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Historical Sources of Institutional Trajectories in Economic Development: China, Japan, and Korea Compared

Masahiko Aoki

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Masahiko Aoki is professor emeritus and senior fellow at Stanford University and visiting fellow at ADBI.

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Please contact the authors for information about this paper.

Email: aoki@stanford.edu

Asian Development Bank Institute
Kasumigaseki Building 8F
3-2-5 Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan

Tel: +81-3-3593-5500
Fax: +81-3-3593-5571
URL: www.adbi.org
E-mail: info@adbi.org

Abstract

This essay provides a game-theoretic, endogenous view of institutions, and then applies the idea to identify the sources of institutional trajectories of economic development in China, Japan, and Korea. It stylizes the Malthusian-phase of East Asian economies as peasant-based economies in which small families allocated their working time between farming on small plots—leased or owned—and handcrafting for personal consumption and markets. It then compares institutional arrangements across these economies that sustained otherwise similar economies. It characterizes the varied nature of the political states of Qing China, Tokugawa Japan, and Yi Korea by focusing on the way in which agricultural taxes were enforced. It also identifies different patterns of social norms of trust that were institutional complements to, or substitutes for, political states. Finally, it traces the path-dependent transformations of these state-norm combinations along subsequent transitions to post-Malthusian phases of economic growth in the respective economies.

JEL Classification: O43, O53, P51

Contents

1. INTRODUCTION: THE CO-EVOLUTION OF ECONOMIC, DEMOGRAPHIC AND INSTITUTIONAL VARIABLES

One of the most important social scientific research agendas today is to understand the dynamic nature of East Asian economies in a comparative and historical perspective, and to understand how those economies affect the world economy. According to Angus Maddison's frequently cited estimate, China, Japan, and Korea together constituted the largest economic region in 1820, producing more than one-third of the world's total production (Maddison 2003). However, that proportion dropped to about 8% in the middle of the 20th century, which was then followed by the successive economic miracles of Japan, the Four Asian Tigers, and now the People's Republic of China. The aggregate real gross domestic product (GDP) of the East Asian region, including Taipei,China, amounted to 22.4% of Gross World Production in 2011, slightly surpassing that of the North American Free Trade Agreement economies and the European Union plus Switzerland and Norway (IMF 2012).

How can we account for this dramatic "return" of East Asia? Can we simply extrapolate its recent economic performance into the future? Is there anything common and unique to the development patterns of East Asian economies, or something fundamentally different in their respects? In either case, how will their accumulated assets—physical, human, and institutional—and other heritages be facilitating or constraining their capacities to further develop and meet emergent challenges such as population aging? These questions appear to call for new thinking based on historical and comparative perspectives.

In the last decade or so, a new "unified" approach to economic growth has been explored in economics to deal with issues relevant to the above-mentioned ones in a general analytical framework (e.g., Hansen and Prescott 2002; Galor 2010). They are unified in three senses. First, they deal with interactions between economic variables and demographic variables (e.g., fertility, mortality, migration, age composition of the population) rather than dealing with the latter as parameters as in neoclassical growth theory. Second, this approach attempts to understand the transition from the Malthusian stage of economic development to the post-Malthusian stage and further to the modern growth stage in a unified framework rather than treating them as completely disjointed stages. Third, as a corollary to the second, it understands different growth paths among different economies as following the same, normal process of development, only with time lags rather than as differently-balanced growth paths conditioned by different parameters. From such a unified perspective, then, the miracles of the East Asian economies are not really miracles, but catch-ups. To better understand the development process in general, however, we may also wish to know why there are differences in the timing, duration, and institutional forms of successive developmental phases across economies. Between, say, West and East Asia, or among China, Japan, and Korea within East Asia. An immediate answer could be "institutions matter". However, the unified approach as it stands now appears to be based on observations of stylized facts from "advanced" Western development. Are the East Asian economies following the institutional paths of the West, only with a time lag?

In the literature dealing with the subject, historical characteristics of East Asian institutions are often compared to their Western counterparts and characterized in terms of dichotomous parameters such as authoritarian political regimes, as opposed to democratically controlled governments and the rule of law; trust relations limited to kinship groups as opposed to generalized morality; cultural collectivism as opposed to individualism; paternalistic Confucianism as opposed to individualistic Protestantism as legitimizing ideology, and so on. These parametric approaches then go on to examine their impacts on divergent economic development patterns, often with negative connotations with regards to East Asian capacity to

generate innovation, autonomously generate industrial revolution, secure private property rights, and so on. However, even if such a dichotomy may be granted as a working hypothesis, we may wonder why and how it occurred in the first place? Or more deeply, are the above-mentioned parametric dichotomies rich enough to capture the nature and possible varieties of East Asian institutions and their impact on economic and societal development processes?

Instead of a parametric treatment of institutions, I adopt the following game-theoretic conceptual framework for understanding institutions and their dynamics that I have developed elsewhere (Aoki 2001; 2010; 2011). I start with the simple notion that: Institutions are salient ways of the societal games played, being played, and believed to be played in a population. Very simple indeed, but evoking recursive states of play and beliefs calls for equilibrium thinking. How are such recursive states both in the physical play of societal games and the internal belief of individual agents co-jointly generated and made sustainable? I submit that it is due to the intermediating function of public (linguistic) representations that summarize the salient features of the recursive state of play and serve as external cognitive resources for the belief formation of individual agents. They may take such substantive forms as laws, norms, organizations, social rules and signs, religious ideologies, and the like. Their acceptance by agents as legitimate, authoritative, enforceable, trustworthy, taken-for-granted, etc., depending on domains of societal games, is neither automatic nor simply policy-induced. They must be endorsed and reconfirmed by salient features of the recursive state of actual play. Instead of taking them as exogenous parameters, as some of the traditional approaches do, we need to analyze how they become sustained as equilibrium phenomena and how they correlate and are mutually reinforcing with the recursive state of play.

Such an endogenous view of institutions anticipates that institutions also change with substantive changes in the state of play such as envisioned in terms of phase-transitions of economic-demographic variables in the unified approach. Thus, institutions should be viewed as co-evolving with economic-demographic dynamics rather than determining economic-demographic variables in a uni-directional way. The lack of understanding of feedbacks from the real play of societal games to institutions often leads to policy recommendations that are irrelevant, or that may have adverse impacts on economic performance of the targeted economy.

This paper stylizes the Malthusian-stage economies of China, Japan, and Korea as the peasant-based economy in which peasant families of small size self-managed their working time among (wet) farming on small plots, leased or owned; domestic handcrafting (manufacturing) for personal use and markets; and running households. Based on the above endogenous view of institutions, this paper goes on to identify crucial institutional arrangements in these respective economies that sustained their otherwise similar economies. It characterizes the basic nature of the political states in Qing China, Tokugawa Japan, and the late Yi Korea by focusing on the ways in which agricultural taxes on farmlands were respectively enforced. It also identifies different patterns of social norms of trust that were either institutional substitutes or complements to the respective political states. It concludes that these state-norm combinations set in the Malthusian phase of the East Asian economies became sources of subsequent institutional trajectories, viewed as successively punctuated equilibria co-evolving with corresponding phases of economic development.

This essay is thus not a historical study per se, based on the scrutiny of primary documents, data and so on, but an analytical narrative based on the readings of authoritative historical studies from an institutionalist's perspective.

2. A STYLIZED MODEL OF THE EAST ASIAN PEASANT-BASED ECONOMY

2.1 The Stylized Model

Seventeenth and 18th century East Asia may be considered as having been in the Malthusian-phase of economic growth—referred to as the M-phase hereafter—characterized by low equilibrium of per capita GDP with a large employment share in agriculture. However, it does not necessarily imply that the phase lacked agricultural production growth. Indeed, in those periods, China, Japan and Korea enjoyed agricultural production growth, although accompanying increases in rural population offset growth in per capita terms: the typical characteristics of the M-phase in general. The growth of total agricultural production was partly accomplished by the introduction of new products such as maize and potatoes from the New World into hitherto unproductive regions such as south and west China as well as some parts of the Korean Peninsula. However, land reclamation for wet farming was widely pursued in those periods in each economy. Further, the proliferation of labor-using technological progress, such as replacing the use of livestock with deep plowing by spade, greatly contributed to an increase in rice field productivity (Furushima 1954).

Thus, drawing on prevailing practices in advanced regions such as the Yangtze delta and the central Japan Archipelago, a stylized model of the East Asian peasant-based economy may be formulated as the one in which small-sized (conjugal or stem) peasant families were engaged in the self-management of farming on small plots of several acres, self-owned or leased. Wet-farming in the Monsoon area of East Asia, combined with technological progress mentioned above, increased agricultural value productivity, but it required attentive human care to vegetation from the time of seedling to harvesting that cannot be efficiently replaced by mechanical devices or slave labor. Self-management by peasant families without hierarchical monitoring better fits incentive-wise wet farming, although there were needs for cooperative efforts in developing and sustaining an irrigation system within their communities. Also, the seasonal rhythm of wet farming made possible the efficient use of rice paddies for secondary (and tertiary) dry cropping in non-rainy seasons, as well as the use of non-farming time for family labor, particularly that of women, the aged, and children, for handcrafting and domestic manufacturing for household uses, local markets, and indigenous brokers.

I am aware that the above description is highly stylized, abstracting from regional differences and temporal changes. For example, in northern China climate conditions were less favorable for wet farming and water transportation, while natural disasters leading to famine were more severe. As dry farming produced fewer surpluses there, tenancy rates were lower. Instead, managerial farming, in which the principal cultivators worked together with a few hired laborers, was more frequently observable, side by side with family farming (e.g., Perkins 1969; Huang 1985). In south-eastern areas such as Guangdong and Fujian, lineage organizations regulated the self-management of member households, in a way that was reminiscent of the relatively late, collective reclamation of farmland of lower grade (e.g., Freedman 1970; Baker 1979). Even in the 18th century, the south-western area was still being developing by new immigrants. In Japan, the stylized model of the peasant-based economy by the small conjugal peasant family was more typically applicable to practices in the advanced central region. In northern Japan, where climactic conditions are more severe, stem families with several generations living together were more prevalent in order to cope with the harsh labor needs of individual households. In south-western Japan urbanization was less developed than in the central region so that families became large with unmarried adults living together (Hayami 2009). In Korea, where the comparatively longer rule of the Yi Dynasty continued from the late 14th century,

some aspects of the institutional arrangements that had developed prior to the introduction of wet farming tended to remain resilient (as discussed shortly). However, with these preliminary qualifications, it may suffice for us to highlight the salient features of the advanced Yangtze Delta and Central Japan as a reference point for framing comparative studies in institutional trajectories in East Asian economies.[1] I will subsequently discuss ways how diversities in rural structures in China and Japan were held together in the Qing and Tokugawa states.

2.2 The Evolution of Self-Managing Peasant Families in East Asian Economies

First, let us ask how small families (typically conjugal) with not more than a few children prevailed as the cultivating unit norm in the periods and places of our concern. A universal imperative for such family structures to be technologically compatible with wet farming was suggested in the previous section. However, it points only to a sort of demand factor. There must have also been institutional factors to induce and sustain agents' behavior toward such family-based cultivation.

In China, one of the major institutional factors was the practice of partible inheritance among sons. A public representation of such a rule can be traced back to as early as the legalist philosopher Shang Yang (390–338 BC) in the Warrior period. He formulated a rule for the stability of political rule that male adults should not live together under a single roof. The legal design of this school laid institutional foundations for the short-lived, but first unified imperial state Qin dynasty (221–206 BC). Indeed, the rule was not inconsistent with the interests of successive dynasties to control and restrain the emergence of counter-powers of landownership-based aristocrats. The inheritable aristocrat class was removed from the political arena in Sung China that implemented exclusive reliance on the time-honored imperial examination system for the recruitment of government officials. Scholarly officials thus recruited could accumulate economic wealth and reputation capital for their extended family members, but their positions were not inheritable. The accumulated wealth of ex- scholar-officials often dissipated after their deaths, as their alleged lineage members and opportunistic servants often grabbed the remaining wealth and ran away. Some wealthier lineages tried to avoid equal division among sons by setting up lineage trusts, relying on Confucian moralizing about an "ideal family" consisting of generations living together. However, this type of family structure became less stable in Qing China, as problems over the succession of the family head and disputes over the control of trusts could easily result in the division of property. Peasant families could not afford such funds, even if modest, unless some peripheral assets were set-aside at the time of settlement.

The norm of partible inheritance made the change of land ownership fluid, while limiting the size of farmland ownership by cultivating peasant families. Some families were then forced to pawn their properties or part with the ownership permanently or retaining repurchase options when they had bad loans, urgent family needs and so on. However, even if they were forced to do so, they often continued to cultivate the plots under lease contracts from the buyers, because relying on them for cultivation was beneficial for new owners or lenders for the technological reason noted above. Thus, intricate arrangements of multi-layered property rights and networks of leasing contracts evolved within and across villages and classes (e.g., Ellickson 2011; Long 2012). Ownership/contracts were sold and bought like stocks, sometimes even without the

[1] The Yangtze-delta has always been an advanced economic region and has influenced the development of other regions to the present day (e.g., Muramatsu 1970; Brandt 1989; Rawski 1989; Ma 2008; Li 2012). If the delta was counted as an independent economy, it would have been the tenth largest economy in the world in terms of real GDP in 2009, with its GDP per capita rising to US$11,600 (Li 2012).

knowledge of the peasant families cultivating the transacted plots. How then could the collection of taxes and the enforcement of varied contracts be institutionalized? Before discussing this, let us quickly compare the major institutional factors that gave rise to peasant-based economies in Japan and Korea for comparative purposes.

In Japan, the institution of small-sized ownership of farmland by cultivating families was ushered in through the political event of Taikō kenchi (1582–98), a farmland survey by Toyotomi Hideyoshi who came close to unifying the war-divided Japan prior to the establishment of the Tokugawa regime in 1603. This survey examined the size and productivity of each farming plot in detail and attributed tax obligations to the actual cultivator of each plot. This survey was enforced against the resistance of large patriarchal families, such as myoshu (literally "name owners"), who managed relatively large farming units with quasi-domestic subordinate laborers (nago, literally meaning "name-holder's child") and livestock. Toyotomi issued an ordinance to prohibit two or more conjugal families living together, mindful of Shang Yang's rule, while prohibiting farmland lease contracts among rural families (Araki 1959). These measures were essentially followed by the subsequent Tokugawa regime. In this way, peasant families headed by one male adult became the basic farming unit with de facto ownership of the farmland they cultivated. Large patriarchal families in rural areas were dissolved. Their members became tax-paying, cultivating peasants, while powerful family heads among them who had supplied human and physical resources to armed battles in the preceding Warrior period were exempted from taxation. They were now required to live in castle towns and made to draw stipends fixed in terms of quantity of rice from the Shogunate (Bakufu) or domains (Han) as their samurai (literally, "servant"). This regime is referred to as the Baku-han regime in contemporary literature.

Through the establishment of Baku-han regime, Shogunate and Han governments became able to secure tax revenues without intermediate extraction by non-cultivating landowners, while removing potential sources of political challenge against their political order. The land ownership register was kept at the village office and managed by leading families, who also mediated ownership disputes, although village members were formally entitled to bring cases to the courts administered by the Shogunate and some domains. Thus, common law essentially prevailed in settling disputes. The transfer of land ownership across villages was regulated, if not in practice, vis-à-vis merchants in the late Tokugawa era (e.g., Smith 1959). To secure tax collection, the Shogunate issued an ordinance to prohibit partible inheritance of farmland after the initial sixty years of its rule. However, the practice of primogeniture had already spread by then for a reason that I will discuss shortly, although in practice there were variations from the rule, depending on households and regions from the rule (Hayami 2009).

Korea was also not precluded from transition to a peasant-based economy. In the 17th century, the rural population was still composed of three distinct classes: yangban, registered as descendants (officially within three generations) of ex-scholar-officials of the dynasty and now engaged in agricultural management; nobi, (constituting about one-third of the population in the 17th century) as objects for inheritance and sale by yangban; and commoners, (yang'in) who were subjected to taxation and conscriptions by the Yi Dynasty. However, there were variations in the status of nobi. As already noted, the introduction of the new agricultural technology of wet farming in the late seventeenth and 18th century on the Korean Peninsula made the self-management of peasant families more productive, and the price of nobi fell dramatically, indicating the spontaneous disintegration of the nobi-system (Jun, Lewis, and Kang 2008). In parallel, the dynasty moved to reduce the status and power of the yangban by introducing various anti-nobi bills (Rhee and Yang 2010). Thus, nobi morphed to tenancy farmers with long-term sharecropping contracts, while yangban withdrew from direct agrarian management. Clusters of peasant families emerged outside traditional yangban villages or mixed with them, almost doubling the number of villages in the 19th century (Rhee 2008). Throughout these

periods, inheritance systems also changed from division among children including daughters in the early Yi dynasty to division among sons, and then to primogeniture, in contrast to the Confucian norm (Kishimoto and Miyajima 1998). This may be considered a symptom of the evolution of the peasant-based economy as in the case of Japan.

Thus, the peasant-based economy may be seen as capturing convergent, stylized features of 18th century East Asian economies, although institutional paths to this end were varied. A further question is how this economy was politically governed. The next section narrates game-theoretic parables on this issue by focusing on the ways in which agricultural taxation was enforced to finance government expenditures.

3. THE POLITICAL STATES, NORMS, AND THEIR INSTITUTIONALIZED RELATIONS IN THE PEASANT-BASED ECONOMIES

At the most basic level, the political "state" consistent with the notion of institution proposed in the beginning of this essay may be conceptualized as a stable equilibrium "state" of the societal game in the political-exchange domain (Aoki 2001; 2010). Needless to say, any group of human beings needs to be collectively safeguarded to form a society through the accumulation and provision of public goods such as collective defense, safety and security, knowledge, and so on. Within this collective framework, individual agents can pursue interests of their own as well as collective benefits at the sub-population level. However, the actual delivery of public assets and goods, as well as their financing, in populations larger than tribes needs to be centrally delegated to a corporate entity simply referred to as the government. The government is equipped with the physical force and organizations to perform these functions, but it is also an agent which acts in its own interests in one way or another (including interests in sustaining the monopoly of violence, the enjoyment of prestige and so on). It selects actions on the basis of its own belief about private agents' possible reactions to its own various options. On the other hand, private agents react to government's actions from among options such as approval, submission, resistance, rejection, revolt, and others. They can do so either individually, by forming a sub-coalition among them, or colluding with the government. Thus, a strategic game situation arises between the government and private agents. Multiple strategic equilibria could arise in this kind of game, resulting in various substantive forms of the political state, depending on parameters of game structure. However, a selected equilibrium is likely to fit with institutional equilibria in other domains of societal games such as economic, social and organizational domains. Otherwise political decay is inevitable. It is important to distinguish in this respect between the political state as a stable, recurrent state of play of the political game and the government as a player of the game. With such a basic view of the nature of the political state, the following discussion focuses on an aspect of political states in East Asian economies that fit the property rights arrangements in their respective peasant economies.

3.1 The Interpenetrative State of Qing China

It is well known that the government apparatus of the Qing Dynasty of nomad origin was run by Confucian scholar-officials selected through the imperial examination system. As already noted, this system reflected the long tradition of successive dynasties (completed in the Sung Dynasty) to eliminate landed, aristocratic political power. In the late Qing Dynasty about 300 hundred doctors (*jinshi*) were selected every three years on the merits of scholarly and literary knowledge out of more than 20,000 qualified candidates from all over the country. The high-

fliers among them belonged to the academy, from which high government officials were appointed. Lower performers were sent to provinces and prefectures as magistrates on a rotational basis. It is estimated that there was only one magistrate per two to three thousand heads of population assisted by quasi-permanent local staff including those who had failed the examination at various selective stages of the process. Given the complexity of property rights arrangements referred to in the previous section, scholar-official magistrates could not be directly engaged in the detailed administration of taxation, although they were supposed to represent Confucian moral authority in maintaining the political order imposed by the Dynasty. Recent academic research emphasizes that this political framework lead to lower taxation, non-interference in nationwide markets by the dynasty, but also to a serious principal-agent problem, that is, corruption at the local level involving magistrates and their local staff (e.g., Rosenthal and Wong 2011; Sng 2011; Brandt, Ma, and Rawski 2012).

Under the weak grassroots power of the Dynasty, the ways in which local political games were actually played could depend on property rights arrangements in regions. Let us begin with a case of the advanced Yangtze delta region and how taxation and contracts were enforced within the said complex property rights arrangements. Muramatsu (1970) studied hundreds of contractual documents involving the landlord bursary (*zu-zhan*) that played crucial roles in this respect. These organizations acted as agents for multiple landlords who owned large numbers of small plots of farmland widely scattered and mutually intermeshed across villages. They collected rent from hundreds, in some cases from thousands, of peasant tenants, paid taxes to magistrates, and received fees for these services. They were normally created by clans of well-to-do ex-scholar-officials: gentry, but also entrusted by other landowners, even of different lineages.

Although family metaphors and ancestral rites were often invoked to perpetuate their activities beyond a single generation, as well as to be politically correct by being consistent with the legitimizing ideology of the Qing dynasty, they may be considered a quintessential example of corporations *à la* China[2]. Namely, landlord participation in these organizations was voluntary rather than exclusively natural kin group-based; members drew the benefits of a steady stream of rents from their activities that otherwise would be costly to secure; they were perpetual beyond the lifespan of any natural person; and they internalized administrative structures independent of particular persons. They were even equipped with a small army of the physically strong to literally enforce rent payments, while relying on the legal/physical assistance of magistrates whenever there was a need to punish rent arrears and settle contract disputes on their behalf. Ruskola, who also applied the concept of corporation to the clan in general, argued: "clan corporations' vehement insistence on kinship as their organizing principle did not mean that they were just family affairs. Rather, kinship was often a finely wrought legal fiction that legitimized the existence of private enterprises by profit-seeking individuals in a state in which Confucianism was the official orthodoxy" (2000: 1617–1618). He provides evidence that even the ownership interests in the ancestral fund were transferable.

There were thus strategic complementarities between the dynastic administration and the landlord bursaries. For the Qing dynasty of nomad origin with weak political basis in rural areas, endorsing or assisting the (coercive) enforcement of private contracts by the landlords was a way to secure tax collection. On the other hand, the large landholders were able to legitimize the forceful collection of rents by acting as quasi-public agents to collect taxes for the dynasty. Such interpenetrations of the government apparatus and quasi-public, private corporate bodies were not limited to the groups of landlord cum gentry in the most advanced Yangtze Delta, but widely

[2] For the general concept of corporations prior to the birth of business corporations and not limited to them, see Berman 1983; Aoki 2010: Chapter 1.

observed in various forms in the Qing China. For example, private corporate entities such as the lineage organizations in relatively late-developed south-eastern provinces (Freedman 1958; Baker 1979); the merchant organizations for which the rights to produce, transport, and sell government-monopolized salt were farmed out (Ho 1954); government-supervised, merchant-managed enterprises in the late 19th century (Feuerwerker 1958; Zelin 2009); and so on were in the position of playing mutually complementary strategies with the Dynasty to enhance their own private interests. Traditionally, in social scientific studies on the Ming and Qing China there have been two divided foci of approach: one focusing on the "centralized" power of the Dynasties and the other on the roles that various "decentralized" social and regional organizations play. However, the nature of the Chinese political state in those eras may actually be characterized as strategic complementary interpenetrations between the Dynasty and various private corporate bodies, although they were often disguised as the kin-related clan organizations. Below I refer to this equilibrium state of the quasi-political domain of the societal game succinctly as the *interpenetrative state*.

This is but one institutional form uniquely characteristic to Qing China, however, because the intermediate corporate bodies cannot cover the entire transactions in the peasant-based economy. Vast areas of economic and social transactions and private contracts were left outside the active involvement of the weak government even through their quasi-agent corporate bodies. A mechanism thus evolved for sustaining and enforcing contracts among individual agents, such as among peasant families, between peasants and indigenous brokers, as well as among merchants of various levels. It was provided by reciprocal trust relations strategically supported by mutual investments in individual social capital among contractual partners. Further, to make such reciprocal relationships trustworthy and self-enforcing, they needed to be monitored by third parties who themselves were part of the chain of contractual relationships. The strategic nature of trust relations that embeds private contracting within a specific network of people is the essence of what Chinese referred to as *guanxi* (literally, the relation or connection).[3] Thus the culture of private contracts was strengthened on the basis of *guanxi*. *Guanxi* may be considered as institutional complements to the sustenance of private corporate entities and market relations among the powerful and wealthy, while it served peasant families as an indispensable institutional substitute for the formalized rule of law (Herrman-Pillath 2009).

It is to be noted that the *guanxi* should not be confused with kinship. What kinship could do was to provide better information about agents' interlocutors within which contracts took place; it may also have provided an effective sanctioning mechanism for defectors. So it is not surprising even if contracts existed more often within the context of extended kinship, but the kinship did not guarantee that transactions would occur. On the other hand, the interpenetrative state was legitimized by the Confucian metaphor of inviolable father-son relations between the dynasty

[3] There is controversy among anthropological sinologists as to whether *guanxi* is emotion-based or strategy-oriented. However, these two possibilities do not need to be considered as mutually exclusive from a game-theoretic perspective. Suppose that agents in a particular domain of the societal game exchange social symbols, such as words, gestures, gifts, help and the like, in order to have impact on others' emotional payoffs (corresponding to ganqing in Chinese). If one does so with the expectation of reciprocity from others, then such actions may be regarded in the reduced form as investment in one's own individual social capital. As recent neuro-scientific research confirms, there are trade-offs between emotional pay-off and materialistic/hedonistic pay-off, as if "neuro-currency" (Montague and Berns 2002) is being circulated in the network of neurons within the individual brain (see Fehr and Camerer 2007; Izuma, Saito, and Sadato 2008). People may then refrain from free-riding on others' collective efforts or pursuing exclusive self-interests at the expense of others in economic exchanges, if they feel they will depreciate their own social capital by doing so. Thus social norm and trust relationships may evolve as an equilibrium outcomes of linked games between the domain of social-exchange and those of economic and other societal exchanges, embedding and regulating actions in the latter (see Aoki 2010: Chapter 3).

and intermediate private corporate bodies. It was also widely believed among less advantaged agents that any unfair violation of contractual relations or wrong doing by lower-level officials could ultimately be sanctioned by the benevolent judgment of the higher-level scholar-official committed to the moral values of Confucianism (e.g., Hung 2011). But beneath those linguistic representations, rhetoric, and popular belief, there laid the combination of deep stable states of societal games that were mutually strategic complements/substitutes. It was precisely through this structure that the Qing Dynasty of nomadic origin was able to unify the country with diversity in spite of its weak power basis at the grass roots level.

The stable rule of the Qing dynasty was jolted by the rural Taiping rebellion in the mid-19th century in which about twenty million people are said to have died. The rebellion that threatened the property rights order under the interpenetrative state was quelled by regional armies of militiamen organized and led by ex-scholar-officials based in the mid-Yangtze region. They became more influential players in the political game of the late Qing dynasty. This story reveals that the interpenetrative state was resilient, as the interests of regional powers were aligned with preserving the property rights order enforceable under the interpenetrative state. But it also became clear that the centralized power of the dynasty had become weakened vis-à-vis regional powers. This situation eventually led to half of century of turmoil in which the structure of the interpenetrative state was reshuffled.

3.2 Nested, All-Inclusive Coalitions and Membership-Based Norms in Tokugawa Japan

In contrast to the monolithic governance structure of the Qing dynasty, the *Baku-Han* regime of the Tokugawa era was divided into territories directly governed by the Shogunate (*Bakufu*) and the 280-odd domain governments (*Han)*. Each domain was provided with exclusive rights to collect a fixed amount of tax set in terms of quantity of rice from each village under its jurisdiction. Shogunate's ordinances with regards to farmland and rural households were formally applicable only to its own domain, although its area was far larger than other domains. The Shogunate was still entitled to formally sanction succession to the lordship of each domain, as well as terminate the rule of any domain in the case of serious offense to the political order such as the unauthorized use of violence. There were only a few minor cases in which the latter rule was actually applied, although, as we will see, the rule was overtly defied by samurai of powerful domains in the last decade of the *Baku-Han* regime. Thus, the nature of the *Baku-Han* regime in its heyday may be characterized as an all-inclusive coalition structure, strategically supported by the threat of exclusion in the event of deviance. This regime emerged as a collective response to the more than a century-long Warrior period (1493–1590) in which fierce competition for political hegemony was waged among rural-based powers in a small (relative to China) geographical arena. With the possibility of military combat thus effectively constrained, samurai who were settled in the castle town became de facto bureaucrats of the domain, ranked by the amount of stipend in terms of shares in the rice tax collected from the villages under their jurisdiction.

On the other hand, taxes on peasant families were fixed according to the size and grading of their landholding registered in the official record kept at the village office and their collections were contracted out to the village. The Shogunate and domains were in turn not to directly intervene in the internal affairs of the village (*mura*) under their jurisdiction, as long as the village's aggregate tax obligations were met. The member households of the village in the Tokugawa period as a collectivity thus became de facto the residual claimant after the fulfillment of the village contract vis-à-vis the Shogunate or the domain. This situation not only stimulated each household's incentive for increasing the productivity of its own land by intensifying family

labor inputs: the phenomenon artfully termed as “the Industrious Revolution” by Hayami (1983: Chapter 1). But it also induced all the member households to have potential common interests in building and sustaining farming infrastructure, such as irrigation networks for wet farming, the defense of crops from typhoon, as well as mutual help in farming activities. In mutually monitoring the fulfillment of individual tax obligations and controlling free-riding over collective enterprises, a strict social norm of compliance and conformity evolved among member households with the threat of social ostracism for deviants called *mura-hachibu* (literally meaning “80%” exclusion from collective actions except for cases of funeral and fire-fighting. See Aoki 2001: Chapter 2.1). This institutional arrangement was facilitated and effectuated by making the household the sustainable constituent unit of economic and political life in the village, and as already suggested, primogeniture evolved as the inheritance norm, although variation did exist (e.g., women sometimes headed households. See Hayami 1983).

The kind of norm thus evolved in the village may be characterized more generally as the *membership-based norm* of trust, compliance and conformity in that mutual obligations and trust were directed towards all member households of the village and only towards them. Members of each village were indifferent toward those of other villages in normal times, while villages were mutually engaged in fierce confrontation in times threatened by the shortage of water supply to rice paddies. A similar membership-based norm of group loyalty was imposed on samurai-bureaucrats of the domain with a metaphor of the domain as *ie* (a house). A norm of this type also prevailed in south-east China where lineage organizations regulated village affairs. But the membership-based norm markedly differs from *guanxi* that can be built and sustained only among those who mutually and continually invest in reputation capital. *Guanxi* is selective and constitutive rather than membership-based.

The *Baku-han* regime and its subordinated villages may then be considered as constituting the nested structure of all-inclusive coalitions. A proposition of the potential game theory indicates that if the members of such a coalition expect a fair distribution of cooperative outcome (technically as represented by the Shapley value distribution), individually motivated members can act as if they have a common objective (Monderer and Shapley 1996; Aoki 2012b). To an extent that such is the case, the Tokugawa *Baku-han* regime may be considered as having represented a coherent institutional arrangement, leading to two hundred years of the Pax Tokugawa. But if the premise becomes problematic, it becomes hard to define a collective interest (technically, potential game ceases to exist). As income differentiation within the village widened, as lower-ranked samurai became impoverished by the deflation of rice prices, and as Commodore Perry’s black ships jolted the Shogunate’s primacy in foreign policy making, the premise became problematic.

3.3 The Governance Structure of the Yi-Dynasty and Autonomous Social Compacts

The *yangban* status in the Yi Dynasty was originally offered to those that had passed the imperial examination system similar to Qing China, but there was one important difference in that it was hereditary over three generations of official matrilineal lines. Except for incumbent government officials serving in the capital, ex-*yangban* officials and their offspring resided in rural areas, formed their own residential clusters, and owned farmland exempted from taxes and military and other services except for the military *yangban* (the *yangban* literally means “two branches”: civil and martial office holders). These rural *yangban* exercised influence on local administration, owned *nobi*—also exempted from military services and punishable at their owners’ own discretion—and extracted livelihoods locally. Thus there appeared elements of divided power in the political state of the Yi Dynasty even in the 17th century. As already

suggested, however, from that time on there was a gradual erosion of political power of the rural *yangban* as the economy transitioned to a peasant-based economy. At the same time, offspring of *yangban*'s lower matrilineal relations, local administrators, well-to-do commoners, and even ex-*nobi* started to gain the status of *yangban* through political demands, donations of crops to the central government, purchasing counterfeited genealogies, and so on (Kishimoto and Miyajima 1998). Through these mechanisms, rural *yangban* was transformed into social status from a formal position, embodying quasi-kinship social connections somewhat similar to, but less flexible and closed, than *guanxi* in the contemporary China.

As the differences between the *yangban* and the commoner became blurred, peasants from varied backgrounds moved to form their own cooperative associations or community compacts called village *kye* for various specific purposes, such as pooling capital and lending it to members in rotation, establishing marriage and burial funds, co-owning livestock, helping each other with the changing of roof hatches, and so on. Among them, one of the most important was the irrigation association to construct and run small-scale irrigation systems called *pok* (Miyajima 1982). But norms regulating these associations or compacts appeared to be more specific (than *guanxi*) in their objectives and less inclusive (than the Japanese membership-based norm). In Japan, the coherence of the domain and the village was grounded on the sustainability of each member household, inheriting the trifold of family name, family property (entitlement to stipend or cultivating slots) and family occupation. To sustain the system, it even became the custom for families lacking a son to adopt a non-biological male child, or allow a biological daughter to become heiress. In contrast, the flexibility and openness of Korean social compacts, as well as the blurring of social status differentiation and increasing social mobility among rural families, might have generated an endogenous potential for much more flexible familial dynamics if opportunities arose.

In the 18th century the Yi-dynasty played an active role in enhancing agricultural productivity. The issuance of a series of anti-*nobi* ordinance was already mentioned. It also promoted the construction of reservoirs at the foot of mountain valleys that required large-scale labor mobilization. The dynasty also provided a network of granaries for redistribution and reserves for loans in time of famine. In that century, the economy became relatively stable and the population grew side by side with agricultural productivity increase. However, this relative prosperity gave rise to massive exploitation of forests, as land was cleared for cultivation and trees were cut for timber and firewood to satisfy rising demands for fuel and construction (Lee 2011). This lead to serious ecological damage and a dramatic fall in agricultural productivity in the 19th century (e.g., Rhee 2004; Jun, Lewis, and Kang 2008). The productivity decline weakened the fiscal and governing capacity of the dynasty. Internal fights and palace intrigues within and between the dynasty and powerful central *yangban* families, intervened by the Japanese, Chinese, and Russians, failed to consolidate potentials for an exit from the M-phase. The autonomous self-governing *kye* may be thought of as emerging as a substitute for the destabilizing political state. An acute English scholar-traveler, Isabella Bird Bishop, who visited Korea at the chaotic time of the Sino-Japanese War (1894–95) noted, after visiting the Korean immigrant community in Siberia, that the settlers there were much more productive, motivated, and open as they were free from the rent-seeking of the dynasty's magistrates, runners, and the greed of *yangban* (Bird 1988).

3.4 Institutional Reasons for the Lack of Endogenous Driving Force for the Industrial Revolution

I have described the basic features of state-norm combinations, either as complement or substitute, for each peasant-based economy in East Asia. How did these features condition, facilitate and characterize paths to industrialization? In the unified approach of economic growth, the path from the M-phase to the modern growth regime is regarded as intermediated by the post-Malthusian phase. As the state of new ideas passed a threshold in the M-phase, the industrial revolution set in with physical and human resources becoming re-allocated to urban industries. There was also an increase in the working-age population brought about by a decline in infant mortality. This increase was absorbed by urban industries. The hike in GDP per capita growth occasioned by this demographic shift is referred to as the demographic dividend or gift. A classical study of modern economic growth by Simon Kuznets (1957) empirically characterized the reduction in the agricultural employment-share across economies and over time as "quantitative aspects of the economic growth".

The exit from the M-phase economy requires the transfer of agricultural surplus into industrial capital accumulation that creates non-agricultural employment. The nature of the institutional arrangements in the peasant-based economies of Qing China, Tokugawa Japan, and Yi Korea alike lacked an endogenous driving force in that direction, however. As already noted, the prevalence of labor-using technology by peasant farmers made available non-farming labor time for household handcrafting and manufacturing. However, because of the constraint of part-time allocation, individual family activities tended to be fragmented in China, say between spinning and weaving in the case of cotton production. These different activities were intermediated by specialized local brokers. On the top of fragmented local markets, wealthy merchants networked nationwide markets for final products protected under the stable political rules of the Qing Dynasty. The governments that relied on land taxes for three-quarters of their fiscal revenues did not attempt to repress such market development (e.g., Rosenthal and Wong 2011; Ma 2012). Although there were cases of the putting-out system in the late Qing, peasant families largely supplied their own equipment, purchased the cotton or yarn, and sold their products (e.g., Elvin 1972; Eastman 1988). In late Tokugawa Japan, cotton growing, spinning, and weaving were mostly performed within a household, or weaving became specialized in relatively advanced areas. The putting-out system did not prevail here either, however, until the 1880s when the introduction of imported cotton yarn gave impetus in that direction (Tanimoto 1998). The development of domestic markets rooted in the peasant-based economy did not thus generate endogenous incentives for the experiment and introduction of labor-saving technology. Different from England before the dawn of Industrial Revolution (Allen 2009), the use of flexible domestic labor supply was cheaper than long-term investment in mechanized production methods either by merchants or peasant families. Economic logic alone can thus explain the absence of autonomous initiation of the Industrial Revolution in East Asia.

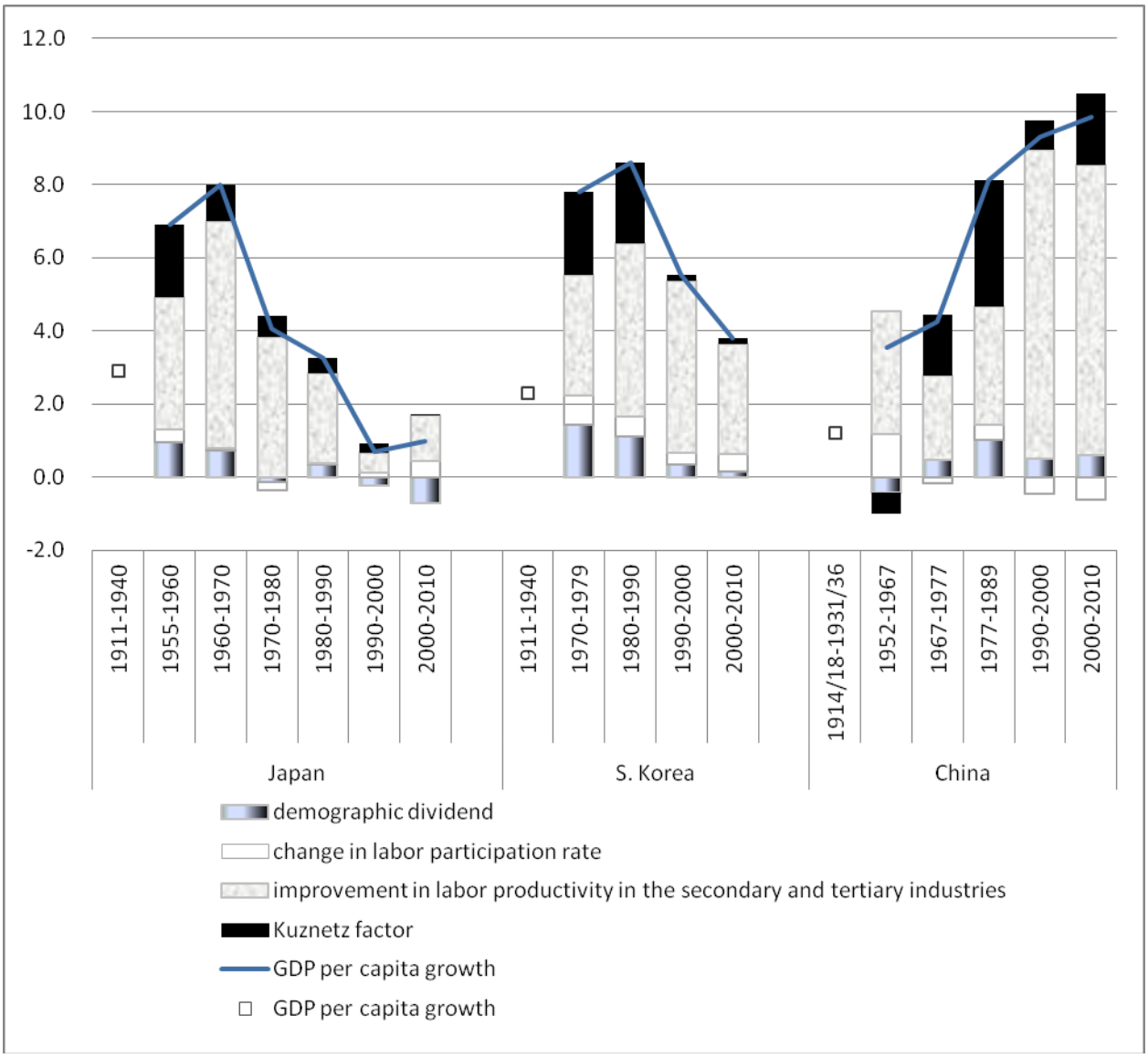
There were also institutional reasons for it. In Qing China, when merchants became wealthy, they invested in human capital to achieve the status and prestige of scholar-officials by their kinship members and spent on conspicuous and cultural consumption. They invested in money-yielding farmland and relied on rent-collection agent organizations rather than being entrepreneurial themselves. In Japan, the nature of the state as the nested structure of all-inclusive coalitions, socially segregated and ranked samurai-bureaucrats from farmers, artisans, and merchants in that order. Although merchants amassed wealth by mediating the monetization of taxed rice in cities and associated financial services to domains, the rigid status separation prevented anyone from combining talents from different socio-political ranks to effect industrial innovation. Redundant laborers from rural areas were supplied as cheap service labor

in cities, and there was no incentive for exploration into labor-saving technology there either. Thus, when Western technology and products of the factory system became exogenously known as a potential threat to the independence of the state and the integrity of society in East Asia, the transformation of the political state of the peasant-based economy was called for. But, how and when?

4. TRANSITIONS TO THE KUZNETS PHASE IN EAST ASIA

Figure I illustrates a somewhat unique characteristic of transition from the M-phase to industrialization in East Asia. The first bar from the left for each economy in the illustration provides an estimate of the growth rate of real GDP per capita in the period approximately between the demise of the respective dynasty and the beginning of the Asia-Pacific War. The rates are 2.90% over the period between 1905–1940 for Japan (calculated on the basis of a GDP estimate by Okawa and Rosovsky 1973, Table 2A); 2.3% over the period between 1911–1940 for Korea (Cha and Kim 2012); and 1. 2%–1.3% over the period between 1914/18–1931/36 for China (Rawski 1989, Table 6.11). Although an often-cited estimate by Maddison (2003) attributes no real per capita growth for China for the same period, other recent estimates cite positive growth rates (e.g., Brandt 1989; Meyer 1991). Therefore we may (arguably) conclude that the East Asian economies exited from the M-phase of economic development after the demise of respective dynasties. However, the reduction of the agricultural employment share was not necessarily immediate.

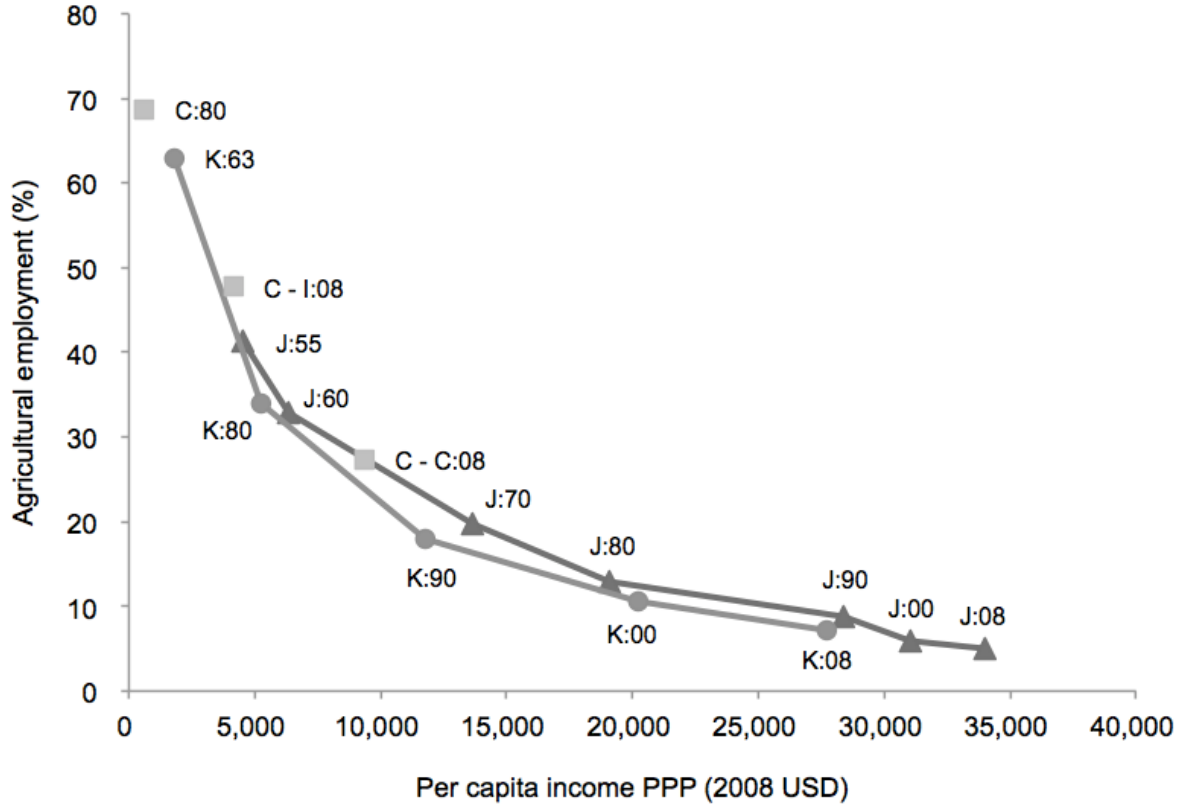
Figure 1: The Growth Rate of Real GDP per Capita and its Decomposition by Sources: Japan, South Korea, and China



Note: For the method of decomposition of the rate of real GDP growth per capita into sources, see Aoki (2012a): note 3.

Sources: Japan, Republic of Korea, and PRC Official Statistical yearbooks; Ohkawa and Rosovsky 1973, Cha and Kim 2012, Rawski 1989.

Figure 2: The Kuznetz Process: Japan, Rep. of Korea, Coastal and Inland PRC



Sources: Real GDP, Agricultural Employment Share: Country Official Data;
PPP converter to USD: IMF (2008)

The agricultural employment share in the People's Republic of China (PRC) remained as high as 83.5% in 1952 and 68.7% in 1980. Korea is somewhat unique in that there was rather high labor mobility in the colonial period. Kwon (1977) estimated that by the year 1940 as many as 10.7% of ethnic Koreans were in Japan and Manchuria. A large proportion of them repatriated after the Second World War and temporarily settled in rural areas. Thus the share of agricultural employment was also as high as 62.9% in 1963 for the Republic of Korea. Japan steadily reduced the rate from 83% in 1877 and 1882 to 48% in 1950. However, the number of agricultural households remained almost constant between 1887 and 1940 at the level of fourteen millions. These figures indicate the resilience of the peasant-based economies in East Asia during the said periods.

Indeed, the typical Kuznets process, that is, per capita income growth through the reduction of the share of agricultural employment, started to operate forcefully in these economies only in the second half of the last century. How it has been working is exhibited in Figure II, which displays the dynamic paths of combination between the share of agricultural employment (the vertical axis) and per capita real GDP (measured in terms of 2008 US$) for Japan (1955–2008), the Republic of Korea (1963–1980), and the PRC (1980–2008). Using provincial-level data, the PRC's coordinates for the year 2008 were separately displayed for coastal regions (C-C: 08)

and inland regions (C-I: 08).[4] This figure shows a good example of the Kuznets process. In order to see the changing impact of the Kuznets process over time, go back to Figure I. Bars except the first one for each county in Figure I exhibit the decomposition of per capita income growth in the post Second World War period into the four sources: (1) demographic dividend; (2) change in the labor participation rate among the working-aged (aged 15–65) population (affected by the average length of schooling, unemployment rate, women's labor participation, etc.); (3) the reduction of agricultural employment share; and (4) per worker productivity increase in the non-agricultural sector (for the accounting method used for the break-down, see Aoki 2012a, note 3).

Let us refer to the combined factors of (1) and (3) as the Kuznets factor, or simply as the K-factor. A glance at figure I indicates that the three East Asian economies share a strikingly common feature in experiencing periods of high growth rates of real GDP per capita largely contributed to by this K-factor: the period 1950–1970 for Japan; 1970–1990 for the Republic of Korea; and 1977–1989 (or arguably 1977–2010) for the PRC. Thus, the K-factor started working rather late (or slowly in the beginning) in East Asia, and when it started to work in earnest, it worked in a compressed manner (compare with data for the West in Kuznets 1957). From the perspective of the unified approach, then, the East Asian miracles may not have been miracles, but involved an element of catching up. However, by saying so I do not mean to imply that associated institutional evolution also tended to converge to the Western norm. How then did the institutional legacies of the M-phase impact the unique features of economic transition to the industrialized economy in East Asia?

4.1 Japan: Realignments of the Coalitional State and the Resilience of Membership-based Norm

Japan was relatively fast in the transition to the K-phase and one of the primary reasons may be attributable to the quasi-decentralized nature of the *Baku-han* regime. Initial responses to foreign threats in the mid-19th century differed amongst the Shogunate and domains. Various reform agendas were initially proposed and contested, including issues over industrial development versus military build-up, open trade policy versus protectionism, the establishment of a representative parliament to control the Shogunate versus the return of the commanding power to the emperor, and so on. However, an anti-Shogunate coalition quickly took shape among several domains, especially those in which discontented lower ranked samurai bureaucrats became reform-minded. Their agenda-setting in response to the crisis was flexibly adapted and evolved through negotiation, competition for leadership, and learning by doing among the activists across those domains and beyond, even including some court nobles and reform-minded administrators in the Shogunate. The number of samurai who played an active role estimated to be about 1% of the samurai class (Banno and Ohno 2010). This movement culminated in the forceful removal of the Shogunate as the leading player of the coalition structure in 1867, the establishment of a unified central government legitimized as the return of sovereignty to the Emperor, and subsequently in the abolition of the domains and their replacement by prefectural governments in 1871. Samurai status was abolished and their stipend was replaced by the provision of national bonds. The relatively bloodless abolition of the *Baku-han* regime in a reasonably short period of time was possible because of a realignment of the coalition structure. This pragmatic transformation of the governance structure was responsible for the elite-led, bureaucratic nature of succeeding governments that would generate a coalitional structure of a new type (I refer to this below). Dissatisfied lower class ex-

[4] However, regional break-downs are not available because of the absence of official provincial data for 1980. Thus C:80 refers to the PRC as a whole.

samurai excluded from the emergent power structure revolted in 1877 in south-west Japan, resulting in a civil war entailing the loss of 12,000 lives. One of major driving forces of Japan's imperial aggression to the Korean Peninsula was to give an outlet for repressed samurai sentiments (Banno 2012).

The central government decreed that the ownership of farmland be registered at the national registry, and any dispute over property rights and breaches of contracts be settled by the courts according to law. In lieu of the village contracting system, farmland taxation was fixed in monetary terms and imposed on individual landowners by the central government. In spite of the substantive transformation of land ownership rules, norms regulating socio-economic relations in the village proved to be resilient. Farmers of small landholdings were subjected to a fixed rate of land tax and suffered from deflationary pressures in the early 1880s, and many were forced into tenancy. The proportion of tenancy lands increased from 20–30% in the 1880s to more than 40% in the 1890s. However, as already noted, the number in agricultural employment remained almost the same in the transitional period, reflecting the continued practice of primogeniture and the pressure of the social norm of membership duties for tax and rent payments. Hayashi and Prescott (1988) estimate that without this institutional barrier, Japan's pre-war GNP per worker would have been at least half that of the United States, not around a third as per the data. However, it is not immediately clear how the removal of such institutional constraints could have been possible in practice.[5] Thus, a clear transition to the K-phase, that is, the substantial reduction of agricultural employment, had to wait for the security of landownership by the farming household realized by the post-Second World War land reform. The new generation of farm households then started to leave the rural landscape behind and joined corporate organizations after their schooling. As is well known, the membership-based norm was then transplanted into the new corporate work environment (Aoki 1988).

4.2 Korea: Development under the Colonial State

Japanese imperial power colonized Korea in 1910 by taking advantage of the weakened rule of the Yi Dynasty. As already mentioned, Cha and Kim (2012) estimate aggregate output growth from 1911–40 was 3.70% per year, which together with the population growth of 1.33% implies per capita output growth of 2.37% for the three decades, a figure slightly higher than the 2.08% derived from Maddison's estimates of GDP during this period. Cha (2000) attributes a fundamental source of this per capita income growth to economic "openness" including free labor markets, free trade, and foreign direct investments. He did not find statistical evidence of government direct interference in markets, while Eckert (1990) regards the construction of infrastructure such as public primary schools, public health systems, railways, hydroelectric and irrigation projects as contributing factors. Miyajima (1980) examined the productivity effects of the irrigation system development promoted by the colonial government. He found that the most effective system developed in the area where the traditional irrigation associations had been active since the late Yi dynasty, whereas the irrigation associations founded according to the legal stipulations of the colonial government and including new Japanese landlords had only a limited success. This suggests that it is not just government policy that could be effective in agrarian development, but its complementarity with potentials of endogenous development in the rural area.

After the liberation from Japan's colonial rule, however, a large proportion of physical infrastructure built in the colonial period was left in the territory of North Korea or damaged in

[5] On the other hand, Gatti et al. (2012) argue that a major cause of the Great Depression in the United States in 1929–33 was not financial, but the deterrence of the reduction of agricultural employment that had been made redundant by tremendous technological progress in agriculture in the mid-1920s.

the Korean War. Capital investment by the Japanese became worthless or withdrawn. According to Maddison (2003), the level of real GDP in the Republic of Korea dramatically fell to 79% of the level of 1911 at the end of the colonial state, and it was able to surpass the 1911 level only in 1952–53. However, the relatively high mobility of the youth population in the colonial period might have sown the seeds of entrepreneurship and human capital investment that had not been possible during the peasant-based economy. An earnest self-drive for industrialization under the developmental state began in the mid-60s and continued up to the late 1980s, accelerating the K-process. For a game-theoretic analysis of the nature of the developmental state Korean-style, see Aoki 2001: 169–174.

4.3 China: Transformations of the Interpenetrative State Structure

After the collapse of the Qing dynasty in 1912, private factories started to spring up in urban areas like Shanghai with the advanced rural Yangtze delta as its rural hinterland. Rawski (1989) estimates that gross industrial output grew by an average of 8.1% during the years between 1912 and 1936. Despite the importance of foreign investment in Shanghai and northeastern provinces (Manchuria), Chinese-owned companies produced a quarter of China's 1933 factory output. The GDP share of modern industry still remained small during the four decades of the republican and nationalist periods, as the initial base of growth was very low. According to Perkins' estimate, the GDP share of modern industrial output remained at 7.5% in 1933, while pre-modern manufacturing's share was 12.4% (Perkins 1975). Rawski argues, however, that the development of the small modern sector exercised substantial spillover effects on the much larger traditional sector, including native banks, handicraft textiles, traditional water transport, and particularly agriculture. Brandt (1989) also provides persuasive data showing the increasing integration and productivity of the rural economy in the lower Yangzi region. However, this potential for sustained growth was not fully exploited in the 1930s because of the institutional constraints of the degenerating interpenetrative state.

Under Nationalist rule, military and political groups, as well as imperial powers, competed to exercise control over commercial and industrial activities across the country. By 1947, nationalist government-controlled plants produced 72.6% of cotton cloth (Feuerwerker 1983). But Nationalist government control did not extend to rural areas in such a way as to mobilize surplus resources from there for industrial accumulation. The Nationalist government yielded the land tax to provincial governments from the time of its inception because of their weak position in the degenerating interpenetrative state. The provincial governments then subcontracted land tax collection to county chiefs whose positions were occupied by ex-gentry or new rural elites who had *guanxi* with military elites in the provincial governments. After fulfilling negotiated contractual obligations to the provincial governments, the county chiefs were able to claim the residue of the collected taxes, which motivated them to squeeze the share of landowners' rents including those for the small landholders by large expenditures on police forces (e.g., Huang 1984)

Needless to say, it was the Communist revolution that finally restored the unified central government, but with an extreme form of the interpenetrative structure. The formation of People's Communes in the late 1950s created direct economic relationships between the Communist government and 120 million rural households with no private intermediate corporate bodies. The peasant families themselves were forcibly incorporated into the People's Communes and placed under the direct control of the government at the expense of the traditional culture of private contracting. It became illegal for them to move to cities on their own initiative. The Communist government thus attempted to industrialize without relying on the K-factor. The peasants were mobilized through the Great Leap Forward campaign (1958–60) for an adventurous attempt to industrialize by their own physical efforts, which resulted in the tragic

loss of thirty to fifty million human lives (Dikötter 2011). The government then imposed direct agricultural taxation and state-monopoly procurements on the Communes, and invested forced rural surpluses in state-owned enterprises in the form of direct subsidies and price controls. Under this forceful industrial accumulation in the 1970s all-inclusive collective actions were made possible such as the adoption of new crop varieties and chemical fertilizers, investment in water control, tractor plowing and public health campaigns, which were not possible during the previous transitional phase. Indeed, between 1970 and 1977, per worker output in the agricultural sector increased by a compounded annual rate of 2.32%, in comparison to a stagnant 0.21% in the industrial and service sectors.

Thus a preparatory stage for the transition to the K-phase was set. The actual onset of the phase was triggered not by a conscious political design, but rather by the spontaneous restoration of private contracting at the village level: that is, by contracting out the commune's tax obligations to member households through the subletting of village-owned plots (Wu 2004). An increase in agricultural surplus was thus transformed into industrial capital through the autonomous establishment of township and village enterprises (TVEs) in the early 1980s. The local initiatives based on inclusive *gunaxi* within the village and the return to the practice of private contracting complemented each other for the TVEs to emerge, ushering in the K-phase *à la* China. The self-managed TVEs by county and village governments in the 1980s functioned as an effective safeguard against possible predatory behavior by higher governments in collusion with inefficient state-owned enterprises (Che and Qian 1998).

5. CONCLUSIONS AND FURTHER PROSPECTS

I began this essay with a characterization of the Qing Dynasty of China, Tokugawa Japan, and the Yi Dynasty of Korea as peasant-based economies. Then, following the endogenous view of institutions I developed elsewhere, I tried to extract basic institutional features that co-evolved and sustained themselves in the respective economies. Underlying linguistic expressions such as the Confucian moral principles of filial piety, clans and *guanxi,* etc., was the deep structure of institutions in Qing China characterized by the interpenetrative state and the culture of private contracting—features that complemented or substituted for each other, depending on the type of social-exchange. In the same vein, I have described the deep institutional structure of Japan in the Tokugawa era as the nested structure of all-inclusive coalitions, with each of its components cohering by the sharing of the norms of membership-based trust and compliance. The institutional arrangement of the Yi Dynasty of Korea was characterized as the emergent substitution of flexible, autonomous social compacts at the grassroots level for the divided power structure between the Dynasty and the rural *yangban*.

The peasant economies were sustained on comparatively cheaper labor costs, which together with the accompanying institutional arrangements did not endogenously generate autonomous experimentation and the introduction of labor-saving technology. This was in contrast to the position in England at the time, where rising labor costs in comparison to energy costs served as the impetus for exploration into labor-saving technology, eventually leading to the Industrial Revolution (Allen 2009). I thus submit that the nature of the peasant-based economy and that of associated institutional arrangements were the major causes of the so-called "Great Divergence" (Pomerentz 2000) on the side of East Asia. These factors also deterred the spontaneous and autonomous reduction of agricultural employment share characterized as the quantitative feature of modern economic growth by Kuznets. The process (the K-phase) could not be induced by enlightened government policy, but must have been preceded/accompanied by the transformation of political states in a path-dependent manner. I discussed how the nature

of the respective political states in the Malthusian-phase (the M-phase) conditioned this transition in each economy: its timing, duration, and institutional forms.

As Figures I and II clearly suggest, the K-phase came to an end by the late 1960s in Japan and by the late 1980s in the Republic of Korea. It is arguably about to end in the PRC or has ended in her advanced coastal regions, although the Kuznets process will keep going in inland regions for the time needed for the generational change of rural families already underway.[6] The succeeding phase of the development may be characterized as per capita income growth primarily driven by improvements in per worker output in the secondary and tertiary industries based on human capital accumulation and TFP growth in the context of the corporate economy—the phase that may be referred to as the C-phase. In association with this phase, some elements of path-dependent transformation of institutions are bound to occur. In the heyday of the C-phase in Japan during the 1970s and 80s, the membership-based norm was solidly established among life-time employees within business corporations and corporate groupings. As a complement to this, the nested structure of the coalitional state also evolved into the form that I once referred to as bureau pluralism (Aoki 1988).[7] In Korea, agile corporate strategy, mindful of the relatively unconstrained human mobility in preceding periods, has made the quasi-familial *chaebol* groups internationally competitive.

During the last thirty years of domestic migration in the PRC amounting to some 300 million people, new substantive forms of the interpenetrative state structure have been shaping themselves. One is collusion between government ministries and state-majority-owned corporations possessing strong market power: the phenomena that reformist economists and liberal media in the PRC referred to as *Quangui* Capitalism.[8] The other is the *de facto* penetration of private interests into some aspects of provincial and county government. In the past two decades there has been a policy movement towards the centralization of tax collection in order to control the diffusive tendency of regional governments inherent in the interpenetrative state structure in general. However, the provision of welfare, education and health services are the constitutional responsibilities of provincial governments. Competition among provincial governments in contribution to GDP growth provides them with an additional fiscal burden. Thus, provincial governments come to rely not only on negotiable subsidies from central governments but also on off-balance-sheet revenues in the form of development surpluses. This is net revenue that provincial and county governments can derive by acting as monopsonic-cum-monopolistic intermediaries transforming collectively owned farmland for privately run commercial and residential uses. The prevalence of this practice not only accelerates inflation in

[6] The end of the K-phase appears to be identical with what some Chinese scholars (e.g., Cai and Wang 2012) refer to as the Lewisian turning point, following the growth theory of unlimited labor supply due to Lewis (1954). However, in my view, the latter characterization is somewhat misleading in a broader perspective. As Figures I and II together show, high per capita income growth can be generated by the reduction of agricultural employment share up to a certain threshold point (say, about 20% as in the case of Japan and the Republic of Korea). It is certainly true that up to that point industrial wages offered may be rising only at a moderate rate. However, it does not necessarily mean that it is kept at a subsistence level that rural agents accept without any economic calculation. The peasant family is a rational agent which divides its time between various activities, even in the M-phase, and remains so when employment opportunities are open to them in the K-phase. Thus, even in this phase, wages are determined by market forces, unless there is movement out of agriculture controlled by political forces, as during the Great Leap Forward campaign. For an earlier neoclassical analysis of the dual market, as opposed to the Lewisian view, see Jorgenson (1966).

[7] Aoki (2012a) and Aoki and Rothwell (2013) discuss how the legacies of the membership-based norm and the coalitional structure of the state are still alive in the context of current corporate and regulatory frameworks in Japan and how they might have been responsible for some aspects of the Fukushima nuclear disaster in March 2011.

[8] Quangui Capitalism is conventionally translated as “crony capitalism”. In my view, this does not capture the nuance of the Chinese expression. Literally, it connotes the capitalism of, by, and for the powerful and noble/rich.

real estate pricing, but also creates opportunities for the morally hazardous behavior of some corrupt local government officials, while hurting disadvantaged rural residents lacking secure property rights in farmland.

The fiscal problem just mentioned in the PRC may be considered as having an aspect of the common challenge that all East Asian economies are now facing. That is, aging of their populations. It is not clear if institutional arrangements that have adapted to the patterns of economic-demographic variables in the C-phase can still meet this new challenge. If not, institutional adaptations will become inevitable for each East Asian economy in their own respective path-dependent manner (Aoki 2012). Although it is beyond the scope of this essay, it is hoped that this essay has provided food for thought on this issue.

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