

1. Hegemon-led growth clustering and the flying-geese paradigm of catch-up growth

1.1. TWO HEGEMONIES AND TANDEM GROWTH

It is important to keep in mind that Japan's phenomenal economic growth, both pre- and post-World War II, has been a derivative of the spread of global capitalism, early on under the Pax Britannica and more recently under the Pax Americana. In other words, Japan's rapid industrialization would have been inconceivable if it had not been for the roles of Great Britain and the United States as the successive hegemonies that created a favorable global environment for trade, investment, and technology transmission. The postwar US hegemony in particular has brought about a host of ideal opportunities for Japan to capitalize on in crafting and pursuing its own brand of catch-up growth.

The Pax Britannica and the Pax Americana both constitute a global economic system of what may be called 'hegemon-led growth clustering' (a hegemon-driven process of tandem growth) (Ozawa, 2003c), when looked at from an economics point of view (though it has many other dimensions). Growth clustering is a phenomenon in which a hegemon economy propagates growth stimuli to its closely aligned cohort of countries that are at *various* stages of development and structural transformation. The stimuli include dissemination of technology, knowledge, information, skills, and demand (via access to the hegemon's home market), and provision of development finance – and above all, transplantation of growth-inducing institutional arrangements of open market capitalism; this all contributes to higher levels of industrial productivity, efficiency, and per capita income. The lower-echelon countries can 'free ride' and thrive on those stimuli, so long as they are willing to follow in the ideological steps of the hegemon. In other words, there are what may be called 'economies of hierarchical concatenation' (Ozawa, 1995b) that the follower countries can reap from the forces of hegemon-led growth clustering.

At the same time, the hegemon itself and other high-echelon countries in turn garner benefits from rapid integration with lower-echelon countries, as well as from the latter's vigorous economic development and growth which create demand for goods and services from the upper-echelon countries. (Such

benefits, for example, have most recently been seen in the information technology boom in the US which was in no small part stimulated by the low prices of computers and telecommunications equipment outsourced in East Asia and made available to more companies and individuals.) Their synergistic interactions result in agglomeration economies, enabling the *entire* hierarchy of countries to mutually gain, grow, and prosper.

The cross-border trade and investment created under the regime of growth clustering are fundamentally market-driven (profit-motivated and guided) under capitalism, though individual countries, especially those in the lower echelons, are usually involved in *dirigiste* strategies. Growth clustering is geographically expansive, geocentric, and intertemporally concatenated. *Markets, hierarchies, and institutions* play their respective requisite roles in governing the hegemon-led system. Put simply, a hierarchy of countries led by a *lead* country matters – and matters a lot, not only for the individual cohort countries’ economic development and growth but also for the entire hegemonic sphere’s prosperity.

1.2. ECONOMIES OF HIERARCHICAL CONCATENATION AND LEARNING EXTERNALITIES

1.2.1. Classical Economists’ Foresight: Ideas from Adam Smith, John Stuart Mill, and Karl Marx

The concept of ‘economies of hierarchical concatenation’ brought about by the forces of hegemon-led growth clustering draws in part on the insights of Adam Smith (1776/1908):

Private people who want to make a fortune, never think of retiring to the remote and poor provinces of the country, but resort either to the capital, or to some of the great commercial towns. *They know that where little wealth circulates, there is little to be got; but that where a great deal is in motion, some share of it may fall to them.* The same maxim which would in this manner direct the common sense of [individuals] ... should make a whole nation regard the riches of its neighbours as a probable cause and occasion for itself to acquire riches. *A nation that would enrich itself by foreign trade is certainly most likely to do so when its neighbours are all rich and industrious.* (vol. 1: 378, emphasis added)

What is described here is more than the ‘neighborhood’ effect. Smith is thinking in *hierarchical* terms where some countries (‘the capital’ and ‘great commercial towns’) are rich, while others (‘remote and poor provinces’) are undeveloped or underdeveloped. Those developing countries, if they are to develop (‘to make a fortune’), need to establish close commercial contact with

the hegemon ('the capital') and the advanced subregional countries ('great commercial towns'). In other words, the former can capitalize on gaps in incomes (purchasing power) and industrial knowledge (technology) vis-à-vis the more advanced.

In Smith's day, trade was the main form of international business operations whereby to exploit such economies of concatenation. Foreign direct investment (FDI) (international production as we know it today) obviously did not exist – except in the nascent colonial type of overseas investments, investments made to support early settlements in the New World by chartered trading companies such as the Plymouth Company and the Hudson Bay Company from the Old World (McNulty, 1972). Besides, Smith himself considered the logistic costs of making investments abroad too high to be justified: '[the fortune] of the trader who is obliged frequently to commit it, not only to the winds and the waves, but to the more uncertain elements of human folly and injustice, by giving great credit in distant countries to men, with whose character and situation he can seldom be thoroughly acquainted' (Smith, 1776/1908: 291).

Hence, Smith advocated free trade as a means of making the best use of the prevailing hierarchy of nations at that time. For him, indeed, free trade was the most effective development tool for any underdeveloped country to use, if it was determined to catch up and become 'equal' with the advanced countries: 'Nothing seems more likely to establish this equality of force than that mutual communication of knowledge and of all sorts of improvements which an extensive commerce from all countries to all countries naturally, or rather necessarily, carries along with it' (Smith, 1776/1908, vol. 2: 140). In other words, trade provides opportunities to emulate and learn from each other. It is more than mere exchanges of goods, but it is more importantly a knowledge-transfer mechanism.

On this score, John Stuart Mill (1848/1909) made a further elaboration:

... the economic benefits of commerce are surpassed in importance by those of its effects which are intellectual and moral. It is hardly possible to overrate the value, for the improvement of human beings, of things which bring them into contact with persons dissimilar to themselves, and with modes of thought and action unlike those with which they are familiar ... it is indispensable to be perpetually comparing [one's] own notions and customs with the experience and example of persons in different circumstances ... *there is no nation which does not need to borrow from others.* (pp. 581–2, emphasis added)

The total gains from trade, therefore, consist of more than the mere *static* gains arising from exchanges of goods and from trade-induced specialization; more important dynamic gains come in the form of *mutual learning*. Yet, in a hierarchical world of nations operating at different stages of development, the

lower-echelon ones no doubt enjoy the availability of much more abundant opportunities to learn from their higher-echelon (more advanced) counterparts than vice versa. These learning opportunities are the *core* of economies of hierarchical concatenation – and latecomer advantages.

Relevant also is a similar observation made by Karl Marx: ‘The country that is more developed industrially only shows, to the less developed, *the image of its own future*’ (emphasis added, as cited in Palma, 1978: 7). For Marx, the cross-border spread of capitalism from the most advanced to the less advanced is inexorable and unavoidable, ultimately creating competitors for the former as the capitalist mode of production is transplanted onto the less advanced. The hegemon economy innovates and disseminates to the rest a new pattern of production and consumption, which is ‘the image of its own future’ for the latter. *The wealth-producing power of capitalism was considered so strong that it could not be contained and monopolized within the advanced world alone and would necessarily spread to the less developed.*

1.2.2. The ‘Price-Knowledge/Industry-Flow’ Theory à la David Hume

The inevitability of the spread of economic growth under capitalism had actually been stressed much earlier by David Hume (1754/1985), a couple of decades earlier than the publication of Adam Smith’s *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776/1908). Hume zeroed in on the transmission of growth (hence wealth) from the rich to the poor countries in connection with his argument that British hegemony and one-sided prosperity would prove only transitory because of the inexorable catch-up of other countries. He started out by observing ‘a happy concurrence of causes in human affairs, which checks the growth of trade and riches, and hinders them from being confined entirely to one people’ (Hume, 1754/1985: 283). Hume’s point was that no single nation would be able to keep prosperity all to itself without eventually sharing it with the less developed. He continued:

Where one nation has gotten the start of another in trade, it is very difficult for the latter to regain the ground it has lost: because of the superior industry and skill of the former, and the greater stocks [i.e., the first-comer advantages]. But these advantages are compensated, in some measure, by the *low price of labour* in every nation which has not an extensive commerce, and does *not much abound in gold and silver. Manufactures, therefore, gradually shift their places, leaving those countries and provinces which they have already enriched, and flying to others, whither they are allured by the cheapness of provisions and labour, till they have enriched there also and are again banished by the same causes ...* [I]n general, we may observe, that the dearness of everything, from plenty of money, is a disadvantage, which attends an established commerce, and sets bounds to it in every country, by enabling the poorer states to under sell the richer in all foreign markets. (Hume, 1754/1985: 283–4, emphasis added)

Terutomo Ozawa - 9781843769590

Downloaded from Elgar Online at 06/19/2018 09:40:11PM

via free access

What is so insightful in Hume's observation is that he clearly grasped the key roles played by labor cost (as well as the costs of other inputs) and the reserves of 'gold and silver' whose relative abundance invariably would affect prices and the market exchange rates, triggering cross-border flows of those precious metals under a bimetallic monetary standard (as posited in his 'price-specie-flow' theory). Because of changes in these two variables which would become relatively unfavorable for the rich countries (hence relatively favorable for the poor), the manufactures would be 'flying to others, whither they are allured by the cheapness of provisions and labour, till they have enriched there also and are again banished by the same causes ...'. This process may be called the 'price-knowledge/industry-flow' theory as the 'real' sector counterpart of Hume's 'price-specie-flow' theory for the 'money' sector.

A *trans-migratory* shift of manufacturing across borders was thus recognized by Hume as a development-transplanting and wealth-spreading activity across countries. He was thus talking about the phenomenon of what may be called 'comparative advantage (or industrial/market) recycling' down the hierarchy of nations (Ozawa, 1993; UNCTAD 1995). In a nutshell, he boldly elucidated the two principal mechanisms – low labor costs and currency undervaluation (real depreciation) – through which a poor nation (a follower economy) might be able to catch up in manufacturing activities.

In this regard, although Stephen Hymer (1960/1976), who theorized a process of international business operations at the firm level, is considered the *father* of the *microeconomic* theory of FDI, we can unarguably call David Hume the *father* (better still the great, great, great grandfather?) of the *macroeconomic* theory of FDI (which necessarily transplants industry across borders). Labor cost and exchange rates are now recognized as among the key macroeconomic determinants of overseas investment, especially in labor-intensive manufacturing. (These two factors are, indeed, currently so powerful that the US economic upturn of 2003–4 initially had difficulty immediately creating jobs and was dubbed 'jobless – or even job-loss – recovery' in the American media, at least partly because of the 'flying' of jobs to China and India. In this respect, we are justified in saying that Hume was already concerned with the issue of 'off-shoring' (outsourcing abroad). Hume's theory of industrial transmigration will be revisited in Chapter 7 after we study the postwar Japanese experience of catch-up growth in the following chapters.

1.2.3. Hume's Theory of Endogenous Retrogradation

In addition to the labor costs and exchange rates that move against the interests

of the advanced nations, Hume (1754/1985) also argued that ‘*When the arts and sciences come to perfection in any state, from that moment they naturally, or rather necessarily decline, and seldom or never revive in that nation, where they formerly flourished*’ (p. 135, emphasis in original). The ineluctable decline of an advanced economy is likewise caused by an internal decay in the arts and sciences as well. Elmslie (1995) calls such a climactic ‘Hume’s Theory of Endogenous Retrogradation’. (Hume was concerned mainly about Britain’s eventual retrogradation, but as will be seen in Chapter 6, Japan is presently confronted with the phenomenon of endogenous retrogradation in sciences and engineering among the youth – and what may be called ‘institutional retrogradation’ in Chapter 9.)

1.2.4. Catch-up Growth by Emulating and Learning

These observations made by Smith, Hume, Mill, and Marx are intuitively powerful and perspicacious. They provide support for the notion of economies of hierarchical concatenation, the essence of which is *the existence of opportunities for catch-up growth by emulating and learning* mainly on the part of the lower-echelon countries. There are so many poor countries, however, with extremely low wages and depreciated home currencies, yet they are unable to industrialize, failing to take turns in *emulative growth*, as envisaged by Hume. The learning initiative needs to be started from the part of developing countries themselves, and ‘learning how to learn’ is the most critical first step. We need, therefore, more detailed explanations of under what circumstances and in what ways the less developed can catch up with – and in some cases, even surge ahead of, in some industrial activities – the ‘lead’ country or any other higher-echelon countries. In other words, we need to specify the *operational causal mechanisms* through which the benefits of hierarchical concatenation are engendered and exploited by the constituent countries of a particular regime of growth clustering.

The Japanese experience (explored in this book) provides one model of ‘catch-up growth by emulating and learning’, which proved to be a success story – thanks in many ways, however, to the unique circumstances that surrounded Japan in the early postwar period. Each developing country must ultimately formulate its own catch-up strategy (model) that is both compatible and effective with the prevailing *external* and *internal* circumstances. (We already know that other Asian countries have successfully been pursuing development policies of their own that are quite different from the Japanese model.) In what follows, a new overarching framework of evolutionary analysis will be introduced for the purpose of elucidating the driving forces of hegemon-led growth clustering in terms of a reformulated version of the so-called ‘flying-geese’ theory of economic development.

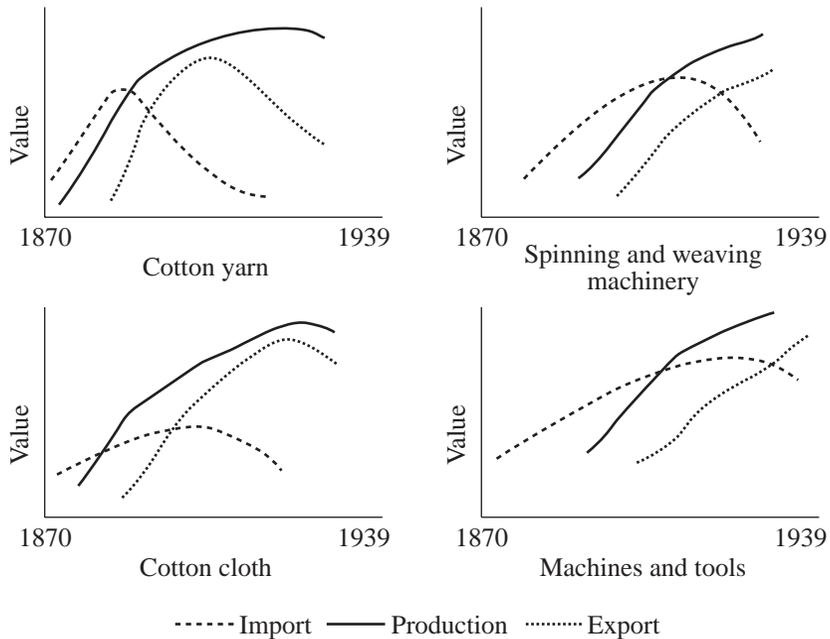
1.3. AN AMENDED ‘FLYING-GEESE (FG)’ MODEL OF INDUSTRIAL UPGRADING

As introduced and explained elsewhere (Ozawa, 1992, 1993, 2001a, 2003a), a model of industrial upgrading can shed light on the evolutionary process of hegemon-led tandem growth. This model is a reformulated version of the so-called ‘flying-geese (FG)’ theory, which originated in Akamatsu (*inter alia*, 1935, 1962), expanded conceptually in Kojima (*inter alia*, 1958, 2000, 2003, and 2004), and Kojima and Ozawa (1984a, 1985). There are many other scholars who have used Akamatsu’s framework, either explicitly or implicitly, for analyses of trade and investment patterns, as well as economic development patterns among different countries. Noteworthy (to cite a few of those published in English) are Shinohara (1972, 1982), Rapp (1967), Meier (1980), Yamazawa (1990), Chen (1993), UNCTAD (1995), Radelet and Sachs (1997), Korhonen (1998), and Ito (2001). (For a recent literature survey, see Kojima [2000]). Most of them, however, have not really elaborated on Akamatsu’s original ideas, especially on the idea of a *sequence* – and its causal *mechanisms* – of structural upgrading, particularly from an institutional and evolutionary perspective, which is the main focus of this book.

1.3.1. Akamatsu’s Three Patterns of Sequential Development

In his writings published back in the 1930s and also after WWII, the late Kaname Akamatsu of Hitotsubashi University introduced *three* patterns of flying-geese formation. The first FG analogy came from his empirical findings of the sequential pattern of ‘importing→domestic production→exporting (M→P→E)’ in several prewar Japanese industries, which he identified as the *fundamental* FG pattern of industrial development. This represents a strategy of import-substitution-cum-export-promotion. He found this pattern of sequence statistically in the industry development of cotton yarn, cotton cloth, spinning and weaving machinery, and machines and tools, as shown in Figure 1.1. It should be noted that prewar Japan pursued the ‘M→P→E’ strategy to cash in on the forces of Pax Britannica-led growth clustering. In other words, this fundamental FG pattern is nothing but the ‘natural/rational’ behavior of the follower-goose countries emulating and learning from the lead-goose (hegemon) economy.

A second FG pattern is a *sequence of product development* not only in the order of ‘capital goods following consumer goods’ but also ‘in the progression from crude and simple goods to complex and refined goods’ (Akamatsu, 1961). Both types of qualitative product transformation/improvement are themselves made possible by way of a catching-up country’s M→P→E strategy. Hence, the FG pattern of concomitant industrial and product



Source: Akamatsu (1962)

Figure 1.1 Akamatsu's wild-geese-flying patterns

development can be considered a *derivative* of the fundamental FG formation, a pattern that is also correlated with the phenomenon of industrial upgrading (to be detailed in the next section).

A third FG pattern is what Akamatsu (1961) called 'the alignment of nations along the different stages of development'. In his own words,

... the underdeveloped nations are aligned successively behind the advanced industrial nations *in the order of their different stages of growth in a wild-geese-flying pattern*. For example, when Japan passes the third stage of growth, India and China, which are less developed than Japan, will proceed to the second stage, where they will become homogeneous with Japan in consumer goods industries, and Japan's consumer goods exports to them will decrease. However, Japan will proceed from domestic production and use of capital goods to their production for export, creating a relationship of *advanced differentiation* with these backward nations. On the other hand, Japan will show an *advanced uniformization* with these backward nations. (Akamatsu, 1961: 208, emphasis added)

The first and second FG patterns are specific to the catching-up processes experienced by *individual* developing countries, while the third pattern is a

phenomenon observable within a hegemon-led *hierarchy* (group) of countries. The notions of ‘differentiation’ and ‘uniformization’ are synonymous with those of ‘divergence’ and ‘convergence’ in the jargons of present-day development theories. The adjective ‘advanced’ (though not explained by Akamatsu) connotes a process of ratcheting, rung by rung, up the ladder of industrial upgrading. It is not a one-shot climb but a *step-by-step* sequence of *continuous advance* in learning over time along the trail of industrialization pioneered and already blazed by the more developed countries. As Akamatsu (1962) put it, ‘It is impossible to study the economic growth of the developing countries in modern times without considering the *mutual interactions* between these economies and those of the advanced countries’ (p.1, emphasis added). Thus, his thought can be captured in terms of the notion of economies of hierarchical concatenation.

What is implied in the above quote is also that Japan as a second-ranking goose needs to be mindful not only of closing the gap with ‘the advanced industrial nations’ but more importantly of how fast the follower-geese countries in the third-rank echelon are in turn advancing, thereby closing the gap vis-à-vis Japan. There is always a ‘danger’ for Japan of being overtaken by other follower geese and experiencing the problems – and new opportunities – of ‘uniformization’ in industrial relationships.

1.3.2. A Stages Model of Industrial Upgrading *à la* Schumpeter

This book concentrates on Akamatsu’s first and second patterns in terms of the Japanese experience of industrial upgrading. The third pattern requires a separate analysis of Japan’s relationships with other Asian economies – that is, an examination of Asia-wide FG formation as a unit of analysis.¹

Although Akamatsu’s ideas are riveting and thought-provoking, he only outlined his paradigm with very broad strokes of a brush so to speak, leaving its many important dimensions unelaborated. The reformulated model of industrial upgrading (Ozawa, 1992, 1993, 2001a, 2003a) presented in this book is a ‘leading growth-sector’ stages theory *à la* Joseph Schumpeter (1934), in which *a sequence of growth is punctuated by stages* (five stages as will be seen below) in the wake of ‘the perennial gale of creative destruction’. In each stage a certain industrial sector can be identified as the main engine of structural transformation enabling the economy to scale the ladder of industrial development.

This conceptualization is in sharp contrast to the neoclassical view of growth as a smooth incremental accumulation of capital and jibes with what W.W. Rostow (1960) emphasizes:

At any period of time, the rate of growth in the sectors will vary greatly, and it is

possible to isolate empirically certain leading sectors, at early stages of their evolution, whose rapid rate of expansion plays an essential direct and indirect role in maintaining the overall momentum of the economy. For some purposes *it is useful to characterize an economy in terms of its leading sectors; and a part of the technical basis for the stages of growth lies in the changing sequence of leading sectors*. In essence it is the fact that sectors tend to have a rapid growth phase, early in their life, that makes it possible and useful to regard economic history as a *sequence of stages rather than merely as a continuum, within which nature never makes a jump*. (p. 14, emphasis added)

How ‘the perennial gale of creative destruction’ persistently provides the fundamental impulse to structural transformation and modernization is explained better still in Schumpeter’s (1942) own words:

The essential point to grasp is that in dealing with capitalism we are dealing with an *evolutionary* process ... *Capitalism, then, is by nature a form or method of economic change and not only never is but never can be stationary*. And this evolutionary character of the capitalist process is not merely due to the fact that economic life goes on in a social and natural environment which changes and by its change alters the data of economic action; this fact is important and these changes (wars, revolutions and so on) often condition industrial change, but they are *not* its prime movers. Nor is this evolutionary character *due to a quasi-automatic increase in population and capital* or to the vagaries of monetary systems of which exactly the same thing holds true. The fundamental impulse that sets and keeps the capitalist engine in motion comes from *the new consumers’ goods, the new methods of production or transportation, the new markets, the new forms of industrial organization* that capitalist enterprise create. (pp. 82–3, emphasis added)

In other words, the evolutionary progress is *not* input-driven incrementally (not ‘due to a quasi-automatic increase in population and capital’) but is set in motion by innovations, which then lead to rapid capital formation in new industries, *necessarily destroying the value of the existing old capital*. Hence, the capitalist process can be neither incrementally additive nor cumulative in capital accumulation as posited by neoclassical economists.

Japan’s high growth period was driven by a process of sequential upgrading through which its whole industrial structure is upgraded by a leading growth sector. It is more than a mere increase in total factor productivity (TFP) as usually perceived by neoclassical economists as an upward shift of a *given* aggregate production function. A *new* aggregate production function of the entire industrial structure replaces the existing old one – that is to say, the new continually (periodically) destroy the value of the existing production function in a wave-like fashion, as schematically illustrated in terms of a series of structural upgrading in Figure 1.2. This feature will be made clear in the following chapters that describe how the Japanese economy has gone through the different stages of industrial transformation.

This dynamic stages-delineated evolutionary/mutational approach is similar

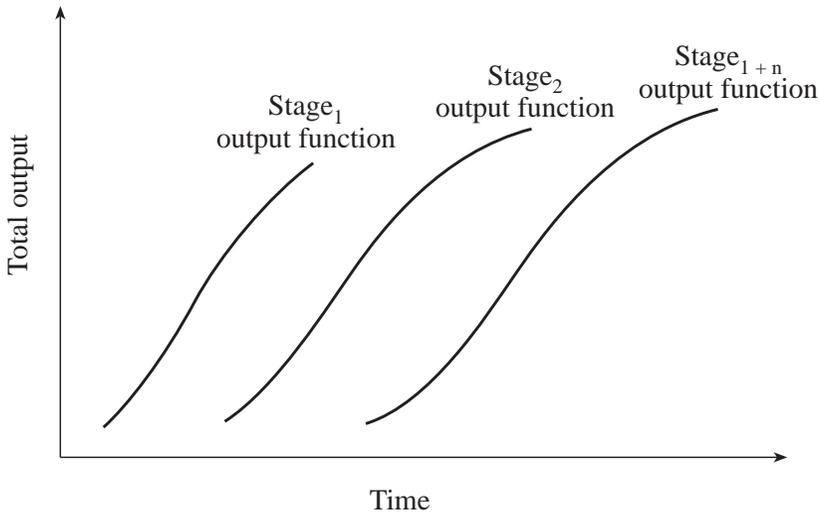


Figure 1.2 Mutating aggregate production functions, FG-style

in growth pattern to the idea of what Aoki and Yoshikawa (Aoki and Yoshikawa, 1999; Yoshikawa, 2000) call ‘demand-creating innovations’, although the latter emphasizes the demand side more strongly than our model of structural catch-up which is more supply-sided in comparison, as will be seen below. Luckily, Japan’s catch-up growth, especially in its earlier phases, had no problem with demand. Arguably an ‘excessive’ number of producers were engaged in manufacturing a particular type of ‘new’ product (new to Japan but already in existence in the West) in the post-WWII period of catch-up growth, yet their oversupply was, on the whole, taken care of – thanks to their export markets in the West, as well as the rapidly growing home markets. More importantly, furthermore, they were able to adopt, adapt, and improve on, imported technologies by basically concentrating on the technology absorption-cum-production (supply) side (Ozawa, 1974). Put differently, postwar Japanese innovations have largely been ‘supply-creating innovations’ to paraphrase Aoki and Yoshikawa’s nomenclature. Now that Japan is close to the existing top rung of the development ladder (which is ever more consumer-oriented than the earlier rungs), however, ‘demand-creating innovations’ are, indeed, the *sine qua non* for growth in Japan.

The model of industrial upgrading under the forces of hegemon-led growth clustering is based on the Japanese experience with structural transformation. The sequence of industrial upgrading Japan has gone through, however, is *not* Japan’s own creation. Instead, it is laid out clearly in the scheme of global capitalism driven by the Anglo-American hegemones.

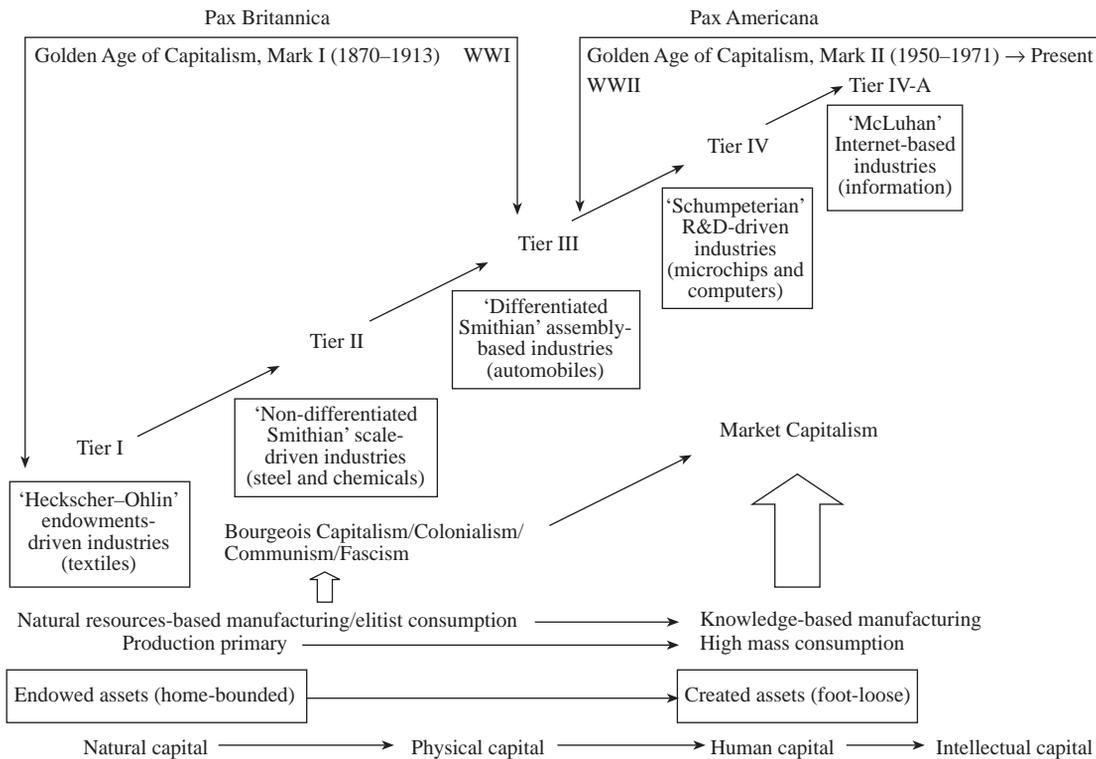
1.4. A SEQUENCE OF INDUSTRIAL UPGRADING UNDER THE TWO HEGEMONIES

The world economy has so far seen five tiers of leading growth industry emerge in wave-like progression ever since the Industrial Revolution in England: the five tiers which are illustrated in Figure 1–3. The first dominant industry that appeared was what may be called ‘*Heckscher-Ohlin*’ *endowments-driven (natural resources- or ‘raw’ labor-intensive) light industries* best represented by cotton textiles – named after the Heckscher–Ohlin trade theory which explains the basis for trade (the doctrine of comparative advantage) in terms of differences in factor proportions between countries. It was soon entailed by the ‘*non-differentiated Smithian*’ *scale-driven (physical capital-intensive, natural resource-processing) heavy and chemical industries*, such as steel and basic chemicals (basically homogeneous/non-differentiated goods). This second stage is named after Adam Smith who stressed the dynamic gains from increasing returns to scale.

Indeed, the Golden Age of Capitalism, Mark I (1870–1914) stemmed from the rapid growth of these first two phases of industrial development under the Pax Britannica. That age’s need – and its search – for natural resources (e.g., iron ore and copper ore) and overseas markets for textiles and capital goods led to colonialism. And scale-driven heavy and chemical industrialization was pursued relentlessly under imperialism as part and parcel of an arms race among the imperial powers (including Japan, which engaged in authoritarian nation building under the banners of ‘*Fukoku Kyohei* [Rich Nation and Strong Army]’ and ‘*Shokusan Kogyo* [Nurture Industry and Promote Production]’) (Samuels, 1994). The stability of currencies was maintained under the international gold standard of the period, with London as the world’s financial center.

The rise of the Pax Americana originated from US ingenuity in the innovation of interchangeable parts and assembly-line operations, which eventually culminated in the American manufacturing paradigm of mass production – and the American-initiated pattern of mass consumption (especially after WWII) that would set the tone for the rest of the world. The ‘*differentiated Smithian*’ *assembly-based industries (notably automobiles)* emerged as the leading growth sector in the United States, following the introduction of Ford’s assembly-lines and Frederick Taylor’s scientific management (‘time and motion study’). Fordism-cum-Taylorism thus became the dominant manufacturing paradigm, which was aimed at exploiting increasing returns to scale through standardization of products (as initially exemplified by the Model T), work processes, and parts and components.

With the entry of other producers, however, automobiles became increasingly differentiated in engineering, designs, functions, optional



Source: Based on Ozawa (2003a)

Figure 1.3 Structural upgrading under Pax Britannica-led and Pax Americana-led growth-clustering

features, and add-on accessories to satisfy consumers' diversified preferences, although this type of differentiation was normally of the 'skin-deep' (on the surface) nature. Nevertheless, the stage of assembly-based industries, which also included electric machinery and appliances, became by nature far more *consumer-oriented* and far more responsive to diversified consumer tastes than its previous counterpart of heavy and chemical industrialization. The business concept of 'marketing' (as opposed to 'production') and the practice of 'market research' came into use in the United States where the 'differentiated Smithian' stage first saw its highest state of evolution ahead of any other countries – particularly with the rapid rise of the middle-income class of households underpinning the viable mass-consumption markets.

Such a new industrial structure necessitated strong market democracy where people are able to vote by their dollars in determining the desirable types of consumer goods. Individual freedom of choice became the *sine qua none* of the age of high mass consumption. Consumerism was the market ideology of US-led global capitalism – and the hallmark of the Golden Age of Capitalism, Mark II (1950–71). The US magnanimously (by then prevailing standards) opened its markets to foreign manufactures (particularly for Japanese exports, as will be seen in Chapter 3).

Rising consumerism then spurred R&D activities in corporate America in search of new products. As a consequence, especially in the post-WWII period, the '*Schumpeterian*' *R&D-driven industries* came to represent the subsequent stage of economic growth, innovating *knowledge-based* goods, one after another – such as TV sets, computers, semiconductors, washers and dryers, dishwashers, microwave ovens, tape-recorders, and antibiotics. In the 1950s and 1960s, many large companies in science-based industries began to set up corporate R&D centers. Notable were IBM's Watson Labs and AT&T's Bell Labs. The 'age of corporate laboratories' (Best, 2000) was thus ushered into the US economy, leading to America's industrial leadership in many high-tech sectors. 'Created' assets began increasingly to substitute for and replace 'endowed' natural assets.

Indeed, this structural transformation of the US economy was captured in the product-cycle (PC) theory of trade and investment (Vernon, 1966; Hirsch, 1967). It describes (i) why new high-income goods and labor-saving processes are first introduced in, and exported from, the US ahead of any other countries, but (ii) why such US exports are soon to be replaced by overseas production once the technology involved has been perfected and standardized, making it easy for the follower firms in other countries to imitate. In the end, furthermore, the US is actually to wind up importing these goods, the very goods it has initially innovated at home and exported. Hence, the PC theory can be interpreted as a theory of innovation and cross-border knowledge dissemination.

In addition to this PC theory (Type 1), Vernon (1979) introduced the PC theory, Type II, in which R&D activities themselves are, in turn, widely dispersed throughout the world via networks of multinationals' FDI – instead of being centered only in the US. The PC theory, Type II, thus can be construed as a theory of R&D capability dispersion overseas. A full range of R&D activities (from basic research to commercialization, involving product and process engineering, designing, and development) may still be controlled and managed by US multinationals, but many such knowledge-creating activities, especially downstream, are now carried out in foreign host countries. This dispersion of R&D facilitates immediate local production in the host countries – without the prolonged product-cycle sequence of innovations at home→exports→technology transfers and local production→imports as envisaged in the PC theory, Type 1.

In this connection, another version of the PC theory (Type III) is proposed to describe how in the early upstream stages of R&D, American firms have often been induced to sell basic/seed technologies abroad through licensing or other non-equity transactions – instead of fully developing and commercializing them at home first, often even giving up commercialization efforts altogether. The PC theory, Type III, is quite relevant to Japan's postwar strategy to secure under license state-of-the-art technologies in 'crude' (un- or underdeveloped) form from Western firms and commercialize them into successful products (more on this in Chapter 5). As rapidly catching-up economies (such as the NIEs and China) develop R&D capabilities of their own, the Japanese experience is most likely to be replicated.

The latest stage of economic growth driven by information technology (IT) has emanated from the configuration of Schumpeterian industries. The new stage is built on the Internet and other forms of IT, which have revolutionized the telecommunications industry. This IT revolution has given birth to the '*McLuhan*' *Internet-enabled phase of economic growth* in which we now live – named after Marshall McLuhan, the guru of mass communications (Ozawa, 2001b). Indeed, the phenomena of 'The Media is the Message' (McLuhan and Fiore, 1967) and 'The Global Village' (now Web-enabled) (McLuhan and Powers, 1989) are the hallmarks of our present age of information. This new growth sector was pioneered in the US, particularly during the latter half of the 1990s. (The salient features of the McLuhan stage will be examined further in Chapter 6.)

In addition to the above five stages, moreover, an additional phase of growth is actually in the making as another spin-off from the Schumpeterian industries and as a subsystem of the New Economy. It is based on the biotechnology (BT) revolution, though still in its infancy as a lead sector. A tentative nomenclature can be assigned to this promising industry: the 'Watson-Crick' stage of growth – named after James Watson and Francis

Crick, Nobel prize winners who discovered the famous double helix in the DNA molecular structure in the early 1950s. In addition, yet another technology revolution is in the offing: a nano-technology (NT) revolution. The world will thus soon witness a fuller unfolding of the New Economy, a new economic structure that is molded not only by IT but by BT – and soon by NT as well. It is said that a comeback of presently depressed Silicon Valley depends upon its capability to ride ‘the next big wave of innovation after the internet: the convergence of bio-, info- and nano-technologies’.²

We can recapitulate the sequential path and nature of modern industries introduced under global capitalism as follows. What the Pax Britannica introduced were initially the labor-intensive light industries (the ‘Heckscher–Ohlin’ stage) as typified by textiles and then the resource-intensive, scale-driven heavy and chemical industries (the ‘non-differentiated Smithian’ stage) as epitomized by steel, basic chemicals, and heavy machinery. In contrast, the Pax Americana created the highly components-intensive, assembly-based, genuinely consumer-oriented, and R&D-intensive industries (the ‘differentiated Smithian’ and the ‘Schumpeterian’ stages) as best represented by automobiles and electronics – and most recently, the Internet-enabled information-intensive industries (the ‘McLuhan’ stage), which may soon be joined by the BT and NT revolutions. In particular, the IT-driven industries are built on ‘intellectual and entrepreneurial capital’ and strongly geared to the needs of final consumers. The New Economy is the latest creation of US-led consumer capitalism.

Furthermore, the three tiers of industries developed under the Pax Americana all require market democracy as the *sine qua non*, where individual freedom and the free enterprise system prevail, along with safeguarded human rights. As Baumol (2002) argues, free market capitalism is the most efficient innovation machine to produce a stream of innovations, satisfying consumer needs and demands – because of its ‘survival-of-the-fittest’ force of fierce competition:

... what differentiates the prototype capitalist economy most sharply from all other economic systems is free-market pressures that force firms into a continuing process of innovation, *because it becomes a matter of life and death for many of them*. The static efficiency properties that are stressed by standard welfare economics are emphatically *not* the most important qualities of capitalist economies. Rather, what is clear to historians and laypersons alike is that *capitalism is unique* in the extraordinary growth record it has been able to achieve; in its recurring industrial revolutions that have produced an outpouring of material wealth unlike anything previously seen in human history. (p. viii, emphasis original)

Open free-market capitalism is therefore the necessary institution for Pax-Americana-nurtured industries, especially for the New Economy, where individuals are increasingly empowered more fully to exercise freedom of

choice and communicate with each other at the grass roots more freely than ever before in real-time exchange of information at the click of a mouse, thanks to the IT revolution.

In contrast, the Old Economy industries (especially the ‘smoke-stack’ industries) are the legacies of the Pax Britannica. They were once developed and thrived as the leading growth sectors in the advanced countries in the pre-WWII period – under a variety of economic systems; unfettered bourgeois capitalism and colonialism (early on in Great Britain and other capitalist powers), communism (in the Soviet Union and China), fascism (in Germany, Italy, and Japan), and welfare/socialist capitalism (in Scandinavia).

In short, the evolutionary sequence of growth under capitalism has compelled the entire world economy, notably in the recent past, irrevocably to move toward market democracy as an *institutional requirement* for growth. In this sense, Amartya Sen’s (1999) vision of ‘individual freedom’ as the ultimate goal of development (‘development as freedom’) is no longer an exogenous element that needs to be attained as the objective; it is all but endogenously and autonomously achievable under the internal logic of evolutionary capitalism.

1.5. THE GOLDEN STRAITJACKET

The apt concept of the ‘Golden Straitjacket’ (Friedman, 1999) has been introduced to describe the newly emerged institutional requirements for countries to survive and thrive in this age of globalization and mega-competition that has replaced the era of the Cold War. The Cold War era divided the world into the Free World bloc, the Soviet Communist bloc, and the Third World which played the game of pitting the US and Soviet superpowers against each other. (Japan as a designated bulwark against communism was one of the most fortunate beneficiaries of the era, as will be detailed in Chapter 9.)

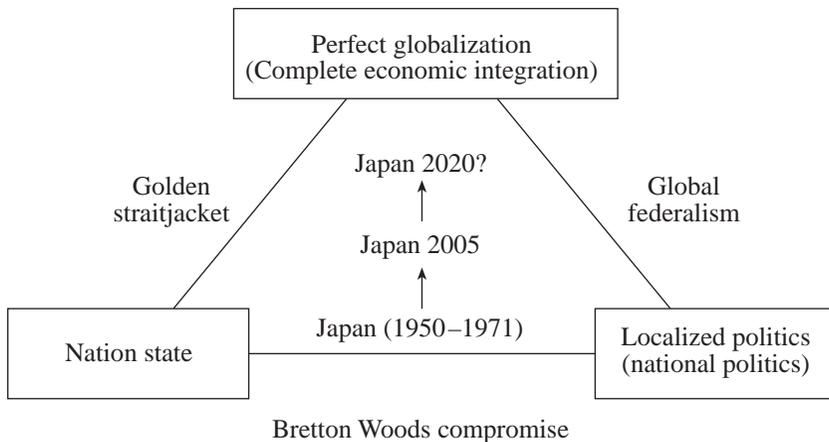
The collapse of the USSR created an entirely new world, in which the US suddenly found its total hegemony and began to mold the rest of the world in its own image. Thatcher-Reaganism was first targeted at deregulation and marketization at home but soon to spread overseas, forcing other countries to wear the Golden Straitjacket if they were to partake of the benefits of global capitalism (stepped-up economic integration). The rules of the Golden Straitjacket (or what has come to be known as the ‘Washington Consensus’) are the requirements of responsible macroeconomic policies (tight monetary and fiscal policies), a ‘hands-off’ small government, flexible labor markets, deregulation, privatization, liberalization, opening of the domestic markets for trade and investment.

Rodrik (2000) incorporates the idea of the Golden Straitjacket into what he calls ‘the political trilemma of the world economy’, a trilemma stemming from three policy choices: international economic integration, nation-state, and mass politics, as illustrated in Figure 1.4. The trilemma allows us to choose a combination of two policy choices, not all three:

If we want true international economic integration, we have to go either with the nation-state, in which case the domain of national policies will have to be significantly restricted, or else with mass politics, in which case we will have to give up the nation-state. If we want highly participatory political regimes, we have to choose between the nation-state and international economic integration. (Rodrick, 2000: 180)

Japan was once able to pursue a combination of nation-state and local politics (which was quite ethnocentric/nationalistic) at the cost of international economic integration (i.e., protecting domestic industries and controlling capital flows across border) under the Bretton Woods compromise, which, in fact, permitted restrictions on trade and capital flows to a considerable extent, although the overall trend was in the direction of freer exchanges of goods.

As will be detailed in Chapter 9, such an ethnocentric *dirigiste* catch-up policy turned out to be effective during the Bretton Woods-cum-the Cold War period. But the post-Cold-War age of the IT revolution (which ushered the New Economy into the world) has been compelling Japan to shift away from the axis of nation-state and local politics and toward that of nation-state and global integration. In other words, Japan has recently begun to wear the



Source: Based on Rodrik (2000)

Golden Straitjacket – albeit initially reluctantly and even now somewhat gingerly (as illustrated by arrows in Figure 1.4).

1.6. COMMON FEATURES AND DISSIMILARITIES BETWEEN THE TWO HEGEMONS

There are at least six important common features (though there are obviously many dissimilarities as well) between the two strands of hegemon-led growth clustering.

1.6.1. Leader's Stance

Both types of growth clustering are based on a *hierarchy* of diverse economies in terms of degree of technological advance and levels of per capita income. Each hegemonic economy (as may be interchangeably called the 'first lead goose' in terms of the flying-geese model of tandem growth discussed earlier) initially even adopted a unilateral free-trade stance. This created the vast and readily available markets to which the emulating economies were able to export goods. The hegemon thus provided a crucial external market (demand) so that the follower countries could supplement their underdeveloped internal markets and even earn foreign exchange (dominant currency).

The only difference between Great Britain and the United States as a lead economy was that the former at least initially restricted technology outflows to retain trade competitiveness at home, while the latter was much more willing to impart its technological and organizational knowledge overseas (as evidenced by America's various programs of technology transfer and economic aid in the post-WWII period) – most importantly, because of the huge technological gap that existed at the end of the war and America's Cold War geopolitics to create industrially strong allies.

1.6.2. Layers of Emulators

Both British and American hierarchies had layers of challengers. In the British hegemony, as Rostow (1960) shows in his stages theory of growth, Britain had a take-off lead over the 1783–1802 period, followed by 'take-off Class II (1830–50)' (e.g., US, France, and Germany), then 'take-off Class III (1870–1901)' (e.g., Sweden, Japan, Russia, Italy, Canada, and Australia), and 'take-off Class IV (1933 onward)' (e.g., Argentina, Turkey, Brazil, Mexico, Iran). Although Rostow is concerned only with identifying when the take-off (and subsequently 'the drive to technological maturity and high mass consumption') has occurred in different countries, his classification of

countries demonstrates the time lags involved among what he calls the ‘four graduating classes’. It is also of interest to note that Japan was already in the third graduating class, along with such other countries as Sweden and Italy, under the forces of Britain-led growth clustering in the pre-World War I (WWI) period.

The British hegemony ended by WWI, and the between-the-wars period witnessed a global stagnation. The US, a member of the second graduating class, whose economy dramatically expanded during WWII, emerged decisively as a new hegemon after the war. Thus, the America-led clustering was clearly a continuation of the Britain-led clustering. In turn, the America-led Pacific Rim clustering has been a sequence of tandem growth: US→Japan→NIEs→ASEAN-4→China. That is to say, the flying-geese pattern of tandem growth has been a regional manifestation of America-led clustering. (It should be noted, however, that this sequence of tandem growth has become *no longer* so linear and monotonic as depicted in the FG pattern in some industries, notably electronics and the Internet-enabled industries. That is to say, the FG formation becomes ‘un-orderly’, though its essence – knowledge transfer – remains unchanged.)

1.6.3. Emulators’ Catch-up Policy – ‘Infant Industry’ Protection

The Britain-led clustering indicates that the emulating nations all used dynamic ‘infant-industry’ protection (import substitution) policies. Interestingly, Friedrich List (1841) greatly influenced both Germany and the US (of the second graduating class or the second geese) in adopting protection as a means of building up national manufacturing industries in their efforts to catch up with Britain. Surprisingly enough, it is not widely known that List himself was actively involved in the early protectionist movement and the formulation of the early tariff policies of the US. He was in exile from Germany in the US from 1825–1830 to escape a ten-month sentence received for his liberal ideas, which were too far advanced for the government of the time (Bell, 1953).

Japan as a second goose under the American hierarchy similarly pursued a dynamic infant-industry protection strategy, as did South Korea and Taiwan (the third-ranking geese). On the other hand, China is currently engaged in a new form of protection, what may be called ‘infant market protection’, involving the participation of many foreign multinationals in local industrial development in its still protected markets (Ozawa, 1999b).

It is worth noting that even Britain’s rise to power in the wake of the Industrial Revolution may itself be interpreted as an outcome of import substitution involving Indian cotton cloth. Textile machinery was invented for the very purpose of manufacturing ‘the cotton yarn that European hands

were too clumsy to produce by methods long used in India' (Rostow, 1990: 22).

1.6.4. Emulators' Technological Contributions

A successful catch-up process is not a mere borrowing of advanced knowledge (technology and skills) from the hegemonic economy. It involves original knowledge creation, normally as improvements on – or alternatives to – existing knowledge. Among the most notable innovations made by the followers during the British-based period were, as mentioned earlier, the interchangeability/standardization of parts and assembly-line mass production (Fordism/Taylorism) in the US. Later on, under the America-led clustering, mass production in turn came to be replaced by flexible or lean production (to be discussed in Chapter 5) in Japan. Japan's consumer electronics industry also made a significant contribution to innovating and commercializing a slew of sleek and wondrous gadgets, devices, and components (ranging from pocket-sized transistor radios in the late 1950s to business-card-sized calculators, the quartz watch, portable stereos, VCRs in the 1970s to LCDs and camcorders in the 1980s to CD players, digital cameras, and high-definition flat TVs in the 1990s, and now DVDs and other digitalized devices). The simultaneous existence of the technologically capable second geese is critical in augmenting and further spreading the forces of macro-clustering initially set in motion by the lead goose. The role of the second geese as a technological augments cannot be overemphasized.

1.6.5. Trade and Factor Movement

In both hierarchies, multilateral patterns of trade ensued. Britain (the first goose) and its close emulators, continental Europe and the US, focused on manufacturing, while the primary producing countries (mostly colonies) specialized in producing and providing raw materials to the industrial North. And a new international division of labor developed between Britain and other newly industrialized European countries and the US, in which Britain tended to specialize in the old industries (steel, ships, rail, and related goods) and services (especially international finance and insurance), while Europe and the US specialized in the new industries (chemicals and electrical goods) (Landes, 1969).

Furthermore, the British growth clustering was strongly characterized by international labor migration and capital (mostly debt capital) from the Old World to the New World. Kevin O'Rourke and Jeffrey Williamson's *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy* (1999) is the first attempt to present a comprehensive analysis of

Britain-led clustering in terms of a received neoclassical framework, the Heckscher–Ohlin–Samuelson factor-endowment theory. O’Rourke and Williamson’s aim is to examine cliometrically if income (real wage) convergence occurred among major economies during the 1850–1914 period. They argue that the driving mechanisms of what they call ‘globalization’ (which is equivalent to the notion of growth clustering) are (i) cross-border factor movements (labor migration and capital flows) and (ii) international trade – both of which were substantially liberated due to cost reductions in transportation and communications (railroads, steam ships, and the telegraph) and the hegemon’s (Britain’s) free trade stance. They stress that ‘Our results suggest that the ability to exploit international factor markets was *the* crucial variable determining relative performance’ (O’Rourke and Williamson, 1999: 282, emphasis added). Capital flows were mostly debt capital (bonds) at that time. Put in terms of our lexicon, the more successful a catching-up country (the New World) was in attracting immigrants and capital inflows, the more effective it was in riding on the hegemon-led wave of growth clustering. This thus explains the success of the US to later emerge as the heir of global capitalism.

In contrast, the US-led growth clustering, especially as it is regionalized in East Asia, has been quite different, since labor migration was out of the question, and capital flows were initially constrained under the Bretton Woods (original IMF) regime. Trade and knowledge flows were *the* crucial variables determining relative growth. This was, indeed, the very situation Japan exploited to its advantage, as will be seen in subsequent chapters. Later on, furthermore, capital movement, once liberalized, has turned to rapid cross-border flows of FDI, portfolio equity investment, and bank loans.

As was the case with the British hegemony, its American counterpart has been supporting industrial production in the rest of the world by securing and governing the supplies of raw materials and fuels (now, oil and natural gas) from the Third World. In addition, a new division of labor has developed between the US and East Asia, in which the former has become ever more service-oriented (e.g., R&D, banking, finance, and insurance), while the latter has increasingly specialized in manufacturing. These patterns of multi-lateralism are the reflections of trade based on differences in the stages of growth and structural upgrading.

1.6.6. Currency Stability

Both the Britain- and America-led regimes produced a Golden Age of Capitalism, as seen earlier – chronologically speaking, 1820–1913 for the former and 1950–73 for the latter, respectively. During the Britain-led golden age the GDPs and exports of constituent countries rose phenomenally by

then-prevailing standards; 2.2 per cent (1820–70) to 2.5 per cent (1870–1913) in growth rates, and 4.0 per cent (1820–70) and 3.9 per cent (1870–1913) in export expansion. During the America-led golden age, there was 4.9 per cent in growth and 8.6 per cent in export expansion (Maddison, 1982, as cited in Glyn et al., 1990). Thus, ‘global economic involvement’ (Gray, 1999), another way of describing a process of globalization, intensified. The golden-age growth of the Pax Britannica was facilitated by the gold standard, and that of the Pax Americana first by the Bretton Woods system of fixed exchange rates, but later also by its ability to adapt to and manage flexible rates when this proved vital. Most recently, America’s balance-of-payments conditions are such that many developing countries (notably China) have been able to keep their currencies undervalued vis-à-vis the US dollar so as to remain competitive in trade (causing the Humean ‘flying of manufactures’ phenomenon) and stock up on foreign exchange reserves.

1.6.7. Disruptions in Growth Clustering

The Britain-led clustering was ended by WWI, while its US-led counterpart has so far been interrupted by oil crises (in 1974 and 1978) and most recently by a series of financial crises, notably in Asia and Latin America. But the hegemonic power of the US continues – especially with the recent information technology revolution (more on this in Chapter 6).

1.7. RUSSIA AND JAPAN AS ‘TAKE-OFF CLASSMATES’: COMMUNISM VS. CONSUMERISM³

As pointed out earlier, the US-led growth clustering has been built on strong consumerism and market democracy. In this connection it is worth paying attention to the collapse of the USSR where consumer goods were once in short supply and it was difficult to shop – say, in comparison to postwar Japan where all manner of consumer goods came to abound, raising the people’s standard of living dramatically.

Interestingly enough, Russia and Japan initially had many common characteristics as late starters at industrialization. Both began to industrialize at about the same time – and under the imperial tutelage of their respective rulers, the tsar in the former and the Meiji emperor in the latter. As discussed earlier, in categorizing countries into four different classes with respect to their ‘take-off’ periods, Rostow (1960) grouped Russia and Japan together in the take-off Class III (1870–1901). Russia and Japan thus began as classmates, so to speak, in the take-off stage of economic development. To be more exact, Rostow identified the Russian take-off as approximately from 1890 to 1914,

and Japan's from 1878 to 1899. In the next stage of 'the drive to maturity' (in which 'a society has effectively applied the range of [then] modern technology to the bulk of its resources'), 1950 was a 'rough symbolic date for technological maturity' for Russia, and 1940 for Japan.

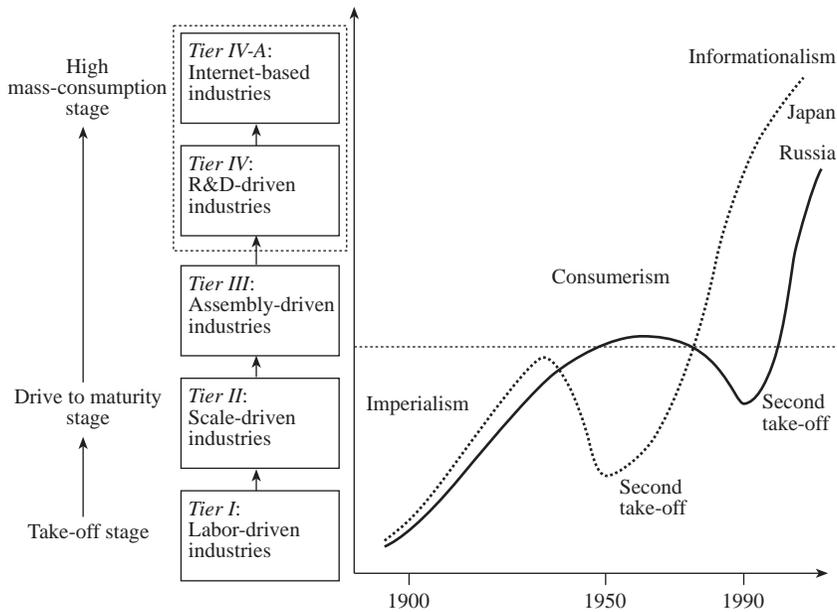
Consequently, Japan was slightly ahead of Russia through the 'drive-to-maturity' stage. But Japan's lead accelerated, especially after 1950 when it regained political autonomy upon the signing of the San Francisco Peace Treaty, and its economic miracle was soon to be made on the back of market democracy – with an ever-widening gap vis-à-vis Russia. For the next stage (after the 'drive-to-maturity' phase) is the age of high mass consumption in which Russia was victimized by its own political system, totalitarian communism, since such a system proved incompatible with the democratic consumerism needed to make mass-consumption capitalism flourish. The collapse of communism was the telling testimony to the intrinsic incompatibility between the age of consumerism and the centrally planned and military-dominated totalitarian society.

Rostow's (1960) prognosis concerning the self-contradictory course of Soviet communism back in the late 1950s shows great foresight:

We come now to the age of high mass-consumption, where, in time, the leading sectors shift towards durable consumers' goods and services: a phase from which Americans are beginning to emerge [in the 1950s]; whose not unequivocal joys Western Europe and Japan are beginning energetically to probe; and *with which Soviet society is engaged in an uneasy flirtation.* (p. 10, emphasis added)

For the United States, the turning point was perhaps Henry Ford's moving assembly line of 1913–14; but it was in the 1920s, and again in the post-war decade, 1946–56, that this stage of growth was pressed to, virtually, its logical conclusion. In the 1950s Western Europe and Japan appear to have fully entered this phase, accounting substantially for a momentum in their economies quite unexpected in the immediate postwar years. The Soviet Union is technically ready for this stage, and *by every sign, its citizens hunger for it: but communist leaders face difficult political and social problems of adjustment if this stage is launched.* (p. 11, emphasis added)

The basic incompatibility between totalitarian communism and the age of consumerism gave the communist leaders only one option: in order to retain power, they had to keep the Soviet economy in the pre-consumerism phase of industrial production, namely, heavy and chemical industrialization. In the meantime, the West, including Japan, quickly proceeded to the phase of high mass consumption, as its political system, democracy, turned out to be structurally congruous with the new age of consumer capitalism. No wonder, then, that the Soviet bloc came tumbling down in the late 1980s. The same forces of Pax Americana-led growth clustering likewise tapped the shores of communist China, which began pragmatically to adopt a market economy by



Source: Based on Ozawa (1996b)

Figure 1.5 Sequential catch-up development: Japan vs. Russia

opening its door to the Free World in 1987. These developments are schematically illustrated in Figure 1.5.

Why did the US win the Cold War? In a nutshell, it was not so much the build-up of US military power under Ronald Reagan as the affluence of the masses made possible by consumerism – that is, the power of Pax Americana-led growth clustering, that proved decisive. In other words, consumerism and individualism triumphed over communism and collectivism. That is to say, Adam Smith triumphed over Karl Marx, as so often remarked in the media after the fall of the Berlin Wall. And now the former communist bloc is in the orbit of US-led global capitalism.

1.8. SUMMING UP

We cannot deny the fact that we are living in a world economy driven by global capitalism under the aegis of the Pax Americana. The US-led regime is a growth-spreading system, even at some cost to the hegemon's own

economic interests. As Hume emphasized, this is supposed to be due to ‘a happy concurrence of causes in human affairs, which checks the growth of trade and riches’ only in one particular people, namely the hegemon people. In other words, growth and prosperity cannot be monopolized by the hegemon alone – nor, for that matter, by any higher-echelon countries, since the hegemon-led global system is so structured that growth inevitably spreads – or ‘flies’ in Hume’s own word – to lower-echelon countries. And this process is now accelerating thanks to the IT revolution (which leads to the death of time and space) and the on-going process of institutional reforms (deregulation, privatization and liberalization) and corporate business restructuring (involving the outsourcing, shedding and transfer of value-added activities both at home, abroad, and across borders).

In the subsequent five chapters, we will examine in detail how postwar Japan has benefited from the economies of hierarchical concatenation engendered by the forces of Pax-Americana-led growth clustering as Japan has climbed, rung by rung, the ladder of industrial upgrading. The climb has not necessarily been an easy task, since Japan encountered a different set of obstacles and accompanying problems at each rung. It will be shown that its catch-up growth, flying-geese style, has been the fundamental outcome of *incessant learning* (learning-by-borrowing, learning-by-emulating, and learning-by-alliancing), which has been made possible in terms of crafting economic policies and pre-arranging the requisite institutions designed to make the best use of the prevailing politico-economic conditions both at home and overseas at each stage of catch-up.

NOTES

1. Another book by Ozawa (forthcoming) on the third pattern is in progress, *Regionalized Endogenous Growth in Asia: The Flying-Geese Paradigm of Tandem Catch-Up*.
2. *The Economist*, July 19, 2000.
3. This section draws on Ozawa (1996b).