Introduction

It is with great pleasure that I help commemorate the career of Professor Sumimaru Odano. Combining academic research, real world advising on economic policy and regulation, and development of the Risk Institute at Shiga University, Professor Odano epitomizes the importance of ‘institutions’ and the interaction of those institutions with the creation of academic economic ideas.

To focus the paper for this commemorative volume, I use Professor Odano’s and my shared interaction at the University of Washington Economics Department with Professor Douglass North, the Nobel laureate honored for his work on the importance of institutions, and Professor Kozo Yamamura, who taught us both about the importance of history in explaining economic phenomenon and about the Japanese economy. Professor North forced us as microeconomics graduate students to recognize that firms and individuals maximize their utility or profit within the ‘rules of the game’ that provide constraints and regulations. Yet he also taught us that firms and countries do not take these constraints as given, but are capable of creating new economic and social institutions that can free the firms and individuals to create value for the society and the firm. Professor Yamamura taught us in depth about the specific economic institutions that are the core of Japanese economic history. He reminded us that the various elements in the historical environment are interconnected. For Professor Yamamura, to look at just one element of Japanese economic history was to neglect the ability of the Japanese to combine and enrich their institutional environment with that inter-
action. At a recent conference in Japan, I was again reminded of the significance of this training when a younger scholar presenting a business history article was puzzled by the wide dispersion of spinning mills in the Meiji period. Focusing only on the trading companies and the textile firms, he failed to understand the labor market environment that explained the dispersion well. Work by Saxonhouse (1978) showed that villages made contracts with the mills to identify ‘good’ environments for their young females to work in the factories. Having these factories closer to their villages allowed the villages to monitor the contracts more effectively. Labor market institutions and trading institutions are closely linked, and our training at the University of Washington made us both instinctively look for those connections as we did our analysis. It is of course important to note that neither of these scholars permitted us to ignore the importance of transactional efficiency, issues that our Chicago school microeconomics professors like Yoram Barzel (1989) and Steven Cheung (1969) always emphasized. It is that combination of history, and the cultural elements bound up in it, with the rational economic perspective, that made both Sumi and I such effective interpreters of institutions and the wider markets. (Odano, 1987)

Using the principles that these two scholars imparted to both of us, I would like to look at the interaction of institutions and economic phenomenon in the post-war Japanese economy. As will become clear, these Japanese institutions are excellent illustrations of the principles of Douglas North (1973, 1990), as the environmental conditions dictated the creation of institutions specific to Japan, but at the same time, changes in those environmental conditions called into question the continued viability of these institutions. However, Kozo Yamamura reminded us that government policy and its historical experience, not just the external environment, can influence the path that the institutional development follows. While one could choose many other Japanese institutions to illustrate these issues (general trading companies (Roehl, 1983); (Yamamura, 1976); vertical groups around auto companies (Ahmadian and Oxley 2006; Dyer and Nobeoka, 2000), or Japanese internal corporate decision-making (Cole, 1992; Dore, 1986), I have chosen to consider two Japanese post-war institutions because the illustrate the North and the Yamamura principles: horizontal keiretsu groups; and ‘permanent’ employment. While each are often cited as quintessential Japanese institutions, they have distinctions when both history and institutional economics are combined, as both these professors taught us. Rather than give citations for the opinions presented, the references give representative scholars who presented the concepts to the profession. This approach will let the reader follow the trends over time in this research stream.

II Permanent Employment

1: Response to Environmental Uncertainty; History Doesn’t Matter

Large Japanese firms made long-term implicit contracts to hire and promote internally in the post-war period (Hashimoto, 1979, 1981, 1990) (Koike, 1988). The system had a number of significant characteristics:

– primary hiring from school leavers
— significant training of all employees hired into the system
— implicit contract for employment until ‘reirement’ age
— pay that reflected seniority and ability to carry out functions
— job rotation for a significant portion of one’s career

Much has been written about permanent employment from a cultural viewpoint (Dore, 1986), but following Professor Yamamura’s admonition to consider history, we do not find much evidence that this was the predominant form of employment in the prewar period. Firms hired and fired at will, and employees found it attractive to search for new employment opportunities. Pay reflected performance rather than years on the job.

The only exception might be segments of the managerial labor market. For more than a century, many family firms had ‘adopted’ managers into their family in order to provide the managerial talent pool that family members might not supply. This tradition, often labeled banto, had the same sort of long-term commitment, training and compensation that would be seen in the postwar system. The permanent employment of the postwar system is often cited as evidence of the continuation of this pattern. Seen in Northian terms, however, this quite narrow and limited system might be better seen as evidence that a new institution is likely to pick up and further develop existing elements that are known to be consistent with the wider business and social culture.

What can explain this ‘sudden’ change in the Japanese employment system, and what explains its lack of historical precedent? How can we explain the response to the fast-growing environment in Northian institutional economics terms?

There were several postwar economic conditions that made the above mentioned institutional characteristics especially attractive:
— very fast economic growth required many new workers
— labor supply was very limited because of the wartime losses
— catch-up technology required teamwork and implementation

### 2: Fast Economic Growth

With growth in business of greater than 10% per year, firms needed to respond quickly to that growth. While the domestic market was protected from foreign imports to a large extent, Japanese government policy never really protected the market shares of firms in that domestic market. Thus, firms felt strong pressures to respond to growth opportunities.

### 3: Labor Supply Issues

Contrary to earlier periods in Japanese history when firms could count on labor to be supplied from the rural agricultural sector, the post-war period presented firms with severe labor supply problems. With the loss of life in the war, this was even more challenging for the firms. Thus, supply side conditions also forced a strong pressure to attract and keep good workers and managers. The institutional environment, rather than any cultural characteristic, put pressure on a system based on open labor markets.
4: Catch-Up Technology Requires a Specific Skill Set

Japan faced more than twenty years of technological isolation as a result of the war. While it has outstanding technology in many areas by 1930—the zero fighter was acknowledged to be one of the best at the start of the war—little investment in new technology was made during that period. Since the growth opportunities were thus of the ‘catch up’ type, it needed a reliable work force that could be trained to provide consistent quality, and managers who could oversee that process. Training was necessary, so labor turnover was to be avoided. Innovation that was demanded was of the process variety, and of incremental improvements in the quality and the consistency of products. Much of this was quite specific to the firm, so that the skills could not be bought in the marketplace.

With these three conditions in the institutional environment, the Japanese post-war employment system for large firms was a quite natural and rational response to that challenge, and need not be explained in cultural terms alone.

5: The System in Practice

Firms were not willing to make too large a commitment to the system, wanting to have some of the flexibility of more open labor markets while dealing with the three issues mentioned above. Efficiency losses were always under consideration. First, firms made commitments to only a portion of their work force. Even at firms with a strong long-term employment strategy, employees had a lower status. In a down economy, those workers could be laid off. Outsourcing of low skilled and repetitive activities to suppliers also limited the employment commitment. Recognizing the declining average productivity after a certain age, the system included a relatively early ‘retirement’ age of around 55. Workers could expect new jobs at lower pay for a period to follow, consistent with efficiency.

It is often said that Japanese long-term employment did not apply to women. Indeed, the ‘retirement’ age was mid 20’s. However, all the other elements of the system were applied. Hiring was done from schools. Substantial training was given, even though the expected work life was only a few years. Female workers hired at a food processing plant were trained to work at a lumber of lines, even as a purely short term efficiency analysis might suggest that new workers could be hired. These workers were almost never fired until all more temporary workers were laid off. While the early retirement was certainly discriminatory, those female employees who joined the system got benefits of longer-term employment than their female counterparts.

6: The Breakdown of the System

If the system were cultural, you would expect that Japan would continue to emphasize that system, but all three of the supporting environmental conditions have now changed, and the Japanese employment system. While it is still observed in many parts of the business system, is no longer as efficient in handling the changed institutional environment (Ahmadjian and Robinson, 2001).

Growth made it easy for workers and managers to accept the long-term contract that limited their labor mobility. As growth slowed, this contract did not seem as secure.
The labor supply conditions made it less attractive for both sides to make strong commitments to the system. While younger workers again entered the labor market, workers were increasing their skills level as the economy recovered. Managers had the option of going abroad for education, and their experience abroad also made their skills less dependent on things learned in the domestic firm’s operations. The temptation to seek out firms that rewarded that skill set more quickly was tempting to many.

As the technology catch-up period came to a close, both workers and management had to think differently about the labor market. For workers, the choice of an individual firm was very important in a long-term employment system. If you picked wrong, you were stuck with a firm that would not be successful. In the fast growth period, that punishment was not so high, since the rising tide floated all boats, allowing even poorly managed firms or declining industries to survive. By the 1980’s, this was no longer the case. A bad pick was very costly, so workers and managers naturally were more cautious in making their long-term commitments.

III Horizontal Business Groups

We can also explain the evolution of the post-war horizontal business groups in Japan using similar Northian reasoning. The same kinds of conditions that encouraged labor market innovations required firms to develop new business relationships:

– fast-paced market growth;
– partner supply; and
– technology.

However, an external environmental change drives the options: SCAP dissolution of the formal structure of major industrial groups from the prewar period.

1: The Pre-war System

Up until the end of the war, Japanese conglomerates dominated the market. These firms were not especially unusual business forms, with central control at headquarters, and a variety of firms in many industries that reflected the Japanese economy. While some were family-based, other types coexisted. A conventional story of imperfect markets for technology and management skills (cite Khana) could be used to justify the seemingly unrelated diversification in this period. The system would fit well into an analysis of the value and problems of related and unrelated diversification.

2: The Post-War Adjustment

Institutional economics usually focuses on the ability of economic actors to identify the conditions in the environment and then create an appropriate set of institutions and relationships. (Caves and Uekusa, 1976) To conduct an analysis of the post-war changes in business relationships, however, a researcher has to understand the importance of political constraints imposed on the system. For this, Professor Yamamura’s thorough training in the political economy of the Japanese economic systems was essential for our ability to analyze these situations. As Professor Odano went abroad to participate in the analysis of the political economy of Asian countries, he benefited from the writing and the training of Professor Yamamura. In my case, my dissertation on the Japanese trading companies, and the subse-
quent work on business relationships, could never neglect the rules that either the Japanese government or foreign governments imposed on the options that were faced by Japanese business and economic actors.

In the case of the horizontal keiretsu, it was the foreign pressure by the American occupation forces, SCAP, which forced the firms in horizontal keiretsu to reconsider their relationships. SCAP ordered the formal prewar holding company structure to be abolished. The rationale was two-fold. First, these firms were seen as key to the Japanese war machine, and thus should be punished. But equally important, the ideological New Deal managers assigned to the office believed that large firms could damage competition. Both values forced the horizontal keiretsu firms to seek out alternative economic institutional forms. So in addition to destroying the hierarchy, many of the individual firms were broken up to create a more competitive Japanese business system. The leaders of the keiretsu were not allowed to be part of the management structure of the now independent firms. So severe were the restrictions that the best use of the managerial skills of one of the family members of a major keiretsu was to run a kindergarten.

The post-war period simultaneously increased the challenge for these newly independent, but still historically connected firms. (Ramseyer, 1991) (Gerlach, 1992) We take the three factors in turn to discuss how the factors shaped the new corporate forms. Note that many of the factors are similar to that discussed in the employment environment. However, for the historical reasons presented above, more relationship options available to firms in horizontal keiretsu groups.

3: Dealing with Rapid Market Growth
As with the employment system, the postwar growth required substantial investment, this time in facilities. Government incentives rewarded the large firms with financing, and encouraged exports. At the same time, there were always multiple sources of products, so that competition continued to be fierce in the protected domestic market. Firms were under pressure to grow while the returns to growth were not guaranteed.

4: Identifying Partnerships that Reduce the Risk of Strategy
Firms needed to have known that they would have a certain amount of guaranteed sales in order to aggressively pursue the growth strategy that the market forced on them. They also needed to find guaranteed sources of supply for parts and raw materials and other inputs so that the expected productivity gains would not suffer from supply shortages. With Japan’s isolation from world markets for a long period, firms were not confident in the open market purchases of these factors from what were perceived as oligopolistic suppliers of the inputs. These partnerships also included the banking relationships. While it is possible to characterize these banking relationships as arms-length (Ramseyer), the risk of substantial investments to serve the growth required relationships to deal with the high level of risk. As Haley (1991) reminds the reader, the legal system to resolve any disputes involving financing was not as complete as in Western markets, so that firms sought other relationship-based solutions to deal with possible issues on the distribution of gains and about disagreements between partners.
5: Technology: Integration and Improvement

Japan’s isolation during the two decades of the war left firms with a substantial pool of technologies to integrate. While some firms like Toyota chose to develop with little foreign technology (Cusumano, 1989), most firms aggressively sought out technologies from abroad. Several technologies might have to be integrated, and firms had to identify possible improvements that would lead to a stronger competitive position at home and eventually in world markets. Identifying important technologies, negotiating the contracts, and making good use of the technology all required that firms share the benefits from the imported technology with uncertain returns.

6: The Institutional Response: Loosely Connected Business Groups

Following the approach of Douglas North, these institutional environmental conditions required firms to create new institutions and relationships to take full advantage of the changed environment. The newly renamed keiretsu groups took advantage of some aspects of the historical relationships, but created new institutional and ‘contractual’ relationships to substitute for the hierarchical relationships of the zaibatsu ownership. They created a) new relationships for trading, b) created ‘main bank’ relationships to deal with allocation of financial resources, and c) created information exchange systems like Presidents Clubs.

7: Trading Relationships

As the firms searched for partners to deal with these pressures, it was natural to utilize firms within the networks that were part of the pre-war groups (Gerlach, 1992a, 1992b) (Aoki, 1990). Thus, firms could get a commitment to provide raw materials for products they produce, and markets for the industrial products and components they want to market. In a fast growth period, these commitments would reduce the risk of the substantial investments necessary to be prepared for the competition to serve the growth. Firms would not want to commit totally to these internal sources, however. The fastest growing firms using the output, and the best supplier firms might not always be in the network. In addition, full dependence, even with a firm with former group ties, might allow for that firm to take advantage of the relationship. Japan Fair Trade Commission data consistently showed that there was an optimal amount of commitment of from 25% to 35% of exchange volume in the relationship. We can contrast this to the sometimes quite large commitment within the more hierarchical relationships in the supply networks in electronics and automotive, where a core firm could resolve such issues more easily. Note that this need not have any cultural explanation based on trust or Japanese aversion to contracts, just the informational benefit of accumulated transactions over the historical period. The general trading company within the keiretsu group could handle some of the information sharing duties, taking a commission from parties that implicitly compensates it for the monitoring of the transactions within the group (Roehl, 1983).

8: Financial Relationships

Firms in the Mitsubishi, Mitsui and Sumitomo groups inherited the banking relationships
that were part of the prewar zaibatsu. For those firms who did not have a zaibatsu heritage, the bank relationship that they shared in common was an alternative source of these network partnerships. None of the firms wanted the hierarchical financial control of the prewar period; nor did the banks want to be overly committed on these firms when deciding on the allocation of capital. Yet all firms wanted the assured access to financing that was essential to responding the growth in the marketplace. At the same time, they did not want to merge with unrelated firms within the network, recognizing the value of independence in developing a wide variety of markets.

9: Cross Stockholdings

Firms in the group took stock positions in other group member firms. While some writers suggest that the stockholding was a way to re-establish the central control of the prewar system, this system can be more easily described in a Northian institutional economics framework. If a firm were to make a commitment to providing resources to a partner firm, or if it were to forego the opportunity to source product in the open market, then there was an opportunity for the partner firm to take advantage of the commitment. Exchange of stock allowed for the supplier firm or the user of the product to gain some benefit from the increased productivity that their commitment gave to the partner firm. Since banks and trading companies provided significant services to the firm, they often held shares of the firms to recognize their contribution.

In a financial system in which low cost government financing was made available to large fast growing firms through the banking system (Aoki and Saxonhouse, 2000), banks inevitably played a key role in the institutional arrangements.

10: Information Exchange Systems

In order for this complex set of relationships to work effectively, information had to flow smoothly between the various members. Monitoring had to be done by members of the keiretsu, since the firms could not depend on the exit of a market relationship if there was dissatisfaction with the performance of a member of the group. If a firm member did not perform well, scarce resources of the keiretsu would be misallocated, and the potential for exchange or development of technology would be impacted. Thus, firms had to develop monitoring institutions. Much writing on the keiretsu groups focused on meetings of the keiretsu member CEO in Presidents Clubs. However, the monitoring functions seem better modeled as a complex set of information sharing. At any functional level, there were similar committees to keep people in contact in areas like R&D, accounting and HR. More significantly, both banks and trading companies, through their almost daily interactions with their customer firms, were able to monitor the activities of the member firms, giving an early warning to other keiretsu members when things were not going as well as expected. Part of the ‘sleeping commissions’ of trading companies reflected a payment for this type of monitoring for the group.

If a company did fall into a crisis, managers from these related firms would often be called upon to help with any restructuring (Pascale and Rohlen, 1983). Even without a crisis, the guaranteed relationships and support led to a
significantly lower variation in growth and profits for firms in the group, though sometimes this came at the expense of profit (Nakatani, 1984).

11: The Changing Nature of the Economy

As long as the high growth continued, and the technology remained in catch up mode and thus effective utilization and integration was central, these institutional structures served the member firms well. However, but the 1980’s both of these environmental factors changed in ways that made the horizontal keiretsu groups less attractive for their most competitive members. Growth slowed, and the nature of the growth changed: there was continued growth in some sectors, with significant decline in others. Some firms in a given sector did much better, compared to the earlier period where there was less difference in firm performance in an industry.

The technology environment also changed. No longer able to import and improve on technology, firms had to develop new technology on their own. They often found that the logical partner was not within the keiretsu group. International partner relationships became increasingly important; these relationships did not lend themselves to the information sharing systems developed for the fast growth period.

12: An Institution with Changing Value

In this new environment, the individual firms in the group had to search for new opportunities to renew their partnership relationships. While some did so (Roehl, 2004), most firms found it difficult to continue the wide set of relationships that characterized the high growth period. If the partner firm was not the strongest firm in its industry by a significant margin, firms naturally drifted away from those relationships. Since they had never had a total commitment, that drift could be gradual but irreversible. The stronger competitive environment would not allow a firm to sacrifice for the good of the group.

The opportunities to share technology elements are, if anything, greater in the new technology environment. While there have been some high profile cooperation across firm boundaries in the groups, more often than not the firm found that logical technology partner would be outside the group, often in international markets. Thus, the technology sharing benefits of the group had much less value in the new environment.

Banks found that the benefits of group affiliation turned into obligations. The well-managed firms in the keiretsu found less reason to use the group banks for two reasons. First, due to their high profitability, they needed less borrowing. Second, they were able to access a variety of financial sources, both domestic and international. Thus, the banks found themselves in the unattractive position of financing the weaker group member firms, with little expectation of a turnaround. What Hoshi and Kashyap (2001, 2004) have called ‘zombie’ firms came to dominate their portfolios (Terasnishi, 2003). As these articles point out, the government support for low interest financing became a system that put pressure to maintain failing firms. In their search for more profitable uses of their resources, the banks moved...
away from their traditional areas and thus away from the *keiretsu*.

For this *keiretsu* institution as well, institutional environmental changes first create, and then challenge the existence of an economic institution.

## IV Conclusion

The Japanese business system has often been a source of an alternative model for economic development (Kojima, 1977). The study of the Japanese economic institutions, and the changes and evolution of those institutions as the environment changes, can be just an important source of insights for Asian countries, and even Western countries, that face rapid change. In a world where risk is a substantial factor, as Professor Odano’s institute as so clearly identified and studied, institutions need to be an important part of our study. Our common training at the University of Washington, and our experiences in our quite different careers, demonstrate that both markets and institutions need to be studied, and the studies integrated, if we are to make further progress in understanding the risk-filled world in which we live and do our research.

### References


I commemorate the retirement of Professor Odano by discussing the shared experience of institutional economics and Japanese economic history that the author shared during doctoral training at the Department of Economics, University of Washington Seattle. Both the principles of institutional economics of Douglas North and the importance and interaction of a wide variety of Japanese economic institutions stressed by Professor Kozo Yamamura have influenced our thinking in so many rich ways. I illustrate the usefulness of these principles through a discussion of two Japanese postwar economic institutions, long term employment contracts and horizontal industrial groups. I show that the institutions drew on earlier Japanese experience, but were not culturally determined. Rather they were a response to postwar economic conditions, and their usefulness was called into question as these conditions changed.