

Appointment of Retired Bureaucrats to Japanese Boards: Further Evidence

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Abstract

This paper investigates the incentive structure that encourages the appointment of retired bureaucrats in the boardrooms of the Japanese private corporations. For the sample of 1441 firms from 28 industries we find that such appointments are more likely to occur (i) if the government is the customer to the private corporation or (ii) if the firm is debtor to the government loan. However, such finding is applicable to the relatively smaller sized corporations. The evidence suggest existence of tacit collusion between the government and the private corporation as also lent support to ‘equalizing process’ theory.

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1 Introduction

Traditionally the role of directors has been looked as a market solution to counter the agency problem between shareholders and management of large corporation (Fama and Jensen, 1983). Hermalin and Weisbach (2003) argue that studying and analyzing role of directors as amelioration to contracting problem within the organization is the most useful perspective. But such an emphasis on the ‘governance’ role played by directors is one view. The director’s role could be more and different. Particularly the role of outside directors with non-business experience such as those with background in government. *Amakudari* – a practice to reemploy retired bureaucrats in the board of directors of Japanese private and public corporations has been a subject of continued discussion in academics and in media for such a ‘non governance’ role played by these directors.

Amakudari, which literally means *descent from heaven*, as the subtle area of contact between the government and the private corporations was initially essayed by Johnson (1974), Blumenthal(1985) and Caldor (1989). Johnson and Blumenthal primarily viewed it as part of the bureaucrat led development strategy pursued after the World War II. These descriptive works used evidences those were mostly anecdotal or very selective. Later, Schaeede (1995) used a regulation management model to explain the *Amakudari* among the largest firms. In a more objective study Horiuchi and Shimizu (2001) empirically show that *Amakudari* is a form of collusion between the regulators and the regional banks. They find that the collusion helps in the liberalization of prudential norms for the troubled banks. Van Rextel and Hassinik (2002) followed it up to show that *Amakudari* is related to the performance of the private banks. Troubled banks secure influence from the monetary authorities through the retired bureaucrats in their boardroom. The last two works emphasized the ‘political’ role played by the *Amakudari* directors.

Hitherto detailed and systematic empirical analysis of *Amakudari* has been confined to banking industry. Given the nature of stricter regulation in Banking industry, the collusion between government and firms seems more natural consequence. However, same cannot be said about the non financial sector. In this paper, we specifically propose to study the incentive structure for the firm that encourages the practice of *amakudari*

among the large number of listed firms in the non financial sector. Miwa and Ramseyer (2005) does talk about the appointment of retired bureaucrats in manufacturing sector. But the focus of their study is to critically examine the ‘governance’ role of outside directors in listed Japanese firms in contrast to the US firms. A study directly relevant to our work is Agarwal and Knoeber (2001) who find evidence of the political role played by the directors with backgrounds in politics and law in US. Since then no work has been done that examines the appointment of directors for playing ‘political’ role.

In this paper, we try to identify the mechanism that influence the appointment of retired bureaucrats to the board rooms of the Japanese non financial firms for their ability to play political role. We argue that retired bureaucrats as directors help the firms - out of their past experience with government to provide knowledge of government procedures, identify the services government wants to buy (Miwa and Ramseyer, 2005), leverage on contacts and personnel relationships developed during their career span, predict the government actions, help facilitate transaction with government. If indeed outside directors with experience in government play political role it is more likely that firms in greater need of such services will employ them. Based on a large cross section of firms in non-financial sector we do find that firms doing business with government or firms which borrows from government are more likely to appoint the retired bureaucrats. We also find that the mechanism through which *Amakudari* directors aid the firm will be influenced by firm characteristics. Relatively smaller sized firms are more likely to employ retired bureaucrats in order to compete with influential large sized firms for gaining transaction with government.

Next section discusses the relevant literature. Section 3 develops the hypothesis of the paper. Section 4 deals with methodology, data and variables description. Section 5 details the empirical investigation. Section 6 concludes.

2 Background Literature

Appointment of *Amakudari* directors has large opportunity cost. Position in the Board of Directors is the pinnacle of career in Japanese industries. The directors enjoys compensation almost five times the compensation of typical worker in industry (Kaplan, 1994).

Long service employees (insiders) view such appointment with much resentment. It is in the light of such pecuniary and non pecuniary opportunity cost that debate on *Amakudari* practice assumes importance. This practice that has grown in prominence in the post World War II era and has been sustained for more than five decades.

At a macro level, Colignon and Usui (2003) argues that *Amakudari* is a feature unique to Japanese political economy and is driven by the institutional co-operation between bureaucracy, political process and private corporation. In contrast the institutional arrangement in United States separates executive bureaucracy from markets and legislative processes. Notwithstanding the distinction ‘revolving door’ practice still exists and private sector personnel can move in and out government. However, personnel movement involved in *Amakudari* and ‘revolving door’ is distinctive in many ways. *Amakudari* is more widespread phenomena. Agarwal and Knoeber (2001) find that appointment of personnels with background in politics as directors in US firms is less than 10 per cent. While *Amakudari* appointment is spread to 25 per cent of the firms in our sample ¹. Also, *Amakudari* is unidirectional movement of personnel from government to bureaucracy.

At a micro level, various studies seek to identify the channels that determines the sustainance of *Amakudari* practice. According to Aoki (1988), these channels could be classified as ‘push’ and ‘pull’ factors that shape the practice of *Amakudari*. Johnson (1974) emphasize the ‘push’ factors and mainly focus on the arguments behind the existence of *Amakudari*. He argues that presence of the retired bureaucrats in the firms help in effectively carry out the ‘administrative guidance’ or more broadly the larger economic objective of the government. Though Johnson does acknowledge that in the context of the strict government control in 1950s, firms employed the retired bureaucrats in order to get access to critical information within government. Thus, the political role played by *Amakudari* directors found mention since the very first work. However, overall, Johnson views *Amakudari* as a positive feature in the bureaucrat run development strategy of Japan. Blumenthal (1985) echoed similar views. Blumenthal also provided evidence that firms with *Amakudari* presidents performed poorer than other firms. However, there is

¹This is conservative measure since firms also appoint the retired government officials as advisers and such appointments are not included in our sample

no conclusive interpretation to this evidence. *Amakudari* position might be created in the wake of poor performance or might have led to poor performance due to the lower skills of the *Amakudari* presidents.

Caldor (1989) contradicted the premise that *Amakudari* position is the positive feature on the Japanese economy and emphasized the ‘pull’ factors behind *Amakudari* practice. He viewed the practice as the ‘equalizing process’ for firms in disadvantageous position. Caldor’s evidence suggest the possibility of *Amakudari* position helping in equalize the disparities caused by corporate size in access to government as well as in equalizing geographically and educationally rooted disparities. However, Caldor’s work was based on restricted data comprising the top affiliated group firms or the largest sized firms in industry. Schade’s work (1995) tried to explain *Amakudari* as a mechanism to manage the regulation. The management of regulation could run both ways. The government can improve the compliance of regulation through the *Amakudari* appointments. On the other hand greater regulation means more incentive for the firms to circumvent the regulation. The ‘old boys network’ of the retired bureaucrats helps in the management of the regulation. The drawback of her paper is that she uses data on the largest 100 firms in 1991. This effectively implies that the results of Schaed’s work does not apply to wide spectrum of the Japanese private corporations.

Horiuchi and Shimizu (2001) and Van Rixtel and Hassenk (2002) examined the *Amakudari* relationship in the banking industry. As mentioned above, Horiuchi and Shimizu (2001) viewed *Amakudari* as a form of tacit collusion between the regulators (Ministry of Finance and Bank of Japan) and the regulated firms (regional banks). Troubled bank seek to employ retired bureaucrats from the Ministry of Finance or the Bank of Japan so as to influence the prudential norms binding the regional banks. In lieu of the *Amakudari* position in the bank, the retired bureaucrats through their ‘old boys’ network help in getting the support of regulators or show forbearance to the riskier activities of the troubled banks. Using the data on regional banks they indeed show that banks recruiting retired bureaucrats took greater risk.

Van Rixen and Hassink (2002) studied the *Amakudari* relationship for the largest group of private banks. Their estimates show that retired bureaucrats are recruited

in the wake of negative profits by the bank, in order to buy influence with respect to prudential policy. They also found that *Amakudari* positions have a positive influence on future profitability and lending to risky industries viz. construction, real estate and non-banking financial sector. This work also hints at the collusive tendency between the government and private corporations.

Apart from the institutional feature and micro level arguments determining the *Amakudari* appointments, the practice is also facilitated by the employment structure within bureaucracy which encourages early retirement. The career bureaucrat is promoted strictly on age and so younger officials cannot normally reach top level positions until their seniors retire. Moreover, civil servants are obliged to retire once a junior or official of same cohort occupy the Vice Ministership. As a result every year a pool of 3000 bureaucrats are available in the age group of mid 40s to mid 50s to start their ‘second’ career.

3 Hypothesis

In this paper we inquire the factors determining the sustenance of *Amakudari* practice. We build on the premise of ‘equalizing process’ and ‘tacit collusion’. Although, Caldor (1989) does examine the ‘equalizing process’ hypothesis, the evidence cited is primarily based on few largest banks and ‘key’ largest corporation. Therefore, precluding any attempt at generalization. We investigate ‘equalizing process’ hypothesis for a much wider selection of firms. The ‘tacit collusion’ hypothesis is supported by works of Horiuchi and Shimizu (2001) and Van Rixtel and Hassenk (2002) for banking sector. But unlike banking sector, non financial sector is far less regulated and forbearance or support of prudentials norms cannot be constructed as indicator of the business-government nexus.

In order to isolate ‘equalizing process’ effect and ‘tacit collusion’ effect from other macro level and micro level factors (discussed above), we focus on two variables that gives us information on whether firm enters into direct transaction with government. The first factor is *Business*. This variable provide us information on whether government is a customer of the firm. If the government has made some procurement from the firm or has handed over a public project to a firm after an auction, it will be captured by *Business*. Few evidences have been cited in the literature on the relationship between

Business and *Amakudari* in context of construction industry. Yamamoto (1975) reports that a survey undertaken for public projects in mid 1970s found that firms that hired former officials submitted bids that were 99.92 per cent of the ceiling prices. McMillan (1991) reports that ceiling prices are leaked via former Ministry of Construction officials employed by the bidders. Thus, the business link between government and corporations, provide incentive to the corporations to hire *amakudari* officials. Second variable we focus on is *Government Loan*. This variable implies that firm's need of external finance is dependent on government loan. The two indicators informs us whether a firm and the government enters into direct transaction.

Studies analyzing the importance of firm strategy to influence government policy focus on the wealth transfer ability of the government. Regulation, taxation and subsidies comprise some of these abilities that firms are directly related to. Governmental purchases of goods and services as well as the means to provide the needs of external finance also influence the corporate sector's wealth redistribution. To the extent various decisions of the government influence such redistribution², access to policy makers will comprise firm's key strategy. In this context *Amakudari* officials become important. The former bureaucrats from their prior participation in government gain invaluable insider knowledge about a ministry's policy and procedures as well as personal relation developed with important decision makers. The importance is magnified by the 'old boys' network maintained by retired bureaucrats³ which provides possible means for sharing of information.

The variables *Business* and *Government Loan* are the direct indicators of the resource allocation of the government across firms. If the *Amakudari* directors does indeed play 'political' role then they are more useful for the firms which has business relation with government or has borrowed loan from the government. This gives us our first hypothesis, which captures the 'tacit collusion' effect.

Hypothesis I: *Firms with 'Business' relation with government and borrower of 'Gov-*

²Governmental decisions could influence the wealth transfer of the industry as a whole as well as across firms. We only focus on across firms redistribution

³See Schaefer (1995) for commentary on how 'old boy' network is maintained. Maintenance of network increases the collective bargaining power of the *Amakudari* officials vis-a-vis the private corporation.

ernment Loan' are more likely to recruit the 'Amakudari' directors

As discussed above, according to Caldor (1989), smaller sized firms are more likely to appoint the *Amakudari* directors. The retired bureaucrats provide a channel to get access to 'critical' information within the government. Such information are more valuable to smaller sized firms who are already in a disadvantageous position vis-a-vis the larger firms. But simultaneously, a contradictory premise has also been discussed in the literature studying the corporate political involvement. Watts and Zimmerman (1978) argues that firms bear political cost of government's decision. There are various social and political groups that lobby for nationalization, regulation and expropriation. Some of these lobbying and pressure strategy end up in legislation or government advisory which amounts to political costs for the firms. Larger firms with more resources and visibility are more vulnerable to these political costs. Therefore larger firms have more incentive to develop political contacts to influence policy makers. Such a premise has also been supported by evidence in Agarwal and Knoeber (2001) and recently in Schuler, Rehbin and Cramer (2002).

In this paper we test both the hypothesis and thus also seek to resolve the contradiction. For the 'equalizing process' hypothesis we focus on the two direct measures of the government and business contact viz. *Business* and *Government Loan*. We argue that to the extent commercial transaction with the government matters for the *Amakudari* appointment, it will be more pronounced in the case of smaller firms. Our second hypothesis is the following.

Hypothesis II: *Smaller sized firms as compared to larger sized firms have greater likelihood to employ the 'Amakudari', when firms have 'Business' relation with government and are borrower of 'Government Loan'.*

In order to examine the relationship between the higher political cost and the likelihood of *Amakudari* appointment we focus on the size of the firm. But it is an indirect proxy of political cost. It is conjectured that larger the firm size larger the political cost. Hence, larger sized firms will be more willing to recruit retired bureaucrats in order to maintain close relationship with government. Closer relationship helps counter political cost. This gives us our third hypothesis.

Hypothesis III: *Larger firms are more likely to appoint the ‘Amakudari’ directors.*

4 Methodology and Data Description

On the basis of our hypothesis we would expect that firms with business relation with government and borrower of government loan are more likely to appoint the *Amakudari* directors. Such effects will be more pronounced in relatively smaller sized firms. At the same time *Amakudari* directors will be more likely to be appointed by larger sized firms as an indication of the public policy complexity faced by more resourceful and visible firms.

We use the probit model to empirically assess our three hypothesis. We also control for factors that are likely to influence the corporate political involvement.

$$\begin{aligned} Amakudari^* = f(& Business, GovernmentLoan, Size, \\ & TotalDirectors, Keiretsu, IndustryDummy) \end{aligned} \quad (1)$$

*Amakudari** is the latent variable that takes the value 1 if the firm has *Amakudari* position or else 0. The source of the variable is *Kigyo Keiretsu Soran* published by Toyo Keizai. There are 349 firms with *amakudari* position in 1995. *Industry* is the dummy variable used for the 27 industries. There are 28 sectors, including retail and wholesale, to which firms in our sample belong to. We include the industry dummy to capture the any industry effect. There is large variability of presence of *Amakudari* directors across industries. In the Table 1 we can find that in construction industry almost 60 per cent of the firms employ *Amakudari* directors but is totally absent in the rubber product industry. Given that different industries are subject to different government policies like regulation, tax structure etc we expect that industry dummy will capture such effects.

Business is the binary variable that informs us whether the firm has business with the government. It takes value 1 if there is a business link. There are 164 firms that have business link with the government. Of these 72 firms belong to the construction industry. This information clearly indicates the preponderance of the construction industry firms when it comes to business relation between firms and government. *Government Loan* is

again the variable those takes value 1 if the firm is borrower to the government credit. There are 619 firms those have borrowed from government. Information on both the variable is provided by *Kigyo Keiretsu Soran*. According to our Hypothesis I and II if the coefficients corresponding to *Business* and *Government Loan* are positive and significant then it supports our hypothesis that firms entering into direct transaction with the government are more likely to recruit the retired bureaucrats as directors.

Size is the log form of total assets expressed in million yen. The source of the data is Pacific Basin Capital Markets (PACAP) database. According to Hypothesis III, if the coefficient corresponding to *Size* is positive and significant then it implies that larger firms do indeed face larger political cost and they recruit the *Amakudari* directors to help, influence such costs. However, larger firms have larger board size. So the logarithmic value of total number of directors *Director* is used for controlling such effect. The information on total number of directors in a firm is available in *Kigyo Keiretsu Soran*.

To test our Hypothesis II, we split the sample into two using the median of the size. This gives us two sub samples of relatively larger firms and relatively smaller firms. According to the hypothesis the size and significance of the coefficients estimate associated with *Business* and *Government Loan* should differ for the two sub samples. If the size effect is more pronounced for the group of smaller firms and/or the coefficients estimates are not significant for the larger firms sub sample then our hypothesis is supported.

We also include *keiretsu* as one of our control variables. Numerous Studies in the past argues that affiliation to industrial groups (*Keiretsu*) facilitates informational and financial coordination. Miwa and Ramseyer (2003) consider such classification as figment of academic and journalist imagination. But they still concede that the firms considered to be *keiretsu* affiliated firms are large firms with loan from largest money-center banks. We do not take position on the merit of *keiretsu* classification. Instead we acknowledge that these are (i) large firms and (ii) with loans from large private banks and hence lesser dependence on government loan. In this context we assess significance of *keiretsu* classification in our model. *keiretsu* is defined as the dummy variable, which takes the value 1 if the firm is among the top fifty firms affiliated to any of the six large corporate groups viz. Mitsui, Mitsubishi and Sumitomo, Sanwa, Fuyo and Dai-ichi Kangyo.

The empirical analysis is based on publicly traded non-financial firms in Tokyo Stock Exchange. Our bench mark estimation is based on 1995 though we also include information on 1991 in our results. The emphasis on 1995 is due to the larger data set, 1441 versus 1049.

5 Empirical Results

5.1 Primary Result

Our results using the 1995 sample are reported in the columns 1-3 of Table 2. We find that coefficient estimate corresponding to *Business*, *Government Loan* are significant at the conventional confidence level. The evidence supports our first hypothesis that firms having business relation with government or having borrowed loans from government are more likely to appoint retired bureaucrats as directors. We also find that magnitude of the coefficient estimate corresponding to *Business* is higher than that of *Government Loan*. This indicates that firms having business link with government are more likely to hire *Amakudari* directors than firms which are debtor to government loans. Overall these results suggest that the ability to play the ‘political role’ by the *Amakudari* directors significantly explains their appointment.

We also witness that coefficient estimate of *Size* is significant and positive. This supports the premise that larger firms face larger political cost. Therefore, larger firms are more likely to recruit retired bureaucrats. We also find that coefficient associated with *Directors* is highly significant and positive. Therefore bigger boards are more likely to employ the *Amakudari* directors. In fact the size effect of the variable *Directors* is larger than *Size*. It is expected that bigger firms have larger boards and therefore it is more likely that bigger boards will employ the retired bureaucrats. Hence, we see greater size effect associated with *Directors*. Finally, we also find that the coefficient estimate of the dummy *keiretsu* enters as significant and with negative sign. It implies that firms affiliated to *keiretsu* groups are rather unlikely to recruit the retired bureaucrats. If we ignore the criticism of Miwa and Ramseyer (2003) this implies that because of the lower financial constraint and more lobbying capability of the *Keiretsu* affiliated firms to

influence the government decisions, such firms do not recruit the retired bureaucrats as directors. We can also conjecture that because of the symmetric information across the grouped firms, *amakudari* officials recruited in one of the affiliated firm could be used as for the benefit of the other firms in the group. Thus, making the likelihood of the recruitment even more remote. Even acknowledging the criticism, it implies that firms with large size and dependence of finance on money center banks have lesser incentive to employ retired bureaucrats. In fact they have incentives to not to employ them.

Before we comment on the support of ‘tacit collusion effect’ we try to find evidence whether the interaction between the agents (government and private corporation) is long term in nature⁴. In our sample we do find evidence of long term firm level interaction with government via *Amakudari* directors. Between 1991 and 1995 almost 60 per cent firms continue to recruit retired bureaucrats. The ‘tacit collusion’ effect also gets support from the similar qualitative results between 1991 and 1995. For 1991 data, coefficients associated with *Business* and *Government Loan*(presented in columns 1-3 of Table 4) remains similar. Thus indicating the importance of ‘political role’ played by the retired bureaucrats across time. Reported in columns 1-3 of Table 4 (1991 sample), we also find that coefficients corresponding to *Size*, *Directors* and *keiretsu* are qualitatively similar to the 1995 results.

5.2 Equalizing Role of *Amakudari* Directors

As mentioned above we split the data using the median of the total asset (*Size*). Firms above the median of *Size* are grouped as larger firms and those below the median value are grouped as smaller sized firms. Columns 4-6 of Table 2 gives us the estimate for the larger sized firms, while the columns 7-9 gives us the estimates for the group of smaller sized firms. The noticeable changes from the primary results are: (i) Coefficient estimate for *Business* improves for the group of larger sized firms and dips for the smaller sized firms, (ii) the coefficient estimate corresponding to *Size* is significant for the larger sized firms but insignificant for the smaller sized firms and (iii) Coefficient estimate of *Directors* is significant for the smaller firms but insignificant for the larger firms. This

⁴According to Ivaldi et. al, tacit collusion can arise when agents interact repeatedly and any deviation from collusive path would trigger retaliation that outweigh the short term benefits of retaliation.

result further lent support to the hypothesis that larger firms are more likely to recruit the retired bureaucrats. However, among the smaller sized firms such a effect is absent. Smaller sized firms are more likely to recruit the retired bureaucrats when they enter into direct transaction with the government.

As mentioned above, we notice that 72 firms out of the 164 firms (for 1995) having business relation with government belongs to construction industry. Accordingly, we estimate our model after dropping firms belonging to construction industry from our sample.

As seen in the columns 1-3 of Table 3, estimate does not show dramatic change compared with estimates based on complete sample. Though we notice the reduction in the size of the coefficient estimate of *Business* from .7412 to .4468. This hints at the significance of the construction industry firms for explaining appointment of retired bureaucrats. The results appear startling when we carry the estimation for the two groups of larger and smaller firms. From the results presented in columns 4-6 and 7-9 in Table 3, we find that (i) coefficient estimate of *Business* is not significant for the larger sized firms, (ii) size effect of coefficient estimate of *Government Loan* is more pronounced for smaller sized firms and significantly (iii) we find that *Size* is significant for the larger sized firms and not smaller sized firms. These results supports our second hypothesis that smaller sized firms are more likely to appoint the retired bureaucrat if there is business link with government of firm is debtor of government loan. Our third hypothesis that larger firms are more likely to appoint *Amakudari* directors also gets further support from these results. In Table 5 estimation results are reported for the year 1991 when the construction industry is dropped from the sample. The results are quite similar. While *Business* is significant for the smaller sized firms, *Size* is significant for the larger sized firms.

The above results are in accordance to the ‘equalizing process’ hypothesis suggested by Calder (1989). It is the smaller sized firms which strive harder to win influence over the government projects and procurement as well as access to government loan in order to compete with larger sized firms. Simultaneously we also find that because of the larger political costs larger sized firms are more likely to recruit the *Amakudari* directors.

6 Conclusion

In this paper, we find that collusive behaviour between the government and the private players is apparent when it comes to firms those have business link with government or have borrowed from the government loan. However such a tendency is more pronounced among the firms that are not the largest in the industry. The incentive structure is biased toward the smaller firms to form collusion with government in order to compete with the bigger players in the industry. This aspect is further strengthened by the finding that firms affiliated to Keiretsu are more likely to not to recruit the retired bureaucrats.

Simultaneously, we find that larger firms too have greater likelihood of appointing the retired bureaucrats. But for the larger firms the incentive is sourced to the higher political costs which is directly related to the size of the firm.

Our work also provide insight on the sustenance of *Amakudari* practice inspite of the general unpopularity. The evidence suggests that firms too have the incentive to participate in the practice. The welfare implication of the *Amakudari* practice is interesting topic for future research.

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Table 1: Summary Statistics (1995)

Industry	No. of Firms	Firms with Amakudari Directors	Proportion	Average Assets (Million Yen)
Chemical	161	22	.13	162857
Construction	117	71	.58	255528
Electric and Machinery	175	45	.25	217669
Foods	92	24	.26	153340
Glass and Ceramics	40	4	.10	140121
Iron and Steel	44	8	.18	352415
Land Transport	19	6	.31	270119
Machinery	130	17	.13	96362
Metal Products	40	14	.35	90481
Mining	8	2	.25	107182
Non Ferrous	50	6	.12	181853
Other Manufacturing	52	10	.19	306028
Petroleum Refineries	12	2	.16	592604
Precision Equipment	29	6	.20	93448
Pulp and Paper	25	3	.12	202853
Real Estate	17	4	.23	370920
Retail	84	19	.22	237265
Rubber	15	0	0	149918
Services	42	16	.38	110668
Shipping	13	2	.15	40886
Textiles	63	6	.09	118605
Transportation Equip.	110	19	.17	296307
Warehousing, Warfing	17	4	.23	67456
Wholesale	95	24	.25	331024

Table 2: Probit regression estimates (Dependent Variable: *Amakudari*) Year: 1995

Independent Variables	Total Sample		Independent Variables	Large Size		Independent Variables	Small Size	
	Estimate	Z		Estimate	Z		Estimate	Z
<i>Business</i>	.7412***	5.58	<i>Business</i>	.8842***	4.81	<i>Business</i>	.7242**	3.51
<i>Government Loan</i>	.2154**	2.38	<i>Government Loan</i>	.2403*	1.98	<i>Government Loan</i>	.2981*	1.92
<i>Size</i>	.1839***	4.30	<i>Size</i>	.3696***	5.25	<i>Size</i>	.0020	.986
<i>Director</i>	.6779***	4.07	<i>Director</i>	.0831	.38	<i>Director</i>	1.6054***	5.45
<i>Keiretsu</i>	-.4784***	-4.46	<i>Keiretsu</i>	-.4261***	-3.20	<i>Keiretsu</i>	-.8704***	-3.87
LR $\chi^2(27)$	288.73		LR $\chi^2(26)$	161.67		LR $\chi^2(21)$	116.15	
Pr ob > χ^2	0.000		Pr ob > χ^2	0.000		Pr ob > χ^2	0.000	
Pseudo R-Squared	.1835		Pseudo R-Squared	.1809		Pseudo R-Squared	.1946	
Observations	1422		Observations	709		Observations	633	

We define *Amakudari* is a binary variable that takes the value 1 if the firm has retired bureaucrat in the board or else 0. *Business* is the binary variable that takes value 1 if there is a business link with the government, otherwise 0. *Government Loan* again is the binary variable that takes value 1 if the firm is borrower to the government credit otherwise 0. *keiretsu* is the dummy variable, which takes the value 1 if the firm is among the top fifty firms affiliated to any of the six large corporate groups. The source of the above variables is *Kigyo Keiretsu Soran*. *Size* is the log form of total assets and is taken from PACAP. *Director* is the log form of the total numbers of directors within a firm. *** indicates significance at 1%, ** indicates significance at 5% and * indicates significance at 10%.

Table 3: Probit regression estimates (Dependent Variable: <i>Amakudari</i> ; Construction Industry Dropped.) Year: 1995								
Independent Variables	Total Sample		Independent Variables	Large Size		Independent Variables	Small Size	
	Estimate	Z		Estimate	Z		Estimate	Z
<i>Business</i>	.4468***	2.83	<i>Business</i>	.3603	1.61	<i>Business</i>	.5683**	2.39
<i>Government Loan</i>	.2412**	2.55	<i>Government Loan</i>	.2438*	1.93	<i>Government Loan</i>	.3903**	2.37
<i>Director</i>	.5229***	3.04	<i>Director</i>	-.0440	-.19	<i>Director</i>	1.4162***	4.68
<i>Size</i>	.2061***	4.70	<i>Size</i>	.4097***	5.64	<i>Size</i>	-.0195	-.016
<i>Keiretsu</i>	-.4747***	-4.17	<i>Keiretsu</i>	-.4300***	-3.01	<i>Keiretsu</i>	-.8556**	-3.58
LR $\chi^2(26)$	164.58		LR $\chi^2(25)$	90.26		LR $\chi^2(20)$	85.07	
Pr ob > χ^2	0.000		Pr ob > χ^2	0.000		Pr ob > χ^2	0.000	
Pseudo R-Squared	.1239		Pseudo R-Squared	.1183		Pseudo R-Squared	.1269	
Observations	1301		Observations	653		Observations	597	

We define *Amakudari* is a binary variable that takes the value 1 if the firm has retired bureaucrat in the board or else 0. *Business* is the binary variable that takes value 1 if there is a business link with the government, otherwise 0. *Government Loan* again is the binary variable that takes value 1 if the firm is borrower to the government credit otherwise 0. *keiretsu* is the dummy variable, which takes the value 1 if the firm is among the top fifty firms affiliated to any of the six large corporate groups. The source of the above variables is *Kigyo Keiretsu Soran*. *Size* is the log form of total assets and is taken from PACAP. *Director* is the log form of the total numbers of directors within a firm. . *** indicates significance at 1%, ** indicates significance at 5% and * indicates significance at 10%.

Table 4: Probit regression estimates (Dependent Variable: <i>Amakudai</i>) Year: 1991								
Independent Variables	Total Sample		Independent Variables	Large Size		Independent Variables	Small Size	
	Estimate	Z		Estimate	Z		Estimate	Z
<i>Business</i>	.5937***	4.36	<i>Business</i>	.5944***	2.95	<i>Business</i>	.7631***	3.78
<i>Government Loan</i>	.3634***	3.26	<i>Government Loan</i>	.2814*	1.78	<i>Government Loan</i>	.4326**	2.55
<i>Size</i>	.1034	1.54	<i>Size</i>	.2642**	2.29	<i>Size</i>	.1291	.85
<i>Director</i>	.7340***	3.00	<i>Director</i>	.6468*	1.90	<i>Director</i>	.7151*	1.86
<i>Keiretsu</i>	-.6353***	-4.77	<i>Keiretsu</i>	-.6326***	.48	<i>Keiretsu</i>	-.8158***	-3.26
LR $\chi^2(23)$	201.49		LR $\chi^2(21)$	125.19		LR $\chi^2(20)$	70.44	
Prob > χ^2	0.000		Prob > χ^2	0.000		Prob > χ^2	0.000	
Pseudo R-Squared	.1855		Pseudo R-Squared	.2145		Pseudo R-Squared	.1536	
Observations	1015		Observations	481		Observations	483	

We define *Amakudari* is a binary variable that takes the value 1 if the firm has retired bureaucrat in the board or else 0. *Business* is the binary variable that takes value 1 if there is a business link with the government, otherwise 0. *Government Loan* again is the binary variable that takes value 1 if the firm is borrower to the government credit otherwise 0. *keiretsu* is the dummy variable, which takes the value 1 if the firm is among the top fifty firms affiliated to any of the six large corporate groups. The source of the above variables is *Kigyo Keiretsu Soran*. *Size* is the log form of total assets and is taken from PACAP. *Director* is the log form of the total numbers of directors within a firm. . *** indicates significance at 1%, ** indicates significance at 5% and * indicates significance at 10%.

Table 5: Probit regression estimates (Dependent Variable: *Amakudari*: Construction Industry Dropped) **Year: 1991**

Independent Variables	Total Sample		Independent Variables	Large Size		Independent Variables	Small Size	
	Estimate	Z		Estimate	Z		Estimate	Z
<i>Business</i>	.3887**	2.52	<i>Business</i>	.1687	.480	<i>Business</i>	.7009***	3.20
<i>Government Loan</i>	.4504***	3.87	<i>Government Loan</i>	.4468***	2.81	<i>Government Loan</i>	.4437**	2.50
<i>Size</i>	.1571**	2.23	<i>Size</i>	.3907***	3.22	<i>Size</i>	.1602	1.01
<i>Director</i>	.4179	1.61	<i>Director</i>	.2306	.65	<i>Director</i>	.4359	1.05
<i>Keiretsu</i>	-.6586***	-4.61	<i>Keiretsu</i>	-.7056***	-3.71	<i>Keiretsu</i>	-.8461***	-3.81
LR $\chi^2(22)$	110.59		LR $\chi^2(20)$	66.29		LR $\chi^2(19)$	55.01	
Pr ob > χ^2	0.000		Pr ob > χ^2	0.000		Pr ob > χ^2	0.000	
Pseudo R-Squared	.1213		Pseudo R-Squared	.1386		Pseudo R-Squared	.1357	
Observations	931		Observations	439		Observations	441	

We define *Amakudari* is a binary variable that takes the value 1 if the firm has retired bureaucrat in the board or else 0. *Business* is the binary variable that takes value 1 if there is a business link with the government, otherwise 0. *Government Loan* again is the binary variable that takes value 1 if the firm is borrower to the government credit otherwise 0. *keiretsu* is the dummy variable, which takes the value 1 if the firm is among the top fifty firms affiliated to any of the six large corporate groups. The source of the above variables is *Kigyo Keiretsu Soran*. *Size* is the log form of total assets and is taken from PACAP. *Director* is the log form of the total numbers of directors within a firm. . *** indicates significance at 1%, ** indicates significance at 5% and * indicates significance at 10%.