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New Developments in Economic Policy: Complementarity between Government and the Market Place

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[1] July 1997, which marked the 10th anniversary of the Research Institute of International Trade and Industry (MITI/RI), Director General Ryutaro Komiya, a professor of International Politics and Economics Department at Aoyama Gakuin University, was replaced by Stanford professor Masahiko Aoki. As an internal research center of the Ministry of International Trade and Industry (MITI), the Research Institute of International Trade and Industry has played a role in forming the theoretical backbone of MITI policy. To mark the new director's first year, and also as a way of returning to its roots, MITI/RI has since September 1997 held a series of conferences having as their central theme the fundamental issue of the roles of the market and government.

A total of 27 researchers attended the six conferences, each of which was also attended by numerous MITI personnel, and at which there were presentations by nine researchers and Mr. Ichiryu as well as lively discussions in which all present participated. It was the invaluable ideas heard at these conferences, and the desire to put in written form the new knowledge deemed applicable to commercial and industrial policy, that inspired the authors to write this paper. The authors would also like to thank the many participants for their invaluable comments during presentations made at these conferences.

As the foregoing clearly shows, this paper merely presents the personal opinions of the authors, and in no way represents either the official position or policy stance of the Research Institute of International Trade and Industry or the Ministry of International Trade and Industry. It must also be stated that this paper is in no way intended to represent the opinions of the researchers who attended the conferences.

In the writing of this paper, the authors received the complete cooperation of MITI/RI personnel Yoshiyuki Sugiura (senior research fellow), Noboru Kuwayama (research fellow), Masaki Nakauchi (research fellow) and Yoshiaki Maeda (research fellow) in investigating the inventory of individual policies discussed in Chapter 3, writing the manuscript, and during the group discussions attended by everyone involved.

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Abstract

In this paper, the economic structural reforms currently being implemented by the Japanese government, along with the economic policies that are needed to make the Japanese economy dynamic and vigorous in the 21st century, are discussed from the basic viewpoint of comparative institutional analysis, with an emphasis on institutions and social and economic system. This paper also outlines the basic relationship between markets, private-sector institutions and governments, and asserts that the expansion of market functions is now an extremely important role of the Japanese government.

The market is inherently capable of achieving dynamic efficiency in resource allocation through innovation when it is complemented with private-sector coordination and with the institutions that result from the spread and firm establishment of this coordination. However, the market's performance is also greatly influenced by private-sector institutions, which are at various degrees of development in each nation. According to comparative institutional analysis, an institution possesses historical path dependence as a system, and so evolves within the context of a nation's economic and social environment and occasionally, when institutional complementarity exists, achieves stability as a firmly established economic and social system that determines that country's comparative advantage. However, when the surrounding environment changes or a higher stage of development is achieved, institutions that had previously promoted proper performance can cease to function and in some cases actually hinder economic activity. The major environmental changes affecting Japan - namely, globalization, informatization, declining birth rates combined with the aging of society, and Japan's emergence as a front-runner in international society - are indeed changes that demand institutional reform.

Amid such circumstances, the Japanese government is being called on to play the role of facilitating the private-sector coordination intended to bring out the market's inherent dynamic resource allocation functions, which are achieved through the integrated action of the market and private-sector institutions. In short, these are "market enhancing" policies. Market enhancing policies must enhance the abilities of private-sector coordination efforts and institutions to generate incentives for market agents, reduce moral hazards, and correct the asymmetry of information, and must also promote the establishment of intermediaries capable of assuming this role. With respect to Japan's current circumstances, it is essential to reinvigorate innovation, to overcome the inertia that arises from institutional

complementarity, and to secure a diverse range of options that permit economically driven challenges.

From this basic point of view, the second half of this paper discusses the direction that is preferable for the individual policies Japan is currently promoting: introduction of the pure holding company system, reevaluation of corporate governance, making proper conditions to encourage the creation of new industries, tax system reforms, reevaluation of employment systems, university reforms, designing a proper intellectual property rights, environmental policies, introducing market functions into government activities, and improving the social safety net, among others. The formulating of a package of such policies from a market enhancing view is seen as contributing to evolution that culminates in a new Japanese economic and social system.

It is also imperative to expand those policies - which the authors term type 2 market enhancing policy - in which the market complements government action through the introduction of market functions and private-sector coordination functions in fields where government involvement will continue, such as regulation and the providing of public goods. Establishing a trial period for government measures prior to full implementation and establishing an effective system of checks and balances in the government are also important issues in view of the need to address growing uncertainty about the future by reducing the possibility of government failure.

Contents

Preface

Since September 1997, the Research Institute of International Trade and Industry (MITI/RI) has held a series of six conferences, entitled "The roles of the market and government," grounded in the basic viewpoint of implementing market function-oriented economic policy in Japan in order to prepare for the 21st century. These conferences gathered together many researchers and others for extensive debate that reexamined the issues of the proper relationship between the market and government and what role the government should play if it were to extensively follow market functions.

A continuation of said debate, this paper first positions the economic structural reform policy measures currently being wholeheartedly pursued by the government as a policy system designed to transform Japan's economic and social system into one that more greatly stresses market functions, then discusses, in light of concrete policy issues, the role of government in the new Japanese economic and social system the transition to which is being effected through economic structural reform policy. We support the basic viewpoint of the economic theory known as "comparative institutional analysis"[1] , and pursue the discussion outlined below in accordance with said theory. This reason is that comparative institutional analysis is quite probably the most suitable theoretical tool for examining the relationship between the market and government under Japan's new economic and social system. The designing of a suitable relationship between the market and government is nothing less than institutional design. However, comparative institutional analysis shows that an institution evolves with historical path dependence as a system and so must not and cannot be changed at will through policy without addressing the issue of institutional complementarity. Instead, comparative institutional analysis merely provides an indicator of policy feasibility in the changing of institutions. Also, because of the inertia arising from institutional complementarity, reform must be implemented gradually, creating the need to prioritize numerous institutions for reform. In this respect, comparative institutional analysis can provide many suggestions regarding the reform process.

At the same time, comparative institutional analysis also teaches us that even economic and social systems based on essentially the same market economy can encompass a diverse range, and that behind this diversity are the rational, albeit bounded, choices of

[1] For the basic viewpoint of comparative institutional analysis and the related technical terms, see Aoki (1995), etc.

economic agents. From this we learn that many different economic and social systems are possible in Japan's future, and that a large number of options are also available to the Japanese people. As one of the roles of the government is to inform the people which of these options can be newly adopted or altered through policy, this paper points out the various possibilities and also states radical personal opinions regarding institutions, etc., that should be added to these diverse options according to their own criteria.

This paper comprises three chapters, an overview of which follows. In chapter 1 the authors present, in their own way and within the pertinent scope, the basic viewpoint of comparative institutional analysis as it pertains to the context of "the roles of the market and government in Japan's new economic and social system." Although concrete examples are given where possible, the discussion is generally set forth on an abstract level. Thus, this chapter focuses on theory. Chapter 2, working from the discussion of Chapter 1, develops the argument that Japan's new economic and social system should be a vigorous system that is conducive to innovation by securing diverse options. This analysis is a normative argument based on the theoretical viewpoints of comparative institutional analysis. Lastly, Chapter 3 explains the significance of and the need for the specific, concrete measures either currently being implemented or considered necessary in accordance with the arguments set forth in the preceding two chapters.

Chapter 1: Japan's New Economic and Social System and the Role of Government

(1) Major changes in the economic and social environment affecting Japan

Economic activity takes place with the participation in the marketplace of many individuals and corporations (i.e., economic agents). Various economic institutions are spontaneously or artificially created to facilitate this economic activity, and are widely adopted throughout society in a developmental process, comparable to evolution, that transpires over time. Not only must an institution must adapt to the various environmental factors that affect economic activity in order to establish itself and spread in this manner, but even an institution already established inherently possesses the possibility of losing its previous functions and, under certain circumstances, actually becoming an impediment to economic activity once major environmental changes have occurred. As they are also interrelated, various institutions, when their functions are intensified in a given environment, are known to form a dominant institutional system that, while being widely established through society, also maintains close interrelations in a phenomenon known as institutional complementarity. Institutions thus complementarily interrelated are not limited to economic institutions but rather also include a broad range of social institutions. Once a dominant institutional system spread throughout the entire society forms at a given point, it essentially becomes an economic and social system. Because the respective environments of nations vary considerably in such factors as developmental stage and supplies of natural resource and also change over time, each nation's institutions and the economic and social system that forms that nation's foundations, as it is known, develop in greatly varying forms even when based on the same market economy. Comparative institutional analysis explains this diversity of national institutions by stating that institutions possess historical path dependence, and that multiple equilibria can arise from differences in the initial condition of the economic and social environment.

In the 1990s, many forms of "institutional fatigue" have been observed in the Japanese economy, highlighting the need for institutional and structural reform. The basic tendency has been for the reevaluation and reform of Japan's entire economic and social system to proceed in ways that place greater emphasis on market functions. The authors generally support this stance. Well then, what are the major environmental changes necessitating this reform of the economic and social system? We attach particular importance to the following four environmental changes: continuing globalization, socioeconomy-wide changes brought about by informatization, declining birth rates and the aging of society from a long-term, macro-environmental perspective, and Japan's emergence as a front-runner in international society as a result of economic maturation

1) Continuing globalization

There are two particularly important phenomena with respect to continuing globalization. The first is that the globally extensive increase in cross-border economic activities - in particular, the movement of capital - has in recent years resulted in increased interdependence among national economies, greater demands for an international harmonization of institutions (particularly with regard to the transparency of information), and other environmental changes common to all nations having a market economy. The second is a phenomenon with a particular relevance to Japan since the late '80s, namely, increased interdependence in the form of increasingly complex, extensive division of labor with East Asia as a result of direct investment abroad in manufacturing, particularly the processing and assembly industry. Such changes, as also reported in the White Paper on International Trade for 1996 and 1997, are expected to have many positive effects on both Japan, the investing nation, and on the East Asian nations that have received this investment. Nonetheless, sharp appreciation in the yen, in the first half of 1990's, raised fears of the "hollowing out" of the Japanese economy. Comparative advantage, however, depends on myriad factors, and this fear can be interpreted as the concern that the center of industrial production could move from Japan to other countries in response to relative cost differences between Japan and those countries, possible because those domestic industries with relatively high productivity enjoy degree of freedom in siting that is high enough to exceed national boundaries.

In addition, the global tendency to emphasize market functions can also be added to the list of global environmental changes. Behind this tendency is the fact that increasing globalization thwarts economic management that is isolated from the tendency to emphasize market functions, and also the realization - seen in the concept of "regulatory arbitrage" - that regulations that fail to keep up with worldwide trends can have such unfavorable effects as increasing the outflow of businesses to overseas locations or limiting the inflow of foreign businesses. In this respect, it is the former of the above two phenomena that will be the more important, fundamental impact of globalization.

Understanding globalization in this light reveals the historical importance of the economic turmoil that began last year in East Asia: such events could not occur without the recent major changes in the global environment that allow huge sums of money to move across borders virtually instantaneously. Furthermore, these events can also be interpreted as a demonstration of the fact that while the institutional factors at issue here may vary considerably from nation to nation, each nation's very economic and social system, including the government policy stances that may have contributed to past economic development, is now evaluated by the global financial market. Consequently, when proper reforms are not implemented at the proper time, significant damage can be sustained in a short period of time. That Japan and the rest of East Asia are all simultaneously facing economic difficulties caused by financial factors should not be considered a mere coincidence, but rather demonstrates the importance of examining the relationship between global environmental changes and each nation's respective institutional factors. MITI/RI views the relationship between East Asia's economic turmoil and its institutional factors as a research issue requiring careful examination.

2) The major economic and social impacts of informatization

Rapid advancements in information and telecommunications technology are having a major impact on the entire socioeconomy in the form of what is called informatization. Were it not for today's advanced information technology and the closely related technical advancements in the financial industry, then concerns about East Asia's economic turmoil triggering a global chain-reaction of plummeting stock prices and even a global recession would be groundless.

Okuno (1998)[2] states that "the largest impact of informatization is that great reductions in information processing and transmission costs and other information-related costs will lead to the production and distribution of massive amounts of information," and adds that "what is particularly important is that ・・・ the increased quantity of information ・・・ will also be accompanied by a rapid increase in the diversity of

2 Presented at the conference "The Impact of Informatization on the Socioeconomy," held in tandem with the 4th "The roles of the market and government" conference.

information content, [for] informatization will actually widen the difference in information content among individuals." Regarding the impact of informatization on economic and social systems, he writes, "The rapid changes in product development, production and distribution brought about by informatization have begun producing drastic changes in corporate structures, business relations between corporations, the relationship between corporations and consumers, and market governance."

These and other characteristics of informatization are envisaged bringing about sundry changes in every aspect of the modern socioeconomy, and could even conceivably lead to several definitive changes in the roles of the market and government - the topic of this paper. For instance, one major development is technological advancement in the distributed processing of information, which is foreseen further accelerating decentralization in governments and various other organizations, and also at every level within these organizations. This will also place increased restrictions not only on the ability of governments to consolidate information in order to appeal to private economic agents in a centralized manner, but also on governments' ability to monitor and control the activities of private economic agents. In fact, the tendency of advanced nations to attach greater importance to market functions and entrust more to the market may be further intensified by informatization. Furthermore, as the various institutions created by private economic agents to facilitate economic activity are also known to be deeply interrelated with respect to the exchange of information among economic agents, informatization will most likely obsolete existing institutions and promote the creation of new institutions to take their place, which would also impact on the overall economic and social system.

It must also be noted that informatization, in addition to promoting the distributed processing of information, can also potentially have a major impact on the actions of economic agents by making possible the rapid dissemination of a particular piece of information. There is no denying, for instance, that certain aspects of the financial crisis that have triggered the currently economic turmoil in East Asia were amplified by the confusion generated among people by specific pieces of information. As in this example, even a criticism or commentary based on an issue of less than primary importance can, through the global mass media or other channels, transform into "international public opinion" and have a major impact. In this respect, the government's role of disclosing correct information and providing the public with the proper information will increase in importance.

Another major impact of informatization is its potential to complicate and intensify competition by causing more differentiated products to be released into the marketplace. In this process, which leads to market fragmentation, a) informatization lowers the cost of flexible production, thereby b) enabling the production of diverse finished products in a short amount of time by disassembling products into modules and then combining different modules, and c) resulting in a system in which various products are sold in finely divided groups from which the consumer selects, effectively becoming a single product in the consumer stage (i.e., unbundling). This is expected to complicate and intensify market competition by, for instance, promoting corporations who supply the market with products to adopt more diverse strategies as to whether or not to bundle a certain category of software and hardware.[3] Thus, in combination with the globalization of competition, informatization is likely to restrict the abilities of governments to manage market competition, and it is a convincing viewpoint that emphasis in the role of government will shift instead to preliminary rule formation and ex post facto dispute resolution.

3) Declining birth rates and the aging of society

Of the major environmental changes poised to occur in Japan in the 21st century, the most certain to occur are the demographic trends of declining birth rates, the aging of society, and a shrinking population. According to intermediate forecasts in the report "Japan's Future Population Forecasts" (January 1997) by the National Institute of Population and Social Security Research, the 65-and-over population will increase in size from 14.6% of the total population in 1995 to 26.9% in 2020 and 32.3% in 2050, a high rate and level of societal aging compared to those of other advanced nations. At the same time, the productive population (ages 15 to 64) has been decreasing since peaking in 1995, and is expected to fall 16% by 2020 and approximately 43% by 2050. In sharp contrast, the respective productive populations of the U.S. and France are expected to begin declining only after increasing until 2020 and 2010, respectively.

This continuing decline in birth rates, coupled with the aging of society, is envisaged

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3 Although it has been suggested that continuing informatization creates the potential, when network affordability is also present, of the relatively quick achieving of a dominant position in the market for so-called "digital goods," such as computer OSes, the characteristics of informatization are such that the possibility of another OS becoming dominant also inherently remains, making evaluation of a market's competition conditions difficult. For a detailed argument concerning this matter, refer to Okuno (1998), op. cit.

having major impacts on Japan's macroeconomic environment. There are estimates based on various assumptions, many predicting declining family savings rates, falling rates of investment, slowing economic growth rates, and a rising rate of national burden, among others. Seen by the government as the most urgent problem is a loss of Japan's economic vitality due to factors such as increased burdens that diminish the working generation's enthusiasm for work, and Japan's diminishing appeal as a business environment due to the increased public burdens placed on the private sector.[4]

However, it is unlikely that these various forecasts sufficiently take into account the dynamic effect of the technical innovation and budding new industries resulting from the active adaptive behavior of private economic agents striving to overcome restricting demographic factors. Rather, it is important that we view the environmental changes of declining birth rates and the aging of society as demanding environmental improvements that will encourage even greater innovation.

4) Japan's emergence as a front-runner in international society

In the same respect, Japan's emergence as a "front-runner" in international society as a result of economic maturation is also an important environmental change. Of course, the setting of goals modeled after leading nations, the "catch-up" or "leapfrog" effects and other benefits of a late starter were important factors in Japan's superior economic performance from war's end through the 1980s, but this performance cannot be explained on the basis of those factors alone. Instead, a major role was played by original innovation, including the vigorous development of new products in the manufacturing industry (in particular the processing and assembly industry) and the adoption of new production methods and new organizational approaches, such as the just-in-time system. Becoming a front-runner, however, increases uncertainties, while clear goals for the future are more difficult to set, and may not even be valid under existing traditional organizations and institutional frameworks. In order to survive the intense competition under the aforementioned major environmental changes of globalization and informatization, Japanese corporations must

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4 For instance, The Action Plan for Economic Structure Reform, adopted by the Cabinet in December 1996, states, "In view of the fact that the increasing public burden placed on the Japanese people, the working generation and businesses by society's aging represents a restricting factor with respect to maintaining a vigorous economy, utmost efforts shall be made to minimize said public burdens, while maintaining fiscal soundness, by striving for increased efficiency in social security, national and local financial affairs and all other aspects of official affairs, and for equity in benefits and burdens."

work even harder at innovation.

With the role of government is certain to change as the aforesaid major changes occur in the environment surrounding the Japanese economy, economic policy will increase in importance from the perspective of bringing out the vitality of private economic agents.

(2) The relationship between the market and government: Substitution and complementation

The objective of this paper is to reexamine the role of government in Japan's economy as environmental changes occur. Doing this requires that we examine the role of "the market," to which is entrusted a large portion of economic activities, and the relationship between the market and government. Here, we shall present basic generalizations concerning the relationship between the market and government.

1) The view of economics on the role of government in a market economy

It was in modern society in the 18th century, after industrialization had been spread by the industrial revolution, that market-based transactions between private economic agents began to account for a large portion of economic activity as suggested by the term "market economy." Economics traces its roots back to this period, and Adam Smith, considered the father of economics, placed the role of the market in a market economy at the center of analysis. The basic viewpoint of economics as originated by Adam Smith emphasizes market and price mechanisms and holds that scarce resources are used efficiently when private economic agents engage compete with each other in free economic activity, being driven by the profit motive and using prices determined by supply and demand in the marketplace as signals.[5] The first theorem of welfare economics, which states that the optimum allocation of resources is achieved through market mechanisms, is

[5] In the basic viewpoint of economics, equity of income distribution is as important a yardstick of economic performance as efficiency of resource allocation. However, whereas efficiency can be evaluated with only relatively weak value judgment criteria, equity is difficult to ascertain without strong value judgments. For this reason, the science of economics views the value judgment criteria for equity either as existing outside the sphere of economics or as being indicated by the public through the act of voting under democratic institutions, the result being that debates tend to focus on efficiency. Nonetheless, the extreme disequalization of income distribution can have a negative effect on economic activity by increasing social instability, for instance. In this respect, the implementing of income redistribution policies and other economic and social policies by government is not something that economics should disaffirm.

demonstrated under a certain assumption. However, even under the laissez-faire philosophy attributed to Adam Smith, the role of government is seen as indispensable to the functioning of the market, in that government provides public goods in the form of services that the market cannot be counted on to supply adequately, or which the government is more accustomed to supplying, namely, determining and protecting the property rights of goods and services, preservation of the peace, national defense and education.

An important concept concerning the relationship between the market and government discovered during the subsequent development of economics is that of market failure, in which the market cannot assure optimal allocation of a resource either because the market does not exist or because the market exists but a sufficiently functioning price mechanism does not. The standard scenarios in which this occurs include cases of imperfect competition, the presence of an externality, or goods with the properties of public goods. Economic theory supports government intervention as a means of raising the efficiency of resource allocation when a market failure exists,[6] and all advanced nations have, to some extent, established economic policies designed to correct market failures.

Historically, fiscal and financial policies that address macroeconomic issues became firmly established in many advanced nations in the postwar years with the development - spurred by the Great Depression of 1929 - of an economic theory asserting the validity of government macroeconomic policy, particularly aggregate demand management policy. Through extensive debate over theory and policy, such policies have survived to the present day.

In addition to market failure, however, modern economics also characteristically addresses the issue of government failure, the debate over which first stressed criticisms of discretionary policies in the context of macroeconomic policy. Today, however, government failure is debated in a more general form, in the context of the position that intended policy effects are unachievable when the government does not show "reliable commitment" during policy formation, or the position that governments are not necessarily superior to private economic agents in the ability to collect or analyze information, etc.

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6 Views on market failures are varied to include the market friendly view, which assumes the rationality of economic agents but sees this rationality as limited; the "development-oriented state" view, which recognizes a broad range of market failures; and the "market enhancing" view, which recognizes the bounded rationality of economic agents and, rather than seeing the market as perfect as the market-friendly view does, sees the various forms of private-sector coordination as complementing the market, and emphasizes the role of government as promoting this private-sector coordination (Aoki, Murdock, Okuno (1996)). The market enhancing view is discussed in detail below.

2) Substitution and complementation

In this manner, the national economies of today that are essentially market economies are actually "mixed economies," in which economic activity occurs with an interrelation between the market and government. What we wish to emphasize, however, is that the foundation of economic activity must still be the market-based allocation of resources, especially in Japan and the other advanced nations which have highly advanced markets. The market has many functions, but the most important of these is the price mechanism, the mechanism whereby resource allocation is achieved through the actions of economic agents in which the prices determined by market supply and demand act as signals. The reasons that the market's functions are superior can be found in any standard textbook on microeconomics and do not need to be restated in detail here. To summarize, the price-based resource allocation function of the market characteristically 1) is decentralized, 2) uses price signals, which compress large amounts of information into an extremely limited package of public information called price, and 3) is based on an incentive system in which economic agents, using prices as signals, pursue greater utility or profit for themselves. The most definitive of these is the first: the indispensability of some form of distributed processing in resource allocation becomes clear just by imagining the vast scope of economic activity, such as the great volume of goods and services that are bought and sold, the many factors of production, and the sheer number of economic agents that deal in them. That prices determined by market supply and demand play an important role remains true today, and will no doubt remain true even in a future where technological innovations are expected to greatly enhance the information processing capabilities of the human mind. It is for this reason that we believe that even in a mixed economy the most important issue in economic policy is how to bring out the resource allocation functions of the market's price mechanism. In this sense, we strongly support the policy of orienting Japan's current economic structural reforms toward deregulation and other measures that are designed to achieve an economic and social system that places greater weight on market functions.

The relationship between the market and government in a mixed economy can be graphically represented in Fig. 1, which is based on the preceding basic viewpoints and which emphasizes said relationship in Japan and the other advanced nations.

First, the illustration's horizontal division, into ① to ②, categorizes resources according to how they are allocated: ① resources allocated by the market and ② resources allocated by the government. As the market and government are independent of each other in portions ① and ②, then from the viewpoint that all resources should be allocated by the market, one could say that portion ② is where "government is substituting for the market." Thus, portions ① and ② can be interpreted as a relationship of "substitution" between the market and government. To avoid any misunderstanding, the reader is asked to recall that depictions ① and ② view the market and government as agents of resource allocation, and with respect to the market indicate the function of price-based resource allocation. As stated in greater detail later on, the market is complemented and made to function more effectively by the various types of coordination and institutions of the private sector. Although many view the actions of this private-sector coordination and these private-sector institutions as part of market functions, or else view private-sector coordination and institutions and the market as an integrated whole which they refer to as "the market," this paper, unless specifically stated otherwise, emphasizes private-sector coordination and institutions by distinguishing between them and "the market," which is interpreted in the narrow sense of the price-based allocation of resource.

From this depiction, what is the justification - from the basic viewpoint of economics as presented in section 1) above - for the government intervention represented by portion ②, the portion of resources allocated by the government? This portion represents cases of "market failure" in which no market exists and cases where the government compensates for "market failures" by allocating resources itself, in place of the market, or provides a good or service in order to achieve an extra-economic goal. In the real world, this portion essentially represents cases where public goods and services are provided by government, and is considered to include government-owned enterprises in countries with a market economy. In addition, the role of government in social regulations based on so-called extra-economic goals is also considered part of portion ② as the providing by government of the public service of "safety."

In each case, resource are allocated, either by the market or by government. Above these portions in the illustration are several additional layers. These layers are what complement the market's price-based resource allocation function: the vertical direction represents the multi-layered, stratified structure comprised by the market-based price mechanism and the private-sector and government functions that complement it. The thin layer situated immediately above represents the minimum policy necessary for market-centered economic activity to occur, such as the establishment and protection of property rights.[7] Next comes the "private coordination and institutions" portion, which represents the various forms of private coordination that arise as a means of compensating for "coordination failure," in which sufficient performance is unachievable when relying only on resource allocation whose signals are the prices determined by supply and demand in the market; it also represents the institutions that result from the spread and firm establishment of that coordination.[8]

The remaining portions comprise those where the "government and market are complements," and can be broadly divided into the following three categories.

③a) The portion where the government complements market functions directly, regardless of private-sector coordination or institutions, in order to compensate for "market failure." In contrast to those "market failures" where, because of an externality or increasing returns, etc., optimal resource allocation is not possible with the market's price signals alone, the government performs compensation to enhance the market's resource allocation effects rather than substituting for the market as in section ② above. Examples of this include public utility regulations on natural monopolies and Pigovian taxes levied as a countermeasure to environmental problems.

③b) The portion where "market failures" in the sense of resource allocation through price signals have been to a certain extent avoided by complementation in the form of private-sector coordination and institutions, but where the government complements that private-sector coordination and institutions in order to maximum its functioning. This happens when environmental improvements by the government are an effective means of

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7 Although we may take property rights for granted, it is the subject of an extremely important argument in economics. In the mixed economies of today's advanced nations, the government role of establishing and protecting property rights is essential for the allocation of resources by the market. Nonetheless, even without the "institution of property rights," economic transactions would be possible under certain conditions, such as a "community organization" or a "membership-based organization." Refer to Ikeda (1997) and Okuno (1998, op. cit.) for more on this point. Another important issue in economics is the extent to which property rights should be considered an exclusive right, as governments can create new markets depending on how it is established. For instance, the establishment of intellectual property rights for so-called "digital goods," which possess characteristics not found in material goods, and the establishment of emission rights under a tradable permit system devised as a response to environmental problems are both extremely fascinating policy issues.

8 This argument, including the concept of coordination, is discussed in great detail in the following pages.

making private-sector coordination and institutions function better, or when the government is actively involved in private-sector coordination itself.

The arrows in the illustration represent portions where the market complements government.

③c) The portions where, in a field where government engages in resource allocation, market functions are utilized so that government functions more efficiently (③c)-I) and the portion where market functions are introduced into a field where government engages in policy involvement because of "market failures" (③c)-II). The former corresponds to PFIs (private finance initiatives), in which an enterprise that would conventionally be treated as a public investment is performed as a for-profit enterprise by a private entity, and fields where auctions are used for approvals and licenses. Examples of the latter include the policy of deregulation that permits the participation of IPPs in electric and other utilities, which compensate for the "market failure" of natural monopoly.

As stated in detail below, we attach special importance to ③b) and ③c), which we refer to as "market enhancing" policies.

In addition, it should be noted that the above is merely a conceptual depiction; that in actuality, regulation and other forms of government intervention are not so obviously classifiable because they can have multiple objectives at the same time, for instance.

(3) The basic viewpoint of market enhancing policy

Here, using the basic techniques of comparative institutional analysis, we shall first explain how various types of coordination are performed by private economic agents in order to enhance market functions, and how "institutions" arise from that coordination, after which we shall present the "market enhancing view" of the role of government.

In an actual economy, unlike the simple models assumed in the microeconomics studied by the beginning student, corporate organizations and inter-company transactions, etc., are advanced and, in some countries, diverse in ways that complement market transactions. This is because coordination among the economic agents engaged in economic activity is extremely important, so much so that market performance is affected by the suitability of that coordination.

Coordination is a very broad concept that is not easy to define clearly. Essentially, it refers to coordination of the various actions that take place between economic agents, and is viewed as "the question of what type of information each agent should share or divide among themselves in order to harmonize its own decision-making and to achieve [the efficient use of scarce resources]" (Aoki, Okuno (1996) pg. 41). The most important market function is the "price-based coordination function," whereby resources are allocated efficiently through the sharing of information (i.e., prices) by economic agents acting on the basis of the signals that the information represents.

The phenomenon of "coordination failure"[9] refers to a mismatch, such as when an asymmetry of information among market participants prevents a market from remaining sustainable with price information alone, or when entrusting everything to the market would result in moral hazards that would prevent the proper utilization of resources. To avoid such failures, a corporate organization such as a joint-stock corporation develops, as do mechanisms for providing various incentives and penalties for a corporation's stockholders, board members, employees, customers and other stakeholders, and intermediaries whose role is to facilitate coordination among corporations, individuals and other economic agents. Institutions can be understood as the entirety of such coordination-promoting mechanisms that have diffused and firmly established themselves throughout the economy and society.

According to the market-friendly view, which emphasizes market functions to an extreme degree, most types of economic coordination are achievable using the marketplace or, when the market alone is insufficient, with intra-business coordination or other types of private-sector organizations, or with spontaneous institutions. According to this viewpoint, the role of government should be limited to the providing of those public goods that cannot be properly supplied with private-sector coordination alone.

Standing in contrast to this view is the "market enhancing view," which holds that the government should play a complementary role in the sense of enhancing market functions, and which is based on the belief that the perfectly rational economic agents and perfect information assumed by textbook-level market models do not exist in a real economy; economic agents are instead seen as possessing bounded rationality. This gives rise to a broad range of coordination failures, prompting the development of private-sector

[9] The market's most important coordination function is the price mechanism, and so "market failure," in which this price mechanism fails to function, can be understood as a type of "coordination failure." Here, however, we use the narrow definition of the term "coordination failure," which does not include "market failure" in the sense of the failure of prices to function as signals." In other words, "coordination failure" is understood as indicating a situation in which private-sector coordination outside the market fails to function as expected when its successful implementation would have otherwise "avoided market failure, i.e., enabled prices to function as signals."

coordination and private institutions to correct them. In the advanced nations, the various institutions have indeed developed to an advanced degree and, in some countries, even formed diverse institutional systems. It is no exaggeration to say that today's market economy cannot be discussed without addressing such institutional factors.

The next question is, therefore, how to interpret the relationship between such private-sector institutions and government. The "market enhancing view," which sees government "as an endogenous entity possessing information and incentive restrictions, like other economic agents in an economic system (Aoki, Kim, Okuno (1996))," recognizes that private-sector coordination has a fundamental advantage over government with respect to the providing of appropriate incentives and the ability to process information, but states that the role of government is to encourage and complement this private-sector coordination by the facilitation thereof, even in markets already being complemented by private-sector coordination and institutions. In other words, the role of government is to promote the development of private-sector institutions capable of overcoming coordination failures. We interpret this as corresponding to case b) of the three cases explained with the preceding illustration (Fig. 1) in category ③.

The policy of introducing market functions to enable the government to provide public goods, etc., more efficiently allows for symmetry in the sense that government is complemented by the market, and so can be considered as a "market enhancing" policy, corresponding to ③c).

The portion ③a), which represents policy responses to "market failure" excluding the providing of public goods, can, like case ③c), also be viewed as a "market enhancing" policy in that government plays the role of complementing the market. In our representation, however, this is the portion where the government compensates for "market failure" directly because private-sector coordination and institutions cannot be anticipated; in the mixed economies of today's advanced nations this is a limited portion. As our focus here is on the new role of government in economic policy, let us turn our attention to ③b) and ③c) as examples of "market enhancing" policy.

(4) Why market enhancing policies are an important role of government

Now then, what kinds of effects can be anticipated from "market enhancing policies"? The objectives of economic policy are generally said to pursue the "efficiency of resource allocation" and the "equity of income distribution," but it is not always properly understood that the former has not only a static meaning but also a dynamic meaning. Recalling the production frontier where maximum quantities of goods and services are output with limited resources (Fig. 2), one can see that efficient resource allocation in the static sense entails the production currently being carried out in the feasible domain inside the production frontier being relocated to a point on the frontier. As the production frontier is already showing maximum output possible with available technology at that point, expanding the frontier toward the outside over time makes it possible to produce more goods with the same limited resources. This is dynamic efficiency in the allocation of resources.

The expansion of national income and wealth is partially achieved by the pursuit of static efficiency in resource allocation, but cannot be achieved sustainably without efficiency in the dynamic sense. In the context of growth accounting, this corresponds to the requirement of a sustainable growth of TFP (total factor productivity). Increase in TFP is brought about by various factors, but sustainable growth is closely linked to innovation, which encompasses elements - new product development, the introduction of new production methods and the creation of new organizations, among others - all of which are most likely closely connected to the economic and social system that we emphasize. In the case of the just-in-time system developed by Japan's auto industry, for example, this system, as a new method of production and organizational reform, represents innovation, but the horizontal hierarchy of Japan's postwar information systems (a form of intra-firm coordination) is said to be closely related to the widespread adoption of the just-in-time system by the processing and assembly industry, where it was a major factor in the comparative advantage achieved by that industry.

Thus dynamic efficiency in resource allocation is intimately related to generating innovation in succession. In addition, the type and extent of innovation are greatly related to that country's particular economic and social system. With respect to the dynamic resource allocation effect that the market inherently possesses and which is achieved with the various types of private-sector coordination as integral features, the primary objective of the market enhancing role of government can be seen as maximizing the dynamic effect of the market by facilitating private-sector coordination.

To be sure, policies that compensate for "market failure" also include those designed to enhance the "dynamic efficiency of resource allocation." For instance, subsidies used to promote R&D investment and correct the market failure of spillover, in which R&D investment is falls below a socially desirable level, also enhances the "dynamic efficiency of resource allocation." In addition, the protection of so-called infant industries can be justified by Marshall's externalities, and is a typical dynamic argument. On the other hand, the correction of ordinary "market failures" other that these, such as Pigovian taxes justified by the external diseconomy of environmental pollution or public goods justified by non-excludability and the collectivity of consumption, are essentially static arguments. In contrast to these, "market enhancing" policies can be viewed as focusing more on the dynamic aspects and have as their primary goal the promotion of private-sector economic agents' various types of market-centered coordination in order to encourage the active adaptive behavior that seeks to overcome restrictions.

Upon further elaboration, the relationship between "market enhancing" policies and the dynamic efficiency of resource allocation can be understood thus. The "market enhancing view" holds that a wide range of coordination failures exist because of the bounded rationality of economic agents, and that, inasmuch as the dynamic aspects that accompany time preference cause circumstances in which the market functions only inadequately due to the bounded rationality of economic agents to manifest themselves more acutely, the necessity of "market enhancing" policies is most likely deeply connected to the dynamic efficiency of resource allocation.

Next, we shall present several points supporting the importance of market enhancing policies so as to give the preceding argument concreteness.

First, it must be pointed out that market enhancing policies have always existed in some form or other in every country. Examples include the laws that provide the criteria in trials involving a dispute between private-sector economic agents that could not be resolved either between the parties involved or by a third-party institution, along with the myriad other rule-making and enforcement by which private-sector coordination is facilitated. An important characteristic of government involvement is that it entails some form of compelling force, which is why rule-making and rule enforcement normally come as a pair. A classic example is role governments have played, since the time of Adam Smith, in establishing, determining propriety of and protecting property rights.

Even more recently, advanced nations such as the U.S., UK and New Zealand have since the 1980s reevaluated the conventional role of government and implemented policies that boldly introduce market functions. The policies of deregulation and privatization entrust the market with realms where market functions had been difficult to stimulate with government intervention. Prior government inventions may have been deprived from various reasons, but if deregulation and privatization merely represent a change in the boundary line separating the respective spheres of responsibly of the market and government, then such policies may not necessarily be market enhancing policies. On the other hand, this can be interpreted as government complementation by the market in that deregulation, etc., has meant the introduction of market functions through policy management, and in each of these countries such polices have also been accompanied by extensive disclosure requirements for corporations, new rules for entrusting tasks to the market, allowances to reduce the risks associated with insurance system reform, and other market enhancing policies implemented by the respective governments. In view of this, and the new attempts at using market functions in the public sector in ways that go beyond the realm of deregulation and privatization e.g., introduction of PFIs, the use of auctions in the allocation of frequency bands it can be said that the market enhancing role of government has grown considerably in these countries.

One comment must be made in regards to such trends in the advanced nations. It is a fact that when the concept of the "market enhancing" view was first proposed, analysis focused primary on economic development policy. As the validity of "market enhancing" policy consequently depends on the stage of economic development, doubts have been expressed as to the validity of such policies for Japan and the other advanced nations where the market and private-sector coordination and institutions are developed to an advanced degree. Nonetheless, we believe that even in the advanced nations, governments play more than a small role in the complementation of private-sector coordination and institutions. On the contrary, in an advanced nation having highly developed private-sector coordination and institutions, government should pay closer attention to policies that promote private-sector coordination and enhance functions than to policies that call on the government to act in place of the private sector to correct "market failures" directly. In this respect, we call attention to the 1997 report of U.S. Council of Economic Advisers, compiled under then chairman J. Stiglitz. Chapter 6 entitled "Refining the Role of Government in the U.S. Market Economy" stresses the importance of a "complementary relationship between the market and government," and focuses on the policy of government complementation by the market, which corresponds to item ③c) in Fig. 1. The chapter concludes with the following comment: With a careful, pragmatic balance of the costs and benefits of public intervention in the economy, however, we have seen that markets and governments need not be regarded as substitutes, but as highly effective complements. . . . Public policy can help markets perform better.

Of course, the "market enhancing" role of government, as is apparent by its initial use in the context of economic development, has also come to be considered with increasing importance in the developing regions as well. A typical example of such an argument is the one addressing financial restraint in Asia's developing nations, put forth by Stiglitz et al. "Financial restraint" is a policy of using government intervention compliant with market functions to encourage financial institutions to generate rent as an initiative for them to collect information and engage in monitoring.[10] This can be considered an example of market enhancing policy in which government assists the mechanism for avoiding the coordination failure that results from the asymmetry of information between the lenders and borrowers of capital.

It must be noted, however, that such policies cease to function when the stage of development or economic and social environment changes, or, conversely, when their role changes dynamically, e.g., they become a factor impeding further development. Because the market enhancing effects can over time become dynamic, so to speak, the political leadership necessary to change or fade out the policy in question becomes imperative when said effects begin to negatively impact the market. In Japan, for instance, financial restraint previously encouraged the development of the main bank system but today, now that environmental changes and other factors have diminished the main bank systems functions and engendered financial institutions dependence on government, it can be viewed as a source of moral hazard. Similarly, it is extremely important to look at the current economic difficulties in East Asia from the perspective of what roles such institutional factors have played and how those roles should be changed now.

At the same time, looking at Japans current situation, the recent major environmental

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[10] It should be noted that the term rent here refers to "contingent rent," which is not automatically guaranteed, and which has helped enhance the financial intermediation functions of financial institutions through deposit expansion efforts that have increased rents.

changes have the potential to bring about serious changes in Japan's current economic and social system as discussed in section (1) above. The Market functions are stressed even more than before in the basic philosophy embodied by the series of policies aimed at creating a new Japanese economic and social system, and which are part of the "economic structural reform" already begun by the government, led by the Ministry of Trade and Industry. The so-called six major reforms, of which economic structural reform is one, include such market enhancing policies as improving the market environment (e.g., establishment of market rules and increasing the degree of freedom in market entry and exit), importance placed on investors and consumers (such as complete disclosure and reducing the risks associated with insurance reform) and the securing of market competition.

In terms of the type illustration in Fig. 1, the economic structural reform policy of deregulation can be considered as a change in the boundary line between ① and ② that enlarges ①, as in ③a), enables the market to function better by reducing the degree of government involvement, that is, by expanding ③c). In addition, PFIs and other manners of introducing market functions into public domains would change the boundary by enlarging ③c) within ②. Other than these, many market enhancing policies (③b)) are packaged with deregulation measures and attempt to complement, and thereby enhance, market functions by altering government involvement. In other words, economic structural reform can be seen as a policy of shifting the focus of the role of government from correcting market failures to the enhancing of market functions while reducing government involvement overall. It is important for Japan to draft policies with full recognition and awareness that "market enhancement" is one of the roles of government, and that active promotion of market enhancing is the intention behind economic structural reform. In short, what the Japanese economy needs now is not a mere weakening of government involvement in the market through, say, deregulation, but also the establishment of the various mechanisms needed to make market functions work even more effectively, and it is in this context that the government must consider its own role.

Next is the issue of how macroeconomic policy relates to the market. Aggregate demand management policy based on ordinary financial and fiscal policy tools can be said to perform both substitution and complementation. That is to say, when the speed of labor market adjustment is slow and stimulative measures are to formulated to avoid unemployment in excess of the publics maximum permissible level, the market and government can be said to be following an approach viewed as essentially substitutive in that market functions alone do not suffice. However, the fundamental function of macroeconomic stabilization (price stability being a typical example) and eliminating or mitigating extreme economic fluctuation must be viewed as the market enhancing act of enabling market functions to work sufficiently by making possible long-term economic calculations by private economic agents participating in the market and by cultivating healthy expectations among them. At the same time, policies that address both demand and supply with the objective of dynamic efficiency in resource allocation have aspects that complement market functions, as seen in the example of applying demand pressure to the market in order to stimulate private investment, promote new venture creation and smoothen labor turnover while at the same time promoting private investment with measures such as corporate tax cuts. In such cases, macroeconomic policy can be viewed as economic structural reform policy[11] and as policies that complement the markets dynamic resource allocation functions, such as new industry creation. In this context, both types of policies are mutually complementary, and together comprise macroeconomic policy in the broad sense.

Lastly, to repeat: Not only does "market enhancing" policy characteristically focus on the dynamic resource allocation functions performed by the market, but the effects brought about by the policies themselves change dynamically as the stage of development or the socioeconomic environment changes. In other words, "market enhancing" policies are necessary at all times and in every nation, but must vary in their content according to the nation and the times. Hence, policymakers must fully recognize that "government failure" can result from the continuation of a policy that has ceased to suit the demands of the times

[11] Here, macroeconomic policy refers to what is known as fiscal and financial policy. However, as the long-raging debate over macroeconomic policy (i.e., Keynesian vs. monetarist, the school of rational expectations) has gradually made clear, there are many doubts regarding the validity of macroeconomic policy as a means of fine-tuning the economy. And as demonstrated by the tendency, brought about by globalization, of macroeconomic disturbance in one country to cause shocks in other countries, there is now strong awareness of the limitations of a macroeconomic policy that addresses only a country's domestic economy. This has prompted Japan and many other advanced nations to widely adopt the view that macroeconomic policy is a short-term remedy, and that what is more important are dynamic policies such as increasing the intellectual stock through research and development and human resource accumulation, improving telecommunications and other physical infrastructures, and improving the institutional infrastructure. In short, greater weight is now placed on the viewpoint that interprets "broadly defined macroeconomic policy" as consisting of the "narrowly defined macroeconomic policies" of fiscal and financial policy in combination with the "structural policies" (semi-macroeconomic policies) Japan is implementing as economic structural reform policies.

or the environment, even if that same policy had been consistently effective in the past. It also goes without saying that the "market enhancing" effects of certain policy intervention, even if assumed to exist, do not by themselves justify all policy intervention: the balance between costs and benefits, as well as the possibility of "government failure," must be always be carefully considered. Proceeding from this point, Chapter 2 focuses the discussion on the role of government, primarily with respect to the "market enhancing" policies that the Japanese economy requires as it heads toward the 21st century.

Chapter 2: The New Role of Government in Japan: Striving for a Vigorous Economic System Conducive to Innovation by Securing Diverse Options

(1) A new perspective in policy selection: The market enhancing

Here, working from the abstract representations of the previous chapter, we state that Japan's current economic and social circumstances call for the drastic introduction of a "market enhancing" view with respect to the new role of government.

In this respect, it is first necessary to point out that considerable "inertia" is currently at work in the role of government in Japan. Comparative institutional analysis indicates that inertia is a property generally found in all institutions. More specifically, institutions are affected by a historical path dependence in that during their evolution, the new course they eventually take depends on their initial conditions, with the consequence that economic agents cannot instantaneously switch to different behavior patterns in response to environmental changes. This sometimes arises from the bounded rationality of economic agents; in other cases, in choices that, once made, make it difficult to make other choices because of the significant costs that are sunk. The Japanese government, according to Aoki (1992), possesses a characteristic he calls "bureaupluralism," a two-sidedness in the coordination of interests by bureaucrats who, on the one hand, act on behalf of private economic agents through the genkyoku genka system i.e., the system of composing bureaus and divisions corresponding to each industry sector, on the other hand, act autonomously and with their own specific interests. This relationship between government and the private sector, in addition to functioning extremely well by permitting flexible responses while the nation was trying to catching-up with Europe and America during the postwar years of high economic growth, and, later, when the country faced the two oil crises of the 1970s, is most likely responsible for creating a strong institutional complementarity with other private-sector institutions. Nor can it be denied that it may be the government's overvaluation of its good performance that led to such inertia.

Because of inertia, an institution frequently evolves only gradually in response to environmental changes. Attempts to isolate and reform those institutional elements in one fell swoop are likely to end in failure when this inertia arises from strong institutional complementarity, and even more likely to fail when inertia is very strong. Nonetheless, no institution is immutable, and changes in a cornerstone institution can accelerate changes in other, complementarily related institutions.

This argument also applies to efforts to reform the role of Japan's government, i.e., it entails an approach of gradual reform. We view the deregulation-centered economic structural reform as the first step in the larger reform to change the role of government. In other words, although the first order of business is to introduce market functions to private-sector areas where past government intervention has failed to make market functions work properly, this alone is not enough: a second stage of full-fledged "market enhancing" policies beyond deregulation must also be implemented. At the same time, deregulation, while it may be only the first stage, is still in progress, and there are still many issues requiring concerted, earnest effort by the government. Moreover, the first and second stages will not necessarily take place in this order, for there are more than a few areas financial reform being just one where institutional design from a "market enhancing" perspective must be implemented in tandem with deregulation.

As already stated in Chapter 1, market enhancing policies comprise the following two types:

(Type 1)

The viewpoint that facilitation of private-sector coordination is imperative in order for market functions to work properly suggests such policies as that of support for private-sector efforts to overcome coordination failure and facilitate coordination more effectively, and the policy of constructing a mechanism for complementing private-sector coordination. In short, this is the policy of government complementation of market and private-sector coordination functions.

(Type 2)

The other type involves the implementation of market functions in those spheres to which Japan in particular will have to pay close attention where government involvement or intervention will continue for reasons such as market failure. Examples include the use of market functions for approvals and licenses, such as U.S. auctioning of radio frequency bands; tradable permit for emission used as environmental policy; PFIs and other forms of private-enterprise participation in public investment, and deregulation of IPP participation in electric power utilities. Policies such as these can be viewed as using the market to complement government functions, or as market making in government-related spheres.

Shifting emphasis to such "market enhancing" policies necessitates, first of all, the establishment of a process for selecting policies in advance of their drafting and implementation, as summarized by the following questions.

1) Are market functions working properly in the specific field? If not, is this due to market failure? What kinds of concrete problems exist?

2) If the problem is one of market failure, can it be overcome through spontaneous private-sector coordination? If not, can private-sector efforts be encouraged? If no efforts at all can be anticipated from the private-sector, could government, as a form of policy, create a system for complementing private-sector institutions?

This is one type of flowchart-like selection process conceivable. In addition to the above, cost evaluation is also necessary, thus:

3) In general cases requiring a policy response, can policy be made more cost-effective by measures such as market function introduction?

This viewpoint calls on government to do nothing less than to envisage itself playing a "market enhancing" role, and to always assess policy from a market enhancing viewpoint as a basic policy. We believe that incorporating such a viewpoint into the policy formulation and implementation process can provide the opportunity and the means to overcome the inertia that exists the public sector.

The economic structural reform currently under way, aside from the significance of the individual policies it encompasses, is also highly significant as a "banner" under which to unite various individual policies, and as a source of "government identity" by which awareness of the need to reform a government where strong inertia is in effect can be imbued down to the lowest levels of government. As stated above, however, in order to make economic structural reform more effective, it is imperative that the series of reforms be framed around the clear philosophy that "market enhancing policies are to be promoted as package in order to create a new Japanese economic and social system that places greater emphasis on market functions." The reason is that establishing such a philosophy will send a clearer message to private economic agents concerning the direction of institutional reform, thereby helping to create sound expectations.

(2) A new perspective in achieving dynamic efficiency in resource allocation: Diverse options

As stated in the previous chapter, the primary objective of "market enhancing" policies is to address private-sector coordination, as well as the "institutions" that result from the spread and firm establishment of that coordination, in order to effect "dynamic efficiency in resource allocation," which is a product of integrated actions by the market and the private-sector coordination that complements it. This is closely related to the fact that dynamic efficiency in resource allocation leads to continuous innovation, with the resultant degree of innovation depending on a chain comprising the great relevance to the various "institutions" adapted to a specific country and specific era, and the overall economic and social system that comprises those institutions.

The U.S. and other advanced countries devote considerable attention to the continuous creation of "new knowledge" under the consensus that it holds the key to future economic vitality. In Japan's case, particularly in view of the major environmental changes affecting Japan that were discussed in the previous chapter   namely, declining birth rates combined with the aging of society and Japan's emergence as a front-runner   the need to generate, implement and establish vigorous innovation is even greater than in other countries. Japan's economic and social system must change in a direction that responds to this need. In short, Japan must enhance market functions in ways that encourage innovation.

For the above reasons, we believe that in order to establish in Japan a new policy system that stresses market enhancing policies, the goal of "securing diverse options" must be put forth and broadcast to all as the new viewpoint. This is because what is most important for generating innovation, and also what today's Japan is most relatively lacking in, is a broad range of feasible options and large numbers of innovative, ambitious individuals willing to make choices that no one else ever has. Put differently, this philosophy holds that the markets function of dynamically allocating resources lies in the generation of innovation from repeated experimentation and trial-and-error by both corporate and individual economic agents, and that it is therefore essential to increase even further the degree of freedom of economic agents, that is, to provide them with a diverse range of options.[12] Furthermore, the successes resulting from individual experiments will then spread and form a new system of coordination, and induce Japan's economic and social system to evolve gradually into a firmly established, new system.

The basic principle that the source of innovation is always the private economic agents, and that any failed attempts and any defeats sustained in intense competition are the "one's own responsibility" of the economic agent in question, must also be recognized. At the same time, however, policies that complement areas where market or private coordination is still insufficient must be expanded in order to create an environment that encourages private economic agents to boldly make various challenges they confront. Examples include unemployment insurance and other aspects of the social safety net, and the granting of incentives for self-investment in vocational training, for instance.

Now then, the foregoing argument focuses on the aspects of economic agents that are primarily concerned with the production of goods and services, and so views the "individual" as a supplier of labor. At the same time, however, the "individual" also functions as a "consumer" purchasing goods and services by his or her income in compensation for providing labor and other production factors, and as an "investor" who saves and invests whatever income is not consumed. To the consumer, "diverse options" imply the supply of "diverse goods and services" on the market, and so expansion of the breadth of choice, in and of itself, increases the consumers utility in the form of "love of diversification." Similarly, from the "investor's" standpoint diverse options mean the availability of "diverse opportunities for and methods of investment," which translate into increased opportunities for gain. In this sense, the securing of "diverse options" is an important goal not only with respect to the revitalization of innovation, but also for economic activity as a whole.

Examples of the role of government in this area include further liberalization of trade and investment along with financial deregulation, but it must be remembered that an asymmetry of information can exist between consumers and investors on the one hand and producers and borrowers of capital on the other, and also that there are limits to the capabilities of individuals to collect and analyze information as consumers or investors.

[12] From a evolutional game theory perspective of economic and social systems and institutions, securing diverse options and thereby encouraging vigorous private-sector experimentation has the effect of increasing the probability of mutational innovation and, therefore, of promoting institutional evolution. This is the viewpoint of asserting the importance of securing "strategic substitution."

Moreover, today's highly evolved informatization, advanced financial technology and other factors, when they cause a great increase in options and combinations thereof, can engender a situation in which major risks occur but cannot be sufficiently diversified. Because such a situation conversely narrows the breadth of choice and thereby negatively affects economic activity, the various intermediaries involved should be further developed: financial intermediaries, rating agencies, analysts, product information providers, and so forth. For its part, the government must therefore promote the sound development of these intermediaries through market enhancing policies that include not only the establishment and enforcement of rules that restrain unfair activities by producers and capital borrowers, but also complete disclosure under the proper rules and also enhancement of the social safety net. At the same time, corporations are also expected to make serious efforts to improve corporate governance so as to properly reflect the interests of consumers and individual investors.

To reiterate, let us summarize the logic set forth thus far in order to further clarify the argument regarding the individual policy inventory of Chapter 3.

① As we understand them, market enhancing policies include policies that address private-sector coordination in order to fully bring out dynamic efficiency in resource allocation, which the market achieves in unison with private-sector coordination.

② Facing the environmental changes of declining birthrates coupled with the aging of society and also its emergence as a front-runner, Japan must center its economic policy on the objectives of inducing this dynamic resource allocation effect and revitalizing innovation.

③ In Japan and the other advanced nations where markets and private-sector coordination are advanced, although some may question the validity of market enhancing policies, those market enhancing policies that are designed to fully induce dynamic efficiency in resource allocation are extremely important to those countries.

④ In implementing this type of market enhancing policy system, it is imperative to secure "diverse options" in order to encourage vigorous competition and trial-and-error by private economic agents.

⑤ In Japan, where the actual range of economic agents choices have very often tended to be effectively limited by regulation, the taxation system and other factors, the future implementation of market enhancing policies and the securing of "diverse options" must be viewed as inextricably linked to one another.

For this reason, in today's Japan, the neutralization of incentives in the taxation system, which currently encourage certain choices, for instance, is highly commendable from the viewpoint of the "diversification of options."

(3) A new perspective in policy implementation: Minimizing the possibility of "government failure"

This paper has emphasized the importance of "market enhancing" policies as a new role of government. This assertion is based on the "market enhancing view," which holds that a broader range of coordination failure can exist under the bounded rationality of economic agents. As already stated, however, this does not justify all policy intervention, as the possibility of "government failure" must also be addressed. Particularly in Japan, which faces major environmental changes and increasing uncertainty about the future as stated in Chapter 1, the avoidance of "government failure" is an extremely important issue. Here, we shall conclude this chapter by examining several ideas concerning the reduction of the possibility of "government failure."

The system of legislation that has existed up to now in postwar Japan is one in which proposed legislation is drafted by the responsible government agency and then submitted by the cabinet rather than being drafted by the Diet, and in which policies are generally formulated in a bottom-up fashion and the submitted to a multilayered review procedure at each stage in the policy making process: first the responsible ministry, then other government agencies, and finally the Diet. In addition, the principal of self-responsibility has been underdeveloped among the public and dependence on the government strong, the result being a strong tendency of extensive involvement by the administration in the form of government and ministerial ordinances and official notices, as typically seen in safety regulations. Thus, as demonstrated by the so-called myth of government infallibility, perfection is often expected of policy at least in stated principal, the result being an extremely limited occurrence of cases of policies reevaluated flexibly because of ineffectiveness or secondary abuse, or where policy was implemented after a sufficiently long trial period. A major reason that policy implementation without this type of trial period has not resulted in extensive problems is most likely the fact that in many areas prior cases in North America and Europe could be studied as examples. Exceptions to this rule includes government-initiated advanced R&D pilot plants, technopolis projects, new media community projects, and other types of pioneering local development model projects.

Nonetheless, because of the need to shift emphasis to market enhancing policies and provide the public with diverse options, and because of increasing uncertainty about the future as testified by Japan's front-runner status, it is no longer possible to neglect the reevaluation of relationships with private economic agents having closely related interests whenever necessary, or to implement policy without first clearly stating where responsibility lies, or to ignore the negative effects of the governments failure to reevaluate policies according to environmental changes after those policies have been implemented. We therefore feel that during the coming implementation of new policies a system in which a fixed trial period is established in which to evaluate a policy's effectiveness with the appropriate methods and to alter the policy according to what was learned during its trial implementation should be considered. In addition, the so-called competition approach, in which a wider range of opinions are solicited from the outside in order to select the best idea possible, may also be a valid approach for some policy areas, as in the system of open application for the design of public structures.

However, one must also be aware of the fact that trial implementation and open solicitation are a double-edged sword in that when implemented, they increase the possibility of subsequent renegotiation between interested parties and the government, which could be interpreted by private economic agents as a lack of "reliable commitment" on the part of government. For this reason, it may be necessary to limit the introduction of such experimental elements to certain fields, such the aforementioned type 2 market enhancing policies, which entail the use of market functions in fields where government involvement or intervention remains necessary due to market failure, etc. In this respect, it is also important to learn from such efforts as America's pilot projects for government performance evaluation systems introduced under the Government Performance and Results Act (GPRA),[13] and the UK's use of PFI projects to accumulate know-how and reform its institutions. Even in policy areas not conducive to "trial" implementation, other ways of giving policies legal flexibility should be considered, such as the prior provision of

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[13] A federal law enacted in August 1993, the GPRA provides a framework of "results-oriented administration." The previous administrative system based on executive orders was replaced by this law at the initiative of Congress due to its weak linkage to effects and budget reduction. Under this act, government agencies are required to define their mission and objectives, assess their performance, and report and utilize performance-related information. Most noteworthy in the context of this paper is the fact that the law became effective for all agencies in 1997 after a trial period from 1994 to 1996 during which time it was implemented as 70 pilot projects at 28 agencies.

reevaluation after a certain period of time, or a sunset clause that defines when the policy will end.

The need for decentralization may even be partially justifiable in the context of "trial" implementation and "diverse options"[14] insofar as relegating authority to and increasing the discretionary powers of local governments could, as a result, expand the options of each local governments policy inventory so that local governments could then provide various governmental services in a competition for differentiation. The result would be the extensive adoption of the element of "trial" implementation throughout central and local government activities. In addition, decentralization that expands the independent efforts of local governments could also potentially lead to increased options for the public as people "voted with their feet" (Tiebout (1956)), that is, exercised their option to move to other locations.

Also requiring examination at this point is the issue of intra-government checks and balances. Thus far policy checks have been in the form of the all-agency discussions to which legislative bills, ordinance proposals and other proposals referred to the Cabinet are submitted. Such checks, however, have undeniably centered on negative checks, such as whether a proposed piece of legislation entails changes in the allocation of bureaucratic power. Although partially due to the provisions of such laws as the National Administrative Organization Act and the laws establishing the various government agencies, this is essentially the result of the belief that every field of government administration can be placed under the authority of some agency. The tendency of policy to have multiple objectives, however, creates the possibility of conflict among multiple objectives when said objectives call for government to play a certain role. This clearly necessitates some form of separate intra-government coordination for each policy, and so constructing a system that places sufficient checks and balances on policy standards in the policy formulation process is an important prerequisite for minimizing "government failure." In this respect, the current government agency reorganization and other measures that comprise administrative reform

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[14] Of interest to this argument are new developments in the field of modern economics relating to the theory of "federalism," which deals with the need for decentralization. These applications of recent "corporate theory" to government include the arguments ① that incentives for efficiency and the moral hazard reduction effect are enhanced when local governments exist as independent organizations provided with decentralized information and authority, and ② that competition among local governments results in increased attention to the wishes of local residents in the same way that market competition compels corporations to pay greater attention to the interests of stakeholders. For more on this field of research, see Qian, Weingast (1997).

are commendable for having demonstrated the basic principle of strengthening the general coordinating functions primarily of the prime minister but also the rest of the cabinet, realigning government agency functions along national government roles, and recognizing the authority of each agency to state its opinion from the prospective of the “function” for which it is responsible.

Chapter 3: An inventory of market enhancing policies that permit diverse options

Of the market enhancing policies whose necessity of implementation in Japan was discussed in general terms in the previous chapter, this chapter examines in concrete terms those policies that permit diverse choice for private economic agents and those policies that would present an institutional framework suitable for inclusion as one of a diverse range of options. The necessity of individual policies is assessed on the basis of multiple keywords, given below.

1) Market enhancement
2) Diverse choice
3) Incentives
4) Intermediary
5) Institutional complementarity
6) Moral hazards
7) Rent for innovators (entrepreneur profit from innovation)
8) Information (transparency, asymmetry, incompleteness, information systems, etc.)

1) Introduction of the pure holding company system

Here we shall discuss the significance of, and the role that can be expected of, the "pure holding company system," which has been legalized in Japan.

As it provides corporate groups with an alternative to the existing organizational types (e.g., multidivisional organization, operating holding company, and independent corporation), the pure holding company is extremely significant with respect to allowing corporations to undertake new challenges and experiments by securing diverse options in inter-company relationships. Let us begin by comparing the pure holding company to the current operating holding company with respect to the ordinary functions that a pure holding company possesses as a new type of organizational approach for corporate groups.

First, a pure holding company makes it possible to concentrate on managerial strategy for the entire corporate group as separate from those of the primary divisions, and so is superior to the operating holding company in effectively and flexibly allocating group company resources to strategic enterprises or new ventures, for instance, in response to major changes in the external environment affecting those companies. In an industry such as telecommunications, for instance, where technological change is rapid and product modularization is advanced, a pure holding company would allow a corporate group to make use of its advantages and strengths by effectively utilizing group resources through the flexible creation and termination of enterprises.

Next, the pure holding company institution can be seen as an institution that allows for enhanced prior incentives for the discipline or independence of subsidiaries, in that unlike the enterprise holding company approach it eliminates ex post facto coordination between the holding company and subsidiaries and isolates each from the risks of the other, thereby preventing moral hazard at each concern and reducing dependence on the parent company. In short, by establishing an arms-length relationships and compelling subsidiaries to assume self-responsibility for their operations when debt guarantees or other support cannot be counted on, this approach gives subsidiaries the incentive to maintain a certain level of discipline in order to continue their operations.

Thus a pure holding company characteristically can be a corporate structure that promotes the effective and flexible use of a corporate groups resources and contributes to discipline among subsidiaries. What makes the introduction of this approach in today's Japan so significant is that as an institution it has the potential to trigger major changes in Japan's economic and social system, where institutional complementarity exists. Let us examine the significance of the pure holding company from this perspective.

First is the expansion of corporate options with respect to employment. One of the merits of the pure holding company system is that through the across-the-board subsidiarization of operating departments, a different form of personnel management can be adopted for each resultant subsidiary, meaning that within the same corporate group the new forms of employment of annual contracts and performance-based compensation could coexist with the conventional forms of employment of seniority wages system and long-term employment. The ability to adopt diverse types of employment for operational subsidiaries would also permit the diversification of organizational form in that the organizational form of each subsidiary could be determined according to sectoral characteristics and type of operation: for instance, long-term employment for information-sharing organizations and annual contracts for information-decentralized organizations.

This could provide an opportunity to gradually change employment systems and other systems having institutional complementarity.

Second, the pure holding company system is significant as a new form of corporate finance in that from the perspective of corporate finance and in particular the associated corporate monitoring functions, it has the potential to replace the main bank system, which is said to have institutional complementarity with long-term employment. In addition to the transfer of capital to operational subsidiaries in the form of investment, a pure holding company, through financial control and from the stockholders perspective on corporate governance, can also perform the role of monitoring subsidiary managers. There is, however, the issue of monitoring the holding company itself. In this regard, although the pure holding company is itself founded with stockholders investments and so can be considered as being governed through financing on the direct finance market, it still requires a mechanism of internal correction, such as the active use of outside directors, discussed in detail later. Also necessary with respect to investor protection and improving governance is the complete disclosure of financial information, including that of operational subsidiaries.

Another important financial role of the pure holding company is its so-called venture finance function, meaning that a pure holding company can perform a function similar to that of venture capital in the United States in the context of what are called in-house ventures, i.e., operational subsidiaries that are established in new fields of business. The pure holding company, inasmuch as it performs coordination of group resource allocation and is capable of assessing operational subsidiaries more objectively than an operating holding company could, is fully capable of becoming a new type of private-sector intermediary similar to venture capital.

Introduction of the pure holding company system will gradually break down the institutional complementarity that exists in Japan's corporate systems and therefore is important as a gradual approach to reform. This, combined with its ability to promote the effective use of corporate group resources while maintaining corporate discipline, will ultimately help the Japanese economy become more vital and conducive to innovation. In this respect, it is hoped that once current efforts to lift the ban on holding companies are complete, the operating environment of holding companies will also be improved by promptly revising commercial law to permit exchange of shares and by revising the taxation system to allow for consolidated tax payment.

2) Monitoring functions in corporate governance: Outside directors, analysts and institutional investors, etc.

Recently in Japan, corporate governance has been the subject of intense debate due to developments that have highlighted bank's unperformed assets problem and the need for the prevention of corporate impropriety, such as payments to corporate racketeers (sokaiya) by the big four securities companies, for instance and due to the diminished monitoring functions of the main bank system. The points at issue cover a broad range and include expansion of the authority of stockholders as company owners, increasing the functions of directors and auditors, improving how general meetings of stockholders are run, increased disclosure, and use of stockholder representative lawsuits. Important from the market enhancing viewpoint are monitoring functions that provide companies with incentives for efficient management and which help prevent moral hazard by assuring discipline so that corporations can function properly as private coordination organizations that complement the market and to revitalize the market by protecting investors and others.

While the debate in Japan on corporate monitoring systems has thus far tended to focus on the main bank system, in the U.S. market-based monitoring functions are distributed among a large number of specialized institutions, and a diverse range of forms of governance are being tested. The role that the Japanese government must play here is to perform the kind of rule making which, in a manner that preserves the private sector's independent endeavors and provides diversity in ways of securing discipline rules, creates monitoring incentives for those responsible for monitoring namely the various specialized institutions and stakeholders (primarily stockholders) and which minimizes any disincentives that may exist. With this awareness, let us discuss the functional aspects of the necessity of those who have the potential to be new implementers of corporate monitoring: outside directors, analysts and institutional investors.

Let us first briefly define monitoring in order to clarify the functions of each.[15] There are generally three stages of monitoring: ex ante monitoring, interim monitoring and ex post monitoring. In the case of investment, for example, the functions of ex ante monitoring entail initial evaluation and credit analysis for the investment project; interim monitoring, the monitoring of investment effectiveness and other aspects of administrative action; and

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[15] For a more detailed and systematic explanation of monitoring functions, see Aoki, Okuno (1996).

ex post monitoring, ① determination of financial conditions and ② the performance of punitive or corrective actions in accordance with those conditions.

Outside directors, first of all, perform monitoring through a corporation's board of directors, an internal organization, and can be involved in every stage of monitoring, although their emphasis in monitoring would seem to be the interim monitoring of the soundness and efficiency of corporate management. Outside directors are particularly viewed as a means of providing a mechanism of internal correction for the board of directors, which until now has been typically comprised almost exclusively of persons promoted from within the corporation and who have not functioned sufficiently with respect to moral hazard detection and intermediate monitoring. Outside directors also provide corporations with the chance to incorporate outside opinions and decisions into their management, and so can contribute to corporate reform, while their legal exposure to stockholder representative can be expected to impose discipline.

Because of these functions, the use of outside directors in the U.S. expanded considerably beginning in the 1970s and is said to center on governance innovation. In Japan, too, awareness of the importance of incorporating the opinions of outside specialists is expected to rise. While outside directors are one such option, an alternative to outside directors as an effective method of governance would be to create an advisory committee that comprises outside experts and which is separate from the board of directors, and ① provide the chairman would the authority to convene meetings of the advisory committee and ② when necessary provide the effective authority to recommend the resignation of the company's president. Such a structure could also be an effective means of internal correction governance, particularly for pure holding companies. In this respect, it is important to encourage the active use of this approach by corporations in rule-making in initial listing requirement, for instance.

Second, analysts are seen as performing ex ante and interim monitoring on behalf of investors, but their most important task is the intermediary function of providing investors with their interim monitoring assessment as market monitors. Their incentive for monitoring is the reputation mechanism in which the assessments made by analysts are themselves assessed on the basis of subsequent stock prices. In the U.S., a high reputation is rewarded with high compensation. The first important question in using analysts as private-sector intermediaries is how to establish a reputation mechanism in the form of private-sector coordination. Here, the important role of government is promoting this type of private coordination as part of environmental improvements in the over-the-counter market and other direct finance markets.

Lastly, institutional investors, like outside directors, can be involved in every stage of monitoring as representatives of stockholders as stakeholders, but their most important role is interim monitoring insofar as their position as stockholders (i.e., owners) gives them the authority to take punitive measures in response to inefficient management or improper acts, and so they can restrain moral hazards by demonstrating a commitment to this. In Japan, however, the custom of cross-holding shares has prevented life insurance companies and other institutional investors from properly performing the functions expected of them in interim monitoring. The California Public Employees Retirement System (CalPERS), one of America's most important institutional investors, is famous for actively exercising its rights as stakeholders, but behind this are the effectively functioning rules set forth by the state government[16] and the fact that the concentrated holding of large numbers of shares in a given company makes it difficult to sell off those shares quickly and invest in other companies, and so creates the strong incentive to monitor the management of that the company from the perspective of improving investment efficiency. In Japan, with the abolishment of the 5:3:3:2 rule[17] for pension capital generating expectations of a new role for institutional investors, the proper governance mechanisms must also be established for institutional investors themselves, including disclosure rules and reevaluation of the organizational form of life insurance companies, for instance.

Although the preceding discussion has focused on the implementers of monitoring functions in corporate governance, it must be again stressed that such market-based governance mechanisms absolutely require the complete disclosure of information at every level of the related institutions and stakeholders. Market functions are effective only when relations with diverse private-sector corporations are based on information that is public and fair, and each company must independently select from a diverse range of options the

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[16] CalPERS is a defined-benefit pension system. Being a public pension, compensation for investment losses is essentially provided by the state government. Its actual board members comprise two government members appointed by the governor and, as nongovernment members, a treasurer and auditor, among others (from the CalPERS homepage).

[17] The so-called 5:3:3:2 rule concerns the allocation of assets invested by welfare pension funds: government bonds and other safe assets, at least 50%; stocks, no more than 30%; total foreign assets, no more than 30%, and real estate, no more than 20%. These and other regulations have been a major impediment to investment in private-owned company's shares

mechanism that best facilitates coordination between it and those concerned. In this respect, the government plays an important role in rule-making concerning disclosure, etc., and in environmental improvements to permit diverse options in corporate governance.

Lastly, Aoki (1997) states that the reason that anti-market players such as corporate racketeers [sokaiya] function so widely in Japan lies in the fact that, compared to their counterparts in other nations, minority stockholders are given unprecedentedly strong legal authority with regard to the nominating of directors at a general meeting of stockholders. Possible methods of correcting such problems include making the general meeting of stockholders more substantial by utilizing it more effectively, from the perspective of accountability, as a forum for the exchange of opinion between stockholders and the board of directors, limiting resolutions brought up there to those affecting fundamental aspects of the company's management, or by selecting directors by means of a voting system in which stockholders exercise their rights by mail. Solving such problems requires not just improving the morals of managers but also environmental improvements that encourage sound business activities such as the reevaluation of commercial law which are therefore an important aspect of the governments market enhancing role.

3) Legislation concerning corporate reorganization: Simplifying M&A, corporate breakup, and sale, etc.

In the favorable economic environment of the U.S., companies are vigorously amalgamated and sold, etc., in response to product standardization, the modularization of elemental technologies and other changes, as typified by the information industry. Similarly, Europe's pharmaceutical and other industries are vigorously merging to take advantage of economies of scale and selling off operational divisions in order to specialize in their strongest fields. Meanwhile, Japanese companies, facing globalization, informatization, maturation of the domestic economy and other changes in the economic environment amidst continuing domestic economic stagnation, are under pressure to radically restructure their operations by breaking into new fields and by rationalizing operations in existing ones in order to adapt to new needs and major technological changes. This is accelerating the trend of reevaluating corporate organizations with the objective of allocating corporate resources more efficiently. In response to such trends, institutional changes are under way, such as the lifting of the ban on pure holding companies through revision of the Anti-Monopoly Law, yet securing a more diverse range of organizational type options and speeding organizational changes in turn necessitates legal changes concerning the various methods by which organizational change is effected: M&A, corporate breakup, and sale.

A corporation selects the method of organizational change on the basis of management efficiency, and mergers and acquisition are effective when economies of scale or economies of scope are at work in a company's existing operations to the extent that a company can expand its scale of operations, reduce production costs or achieve a competitive advantage over other companies by acquiring or merging with a company engaged in related operations. Alternately, when there is an inefficient, unprofitable operational division of low relevance to the company's other operations, the selling of that division to another company is effective when the modularization of operations is possible. Finally, corporate breakup promotes the decentralization of decision-making in an operation where uncertainties exist but which is still deemed promising, and is used when doing so is an effective way of immediately establishing an enterprise specializing in that operation. Which type of organization change a corporation selects is generally affected by the characteristics of the industrial category to which that company belongs, and companies also pursue the merger, acquisition and breakup or sale of operations more vigorously in order to enhance management efficiency in their respective core competencies. The widespread use of M&A, corporate breakup and sale, etc., is expected to have the positive effects on industry and the entire economy of contributing to increased entry into and exit from industries and increased productivity through the more-dynamic activity of corporations. It is worth remembering that in the U.S. acquisitions have enhanced corporate governance functions by imbuing managers with the discipline to avoid moral hazard, while company sell-offs have provided so-called venture companies with the cash flows needed to create new enterprises.

Thus the acceleration and simplification of M&A, corporate breakups and sell-offs are important tools in making the Japanese economy more oriented toward market functions, but in the related institutional design it is important to assure ① neutrality toward the selection of organizational type by corporations, whether it be pure holding company, operating holding company or multidivisional organization, and the ability to respond rapidly and flexibly with respect to institutional application, and ② a certain degree of international consistency. This is because, with respect to ①, complicated institutional procedures and application that vary depending on organizational type could be disincentives to free organizational change and free selection of organizational type, and, with respect ②, because a lack of consistency could have negative effects on investment in Japan by foreign companies, create asymmetry between Japanese corporations domestic and foreign activities, or impair the overall organizational efficiency of corporate groups. Japan must urgently consider the establishment of "company breakup"[18] and other actions for which no sanctioned institutions currently exist, for such institutional improvements will diversify corporations options with respect to organizational change, and are thus one type of market enhancing policy. The consolidated tax payment system and other taxation systems having complementarity with these institutions must also be considered in tandem. In addition, a noted example of the role of intermediaries in private-sector coordination is found at the Osaka Chamber of Commerce, which facilitates the sale of corporations with information services that match sellers to buyers.

From this perspective, although last October's revision of commercial law did simplify merger-related procedures, current actual institutional revision is still inadequate with respect to corporate breakup: procedures are still complex, the company breakup institution is undeveloped, and tax-related allowances such as consolidated tax payment are lacking. The issues of corporate bankruptcy and business succession must also be properly considered when these and other institutions relating to organizational change are reevaluated from a comprehensive perspective. It has been pointed out that currently bankruptcy law, for instance, provides only few options with respect to reconstructive procedures: organizations other than joint-stock corporations are given only the options of bankruptcy in accordance with bankruptcy law or composition in accordance with composition law, and even a joint-stock corporation must be sufficiently large in order to take advantage of the provisions of the Company Resuscitation Law. The objective of establishing a vigorous economic system would be furthered by the securing of diverse options for diverse corporate organizations in the form of institutions that set forth the legal

[18] Indicates one type of corporate breakup in which the shares of the company formed in the breakup are allocated to the pre-breakup company's stockholders. This alternative to ordinary corporation breakup, in which the original company retains shares in the new company formed, is an option with a greatly different effect with respect to corporate governance: the newly formed company retains the original company's stockholders and so also inherits the governance structure that those stockholders comprise. Although there are problems with this institution (e.g., the original company's stockholders are subject to taxation when shares are transferred following the new company's formation), U. S. law views the transfer of a new company's shares as a nontaxable dividend, and so the type of company breakup known as spin-off is widely used there.

procedures for settling debts or reconstructing or liquidating troubled companies before their financial situation deteriorated too far, in order to help them start over. Other environmental improvements that should be considered include simplifying bankruptcy procedure to allow for written resolutions to call for a meeting of creditors.

4) Making proper conditions to encourage the creation of new industries

Important conditions needed in the Japanese economy to encourage innovation include not just various cross-sector policies, but also support policies that encourage the creation of new industries as the sources of such innovation. In short, the vigorous creation of the kinds of high-growth-potential small and medium-sized firms symbolized by the so-called venture corporations[19] will lead to new markets and new industries through various experimentation and trial-and-error by those firms.

Environmental improvements to encourage new-industry creation are also a noted new direction in small and medium enterprise policy. Past and current small and medium-sized business policy provided various measures that focused on corporation scale and which were designed to compensate for the disadvantages of competitive conditions relative to large corporations. To a certain extent, this policy has been successful in bringing out the positive role of small and medium-sized businesses. Today, however, small and medium enterprises are counted on to play a more positive role in the creation of new industries, as suggested by the terms the vigorous multitude and the engine of creation and originality. In response to such changes, policy emphasis must also be shifted to the enhancement of new market incentives for small and medium-sized businesses.[20]

Environmental changes that facilitate the creation of venture corporations and other small and medium-sized businesses will also help improve the domestic investment environment and therefore promote the entry of foreign-affiliated firms, which has thus far

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[19] Keio University Professor Kiyonori Sakakibara has made the important comment that the American term venture business refers to venture capital, not to venture corporations, as in Japan. In this paper, however, the authors use the term venture corporation in the sense already established in Japan, that is, a just-established business corporation, which is referred to in the U.S. as a start up firm.

[20] The beginnings of new policy are traceable back to the late 1980s, as exemplified by the inter-company and inter-sectoral strategic alliance objectives of the organization-forming policies provided in 1988's Extraordinary Law Concerning the Promotion of the Development of New Business Areas through Fusion of the Knowledge of Small and Medium Enterprises in Different Industries(the Amalgamation Law). By 1995 this law had been repealed and replaced with the Temporary Law Concerning Measures for the Promotion of the Creative Business Activities of Small and Medium Enterprises, and the expansion of policies to provide incentives for the development of new business fields had begun.

been limited by such factors as the hysteresis of past investment restraining policies, the current high-cost structure, and insufficient deregulation. The entry of foreign-affiliated firms, however, in addition to such spillover effects as the transfer into Japan of technology, know-how and other excellent business resources, can also be expected to sow the seeds of new domestic innovation as Japanese corporations compete with corporations of a different nature. And in actuality, vigorous entry by foreign-affiliated firms can be seen in the financial and service sectors, and this entry will intensify once foreign firms realize that business opportunities await them. In this regard, it is extremely important to promote environmental changes aimed at reinvigorating corporate activity in general through economic structural reform.

In addition to policies design to invigorate corporate activity in general through, for instance, reform of corporate taxes, which are said to be high in international terms, important policies with respect to effecting environmental changes that encourage the vigorous creation of venture corporations and other businesses also include policies that help alleviate the special problems faced by just-established corporations. Notable in this respect is direct finance market adjustment that facilitates financing, said to be the biggest bottleneck in business formation.

Emphasizing indirect finance, Japans finance system has to a certain extent been effective in that banks, led by the so-called main banks, have extensively provided corporations with rapid, low-rate financing, partially because of the incentive of the rents resulting from financial restraint. Bank loans, however, are based on the principle of complete recovery, and so banks alone cannot be completely depended on to provide startup capital the riskiest of risk money. And the impending major environmental changes that will be engendered by the financial Big Bang will make it even more difficult for banks to perform their traditionally active role. In other words, risk money should be provided not as financing but as investment, which necessitates invigoration of the direct finance market.

In this regard, we shall look at three types of concrete policies for invigorating the direct finance market in ways that provide enhanced incentives for venture corporation formation: utilization of the functions of intermediaries (venture capital) that link venture corporations to investors, increasing investors investment incentives, and improving the over-the-counter market.

The first type, environmental improvements to make full use of the function of venture capital as an intermediary between investors and companies, involves the important role that can be expected of venture capital in resolving the major problem of the asymmetry of information that exists between investors and corporations on the direct finance market. Venture capital in the United States, for instance, includes what is called the full-service capitalist, who, in addition to monitoring the early stages of a venture corporation with the objective of capital assistance, is also actively involved in management as, say, an outside director, and who provides support in everyday affairs, from material purchasing to legal measures for intellectual property protection and accounting.[21] In the area of financing, a type of venture fund known as a limited partnership[22] is frequently used to minimize investor risk, and there is often in place a system for collecting information about venture corporation managers so that they can more easily start over again when a venture fails.

Japan, too, must make full use of the intermediary functions of venture capital and use those functions to invigorate the establishment of new businesses. Also important is training to produce a resource that is in short supply in Japan: the kinds of people who, like America's successful venture capitalists, possess specialized knowledge and are capable of selecting investment opportunities and providing various advice. At the same time it is also necessary to remove the factors that have impeded the participation of venture capital in the management of invested-in companies,[23] and to promote policies to establish forms of financing with clear rules for investor protection. In this respect, Limited Partnership Act for Venture Capital Investment, scheduled for enactment in November 1998, is to be applauded for its authorization of financing through venture business partnerships in which the limited liability of investors is guaranteed, and for clearly establishing clear disclosure requirements for such venture business partnerships. Just as American deregulation in the form of revision of 1979's Employee Retirement Income Security Act (ERISA) invigorated pension funds investment in venture capital, so too repeal of the 5:3:3:2 requirement in Japan is clearing the way for pension capital, yet continued improvements, such as

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[21] It has been pointed out to the authors by Keio University Professor Kiyonori Sakakibara that in the U.S., this service is just one type of behavior and strategy of venture capital, among which a diversity of behavior can be seen, including venture capital where only financing is provided without any such services.

[22] A limited partnership characteristically avoids double taxation (investors are taxed directly and are not subject to corporate tax) and guarantees the limited liability of the limited partners.

[23] For instance, until 1994, the Fair Trade Commission viewed venture capital as equivalent to a joint-stock company, and employed guidelines that limited the maximum ratio of shareholding to 49% and which prohibited the sending of directors to the invested-in company.

resolution of venture business partnerships double taxation issue, are necessary to encourage the active introduction of pension capital.

Another issue particular to just-formed companies must also be touched on, namely, such companies lack of resources. A characteristic of some American venture capital is the various support available to founders in satisfying such business requirements as the acquisition of the human resources, materials and outlets. Japan's numerous trading companies can be seen as having functioned as similar intermediaries in the past, and the utilization in this area of the trading company-like functions of existing economic agents and pure holding companies should also be considered. At the same time, ways must also be found to enhance the possibility that new types of economic agents will, through experimental competition, emerge as new types of intermediaries. The so-called public incubators being developed by local public entities can also be expected to play a role complementary to the private coordination discussed above.

The second type of policy is policy support to enhance the investment incentives for investors as market entrants. Particularly important are tax incentives, as in the United States, where the various tax measures designed to minimize investment risk and enhance incentives include the allowing of capital losses on investments in venture corporations to be aggregated against other income, and to be carried over to subsequent fiscal years. In Japan, preferential tax treatment for so-called angels established in June 1997 allows for capital losses incurred by individual investors from investments in venture corporations in their founding phase to be carried over for up to three years. In other ways, however, such as the fact that aggregation of profit and loss is limited to capital gains on stocks, Japan's tax measures to not measure up to those of countries such as the U.S. and the UK. Japan must therefore introduce even more-daring tax incentives, such as the across-the-board deduction of a specific rate of invested amounts or expanding the range of aggregation of profit and loss. In Japan there is also almost no information available concerning unregistered or unlisted companies, and although the Ministry of International Trade and Industry has striven to distribute a corporate disclosure manual completed in September 1996, additional measures that support the distribution of corporate information are an important prerequisite for bringing larger numbers of investors into the market.

The third type of policy is improving the over-the-counter market. America's direct finance market provides a diverse range of options for investors and corporations that goes beyond the seven nationwide exchanges including NASDAQ, the OTC Bulletin Board, pink sheets, and even local markets. Japan, too, has rapidly implemented an array of improvements such as a 1983 institutional reform, modeled after America's NASDAQ, that gave the over-the-counter (OTC) market the functions of a primary market, while the 1995 establishment of a second OTC market opened the door to financing for new firms not meeting the requirements of the main OTC market.

Even now, however, and extremely small turnover of stocks in the OTC issues market suggests that the market is not functioning properly, one reason for which may be the absence of inter-market competition. Under a 1983 report of the Securities Exchange Council, the OTC market is given complementary status relative to the exchanges, which has created in Japan a perceived order among markets that places the OTC market after the first and second sections of the stock exchange. America's NASDAQ, in contrast, with its group of high-tech start-ups, has achieved an image as a high-risk, high return market and even competes with the New York Stock Exchange. Japan must look to such American examples and, from a market enhancing viewpoint, implement various revitalization policies, such as reevaluating the respective positions of the country's stock exchanges and OTC issues market, and creating a new OTC market to compete with the present OTC issues market.[24] In addition to reevaluation of review parameters and simplification of application procedure, a variety of other policies such as expansion of the market maker system[25] and other forms of private-sector coordination performed by analysts and other intermediaries prior to OTC introduction has been proposed, and some implemented. It is important that such policies been linked to inter-market competition in order to revitalize the entire direct finance market.

5) Creating greater corporate and individual incentives through tax reform:

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[24] Japans OTC issues market is not only operated but also regulated by Japan Securities Dealers Association, while America's NASDAQ and Europe's ESDAQ, although regulated by public institutions, are operated independently by various economic agents in the corporate environment, namely, venture capitalists, auditing corporations and lawyers. Japan, too, is considering the establishment of an OTC market that would be run by economic agents, thereby achieving separation of regulation and operation.

[25] A market maker is a securities dealer engaged in price formation on the securities and other secondary markets. Also called a pricing dealer, the market maker helps maintain stable prices by quoting buy and sell prices regardless of the markets tone. In the main OTC market, market making is insufficient as such activity is limited to the semiweekly issuing of quotes by registered dealers. Expansion of the market maker institution would entail requiring the continuous, competitive posting of buy and sell quotes by multiple market makers.

Corporate tax reevaluation, the consolidated tax payment system, stock options, reevaluation of the income and retirement pay taxation system

This section deals with tax reform. It goes without saying that issues relating to the tax system require a comprehensive discussion encompassing both the fiscal perspective of government revenue and the perspective of income re-distribution functions; even limiting the discussion to effects on resource allocation would still involve points pertaining to the foundations of economic policy, e.g., reevaluation of the ratio of direct and indirect taxes and neutrality with respect to the use of combinations of tax increases and tax decreases to avoid changes in tax revenue. Nevertheless, as such issues go beyond the scope of this paper we shall limit ourselves to a discussion of the kind of tax system that is needed to achieve a vigorous economic and social system that encourages innovative activities by corporations and individuals. As concrete examples, we shall examine the issues of corporate tax reevaluation, reevaluation of the individual income tax and retirement pay tax, the consolidated tax payment system, and the stock option tax, in the stated order.

As for the first issue, the reevaluation of corporate taxes, these taxes effect investment behavior by corporations. For example, a high rate of corporate income tax reduces a corporation's internal reserves for the current term, thereby acting as a disincentive to investment behavior, such as capital investment and risk investment in the following term. Furthermore, this generally applies regardless of how high or low the rate of taxation is. The issue at hand in the debate over whether to lower corporate tax rates is that with increasing globalization, tax rates higher than those in other countries can lead to "tax arbitrage," encouraging the outflow of capital to other countries and becoming a disincentive to investment into Japan. In this sense, the corporate tax rate reduction scheduled for this April is expected to increase incentives for R&D investment and other types of investment, and, by encouraging investment, to increase the likelihood of the kind of innovation that engenders economic vigorousness. In its FY1998 Tax Reform Outline, released at the end of last year, the Liberal Democratic Party states the coming tax cuts to be the first of a series, and that the objective is to bring Japans corporate taxes in line with international levels, and to follow up with bold reforms. It is hoped that this is actualized .[26]

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[26] Former Prime Minister Hashimoto, at a press conference held the day after approval of the FY1998 budget, on April 9 of this year, stated his intentions regarding corporate taxes to be to bring overall tax rates in line with international levels as quickly as possible over the coming three years. Also the Obuchi Administration pledged to accelerate the schedule at its start in July.

Next, let us consider the re-evaluation of the individual income tax and retirement pay tax systems as incentives for individuals. Individual income taxes, when progressive, are designed to redistribute the flow of income, and so can be a disincentive to individual innovation to the extent that not all performance-based compensation reverts to the individual. Given today's globalization, individual income taxes, just as with corporate taxes, can diminish the desire to work and even cause the outflow of capable persons to foreign countries due to "tax arbitrage" when extremely progressive or when the maximum taxation rate is very high relative to those of other countries. The economic system that we envisage absolutely requires the invigoration of innovation, which in turn requires large numbers of the talented people to carry out this innovation. For this reason, individual income tax incentives must be provided while at the same time assuring equity and balance in the country's overall allocation of income. One incentive that should be emphasized in this respect is "entrepreneur profit," a type of rent that is also a reward for innovation. Such opportunities for gain are generally high-risk and high-return, and we should consider a tax system that provides incentive for innovation by, for instance, allowing those who gain such compensation to level fluctuations in their income using the aggregation of profit and loss for income over a certain period of time (e.g., 5 to 10 years). Changes like those made under America's Reagan Administration - lowering the maximum tax rate, less progressive taxation, and broader classification of income level corresponding to each tax rate (e.g., 20%, 30% and so on) - should also be discussed in the context of long-term tax system overhaul.

As for retirement pay taxation, many current retirement pay systems are themselves progressive in that they vary depending on length of employment and so act as a disincentive to changing places of employment. One factor behind this is the fact that the income tax deduction for lump-sum retirement benefits increases from 400,000 yen per year to 700,000 yen per year after 20 years of continuous employment. Because more flexible labor market is an important prerequisite for the securing of diverse options with respect to job changing and other labor issues, the tax system should be reformed in ways that reduce any extreme disincentives to this goal, and it is from this perspective that the retirement pay taxation system must also be carefully examined now. It should also be noted that such reform would permit diversification of employment systems, which are one of the institutional keystones of Japan's economic system, and that this in turn could bring about changes in other forms of inertia arising in institutional complementarity with employment systems (for instance, Japanese-style corporate governance, the public's selection of education institutions). Ultimately, this could bring about gradual change in Japan's entire economic and social system.

The consolidated tax payment system can be understood as an institution that is necessary to provide corporations with diverse options with respect to corporate organization. The current taxation system does not allow for consolidated tax payment and is a disincentive to selection of the joint stock company as the type of organization. Consequently, to provide diverse options in selection of organization type, the taxation system must become neutral to changes in the organizational type of corporations. The consolidated tax payment system should also be implemented as soon as possible as it removes disincentives to the pure holding company system that we advocate.

Stock options, a type of performance-based compensation, can be seen as a new alternative to corporations' existing types of compensation, such as seniority pay and bonuses. Since they are linked to a company's stock price, stock options are also an incentive, from the perspective of the managers or employees who receive them, to improve company performance and managerial efficiency in order to raise the share price (or, in the case of a privately-held company, to achieve public offering). Furthermore, stock options provided to employees in place of employment income also have the effect of personnel expense deferment, and so to a company represent a means of easing restrictions on its cash flow. Such incentives would be particularly effective for the just-formed venture corporations expected to be a source of innovation, and in this respect the commercial law revisions that have permitted stock options (stock options created by the buying of a firm's own stock were permitted last June, while tax reform enacted this April made them income-tax-deferrable until share sale) are to be commended.

6) Diversification of types of employment and smoothing labor turnover

Although no major changes in Japan's overall employment systems are apparent at the present time, employment is becoming more fluid and corporations' personnel management systems (e.g., continuous long-term employment and seniority-based wages) have begun to change. This indicates that Japan's employment systems cannot keep up with the pace of environmental changes, and that the traditional systems do not provide employees with sufficient incentive to change their behavior patterns in response to these environmental changes. And because Japan's employment systems, as has been pointed out, have strong institutional complementarity with other Japanese economic and social systems, such trends in employment will have a major impact on change in Japan's economic and social system. Let us consider what type of market enhancing role the government should play with respect to employment.

Of the various types of institutions having institutional complementarity in Japan's economic and social system, employment systems comprise one of the most important institutions. This is because of the considerable inertia found in employment systems: long-term stability in employment systems encourages individuals to self-invest long years of their time in forming abilities that are adapted to those systems, and both the forming and changing of those capabilities require considerable time and expense. For this reason, it is important to strive for the gradual transition to a new system by introducing institutions that allow for greater diversity of choice while at the same time preserving the advantages of Japan's traditional employment systems.

It is in this context that we wish to emphasize the fact that the current environment does not permit employees to autonomously select from a diverse range of options; the current employment institution serves as a particularly strong disincentive to "changing jobs," for instance. Although workers are vulnerable in some respects and therefore in need of protection, and although proper considerations in labor policy should be provided as part of social policy, employees also function as economic agents in that they provide labor and engage in consumption using the income they receive in consideration for their labor. It is also true that employees enjoy a certain amount of utility from free economic activity. The kinds of institutional designs that, by focusing on the former aspect, would place across-the-board restrictions on free choice in the name of worker protection would be inappropriate because of their effect of greatly reducing utility, the latter aspect. The utility function of employees varies from individual to individual, while the utility function of those having an average utility function depends on the era and on the environment. Consequently, constant re-evaluation is necessary to assure a balance between worker protection policies and policies to assure the free economic activities of employees - two types of policies in a trade-off relationship.

At the same time, employment systems have a major effect on corporate activity and therefore a significant impact on economic activity in general. As stated in Chapter 2, the environment surrounding Japan is undergoing major changes that are necessitating the construction of an economic and social system that permits diverse choice and which is conducive to innovation. For this reason, it is now an important role of government to facilitate the transition to more desirable employment systems by removing the factors that are inhibiting this transition.

From this perspective, employment-related policy that the government should pursue can be broadly divided into two categories. The first is improving the external labor market to make entry and exit easier. Specifically, this entails transferring to private-sector intermediaries those labor turnover-related services previously provided by the government in place of market functions (i.e., employment agency services and temporary placement services) and, with respect to job changing, neutralizing the various institutions that have been a disincentive to job changing, such as the current retirement pay and pension systems. Personnel evaluation systems should also be modified in order to resolve the problem of the asymmetry of information and to enable market mechanisms to function more effectively with respect to job changing. In addition to such deregulation, improved systems of labor-management dispute settlement must also be established as one of the social safety net. In particular, the current system of setting collective, uniform labor conditions and the corresponding dispute settlement system must be improved in order to handle the increases in individual disputes that are expected in the near future.

The second type of policy objective is the establishment of employment systems that are flexible and discretionary. This is significant in that it will provide both labor and management with diverse choices, allow the diversification of compensation systems in employment systems, and provide compensation-based incentives for employees. Many corporations have already replaced traditional seniority-based systems with one in which salaries are gradually lowered after peaking at a certain age, and some have even introduced systems of annual salary that varies according to job type. The ability to select from among diverse compensation systems through labor-management negotiations is desirable because of the institutional complementarity between compensation systems and other employment systems. The diversification of compensation system options should be achieved by making current regulations more flexible so as to permit discretionary labor systems, flextime, fixed-term employment contracts and other types of employment contracts, and by making the aforementioned retirement pay taxation systems and other institutions neutral toward this diverse array of compensation systems while at the same time providing considerations for such aspects of worker protection as employee evaluation, and treatment and disclosure of evaluation results. Deregulation of employment agencies services and temporary placement services is also important as a means of providing diverse options.

7) Diversification of education systems and expansion of discretion in university education

As already stated in Chapter 1, the major environmental changes that the Japanese economy currently faces, in particular declining birth rates coupled with the aging of society and Japan's emergence as a front-runner, are making the invigoration of innovation absolutely necessary. Such innovation, in turn, requires a diverse range of highly talented, ambitious people, yet Japan's current educational system, with this emphasis on the average qualities demanded of education, is overly uniform in certain respects. Institutional reform that allows for diversity and flexibility are urgent requirements for making students more creative and individualistic, and educational reform is therefore being pursued as one of the government's six major reforms.

When considering educational issues from our perspective of the complementarity role of government in bringing out the market's dynamic functions, universities as institutes of advanced technical training are of particular importance, and for this reason we shall consider the optimization of universities from the perspective of the market enhancing role of government.

The various reforms currently being implemented to achieve institutional flexibility in higher education are creating an environment that allows students to freely choose from among a diverse range of options, and include the transfer of credits between different universities, the recognition of credits from study at non-university institutions, greater flexibility in transfers between schools and departments within a single university, and increased admission of transfer students and adults. The entrance of exceptionally talented persons under the age of 18 into universities also became possible in 1998 in the fields of mathematics and physics.

Another notable policy being implemented as a means of education reform is the use of internships, which are a type of education program in which students undergo practical training at corporations while enrolled in a university. A total of approximately 100 public and private universities either already have such a program or currently plan to institute one. In addition to creating a greater interface between corporations and universities and a greater understanding of corporations and the real world, thereby encouraging students to develop a greater awareness of the path they wish to take and what they should learn at university, internships are also significant in that they reduce the asymmetry of information between students and corporations and engender greater diversity in students' career choices and corporations' personnel policies. Another important advantage of internships is that they allow experimentation by corporations and by students.

An extremely important consequence of these and other educational reforms is the increased discretion they allow in higher education, for increased discretion means greater options for universities in how they operate and what types of educational programs they provide. This, in turn, creates an incentive for differentiation among universities and stimulates inter-university competition that can lead to increased quality in education. The further drop in birth rates expected will no doubt intensify this competition, thereby stimulating universities' endeavors at better management. This market competition and use of managerial sensibilities are expected to be a primary source of the discipline universities will need to manage their increased discretion.[27]

In this respect, it is the national universities that are likely to undergo the most far-reaching reforms. Typical examples of changes now under way among private universities are, such as the internal institution established some time ago by Tokai University to promote industry-university partnership, and Ritsumeikan University's pioneering university administration which, under the philosophy of establishing a two-way relationship between university and society, strives to create a system that enables the entire university organization to contribute to the surrounding region. National universities, too, to promote

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[27] During a discussion of a draft of this paper at a conference entitled "The Roles of the Market and Government," the authors received various comments on this paragraph concerning higher education from several attendants who are also university professors. These included the comment that even if universities' discretion were expanded, reform would not move forward without increased discipline in university administration by students and society in general, who are stakeholders in universities. Although being university outsiders and therefore unable to render a definite conclusion, we do believe that the market mechanism of competition must operate among universities in order for university reform to move forward. Because the demographic change of declining birth rates will further intensify competition among universities, the parallel promotion of increased discretion will make this reform even more effective. However, if the current governance mechanism remains in place at national universities, then it is fully possible that the moral hazard associated with reform from within will also persist.

industry-university alliances, have established many venture business laboratories (VBLs) designed to produce imaginative people imbibed with a rich sense of the venture spirit. Such experiments are expanding the educational inventory and diversify the educational options of students, and the proper form of such university-industry alliances is one that arises from universities' increased degree of freedom of administration and the competition among universities to distinguish themselves through innovation. In addition, objective evaluation systems designed to maintain or improve the quality of higher education (concrete examples of which include the engineering school accreditation systems used in the U.S.) are also currently being considered. Although proper operation of such systems is expected to benefit both the corporations and the students they hire, such institutions can only perform their intended functions when expanded discretion allows the competition mechanism to operate in higher education.

For this reason, it is particularly important to the national universities to increase discretion in university administration and the higher education system to increase independence in operations. This concerns type 2 market enhancing policies in that it involves the operation of market functions in the providing of the public service, namely, that of education provided by the government through the national universities. During the coming educational reform, the optimization of university management under more-diverse choices will be an important issue with respect to substituting government involvement in universities - particularly in the national universities - with the discipline of market competition.

Furthermore, the diversification of higher education will shift emphasis in graduate evaluation from the university from which a student has graduated to the type of education he or she has received. This, in combination with the diversification of the human resources turned out by universities, will also affect corporations' approach to hiring, currently said to be a form of academic snobbism. Conversely, corporations that seek out more diverse human resources will accelerate reform of education institutions, and provide a greater incentive for persons seeking an education to make more diverse choices that also encompass life planning. In order for the government to pursue economic structural reform and educational reform, close cooperation among the related government agencies and their awareness of this institutional complementarity are essential.

8) Systems for promoting university R&D and the transfer of results

Japan's universities account for a considerable share of R&D resources (in terms of both funding and researchers), but with respect to the percentage of all patents that come from universities and the patent royalty income of universities, a comparison of Japan and the United States indicates that those resources have not always been fully utilized in private-sector economic activity. At Japanese universities, the percentage of basic research, which is farthest from commercialization, is even lower than in other advanced nations, indicating some factor responsible for the failure of research achievements to be transferred smoothly. Basic research, it has been pointed out, is closely related to the innovation that we stress in this paper even if it does not always lead directly to commercialization, and in this respect it is extremely important to further integrate R&D activity at universities and also to encourage the transfer of the results.

As in education, this requires, first of all, greater discretion in university administration and the creation of an environment that allows researchers to pursue their research freely. Once this has been achieved, an environment that encourages the transfer of research achievements to industry and other sectors must be created so that the spillover of university research achievements can be put to maximum use by society.

In regards to discretion in university administration and researchers' activities, there is no denying the fact that the national universities in particular have been greatly restricted by regulation, or the fact that all universities in general, including private universities, have also been greatly restricted by various forms of government involvement, such as in budget allocation. The various institutions have been reformed by the "Science and Technology Basic Plan," adopted by the Cabinet in July 1996, and by the "Action Plan for Economic Structural Reform," adopted by the Cabinet in May 1997. These and other reforms have eased restrictions on instructors at national and other universities who wish to engage in work outside the university, eased restrictions on joint research, introduced fixed-term hiring systems that allow universities to exercise their own judgment in the appointing of university instructors, and also expanded the scope of the Worker Dispatching Law to allow for the temporary placement of researchers and research assistants.

However, further deregulation of the national universities is necessary in order to provide universities and researchers with freedom of choice and to provide greater incentives for the transfer of research activities and research achievements to industry.

Examples include simplifying and speeding up accounting and execution procedures for research expenses in cases of contract research commissioned to a national university by an outside entity, and also a re-evaluation of the regulations governing national and other universities wishing to construct on their premises a facility for joint research by Japanese and non-Japanese researchers. National universities' current lack of juridical person status is another factor weakening their commitment to university management and restricting the degree of freedom of research environments. These and other factors must be addressed in the continued consideration of concrete policies to expand universities' discretion.

As for promotion of the transfer of research results to industry, the government is considering active support for a type of organization that some universities have begun instituting recently, the Technology Licensing Organization (TLO), which scouts for research achievements at universities, assesses those achievements, assists in patent acquisition, generates income by licensing those patents to corporations, and allocates that income to universities and researchers. In addition to the complexity and considerable costs of the patent acquisition process, researchers who develop new technology have also faced the considerable burden of having to find licensees and prepare licensing contracts, and so there have not been adequate incentives for patent acquisition for universities' research achievements or for the active transfer of those achievements to industry. In addition to encouraging the patenting of university research achievements so that they can be utilized by the appropriate companies and thereby effectively utilized by society, TLOs, as intermediaries, can also be expected to perform the role of instituting a virtuous circle in which universities and researchers are assured of proper compensation (in the form of license fees, etc.) which can then be applied toward further university research that then produces new research achievements. In the United States, this system has been widely adopted by and has been used to achieve results by research universities successfully as a result of 1980's Bayh-Dole Act, which in addition to granting universities patent rights to inventions made with government funds, also imposed the requirement of "due diligence" in the selection of licensees to commercialize acquired patents. Institutional improvements such as these can be seen as extremely important market enhancing measures that provide researchers with the incentive to pursue research and development and transfer their achievements, and which use innovation to achieve economic invigoration. Incidentally, in Japan, a bill that was introduced in the latest ordinary session of the Diet, entitled "The Law

Promoting Technology Transfer from Universities to Industry," contains such policy support as debt guarantees and subsidies from the Industrial Infrastructure Improvement Fund for technology transfers by TLOs and other organizations.

9) Disclosure and information services

Technological advancements in information and telecommunications have greatly increased the weight of information in economic activities, and economics has come to also stress the important role information plays in economic activity, for it is now recognized that when the "asymmetry of information" exists among trading agents, price information alone results in too few market transactions and the improper allocation of resources.

In Japan, amidst widespread awareness of the close relationship between information and economic activity, there are now increased calls for extensive disclosure by corporations. Among the various reasons, one is awareness of the need for the international harmonization of disclosure through standardization of corporate accounting standards because of the vigorous globalization of capital movement and the cross-border expansion of corporate activity. From the viewpoint of corporate governance, another important factor that has created an awareness of the need for further disclosure is the demand for more open governance centered on market-imposed discipline, and the realization that Japan's traditional, insider-centered system of governance, with its main bank system and share cross-holding, has many limitations and is no longer capable of keeping up with environmental changes. Serious doubt was also cast on the disclosure methods of Japanese corporations by the revelation that the financial institutions that announced their bankruptcy last November had considerable off-book debt, including unperformed assets that had not been announced. Deregulation and other changes that allowed the competition mechanism to operate to a greater extent than before would increase market discipline and also create an incentive for corporations to voluntarily disclose information for the purpose of attracting investments.

Although the need for disclosure can thus be discussed from a variety of different viewpoints, the requiring of the disclosure of necessary and appropriate information can be seen as a market enhancing role of government that encompasses the rule-making needed for market mechanisms to function properly, and basic infrastructure improvements needed to assure fair transactions on the marketplace. Below, we shall discuss the necessity of disclosure from the viewpoints of investor protection and consumer protection.

Let us first discuss the need for further disclosure in capital markets from the perspective of investor protection. In capital markets, with corporations turning to direct financing more and more, investors face a greater and greater need for information to make proper investment decisions under the principal of self-responsibility. The information on which investors base their decisions includes financial information and macroeconomic information pertaining to a company, and so in the absence of proper disclosure - in the case of a company's financial information, the lack of market value accounting and the timely disclosure of financial information - investment risk increases, becoming a disincentive to investment from the investor's perspective. With respect to corporate governance, institutional investors, who are expected to play a leading role in the establishment of a system of governance centered on market-imposed discipline, require the disclosure of proper information about companies when deciding which companies to invest in, and also when subsequently monitoring those companies' management. Proper disclosure also complements the credibility of ranking agencies, venture capital, and other intermediaries that mediate information, and so is a prerequisite for encouraging the development of these intermediaries. The need for market value accounting, timely disclosure and other concrete methods of investment-related disclosure has already been demonstrated, and now it is necessary to consider the issue of disclosure from a comprehensive perspective that includes the range of disclosure requirements, the burdens of corporations and consistency among the various accounting systems. From a market enhancing viewpoint, such rule-making is an important role of government to the extent that it assures the enforcement of fair market rules from the viewpoint of investor protection (e.g., monitoring for rumors or other false information and cracking down on insider trading), although it is a separate issue from the disclosure of information concerning corporations receiving investment.

From another perspective, that of consumer protection, proper disclosure by corporations is important in that it facilitates the matching of supply and demand in the goods and services markets, and minimizes the asymmetry of information concerning goods and services that exists between suppliers and consumers. The asymmetry of information occurs when, as in the case of secondhand goods and real-estate, products have differences in quality and other attributes that are difficult to detect outwardly. The extreme asymmetry of information makes it easier for consumers to take risk avoidance action and therefore helps match supply to demand when information concerning product defects or other risks exists. The development of intermediaries who perform various types of private coordination should help correct the problem of asymmetry of information relating to pre-existing attributes. Incentives that encourage the active disclosure of information on the part of corporations who are offering a good or service for sale are also important. For instance, one direct objective of product liability law is to reduce the consumer's burden of proof with respect to damage caused by a defective manufactured goods, but the law is also effective as a means of providing corporations with the self-discipline incentive to avoid disputes with consumers by providing consumers with proper information in advance, such as information about precautions for use. From this consumer protection viewpoint, an important role of the government is to monitor compliance with prior disclosure requirements - such as those concerning the legally required disclosure of sales conditions pertaining to installment plan sales and door-to-door sales - and to provide information about violators of such requirements.

10) Intellectual property rights

The combination of declining birth rates and the aging of society, along with Japan's emergence as a front-runner, are major environmental changes in the Japanese economy that are necessitating a major shift in technological development strategy from improvement and application to the development of original fundamental technologies. An important prerequisite for doing so is improvement of intellectual property rights systems. In addition, because the major technological innovations typified by the trend of informatization are expected to be applied in various fields and create countless new possibilities, protection of the intellectual property rights that result from this innovation requires proper institutional design that addresses the technological characteristics of intellectual property as a type of good.

When considering intellectual property rights institutions from the market enhancing view stated in Chapter 2, it is extremely important to provide "incentives" for both research and development performed by private economic agents and for the inventions that are the results of this research and development in order to encourage innovation.[28] Regarding this

[28] Here, the authors' intent is to focus on R&D by private economic agents in the context of the relationship between intellectual property rights institutions and R&D, not R&D in general or R&D performed directly by the government.

point, Aoki, Murdock, and Okuno (1996) have stated: "Subsidies for investment in research and development may not create incentives for generating really innovative products. The patent system, which requires much more detailed and specialized information processing for its administration, may perform better in this respect."

From the viewpoint of providing incentives for original technology development, patent institutions can be seen as policies for correcting "market failure" in that the protection of inventions by patent institutions is justified by such externalities as spillover, whereby the results of research and development commonly "spill over" to those besides the inventor, with the consequence that an absence of some form of protection causes research and development investment to fall below the socially desirable level. Although such externalities can also be corrected with the policy of using subsidies to raise research and development investment from levels deemed too low socially, subsidies, in addition to requiring funding, also entail many uncertainties: R&D target issues must first be defined as national objectives and the formation of grantee private economic agents, etc., must be coordinated. The decisive problem, moreover, is that because subsidies must be granted before R&D is begun, the imposition of clear obligations concerning results becomes more and more difficult when frontiers of research are involved, and a lack of sufficient obligations can lead to a moral hazard among the R&D agents in question. The use of patents to protect inventions, in contrast, guarantees the actual inventor a type of rent in the form of entrepreneur profit, and may therefore be superior with respect to providing incentives for truly innovative research and development. This approach can also help avoid inefficiency and the various other problems associated with government-based R&D as the selection of R&D topics and methods of implementation are essentially left to independent economic agents and to private-sector coordination.

Nonetheless, there are cases in which patent institutions alone are not a sufficient policy for correcting "market failure," such as extremely basic research with a low possibility of immediate commercialization, in which case independent endeavors by the private sector are unlikely because of the extremely high uncertainties concerning results. Another example is environmental problems, in which case policy objectives are clear and the public interest is promoted but in which the costs of commercial use are difficult to recover. In such cases R&D investment subsidies may also be justified. In addition, problems with institutional operation may be resolvable with, say, the open application system for the selection of subjects for subsidization. Basically, the appropriate approach would seem to be one in which patent institutions are used to provide private-sector incentives but in which subsidies are used in fields that closely affect the public interest and in which spontaneous private-sector initiative is unlikely to be stimulated with patent institutions alone.

Now that we have considered the relationship between R&D issues and intellectual property rights institutions, the next step is to consider institutional design issues in intellectual property rights institutions themselves. Broadly speaking, these can be divided into three categories: the proper protection of rights, encouraging the utilization of rights, and international consistency.

With regard to the first, the proper protection of intellectual property rights, Japan, too, has in recent years begun instituting policies with strong propatent[29] characteristics. Because the aforementioned "market failure" associated with R&D investment also depends on the extent of intellectual property rights protection, the mere existence of institutions may not assure sufficient incentives for invention if protection is weak, while at the same time protection that is too strong can preclude new innovation through the application of inventions in myriad fields. This means that the balance between the objectives of providing incentives for inventions and encouraging the diffusion and utilization of inventions is a constant problem. The shift to propatent policy not only affects this balance, but also is closely connected to a goal advocated in this paper: dynamic resource allocation through innovation. From the perspective of today's importance of original technology development in the private sector over the objective, pursued during the period of economic "catch-up," of the widespread adoption by industry of foreign technology and application technologies based on that foreign technology, the shift to propatent policies that provide strengthened protection of rights and enhanced incentives for invention is essentially supportable. From the market enhancing viewpoint, however, it would also seem necessary, when striving to create an environment where investors have the proper range of protection to pursue their invention efforts with a sense of security, to also design institutions that address the economic and technological characteristics of intellectual property as goods with respect to

29 "Propatent" is a term used in America's Young Report, which was released in 1985, in the midst of the extremely important policy shift from anti-patent to propatent in the 1980s. This policy shift, which ended a long-standing anti-patent stance that had lasted from the 1930s through the 1970s as part of antimonopoly policy, was spurred by fears that America would lose its leadership in high technology.

the range and extent of protection in order to institute the kind of unrestricted coordination (e.g., the matching of dormant patents with potential applications) that encourages diffusion by private economic agents.

As for concrete examples of the proper protection of intellectual property rights, let us begin by considering two points concerning the range of rights protection: ① patent acquisition in non-manufacturing sectors and ② creating a rights definition scheme for new domains. In regards to the first, the acquisition of intellectual property rights is expected to expand from manufacturing (the traditional center of patent acquisition) into finance, distribution and other services, as exemplified by the attention that electronic money patents are attracting. In addition to a heightened awareness of intellectual property, these sectors are also likely to soon require support in creating an appropriate management scheme suited to the characteristics of intellectual property. As for the second point, the proper protection of software and digital contents must first be addressed as responses to informatization. One view on the defining of rights in these new domains holds that the promotion of utilization should in some cases be given priority over development incentives (i.e., rights protection) from the perspective of increasing economic welfare as viewed after the fact, as in the case of the idea for the MAC/OS icons.[30] This type of intellectual property has also demonstrated properties as goods that are unlike those of traditional intellectual property - for instance, widespread citation and alteration in the case of images and other content, and the strong complementarity between individual software programs, as with Windows and other OSes - and a great resultant need for proper balance between rights protection and the demands of competition policies. Other issues currently being considered include the question of what kinds of rights protection to provide for databases, which although low in creativity have high value added and high demand. Thus, there are still many issues requiring active government efforts with respect to the construction of a rights protection scheme for these new domains.

Next is the issue of the extent of rights protection. The first point to examine is that of damages under patent law. Japan's system of compensation for damages has not allowed for damages high enough to discourage infringement. In addition, profits from intellectual

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[30] In regards to the "technology" of using icons (small pictures or icons) on computer screens as a means of simplifying operations by human users, at first the issue arose of whether to protect the rights of developers (or pioneering users) or to permit widespread use, but eventually widespread use was permitted, opening the door to the subsequent use of icon interface by Windows, TRON and X Windows (a UNIX-based OS).

property are, for reasons of technology, more difficult to calculate than profits from other types of goods, while it has also been demonstrated that calculations of missed profit tend to be lower than the actual damages sustained. For this reason, the current system of compensation for rights infringement is likely to result in continued moral hazard in infringement that could act as a disincentive to the development of new technology. A revision of patent law that would revise the system of compensation[31] in order to resolve this problem was carried in the latest ordinary session of the Diet. In addition, civil action in cases of patent infringement require greater speed and expertise as well as environmental improvements that would encourage the development of intermediaries to perform negotiation and arbitration between companies, and thereby provide companies with more diverse options and allow for more flexible management.[32, 33] Particularly from the viewpoint of increasing expertise, because Japan currently does not allow special courts (i.e., courts not belonging to the regular courts system),[34] the establishment of a patent court system should be considered as a means of preventing protracted trials from acting as a disincentive to technological development.

As for the issue of the use of intellectual property rights, it is said that only slightly more than 30 percent of all patents issued in Japan as of 1996 have been commercialized or otherwise utilized. Many of these unused patents are most likely what are called dormant patents. This indicates the importance of market enhancing policies for establishing a "patent marketplace" by cultivating and supporting intermediary institutions that match corporations holding dormant patents with corporations seeking to actively utilize those patents.

Lastly, in regards to the issue of international consistency in intellectual property right institutions,[35] continued economic globalization and increased interdependence

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31 Specifically, this revision simplified for instance the establishment of damages by changing the method of damage calculation, and also proposes stiffer penalties for corporations that commit infringement.

32 Specific examples include increasing the number of judges, expanding expert departments responsible for cases related to intellectual property rights, and a system for training expert judges.

33 This partial revision of patent law also includes a scheduled revision that encourages appeals of invalidity. Although the original purpose of appeal system conducted the Patent Office is to determine and clarify patent ownership, in patent infringement cases judgments of invalidity are often requested by plaintiffs as a defense tactic. For this reason, it is important to speed up not just judicial procedure but also the appeals as well.

34 In the United States, the Court Of Appeals for the Federal Circuit (CAFC), established in the 1980s under a new propatent policy, handles appeals in cases of patent infringement. In Japan, according to the November 1997 report of the Compensation Subcommittee of the Industrial Property Council, "there are many calls for the establishment of a special court system such as those found in other countries."

35 One recent development in the area of international consistency is the WTO's TRIPS Agreement, which went into effect

among nations make it more likely today that efforts by individual nations attempting to design institutions for intellectual property rights protection will not be sufficiently effective. And in developing nations, despite the progress in intellectual property rights institution establishment spurred by enactment of the WTO's TRIPS Agreement, there are still the problems of patent infringement and the copying of trademarks and designs, etc., by foreign corporations, and continued improvement in intellectual property institutions in such developing regions - including improvements in effectiveness - are still necessary. It is important for Japan to make suitable contributions with regards to these and other international issues.

11) Environmental regulations and the development of new industries

Here, we shall use environmental problems as an example of the effects on new industry development of the implementation by governments of policies with objectives other than economic ones.

In cases of problems where, as in the case of environmental problems, externalities exist that make the optimum allocation of resources impossible with market functions alone, a government will often initiate some form of corrective, ex post facto policy intervention intended to achieve the optimum allocation of resources. Such policy measures can be broadly divided into direct regulation on the one hand and, on the other, indirect intervention that seeks to apply market mechanisms to the problem (such as in the case of environmental problems) through taxes, burdened charges, or subsidies, for instance. Generally, economic methods falling under the latter category are theoretically considered more efficient than direct regulation in achieving the ex post optimum allocation of resources in that monitoring costs are lower and the distortions in resource allocation caused by government intervention are lessened. Nonetheless, governments must determine the overall advantages and disadvantages of substitutive policy measures by considering target levels, technological characteristics, and impact on the entire economic and social system

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in January 1995, and which calls for a higher level of protection of all types of intellectual property rights (copyrights, patents, designs, trademarks, geographic indications, semiconductor integrated circuit configurations, and undisclosed information), the use of most favored nation status among countries, and, with respect to the execution of intellectual property rights, the establishment of institutions that guarantee impartial, fair and appropriate procedures. Related developments concerning copyrights include adoption of the WIPO Copyrights Agreement and the WIPO Performance and Record Agreement in December 1996, progress in considerations for digital formats and networks, and the establishment of distribution rights.

when considering which type of policy measures to take. For this reason, the selection of policy measures is no easy task even when discussed in terms of using static resource allocation to correct a market failure that results from externalities, namely pollution problems.

The impact on dynamic resource allocation of substitutive measures used for environmental problems is an issue even farther beyond the scope of textbook-level debate. The creation and development of new industries as advocated in this paper is an extremely dynamic issue, and environmental conservation policy measures have a very complex impact. This is because the success of a policy depends greatly on the success of incentives for the economic agents whose positive adaptive behavior plays an extremely important role in dynamic issues.

In short, there seem to be some possibilities that direct regulation may be superior with respect to encouraging the innovation needed to resolve environmental problems and encouraging the development of new industries. A classic example of this is America's Muskie Act, whose restrictions on automobile emissions prompted the entire auto industry to develop the technology needed to comply with those regulations.

The mechanism by which direct regulation and indirect methods such as taxes and burden charges have different effects on incentives for innovation by private economic agents can be summarized thus. First of all, the incentive to achieve a given environmental goal will vary depending on the nature of each type of economic agent. It follows that economic agents differing in nature will have different incentives to achieve that environmental goal by developing innovative, new technology rather than with existing technology. For instance, if the environmental goal in question were a 10% reduction in energy use, the aforementioned two types of incentives can easily be imagined varying according to industrial sector.

When comparing a certain level of tax on petroleum fuels across the board to direct regulation in the form of energy conservation goals set differently for each sector according to the differences in incentives in those sectors, it would appear that the latter option would encourage greater innovation and thereby plant the seeds for new industries. The sectoral difference in incentives is due to the fact that factors such as competition in the market for a good, the technological characteristics of a product and industrial comparative advantage vary from sector to sector. Or, to put it in more general terms, direct regulation allows for more detailed differentiation according to the incentives of economic agents than do indirect methods.

Another mechanism by which the incentive for innovation is affected differently is the fact that different policy instruments have a direct effect on different economic agents. For instance, in our above example, energy taxes are a policy instrument that have a direct effect on users. In the household, the effect takes the form of higher fees for electricity, which encourage consumers to reduce their use of electricity. In contrast, direct regulation requiring the sale of household electrical appliances with 10% lower energy use would have a direct effect on the manufacturers of electrical appliances. To be sure, taxes would create an incentive among electrical appliance manufacturers to strive for technical innovation by causing a long-term shift in demand to energy-saving products by affecting the purchasing behavior of consumers, but direct regulation creates a more dependable incentive.

In the example of the environmental problems that Japan is currently facing, this implies that direct regulation of specific fields to create a greater prior incentive for innovation would be better capable of increasing the competitiveness of existing corporations and encouraging the development of new industries. It must also be remembered, however, that regulation generally entails not only relatively high monitoring costs but also in some cases the possibility of considerable distortions in resource allocation.

In this respect, the system of tradable emission permits, frequently mentioned as an environmental response that makes use of market techniques, is commendable as a method complementary to direct regulation in that it compensates for its shortfalls. The system of tradable permit sets a maximum limit for total emissions of a certain substance for the entire economy, allocates emission permits within the framework of the total emissions allowed according to some standard (such as past emissions in a reference year or a quantitative emission level differentiated by sector according to the possibility of innovation in each sector, for instance), and allows economic agents to buy and sell those emission permits. Of course, just as with direct regulation, monitoring is required to assure that the total emissions of each economic agent do not exceed the sum of the original emission permits allocated and any emission permits purchased subsequently. Nevertheless, this system is characteristically capable of encouraging innovation just as sectorally differentiated direct regulation does, in this case by using institutional design relating to the initial allocation of emission permits and the subsequent trading of emission permits. In addition, with sufficient institutional design, the permitting of tradable emission permits can lead to greater efficiency ex post in the overall allocation of resources throughout society (i.e., Pareto efficiency-improving adjustment among economic agents) without any after-the-fact adjustment by government, which in turn can correct distortions in resource allocation, a shortcoming of regulation. In other words, the market failure of the expected error in initial emission permit quotas that would occur in cases of regulation alone is automatically corrected to a certain extent. At the same time, if innovation in reducing emissions is lagging, institutional design concerning tradable permit can accelerate this innovation by either raising the prices of emission permits or by creating the expectation that prices will rise. And in contrast to a regulation-only approach, in which there are strong incentives for economic agents to achieve the goals imposed by regulation but no incentive for improvements beyond the level imposed by regulation (in other words innovation is limited to complying only with the minimum requirements imposed by regulation on economic agents), tradable permit system provide a continuous incentive for innovation in environmental improvement in that private economic agents can expect profits from the selling of their emission permits. It should be noted, however, that actual implementation of the tradable permit system involves various technical issues, including the need for extensive institutional design.[36]

In any event, the issue of fairness in burden-sharing is one that cannot be ignored when selecting substitutive means to resolve environmental problems. Moreover, environmental problems encompass a broad range, from global warming and other issues global in scale to air pollution, water pollution and other traditional environmental problems, each differing greatly with respect to the substances that cause them and the technological characteristics that responses must address. In this respect, the appropriateness of substitutive policy instruments must be judged from a comprehensive standpoint as stated in

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[36] Actual institutional implementation requires resolution of more than a few issues, such as the following:
① The scope of trading to be allowed (e.g., specific sectors or specific corporations) for emission permits for each pollutant, and whether to create a market or not
② The duration of validity of emission permits and whether to allow carrying forward and advances
③ Whether to allow the import/export of emission permits (when also used in other countries)
④ The actual quantitative fines to impose in the event of violation
⑤ How to deal with the problem of the income reallocation associated with initial emission permit allocation
⑥ Measures to take, such as options in emission permits (e.g., a system in which the government buys emission permits at a certain minimum price and sells additional ones at a certain maximum price), to avoid the possibility of speculation in emission permits (see Okuno, Konishi, 1993), which arises from fluctuation in the market price of emission permits in response to supply and demand in the fossil fuels market (e.g., due to business cycle fluctuation)

the beginning of this section.

Our point here is that every form of policy intervention can conceivably stimulate dynamic adaptive behavior by economic agents, and that different substitutive policy instruments can have greatly varying effects on incentives for innovation by economic agents. We hope to have shown using examples that the market enhancing measures, discussed in the 2 chapters before this, that promote efficiency in dynamic resource allocation do not always exclude regulations from policy measures.

12) Monitoring compliance with rules and enhancing ex post facto mediation functions

Eliminating, from the viewpoint of relying more on market functions as we have stated above, the preemptive coordination that governments have until now pursued in order to avoid conflict, and introducing market functions in fields where government has been responsible for resource allocation, is expected to be accompanied by an increase in subsequent conflicts among economic agents, while at the same time, in view of increasing uncertainty in the business environment that has accompanied globalization and other changes, currently unforeseeable types of conflicts may also occur in the future as sundry private-sector agents produce new technologies. The after-the-fact arbitration functions of the judiciary, the administrative organ and the private sector will have to be strengthened at every level in order to handle increases in such conflicts.

Also important with respect to affecting the kinds of environmental changes that will bring out the vitality of private economic agents and invigorate innovation is third-party monitoring to assure compliance with rules such as those concerning disclosure, and also the publication of the results of this monitoring. Thus, such compliance-related monitoring functions must also be enhanced at every level of the executive branch of government and the private sector.

Private-sector coordination and institutions must be utilized first of all as a source of such monitoring and ex post facto mediation functions, the need for which is expected to increase considerably. After-the-fact arbitration can be performed conceivably by the private-sector intermediaries who currently arbitrate disputes based on judicial cases and past cases arbitrated by the administrative organ. For instance, insurance companies substitute for a considerable portion of civil lawsuits involving automobile accidents, and are a typical example of the intermediary functions involved in conflict resolution. The 12 private organizations established in different sectors in response to enactment of the Product Liability Law also clearly perform arbitration functions. Monitoring functions, as discussed above, require the utilization of institutional investors, pure holding companies, and venture capital in matters concerning efficiency of investment, and auditors and auditing companies with respect to preventing the disclosure of false information.

The role of the executive branch of government in ex post facto mediation includes cases where private-sector coordination alone is insufficient and where making proper conditions is needed to allow private institutions to function more smoothly. As for the role of government, this corresponds to type 1 market enhancing policies, and actual examples include efforts by local governments to establish local laws allowing them to perform some of the same functions as mediating agency in Product Liability Law matters. The role of government here should also include institutional design that provides incentives and discipline to encourage institutional investors, auditing companies and other private entities to play an active role in maintaining efficiency of investment and preventing the disclosure of false information. As for intermediate monitoring, government is expected to provide such functions as monitoring to assure compliance with established rules, requiring disclosure in accordance with established standards, and imposing proper penalties on violators. Concrete examples of this include the strengthening of auditing functions in the forward market of commodity exchange and securities market.

Lastly, the significantly greater need that is expected for after-the-fact arbitration functions will make it increasingly important for the judiciary to assume the role of the "last resort" provider of arbitration, as final decisions made by the judiciary will serve as important precedents on which to base arbitration by private-sector intermediaries. This indicates that more than anything else, the current judiciary must become far more expeditious than it currently is. Another issue for consideration is that of expanding the judiciary's capabilities in specialized fields in order to facilitate the handling of disputes in fields requiring specialized knowledge, such as patent infringement.

13) Type 2 market enhancing policies (using auctioning for approvals and licenses, PFI, etc.)

Thus far the government has directly performed resource allocation functions in many fields in order to provide public goods or achieve extra-economic goals, such as assuring safety. The reasons for not utilizing market mechanisms to effect resource allocation in these fields include large externalities that would invite "free rides" and lead to under-investment. Other reasons are the difficulty of cost recovery with the kinds of facilities whose benefits are broadly but thinly distributed in society, and the difficulty of determining artificial prices for benefits. As for the service of assuring safety, here the government has intervened directly in resource allocation through market entry regulations, etc., under the assumption that resource allocation would be unachievable with market mechanisms alone (a typical case in which no market exists). The allocation of radio frequencies, a public resource, is an example of a service provided directly by the government because market mechanisms could not be counted on to achieve the goals of "equitable distribution" or "public benefit."

All of these are cases of a decision seen as being limited to one of only two possible options: either leaving everything to market functions or having the government allocate resources directly. However, it is not always appropriate to view government intervention and market functions as always and completely substitutive in this manner. The latest achievements in economics have shown that there is a way of simultaneously reconciling achievement of the "public benefit" with efficiency in resource allocation utilizing market mechanisms, or cost-cutting incentives. For instance, U.S. has abandoned its once time-consuming and costly system of radio frequency band allocation in favor of a type of bidding system designed to prevent opportunistic behavior and to address the externality of radio frequency bands (i.e., the fact that prices rise when the ownership of permits for the same frequency band in adjacent regions is permitted).[37] This bidding system is significant for its institutional design, which not only strives to assure diverse choices for the private-sector and to bring out private-sector vitality, but which also contains considerations for the

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[37] The 1997 Annual Report of the Council of Economic Advisors praises the use of auctioning for the radio wave spectrum thus: The comparative hearings, in which the FCC attempted to distinguish among prospective licensees on noneconomic ground, generated enormous delay and expensive litigation with little if any public benefit. Using lotteries to distribute licenses randomly to applicants eliminated the need for the FCC to determine which firm would be a better service provider. Unfortunately. . . many from those with no motive other than to sell their "winning ticket" to an actual service providers. . . . . Auctions eliminate the need for arbitrary comparisons and the cost of filing and processing speculative applications. . . . Auctions need not be inconsistent with achieving important noneconomic objectives associated with spectrum use.

At the same time, this report also gives precautions about this type of auctioning: If spectrum uses are specified in advance, auctions may not lead to efficient outcomes.. . . . If auctions are regarded primarily as a revenue-raising device, . . .(they) has the effect of reducing (the) supply. . . . Antitrust oversight and restrictions on bidders may be necessary to preserve competition in spectrum-related services.

public interest (e.g., considerations for minorities and women entrepreneurs). These auctions have also provided the government with enormous sums of revenue.

Let us also touch on the issue of PFIs (Private Finance Initiatives) in public works. PFIs are commendable as a new approach to social capital investment conventionally performed directly by government which allows government and the private sector to share risks and returns and which promotes the public interest while at the same time providing incentives for innovation and cost reduction.[38] This approach, in addition to being far more refined than the conventional policy instruments, which saw the respective roles of government and the private sector as stationary, can also make use of the various advantages that come from market functions in that the roles of government and the private sector can be continuously changed in the project design phase according to an individual projects forecast profitability, quantitative and qualitative risk, and the public-interest goals to achieve, among others.

Lastly, let us generalize about the significance of type 2 market enhancing policies by stating that there are fields that previously had been the responsibility of government or government alone but where government intervention is no longer appropriate or where diverse private-sector options should be utilized instead due to environmental changes, technological progress and other factors in those fields. Two examples of this are the type of labor laws that as discussed earlier provide strong protection by viewing all workers as vulnerable but which also deprive workers themselves of diverse options, and transportation regulations that have restricted market entry in the name of safety. There are also services such as hospital administration and employment agencies that have been performed directly by government but which can be entrusted to the private sector. Although it goes without saying that such fields require further deregulation and privatization, at the same time it is also important to reevaluate all fields of government intervention in line with consistent standards and flowchart-like procedures. Possible standards for this reevaluation include whether or not priority can be given to private-sector activity, whether further

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[38] In the UK, where an important issue has been the use of private-sector vitality to improve efficiency in the public sector and to improve the quality of public goods, 1991's "Citizen's Charter" provided for the use of PFIs as a means of using private capital and know-how in investments previously performed by the public sector. PFIs differ from both complete privatization and outsourcing and can be broadly categorized into three types: ① autonomous PFIs, used for profitable toll bridges, etc.; ② those where a public service is provided but where profitability is low, as with hospitals and roadways, and ③ joint venture PFIs, where both private and public capital are used because of partial profitability. In actuality, a variety of agreements are possible with respect to risk sharing and profits.

efficiency is achievable in public-sector activity, whether government has properly fulfilled its accountability requirements, whether transparency exists, and whether periodic reevaluation is being performed.[39] In the context of such checks it is also necessary to consider new policy instruments which reconcile public interest with cost-cutting incentives (such as auctioning and PFIs) or which utilize private-sector innovation in areas of the public interest.

In regards to such new policy instruments, the establishment of trial periods by government itself and the introduction of open, competitive methods of soliciting policy implementation ideas and institutional schemes should also be considered, as mentioned in Chapter 2.

14) The social safety net

Social safety net, an oft-heard term in Japan of late, can be broadly interpreted as a pre-planned mechanism for avoiding worst-case scenarios when some sort of risk exists. In this respect, the civil minimum guaranteed in Article 25 of the Japanese Constitution (the right to a bare minimum level of health and culture in daily life) can be seen as an important component of the safety net.[40] As a broad interpretation of the safety net would extend beyond the scope of this paper to the boundary with the social policy of relief for persons facing poverty, disaster or other difficult circumstances, here we shall limit the discussion to what is required in the context of market enhancing policy.

Most narrowly interpreted, the social safety net can be envisaged as a system for providing market participants with temporary relief and maintaining market order when there is a high probability of damage serious enough to prevent a considerable portion of market participants from continuing to participate in the market, and when failing to take action would result in the paralysis of market functions themselves. In terms of the type of risk that necessitates the safety net, this would correspond to “systemic risk”. This conceptual rule is most true of deposit insurance, which is currently being strengthened for

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39 Such standards are suggested in "The standards for Appropriate Administrative Intervention" (Administrative Reform Committee, December 16, 1996).

40 The example of using state subsidies to prevent the elimination of steamship routes to remote islands in the wake of deregulation can also be interpreted as one form of this guaranteeing of the civil minimum. Resistance to deregulation or, more generally, to policy change by persons with vested interests is an extremely serious problem in policy implementation. However, it would seem appropriate to view responses to this so-called frictional heat as separate from the safety net as defined here, in view of the fact that no universal solutions for the former exist, and because of the close connection with the issue of income distribution.

reasons of depositor protection, and which can be seen as an instance of the government requiring coordination by private economic agents in order to prevent market failure in the form of market collapse brought about by factors such as external shock.

Nonetheless, from the perspective of enhancing the effectiveness of the varied market enhancing policy menu now claimed to be needed in Japan, it would seem appropriate to interpret the concept of the safety net somewhat more broadly. For instance, even with macroeconomic conditions that are relatively stable and an unemployment rate that is under the maximum socially permissible level, the absence of sufficient unemployment insurance would narrow individuals options in the selection of occupations and corporate employers, thereby making it difficult to maintain an economy that is vigorous also conducive to innovation. In this sense, the establishment by government of unemployment insurance institutions would be a necessary part of the safety net. Public pensions should also be considered within the context of the safety net inasmuch as they give individuals stable expectations of the future and provide them with a sense of security with which to engage in economic activity. These can be understood as mechanisms for using public institutions to reduce individual risk and to avoid the disincentives for economic activity that extreme risk engenders.

There are, however, three points that must be kept in mind in this regard. The first is the possibility that such institutions can be replaced by insurance policies among private-sector parties when the government neither requires nor directly provides such insurance. The second is the danger of such institutions, depending on their design, creating a moral hazard that could have harmful effects, such as encouraging individuals to remain in the unemployment pool for long periods of time. The third point to be kept in mind is that institutions which, like public pension systems, cause a major transfer of income between generations on a national level can, depending on how they are designed, create major distortions in resource allocation and income distribution.

For these reasons, the government, when taking steps to provide a social safety net, must carefully consider from a market enhancing viewpoint whether the safety net can be provided with private institutions and, if government involvement is to occur, what the optimum form of involvement would be and how institutions should be designed to prevent moral hazard and problems in income distribution. At the same time, because greater reliance on market functions is expected to be accompanied by an inevitable increase in the risks faced by individuals, the construction of a safety net, which is highly necessary when employing a market enhancing approach, calls for active efforts by the government that include steps to promote the development of private insurance institutions.

Conclusion

In this paper, the economic structural reforms currently being implemented by the Japanese government, along with the economic policies that are needed to make the Japanese economy dynamic and vigorous in the 21st century, are discussed from the basic viewpoint of comparative institutional analysis, with an emphasis on institutions and social and economic system. This paper also outlines the basic relationship between markets, private-sector institutions and governments, and asserts that the expansion of market functions is now an extremely important role of the Japanese government.

The market is inherently capable of achieving dynamic efficiency in resource allocation through innovation when it is complemented with private-sector coordination and with the institutions that result from the spread and firm establishment of this coordination. However, the market's performance is also greatly influenced by private-sector institutions, which are at various degrees of development in each nation. According to comparative institutional analysis, an institution possesses historical path dependence as a system, and so evolves within the context of a nation's economic and social environment and occasionally, when institutional complementarity exists, achieves stability as a firmly established economic and social system that determines that country's comparative advantage. However, when the surrounding environment changes or a higher stage of development is achieved, institutions that had previously promoted proper performance can cease to function and in some cases actually hinder economic activity. The major environmental changes affecting Japan - namely, globalization, informatization, declining birth rates combined with the aging of society, and Japan's emergence as a front-runner in international society - are indeed changes that demand institutional reform.

Amid such circumstances, the Japanese government is being called on to play the role of facilitating the private-sector coordination intended to bring out the market's inherent dynamic resource allocation functions, which are achieved through the integrated action of the market and private-sector institutions. In short, these are "market enhancing" policies. Market enhancing policies must enhance the abilities of private-sector coordination efforts and institutions to generate incentives for market agents, reduce moral hazards, and correct the asymmetry of information, and must also promote the establishment of intermediaries capable of assuming this role. With respect to Japan's current circumstances, it is essential to reinvigorate innovation, to overcome the inertia that arises from institutional complementarity, and to secure a diverse range of options that permit economically driven challenges.

From this basic point of view, the second half of this paper discusses the direction that is preferable for the individual policies Japan is currently promoting: introduction of the pure holding company system, reevaluation of corporate governance, making proper conditions to encourage the creation of new industries, tax system reforms, reevaluation of employment systems, university reforms, designing a proper intellectual property rights, environmental policies, introducing market functions into government activities, and improving the social safety net, among others. The formulating of a package of such policies from a market enhancing view is seen as contributing to evolution that culminates in a new Japanese economic and social system.

It is also imperative to expand those policies - which the authors term type 2 market enhancing policy - in which the market complements government action through the introduction of market functions and private-sector coordination functions in fields where government involvement will continue, such as regulation and the providing of public goods. Establishing a trial period for government measures prior to full implementation and establishing an effective system of checks and balances in the government are also important issues in view of the need to address growing uncertainty about the future by reducing the possibility of government failure.

These have been the primary points of this paper. We would like to conclude this paper with remarks on the following points which we were unable to discuss sufficiently in the preceding pages.

Just as the two major objectives of economic policy are said to be efficiency in resource allocation and equity in income distribution, the issue of income distribution does indeed fall within the scope of economics. Very often, however, debate tends to center on efficiency in resource allocation, and this paper is no exception. Discussing the role of government without addressing the issue of security broadly defined may also be criticized as unrealistic, and we are forced to admit that we have defined this issue as one that concerns social policy and which therefore falls outside the scope of this paper. The primary reason for this is that policies relating to such issues vary according to the political stage of a democracy, and so are difficult to assess in terms of suitability.

Nonetheless, institutional complementarity is not limited to economic fields, but rather broadly encompasses policies on everything from health care, welfare, education, the environment and national defense to administrative systems, the relationship of the central government to local public entities, and political and judicial institutions. As policymakers, it is difficult for the authors, being thus dependent on the political process, not to touch on the issue. Rather, the issue of how to incorporate public opinion and the will of the people is one unavoidable to us. This is why it is important for policies first of all to be thoroughly examined and debated by the Diet, then properly reported to the people so as to be reflected in voting behavior. As for the executive branch of government, further transparency in the policy-related decision-making process and the timely, appropriate disclosure of information are essential. Moreover, in addition to explaining the content and effects of policies to the public in an understandable, unhurried manner, the various channels for directly determining the publics wishes and needs must also be put to skillful use. Economic policy, in particular, would seem to require gradual implementation beginning with those policies where the costs and benefits of multiple substitutive policies are quantitatively determinable and also demonstrable to the public. We view valuation methods for policy effectiveness and costs and analyses that employ a political economics approach as extremely important issues and hope to make them the subject of further research at the Research Institute of International Trade and Industry.

Lastly, we hope that this paper encourages diverse examinations of the aforementioned issues and the various other points discussed herein in various circles and sectors.

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Fig. 1: The roles of the market, private-sector coordination and government

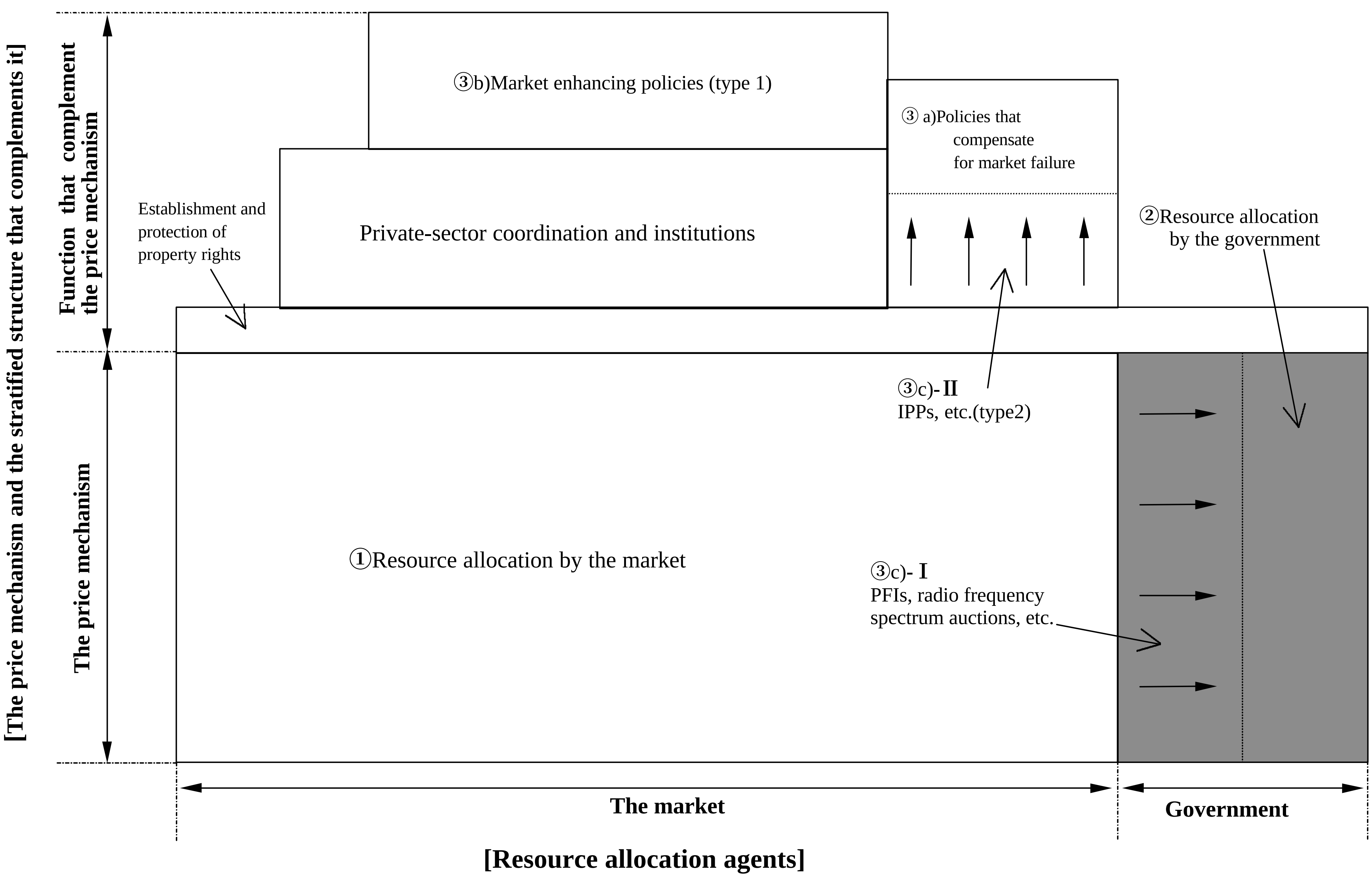

Fig. 2: Expansion of the production frontier through efficiency in dynamic resource allocation