturing it concerns the *percentages* of light and heavy and of labor-intensive and knowledge intensive industries. The application of the policy comes in *the government's attempts to change these proportions in ways it deems advantageous to the nation*. Industrial structure policy is based on such standards as income elasticity of demand, comparative costs of production, labor absorptive power, environmental concerns, investment effects on related industries, and export prospects. The heart of the policy is the *selection of the strategic industries* to be developed or converted to other lines of work (1982, p. 28, emphasis added).

This approach (industrial structural policy aimed at selecting strategic sectors) is in line with a structuralist perspective on the process of catch-up growth that requires state involvement in initiating and making sustainable an effective catch-up. It is well known that even a well-developed market (or price) mechanism often fails—especially in financial markets. In this regard, even market-supremacy neoclassical economists allow for state intervention in such circumstances. Market failures are naturally expected all the more rampant in underdeveloped economies. Hence, structural economics goes even further and argues that emerging economies are plagued by obstacles, bottlenecks, and embedded constraints, *both* internally and externally, that inhibit the structural changes and flexibilities needed for economic development. In other words, the market mechanism, if exists, remains dysfunctional, and the only way to remedy the situation is state involvement. As Ian M.D. Little (1982) explains,

... [T]he production structure of developing countries [is] very different from that of developed countries. To achieve development, this structure [must] be changed rapidly. The direction of the structural change required could be discerned by cross-country studies of the structure of production and trade. *As development proceeds, these structures must approximate more closely to those of the [more developed countries]*. The structuralist view of the world provides a reason for distrusting the price mechanism and for trying to bring about change in other ways... it primarily seeks to provide *a reason for managing change by administrative action* (emphasis added, pp.20-21).

In other words, the goal of catch-up is to attain the same higher level of “the structure of production and trade” that exists in the advanced world—that is, to close the existing gap in industrial structures. However, many emerging economies are stuck at the lower-levels and

simply unable to move up. Some are often even caught in all sorts of the vicious circle of downward spiral, getting bogged down in a morass of destitution. Structural rigidity is a critical obstacle which the market mechanism alone cannot clear away. Hence, a decisive administrative action on the part of government is sine qua none.

In addition to domestic market failures and rigidities, furthermore, the market forces operating across borders under global capitalism are distorted by the monopolistic/anticompetitive holds of large dominant MNCs. Not only are many advanced-market MNCs so large that they control the market but also their business expansion abroad is often orchestrated by their home governments as a tool of foreign economic diplomacy--and also motivated by macroeconomic (i.e., fiscal, monetary, foreign exchange, and employment) policy measures. MNCs' risk-taking behaviors may even reflect the moral hazard of "too-big-to-fail" bailouts by their home governments. In general, states themselves are involved, either directly or indirectly, in international commercial activities in pursuit of national interests. The OPEC's market-influencing decisions are a good example of how such a huge global oil market comes under influence of international cartelization (peculiarly with perfect impunity under global capitalism—but perhaps rationalized as a necessary tool to secure a "fair" share of profits from the Western oil majors). Practically, in fact, all countries restrict trade and investment for both economic and political reasons. If national firms' activities are impeded in overseas markets, their governments are all the more compelled to assist and promote them in such a way to cope with those restrictions. Thus, policy-distorted market conditions are all the more distorted through mutual interventions, though attempts are usually made to reduce such distortions by way of trade and investment treaties.

Consequently, market distortions, market failures, negative externalities, and structural rigidities are necessarily more pervasive and prevalent in global markets, hampering national industrialization and growth. Government is thus expected to play the key role of directing, coordinating, and facilitating the course of catch-up development. In other words, a "facilitating state" is indispensable, as stressed by Justin Lin (2012) in his advocacy of "new structural economics" for economic development, a hybrid between free-market (neoclassical) and structural economics. In this approach, then, the emerging-market governments need to be capable of effectively formulating and implementing a national development strategy. After all, government must guide the economy to change its present proportions of different industrial sectors at home in such a way to "approximate more closely to those of the [more developed countries]"—that is, the very aim of catch-up industrialization.

In essence, the developmental state takes on "developmental functions" (*ibid.*, p. 19) in addition to performing "regulatory functions" which any government plays. It thus becomes closely involved in promoting and coordinating *market-based* economic activities in such a way to achieve the national goal of catch-up under global capitalism. Despite the active government involvement, the private sector or the market serves as the main engine of catch-up growth, and "self-control" and "cooperation"—rather than "state control"—constitute the standard modus

operandi. “Self-control means that the state licenses private enterprises to achieve developmental goals” (ibid., p. 310). In the Japanese model, the state licensed cartels for a specified period of time and allowed the cartels administer themselves. Cooperation took (and still takes) the form of “deliberation councils” and “discussion groups” that were comprised of government officials, industry representatives, and scholars. State control was thus shunned, at least in principle, in respect for free enterprise and democracy. Government corporations were, however, often set up for a specified period in “such high-risk areas as petroleum exploration, atomic power development, the phasing out of the mining industry, and computer software development [in the 1950s and 1960s]” (p. 315). What Johnson calls “situational imperatives” or “situational nationalism” compelled the Japanese government to directly take up those activities/projects, on a temporary basis, that were too risky for the private sector to undertake. The end result is that Japan emerged as a market-capitalist economy. Taiwan, South Korea, and Singapore followed, on the whole, in Japan’s footsteps and similarly have grown into market-capitalist economies, though their situational imperatives were necessarily different and led down divergent paths.

By contrast, although China’s catch-up strategy was clearly influenced by the success of its neighbors, its growth model is distinct from that of a developmental state—in that the role of government is meant to be enduring, pervasive, and motivated primarily for political purposes. In fact, it is classified separately as “state capitalism.” According to Ian Bremmer’s definition (2009), state capitalism is “a system in which the state functions as *the* leading economic actor and *uses markets primarily for political gain*” (p.41, emphasis added). Here, although not pointed out by Bremmer, two types of political gain need to be distinguished; one type is an internal political gain from rapid economic growth to legitimize the political monopoly of the Chinese Communist Party, and the other is an external political gain from China’s rise as a major geopolitical—and potentially military—power (in a sense, China pursues its own version of the “rich country, strong army” strategy once adopted by Japan with a calamitous result). No doubt, China has skillfully blended the authoritarian power of the state (controlled by one party) with the wealth-creating power of capitalism to drive catch-up growth and boost its geopolitical power—while quelling the countervailing power of democracy against autocracy at home.

Bremmer (2009) also observes that four primary actors represent state capitalism: national resources (especially oil) corporations, state-owned enterprises, privately owned, but government-favored national champions, and sovereign wealth funds (SWFs). They all operate as MNCs and serve as a critical instrument of their home countries’ growth. China has all the four primary actors, though its national champions (such as Huawei and Lenovo³) are only recently born. It doesn’t mean, however, that all the four actors have to exist simultaneously to be identified as state capitalism. Nor does the mere presence of one of the four actors in a

³ Lenovo is not really a “national” (home-raised) champion in a strict sense. It was acquired by Legend from IBM in 2005. Lenovo now even plays down its national identity as a China-owned brand in its marketing effort (as reported in *Washington Post*, Nov.19, 2013. www.washingtonpost.com/business/technology/computer-giant/).

country alone necessarily make state capitalism. For instance, SWFs is now set up even in market capitalist-economies (e.g., Norway, Singapore, and South Korea). They are similar in functions and purposes to large-scale domestic pension funds (such as the California Public Employees' Retirement System).

As is well expected, China's approach is strongly oriented to state control—instead of self control and cooperation that are pivoted on the private sector. And this modality presents a major difference from developmental states. Despite its touted privatization in the recent past, China's economy is still dominated by state-backed companies, which account for 80% of the value of China's stock market (*Economist*, Jan. 21, 2012). Thus, the market remains as a captive servant for its sole master, China's Communist Party. In other words, China's model goes beyond a regulatory state and a developmental state—and forms an authoritarian state. Nevertheless, it has so far turned out to be quite efficacious in producing nationally planned economic results. One obvious advantage of China's state capitalism is that the state needs no decentralized democratic decision-making, which is often time-consuming, cumbersome, near-sighted, and parochial—the inherent failings (or “negative externalities” that hinder rapid economic development) of electoral democracy. For example, where else can a state bulldoze away a vast number of old farming communities in order to build modern urban communities with high-rise apartments, schools, clinics, shopping malls, etc. so that it can move 250 million farmers (more than twice the size of Japan's entire population) into cities for the sake of turning the economy more consumption-driven than investment- and export-driven--whether the farmers like it or not? On the other hand, one big disadvantage is that Chinese MNCs, especially those state-owned ones, are often suspected of harboring hidden political motives in the host countries.

Be that as it may, state capitalism has recently emerged even as an alternative to free-market capitalism. China is deliberately *redefining* global capitalism, thereby challenging the existing world order built on the Western ideology of free enterprise, free speech, and individual freedom. It sells this alternative, the China model of authoritarian capitalism, to emerging markets. Undoubtedly, China cleverly seized the “Nixon and Kissinger” diplomacy intended then to remake China as a capitalist ally against the U.S.S.R., a miscalculation that has produced exactly an opposite result. Also, China's impressive catch-up has so far been debunking the generally held (wishful?) view that democracy automatically arrives as an ineluctable result of economic growth. The United States is now confronted with China-and-Russia alliance over an array of intractable and potentially explosive issues in world affairs. Indeed, the U.S.-China relations are at a new critical juncture—or “an inflection” point--and about to cross the point of no return for a stormy sea change.⁴

⁴ The phrase, an inflection point, has recently been used by U.S. Vice President Joseph Biden Jr. to dramatize the momentous implications of the rise of China for world affairs on the occasion of his visit to Beijing for a talk with President Xi Jinping, as reported in “Big Change for China and the World,” *The New York Times*, Dec. 11, 2013. <http://sinosphere.blogs.nytimes.com/2013/12/11>.

China's state capitalism is a text-book perfect fusion of state and industry in pursuit of national economic and political gains. Vietnam's communist regime comes closest to the same type of state capitalism, though on a much smaller scale and with less efficiency.⁵ And the four major actors of state capitalism are active, if not all at once, in other BRIC countries, too, though these countries (all with electoral democracy) are less efficient at and less capable of achieving industrial modernization than China is. Russia's "network state capitalism" (Gaetz, 2014) is mired in oligarchy-dominated transactions that hinder level-field plays and hamper economic efficiency.

Given the current rise of state capitalism, state-owned or -backed enterprises are most likely set up increasingly across the emerging world. For instance, state-owned enterprises dominate in resources-abundant emerging countries where the private sector is incapable of organizing large-sale enterprises on its own for resource extraction and export. The upshot is that "Governments, not private shareholders, already own the world's largest oil companies and control three-quarters of the world's energy reserves" (Bremmer, 2009, p. 40).

Also, state-owned businesses persist in the former centrally planned emerging economies (e.g., China, Vietnam, Russia and other former USSR countries) that adopted a capitalist mode of industrialization. These economies, despite their initial move to privatization, still retain state-owned enterprises in large numbers, especially in what they regard as strategic industries. Consequently, many of emerging-market MNCs are state-owned or -backed. And those state-owned enterprises (SOEs) that operate as multinationals are clearly on the rise. "[SOEs] are serious players in the world FDI market. UNCTAD [United Nations Conference on Trade and Development] identified more than 650 SOEs that are multinational enterprises [in 2011]" (Sauvant and Strauss, 2012, p.1). And these MNCs are mostly diversified conglomerates which have grown in underdeveloped home markets where small fragmented pieces of different local markets for goods and services need to be gathered together to form a viable size of sales—and which try to reap scope, if not scale, economies. In addition, sovereign wealth funds (SWFs) are, in fact, state-owned financial MNCs.

It should be noted that state ownership necessarily signifies state control. Such control may be motivated either for purely economic or for political/ideological reasons. Even in the U.S., supposedly the citadel of free-market capitalism, major banks and automakers were temporarily "nationalized" for bailout in the aftermath of the 2008 financial debacle. As mentioned above, SOEs may be the only viable enterprises in emerging markets where the underdeveloped private sector is unable to undertake high-risk, large-scale ventures. When Japan embarked on industrial modernization in the mid-19th century, SOEs were deliberately set up in what it considered strategic industries but soon privatized in order to develop the private sector. These expedient

⁵ Judging from the government's recent suppression of political dissidence, Vietnam may be learning from China's playbook the development "efficiency" of authoritarian capitalism.

(i.e., “situational nationalism”) measures were still consistent with free-market capitalism, since they were intended to foster or safeguard the free enterprise system.

By contrast, SOEs may be designed to achieve political and ideological goals (e.g., income redistribution, a direct source of state revenue, and socialist, nationalist, or any other non-market ideological ideals)—hence, intended to exist on a permanent basis. After all, government ownership under state capitalism is meant essentially for political purposes, not so much for the sake of economic expediency and efficiency. Economic growth and prosperity is not the ultimate goal of state capitalism but a mere *means* to fulfill political purposes (e.g., the Communist Party dominance in China).

2.2. Nurturing national enterprises as multinationals

A catch-up development strategy taken up by an emerging economy with a strong national determination and leadership is accompanied by an equally strong economic nationalism that evokes a public devotion to—and even self-sacrifice for--national interests in order to attain a respectable degree of economic sovereignty. And many emerging economies are likely to adopt a policy to create their own *national/indigenous* companies, if not state-owned or-run—most desirably, national champions. True, in this age of globalization, the state may pragmatically permit—or in fact, even *proactively* encourage in many instances—foreign MNCs to participate as a critical *joint input* in industrial modernization, especially in the early stages. Their investments in the host economies are expected to create industrial knowledge spillovers to local industry. Such dependence on foreign interests, however, will (or may be policy-guided to) decline once a particular new industry is initiated and well on track to sustained development. Hence, it becomes imperative to promote national companies which, though they may initially serve as junior partners in joint-ventures with foreign MNCs at home, will eventually grow into their nations’ *own* MNCs to compete in the global market.

As is expected, national companies can serve better for national economic interests. For example, they can spawn innovations at home and spin off new local businesses, thereby contributing directly to more autonomous development. In cases where overseas-trained expatriates are encouraged to return home as one important conduit for knowledge inflows, national companies also can serve as a desirable receptacle for reverse brain drain (or what is popularly called “sea turtles” in China). And most importantly, they can eventually engage in overseas business activities in the capacity of home-grown MNCs in such a way as to serve their national economic—and often political—interests. In other words, depending on whether business enterprises are nationally or foreign -owned, the direction and outcomes of industrialization will be vastly different. Therefore, as Alice Amsden (2012) emphasized;

National firms must be nursed and nurtured to fulfill the functions that foreign affiliates are less likely to undertake. There is little substitution. For this reason, specific

institutions must be built to promote national assets. Good models in Asia are the Republic of Korea and China, and in the Middle East, many OPEC members (p. 3).

Similarly, Michael Porter advises that emerging economies should not become dependent on foreign MNCs that invest on the basis of factor cost considerations (e.g., low wages). Instead, “Government should encourage the formation and upgrading of indigenous companies in related and supporting industries to those in which multinationals operate, not solely with an eye toward import substitution but ultimately as international competitors” (1990, p. 679). In other words, to nurture and develop indigenous companies into a nation’s own competitive MNCs is another critical role assigned to government.

In addition, it is worth noting that inward foreign direct investment (FDI), in particular, creates two opposing effects on local industries: “knowledge spillovers” and “crowding-out” (Pathak, Laplume, and Xavier-Oliveira, 2012). Which effect will be more dominant and prevailing than the other hinges largely on each host economy’s capacity to maximize the positive, while minimizing the negative effect. These two effects, however, clearly presuppose the existence of indigenous firms as beneficiaries of knowledge spillovers and as victims of crowding-out. Hence, the net outcome is determined by how strongly and adequately enough the national firms have been fostered and have grown to absorb knowledge spillovers and stand up to crowding-out competition.

Also, in this regard, Seev Hirsch (2012) raised an interesting related question of “whether, *ceteris paribus*, nation states have an economic interest in becoming home countries to [MNCs]” (p.1). His answer is “yes,” basically because “[t]his enables home countries to increase the benefits they derive from the international division of labor, exploitation of economies of scale and the ownership advantages of their MNCs” despite the costs of cross-border activities of national firms such as “tax losses and the diminution of sovereignty implied by outward FDI” (p.1). Though not touched upon in Hirsch’s short essay, the social benefits and costs involved also depend on the stage of catch-up growth. Tax losses and sovereignty diminution do not necessarily occur. In fact, outward FDI may complement and strengthen MNCs’ home operations and profits, thereby enabling them to pay more taxes at home. In fact, sovereignty may be enhanced as MNCs acquire some strategically significant foreign assets, real and financial alike, thereby projecting their national power.

In short, nation states as the gatekeeper for foreign MNCs’ entry in the home market must formulate appropriate policies to harness and maximize the benefits of inward FDI and simultaneously nurture national firms as their own MNCs that will bring home gains from overseas business operations. Therefore, there necessarily arise close links and interplays between state and industry in their national efforts to industrialize by bringing up indigenous enterprises during the course of catch-up growth.

In sum, state-and-industry relations in catch-up-initiating economies are closely collaborative, though unequal. The state often fosters, governs, and even controls the growth of domestic enterprises and industries in hopes of creating national champions that can serve as their own MNCs. It is expected, however, in general that as the economy succeeds in economic development, such a close-knit relationship is loosened up. This is because the economy becomes increasingly integrated with the outside world and the private sector grows and pursues its own interests by expanding businesses abroad as home-grown multinationals. And eventually once the economy reaches advanced status, the state-business relations turn more arms-length-oriented to each other. The private business sector in pursuit of its own commercial gains may even grow insensitive and unresponsive to national interests and needs, as evidenced in many advanced economies. All this said, nevertheless, the evolving scenario sketched out above assumes the world economy continuously under global free-enterprise capitalism. State capitalism and its recently emerged MNCs may write and play out its own unique scenario.

2.3. A catch-up growth and the role of MNCs

Economic development is fundamentally a *derived* phenomenon--“derived” in the sense that the process and pace of development are basically determined by how effectively an emerging economy can *emulate, and learn from*, more advanced economies through interactions (via trade, investment, and other forms of contact) with the outside world. In other words, catch-up growth is the process of absorbing and assimilating industrial knowledge from the advanced world so as to attain the higher-levels of industrial structure. Hence, the speed and scope of catch-up itself is determined by the size of the existing stock of advanced knowledge that can be tapped into and by how quickly and efficiently an emerging economy can absorb such knowledge from abroad. As Alexander Gerschenkron (1962) nicely summed up,

Industrialization always seemed the more promising the greater the backlog of technological innovations which the backward country could take over from the more advanced country. Borrowed technology, so much and so rightly stressed by Veblen, was one of the primary factors assuring a high speed of development in a backward country entering the stage of industrialization (p. 213).

Also, industrialization necessarily involves a succession of structural change and upgrading, exhibiting different stages for catch-up—that is, to climb the ladder of economic development (a nebulous notion heretofore widely used in development economics but to be defined below). And this process requires, and is driven by, technological progress. It is, moreover, in this context that national companies emerge as MNCs as outcomes of such technological and structural transformation at home. They build up their firm-specific advantages inherent in different stages of growth, advantages they can exploit by going overseas. In other words, disparate types of MNCs are spawned *pari passu* with structural changes and growth (i.e., along the ladder of economic development).

The above perspective poses two key questions:

- If the emergence of MNCs is inherent in growth stages, what are really the stages of economic development? In other words, we must specify the hitherto casually used, nebulous notion of “the ladder of economic development”—in terms of different levels of industrial structure.
- In what way can the home-grown MNCs serve as an instrument of catch-up by engaging in overseas business activities? In other words, how does the state get involved in promoting overseas business activities for national interests? Are there any stages-specific justifications for this?

These questions will be addressed below.

3. The ladder of economic development specified

The essence of economic development is a series of structural changes brought about by innovation, and MNCs are a creature of such structural changes. This is because new enterprises come into existence as they succeed in innovating, and eventually advance abroad as multinationals to exploit their firm-specific advantages. This proposition can be explained in terms of the “leading-sector” stages model, *a la* Schumpeter (Schumpeter, 1934; Ozawa, 2005, 2009). The model is built on a *historical sequence of growth that is punctuated by stages (that can be captured as “structural breaks” in econometrics), and in each stage a certain industrial sector and technological thrust is identifiable as the main driver of structural transformation.* The perspective here is in line with what Schumpeter (1942) called “the perennial gale of creative destruction” that drives the process of industrial upgrading under capitalism. And the same idea was emphasized by Rostow (1960) in his view of “economic history *as a sequence of stages rather than merely as a continuum*, within which nature never makes a jump” (emphasis added, p. 16). And it is out of such structural changes (hence, stages) brought about by innovations that *stages-specific* MNCs are home-grown.

As already shown elsewhere (Ozawa, 2009, 2011), the world economy has so far witnessed five tiers of leading-sector industry emerge in wave-like progression since the Industrial Revolution (see column A in Fig. 1 below)—and a new tier looms in the making. The five tiers have been (i) endowment-driven industries (represented by textiles and other light industry goods in labor-abundant countries and by extraction of minerals and fossil fuels in resource-endowed countries), (ii) resource-processing industries (steel and basic chemicals), (iii) assembly-based industries (mass-produced automobiles), (iv) R&D-driven industries (computers and pharmaceuticals), and (iv-a) information-technology (IT)-enabled industries (digital telecoms, operating platforms, search engines, and social media)—and (iv-b) a new emerging tier of green-technology (GT)-based industries (energy-saving and pollution-abating devices, new cleaner energies [solar, wind, geothermal, etc.] that leads to a healthier living environment [augmented by both public and personal health and medical sciences])—all in efforts to create a “green economy” and “sustainable growth.”

The above series of tiers simply traces out the broad *historical* sequence in which different leading sectors have transformed the industrial structure in presently advanced economies. This model clearly indicates the different levels of industrial structure—that is, the rungs of the ladder of economic development, which emerging economies aspire to climb.

3. 1. A caveat to stages theory

The above stages model is a roadmap, so to speak, on a progression of structure changes and industrial upgrading for catch-up industrialization. In other words, this roadmap shows the concrete structural changes for catching-up economies. It is worth repeating Little's observation earlier quoted above: "As development proceeds, [their] structures must approach more closely to those of the [more developed countries]" (1982, pp. 20-21). This does *not* mean, however, that late industrializers need to replicate exactly the same sequence of growth trail-blazed by earlier industrializers. On the contrary, latecomers are totally free to jumble it, take short-cuts by leapfrogging, or enter all stages even simultaneously--though normally from the *low* end (i.e., the labor-intensive segment)--depending on their catch-up strategies, capabilities, and circumstances. In fact, this flexibility constitutes latecomer advantages. Thus, they can emulate advanced countries' growth patterns in a *broad* manner but always *customize their own catch-up processes in adaptation to their country-specific circumstances*. As Gerschenkron (1962) puts it, "In every instance of industrialization, *imitation* of the evolution in advanced countries appears in combination with *different, indigenously determined* elements" (emphases added, p.20).

It should be noted in passing that although the development of these stages in earlier industrializers required a series of breakthrough innovations, such "wheels" no longer need to be "reinvented," proverbially speaking. Many are readily available for presently emerging economies. For example, the technologies for tier-I (e.g., textiles and garments) and -II industries (e.g., steel, chemicals, and cement) are practically so much standardized that any aspiring economy can set up those industries by simply importing industrial knowledge—in a variety ways from licensing to plant imports, to BOT (built-operate-transfer) contracts, to inward FDI. This is one important reason (i.e., a key latecomer advantage) why latecomers can catch up, growing *faster* than earlier industrializers.

3. 2. The "double-helix" ladder of growth: Side-ladders added

In addition to the *inter*-industry ladder of structural upgrading, each stage has produced a *vertical* concatenation of multi-process *intra*-industry sub-sectors, the upper end of which is highly capital-intensive and technologically sophisticated, while the lower end is labor-intensive and technologically standardized (Ozawa, 2011). This *intra*-industry (often *intra*-firm or *intra*-product) vertical division of labor is also known as "production process fragmentation" (Jones, 2000). Consequently, the progression of industrial upgrading (of the *inter*-industry type) and the vertical chains of value-added (of the *intra*-industry type) have opened up opportunities for firms in *both* advanced and emerging markets to pursue a *new* division of labor by establishing cross-

border supply chains of production and marketing within each tier. Supply chains can be established within a *multi-layered hierarchy of economies* operating at different stages of growth--hence, different levels of technology, skills, and wages to be used as inputs in a complementary manner. MNCs are actively using the side-ladders in their quests for cost minimization through an international division of labor.

Also, the side-ladder is a focus of technological innovation in, and for, emerging markets. Local companies are now striving to “innovate on the cheap,” while foreign MNEs similarly try to introduce the low-end lines of products suitable for local consumers’ pockets in emerging markets. The low-priced Nano mini-cars produced by Tata Motor, India’s recently innovated stripped-down medical devices, its generic drugs manufacturing, and its low-end outsourcing services (e.g., call centers and back-office works) are some representative examples of the former, while all major carmakers’ efforts to produce affordable models in emerging markets illustrate the latter. All these examples are meant to illustrate how enterprises are active in product development on the intra-industry side-ladders.

3.3. Stages-specific types of MNCs and government involvement

As emphasized above, different types of MNCs come into existence at different growth stages. For example, apparel MNCs from Tier I, mining MNCs from Tier II, automobile MNCs from Tier III, electronics MNCs from Tier IV, and social media MNCs from Tier V. In other words, no country will have its own automobile MNCs when their home country is still in Tier-I stage or only in Tier-II stage of industrialization. Likewise, no MNCs in electronics and other R&D-based goods would emerge from a country that is still in Tier-II stage. Accordingly, the motives of MNCs to advance into host economies vary, largely depending upon growth stages. These diverse motives can be classified in accordance with the basic classification approach originally introduced by John Dunning (1993, 1998) and are modified for our analytical purposes. The stages-determined patterns of the rise of homegrown MNCs, home government involvement, and their motives are illustrated in Figure 1. Here, postwar Japanese experiences (as the original prototype of developmental state) can highlight the above-described patterns, setting two important precedents (new models of industrial facilitation via overseas business activities) for other East Asian economies to follow.

Insert Fig. 1 here

4. The Experiences of East Asian Economies

4.1. Japan as a precedent setter in (a) initiating comparative advantage recycling (via MNCs’ operations) in labor-intensive manufacturing, and (b) tying resources-seeking FDI with economic cooperation

Despite war devastation, Japan, having already developed Tier-I and-II industries in the prewar days, swiftly rebuilt those war-survived industries by adopting the latest technologies and further

climbed the ladder of industrialization. Its economy succeeded in rapidly catching up with the West in many sectors, joining the ranks of advanced countries--against the backdrop of close state-industry collaboration (dubbed as “Japan, Inc.) and thanks mostly to the then-still-existing stock of human capital at home, knowledge inflows, and indigenous technological progress. Here, it is crucial to understand (i) how Japan has climbed the ladder of economic development by means of outward transplantation of low-wage manufacturing (thereby initiating what may be called “comparative advantage recycling” down the Asian hierarchy of economies) and (ii) how proactively the Japanese government supported then-Tier-II-focused *keiretsu* groups in securing overseas natural resources for heavy and chemical/petrochemical industries financially and through resources diplomacy. Here, Japan set the *precedents* in the above two modalities of MNCs’ overseas business activities, the precedents that South Korea, Taiwan, and China in particular later came to replicate closely. As will be detailed below, market forces are the main driver of comparative advantage recycling in low-wage manufacturing, while in resources diplomacy, state-and-industry collaboration underlies the source of competitiveness in overseas resources procurement.

The first wave of Japan’s postwar overseas investment (which turned its national enterprises into contemporary MNCs for the first time⁶) swelled in the 1960s and 1970s, involving Tier-I industries. In the early postwar years, Japan had to export whatever it was able to do so in order to earn badly needed foreign currency. Labor was abundant, wages were low in early postwar Japan. Hence, low-wage manufacturing was the first step to economic reconstruction by creating jobs. The very success of such labor-driven manufacturing and exporting, however, paradoxically soon caused a shortage of low-wage workers and rising wages (due mainly to the “factor price magnification” effect of trade).⁷ Starting in the late 1960s, companies (which were small and medium-sized) in labor-intensive Tier-I industries (such as textiles, toys, table wares, and other sundries) were consequently compelled to shift production to lower-wage neighboring economies such as Taiwan, South Korea, Singapore, and Hong Kong.⁸ Japanese industry was

⁶ In prewar days Japan’s enterprises did make FDI in several key locations abroad, mainly Manchuria, as part and parcel of its colonial policies.

⁷ This is known as the Stolper-Samuelson factor- price magnification effect in international economics. Other factors also contributed to rising wages. For example, the supply of low-wage workers itself declined as the youth became more interested in, and their families became financially capable to sending them for higher education, notably colleges. With rising standards of living, they also began to shun away from monotonous factory works, preferring “clean” jobs in services. The rapid expansion of Tier-II capital intensive industries led to higher productivity, largely thanks to ever-increasing scale economies, which made higher wages justifiable. This in turn put pressure on wages in Tier-I industries.

⁸ In Singapore and Hong Kong, however, wages were then much higher than in Taiwan and South Korea. Hence, Japanese industry was not really able to transplant low-wage manufacturing on so large a scale as it did in the latter two economies. Singapore actually strove to attract FDI in higher value-added sectors, notably the assembly of early-generation semi-conductors. U.S. electronics companies (e.g., RCA, HP, Fairchild, National, and Litton) quickly set up semi-conductor assembly operations there. Japan’s electronics industry, then still a neophyte, did not immediately participate in the “electronics boom” of Singapore. Besides, in the late 1960s, the ratio of Singapore’s wage to Japan’s was merely 1:1.5, while that to the U.S.’ was 1:11.1. Possibly, also, Japan’s technology-purchase/licensing agreements with Western firms included regional restrictions on Japan’s exports and FDI. In Hong Kong, Japanese investments initially were centered in commercial activities. Though wages there were

then comprised of large-scale (mostly *keiretsu*-related) enterprises and small and medium enterprises (defined as those with either 300 or fewer employees, or a paid-in capital of 100 million yen or less), the latter accounting for as much as 99.5 percent of the total number of manufacturing factories, employing nearly 70 percent of the total manufacturing labor force, and responsible for about half the total value of shipments in manufacturing output.⁹) Lacking in the necessary capacity to go overseas on their own, the small and medium-sized firms were assisted by general trading companies (*sogo shosha* unique to Japan such as Mitsui, Mitsubishi, Marubeni, C. Itoh, Sumitomo, Nissho-Iwai, Tomen, and Kanematsu Goshō) as *co-investors and business partners* (Kojima and Ozawa, 1984). The government was not directly involved in Tier-I industry's overseas investment-- except indirect supports given by way of providing financial assistance via government-affiliated financial institutions (such as the Small Business Finance Corporation, the People's Finance Corporation, and the Central Bank for Commercial and Industrial Cooperatives). Also, overseas market information and guidance were provided by Japan External Trade Organization or JETRO). Yet the market forces generated by the success of labor-driven Tier-I industries and Japan's determination to graduate from low-wage production were decisive in forcing Tier-I firms to go overseas. This period thus marked the start of "low-cost labor-seeking" investment abroad.

This Tier-I industrial transplantation to Japan's nearby less-developed economies served as a catalyst for industrial upgrading as it discarded a comparatively disadvantaged (low-wage) industry to free up resources and capital for a new higher value-added stage of growth (Ozawa, 1979a and b). This *MNCs-facilitated industrial upgrading* was something quite *innovational* in industrial structural policy. Advanced countries that then experienced a shortage of low-cost labor typically depended on immigration or guest workers to retain low-wage production and services. The upward pressure on factory wages was high, basically because Japan's relatively small rural sector had only a limited reservoir of surplus labor to be mobilized as industrial labor at low wages. (In other words, the Lewisian "unlimited supply of labor"¹⁰ that is supposed to provide cheap labor to burgeoning industry was quickly exhausted.) Yet, Japan was not interested in allowing labor inflows from lower wage countries. Consequently, to solve the problem of low-wage labor shortage Japanese manufacturers, especially in small- and medium firms in light industry, had to (i) transplant themselves in low-wage countries abroad, (ii) take up higher-value-added production by upgrading their products, (iii) enter new higher-tier industries (mostly as suppliers), or (iv) come up with labor-saving technology (or automation) at home. Option (i) proved to be the immediate solution, since other options would take time to

initially quite low in the early 1950s due to labor influx from mainland China, they rose quickly as much as 30% between 1950 and 1964, and then doubled between 1960 and 1970. It was only after the mid-1960s that Japanese manufacturers began to set up shop in Hong Kong, mostly in synthetic and woolen textiles, apparel, transistor radios, printing and publication, and other relatively skill-requiring, but small-scale production (Ozawa, 1979).

⁹ These shares of small and medium firms are somewhat overestimated due to the "factory base" statistical procedure employed by Japan's Small and Medium Enterprise Agency. The factories with 300 or fewer employees include some of those belonging to larger firms.

¹⁰ See Lewis (1954).

materialize. Labor-seeking FDI and other measures thus *substituted for* labor immigration from lower-wage economies.

At the same time, the reconstruction and expansion of resource-intensive Tier-II industries compelled resource-indigent Japan to hunt for minerals and fuels overseas. Japan's major *keiretsu* groups (industrial conglomerates), which each aggressively modernized its own set of scale-based Tier-II industries (such as steel, shipbuilding, metals, and chemicals) within itself, activities that came to represent the so-called "one-set principle." They also competed in eagerly entering new petroleum-based industries (e.g., petrochemicals and synthetics). All these efforts required advanced technology. Since Japan's catch-up policy at that time was to avoid, as much as practical, inward FDI in fear of foreign domination over domestic industry, licensing became the main conduit of technology acquisition from the advanced West (Ozawa, 1974).

As expected of a resource-poor country, Japan's buildup of Tier-II industries led to a sharp rise in demand for oil and other natural resources, compelling the *keiretsu* soon to organize resource-seeking MNCs in groups. Their search for overseas resources was *proactively* supported by the government in both financial and diplomatic terms. Special loans were arranged via such state agencies as the Overseas Economic Cooperation Fund (OECF), the Ex-Im Bank, and Japan International Cooperation Agency (JICA). Also, grants and concession loans were given as economic cooperation to host governments for industrial infrastructure (such as dams, power plants, highways, port facilities) and social/community infrastructure (such as cultural centers, education and public health, and other community facilities). (See the so-called "Asahan formula" in Box 1). This period thus witnessed the government's *most* proactive financial involvement in overseas investment and the use of its own homebred MNCs as a strategic vehicle for securing resources abroad to feed Japan's rapidly growing heavy and chemical industries. This constituted what came to be known as "resources diplomacy."

Insert Box 1 here

The upshot of all these governmental efforts to supplement the financial strength of Japanese MNCs was clear. By the end of March 1975, 34.2 percent of their overseas investment capital was borrowed from government-affiliated financial institutions; 32.8 percent from private financial markets (mostly *keiretsu*-based city banks whose liquidity is in turn controlled by the Bank of Japan); the balance, 33.0 percent, was financed internally by the individual firms.¹¹

The successful modernization and expansion of Tier-II industries soon hit the limit of home-confined location and the environment, making it desirable to relocate some resource-processing production (such as smelting, sintering, refining, and the like) to resource-rich emerging economies. Therefore, the second wave of Japan's overseas investment from Tier-II industries

¹¹ These figures were based on the questionnaire replies of 1,361 firms whose total accumulated value of overseas equity investment corresponded to 78.4 percent of the total. MITI, *Wagakuni Kigyo no Kaigai Jigyo Katsudo* [Overseas Business Activities of Our National Enterprises], Tokyo: MITI, 1976.

was of *both* the resources-seeking and the industrial space-seeking type. In this regard, it is worth noting that paradoxically, by 1970, the industrial structure of Japan--a resource-indigent, space-confined country, the size of the State of Montana in the U.S.—actually had come to require the most intensive use of resources among three top economies, the U.S., Germany, and Japan. Compared with the other two, Japan exhibited the *highest* concentration of industry in the sectors consuming the *most* resources and the *lowest* concentration in the sectors consuming the least resources (Ozawa, 1979b, as cited from a government study). Japan no longer could keep on expanding Tier-II industries at home.

4.2. Up on the ladder of growth

In 1971, a far-reaching plan to reorganize Japan's industrial structure was officially announced by the Ministry of International Trade and Industry (MITI) in its white paper on trade, following recommendations made by its advisory council on industrial structure. It emphasized the need for a reorientation (or rebalancing) of the economy away from "pollution-prone" and "resource-consuming" sectors toward "clean" and "knowledge-intensive" ones. The first Arab oil embargo of 1974 and the subsequent quadrupled oil price gave further impetus to the national sense of urgency to reorganize the economy toward a less resource-dependent structure. In 1974, in an economic white paper, entitled "Beyond Growth Economy," the Economic Planning Agency boldly proclaimed that the economy was about to enter a new era of historically significant structural change. This development clearly marked one of the momentous turning points in the annals of Japan's industrial structure. (This transition later came to be characterized in the news media as a shift away from "*Ju-ko-cho-dai* [heavy-thick-long-big]" products toward "*Kei-haku-tan-sho* [light-thin-short-small]" products.)

Such a national mandate meant that Japanese industry had climb further up the ladder of industrialization. Entering and building up higher-tier (III and above) industries, however, required further technological progress. Here, Japanese companies continued to rely on licensing, but focused more on seed technologies which they could commercialize at their own hands through adaptive R&D. Also, many of Japan's manufacturers in tier-III industries strove to improve and refine assembly operations--not only by use of advanced robotics that could relieve factory workers from what they called "3-D: "dirty," "dangerous," and "demanding" tasks (as it was translated from the Japanese acronym, "3-K: "kitanai," "kikenna," and "kitsui")--but also by treating workers as "brains" (instead of "brawns") so that they become an invaluable source of information and ideas for further technological and organizational improvements (Aoki, 1988).

At the vanguard of this unique approach was the automobile industry (Tier III) led by Toyota Motor that introduced a new assembly innovation, the "Toyota production system" (Ohno, 1978), which soon afterward came to be more popularly known as "flexible (or lean) production" (Womack et.al., 1990). This resulted in both higher productivity and higher product quality. With this newly acquired technological and managerial advantage, Japan's carmakers morphed into competitive MNCs. They set up overseas shops across the world in the 1980s and onward—

mostly to skirt rising protectionism in their export markets, especially in response to the “voluntary” export restraints (VERs) imposed by the United States in the early 1980s. For these overseas investments, however, government involvement remained indirect by way of special loans provided by Japan’s Ex-Im Bank for overseas investment (Ozawa, 1986), though it had to administrate the VERs. For instance, Nissan’s plant in Tennessee, Japan’s first automobile plant set up in the U.S. in 1983, received from the Ex-Im Bank an investment credit of \$120 million for Nissan’s initial cost of \$600 million to establish the assembly plant.¹² In contrast, Honda’s car assembly plant in Ohio was totally financed by the huge windfall profits earned as a result of the supply scarcity caused by the VERs in the U.S. market.

This third wave of overseas investment (of the “protection-skirting” type) was soon joined in the 1990s by Japan’s electronics makers that similarly sparked adaptive innovations in products and processes at home for color TVs, cathode ray tubes (CRTs), DRMs, video-recorders, and the like. They began to invest strategically in the Western markets where Japan’s explosive exports met local clamors for protection and led to the adoption of Europe’s strategic (protective) trade policy (Belderbos, 1997). Overseas production thus occurred to *replace* exports from home. There was, however, little direct involvement of the state in the electronics companies’ advance overseas, although the overall development of Japan’s electronics industry was fostered by its industrial structural policy. Their technological advantages at that time were so strong that they hardly needed any support from the government.

4.3. Other East Asian economies

Indeed, the above-described basic characteristics of the stages-inherent emergence of multinationals have been replicated across the rest of East Asia. South Korea and Taiwan in particular, which are similarly as land space-constrained and resource-scarce as Japan is, closely followed in Japan’s footsteps. They display similar features in accordance with their stages of growth. Nevertheless, their catch-up strategies and their MNCs’ behaviors as late industrializers are necessarily differentiated from Japan’s due to their different time (history)-and space (geography)-specific circumstances. For example, South Korea and Taiwan first relied on foreign MNCs’ investments in Tier-I industries by setting up export-processing zones. These NIEs’ success in labor-driven takeoff soon led to rising wages and a loss of export competitiveness. And they, too, quickly shed low-wage manufacturing, transplanting it first to the ASEAN-4 and later to China—more recently to Vietnam and lately to Myanmar. Thus, the Japanese experience was replicated. South Korea and Taiwan similarly had a relatively small reservoir of rural labor. In all these economies a supply of low-wage laborers also declined quickly *pari passu* with rising incomes, which motivated young people to be better educated (autonomous investment in human resource development), thereby paving the way toward higher knowledge-based growth stages. Taiwan, in particular, has specialized in parts and components for electronics and automobiles rather than in final goods, thereby becoming crucial suppliers in

¹² For other examples, see Ozawa (1986).

global supply chains. It has gained a reputation in contract manufacturing for high-tech MNCs, as attested by Foxconn's overseas operations, especially in China.

Being also resource-scarce, both countries intensified their search for overseas minerals and energy by engaging in resources diplomacies of their own, though on a much smaller scale than Japan's. At one time, they together were the largest importer of resources from Australia just like Japan once had been during their respective Tier-II growth.¹³ Both economies combine FDI in overseas resources with economic aid in resource-abundant emerging markets. South Korea's resources diplomacy for oil is directed to Central Asia (notably, Kazakhstan, Azerbaijan, Uzbekistan, and Turkmenistan), exhibiting politically high-risk investments and making the South Korean government intensively involved in strong supportive activities (Miyamoto, 2009). It also helped capturing the Central Asian markets for Korean electronics and automobiles. On the other hand, Taiwan's resources diplomacy is constrained because of its loss of official recognition as an independent state (it was expelled from the United Nations in 1971). It, nevertheless, remains one of major aid donors. It depends on oil-producing countries in the Persian Gulf and Angola for most of its crude oil imports.¹⁴ For other natural resources, Taiwan's FDI and imports are centered on Southeast Asia. It also has heavily invested in China and imports industrial materials from the mainland china.

In order to develop higher-tier, high-tech industries, especially electronics, furthermore, South Korea's and Taiwan's compatriot/expatriate scientists and engineers, who had been educated and on-the-job-trained in the United States, returned home and played a key role. Here, their governments actively lured back those skilled compatriots from abroad. This state-sponsored "brain return" program was quite innovative, something not seen in the Japanese experience. The rise of Samsung to the world's top player owes much to Korea's industrial policy (inclusive of brain return promotion), state funding of risky investment in LCD manufacturing, and the company's willingness to brush off patents and pay penalties for infringement, while stepping up its own R&D efforts (Myers, 2013). In fact, Korea's state involvement in the high-tech sector appears more proactive and more bankrolling than Japan's and Taiwan's in nurturing startups and even sponsoring the program to let young entrepreneurs to visit Silicon Valley, London, Israel and Singapore for exposure to the best ideas—a plan motivated to counterbalance chaebols' dominance in the economy.¹⁵ Also, Taiwan, Singapore, and Hong Kong have ethnicity-and-cultural advantages in advancing into China's markets. In this regard, it is interesting that Japanese MNCs are actively utilizing, and benefiting from, Taiwanese managerial resources and subsidiaries for investing in China (Takeuchi, 2006).

China is also a good illustrative case for comparison. At present, for instance, MNCs from China exhibit four investment features. They are investing most actively (i) in resources

¹³ "A Survey of Australia," *Economist*, May 7, 2005. At present China is the largest importer, however. As expected from the FG theory, they thus have been switching places.

¹⁴ "Taiwan – U.S. Energy Information Administration," www.eia.gov/countries/country-data.cfm?fips=TW.

¹⁵ "Seoul Bankrolls Burgeoning Startups," *Wall Street Journal*, Feb. 11, 2014.

extraction (i.e., minerals and fuels) and accompanying infrastructure projects (such as pipelines, port facilities, rails, and highways—and government buildings and sports arenas) (FDI feature #1); (ii) in low-end manufacturing like textiles in other emerging economies (such as Vietnam, Cambodia, Bangladesh, and even far-away countries in sub-Saharan Africa) (FDI feature #2); mergers and acquisitions (M&As) in the advanced world to obtain advanced technology, business know-how, and globally known brands (FDI feature #4).

These features clearly reveal that China, despite its meteoric rise to the world's second largest country in terms of GDP, has just been graduating from Tier-I stage and still in the midst of modernizing Tier-II industries, though striving to build higher tier-industries (III through IV) simultaneously from the low-end of each industry in its all-out effort to industrialize. An exception is Tier-V (IT-enabled) industries which China has successfully entered without any gap to close simply because this new tier has only recently originated in the U.S. In fact, in Tier-V industries Chinese companies (including Lenovo and Huawei) have swiftly emerged as formidable competitors, especially in smart phones and telecommunications on account of burgeoning investment in R&D, aggressive marketing, hiring of Silicon Valley executives, the government's financial support, and China's undervalued currency.¹⁶

In this regard, China's overseas investment pattern reflects how far its economy has actually climbed the ladder of development. FDI feature #1 reflects the height of Tier-II resource-intensive growth; FDI feature #2 signals the end of Tier-I growth with the suddenly appeared labor shortages and wage hikes at home; FDI feature #3 shows China's still export-driven, import-dependent growth despite its effort to shift towards a new phase of domestic consumption-led growth and away from the past export-cum-investment-led growth; and FDI feature #4 mirrors its drive to acquire badly needed technologies and brands in order to further climb onto higher-end manufacturing. Despite its impressive advance in Tier-V industries, Chinese companies have yet to do more in software, brand development, and overseas production.

Now, the Chinese government (both at central and provincial levels) is heavily involved in promoting its "go global" policy by supporting the overseas advance of Chinese enterprises, notably state-owned or -backed ones. This is due in part to a tightening supply of low-wage labor and its resultant rise in wages—aggravated by its one-child policy-- despite its *huge* rural labor force. As pointed out earlier, China is a paragon of state capitalism that is bent on challenging the market-capitalist world order. The Chinese Communist Party has no choice but to do so simply because yielding to market capitalism is a death knell to itself. And here exists a source of political friction in the wake of China's success in Tier-V (IT-enabled) industries that evokes suspicions of widespread cyberattacks, cyber-espionage, computer hacking, and online-

¹⁶ For example, Lenovo ranked third in smartphone sales globally after Samsung and Apple in the third quarter of 2013, as reported in "The Rise of China's Innovation Engine," *Wall Street Journal*, January 17, 2014, B1. It also reports that China's R&D spending (\$284 billion estimated for 2014) now ranks second only to the U.S.'s (\$465 billion forecast for 2014) and expected to surpass the U.S. by 2020.

theft of technology, though any IT-savvy government is more or less engaged in electronic shenanigans—and suspicions about China’s IT multinationals like Huawei and ZTE as an arm of its military establishment. Moreover, China has successfully gone through the relatively easy initial phase of catch-up (i.e., Tier-I and-II stages), which corresponds to what Paul Krugman (1997) characterizes as “input (or perspiration)-driven.” But it now has to upgrade knowledge-intensive, higher-tier (III through IV) industries, which matches what Krugman calls “efficiency (or inspiration)-driven.” And free-market capitalism is more likely inspiration-conducive than the Chinese brand of state capitalism that represses the freedom of speech in political affairs (thereby constricting free-wheeling thinking and information flows in general) in the name of “social harmony and stability.”

In sum, China is an excellent example, attesting to the relevancy of our stages model that can shed light on the stages-determined trend of industrial structural upgrading, the stages-specific debut of homegrown MNCs on the global scene, and the role of state-industry relations in growth and overseas business activity—all with some distinctively unique undertones of its political economy.

5. Summing Up

Government involvement in catch-up growth is a norm, since the market and its supporting institutions are necessarily underdeveloped prior to industrialization. The market, even if developed, remains dysfunctional with rampant market failures, disruptive externalities--and most of all, structural rigidities. Government thus needs take the initiative decisively to initiate catch-up growth. Yet, government failures are equally prevalent. As is often the case, furthermore, government failures themselves worsen market failures. Such an adverse situation is pronounced in “soft states,” creating a deadly trap of market-cum-government failures, in which many emerging economies are bogged down. As demonstrated by East Asia’s successfully industrialized economies, however, a “developmental state” or a “hard state,” even if not totally free from government failures, can overcome market failures and structural rigidities, igniting and sustaining an industrial takeoff. Also, China’s state capitalism has so far proved quite effectual for industrial takeoff and catch-up growth, though its future may not be so spectacular and promising because higher-tiers of industrial structure require the freer and more transparent information-friendly environments for infusion and diffusion of new ideas and knowledge.

In essence, economic development is nothing but a sequence of structural changes driven by innovations, entailing different stages of growth. And it is out of such a sequence that diverse types of enterprises come into existence in a stages-inherent manner—and rise and fall by the logic of creative destruction. Since different stages open up new business opportunities overseas, indigenous enterprises have to go multinational to exploit those opportunities abroad. Capitalizing on the new overseas business opportunities in turn facilitates home countries’ structural upgrading, as illustrated by the precedents set by Japan’s FDI in low-wage production

and its resource-seeking FDI-cum-economic cooperation designed to consolidate Tier-II industries at home. Hence, MNCs are a creature of—and simultaneously a catalyst for—structural changes at home. To this end, then, the state needs to nurture domestic enterprises in the first place so that some, if not all, will grow into competitive MNCs. All of these developments related to the evolving state-and-industry links in emerging economies and the stages-specific rise of their homegrown MNCs can be best examined in terms of the “leading-sector” stages model of growth, *a la* Schumpeter (that specifies the hitherto nebulous notion of “the ladder of economic development”). After all, the essence of development is a progression of structural upgrading on the ladder, and the goal of catch-up is the attainment by an emerging economy of a higher level of industrial structure that prevails in the advanced world.

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