Review of International Economics, 11(4), 651–673, 2003

Relation-based versus Rule-based Governance: an Explanation of the East Asian Miracle and Asian Crisis

*John Shuhe Li**

Abstract

The paper aims to establish a theory of relation-based governance to explain both the "East Asian miracle" and the Asian crisis. The author first defines "relation" and "relation-based governance" in terms of information and enforcement, and then analyzes the nature and dynamics of relation-based governance, comparing its benefits and costs with that of "rule-based governance" in terms of observability/verifiability, commitment, and transaction costs. The theory is applied to examine a particular relation-based governance system—the Japanese model—to explain both the East Asian miracle and the Asian crisis. The framework provides foundations for studies of East Asian catching-up and economic development in general.

1. Introduction

This paper proposes a theory to shed light on two important economic events in the world since the Great Depression—the "East Asian miracle" and the Asian crisis—and the enigmatic inconsistency between them. The world's highest economic growth during the second half of the twentieth century occurred in East Asia where many economies experienced double-digit annual growth for more than two to three decades. This unprecedented growth was not anticipated, and thus it was labeled as the "East Asian miracle" (World Bank, 1993). Underlying this economic miracle was largely closed, government-monitored-and-directed credit allocation systems in East Asia. Financial liberalization took place in Japan, Korea, Thailand, Malaysia, Indonesia, etc. over the last decade or so. Thereafter, problems in the financial sector began to appear in the Japanese economy in the early 1990s after its per capita income caught up with that of the western advanced economies (e.g., the US). Subsequently, a financial crisis began in Thailand in mid-1997 and quickly spread to Indonesia, Korea, and other economies in the region. The crisis occurred despite the general absence of macroeconomic instability, and it was almost totally unanticipated by investors, bureaucrats, and scholars. What can account for both the East Asian miracle and the Asian crisis?

The existing answers to these questions are largely *ex post* rationalizations based on hindsight. For instance, before the Asian crisis, Porter (1996) characterizes East Asia, particularly the Japanese economy, as "dedicated capitalism" (long-term investment),

* Li: SAP China, 12th Floor, South Tower, Beijing Kerry Centre, 1 Guang Hua Road, Chaoyang District, Beijing 100020, P.R. China. Tel: (86 10) 8529 8581; Fax: (86 10) 8529 8588; E-mail: john.li@sap.com. An early version has been listed on the Social Science Research Network's Top Ten List in April 2000 by Social Science Electronic Publishing (http://papers.ssrn.com/paper.taf?abstract_id=200208), and also reported in *The Economist*. I have benefited from questions and comments by Yoram Barzel, Neil Bruce, Avinash Dixit, Barry Naughton, Jeffrey Sachs, and other participants at the American Economic Association Annual Meeting in New York in January 1999, and the International Conference of the Asian Crisis in Seattle in January 1999. I also have benefited from discussions with Yuming Fu and Edwin Lai. Alice W. Y. Chan, Tatyana Monastyrskaya, and Yi Shen provided invaluable research assistance. I thank the Hong Kong government for providing Competitive Earmarked Research Grant 9040247 and City University of Hong Kong for providing Strategic Research Grant 7000714.

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and attributes its competitive advantage to this feature among other factors. After the Asian crisis, by "playing theoretical catch-up," Krugman (1998, p. 1) characterizes East Asia as "crony capitalism," and attributes the Asian crisis to this feature. To minimize the danger of ad hoc *ex post* rationalization, I shall carry out this study from the perspective of governance and investment along the following lines. First, I will mainly look for those factors which are common to the economies that experienced both the "miracle" and the crisis. Among other factors, these include macroeconomic stability, investment in human capital, an export drive, a pegged currency, a slowing down of the growth rate in the process of catching-up, informal agreements, close government–business relations, and financial liberalization. Second, to account for the crisis, the focus will not be on those factors which remained the same during the "miracle" and right before the crisis, such as macroeconomic stability, investment in human capital, or export drive, since they alone cannot account for the crisis per se. The focus will also not be on those factors which changed, but were expected, or were publicly observable, such as the slowing down of the growth rate in the process of catching-up, and standard macroeconomic indicators, since they can be taken into account by the investors and thus also cannot account for the crisis by themselves.

Therefore, I shall focus on the *common unexpected changing features* that contributed to the crisis. Two common defining features of the East Asian economies are: (a) agreements are largely implicit, personal, and enforced outside of courtrooms; and (b) government, banks, and firms have close relations. I shall characterize the economies with these two features as economies with *relation-based governance*. Our task then is to explore the nature and (unexpected) dynamics of relation-based governance, particularly the (unexpected) consequences resulting from financial liberalization. The central thesis of this paper is that the (unexpected) benefits and (unexpected) costs of relation-based governance were the fundamental causes of both the East Asian miracle and the Asian crisis.

In section 2, I conduct a brief literature review of the East Asian miracle and the Asian crisis, pointing out the "ad hoc hindsight" feature of the existing literature. In section 3, I develop a theory of relation-based governance, and analyze how governance affects capital investment. I first define "relation" and "relation-based governance" in terms of information and enforcement. I then analyze the nature and dynamics of relation-based governance, and compare its benefits and costs with those of "rule-based governance" in terms of observability/verifiability, commitment, and transaction costs. In section 4, I apply this framework to examine a particular relation-based governance system—the Japanese model—to explain both the East Asian miracle and the subsequent crisis. A defining feature of the Japanese model is that, owing to entry restrictions, one political party or clique holds a monopoly in the political sector; some dozens of banks are dominant in the financial sector; and some dozens of industrial groups are dominant in the industrial sector. Such a model was first developed in Japan, and was thereafter adopted by other East Asian countries in various forms and to different extents. Section 5 concludes with remarks on the generalization of the theory to understand the mechanisms of economic development.

2. Brief Literature Review

The East Asian Miracle

Much has been written on the East Asian miracle (e.g., Lucas, 1993; Krugman, 1994), but the World Bank report *The East Asian Miracle* in 1993 was a turning point in

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shaping public perceptions. Since then the generally accepted view has been that there were three successful government policies behind the economic miracle: macroeconomic stability, investment in human resources, and an export drive. We now know that these policies are necessary but not sufficient for catching-up. The World Bank and Stanford University have conducted a joint project for further study of the role of government in East Asian economic development from the perspective of comparative institutional analysis (Aoki et al., 1997). Aoki and others have introduced a "market-enhancing" view, maintaining that the successful role of the state in East Asia was due to the respective governments' correction of most market failures by fostering intermediary organizations, such as main banks and business associations, rather than by direct intervention or no action. More generally, in the same project Okuno-Fujiwara proposes a framework to study the government–business relationship, and compares the benefits and costs of authoritarian, relation-based, and rule-based governments. Aoki and Okuno-Fujiwara (and Krugman) pointed out some potential problems of the Japanese model at a late stage of economic catching-up. But they, as well as others, failed to predict a widespread regional crisis.

The Asian Crisis

The relevant literature on the Asian crisis thus far can be classified into three categories: theoretical, empirical, and policy analysis.

Theoretical analyses A notable explanation for the East Asian crisis is Krugman's note "What Happened to Asia?" (1998). He argues that government guarantees induced financial intermediaries to take too much risk, which was further aggravated by competition between the intermediaries. A related argument is found in Akerlof and Romer (1993), which attempts to explain both the financial crisis in Chile in the early 1980s and the savings and loans crisis in the US in the late 1980s. A common feature of these two models is that government protection can induce a moral hazard crisis. Another theoretical explanation is that of financial panic, based on the pioneering work by Diamond and Dybvig (1983). In their model, bank runs occur as one (sunspot-type or self-fulfilling) equilibrium of multiple equilibria in financial systems.

Both explanations seem to be relevant to the East Asian crisis. However, these models do not explicitly address how the Asian financial crisis is different from other crises (e.g., the savings and loans crisis in the US), and, more importantly, they do not explain the "consistency" of the decisions and responses by international lenders before and after the beginning of the crisis. Rajan and Zingales (1998) use "relationship-based systems" to describe East Asian financial institutions, and they compare them with the arm's-length systems in the West. They argue that low contractibility and a high capital/opportunity ratio led to the Asian financial crisis. However, they do not explicitly define "relationship-based systems" and "investment opportunities," and thus the nature and dynamics of relationship-based systems remain unclear. More fundamentally, these theories do not explain why East Asian countries, such as Japan and Korea, were able to take off in the first place.

Empirical studies There are many country studies, mostly on Indonesia, Korea, and Thailand; for references, see Roubini (1999) and Wong (1999). Perhaps two of the most comprehensive empirical studies thus far are the papers by Radelet and Sachs (1998a,b). They provide a diagnosis of the East Asian crisis by focusing on the empirical record in the lead-up to the crisis, and conclude that panic was the main cause.

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They also estimate a probit model to search for the causes of the financial crisis during 1994–97 in 22 emerging markets. They find that the ratio of short-term foreign debts to foreign exchange reserves seems to be the most significant factor, and the ratio of the financial system claims on the private sector relative to GDP seems to be the second most significant factor. These two indicators are supposed to be closely related to the likelihood of panic by foreign creditors, and by all private creditors (and perhaps to a financial liberalization-induced moral hazard problem), respectively. But the indicators in these models are publicly observable, and hence the investors can take them into account. The question then is: What did the investors miss? If the Asian financial crisis was due to financial panic, what triggered the panic?

Policy studies Many policy studies have addressed the question of whether and which policies of the national governments in the countries involved in the crisis, and of the International Monetary Fund (IMF), might have triggered, aggravated, or avoided the crisis. Much criticism has pointed to the nontransparency (e.g., with respect to data regarding foreign debts and reserves, and bad loans) and the inconsistency of government policies (e.g., with respect to guaranteeing credits, a currency peg, and the closing of banks) immediately before or after the crisis in Thailand and Indonesia. The most noteworthy criticisms of the IMF have been made by Feldstein (1998) and by Radelet and Sachs (1998a,b) among others. They argue that the double contractionary monetary and fiscal policies might have aggravated, if not triggered, the crisis. In particular, the closure of too many banks within such a short period in the middle of the currency crisis might have triggered bank runs, such as those in Indonesia. In contrast, in its *World Economic Outlook* of May 1998, the IMF reviews the financial crisis in general and the Asian crisis in particular, and justifies its role. Which argument is more convincing?

3. A Theory of Relation-based Governance

I aim to develop a theory of relation-based governance and to apply it to account for both the East Asian miracle and the Asian crisis. Following Okuno-Fujiwara (in Aoki et al., 1997, p. 375), let us consider a five-stage game form: in the first stage, the legislative branch makes "rules"; in the second stage, firms make investments and reach agreements; in the third stage, uncertainties or shocks are realized; in the fourth stage, the executive branch moves to tax and to provide public goods, and to bargain with firms; in the fifth stage, the judiciary branch settles disputes. The decisive players in the different stages may or may not be the same people or agency.[1] The payoff matrix may resemble a prisoners' dilemma in which cooperative strategies result in value-maximization outcomes, while deviation is unilaterally beneficial and results in inefficiencies. The game may be played repeatedly. However, the length of repeated plays is endogenous, and is the equilibrium outcome from strategies of investing in relations and deciding whether and when to enter, to continue, or to quit a relation, given the constraints.

A firm may invest (*ex ante*) in productive activities to increase the size of the "pie," or it may invest in rent-seeking activities to enhance its *ex post* bargaining power so as to get a bigger share of the pie. The scale and forms of *ex ante* productive investments by a firm are shaped by its expected *ex post* bargaining power. Expected *ex post* bargaining power in turn is shaped by *ex ante* rules, and, more importantly, by expected *ex post* actions of the government, such as "predatory behavior," credit guarantees, cross-subsidies, and by expected ways to settle disputes, including bankruptcy pro-

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cedures.[2] However, when all contingencies can be specified in enforceable contracts costlessly, bargaining can always result in efficient allocations (the Coase theorem). Indeed, in a world of complete contracts, there is no role for property rights, nor for corporate governance, nor for government intervention (up to the enforcement of voluntary private contracts).

When some important control rights (and also the associated benefits) cannot be specified in enforceable contracts, the allocation of residual rights (i.e., ownership and corporate governance) matters for efficiency. In a world of incomplete contracts, there may be room for government intervention, and different legal systems may have different effects on efficiency. We can refer to the enforcement mechanisms of specified rights as *contractual governance*, and to the enforcement mechanisms of residual rights as *corporate governance*. The mode of the governance mechanism needs to match the nature of economic activities in terms of their observability and verifiability, known as Williamson's discriminating alignment hypothesis. Broadly speaking, economic activities can be classified into three categories: (1) activities observable by and only by the acting party himself (the first party); (2) activities observable by and only by the two transaction parties (the first and the second party); and (3) activities observable by the first, the second, and a third party. Category (1) activities can be governed only by first-party, or incentive-compatible, enforcement mechanisms. It is usually necessary to grant sufficient residual claims to induce efficient first-party enforcement or self-monitoring. Category (2) activities can be governed by first- and also second-party enforcement mechanisms, such as retaliations in repeated plays. Category (3) activities can be governed by first-, second-, and also third-party enforcement mechanisms, such as state enforcement and community sanctions.

It is evident that second-party enforcement must be self-enforcing by the two transaction parties, including their incentive-compatibility of investment in relations. It is less clear but important to note that third-party enforcement must also be self-enforcing when we include the enforcers as players. In other words, third-party enforcement requires agreements between the third-party enforcers and their clients, which must be self-enforcing. Other things being equal, as will be further explored shortly (or as known in Olson's "stationary bandits"), a third-party enforcer with a larger jurisdiction may have lower average (transaction) costs due to economies of scale; i.e., a natural monopoly in enforcement of standardized contracts (based on a unified contract law). In a (national) economy, the third-party enforcer with the largest jurisdiction is the state, which is a (natural) monopoly in third-party enforcement with coercion. When most transactions are based on impersonal and explicit agreements, and the state can impartially enforce contracts, we say there is a *rule-based governance* system. Rule-based governance can be made possible by establishing a circular check-and-balance chain in a polity through collective action mechanisms, such as voting regimes or democracy.

Ultimately, any mode of effective governance relies on either self-monitoring or a circular monitoring chain. To illustrate, suppose there are three players: A, B, and C. One scheme based on self-monitoring can work as follows: A is monitored by B, B is monitored by C, and C is self-monitoring. To induce C to monitor himself efficiently, it is necessary to grant sufficient residual claims, or private ownership, to him. Another scheme based on a circular monitoring chain can work as follows: A is monitored by B, B is monitored by C, and C is monitored by A; A punishes B if B does not monitor C, and so on. As long as the net return from monitoring (rewards minus costs) is larger than that for not monitoring for each player, the circular monitoring strategy profile is a Nash equilibrium. An alternative scheme based on a circular check-and-balance

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chain can be structured as follows: A is checked and balanced by B and C, B is checked and balanced by C and A, and C is checked and balanced by A and B. In our context, A, B, and C can be (for instance) the legislative, executive, and judiciary branches, respectively. Note that any full monitoring (i.e., each and every player is monitored by someone) must involve either self-monitoring or some form of circular monitoring. Broadly speaking, self-monitoring is mainly based on private ownership, including "family-ownership of a nation" or dictatorship (see more discussions later), and a circular monitoring chain is mainly based on democracy. Thus, ultimately any governance system must rely on private ownership, dictatorship, or democracy.

However, a check-and-balance regime at the macro level works effectively only if noise can be sufficiently reduced by an "informational infrastructure" at the micro level; only then does democracy become a "mature democracy." Put differently, the establishment of rule-based governance in a country is a long evolutionary process since rules can be implemented only if all decisive players have mutually consistent beliefs and these become common knowledge. (For instance, a contractor believes that the judge will punish him if he breaches the law, and the judge believes that the legislature will punish him if he does not enforce the law, and so on. See Basu (2001).) And mutually consistent beliefs of multiple parties can become common knowledge only if noise is sufficiently reduced by the informational infrastructure. The informational infrastructure includes accounting, auditing, notary, and rating agencies, and legal cases and codes, which develop and accumulate slowly.[3] Before "universal information-sharing" is possible, "rules" on paper are largely mere ink. Take traffic law as an example. Most countries have introduced the same written rule—"stop before red light"—for many decades, yet today the respect for red light varies greatly from full compliance in countries with a good informational infrastructure and an effective check-and-balance mechanism to total ignorance in many others with neither.

Relation-based Governance

Before rule-based governance is established, firms largely rely on relation-based governance whereby most transactions are based on personal and implicit agreements, and the state is generally not able to enforce contracts impartially. This is the case when the three branches of government are not sufficiently separate, checked, and balanced, or when one political leader or party holds a monopoly in an authoritarian regime. Personal agreements between two transaction parties are based on their mutual relations. Two parties have a *relation* if they share certain relevant private information about one another *locally*. The relevant information of a relational partner regarding monitoring and enforcement may include his credit history and reputation ("*ex ante* monitoring information"), financial status and profit prospects ("interim monitoring information"), and identity and assets ("*ex post* monitoring information"). *Ex ante* monitoring information of a partner reveals his type and the likelihood he is willing to honor a contract; interim monitoring information reveals whether a partner is able to honor a contract; and *ex post* monitoring information enables a party to trace a defaulter and his assets for compensation and punishment after default occurs.

When agreements are enforced by second-party mechanisms, they are largely implicit; i.e., "implicit contracts." Indeed, there is no need to make the agreements explicit as long as the two parties have shared expectations. Sometimes agreements are enforced through third parties in relation-based governance. In such a case, agreements may be made partially explicit for third-party verification. There are two forms of relation-based third-party enforcement. One form is enforcement by community sanctions,

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which is possible when community members are able to share relevant information (hence the relation), and they have incentives to refuse to trade with a defaulter.[4] Another form of relation-based third-party enforcement is enforcement by the state. Given the fact that the judiciary branch is not independent (or separate) and not neutral in relation-based governance, political influence (usually through the powerful executive branch) often dictates the verdicts. In other words, ultimately it is (political) relations that determine the enforcement outcome or *ex post* bargaining power.

The Nature of Relation-based Governance

The information structure and (transaction) cost structure of the two governance systems are fundamentally different.[5] Rule-based governance largely relies on *public information* (i.e., publicly verifiable information), while relation-based governance largely relies on *local information* (i.e., mutually observable information by the two transaction parties). A rule-based governance system involves large total fixed transaction costs, including costs of drafting, interpreting, and implementing contract and corporate law by the legislative, judiciary, and executive branches, respectively. In rule-based governance, the marginal costs of enforcing an (additional) contract between an (additional) transaction pair are negligible due to the fact that the contract is explicit, impersonal, and standardized, and that the police are on standby.

In contrast, a relation-based governance system involves few fixed costs, but significant marginal costs. Unlike rule-based governance, relation-based governance requires only minimum public order—that is, the general absence of rampant robberies or confiscation. In relation-based governance, one needs to screen, test, and monitor each and every transaction partner. The acquired relational information is implicit and person-specific, and hence non-(publicly) verifiable and nontransferable. Thus, the delegation of relation-based enforcement is impossible, and the manager of a firm has to take care of all relations by himself. Given his finite capability and finite time, there must be diminishing returns to the span of relations owing to the rising marginal costs of private monitoring. In addition, as business expands, one needs to deal with partners with increasing search/monitoring costs, or to develop increasingly more costly relations; one first does business with one's brother(s), then with one's cousin(s), then with people from one's hometown or one's classmates, and finally with strangers. Thus, as the market expands from a local level to regional, national, and international levels, the number of business partners increases and the marginal costs of relations will eventually rise significantly.

The costs of screening and testing a new partner form barriers to exit from an existing relation because switching to a new partner is both costly and risky. A new partner may be financially insolvent or may purposely cheat. In (rational-expectations) equilibrium, unmatched firms tend to be cheaters or financially insolvent, and established firms trade with tested partners only (Fafchamps, 1996, p. 35). Besides the costs of screening and testing new partners, the feature of "co-specificity" or the "bilateral-monopoly" of a relation can strengthen an existing relation. As indicated, a person's local knowledge of his partner's private information is hardly transferable to others because such knowledge is hardly verifiable. Furthermore, each party may have incentives to hide his partner's private information in order to prevent potential competitors from "stealing" the relation.

Owing to barriers to exit, the voice of members in a relation-based organization is weak and ineffective. When there are few exits and thus few vacancies in other firms, employees in a given firm cannot exit and switch to other firms easily. That is, no exit

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can be a Nash equilibrium outcome. As a result, (personal) power and loyalty are the norm. Because of this, and the fact that relation-based authority can hardly be delegated, relation-based governance is very centralized. The big boss directly controls all key information and makes all important decisions; subordinates are obedient and loyal. Thus, both the information structure and the decision-making mode are closed, informal, and centralized. In a centralized power structure, formal codes are merely ink on paper since the leaders are not subject to the formal codes that they define.

In comparison with rule-based governance, relation-based governance has its comparative benefits and costs. When relation-based governance works (cooperative outcomes supported by subgame-perfect equilibria), given two transaction partners, it can enforce all mutually observable agreements (by the two parties). When one party deviates from a mutually observable agreement, the other party can punish the deviator by playing (for example) tit-for-tat strategies. In contrast, given two transaction partners, rule-based governance can only enforce a subset of the mutually observable agreements that can also be observed by third parties. Thus, perhaps a large part of monitored activities, which are mutually observable by the monitor and the monitee but are not verifiable by a third party, can be enforced by relation-based governance, but not by rule-based governance.

Another relative advantage of relation-based governance is that when the extent of the market is small, or the number of transaction partners is small, the average (transaction) cost in relation-based governance can be smaller than that in rule-based governance owing to the large fixed (transaction) cost in the latter. However, as will be further explored below, there exist diseconomies of the span of relations; thus a firm can resort to relations to enforce agreements with only a small number of partners. In contrast, there exist economies of scale in rule-based governance; thus a firm can resort to rule-based governance to enforce contracts (impersonal agreements) with an unlimited number of partners, including strangers.[6]

Existence of Relation-based Governance

It is important to note that agreements can be enforced only either by *rule* or by *relation*, and by nothing else. When there is neither rule nor relation, one can only pray or run (exit and panic), or resort to violence (riots and war). In catching-up economies, there is generally no rule-based governance; hence relation-based governance is the only available mechanism to enforce agreements. Thus, investing in relations can be profitable and rational, especially in developing countries. To minimize costs and uncertainties of transactions among business partners, the number of partners must be small and their relations must be long term. This is because the number of business partners must be sufficiently small to maintain low marginal monitoring cost owing to the increasing marginal cost of private monitoring. The small number of partners also serves as a signal to commit to existing partners since switching to new outside partners is much more costly than switching to other partners in the existing circle. Finally, long-term relations can lower the average monitoring cost per transaction since the switching costs can be saved.

To induce efficient *ex ante* investment, the bargaining power of all decisive players must be somewhat symmetrically distributed, or decentralized in addition to their long-term relations and small number. This is possible in a long-lasting authoritarian regime which restricts entry into key industries but grants sufficient firm-level control rights to businessmen. With entry restrictions, there are a small number of players, and each player can possibly commit to its relations with the existing partners. It is likely to be

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in the interests of the regime to limit its *ex post* bargaining power by granting sufficient control rights to firms. Note that the power of the state is necessary but not sufficient to enforce agreements among its citizens.

> "No one will seek enforcement services for their agreements from an enforcer who does not commit not to confiscate. Therefore, (even) a dictator who does not commit is deprived of the potential income that third-party enforcement services may generate. Making such a commitment requires him to give up some of his dictatorial power. . . . A dictator must form long-term relations with at least some of his subjects to secure their cooperation." (Barzel, 1998, p. 8)

However, by the folk theorem, there are multiple equilibria of the repeated play; thus, depending on the structure of mutual beliefs, the equilibrium relation may be good (efficient) or bad (inefficient). A strong political leader or party can serve as a coordination device in selecting equilibrium.

To motivate a dictator or dominant party to act efficiently, it is necessary for the dictator or key members of the party to claim sufficient residuals of economic outcomes in the relevant jurisdiction. Unlike in a democracy, subjects are not able to monitor a dictator or an authoritarian regime. Thus, as indicated, sufficient residuals claimed by the dictator or the regime are needed to induce efficient "self-monitoring." The residual-claim schemes may include taxation, top-family business, state-owned or state-controlled enterprises, and other formal or informal economic performance-based incentive schemes and even bribes for government officials. From this perspective, the commonly observed dominant top-family and state business in an economy under dictatorship or authoritarianism can in fact be "second-best" institutional arrangements subject to political and legal constraints.

Dynamics of Relation-based Governance

Paradoxically, relation-based governance will eventually destroy itself by facilitating market development, given that it faces competition from rule-based economies. As indicated, a stable and balanced relation-based governance system can enforce a larger set of agreements between two transaction partners than rule-based governance, and it incurs lower average transaction costs within a certain extent of the market. Thus, it can expand the market and deepen labor divisions to a certain point. But this in turn will call for a more decentralized governance structure and eventually for rule-based governance. As the market expands and labor divisions deepen, the number of transaction partners increases, and hence the average cost of relations will be increasingly higher owing to the rising marginal costs of private monitoring. On the other hand, as the market expands and the number of transaction partners increases, the average cost of rule-based governance will decrease owing to the large fixed costs and the negligible marginal costs. When the average cost of relation-based governance surpasses the average cost of rule-based governance, relation-based firms (economies) will not be able to compete with rule-based firms (economies). In other words, there exists a turning point in the process of market development before which relation-based governance is more cost-effective and beyond which rule-based governance is more cost-effective. This is illustrated in Figure 1, which describes the transaction cost curves of a representative firm. In the same process, an increase in the number of available competitors (or substitutes), both domestically and internationally, to existing partners will weaken a firm's commitment to its existing relations (as will be seen below). As a result,

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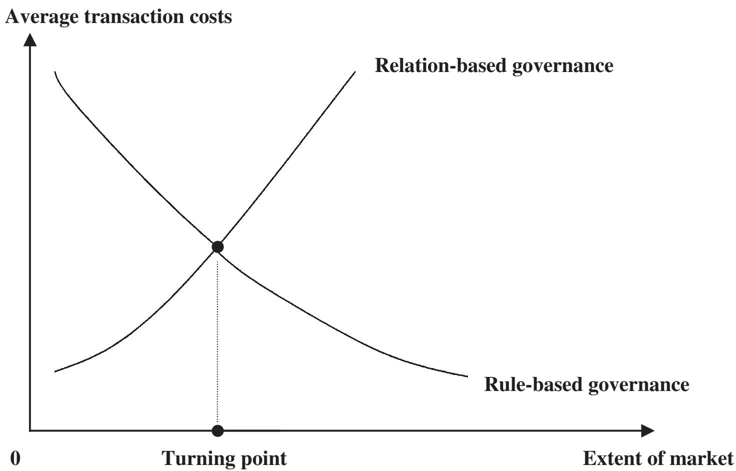

Figure 1. Average Transaction Cost Curves

a given relation-based governance structure can expand the extent of the market, and hence deepen the divisions of labor only to a certain degree. Competitive forces may drive relation-based governance to evolve eventually into rule-based governance to capture the gains from economies of scale in rule-based governance and from deepened labor divisions.

The Discontinuities of Relation-based Governance

Unfortunately, the transition from relation-based governance to rule-based governance is usually a discontinuous process. The decentralization of relation-based governance or a change of management teams can disrupt governance at least for the short run until rules are established. When new management teams replace old ones, and new players enter the market (e.g., due to financial liberalization), either the existing relation-specific information becomes invalid, or the bilateral monopoly of a relation breaks down, while relations with and between new players are yet to be established by repeated plays and tests. In particular, the arrival of newcomers makes it harder for an incumbent to commit to its existing relations. As a by-product, the decentralization of relation-based governance can result in "corruption with independent monopolies." Different branches of government may jointly maximize the value or the total bribe across complementary public goods before decentralization (e.g., political liberalization). In the process of decentralization, relations between different branches of government may be cut off. Then different branches may become independent monopolists which provide public goods. This may result in severe inefficiencies if these public goods are complementary (Shleifer and Vishny, 1993).

To illustrate how competition can jeopardize the relationship and thus result in inefficient investment, consider a marriage for a green-card. Suppose an ugly American man becomes acquainted with a pretty French girl. They agree to marry. He pays the expenses, including her air ticket and wedding ring, for the marriage. After the marriage she gets a green-card. Later she meets a handsome American man and marries him after divorcing the ugly man. If the ugly man had anticipated this result, he would not have married the girl in the first place, provided that he only wanted long-term

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marriage and that financial compensation was infeasible or unenforceable. In (rational-expectations) equilibrium there is no "transaction" if the handsome American man does not know the French girl himself, and the ugly American man's private information is not verifiable, and hence is not tradable. Similarly, when there is no rule-based governance to enforce contracts, potential lateral competition can reduce relation-specific investments.[7]

Thus before rule-based governance is established, there may be a vacuum in the governance structure after market development (or liberalization) has made relation-based governance dysfunctional. On the other hand, there is no guarantee that a rule-based governance system can be established after liberalization, and when it can be established it usually involves a long complex process. Transition from authoritarianism to democracy is hardly smooth, and sufficient noise can trigger a war in the process. Some of the productive resources need to be diverted to cover the fixed costs of setting up rule-based governance. There are "fiscal externalities" involved in financing the setup; for each tax dollar paid by an individual, the social benefit is significantly higher than his individual benefit. To collect taxes and to implement other rules effectively, it is necessary to develop an informational infrastructure, which, as indicated, itself involves a long evolutionary process. Put differently, liberalization is an "investment" in building new institutions; the costs are incurred at present, whereas the returns will be realized in the future with uncertainty.

The Nontransparency of Relation-based Governance

In the process of decentralization or transition, the discontinuous path of relation-based governance can hardly be observed by outsiders. This is because, as indicated, relation-based governance largely relies on non-(publicly) verifiable private information, and each party may have incentives to hide his partner's private information in order to prevent potential competitors from stealing the relation or to cover up bad outcomes to capture the information rent. Company and national annual reports usually contain lots of beautiful pictures and the photos of business or political leaders. These reports are like models in swimsuits; what you can see is interesting, but what you cannot see is vital. A higher degree of nontransparency may trigger larger information cascades,[8] especially among uninformed outside investors, thus resulting in more severe bubbles and bursts in asset markets. Outside investors may not be able to observe the change in the relation until the advent of a crisis and then panic erupts. When good relations turn into bad relations, only the involved parties are aware of the change in the process, and they may have incentives to cover up and to use invisible cross-subsidies (from other firms) to rescue a troubled firm in order to support the cover-up. Thus when one firm's losses are looming, outside creditors may withdraw their capital not only from this firm but also from other firms which might have close relations with the troubled firm.

The Incompatibility of Relation-based Governance

Given the fact that relation-based governance features nontransparency, nonverifiability, and relation-specificity, it is very costly to establish cross-country governance mechanisms among economies with relation-based governance and between economies with relation-based governance and economies with rule-based governance. Take cross-border bankruptcy procedures as an example. Bankruptcy procedures are typically country-specific. But they can be *company*- or *person-specific* in

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relation-based governance because political connections or other personal relations often dictate the *de facto* bankruptcy procedures. These features make it difficult to conduct orderly renegotiations involving a large number of troubled debtors because each and every one may be treated differently with low predictability. Such renegotiations will be particularly difficult when there exists "corruption with independent monopolies" arising from financial or political liberalization. This is because the renegotiations need to be approved by multiple government agencies, which are not coordinated, and each and every step may be highly uncertain. In order to integrate into the community of rule-based economies, a relation-based economy needs to transform itself into a rule-based economy through political and economic opening-up (including financial liberalization). But in the process of opening-up, the incompatibility of relation-based governance can aggravate the panic of outside investors in the case of a bad shock. As a result, when international capital markets involve emerging markets, which largely rely on relation-based governance, panic is more likely.

In the following, I shall examine a particular relation-based governance system—the Japanese model—in the context of East Asia. I shall argue that: (1) rapid growth under relation-based governance at the initial stage of development is possible; (2) financial or political liberalization, as necessitated by a further expansion of the market and a further division of labor, is inevitable; and (3) the economy is vulnerable to financial crisis as a result of financial or political liberalization.

4. The Japanese Model

A particular relation-based governance structure is the Japanese model where the number of decisive players is small and their relations are long-term. More precisely, I characterize the Japanese model as a political–economic system with the following three key features:

1. The government monitors banks, which in turn monitor (non-financial) firms.
2. Owing to entry restrictions, one political party or clique holds a monopoly in the political sector, some dozens of banks are dominant in the financial sector, and some dozens of industrial groups are dominant in the industrial sector.
3. Agreements are largely implicit, personal, and enforced outside of courtrooms.

The Japanese model first developed from the 1950s to the 1980s in Japan. The triangular relationship among government agencies, the main banks, and industrial groups (*keiretsus*) is well known. The government through the Ministry of Finance and the Bank of Japan monitors banks, which in turn monitor (their client) firms. Bank monitoring integrates *ex ante*-, *interim*-, and *ex post-monitoring* of a firm in the main bank system (Aoki and Patrick, 1994, p. 113). From the early 1950s to the late 1980s, there were restrictions on entry into the political, financial, and key industrial sectors. Consequently, during this period there was one dominant political party (the LDP) in the government, some ten main banks, and some ten *keiretsus*; they maintained stable and long-term relations for several decades.

Within a *keiretsu* of Japanese manufacturing, such as the automobile and electronics industries, supplier–buyer relations are also very stable among a small number of players. Holmstrom and Roberts (1998) note:

> "[the Japanese] practices feature long-term close relations with a limited number of independent suppliers that seem to mix elements of market and hierarchy. Apparently, these long-term relations substitute for ownership in

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> protecting specific assets [p. 80]. Having a small number of suppliers is crucial to the Japanese system. It reduces the costs of monitoring and increases the frequency of transacting, both of which strengthen the force of reputation [p. 82]."

Asanuma (1989, p. 5) reports that in 1973 there were some 156 member firms of Kyohokai, an association formed by Toyota parts suppliers. Only three member firms exited from 1973 to 1984.

The main bank system and the *keiretsu* are not legal-based, but rather they are relation-based. More generally, Kester (1992) reports that "handshake" agreements (informal, personal, and implicit contracting) are an important part of business the world over, and they are used much more frequently within groups:

> "In Japan, supply contracts are established by a 'basic agreement,' which is a short (often only three or four pages), written document that is little more than a legal 'boilerplate' stipulating that the supplier and assembler are entering into a commercial relationship, will operate on a basis of mutual respect for each other's autonomy, and will endeavour in good faith to maintain an atmosphere of mutual trust in their business dealings. . . . Japanese contracts often do not even state definitely the transactions at stake so as not to restrict the flexibility considered necessary to modify the supply agreement over time [p. 28]. In America, you have many rules [to govern business transactions]. Here in Japan, everything is very fluid. There may be rules, but they are constantly changing to suit the environment . . . *The overall benefits of an ongoing relationship is what really matters* [in Japan; emphasis added] [p. 30]."[9]

Long-term relations are fostered by a variety of institutional arrangements. Cross-shareholding and cross-guarantees among financial and industrial firms are ways to reinforce relations among group members. Life-long employment is a way to facilitate labor–management and other relations. Systematic job rotation and transfers help to establish relationship networks.

> "It's especially important in Japan for both sides [in a business relationship] to be forthcoming. The reason is that we have lifetime employment. If you treat someone badly either inside or outside the company by taking advantage of them to profit for the moment, it will not soon be forgotten. This is because people remain with the same company throughout their entire careers." (Kester, 1992, p. 30)[10]

On the other hand, security markets and the legal system were less developed in Japan during this period. Security markets started to develop on a significant scale during the 1980s. Only after 1994 did corporations legally have to have at least one outside statutory auditor (Bostock and Stoney, 1997, p. 75). Extensive corruption scandals involved prime ministers, finance ministers, CEOs of major industrial and financial firms, and leaders of the powerful mafia. The judiciary procedures were often nontransparent and impartial (Wang, 1998).

The Japanese model was subsequently adopted by other East Asian countries in various forms and to various extents. Broadly speaking, Korea, Taiwan, and Singapore followed the Japanese development path from the 1960s, and became catching-up economies of a "second-generation Japanese model." Malaysia, Indonesia, and, to a less degree, Thailand followed the Japanese model from the 1970s and may be

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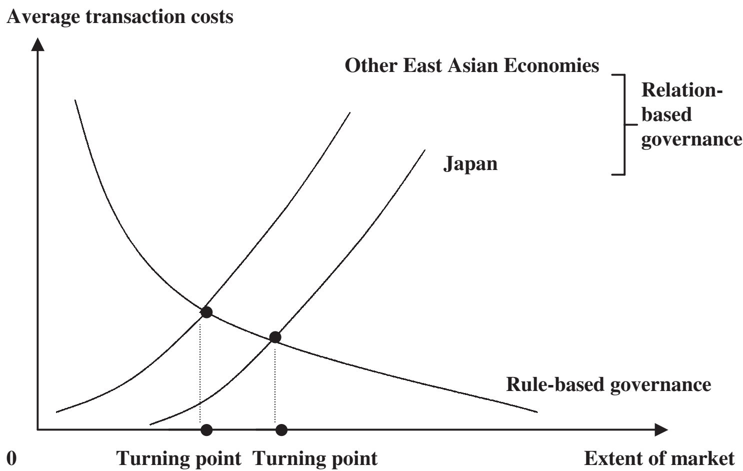

Figure 2. Average Transaction Cost Curves: Japan and Other East Asian Economies

considered a "third generation." China and Vietnam started to follow the Japanese model from the 1980s, and thus may be considered a "fourth generation." To be sure, the specific governance mechanisms in these economies are very different. But they share, by and large, the three key features of the Japanese model regarding relations among government, banks, and firms. A major difference between these latecomers and Japan is as follows: although they all have bank-centered financing subject to government controls, bank–firm relations in these latecomers are generally less close and less stable than they are in Japan. Similarly, other relations, such as employer–employee and supplier–buyer relations, in these latecomers are also less close and less stable than they are in Japan. Consequently, the transaction costs of relations in these latecomers are generally higher than they are in Japan. This is illustrated in Figure 2.

Benefits of the Japanese Model: the East Asian Miracle

The "Japanese model" economies of all generations experienced decades of unprecedented high economic growth before the Asian financial crisis. The Japanese model can be effective in facilitating catching-up because institutional arrangements, such as entry restrictions, group formation, and cross-shareholding, can facilitate commitment to long-term relations among a small number of decisive players, because all mutually observable agreements by two transaction parties potentially can be enforced by relation-based governance, with low average transaction costs at the early stage of market development, and because catching-up economies enjoy the benefit of hindsight.

More specifically, the East Asian miracle can be attributed to six broad factors in relation-based catching-up economies, the first three of which have been noted earlier: First, in catching-up economies, more markets are incomplete and the legal system is less developed; thus government agencies, intermediary organizations, and business groups may play more important roles in coordinating activities and enforcing agreements. That is, since there is no effective rule-based governance, relation-based governance plays a more important role. For instance, industrial groups may serve as a system of contractual governance (Kester, 1992). Indeed, the value of conglomerate or corporate diversification is found to be higher when the legal system is less developed

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(Fauver et al., 1998). Second, perhaps a large part of the activities being monitored, which are mutually observable by the monitor and the monitee, but are not verifiable by a third party, can be enforced by relation-based governance (but not by rule-based governance). Third, when the extent of the market is small, or when the number of transaction partners is small, average (transaction) costs in relation-based governance can be smaller than those in rule-based governance owing to its smaller fixed transaction costs. That is, before reaching the turning point, relation-based governance is more cost-effective than rule-based governance.

Fourth, to facilitate commitment to long-term relations among a small number of decisive players, government in the Japanese model can impose certain entry restrictions into key industries, such as the "staggered entry" approach in the Japanese petrochemical industry (Aoki et al., 1997, p. 7), foster enterprise groups or business associations, and encourage cross-shareholding and long-term employment. Fifth, to correct market failures and to avoid government failures, government in the Japanese model need not intervene in markets and allocate rents directly. Rather, it can indirectly achieve the goals by creating and fostering market institutions or intermediary organizations, such as a main bank system or business associations, and by creating rent opportunities through directed credit and entry restrictions.[11] Furthermore, to motivate the government to monitor banks effectively, relevant government officials can claim sufficient residuals of economic outcomes through taxation, state-controlled business, and other economic performance-based compensation schemes.[12] Finally, catching-up economies can learn from the past experiences of the more developed countries, including earlier generations of the Japanese model. Thus, governments in (later) catching-up economies have more information about how to conduct industrial policies to internalize externalities across sectors and across time through joint value maximization. Similarly, firms in (later) catching-up economies have more information about how to implement business strategies to internalize rents or quasi-rents between partners through long-term relations.

Costs of the Japanese Model: the Asian Financial Crisis

Our theory suggests there exists a turning point in the process of market development, before which relation-based governance is more cost-effective and beyond which rule-based governance is more cost-effective. In the same process, an increase in the number of available competitors (substitutes) to existing partners will weaken a firm's commitment to its existing relations. As a result, a given relation-based governance structure can expand the extent of the market, and hence deepen the division of labor only to a certain degree. Competitive forces may drive relation-based governance to evolve eventually into rule-based governance to capture the gains from economies of scale in rule-based governance and from deepened labor divisions. For instance, the three stages (*ex ante*, interim, and *ex post*) of monitoring a firm by a bank can be separated to a certain degree to capture the gains from specialization in monitoring.[13]

In addition, after the latecomer gets close to or catches up with the leaders, there are fewer or no previous examples to follow (thus less or no benefits of hindsight), and hence trial and error become the main approach of development at later stages of catching-up. Therefore, private experiments, given their great diversity to enhance the chances of success, will increasingly have an edge over state experiments associated with less diversity owing to restrictions on private entries. Combined with increasing average transaction costs and intensifying competition, these forces together will eventually result in political and economic decentralization, including financial

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liberalization, in the process of catching-up, as experienced by Japan and other countries in East Asia.

After growing rapidly for more than two decades, the Japanese development process eventually slowed down after the oil crisis in the mid-1970s. During the 1980s, the Japanese financial system underwent a process of drastic liberalization which provided opportunities for firms to borrow easily from bond markets and from abroad. Particularly, the amendment of the Foreign Exchange Control Law in 1980 permitted cross-border capital transactions with only prior notification to the Ministry of Finance rather than obtaining a formal permit. The main bank relations started to weaken owing to competition from both domestic and international financial markets after the mid-1980s (Allen, 1996, p. 7). Consequently, the government was no longer able to monitor banks effectively, which were no longer able to monitor their (client) firms effectively. The deteriorated monitoring system contributed to the bubble in the late 1980s. Eventually the bubble burst in 1991, followed by stagnation throughout the 1990s after the LDP lost its monopoly in 1993.

Similarly, after decades of high economic growth, financial liberalization, especially a drastic opening-up of capital accounts, was under way in Indonesia, Korea, Thailand, and other economies in East Asia from the early 1990s or so. During the same period, political liberalization was also under way in Korea and Thailand. Since relations in these economies were generally more costly (as indicated), the market development in these economies could reach the turning point earlier than it did in Japan (see Figure 2). Owing to their higher transaction costs, these economies were not able to export, and thus to accumulate foreign reserves, as efficiently as Japan. Partly as a result of this, a crucial difference between these economies and that of Japan was that these economies accumulated huge (short-term) foreign debts during the liberalization process, while Japan became the largest international creditor. In these economies, financial liberalization granted firms the autonomy to borrow abroad. This, along with governmental guarantees of credits and a currency peg, provided opportunities for interest rate arbitrage, thus triggering a buildup of large foreign debts in the 1990s. It is important to note that a currency peg (including capital account convertibility) implies governmental guarantees of the exchange rate or the value of domestic currency, and that this, together with credit guarantees, implies governmental guarantees of credits in the pegged foreign currency, such as the US dollar.

However, our theory suggests that financial and political liberalization can result in a disruption of the existing relation-based governance structure. As a result, foreign investors may invest in excessively risky projects, and at times their assets may simply be looted. In particular, after both political and financial liberalization, the relations between the government and banks and between banks and firms began to weaken, and monitoring thus became less effective. Given the fact that a national government is unable to be the lender of last resort for foreign currency, a foreign debt problem (especially large short-term foreign debts) is particularly vulnerable to financial panic.

But if all these facts had been common knowledge *ex ante*, foreign creditors would have hesitated to lend in the first place. Thus, as indicated, we need to search for unexpected changing factors. Publicly observable factors, such as truthfully reported traditional macroeconomic indicators (e.g., trade deficits), can explain little in this regard since they would have been taken into account by the investors. When these economic indicators are not truthfully reported, we need to examine the underlying incentives and constraints for data manipulation or strategic revealing. The lack of sufficient knowledge by investors, especially foreign investors, about the nature and dynamics of relation-based governance, especially its discontinuity, nontransparency, and incom-

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patibility, is the key to an understanding of their "rush in and rush out" investment behavior in East Asia.[14]

Outside investors, especially western investors, have knowledge of rule-based governance, but they lack knowledge of relation-based governance. When a country with relation-based governance undergoes financial or political liberalization, outside investors observe the promulgated new rules. These rules, if fully implemented, may indeed be able to reduce the moral hazards of the fund users. But outside investors are unable to observe the change of relations, particularly the possible deterioration of relation-based governance resulting from liberalization. Thus, they may invest more in a relation-based economy after learning of its liberalization programs. We now know from our analysis that many new rules will largely remain ink on paper, and that financial or political liberalization can lead to a vacuum or at least to some disruption of governance. As a result, liberalization can increase (rather than reduce) moral hazards, and it provides opportunities for local financial intermediaries and other agents to loot money from both domestic and international lenders. In other words, outsiders may perceive liberalization as an opportunity to invest, while insiders perceive liberalization as an opportunity to loot.

Liberalization-induced moral hazards can lead to severe asset bubbles and bursts through "competitive looting" and through information cascades, especially in relation-based economies. First, as is known, limited liability along with governmental guarantees or cross-subsidies implies that "Heads the fund users win, and tails the tax payers lose." As a result, a borrower has incentives to invest other person's money in highly risky projects. Competition among looters can lead to "asset inflation"; a low-price bidder will lose to a high-price bidder (Krugman, 1998). Second, uninformed or less informed investors, such as many international lenders, make their decisions mainly based on previously observed asset prices (and the observable "rules" on paper). This can generate information cascades which will further enlarge asset bubbles and bursts. As indicated, information cascades under relation-based governance tend to be larger than those under rule-based governance owing to the nontransparency of relation-based governance.

However, the severity of the crisis cannot be fully accounted for by the analysis thus far. It was due both to the vulnerability of relation-based governance for international finance to panic and to policy mistakes that further led to massive capital outflows. When outside investors found that many borrowers were not able to repay their debts on time, and that governmental guarantees of credits in foreign currency were infeasible, they were shocked to realize that the liberalization had induced looting. They started to withdraw their capital, with each creditor attempting to run ahead of other creditors in a credit grab race due to the self-fulfilling multiple equilibrium feature of financial systems. Being afraid of invisible cross-subsidies, they withdrew their capital not only from the troubled firms, but also from other firms which might have close relations with the troubled firms.

Such capital withdrawal would have been limited if there were effective cross-country governance mechanisms, such as bankruptcy procedures and orderly renegotiations involving multiple multinational creditors. Unfortunately, as indicated, given the nontransparency, nonverifiability, and relation-specificity, it is very costly to establish cross-country governance mechanisms among economies with relation-based governance and between economies with relation-based governance and economies with rule-based governance. Renegotiations of debt restructuring of a large number of troubled firms are particularly difficult when liberalization has resulted in "corruption with independent monopolies" in government. Thus, panic to withdraw capital from

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relation-based debtors can easily erupt.[15] But the panic might have been contained from a huge explosion by some right policy mix by national governments and by the IMF. Sadly, however, as Feldstein (1998) and Radelet and Sachs (1998a,b) note, the policy mistakes of the national governments, such as those of Indonesia, Korea, and Thailand, and of the IMF, probably aggravated, if not triggered, the huge explosion of panic to withdraw capital and the severe resultant crisis.

The Asian financial crisis was sparked by the currency shock in Thailand. Behind the Thai currency crisis, however, was the Thai political democratization and crisis after 1992, and its financial liberalization after 1989. After shifting to a parliamentary government in the late 1980s, a *de jure* competitive electoral system was adopted in 1992. Since then the Thai polity has been extremely unstable, with a new government on average once in less than a year. Financial liberalization began in 1989, followed by the opening up of capital accounts in 1992 and the establishment of the Bangkok International Banking Facility in 1993 to channel foreign capital with favorable tax treatments. Before the middle of 1997, the Thai government had been pledging for months that Finance One, a major finance company, was not insolvent, that there were plenty of foreign reserves, and that the baht would not be devalued. Bank of Thailand resorted to an accounting trick of entering into swamp transactions where (only) the spot component was revealed but the future component was concealed (Delhaise, 1998, pp. 89–90). The Thai government ended support for Finance One in late June and devalued the baht on 2 July 1997. Then, as part of the IMF rescue program, 58 of 91 finance companies were immediately suspended, and 56 of these were later liquidated. Panic to withdraw capital then set in.

The ineffective cross-border bankruptcy procedures in Thailand might have aggravated the panic.

> "In practice, it would easily take well over five years, by which time there was little hope of extracting anything approaching the original claim. Foreign secured creditors were in an even worse position, as they had to go through the motion of establishing that their country of domicile was granting Thai creditors similar right." (Delhaise, 1998, p. 98)

Subsequently, shocks in foreign exchange and credit markets affected all the economies in the region owing to their high economic interdependence through investment and trade.[16] But thus far the effects have varied markedly in different economies, with Indonesia, Korea, and Thailand affected the most, and China, Singapore, and Taiwan affected the least. One of the main reasons behind the observed differences seems to have been the financial and political opening up in Thailand, as discussed earlier, and that in Korea.[17] In Korea, a large part of financing was in the form of foreign loans, and they were explicitly guaranteed by the Korean Development Bank and the Bank of Korea (Cole and Park, 1983), or by the Korea Credit Guarantee Fund and the Korea Technology Credit Guarantee Fund (Bank of Korea, 1995). However, Korea was able to avoid a debt crisis in the early 1980s because there was no political or financial liberalization at that time.

In 1997, a debt crisis occurred, and Korea asked the IMF for help. As in Thailand, underlying the Korean debt crisis was its earlier political and financial liberalization. Political opening up began after the establishment of competitive elections in December 1987. Partly required by its admission to the OECD, financial opening up began to accelerate after 1993. Yet by 1997 effective rule-based governance still was far from being established. For instance, after July 1996 merchant banks were allowed to enter

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the land market, and some of them financed 20-year assets with short-term deposits on only a 90 to 180 day basis (*Euromoney*, September 1997, p. 348).

There was financial but no political liberalization in Indonesia in the early and mid-1990s. The catastrophic crisis in Indonesia perhaps was aggregated by the early policy mistakes of the IMF. Sixteen commercial banks were closed immediately after the currency crisis began. Such a massive closure of banks in the middle of the currency crisis triggered bank runs and panic to withdraw capital. More generally, the conditions imposed on these countries by the IMF may be criticized for being too drastic (both economically and politically) and too contractionary (both monetarily and fiscally) for the following reasons. Although the panic might not have been totally unavoidable, it might have been contained from exploding by less contractionary macroeconomic policies, more gradual institutional reforms, and more private party participation in renegotiations.

In particular, too drastic opening-up measures might have severely weakened the existing relation-based governance structure before a new and more rule-based governance mechanism could function. This is implied by our theory and has been experienced by many transition and developing economies. In fact, after financial liberalization and reform during the first half of the 1990s, according to the "rules" on paper, most East Asian countries, including the countries involved in the crisis, had established depositor protection schemes, capital adequacy based on the Basle Accord, global consolidated reporting, and external audits (Barth et al., 1998, Table 4, Figure 9a). Yet many of these rules largely remain only on paper even today. For instance:

> "It may not be visible, but shareholders often borrow more funds from their banks than they commit in shareholders funds, thereby rendering useless the notion of capital adequacy rules." (Delhaise, 1998, p. 74)

Similarly, many rules required by the IMF, promulgated in such a short period, also will remain largely ink on paper for a long time. Finally, the relation-based Japanese model, if properly adopted, can be effective in facilitating catching-up in the early stage of development. This is implied by our theory and has been witnessed during the early East Asian miracle. The dismantling of too many existing relation-based mechanisms in so short a period can damage the future potential of economies at an early stage of development to continue to catch up; i.e., before reaching the turning point where relation-based governance is still more cost-effective than rule-based governance, such as in Indonesia.

5. Concluding Remarks

Although this theory of relation-based governance is intended to explain the East Asian miracle and the Asian crisis, it can also shed some light to understand the crisis of catching-up economies in general. Relation-based governance is the norm the world over in developing and catching-up economies, such as in southern Africa (Yellen, 1990), in Cairo (Singerman, 1995), and in Mexico City (Lomnitz, 1977). Historically, financial or political liberalization has often been followed by financial or economic crisis, especially when a legal system is not yet well developed (for financial liberalization-induced crises, see IMF, 1998, p. 83).[18] East Asia aside, this was also the case in Latin America, such as the crises in Argentina and Chile in the early 1980s, in Mexico in the mid-1990s, and in Brazil during 1998/99.[19] Similarly, Russia suffered a severe currency crisis in 1998 after its massive economic and political liberalization of the early 1990s.

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In light of our theory, economic development is fundamentally a process of establishing relation-based governance and subsequently making a transition to rule-based governance. This view is consistent with the historical facts, which were long neglected by most economists until very recently. Before rule-based governance was established, European business people during the premodern period made agreements, to a large degree, outside the legal system (Greif, 1994b). Transition away from personal reputation in the United States occurred only between 1840 and 1920 (Zucker, 1986). During this transition period, relational banking played an important role in monitoring firms (Cantillo Simon, 1998). It was the Glass Steagall Act, the Securities Act, and other regulations after the Great Depression that essentially ended relationship-based finance in the US (Rajan and Zingales, 1998, p. 14). Therefore, there is little difference between East and West or between North and South other than they are at different stages of development.[20]

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Notes

1. Other things being equal, when the decisive players in the different stages are different bodies, power tends to be more separate and dispersed.
2. In repeated plays, both *ex ante* rules and *ex post* governmental actions may be influenced by rent-seeking investments. Thus, in equilibrium, investments can be fixed points of some complex functions.
3. A foreign informational infrastructure, such as rating agencies, accounting firms, arbitration committees, and legal codes and cases, can be used in a country, but its effects are limited owing to country-specific formal codes and informal constraints. Thus, latecomers have some limited

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advantage to enjoy certain spillovers from the existing informational infrastructure in more developed countries.

4. It is incentive-compatible for community members to refuse to trade with a defaulter if he will default forever if he ever once defaulted; such strategies can support an outcome without default in a Nash equilibrium (Greif, 1994a).

5. Relation-based governance and rule-based governance represent a theoretical dichotomy. In reality, most governance systems contain elements of the two extreme forms (Baker et al., forthcoming). Note also that Okuno-Fujiwara (in Aoki et al., 1997) defines two related but different terms (from ours). He focuses on *government*, and differentiates "relation-based government" from "rule-based government" in terms of decision-making modes within the government. In contrast, I focus on *firms*, and differentiate "relation-based governance" from "rule-based governance" in terms of modes of enforcement.

6. There are two additional relative advantages of relation-based governance. First, in relation-based governance, more technical information (information not directly related to enforcement) sharing can better coordinate the activities of the two transaction parties. Second, in relation-based governance renegotiation is less costly, thus resulting in higher *ex post* efficiency.

7. Note that making divorce illegal may facilitate transactions in this case. For the same reason, when future benefits cannot be specified in enforceable contracts, the emergence of potential competitors may reduce incentives for technology transfers or job training by jeopardizing a partnership or a labor–management relationship.

8. To illustrate information cascades, consider three investors A, B, and C. Suppose their priors are positive, neutral, and negative for investment, respectively, and they move sequentially. First, A invests. Then B becomes positive after observing A's action, and invests. After observing A's and B's action, C becomes positive and also invests. This will likely lead to a "bubble." If the moving sequence is C, B, and A, then it will likely lead to a "depression."

9. Similarly, Holmstrom and Roberts (1998) note: "In Japanese practice explicit contracting is not used to overcome the incentive problems involved in outsourced design and ownership of specific assets. In fact, the contracts between the Japanese automakers and their suppliers are short and remarkably imprecise, essentially committing the parties only to work together to resolve difficulties as they emerge. Indeed, they do not even specify prices, which instead are renegotiated on a regular basis. . . . The key to making this system work is obviously the long-term, repeated nature of the interactions" (p. 81).

10. "Lifetime employment and the high degree of communal solidarity that exists within Japanese companies is one of the two distinctive and perhaps *sui generis* features of the Japanese economy. The other . . . has to do with the long-term stability of relations among different companies belonging to the same network organization. . . . Although there may be a written contract, the force of the agreement does not lie in the contract itself. Indeed, insisting on putting the arrangement into legal language is usually considered very bad form and could result in the employee's being banned from the lifetime employment system altogether. The penalties for violating the informal contract can be severe: an employee who leaves a lifetime employment firm for another because it pays better may subsequently be ostracized, as will a company that tries to raid employees of another firm. Enforcement of these sanctions rests not on law but on moral pressure alone" (Fukuyama, 1992, pp. 186–7).

11. A similar example is found in the patent system (Aoki et al., 1997, p. 14).

12. There are various formal or informal incentive schemes in which government officials claim certain residuals in East Asia, such as the practice of *amakudari* in Japan (Aoki and Patrick, 1994, pp. 32–3), growth-indexed payments in Singapore, the First Family business and the army's security service to the Chinese business in Indonesia, the directorship of bureaucrats on the boards of the Chinese business in Thailand, and the explicit economic performance-based promotion scheme in China (Li and Lian, 1999).

13. In the US, broadly speaking, investment banks, venture capitalists, and rating agencies specialize in *ex ante* monitoring; large shareholders and board directors specialize in interim monitoring; and takeover specialists and liquidation committees specialize in *ex post* monitoring.

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14. In fact, if there were no investor ignorance, then there would be no need to conduct any research on the crisis. Indeed, if investors were not ignorant at all, we would be unable to justify the value of economists.
15. As is known, a financial system is vulnerable to panic owing to its self-fulfilling multiple equilibrium feature, and an international financial system is even more vulnerable to panic owing partly to the lack of a lender of last resort. I here stress that an international financial system involving relation-based governance is most vulnerable to panic owing to the incompatibility of relation-based governance.
16. For instance, Japanese banks lent significantly to Korean banks, which in turn lent significantly to Indonesian firms.
17. In contrast, there was no drastic financial or political opening up in China. There was no political opening up in Singapore. And the political liberalization in Taiwan is still moderate, as the Nationalist Party (Kuomintang) continues to be dominant. Thus it appears that to a large degree the governance mechanisms in these economies have not yet been disrupted. Another main reason behind the observed differences is that these economies did not suffer a huge short-term foreign debt problem; indeed they all had large foreign reserves.
18. Financial liberalization can even lead to financial crisis in economies with an established rule of law, such as the S&L crisis in the US in the 1980s, and the currency crisis in Scandinavia in the early 1990s. The financial liberalization in Scandinavia was partly required for integration into the European Union. However, a crisis induced by financial liberalization is generally limited in both scope and severity in rule-based economies.
19. Mexico experienced trade and financial liberalization partly required by its joining of GATT and NAFTA from 1986 to 1994, and political liberalization after 1988. Brazil began privatization and liberalization after the mid-1990s. In an earlier episode, after drastic trade liberalization in 1987, the Mexican footwear industry suffered a crisis. One of the main reasons behind the crisis appears to have been that the role of the Footwear Association as an enforcement mechanism in the closed economy had deteriorated in the open economy.
20. Thus the popular media terms "Asian values" and "Asian crony capitalism" have little value and are indeed misleading.

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