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Abstract

Japanese economy was losing its stability in the interwar period. Faced with the challenge, Moritaro Yamada gave an understanding that the stability of Japanese political economy before the First World War had been maintained by paternalistic institutions both of agricultural and industrial sectors, not based on thoroughly modern market mechanism. This then influential observation can still be supported by the classical dual economy model. However, as a scholar in the period of institutional change, Yamada failed to rightly predict the direction of change. While Yamada expected the change should lead to impersonal market mechanism, the real history showed people rather built a planned economy during the war and recovered stability. Yamada’s mistake was mainly in that he underestimated the significance of risk sharing in the paternalist organizations. At the “turning point” where labor changed into scarce resource from surplus resource, two vectors with opposite directions could exist. Riskier opportunities for higher wages would encourage people to accept market mechanism based on impersonal exchange. Dissolution of risk sharing in paternalistic organizations would make people call for the state taking on the role as a large welfare state. In Japan, especially in the middle of the Great Depression, the latter factor became dominant.

Key words: Peasant economy, tenancy contract, risk sharing, institutional change.

JEL: N35, N55.

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Introduction

Japan began to be industrialized in the 1880s and had rapidly grown under the 19th-century-scheme of market economy. The economic institutions with the scheme appeared to be, at least as long as focussing on the civil modern industrial sector, classical capitalist institutions based on “freedom of business” consisting of “protection of property right” and “freedom of contract” both of which were guaranteed by the 27th clause of the Constitution of the Empire of Japan. This classical capitalist economy managed to keep stability until the First World War.

The stability of Japanese economy were, however, challenged in the 1920s, as shown in the series of chronic financial crises. The more serious the economic difficulty went, the more people in both of politics and academism felt some “reform” needed. The discourse in politics centralized in the gold standard. Japan left the international gold standard during the First World War and never backed before 1930. Under the floating exchange system, Japan in the 1920s had indulged in inflationary monetary policy. The Constitutional Democratic Party (Rikken Minsei To) asserted Japan needed to take deflationary policy, to conduct the structural reform to improve productivity of modern industries, and to come back the gold standard. The counterpart under the two party system, the Constitutional Party (Rikken Seiyu Kai), by contrast, decisively maneuvered inflationary financial policy and expansionary fiscal policy to manage the financial system under crises.

The hot issue in academic society, on the other hand, was about where Japan had come to in its historical context. The dialogue was called “the debate on the Japanese capitalism.” Background of the dialogue and the message from one side of the “debate” can be summarized as follows:

The critical factor that kept Japanese economy stable before the First World War was in fact not the civil private industrial sector. Stable growth of the traditional sector dominated by agriculture, constant and unlimited supply of labor from the agricultural sector to the industrial sector, and the frame of government and society that politically integrated both sectors were. After all, the tenancy contracts that had stabilized agricultural sector were not really liberal relationships based on modern property rights. They were rather authoritarian and paternalistic transactions, the tradition of rural society rooted in the Tokugawa period. Furthermore, workers supplied from the traditional sector to the modern sector were organized not only by modern employment contracts also by indirect employment where mafia-like intermediary bodies governed personally human relations. This stable coordination, however, turned unsettled after the First World War. The sericulture, cocoon cropping, the driving force of agricultural sector, was seriously damaged by the Great Depression, which forced the paternalist order of rural society to diminish, and, in addition, the structural reform in the interwar period had thoroughly dissolved indirect employment that allowed intermediary bosses to take some return. Workers disconnected from paternalistic landlords and bosses, first in Japanese history, were being released to the labor market literally as individuals. This labor market integration was leading to the nationwide modern market. In other words, a stable but fake market economy was finally approaching to the perfectly competitive market economy...

Such an observation was suggested by Marxian economists and jurists who contributed to *Lecture Series in History of Japanese Capitalism* published by Iwanami Shoten, and the essential part of their view was presented in *Analysis on Japanese Capitalism* (Yamada (1934)) by Moritaro Yamada, the leading Marxian economist, and *The Frame of Japanese Capitalist Society* (Hirano (1934)) by Yoshitaro Hirano, the leading Marxian jurist. The “Lecture Series” caused a hot debate on validity of their understanding, especially on whether tenancy contracts had been, as Yamada and Hirano insisted, authoritarian and paternalist “semi feudalist” relations even after the Meiji Restoration in the 1860-70s, or had already been reformed by the Meiji Restoration into modern tenancy based on modern property rights and disciplined by market mechanism. This was a big issue to Marxian scholars partly because it could affect their revolution strategy. If understanding by the “Lecture Series” school was correct and Japan had not yet reached at the “modern capitalist stage,” the next step would be to establish a genuine capitalist society, and, otherwise, the socialist revolution. But the main concern of this paper is not about their vision for the revolution,¹ rather the implication of Yamada’s view in terms of institutional economics.

From the 1990s to the 2000s, Japan experienced the latest and the most drastic stage of an institutional change from a state-coordinated system, which was had been formed from the 1930s to the 1950s, into a market-based system.² The state-coordinated system consisted of complimentary institutional factors, such as indirect financing stably guided by the the government and stable internal labor markets of manufacturing firms coordinated by the government. Exactly due to the nature of institutional complementarity, the reform need to be “structural.” On the other hand, the “structural reform” called for exactly because of economic difficulty, which resulted in another hot debate on whether to take inflationary policy.

This familiar idea of “structural reform” in Japanese context dates back to the period of the “debate.” It was in the “debate on Japanese capitalism” when Japanese found an idea of “crisis” in a economic “structure” consisting of complementary institutions. At that time, the key complementarity existed between agricultural sector and industrial sector, between peasant economy and industrial economy.

Clearly Japan was not the only country struggling for survival, faced with the melting down “laissez-faire” market mechanism in the 1930s. American, European, and Japanese economies after the Second World War had been explicitly diversified until the period of structural reform and globalization since the 1980s. However, at least on the surface governed by statute laws, those economies had appeared to be much more conformable to each other till the 1920s, based on the uniform modern market mechanism governed by the standardized modern judicial system. Confronted with the collapse of stable modern market economy in the 1930s, each nation began to make effort to manage the chaotic situation and to re-build economic systems. In each effort, each nation was forced to face up to the real structure where the apparently modern stable market had been supported by complementary domestic and informal institutions. This struggle rendered economic institutions further diversified, depending on

¹About the debate in detail, see Nagaoka (1984).

²Hoshi and Kashyap (2001), pp. 269-304. Toya (2006).

their domestic institutions. Then the “Japanese economic institutions,” which were apparently different from those in the US and Europe, were newly formed during the struggle.³

Yasuba(1968, 1975, 1980) took the lead of reconsidering Yamada (1934) and re-settling Yamada’s model in the context of neoclassical economic theory. Remarkable development of game theory and contract theory since the 1980s has brought powerful instruments to analyze risk sharing and incentives, which are obviously critical to understand peasant economy under tenancy relations, hence it enables us to advance Yasuba’s lead even further.

The Section I outlines Yamada’s model and Yasuba’s interpretation of it. The Section II focuses on sharing of risk and provision of incentives, which Yasuba’s works lack. The Section III deals with Yamada’s prediction about the institutional change in Yamada (1934).

I. “Two-story arches” of patriarchal peasantry and the Empire

A. Unlimited labor supply under the “Semi-serfdom”

Static analysis of economic institutions in Yamada (1934) pointed out the equilibrium supported both by poverty in the agricultural sector and by low wages in the industrial sector. Yamada (1934) thought the very labor supply from the agricultural sector to the industrial sector kept wages at low level, hence labor intensive growth under traditional technology, without innovation that could realize more capital intensive growth.⁴

This kind of observation was followed by the dual economy model well known as the Lewis model⁵. Following notations in Yasuba (1975), consider an economy where labor is uniform, and production functions in both agricultural and industrial sectors are marginally decreasing in labor, as presented on the dimension with the horizontal Labor L axis and the vertical wage w axis:⁶

L_e : endowment of labor.

$Y_a = F_a(\cdot, L)$: production function in the agricultural sector.

$Y_i = F_i(\cdot, L)$: production function in the industrial sector.

$\frac{\partial F_a}{\partial L} \equiv mp_a(L)$: marginal productivity in the agricultural sector where $\frac{\partial mp_a(L)}{\partial L} < 0$.

$L_a = (mp_a)^{-1}$: labor demand function in the agricultural sector.

³Okazaki and Okuno-Fujiwara, eds (1999).

⁴Yamada (1977), pp. 33, 46, 88-91, 165, 197-201, 219. His point is in that “exactly because the vast supply of labor from semi-serf hood peasant economy can be utilized with relentless intensity, innovation of technology has rather been prevented”(Yamada (1977), p. 165), economic growth with labor intensive technology is sustained.

⁵Lewis (1954).

⁶The standard dual economy model introduces one-good version of of Edgeworth Box Diagram with two agents (agricultural and industrial sectors) trading one good (labor) in order to specify labor allocation between the two sectors. This specification is, however, not really relevant here, so that we skip it.

$\frac{\partial F_i}{\partial L} \equiv mp_i(L)$: marginal productivity in the industrial sector where $\frac{\partial mp_i(L)}{\partial L} < 0$.

$L_i = (mp_i)^{-1}$: labor demand function in the industrial sector.

$D_L = L_a + L_i$: labor demand function in the economy.

w_s : substantial wage.

Suppose that labor supply function is perfectly inelastic such that

$$(1) \quad S_L = L_e.$$

Then we get the equilibrium wage w^* that satisfies

$$(2) \quad D_L = L_e.$$

Since labor is uniform in this society, all population are employed either by the agricultural or by the industrial sector under w^* . Allocation of labor between both sectors is determined such that

$$(3) \quad mp_a = mp_i = w^*.$$

In a developing economy where productivity is quite low, however, the competitive equilibrium wage w^* satisfying (3) could be too low even to afford the minimum level of acceptable life. Pre-modern society is, at the same time, often patriarchal and paternalistic. In such a society, the master of family might willingly provide a higher living standard that is not affordable by the w^* with his subordinates, standing on his dignity.

Before the Second World War, peasants sometimes sold their daughters as prostitutes in order to cut their cost of board. The reason why the master of family was sometimes tempted to sell his daughter was in that her marginal productivity was less than her cost of board. In other words, if a head of family successfully kept his dignity by resisting temptation to sell his daughter, then it meant he provided socially substantial wage $w_s (> w^*)$ in kind with his daughter. Once she was sold, the living standard she expectedly received was so low that she would die soon or later by venereal disease or tuberculosis.

It turns out then that a very less productive sector whose wage w is lower than w_s could be supplied with labor and could grow if every head of family is free from any paternalism. If considerably many heads of families in an economy provided the socially substantial wage $w_s (> w^*)$, on the other hand, then the wage never goes below the w_s so that the wage level in this economy sticks to the w_s . Then less productive industry where marginal productivity is lower than w_s cannot exist and the labor demand in this economy is smaller than labor endowment L_e . That surplus portion of labor receive the socially substantial wage w_s from the heads of masters and survive. The dignity of breadwinner can be sustained only if the competitive equilibrium wage w^* is significantly lower than the socially substantial wage w_s and he successfully keeps his subordinates from dropping down to the w^* level of living standard.

This kind of relation was not necessarily restricted within a peasant family. Suppose, for instance, that crop of a tenanted farm is very bad due to exogenous shocks such as unexpectedly cold weather. Then, in a local community where some paternalist norm still works, his

landlord would temporarily reduce rent for the year to protect his own dignity, which means he virtually provides his tenant with living standard higher than his tenant's marginal productivity.

Consequently hangers-on who receive w_s that is greater than their own marginal productivity stay both in tenancy relations and within peasant families in a patriarchal society. They do not respond to offered outside option that provides w^* that equals to their marginal productivity. This surplus portion of labor keep staying in villages.⁷ In such a society, growth of industrial sector and capital accumulation do not imply wage increase and wage is fixed at the w_s until all surplus population in rural areas have flown out to the industrial sector in urban areas. On the side of the industrial sector, it looks as if the price elasticity of labor supply is "unlimited" at the w_s such that labor appears to be unlimitedly supplied from rural areas without any increase of wage. Then the labor supply curve here is horizontal at the w_s . This is called the "unlimited supply of labor." The reality behind this picture is that patriarchal communities pay to surplus population more than their marginal productivity. Wage fixed regardless of marginal productivity naturally weakens preference for capital intensive technology as well.

As the industrial sector grows, however, surplus population will have finally been absorbed by the industrial sector. Then the labor supply curve turns out vertical at the L_e , and the wage begins to increase. On the side of the agricultural sector, the w_s provided by paternalistic landlords and patriarchs now just means a living standard lower than reservation opportunity w^* , hence the dignity of landlords and patriarchs supported by provision of w_s disappears. Very this point where labor turns from surplus resource to scarce resource is called the "turning point" in the classical dual economy model.

Yasuba (1975) points to difference between the classical dual economy model and the "Lecture Series" school as well as similarity. Yasuba (1975) understands that Yamada (1934) implicitly thought the level of w_s determined in Yamada's model was below the competitive equilibrium w^* because landlords and patriarchs had more powerful instruments to socially suppress the wage, while the classical model presented by Lewis (1954), Ranis and Fei (1961), and Fei and Ranis (1963, 1964) assumes that $w_s > w^*$.

This Yasuba's interpretation is partly acceptable, but partly not. More precisely, Yamada (1934) virtually assumes that the w_s decreased below the w^* in the interwar period while it had been above the w^* before the First World War, and then Yamada (1934) asserted that this was why Japanese capitalism was confronted with the "structural crisis" in the 1930s. Yamada (1934) was written in the period of this "crisis," so that its rhetoric is awfully dark, but it is to contrast the serious "crisis" with the stable equilibrium before the First World War. Thus Yamada (1934) implicitly thought Japan passed the "turning point" in the interwar period. Yamada (1934) hoped that people thrown out from the good old days of warm paternalism should progress to modernization of economy and finally to the socialist revolution, while in

⁷"Therefore, while a part of peasants who lost their own farmland left villages and joined proletariat of manufacturing in urban areas, since capitalist industry had not yet sufficiently developed to absorb all surplus population in rural areas (and this holds for even at later stages of capitalist development), majority of peasants who lost farmland inevitably turned to semi-feudalist tenants that rooted in feudal society," Hirano (1934), p. 49.

fact they rather chose rebuilding the Empire under the militarist leadership and jumped to the war against the US. Before going to Yamada's contemporary recognition of the 1930s and his prediction about the institutional change, let us deal with his understanding Japanese economic institutions before the First World War.

The stability of Japanese society during industrialization since the 1880s deeply depended on "two-story arch" of the "patriarchal family" as the lower arch and the "Napoleonic spirit" as the upper arch, Yamada emphasizes.⁸ The "Napoleonic spirit" is the spirit of servicemen of the Imperial Army, following the one of infantrymen under the flag of the First Empire of France and the one of Junkers who learned from the French revolution, defeated the Second Empire of France, and established the Second Empire of Germany. The "essential part" of this spirit serving the nation state was the loyalty of upper class of peasants and had built its stronghold in rural communities.⁹ It turns out that imperial peasants under the "semi-serfdom" are supposed to have had, in fact, some their own interests to protect at the exchange of their own life, as the French infantrymen and the German cavalrymen did, hence that sufficient return is supposed to have belonged to peasants that they willingly accepted service for the Empire. At the same time, Yamada points out that rice growing provided them with very little positive return.¹⁰ Sericulture instead of rice growing brought positive return to peasants. Raw silk produced from cocoon was the major export to the US. Strong demand from the US market caused rapid growth of sericulture, which allowed peasants to keep considerable surplus. This surplus salvaged peasant economy, and was the very interest for the patriarchs of peasant household to secure. To secure the interest, they served as the Imperial servicemen.¹¹

While major source of return was sericulture, putting-out system of textile industry also gave opportunity to utilize slack labor in peasant family. Rise of modern cotton spinning industry destroyed hand-spinning in rural areas, but expansion of putting-out of looming provided a new tenement homework opportunity with children and women of peasant family.¹² Now that the dignity of patriarchs of peasant family was founded on protecting their subordinates, tenement homework for temporary slack labor took a critical role, too.

Yamada depicts the frame of rural society before the First World War as "semi-serfdom," and asserts that this feature was typical for large landowners in the backward northeastern region of Japan, rather than the more developed western region where landowners were more sensitive to the return from land and more careless with peasant economy.¹³ The "semi-serfdom" indicates the norm in which landlords allowed tenants to keep the living standard higher than the competitive equilibrium wage w^* affords.

While the 1896 Civil Codes prescribed tenancy contract founded on modern market mechanism, landowners in real tenancy relations were almost forced to reduce rent at bad crops and to support life and education of tenants, regardless of legal contracts. Landowners were especially expected to take risk of bad crops by contingent rent reduction, and this saved their

⁸Yamada (1977), p. 170.

⁹Yamada (1977), pp. 53-54.

¹⁰Yamada (1977), pp. 214-261.

¹¹Yamada (1977), pp. 57-58, 73.

¹²Yamada (1977), pp. 52-54, 57-59, 69-71, 88-91.

¹³Yamada (1977), p. 241. This fact finding is supported by Nakamura (1979), pp. 157-158.

dignity in rural communities.¹⁴ Such “semi-feudalist” paternalism of “semi-serfdom” had resiliently survived in the backward northeastern region.

Tenant peasants were sheltered by paternalistic tenancy relation in local communities. Peasant household also were equipped with profitable sericulture, and were offered slack-labor-mobilizing tenement homework by putting-out network of textile industry. Utilizing those shelter and measures, masters of peasant household were dissuaded from selling their daughters and wives to pimps, kept up dignity as “patriarch,” and maintained “patriarchal family.” Sericulture especially allowed peasants to reserve considerable surplus, which enabled masters to feed their subordinates. This interest as an imperial peasant was so valuable to them as they willingly protected at the exchange of their blood. Masters with this “Napoleonic spirit” served their Empire in the Sino-Japanese War and the Russo-Japanese War. Then even during industrialization paternalistic rural communities had survived and reserved surplus population, which led to “unlimited supply” of labor and resulted in expansion of labor intensive traditional sector, as the classical dual economy model indicates. The frame of imperial governance reinforced this scheme of rural communities as well as it relied on. Thus, economic institutions and the frame of governance were complementary to each other. Ironically, however, this stable political economy was deeply founded on return from sericultural growth that depended on the growth of the US.

B. The structure of society and the “turning point”

Not few works of recent literature on modern Japanese social history have virtually supported Yamada’s observation. Masayuki Tanimoto inquired tenement homework of peasant family organized by putter-out of cotton textile industry, and concluded that a typical peasant family before the First World War preferred keeping female members from migrating to urban industry and held them within the family even if it could bring higher income, and then allot tenement homework offered by putter-out to those female family members. Peasant family typically maximized income under the constraint that as fewer as possible member of the family went out.¹⁵ Ken’ichi Tomobe, on the other hand, argues that such a weak preference of cutting out female members was not necessarily irrational in terms of maximizing income. In the long term, a better trained daughter might get a better marriage that brings a better network to the household. Keeping her at home instead of forcing her to a factory could be more profitable in the long term, and peasant household by its nature maximizes income in the long term given its life cycle.¹⁶

Yamada (1934) also stressed that even in the industrial sector, mafia-like and patriarchal indirect employment was dominant, where intermediary bosses managed work organization and received some return from employers.¹⁷ Tojo (2005) indeed depicted that labor markets of various jobs were segregated to each other before the First World War, and each segment

¹⁴Kawaguchi (1990), pp. 90-100. Kawaguchi (1998), pp. 299-302.

¹⁵Tanimoto (1998), pp. 221-227, 429-459. Tanimoto (2002), pp. 283-286.

¹⁶Tomobe (2007).

¹⁷Yamada (1977), p. 183.

was governed by mafia-like human relations.¹⁸

About the “turning point” of Japanese economy, there is not yet a rigid consensus about the “turning point” of Japanese economy, where the “unlimited supply” of labor ceased. Ryoshin Minami and Takafusa Nakamura, for instance, argue that Japanese economy passed the “turning point” as late as in the 1950s.¹⁹ However, the most influential position supports Yamada (1934). John Fei and Gustav Ranis suggested Japan’s “turning point” was in the interwar period, and Saito (1998) documented that the wage of traditional sector began to increase in the interwar period, which indicates that labor shift from the traditional sector to the modern sector had completed.²⁰

High tenancy return accompanied with low wage was just a result of resource allocation given the surplus labor. Moreover, both of social structure in the agricultural sector and work organization in the industrial structure were not only suitable institutions in a labor surplus society, also complementarily enhanced each other. That scheme realized the social stability before the First World War. This stability that essentially depended on surplus labor and return from sericulture was confronted with the crisis of collapse in the interwar period, when labor turned out to be scarce resource and, furthermore, the US economy went down.

C. Economic and political institutions at the “turning point”

Peasants received some return in paternalistic local communities. Then, by designing the frame of governance as if the Empire appeared to be founded on those local communities, the government could cheaply induce peasants to serve the nation as “Napoleonic” infantrymen. This was the “two-story arches” of “patriarchal family” and the “Napoleonic spirit,” which economized military expenditure to mobilize human resource.

Then surplus population and return from sericulture were critical to sustain cheap militarist state, but those factors were being lost in the interwar period. Labor changed into scarce resource, thus firms in the industrial sector relentlessly conducted reform of work organization, which Yamada (1934) called the “Japanese style of rationalization.”²¹ It generally meant abolition of indirect employment and change to direct hierarchical work organization. Mafia-like “labor aristocrats”²² who had received return from employers as intermediaries were now being excluded by the reform. Moreover, as the American economy fell into serious depression since 1929, export of raw silk and then demand for sericulture almost collapsed. This deprived peasant economy of the source of positive return.

Now imperial servicemen were losing their interests to protect on the one hand, modernization to capital intensive technology of the industrial sector was needed. Yamada (1934) predicted and hoped that people were being released from the robust regime of Empire.

The real history did not favor his hope. Confronted with the Great Depression, the government explicitly gave up the idea of “small government” based on cheap infantrymen and

¹⁸Tojo (2005), pp. 323-371.

¹⁹Minami (1970), pp. 95-186. Nakamura (1985), pp. 189-190.

²⁰Fei and Ranis (1964), pp. 125-131. Saito (1998), pp. 25-56.

²¹Yamada (1977), pp.209-213.

²²Yamada (1977), p. 212.

transformed itself into a “large government” with the Keynesian fiscal and monetary policy. The government increased expenditure for public works to stimulate rural economy and for military without hesitation. Different from Yamada’s prediction, men thrown out from the warm paternalist communities gathered again under the flag of Empire, rather than worked for modernization. What did Yamada overlook or underestimate? This was, probably, risk sharing function of the old regime. While Yamada noticed that existence of risk sharing instruments much better than his opponents, still he underestimated it. Then he could not predict people faced with risk in the market mechanism did want to be protected by the “large government.”

II. Risk sharing in paternalist organizations

A. Tradeoff between risk and incentives

The hottest issue in the “Debate on Japanese Capitalism” was about whether tenancy contract in Japan was “semi-feudalist” or modern. While Yamada (1934) asserted it was “semi-feudalist” because tenancy rent was very high and it was paid in kind. The opponent, Tamizo Kushida, pointed out that it was not relevant whether rent payment was in money or in kind, and high tenancy rent was just an outcome of competition in the tenancy market, and concluded that tenancy relation was essentially a modern contracting relation.²³

Kushida’s statement might seem to make sense, but actually difference between in money and in kind was relevant. Market in the real world is always fluctuated on the path to the competitive equilibrium. Rather, if a market is efficient, price takes random walk. Whichever land tax or tenancy rent, risk in the market presented as variance of price belongs to the payer if payment is in money. The point that attracted Yamada’s attention was exactly this. After the Meiji restoration, land tax payment was changed from in kind to in money, which resulted in that vast number of peasants could not burden the risk of price fluctuation, had to sell their lands, and became tenant peasants.²⁴ Thus many of tenant peasants were losers in market mechanism, so were by nature vulnerable to risk in the market.

If tenants were risk neutral and if limited liability constraint does not bind, then it does not affect efficiency tenancy contract whether payment was in kind or in money. However, the poorer people are, generally, the more risk-averse they are. In addition, poor tenants were almost by definition bound by the limited liability constraint.

On the other hand, provision of incentives almost inevitably accompanies imposition of risk. If there is not asymmetry of information between the principal and agent, no incentive is needed. Since action of the agent is perfectly observable to the principal, the first best equilibrium, where the principal perfectly observes the agent’s action and compensate the same as the agent’s marginal cost of effort, is realized. If asymmetry of information could bring about opportunistic behavior after entering the contract, which is called “moral hazard,” on the other hand, then provision of incentives could calm the loss from asymmetric information after entering the contract. However, incentives are called for exactly because the principal cannot

²³Kushida (1931), pp. 71-76. Nagaoka (1984), pp. 112-118.

²⁴Yamada (1934), p. 252.

perfectly observe action of the agent, hence provision of incentives that make compensation explicitly depend on outcome of the agent's action means even effect of exogenous shock the agent cannot control is imposed on the compensation, that is, the agent is imposed some risk.

Thus risk and incentive unfortunately had tradeoff effect on risk-averse agent, because risk decreases utility of risk-averse agent. When the principal imposes some risk on the agent, the principal needs to increase compensation to the agent to keep agent's utility at the same level. The opposition is true. If the principal imposes smaller risk on the agent, the principal can reduce compensation to the agent with keeping the agent's utility at the same level. Then the landlord can collect more tenancy rent by allowing his tenant to pay in kind, that is, by reducing risk imposed on the tenant, with keeping the tenant's utility at the same level.

The optimal contract must, therefore, solve the problem of optimal balance of incentives and risk. In most region of Japan, tenancy relation was based on fixed rent with contingent rent reduction at bad crops and rent payment was in kind. Fixed rent provides strong incentives because either increase or decrease of crop accrues to the tenant, while contingent reduction at bad crops weakens incentives but decreases risk burden. Payment in kind decreases risk burden due to the market.

It is meaningless to give payment in kind a rhetoric "semi-feudalist." But distinction of incentive effect between in money and in kind was significant. Yamada noticed this significance, but probably he did not really understand his attention was important because of risk-averseness of tenant peasants.

B. Risk-averse peasants and "Napoleonic" servicemen

Tenant peasants received some positive return in paternalistic local communities. This was not, however, the only interest they held. Risk sharing was important to them as well. If the dignity as the master of household did matter, given their small wealth and imperfection of local financial market, risk control, especially smoothing yearly income was critical. Thus landlords in rural community designed risk sharing mechanism of payment in kind and contingent rent reduction. Moreover, in the northeastern region of Japan in which Yamada (1934) argues "semi-serfdom" was typically reproduced, sharecropping contract instead of fixed rent contract was chosen by landlords if the weather condition was especially hard. Sharecropping provides weaker incentives and imposes smaller risk with tenants, hence it was preferred when tenant peasant economy was specially vulnerable to exogenous shock due to severe weather.²⁵

Risk-averse peasants were loyal to the existing regime at least partly because risk sharing brought by local communities insured their households and protected their dignity as the patriarchal master of households.

When local communities lost sericulture as return source and local communities did not insure peasant economy any more, Yamada (1934) hoped peasants progressed to more risk-taking individuals in the atomic labor market. Yamada (1934) clearly underestimated the risk sharing scheme managed by local bosses. Peasants rather supported the large welfare and military state that had enough strength to insure peasant economy against risk of the market

²⁵ Arimoto (2005), Arimoto, Okazaki and Nakabayashi (2005).

economy. Peasants desperately followed the military leadership rather than revolution.

C. Rent distribution and risk sharing in work organization

Yamada thought “semi-feudalist” work organization and labor market were dominant in the industrial sector as well as in the agricultural sector before the First World War.²⁶ A modern work organization here is the one consisting of direct employment contracts between the employer and an employee, and modern labor market is a geographically and socially integrated market. However, especially work organizations and labor markets in heavy industry and mining were far away from the modern one before the First World War. When a man wanted to work in the industry, he entered a relation with intermediary man as a “boss and a henchman.” It was the boss who directly entered a contract with the firm. Furthermore, in copper mining, there was an inter-firm organization that covered whole industry called the “Alliance of Friends” (Tomoko Domei). Relation between intermediary bosses and workers were supposed to be not only business also loyalty and service to bosses.²⁷

The labor market was so segmented into various industries that there did not exist uniform labor. In other words, there did not exist nation-wide uniform “proletariat.”²⁸

When it is sufficiently difficult for the firm to observe action of the workers, indirect employment could be more efficient than direct employment. In this case, intermediary agents could exploit benefit up to the economized monitoring cost that should have incurred to the firm under the direct employment. This is just about design of organization. What is “semi-feudalist” about? It is about the mafia-like boss-henchman relationship where the henchmen felt loyalty and had the “duty to serve” the boss. The source of loyalty was, again, risk management by the boss. The typical case is the “Alliance of Friends” that was the mutual aid association in the copper mining. Intermediary bosses insure their henchmen as well as allocated wages and benefits. This was why an intermediary boss could be a big brother.

III. Presentiment of institutional change

A. Fluctuated “patriarchal family”

The stable “structure” of Japanese political economy was confronted with a crisis after the First World War, and the crisis was especially serious in rural communities, Yamada thought. Since ‘patriarchal family’ was the base of “Napoleonic spirit,” fluctuated “patriarchal family” directly meant a threat to the Imperial Army.

The crisis of “patriarchal family” brought two effects. The one was that Japanese economy was passing the “turning point” where socially substantial wage w_s provided by master of

²⁶Yamada (1977), p. 209.

²⁷Yamada (1977), pp. 112-120, 182-183, 190-193. That observation is supported by Hyodo (1971), pp. 55-213, Odaka (1984), pp. 195-199, and Nishnarita (1988), pp. 23-31, 84-91.

²⁸Yamada (1977), p. 198.

household lowered below the competitive equilibrium wage w^* that subordinate family members could earn outside of household. Typical case was in modern textile industry whose very majority of workers were young female. As their wages increased, young girls became more and more independent against their fathers and husbands.²⁹ A path dominated by this effect could have been modest, where authoritarian local communities were gradually dissolved.

The other effect came from dropped demand of cocoon because of the Great Depression in the US. Sericulture was the source of return to peasant household in the eastern region of Japan. Sudden collapse of sericulture severely affected peasant economy, and not few peasants in the northeastern part of Japan were forced to sell their daughters to pimps. The dignity of patriarchal masters was lost, hence the “Napoleonic sprit” as the pole of the Imperial Army was also faced with the crisis.³⁰

B. Dissolution of indirect employment

The “crisis” of the industrial sector came with the dissolution of indirect employment by the “Japanese style of rationalization.” Before the First World War, indirect employment in heavy and mining industries was taken mainly because it was technologically hard for firms to observe actions of workers. However, as Japanese economy reached at the “turning point,” with wages now beginning to increase, modernization to capital intensive technology progressed after the First World War. Mechanization partly enabled, and partly required firms to directly control workers, because mechanization improved observability of workers’ action on the one hand and mechanization could not depend traditional skills shared by intermediary bosses on the other hand. Thus, especially in advanced manufacturing and mining, organizational transformation from indirect employment to direct employment progressed with excluding intermediary bosses.³¹

Now a firm directly traded with employees without intervention by intermediary bodies. The firm directly entered in employment contract with workers, monitored action of workers, and compensated or fired workers depending on their performance. Workers released from intermediary bodies individually traded with firms in the labor market. Now the integrated labor market consisting of atomic workers was being formed. This emergence of “proletariat” was technologically “inevitable.”³²

C. Aborted liberalization and the rebuilt Empire

With dissolution of indirect employment by the “Japanese style of rationalization,” the labor market came geographically and socially integrated. Workers being released from mafia-like

²⁹Nakabayashi (2003), pp.414-420. Hunter (2003), pp. 270-296.

³⁰Yamada (1977), pp. 78-79, 58-58.

³¹Yamada (1977), pp. 212-213. Sumiya (1976), pp. 91-109. Takeda (1987), pp. 122-192, 261-332. Ogino (1993), pp. 255-327. Ichihara (1997), pp. 65-243. Hyodo (1971), pp. 215-479. Odaka (1984), pp. 209-224. Nishnarita (1988), pp. 115-118.

³²Yamada (1977), pp. 201, 213.

intermediary bodies, transaction in the labor market became impersonal. Thus workers were composing “proletariat.” This was the development Yamada (1934) predicted.

However, while intermediary bodies such as indirect employment organizations and local communities were shaken and dissolved, it is not clear why released individuals necessarily should accept the impersonal market mechanism. Indeed people released from intermediary bodies could not take risk in the market mechanism, and wanted the state to insure them. The government tried to stabilize economy by discretionary macroeconomic policy, and intervened price mechanism by economic planning. People released from “semi-feudalist” mafia-like intermediary bodies did not transform themselves to modern independent individuals after all, rather joined rebuilding the Empire on planned economy during the Second World War. Even elite workers, who Yamada (1934) hoped to lead “proletariat” as the class, re-segregate their work organization from outside market, built internal labor market with the firms, and kept wages higher than outside options after the Second World War. Federation for Industrial Service (Sangyo Hokoku Kai) during the war effort was a starting point of making internal labor market based on cooperation between firm and union.³³

Why did Yamada fail to predict the path? Partly because he did not correctly estimate the impact of collapse of sericulture. If other conditions are fixed, wage in rural areas begins to increase at the “turning point,” and the wage increase itself weakens the paternalistic community. Dissolution of paternalist community on this path could be gradual and modest, and people would might be able to move to market mechanism. On this path, ex-patriarchs might be unpleasant, but other members acquire independence and higher wage and they don’t need to rely on insurance offered by patriarchs. However, in the case of interwar Japan, collapse of sericulture not only destroyed paternalist local community, also decreased wage of any member in the community. Everybody in the community turned to be vulnerable against risk and nobody could insure the risk. It was a natural result that nobody wanted to accept risky modern market mechanism. Yamada also underestimated the significance of risk sharing in “semi-feudalist” organizations, which had Yamada overlook risk-averseness of individuals released from destroyed organizations.

Conclusion

From the interwar period to the Second World War, Japan experienced the first big institutional change since it began industrialization in the 1880s. Japanese political economy had been stable as a whole since the 1880s. Moritaro Yamada sought the factor that had materialized this stability in institutions of both agricultural and industrial sectors, and complementarity between them. Market mechanism worked on the surface of this stable industrialized economy, but in depth of both sectors benefit seeking through personal exchanges in paternalistic organizations took a critical role. This finding could be even reinforced by application of the classical dual economy model, as Yasuba already emphasized.

³³Nakamura (1979), pp. 297-383. Gordon (1991), pp. 123-330. Okazaki and Okuno-Fujiwara, eds (1999). Okazaki (2006).

Yamada's and other scholar's sharp observation came in the interwar period, exactly when stability of the old regime was challenged. Rather, because structural reform was called for, they tried to and indeed could grasp the structure of disappearing regime. However, Yamada's prediction about the future after the old regime was not really successful. While Yamada predicted people released from paternalistic organizations would join the market mechanism based on impersonal exchange, they tried to stabilize the economy by building a planned economy under the the flag of Empire. This institutional change formed the foundation of post-war Japanese society.

An important reason why Yamada failed to predict was in that he underestimated the importance of risk sharing in paternalistic organizations under the old regime, while he was much better in that he at least recognized the existence of risk sharing mechanism, while Tamizo Kushida did not. In the interwar period, partly because Japanese economy reached at the "turning point," and also partly because the Great Depression attacked peasant economy, stability of the old regime was threatened. The effect of the latter factor affected Japan's choice from possible paths at the "turning point."

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