

Part I

East Asian Development Experience and Its Applicability

—Research Papers

(Institute of Developing Economies)

Chapter 1

Economic System Approach and Its Applicability

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Introduction and Overview

East Asia has achieved rapid and sustained economic growth over the past several decades. This phenomenon has attracted much attention from those interested in development from either academic or practical perspectives. The dominant school of thought, neoclassical economics, has interpreted it as a case for its advocacy of “market-friendly” economic management. There are dissenting voices as well. Some scholars have claimed that the role of government in East Asia has been typically much more proactive and forceful than the market-friendly school would make one believe. According to their views, relative prices were deliberately distorted and markets were governed as essential part of development strategy for industrial catch-up. More fundamentally, markets and economic actors were often created and nurtured by the state. East Asian experience thus needs to be viewed as a successful case of creation and evolution of economic system that sustained rapid rates of economic growth.

Here, we take a historical, evolutionary perspective of the economic system approach (ESA). The neoclassical paradigm, modeled after classical physics, is essentially ahistorical and non-evolutionary. Its analytical approach is too mechanistic and deterministic to be able to capture essential elements of interactions among actors and thus misses important strategic issues in the course of economic development. One strength of the more descriptive system approach is found in its capacity to differentiate individual economies as well as stages of development for a single economy from an organizational/institutional perspective. East Asia consists of diverse set of economies and each

economy moves through stages as they develop. We will present a brief overview of East Asian development from this comparative perspective.

Why is ESA needed? It is useful primarily because development is all about change and changes need to be understood in terms of adaptation of a system to its internal as well as external conditions. More substantively, ESA is needed because reduced-form, response function presentation of neoclassical economics is totally inadequate as a basis of policy design. Governments need to decide on many issues relating to industrial organization at a level which general guidelines fail to address. In fact, they do decide implicitly to accept whatever outcomes by not deciding on those issues.

In the discussions surrounding the competitiveness of the Japanese economy, some analysts claimed that the Japanese economic system has higher efficiency compared to those of other advanced Western economies. The main focus of examination was placed on the contrasting characteristics observed in various intra- and inter-firm relationships and also in the relations between the business and the government. Typically comparison was made between the Japanese system and the US system. The most systematic research efforts on this theme have been carried out by Prof. Masahiko AOKI and his associates. Recently they have proposed a methodology for the analysis of economic system, i.e. Comparative Institutional Analysis, combining empirical stylization and game-theoretic modeling.

A Japanese school of industrial organization led by Prof. Ken'ichi IMAI has addressed a similar set of questions on various aspects of firm behavior in a more detailed descriptive mode of discourse. Prof. Imai and his associates have established a view of industrial organization as "network relations" with attention focused on interactive mechanisms of change in capabilities of participants in networks and in the nature of their relationships. Those scholars have expanded their scope to address national economic performance in relation to characteristics of industrial organization and competition between national economic systems in the context of increasingly globalizing world economy. This school offers many useful viewpoints on economic system issues in stylizing and analyzing the process of economic development. We will rely heavily on this school of thought in our discussion of East Asian experience.

Economic system may be defined narrowly or broadly. It may also be addressed at different levels of descriptive realism or, conversely, of theoretical abstraction. Our analytical approach here is narrow as

well as descriptive. Specifically, it typically focuses on intra- and inter-firm relations at the level of an industry or an industry cluster. Alternatively, it may set its focus on an enterprise or an enterprise group. This notwithstanding, attempts will be made to capture dynamic factors accounting for rapid and sustained growth in East Asia and to relate the industry-level analysis to macro-level performance.

We believe that our ESA could make contributions in the following areas:

(1) ESA, with its focus on economic agents, enables one to address the question of productive capability at the level of a firm, an industry and an economy in a systematic way. It is also capable of stylizing and analyzing relations between economic actors and thus capable of describing and characterizing economic systems in a comparative format.

(2) ESA explores the interfaces between the production system and the financial system as well as between the private economy and the government. Stylization of these interfaces are essential in linking firm- and industry-level mechanisms to economy-wide issues such as changes in industrial composition and macroeconomic growth. We approach the experience of East Asia in the following steps. First, we will trace the emergence and expansion of individual industries. Secondly, we will examine the change in industrial composition of the economy. Third, we will relate to the sustenance of rapid growth.

(3) ESA sees the government as one complex organization that interacts with the private sector in a complex manner. Its capabilities and effectiveness are determined by its internal organizational structure and the institutional arrangements formed around it. The government has a unique role of setting legal and other formal institutional environments for economic decision-making. In East Asia governments typically took on a more activist stance and devised policies and institutions directly and specifically aimed at the nurturing and promoting of economic agents and market mechanisms. They have also engaged actively in the coordination of private sector activities by means of fiscal and financial instruments as well as other avenues of influence.

(4) ESA allows one to discuss enhancement of productive capacity and economic system evolution in an integrated manner and to define and characterize system failure in the process of development. In East Asia economic systems have exhibited flexible responses to changed internal and external conditions thus helping to recover and sustain high rates of growth. Over time they have undergone an evolu-

tionary process of change by accommodating innovations in organizational and institutional arrangements.

(5) ESA provides a meaningful and operational conceptual framework for the design and implementation of development policies and economic and technical cooperation. In particular, it is capable of identifying relevant organizational/institutional parameters in the examination of transferability of development experiences and policy lessons.

We are aware that ESA needs to be further developed and elaborated through a series of theoretical and empirical studies to explore its potentialities as research paradigm. Such studies will be most usefully organized as international collaborative research projects combining a general conceptual framework and a case comparison approach.

Furthermore, conscious attention needs to be paid to varying conditions underlying or surrounding economies in different stages of development and in different time periods. In this connection, characteristics of dominant players in international economy and implications of prevailing trade and investment agreements warrant careful examination.

1 Economic System Approach as an Alternative Paradigm

1.1 Paradigms on Economic Development

There are various schools of thought that attempt to stylize and/or analyze the process of economic development. Here we review a few influential approaches.

1.1.1 Historical School (Stage of Development Approach)

On one end of the spectrum belongs the historical approach. In fact, the dominant school of thought in Japan is informed by the “ingredients” thinking shaped under the influence of the German Historical School. It conceptualizes an economy as the sum total of its constituent parts (“ingredients”) typically identified with productive sectors or industries. It envisages the process of economic development in terms of changing proportions of productive activities within a national economy. This approach, descriptive and crude as it may be, attempts to capture the dynamic process of economic development in its totality and to identify historical sequences observed in the course of development.

The key idea in this approach consists in the concept of “stage of

development''. It is hypothesized that economies go through more or less similar stages of development, as typically identified with a universal trend of industrialization (and eventual deindustrialization). Each stage is associated with a set of leading industries. Much emphasis is placed on agriculture in the earliest stage while various branches of manufacturing assume importance as economic development proceeds. In a broad sense leading industries in the future are believed to be predictable based on historical experiences of other countries. At the same time, due attention is paid to detailed assessment of existing productive capacities as well as to favorable conditions or constraints to further development to ascertain potentials and tasks for the future.

These concerns and perspectives lead to proactive and promotional policy stance on industrial development. The Japanese historical school firmly believes that economic policy must be tailored to existing "ingredients" of a particular economy and designed to realize a specific developmental goals set for a certain future date. From this perspective it criticizes the World bank's structural adjustment approach for its failure to formulate differentiated approaches according to stages of development.

1.1.2 Neoclassical School (Market-friendly Approach)

Neoclassical economics represents the opposite extreme in the spectrum of approaches to economic development. One of the most schematic presentations of neoclassical approach is found in *The East Asian Miracle* (EAM), published by the World Bank in 1993.

The analytical framework presented in the World Bank's EAM (a "functional approach to growth") combines a macro-economics perspective based on the growth accounting formula and a micro-economics premise concerning the propitious effects of competitive discipline on growth functions (Fig. 1.1). EAM is in essence premised on the functionalism of neoclassical economics and employs an idealized vision of perfectly competitive markets as the yardstick in evaluating real-world economies.

In EAM, as is typical in neoclassical approach, accumulation of factors of production is conceived as an increase of freely deployable stocks and considered to precede decisions on allocation for specific uses. Its micro-analytic focus is on market-mediated allocation of resources across firms and industries, while the firm itself is treated as a black box. The main source of productivity increase is sought in the introduction of foreign technology and little attention is paid to im-

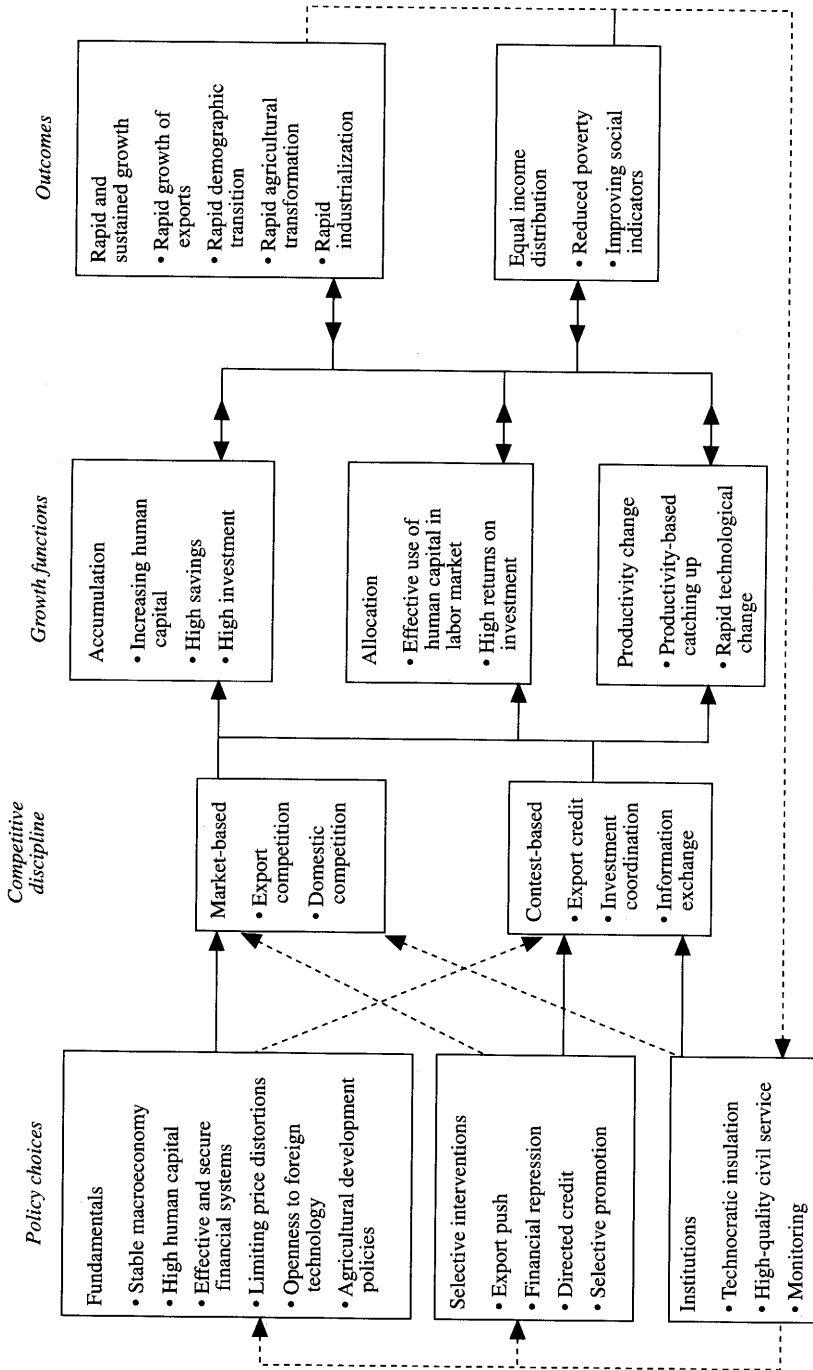


Fig. 1.1 A Functional Approach to Growth

provement in organizational and institutional arrangements within a firm or an industry. As for efficiency of the economy as a whole, emphasis is placed on a superior resource allocation outcome attained when individual economic agents are faced with a relative price structure free from distortions.

It is true that EAM raised an important issue beyond the conventional scope of “market failures” arguments by placing emphasis on “coordination problems”. It broadened the scope of competitive discipline beyond market by highlighting the mechanism of “contest” among private agents in pursuit of a better position in government-managed incentive and coordination schemes. EAM, however, regarded all the “coordination problems” as special cases of “market failures” (now defined in a broader sense) and did not re-examine the concept of “market” itself. It maintained the analytical framework of neoclassical economics, in which spontaneous market coordination mechanisms are stipulated to achieve most efficient resource allocation, and ended up re-emphasizing the same bottom-line policy message of the neoclassical or “market-friendly” approach.¹

1.1.3 New Institutional Economics (Market-enhancing Approach)

There has recently emerged a methodological critique of the neoclassical approach to economic development. One variant of New Institutional Economics, “Market-Enhancing View” proposed by Prof. Masahiko Aoki and his associates, provides further insights into “coordination problems” and identifies the critical role of government not only as one complementary to market mechanisms but more importantly as one enhancing them. The term “market” is used in a broader acceptance as meaning private coordination of decisions taken by private economic agents. Compared to the neoclassical approach it adopts less abstract and more empirical methodology of comparative institutional analysis that views an economy as a system of interdependent institutions.²

This approach departs from the neoclassical school in that it recognizes high incidence of market imperfections in the economy, especially in early stages of development. This recognition leads to its espousal of market-enhancing government policy aimed at facilitating the private sector’s capacity to overcome coordination problems and other market imperfections. It presents “contingent rent” as a central mechanism of market-enhancing policy. Contingent rent represents a logical extension and formalization of the “contest” mechanism and is supposed to be designed and managed by the

government so as to reward growth-enhancing behaviors of private agents.

Another important break with the neoclassical school is found in explicit treatment of the firm as an organization with its internal coordination mechanisms. This opens a way to questions such as organizational capabilities of a firm and the internal mechanism of the growth of the firm. To this extent New Institutional Economics enables one to relate “ingredients” of each economic agent to its behavior.

1.2 Economic System Approach (ESA)

1.2.1 Background and Motivation of ESA

The economic system approach (ESA) presented in this note initially emerged in an attempt to articulate a sense of dissatisfaction and disagreement with the conventional neoclassical account of the developmental success of East Asia. Many Japanese, academics and practitioners alike, have always found the standard neoclassical accounts based on the “functional approach to growth” as inadequate in capturing the dynamic forces that determined the trajectory of East Asian economic development. There has also been a widely held sentiment that structural adjustment and development policies promoted by the World Bank have been ineffective for many developing countries. ESA represents an attempt to re-examine the methodological premises of the policy prescriptions by the neoclassical school, with a view to identifying deficiencies of the neoclassical paradigm in its assumptions and interpretations of economic activities and economic changes and to presenting an alternative paradigm for the understanding of the process of economic development and for the design of development policies.

Since the early 1980s the development discourse has been largely dominated by the policy and research agenda of the neoclassical paradigm. In particular, the World Bank has exerted strong leadership both in the thinking and the practice of economic development and structural adjustment since the early 1980s, with its introduction of Structural Adjustment Lending (SAL) enshrining the neoclassical paradigm as the official and authoritative doctrine of the international development community. Many developing countries have undertaken structural adjustment since the 1980s. In most cases, the direct impetus has been the need to rely on SAL from the World Bank in the face of severe balance of payments difficulties. The disbursement of SAL is conditioned upon the implementation of structural adjust-

ment program, i.e., the recipient government's adoption of a package of policy and institutional reforms as prescribed or endorsed by the Bank.

Structural adjustment has two broad objectives: (1) recovering and maintaining macroeconomic balance; and (2) improving microeconomic efficiency. These two objectives are postulated to be the medium-term (3–10 years) policy goals which constitute the prior conditions for the attainment of sustainable long-term development. Specific policy measures to be adopted are prescribed as a package of policy and institutional reforms for each of the broad objectives (1) and (2). In general terms, these broad objectives are appropriate and non-controversial. Recommended reform measures have received approval and support to the extent that they are intended to redress unsustainable macroeconomic imbalances or highly wasteful use of resources caused by serious distortions in microeconomic incentive frameworks.

There are controversies, however, with regard to the target and speed of macroeconomic adjustment and the timing and sequencing of microeconomic measures for policy and institutional reforms aimed at eliminating distortions in incentive frameworks. In Japan, in particular, there are strong and widely shared criticisms of the World Bank's structural adjustment approach and policy conditionality. Japanese criticisms center on the inadequacy of the market liberalization approach for the promotion of development process. Markets are inherently imperfect or even non-existent in early stages of development, Japanese critics argue, and therefore what is needed is to foster and develop firms and industries under governmental leadership and guidance; premature liberalization is likely to result in undesirable outcomes when viewed from a long-term developmental perspective.

The controversy between the Bank and Japanese critics may be understood as a manifestation of contrasting mindsets underlying the formal pronouncements of both camps.

The World Bank's approach is based on the "framework" thinking of neoclassical economics. The Bank's policy prescriptions to developing countries ("getting the framework right") are essentially identical, both in the macro and the micro domains, with little attention paid to different stages of development. Only in the recent past, the slowness of response to structural adjustment policy in low-income countries and some middle-income countries has come to be recognized by the Bank, with the resultant attention to inadequacies

of such “ingredients” of the real sector as infrastructure, human capital, and private enterprises. This increased awareness of the weaknesses of the real sector “ingredients” has resulted in the recognition of the need to adopt supplementary measures to remedy those deficiencies in the economy. This notwithstanding, the Bank’s policy prescription continues to place the primary emphasis on eliminating distortions in “frameworks” of market-based incentives. In a nutshell, the Bank’s analytical focus is placed on market framework and policy stance remains essentially “market-friendly.”

In contrast, the dominant school of thought in Japan is informed by the “ingredients” thinking. The most elaborate manifestation to date of the Japanese approach is found in an OECF document: “Issues related to the World Bank’s Approach to Structural Adjustment—Proposal from a Major Partner” (OECF Occasional Paper No. 1, October 1991). This document puts forth criticisms against the lopsided emphasis placed on “efficient resource allocation through the market mechanism” in the Bank’s structural adjustment approach and proposes its own set of policy prescriptions as complements or substitutes. Four questions are addressed: (1) need for “measures aiming ‘directly’ at promoting investment” in order to attain sustainable growth; (2) need for a long-term viewpoint and conscious industrial policy for the promotion of leading industries in the future; (3) significance of directed and subsidized finance for the promotion of investment and infant industries; and (4) need to take actual economic, political and social conditions into consideration in making privatization decisions.

The OECF document represents a Japanese manifesto based on the “ingredients” thinking and interpretations therefrom of Japanese and East Asian development experiences. It criticizes the “framework” thinking of the neoclassical economics that lies beneath the Bank’s structural adjustment approach as wanting in the understanding of the dynamic process of economic development.

This initial round of debate between the World Bank and the Japanese critics failed to achieve a meaningful meeting of minds because of the diagonally different mindsets the two camps were (unconsciously) conditioned by.

1.2.2 What is ESA?

ESA represents an attempt to present an alternative paradigm for the understanding of the process of economic development and for the design of development policies. The term “economic system” is here

used to describe the way productive capacities exist embodied in cooperative relationships within and between firms and in relation to various factor markets (Fig. 1.2). The formation and evolution of an economic system is conceptualized as an interrelated and mutually reinforcing process comprising the enhancement of organizational capabilities of firms and the expansion and deepening of inter-firm relationships. In other words, the expansion of market and the increase in division of labor at the industry level is understood as an outcome of capacity building and network creation at the firm level.

ESA places main emphasis on the strengthening of organizational capabilities of economic agents in the process of economic development and views markets as interrelationships among them formed and reshaped through their interactions as individual agents undergo organizational evolution. This approach may be usefully applied to the stylization and analysis of the process of formation and evolution of a market economy in a specific historical context. In this way, the “economic system” approach represents a markedly distinct perspective from that of the functional approach of the World Bank, or the neoclassical paradigm it is informed by, which conceptualizes the market mechanism as passive responses by individual economic agents to the prevailing incentive structure.

ESA propounded here is constructed at a level yet less theoretical and more descriptive than the New Institutional Economics (market-enhancing approach) introduced before. It is informed by a Japanese school of industrial organization study led by Prof. Ken’ichi Imai.³ It focuses its attention on the technical and managerial capabilities of economic agents and views the “market” as a collection of relational arrangements among them. Markets are created and developed, according to this approach, through an interactive process of decision-making and action-taking by economic agents in an attempt to establish and reform interrelationships among them. Facilitating and managing this process is conceived to be an essential role of the government in promoting development.

Unlike the neoclassical school ESA does not view stocks of productive resources comprising the productive capacity of an economy as perfectly malleable endowments. They exist in distinctive forms and contexts, embodying, and mediated and coordinated by, on-the-spot know-how and expertise acquired through learning by experience within specific organizational setups within a firm and particular institutional arrangements between firms. From this perspective, an important function of a market economy is to provide opportunities

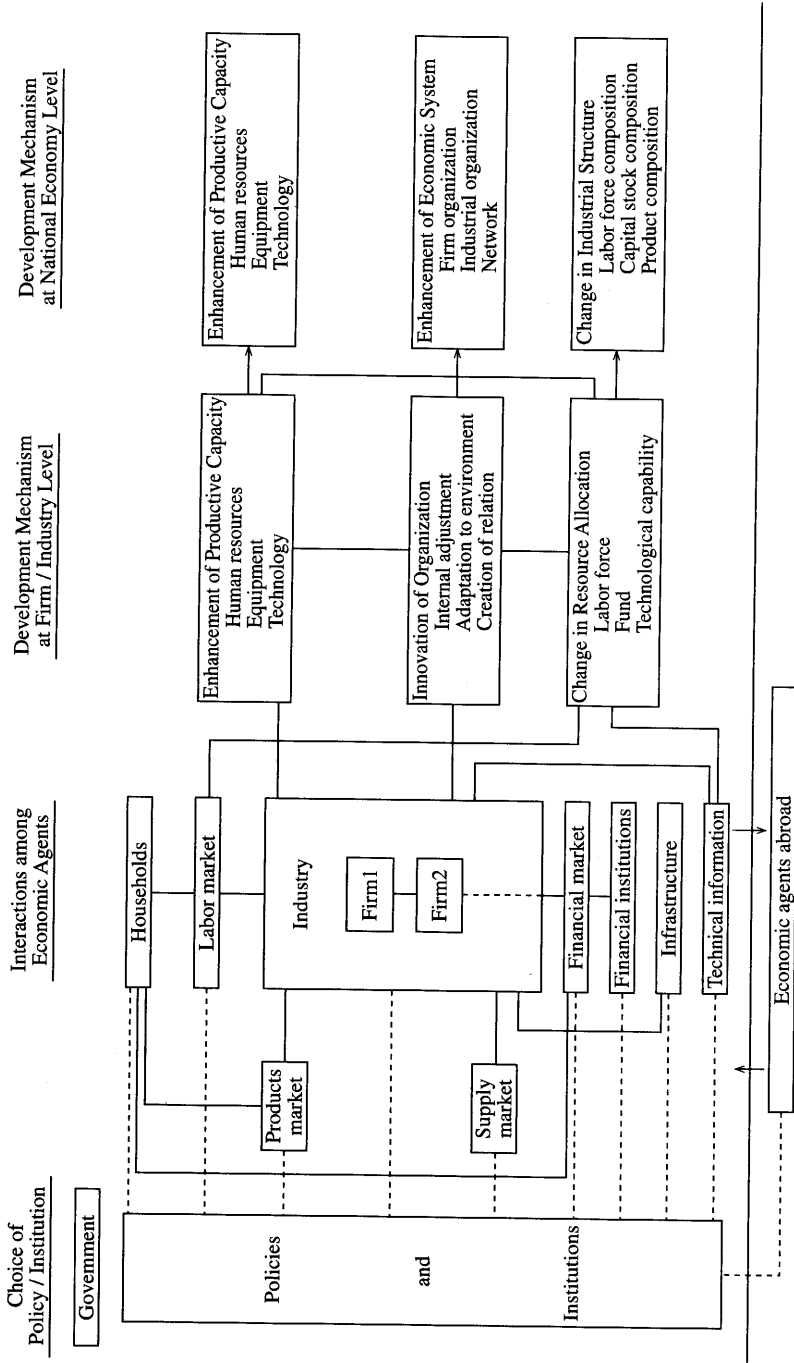


Fig. 1.2 Economic System Approach to Economic Development

for trial-and-error experiments aimed at enhancing organizational capabilities of firms and developing institutional arrangements between firms. ESA aims to give prominence to these viewpoints in stylizing and analyzing the evolution of economic system in the course of development.

ESA is inspired by some of the fundamental thoughts on methodology of development economics by Prof. Shigeru Ishikawa, the dean of development economics in Japan.⁴ First, it emphasizes the importance of paying explicit attention to both productive capacities and organizational/institutional structures in setting up a conceptual framework for the description and analysis of economic activities and of processes and mechanisms of economic development. Secondly, it broadly characterizes the process of organizational/institutional evolution in the course of economic development as the transition from a customary or command economy to a market economy and attempts to stylize the sequences and variations in organizational/institutional changes in comparative empirical study. Thirdly, it attempts to understand changes in production capacity and changes in organizational/institutional structure in an integrated manner. In this approach, the term “economic system” is sometimes used in a narrow sense in reference to the aspect of organizational/institutional structures. It should be remembered, however, that attention is also paid to the aspect of productive capacity insofar as the capabilities of economic agents are viewed as fundamental determinants of organizational/institutional arrangements they form and evolve.

1.2.3 How Does ESA Compare with Others?

Four alternative approaches are considered here. The first approach sees an economy as an aggregation of various (tangible) components which constitute the economy, typically in terms of production sectors. It is labeled as “historical approach” since a version of the German historical school influential in Japan takes this approach and proposes a development stage theory based on empirically observed regularities. The second approach views an economy as being composed of individual agents that make decisions and take actions. The “economic system approach” propounded in this paper represents this perspective. The third approach defines an economy in terms of institutions that regulate and coordinate economic actions by individual agents. This represents the principal concern of the New Institutional Economics, and the “market enhancing approach” may prove to be one of the most powerful variants of this approach. The fourth,

the “market friendly approach”, envisages an economy as essentially consisting of markets, which as a whole serve as the predominant coordinating framework for economic decision-making. Main analytical focus is placed on a system of incentives as determined by market mechanisms and policy prescriptions are mostly concerned with eliminating policy-induced distortions in the incentive framework. This is the dominant perspective of the neoclassical orthodoxy, to which the World Bank subscribes.

These four approaches are compared and contrasted to each other in a matrix format (Table 1.1). In this matrix the vertical axis corresponds to the degree of theoretical abstraction in formulating functional relationships, as against descriptive realism or tangibility. At the top of the scale is placed the neoclassical paradigm, or the “market friendly approach”, whose analyses are carried out exclusively in functional terms addressing the question of incentive frameworks while paying no explicit attention to economic agents or ingredients of an economy. The second place from the top is assigned to the “market enhancing approach”, whose dominant mode of analysis is functional but directed to institutions conceptualized on the basis of stylizations and characterizations of empirical observations. The “economic system approach” occupies the third place. It attaches more importance to descriptive realism in stylizing and comparing intra-firm organizations and inter-firm institutional arrangements as well as processes of their changes. To the extent it pays explicit attention to economic agents and their decision-making, however, the approach is capable of identifying meaningful interfaces with more functionally oriented approaches. The last entry on the vertical scale, the “historical approach”, represents a quintessentially non-theoretical perspective in that propositions it generates, often in regard to stages of development defined in terms of changes in industrial composition over time, are typically in the nature of summarization of empirically observed regularities with virtually no mention of underlying functional relationships. This approach may nonetheless be important, or even indispensable, in capturing the course of development of productive capacities as a historical process and in broadly identifying possible interactions between changes in productive capacities and in institutional factors.

Based on the foregoing discussion, the economic system approach may be characterized in comparison with the others in the following manner:

- (1) ESA focuses on the capabilities of economic agents and inter-

relationships among them in presenting a summary of and a conceptual model for developmental experiences. It thus provides a distinctive and contrasting perspective to interpretations based on neoclassical economics, which places primary analytical focus on incentive environments surrounding economic agents and functional relations associating their actions with incentives they face.

(2) As an implication of the first point, ESA mainly examines the effects on capabilities of economic agents and interrelationships among them in proposing or evaluating structural adjustment or development policies.

(3) ESA postulates the economic relationships by applying a micro-oriented variant of the “ingredients” thinking, which sees an economy as an aggregation of tangible parts or units. It differs from the perspective of the “framework” thinking underlying the functional approach, which maintains that the incentive structure dictates the activities of individual economic agents.

(4) ESA may be understood as an application of Prof. Shigeru Ishikawa’s methodology, which attempts to understand the process of economic development on aspects both of productive capacity and of organizational/institutional setup.

(5) As for the treatment of institutions, ESA takes a position similar to that of Oliver Williamson’s. It focuses on “institutional arrangements” that govern the relationships among economic agents and examines how “institutional environments” influence the design and working of institutional arrangements. It is deemed critical to distinguish these two levels in order to avoid confusions in discussing institutions.⁵

(6) In relation to the “ingredients” thinking, the following comments are in order. The traditional “ingredients” thinking stylizes the process of economic development by tracing it from the perspective of successive emergence of leading industries with resulting changes in industrial composition. Policy discussions tend to be focused on sustaining economic development through the upgrading of industrial composition and strongly orientated toward the mobilization of policy measures aimed at fostering designated infant industries. In contrast, ESA analyzes industrial organization and inter-industry relationships and characterizes the process of economic development as organizational/institutional evolution. In this sense, ESA serves as an empirically grounded model of industrial development and provides a basis for the formulation and evaluation of industrial policies.

(7) In reference to the “framework” thinking, the following points need to be noted. The “framework” thinking is predicated on assumptions which derive from abstract hypothetical functional relations and therefore pays scant attention to specific economic situations. In contrast, ESA puts emphasis on the degree of development and characteristic features both of productive capacity and of organizational/institutional structures. It attempts to identify policy actions that can help promote the development of an economic system under the specific conditions of an economy in question. ESA could, by identifying the factors which determine the degree of responsiveness to government policies, indicate the limit of effectiveness of the conventional neoclassical policy package for structural adjustment and development and possibly suggest necessary supplements or alternatives.

(8) In relation to the market enhancing approach, ESA may be characterized as follows. The market enhancing approach recognizes that “coordination failures” occur frequently in making decisions on investment and technological innovation in the course of economic development. It conceives the role of the government as lying in promoting coordination among private economic agents. In this respect, the above-mentioned conceptual distinction between institutional arrangement and institutional environment seems to be highly relevant. Coordination failures are coped with by “institutional arrangements” among private economic agents, and the role of the government is to provide such supportive policies or “institutional environments” that will help promote the establishment and enforcement of institutional arrangements among private agents. Both the market enhancing approach and ESA understand institutions primarily as “institutional arrangements”. Both approaches thus share essentially common perspectives on how to conceptualize economic transactions.

(9) ESA and the market enhancing approach differ from each other in the following respects. The market enhancing approach originated from and represents the extension of the “market failure” literature based on the “framework” thinking of neoclassical economics. Its analytical framework is in essence an application of the functional approach. In other words, the main focus of analysis is placed on the responses of economic agents to incentives and on the way incentive structures are to be organized to induce desirable reactions. In contrast, ESA, having originated from a Japanese school of industrial organization, is heavily colored by the “ingredients” thinking and at-

taches much more weight to describing and stylizing concrete real-world experiences.

(10) As stated above, ESA and the market enhancing approach have distinct, possibly opposing, cognitive roots, the “ingredients” thinking and the “framework” thinking respectively. They have come close enough, however, to allow a new integrated approach combining both “ingredients” thinking and “framework” thinking. On one hand, the market enhancing approach with its functional analysis of institutional evolution can contribute to clarifying the mechanism of how the relationships among economic agents, as described and stylized by ESA, are formed and altered. On the other hand, the effectiveness of the functionalist analytical methodology, on which the market enhancing approach is based, will be tested by how much it can explain the creation of and changes in the relationships among economic agents in a specific economy.

2 Economic System Evolution in East Asian Economic Development

Our task here is to present a review of economic development in East Asia from the perspective of ESA. We approach the experience of East Asia in the following steps. First, we will trace the emergence and expansion of individual industries. Secondly, we will examine the change in industrial composition within an economy. Third, we will relate to the sustenance of rapid growth. Many of East Asian economies have achieved high performance on all of the three scores. We believe that those superior records could be interpreted from the perspective of ESA. We begin with a brief methodological note.

2.1 Analytical Focus and Policy Relevance

2.1.1 Generation and Realization of Investment Opportunities

Our analytical perspective is focused on the factors in and mechanisms of the process of successive generation and realization of investment opportunities. We hypothesize that such a process leads to, as well as is enabled by, a shift in investment allocation, which in turn results in a change in industrial composition. The record of high and sustained rates of growth in East Asia needs to be understood in relation to the source of and response to investment opportunities.

This analytical focus directs our attention to the interaction between the enhancement of productive capacity and the evolution of

production system. This is where we depart from the production function approach of the neoclassical school. We take the methodological position that explicit attention needs to be paid to production system since we believe that it is an essential determinant of the generation and realization of investment opportunities. Here the production system of a firm signifies the totality of intra- and inter-firm relationships involved in the execution of production plans.

Investment opportunities are generated by technical and systemic (i.e. organizational/institutional) innovations. These innovations might be original or transferred from other sources. In either case they represent or necessitate various types of “new combinations” (à la Schumpeter) leading to the creation or modification (“creative destruction”) of a production system and some part of the broader economic system. In other words, investment opportunity is realized if and only if the required process of the formation or adaptation of the production system of a firm can be successfully carried out.

2.1.2 Interactions between Productive Capacity and Production System

The formation or adaptation of a production system entails and consists of creation or modification of internal and external communication channels, collaborative decision-making mechanisms as well as incentive and monitoring schemes. These organizational/institutional requirements must be met for investment opportunities to be turned into profitable investment projects. The rate of return of an investment project will be greatly affected by the nature of the production system it is translated into; some projects may be judged unprofitable or infeasible because of the absence or scarcity of critical system components.

In general, if an economic system is unable to generate or accommodate innovations and thus fail to realize potential investment opportunities, it will tend to exhibit poor performance in productive efficiency of investment. Furthermore, to the extent that production and economic systems exhibit hysteresis, there would be cumulative effects of a virtuous or vicious circle between innovation, investment, learning and information generation, and creation of new potentials for innovation.

2.1.3 General Propositions and Typologies

As stated above, our analytical focus in tracing the experience of economic development in East Asia is placed on the sequence of genera-

tion and realization of investment opportunities. In this relation we pay explicit attention to productive capacity of a firm as it is embodied in the production system, or a totality of intra- and inter-firm relationships involved in the execution of production plans.

Sources of innovations and investment opportunities will vary depending on the conditions surrounding existing or prospective firms. Roughly, the central idea may be presented in reference to the common, albeit imprecise, conceptual distinction between high technology and low technology. Innovations on high-tech frontiers will need to be generated through systematic R&D activities which often overlap with the domain of pure science. Such R&D activities may not be totally separate from ongoing productive activities but they will certainly have high degrees of independence. In contrast, innovations in low-tech areas will be, in most cases, either introduced by transfer of existing technology or achieved as a result of learning based on experiences. R&D activities will be closely tied to these sources of innovation and will typically have the characteristics of improvement engineering.

The nature of organizational/institutional requirements will be certainly different from one type of productive activity to another. It is nonetheless important to see that any production activity necessarily constitutes a system defined by a set of organizational/institutional arrangements for each and every aspect of a firm's operation. The degree of significance of those organizational/institutional factors in operational efficiency and in generation of innovations will also vary from one line of business to another. These factors seem to be more important in assembly type industries involving close coordination between producers of parts and components and final assemblers. Even in capital-intensive, automated processing type activities, such as iron and steel and petrochemicals, however, small incremental improvements engendered by or reflected in changes in organizational/institutional arrangements account for large percentages of realized productivity increases.

2.1.4 Production System and Financial System

Adequate supply of finance for investment as well as for working capital from the financial system is often an important necessary condition for the realization of investment opportunity as a production system of a firm. Financial system tends to have a determinative influence on the level and composition of investment finance and thus plays a decisive role in the realization of innovations, the emer-

gence and expansion of new activities and the resulting change in industrial composition of a national economy. In this connection, financial strength and technical capabilities (in evaluation, monitoring and advice) of banks and other financial organizations are critically important factors in the determination of the nature, composition and efficiency of investment projects to be realized. Financial system is subject to short-term impacts of domestic and international financial developments. In relation to the performance of the production system it is of utmost importance that the financial system could meet long-term requirements of real investment that embodies innovation.

2.1.5 Economic System and the Government

We will initially introduce the government into our economic system approach as an exogenous agent. So far we have focused on “institutional arrangements” that govern the relationships among private economic agents. The role of the government is to define and establish “institutional environments” that sets the rules of the game for private economic agents, thus affecting the design and working of institutional arrangements. It is certainly true that the government has a unique role of setting legal and other formal institutional environments for economic decision-making by private agents. In this rule-setting or framework-defining role of the government the mode of interaction between the government and the private economy is stipulated to be indirect, as in the typical neoclassical approach to policy-making.

There are more direct, proactive ways the government can interact with private agents. In East Asia governments typically have taken on a more activist stance and devised policies and institutions directly and specifically aimed at the nurturing and promotion of economic agents and market mechanisms. They have also engaged actively in the coordination of private sector activities by means of fiscal and financial instruments as well as other avenues of influence. In this direct mode of interaction between the government and the private economy the conceptual distinction between “institutional arrangements” and “institutional environments” loses practical significance. The government may better be viewed as an element in the economic system which is expected to play a direct entrepreneurial or intermediary role. The role of the government is not only that of the groundskeeper of the playing field; the government itself is an essential player.

There is another aspect that needs to be explicitly introduced. It is

not sufficient to discuss the role or the purpose of the government. It is also necessary to address the question of actual functions and capabilities of the government. One logical extension of ESA will be to see the government as a complex organization that interacts with the private sector in a complex manner. Its capabilities and effectiveness are determined by its internal organizational structure and the institutional arrangements formed around it. The government itself needs to be viewed as an evolving organization that adapts to new environment and reshapes its relations with the private sector.

The above discussion is closely related to the question of "government failures". The role of government is to facilitate the evolution of the economic system so the goals of economic development could be best achieved. In other words, the government needs to address "system failures" at the level of national economy. At the most general level government failures may be defined in relation to the attainment of this task. The extent to which the government will be able to carry out the task will hinge on its own organizational/institutional capabilities. In cases of serious government failure the government itself could turn into the source of system failure. This possibility should not, however, foreclose the consideration of critical and unique roles of the government in envisaging and managing the evolution of economic system as a whole.

2.1.6 An Expanded Framework of ESA

The role of government needs to be viewed in a broad perspective with due attention paid to various aspects of economic management. As stated above, the analytical focus of ESA is placed on the internal structure of the production system, and the financial system and the government is taken into consideration only to the extent and in the aspects they directly relate to the performance of the production system. In understanding the evolution of economic system as a whole and identifying the role of the government, however, one needs to take a broad and balanced perspective (Fig. 1.3). One needs to pay adequate attention to financial as well as real sectors of the economy and to short-term issues of macroeconomic balance, such as inflation and balance of payments position, as well as long-term issues of growth and structural transformation.

Of particular significance in this broadened scope is the question of the level and financing of investment (Fig. 1.4). This is a pivotal question in which financial and real issues intersect and short-term and long-term concerns merge. As we emphasized above, investment op-

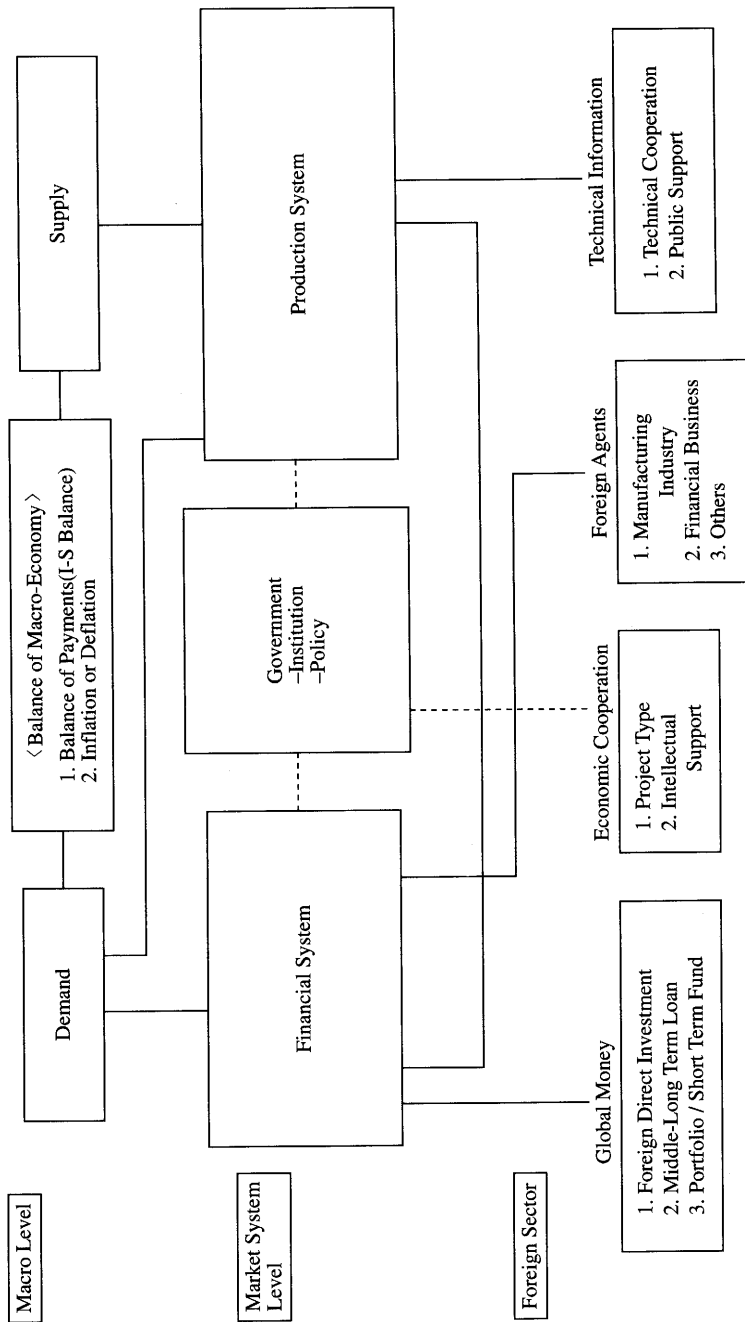


Fig. 1.3 Expanded Framework of the Economic System Approach

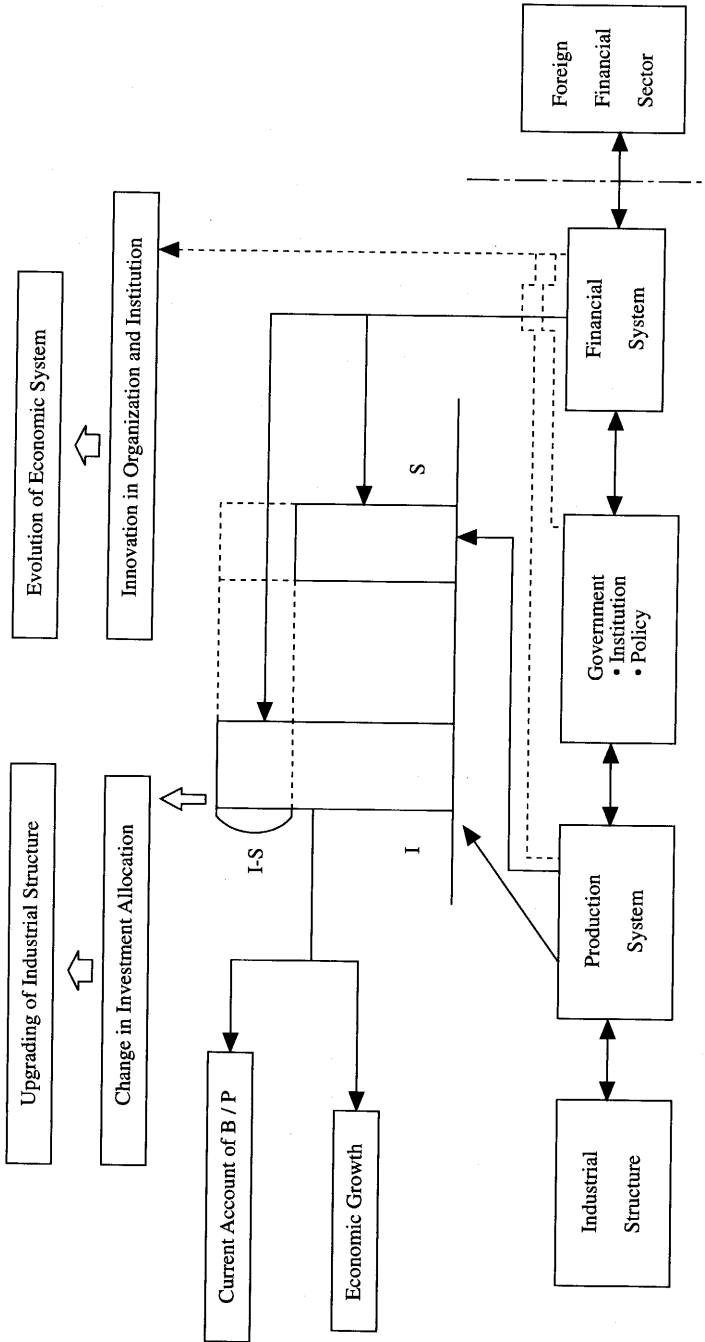


Fig. 1.4 The Relation between Economic System, Industrial Structure and Macro-Economy

portunities are generated within the production system as it acquires new capabilities and enhances absorptive capacity for technological and organizational/institutional innovations. These investments will cause an increase in I-S gap and current account deficit as a result of their immediate demand effects, even if those macroeconomic imbalances are self-liquidating over time as supply capacities are enhanced. The I-S gap, or the current account deficit, will be easily financed for a short period of time so far as there is sufficient amount of capital inflow. Furthermore, the availability of capital inflow could tilt investment allocation toward non-productive projects and could also reduce the domestic savings ratio. Similarly, an increased degree of freedom in fiscal management might result in a loss of discipline in tax collection and public expenditure decisions on the part of the government. These developments would diminish long-term growth potential and result in a setback of development process. Thus short-term macroeconomic and financial management constitutes an important factor in long-term development of the production system.

2.2 Historical Evolution of Japanese Industrial System⁶

Here we will summarize the historical experience of Japan to illustrate a number of general issues to be explored in relation to ESA. First, Japanese experience will demonstrate the way the degree of development of market and the nature of key technology exert decisive influence on some aspects of economic system. Secondly, it will show how the existing system enables as well as constrains the subsequent process of its evolution. Thirdly, it will indicate that workings of public policies and institutions need to be examined in relation to their impacts on the functioning of the existing economic system or their influence on its evolution.

2.2.1 Pre-WWII Period

The long-term process of industrial development in Japan since Meiji offers a historical case of the evolution of inter-firm relations. From Meiji and throughout the pre-WWII period the modern sector of Japanese economy was largely organized under *zaibatsu* control. *Zaibatsu* may be viewed as an institutional arrangement for effective functioning of entrepreneurial activities under the condition of scarce endowment of capital, entrepreneurs, engineers, and information and of the underdevelopment of markets. *Zaibatsu* groups were formed to utilize scarce resources which were hard to be sourced

from markets, such as technical knowledge and entrepreneurial talent. They thus internalized economies of scope and realized inter-related investment opportunities. *Zaibatsu* also represented an effective arrangement to cope with risks and uncertainties inherent in new businesses under the condition of the scarcity of risk capital and insurance markets. In sum, *zaibatsu* may be interpreted to be an institutional innovation that made for the realization, and in later periods also the generation, of investment opportunities in new activities thus critically contributing to the initial start and sustenance of the growth of the modern sector of the Japanese economy.

The start of Japan's modern economic growth took place in the technological paradigm of the original industrial revolution based on steam power, iron and steel and industrial machinery. The transfer of core technologies in new industries were relatively simple as they were largely embodied in plant and equipment. The most difficult task was to establish a system of relations by means of which productive potentials of core technologies could be exploited and translated into high rates of return on invested capital. This exactly corresponds to what we call here the economic system at the firm level and comprized the hiring and training of labor force, the procurement of raw materials, the marketing and distribution of products and the financing of the firm's production and investment activities. All these tasks required high levels of entrepreneurial talent in the initial system formation phase ("new combinations" a la Schumpeter). Economies of scale and scope were bound to be important considerations in designing organizational structure. Large general trading houses and banks became hallmarks of *zaibatsu* groups. The central task for the top management of each *zaibatsu* group was to determine the course of future development of the group and allocate financial and managerial resources accordingly. Top managers could largely derive their visions from the observed trajectories of development of advanced economies in the West. And yet, the task of translating a vision into reality was no small entrepreneurial challenge, especially in early phases of Japan's modern sector. *Zaibatsu* groups subsequently introduced the second wave of technological innovations (in electric and chemical industries) and established and developed a new set of growth industries. Those industries turned into new profit centers and contributed to further expansion of *zaibatsu* groups. As their organizational resources increased and as their economic power acquired dominance, however, management of *zaibatsu* groups tended to become increasingly more conservative and bureaucratic.

In contrast, in some part of the traditional sector there emerged expansion and upgrading of production and distribution systems in response to new business opportunities. This was most notable in weaving sections of textile industries. In weaving many traditional production units not only survived but upgraded their products and processes and that development supported, as well as was enabled by, adaptation and upgrading on the part of traditional producers of looms. Large numbers of loom makers and ironworks catering to them formed an important source of subcontractors in machinery industries in subsequent periods. Furthermore, some loom makers eventually transformed themselves into fully modern producers of various types of machinery, thus forming part of the core of the modern sector of the economy. It is interesting to note that many of the leading corporations of the post-WWII high growth period emerged from this group of traditional machine builders and parts manufacturers.

2.2.2 *Post-WWII Period*

Industrial organization during the post-WWII period was characterized by increased degrees of autonomy in corporate management in the wake of the dissolution of the *zaibatsu* groups. It is important, however, to recognize the role of enterprise groups. Some of them were based on the previous *zaibatsu* ties and others were newly formed. The main function of enterprise groups was to facilitate exchanges of information and thus to reduce risks and uncertainties surrounding investment projects. They seemed to have contributed to smoother transmission of technical information and enabled coordination of investment decisions in related projects through the process of close consultation.

Leading industries during the first phase of the post-WWII period (1950s and 60s) were suppliers of industrial raw materials in iron and steel and in chemicals. Productive efficiency in those industries were largely determined by the scale of key pieces of equipment. The central corporate strategy for growth in those industries consisted in realizing the economies of scale earlier than competitors do and also in establishing ties with large-scale purchasers and thus securing stable demand. In implementing such a growth strategy the presence of enterprise groups (mostly based on former *zaibatsu* ties) played an important role. They facilitated expansion-oriented investment decisions by providing more or less guaranteed advance orders to the producers of industrial materials. Funds for large-scale projects were

provided by public and private lending institutions, the former serving as a signaling agent indicating official support for the projects. Public policy also served as a coordinator of last resort in coping with episodes of industry-wide excess capacity in those industries. Depression cartels were sanctioned by the Ministry of International Trade and Industry (MITI) and production reductions were designed and implemented following MITI's instructions.

Leading industries during the second phase of the post-WWII period (late 1960s and 70s) were assembling industries in electrical machinery and automobiles. Major assemblers in these industries each formed an enterprise group and organized a system of parts supply based on long-term continuous transactions. The central corporate strategy for growth in those industries consisted in realizing cost reduction and quality improvement based on economies of experience and learning. This strategy was pursued at the level of the entire enterprise group. The assembler provided technical and managerial assistance to related suppliers and subcontractors; the latter were required to accumulate know-how and expand and upgrade their technical and managerial capabilities. The core elements of inter-firm relationship was the sharing of information and the institutionalization of collaborative arrangements. In effect they were embodied in personal communications and mutual understandings between people directly involved. As mentioned above, many of the subcontractors originated from traditional ironworks and small parts manufacturers. Some consisted of new ones established by engineers and craftsmen. Public policy helped promote their technological and managerial upgrading by providing preferential credits and technical assistance.

2.2.3 *Network Industrial Organization*

The third phase of the post-WWII period (late 1970s and 80s) is characterized by the fusion of technological paradigms spearheaded by the universal application of electronics and information technology in productive activities. One notable result of such fusion is the emergence of a new paradigm of *mechatronics* as represented by CAD/CAM and robotics among others. Technological innovations were promoted concurrently in various branches of the manufacturing and related service industries, as breakthroughs in element technology led to increasingly finer specialization and also to new attempts at integration of technological elements. Inter-firm relationships became increasingly more interactive and dynamic moving

beyond sharing of existing information toward joint creation of new information and continuous reshaping of interfaces. This more flexible mode of inter-firm relationship came to be called “network industrial organization” (Imai 1984). Under this mode of inter-firm relationship the main role of entrepreneurial function is found in the “editing” of the firm’s networks so as to realize unexplored business opportunities by tapping technological potentialities and meeting latent demands. Decisions need to be taken closer at the operational level on the basis of on-the-spot information and interpretation generated in close communication and collaboration between people directly in charge. This necessity prompted organizational reforms in many large firms toward decentralized decision-making.

2.3 Role of the Government and the External Actors: Two Illustrative Cases

The historical trajectory of industrial development in Japan, as stylized above, may be primarily viewed as a process of endogenous interactions between the enhancement of productive capacity and the evolution of productive system within the domestic private economy. This will not be the case in other economies in East Asia. Here we summarize the experiences of Korea and Malaysia to illustrate the role of the government and the external actors, respectively.

2.3.1 State-directed Industrial Development in Korea⁷

Korea represents an extreme case of state-directed economic development among the NIEs in East Asia. The military government that came in power in 1962 exerted strong and effective leadership in initiating and sustaining industrial development. The government had the long-term goals of upgrading the composition of industrial production and of strengthening international competitiveness of industries. It believed that those goals could be met only through the formation of large industrial enterprises. Various measures of protection and promotion for designated industries were instituted. At the same time the government had no choice but to promote exports facing as it did a programmed phase-out of grant aid from the US.

The key player in the introduction and expansion of new industries have been family-owned business groups (*chaebols*). During the 1960s they established production system for large-scale manufacturing of standardized goods in textiles, footwear, plywood and other technologically simple products. Production technology and technologically sophisticated inputs and equipment were imported from ad-

vanced economies, Japan among others. Qualified labor force was supplied from an effective system of basic and technical education and was kept disciplined by a tight government control on union movements. In the financial system commercial banks were nationalized and were used as conduit for "policy-directed loans". The key instruments the government employed were policy schemes of subsidized credits and other preferences for exporters. Preferential treatment created rent for exporters, but insofar as its availability was conditioned on export performance those schemes functioned as a growth promoting mechanism. These first-generation industries expanded rapidly on the strength of phenomenal export growth.

From around the late 1960s two developments emerged and led to a diversification of industrial composition. First, some of the *chaebols* diversified into assembly-type industries, first into electrical appliances and electronics and subsequently into shipbuilding and automobiles. The basic pattern of production system remained the same as in the case of the previous phase of simple manufacturing in textiles and others. Those second-generation industries were all export-oriented and they operated under a similar set of incentive schemes. They too achieved rapid growth in export and production, thereby bringing about a diversification in industrial composition for the national economy as well as for individual *chaebols*.

Second, the state took a direct entrepreneurial role in capital-intensive, scale-sensitive production of industrial raw materials such as iron and steel. Korean government initiated a program for the promotion of "heavy and chemical industries" and designated iron and steel, nonferrous metals, shipbuilding, machinery, electronics and chemicals as "strategic industries". Policy-directed subsidized credits continued to be the key policy instrument for enticing *chaebols* to these more risky lines of industrial production. By entering into ventures in these industries *chaebols* seized the opportunity to establish vertical integration within the group. *Chaebols* evolved into technologically and managerially sophisticated organizations increasingly capable of planning and executing more demanding investment projects.

Korean economy now faces a new challenge of "systemic transition to market economy". The system of policy-directed finance and intra-organizational resource re-allocation within each *chaebol* seems to be inviable both in relation to the opening of domestic economy and in relation to socio-political pressures. A new system is only built upon the previous one, however. Technological and managerial

capabilities acquired by *chaebols* will prove to be valuable assets in the course of economic development in the next stage.

2.3.2 FDI as the Engine of Industrial Growth in Malaysia⁸

Malaysia represents an extreme case of “external dependence” in the attempt to achieve industrial development by a third-tier economy in East Asia. The weight of foreign enterprises is extremely high in industrial activities accounting for nearly half of total manufacturing output (44% in 1990) and more than 80% of manufactured exports. Industrial composition of manufacturing production is characterized by a markedly high percentage accounted for by the electric machinery and electronics industry (rising from already high 15% in mid-1980s to around 30% today). The industry’s share is even higher in manufactured exports (rising from around 50% in mid-1980s to 65% today). In this important industry foreign enterprises account for 85% of output (in 1990).

Foreign enterprises in the electric machinery and electronics industry are located in free trade zones (FTZs) and form “export enclaves” virtually unconnected with the rest of the economy. Their function is better understood as an extension of the production system of investing foreign firms. What they have sought in Malaysia is diligent work force and reliable infrastructural services. Malaysian government has made sure that they be available and instituted schemes of preferences as added incentives.

With the ever expanding scale of industrial production by foreign enterprises, there are now opportunities to establish linkages between FTZs and domestic producers. The government is promoting an industrial cluster approach with a view to establishing links between export-oriented industrial activities and potential domestic suppliers of materials and parts and components. For this purpose the government has initiated the Industrial Linkage Programme (ILP) aimed at strengthening technical and managerial capabilities of small- and medium-scale enterprises. ILP covers various aspects of business operations encompassing marketing, finance, technical information, skills, and infrastructure. A central component of ILP is the Vendor Development Programme (VDP) promoted under a tripartite scheme consisting of the government, anchor enterprises and financial institutions. In 1995, 54 anchor enterprises and 70 vendors are registered in VDP. Another component of ILP is a database on small businesses called the Subcontractor Exchange Scheme.

It is too early to tell whether and to what extent these attempts

toward the formation of domestic system of production will succeed. They represent right steps in the right direction. Malaysian economy needs to explore new investment opportunities in the interaction of foreign and domestic enterprises. There are cost and management factors making for increased local sourcing of materials and parts and components. Small but rapidly expanding local consumer market provides an added incentive for foreign enterprises to establish a stronger presence in the local economy. Malaysia may present a highly relevant model for contemporary developing economies embarking on the course of outward-looking industrialization.

2.4 Evolving Industrial Configuration in East Asia

In this section we will present an overview of East Asian industrial development from the perspective of ESA. Here we will continue to discuss economic systems at the level of a nation, although due attention is paid to transnational actors and influences.

East Asian economies under consideration here may be divided into three tiers according to income level as well as the sophistication of economic system.

The first tier consists of Japan with its century long history of industrial development and highly autonomous institutional structure.

The second tier consists of Taiwan and Korea with their post-WWII trajectories of limited but continual industrial diversification and deepening and records of high and sustained macroeconomic growth. Their economies possess contrasting sets of organizational and institutional arrangements: Taiwanese system is characterized by a flexible inter-firm relations between small businesses; Korean system is dominated by few large conglomerates called *chaebols*.

The third tier comprises the economies of ASEAN3, i.e. Malaysia, Thailand, and Indonesia. Their industrial development was initially domestic market-oriented but has undergone a drastic and qualitative change as they received large inflows of export-oriented foreign direct investments from the late 1980s on. Newly transplanted export-oriented segments are not integrated with the rest of the industrial sector and their sources of technology and management remain almost entirely foreign.

Regional economic configuration in East Asia is often captured by the “flying geese” metaphor. In fact there are two versions to the flying geese metaphor. One is macroscopic relating to relative positions of national economies in the level of development (often measured by GNP per capita). The other is microscopic in the sense that

attention is focused on a particular industry or even a product. In this microscopic approach the sequence of net exports of a certain product or a product group is traced over time for each economy and then superimposed to see a sequence and interrelation of events on a regional scope.

These two versions of the flying geese metaphor are logically inter-related. The theory of comparative advantage associates trade pattern with resource endowments, which in turn tends to be highly correlated with the level of per capita income. On the demand side, there are regularities between consumption pattern and income level. Thus these underlying economic forces will tend to produce a similar pattern of sequence across economies as they move forward in the process of development. This logic may not be totally negated but could be significantly modified. Foreign direct investment could either accentuate or diminish production specialization. Policy intervention could either promote or hinder the realization of comparative advantage.

From the late 1980s there took place a drastic and qualitative change in the industrial configuration in East Asia. The change is most clearly demonstrated in the formation of regional production networks in several manufacturing industries, electric machinery and electronics, and textiles and apparel, among others. There are two types of regional production arrangements. One is a division of labor across products, with high-end products produced in high-income economies and low-end products in low-income economies. The other is a division of labor across production processes, with high-tech processes carried out in high-income economies and low-tech processes in low-income economies. The three tiers in East Asia have thus come to form a closely connected layers in the web of region-wide corporate production networks.

3 Concluding Remarks

Finally, let us identify what remain as future tasks for the economic system approach.

First, a methodological question should be addressed as to whether the perspectives of the economic system approach (as schematically presented in Fig. 1.2) can be used as a universally applicable checklist or they can only be applicable when certain specific conditions are met. The formulation of the economic system approach has been prompted by the desire to capture relevant real-world ingredients and

structures in understanding dynamic developmental performances of East Asian economies. In fact, the schematic presentation of the approach draws heavily on a Japanese school of industrial organization studies, which is mainly concerned with analysis of technological and organizational/institutional innovations in post-war Japan, especially in advanced assembly-type manufacturing industries such as automobile and electronics. It is possible to maintain, in principle, that the economic system approach can serve as a universally applicable checklist. Its usefulness in understanding central developmental tasks and in formulating industrial policies, however, might largely hinge on the stage of economic development, the characteristics of industries to be analyzed, and the dominant mode of government-private sector relations.

Second, a question concerning the range of issues and the level of analysis that the economic system approach can handle. The strength of the approach, based on industrial organization studies, lies in its ability to identify the determining factors for dynamism and sustainability of economic development at the level of an individual industry or industrial cluster, and thus to provide a basis for formulating and evaluating the policies to foster industries. The economic system approach, however, is not equipped with a theoretical construction that would enable it to treat economy-wide issues such as changes in industrial composition or macroeconomic balances in the process of economic development. This task of relating industry-level performances to determinants of investment allocation remains as a critical challenge in understanding mechanisms of dynamic and sustained development in East Asia. It might be necessary to explore and clarify the relationships between overall economic performance and decisive factors at an individual industry level through comparative case studies.

Notes

1. The concept of "market-friendly" intervention was introduced and expounded in *World Development Report 1991*.
2. Masahiko Aoki et. al., eds., *The Role of Government in East Asian Economic Development: Comparative Institutional Analysis*, Oxford University Press, 1997.
3. The following articles are standard reference available in English on this school of industrial organization: Ken'ichi Imai, "Japanese Corporate System," in Shumpei Kumon and Henry Rosovsky eds., *The Political Economy of Japan*, Vol. 3, Stanford University Press, 1992; Ken'ichi Imai and Hiroyuki Itami, "In-

terpenetration of Organization and Market”, *International Journal of Industrial Organization*, 2 (Dec. 1984), pp. 285–310; Ken’ichi Imai and Yasunori Baba, “Systemic Innovation and Cross-border Networks—Transcending Markets and Hierarchies to Create a New Techno-economic System,” in OECD, *Technology and Productivity—The Challenge for Economic Policy*, Paris: OECD, 1991, pp. 389–406. Essentially the same approach is found in an overview of the Japanese economic system by Michael Best in his monograph: *The New Competition: Institutions of Industrial Restructuring*, Cambridge, MA: Harvard University Press, 1990.

4. Shigeru Ishikawa, *Kaihatsu-Keizaigaku-no Kihon-Mondai* [Fundamental Questions of Development Economics](in Japanese), Tokyo:Iwanami, 1990

5. “Institutional environment” and “institutional arrangement” are defined as follows (quoted from Oliver Williamson “The Institutions and Governance of economic development and Reform” proceedings of the World Bank Annual Conference on Development Economics 1994):

The main divide is between the institutional environment approach, a more macroanalytic perspective concerned with the political and legal rules of the game, and the institutions of governance, a more microanalytic perspective dealing with firm and market modes of contract and organization. (p. 171)

The institutional environment is the set of fundamental political, social, and legal ground rules that establishes the basis for production, exchange and distribution . . . An institutional arrangement is an arrangement between economic units that governs the ways in which these units can cooperate and/or compete. (p. 174)

6. This section draws heavily on Ken’ichi Imai, “Japanese Corporate System,” in Shumpei Kumon & Henry Rosovsky eds., *The Political Economy of Japan*. Vol. 3, Stanford University Press, 1992.

7. This part draws on Yukiko Fukagawa, “Chaebol-led High Growth System in South Korea,” Chapter 4 , Part I of this volume.

8. This part draws on Takeshi Aoki, “Development Experience of Malaysia and Topics in Same,” Chapter 6 , Part I of this volume.