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PERFORMANCE ON MANAGERIAL TURNOVER IN
RUSSIAN FIRMS**

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IMPACTS OF CORPORATE GOVERNANCE AND PERFORMANCE ON MANAGERIAL TURNOVER IN RUSSIAN FIRMS*

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Abstract. - In this paper, we deliberate the possible impacts of corporate governance and performance on managerial turnover using a unique dataset of Russian corporations. This study is different from most previous works in that we deal with not only CEO dismissals, but also with managerial turnover in a company as a whole. We find that nonpayment of dividends is correlated significantly with managerial turnover. We also find that the presence of dominant shareholders and foreign investors is another important factor in causing managerial dismissal in Russian corporations, but these two kinds of company owners reveal different effects in terms of turnover magnitude.

Keywords: ownership structure, corporate performance, managerial turnover, Russia.

JEL classification numbers: D21, G34, G35, P31, P34.

1. Introduction

Establishing an effective governance system to discipline top management to produce maximized shareholder wealth is very important, because the diffuse ownership structure in public companies means that shareholders must delegate the daily management of a business to professional managers, and they do not always bend over backward to satisfy their principals.

To control the potential agency conflicts between shareholders and managers, several mechanisms of internal control reside in modern corporations. In this regard, the corporate governance literature pays close attention to insider ownership, boards of directors, and dual leadership system (i.e., a separation of chief executive officer (CEO) and board chairman positions), and also to shareholders' right to remove ineffective managers. In many countries, including Russia and other post-Communist countries, corporate law provides that the contract relationship between a company and its management officers may create a trust that enshrines the right of arbitrary dismissal of executives. This right may be given to the general shareholders' meeting and the board of directors, if such an authority is delegated to the latter by the former.

This legislative ordination is intended to be a formal tool for governing corporations to allow necessary managerial renewals in favor of shareholders' interests.

From this point of view, an empirical test to examine the likelihood of managerial dismissal initiated by a shareholder(s) or through an entrusted board member(s) and the positive link between poor corporate performance and managerial turnover is of considerable significance to measure the viability of the aforesaid shareholders' right, that is, the enforcement of the corporate law in a concerned state. In the context of transition economies, this kind of empirical work is important also to assess the development of the private corporate sector in a country under "the great transformation" (Kornai, 2006) and the degree of adaptation by its citizens to the new principles of life in a market economy.

Although empirical results are mixed, many financial economists confirm the statistically significant impacts of the governance mechanism and corporate performance on managerial turnover in developed countries.¹ As we will discuss later, empirical evidence does exist concerning the close relationship between ownership structure and managerial turnover in Russia. With regard to the impact of corporate performance on dismissal of poor performing managers, however, there are only a handful of papers supporting the empirical relation between the two elements (Muravyev, 2001, 2003a, 2003b; Kapelyushnikov and Demina, 2005). As many researchers of Russian economy point out, the nonsignificant or neutral association between bad performance and managerial turnover in Russian firms is due to the obstinate managerial entrenchment in the background of substantial insider ownership as a result of the mass-privatization policy, weakly functioning internal corporate organs and serious informational asymmetry between management and outside shareholders (Iwasaki, 2006). Although their arguments are convincing, taking the degree of economic transformation and the current social circumstances in Russia into consideration, we feel there is room for more detailed research on this topic.

In this study, we deliberate the possible impacts of governance systems and corporate performance on managerial turnover using a unique dataset of Russian corporations. The survey underlying this article is a Japan-Russia large-scale questionnaire survey of joint-stock companies conducted in the summer of 2005. It covers 822 manufacturing and communication enterprises located in 64 of the 89 regions of the Russian Federation. This paper is based on the results of our joint survey.

From a methodological perspective, this study is different from most previous work in that we deal with not only CEO dismissals, but managerial turnover in a company as a whole, assuming that different types of shareholders may have distinct impacts on removal of poorly performing managers.² We find that nonpayment of dividends is significantly correlated with managerial turnover in our samples. We also find that the presence of dominant shareholders and foreign investors is another important factor

causing managerial dismissals in Russian corporations, but these two kinds of company owners reveal different effects in terms of turnover magnitude.

The remainder of this paper is organized as follows: Section 2 reviews preceding studies of managerial turnover in Russian firms. Section 3 discusses testable hypotheses and empirical methodology. Section 4 describes the data. Section 5 presents our empirical results on the determinants of managerial turnover. Section 6 concludes the paper.

2. Managerial Turnover in Transition Russia: Literature Review³

Many studies have been devoted to the CEO turnover observed in developed countries because this phenomenon offers a unique dimension to corporate governance theory. Likewise, this theme is also a center of attention for those involved in the study of Russian corporate governance. In fact, many researchers and research teams have conducted studies on CEO turnover from the viewpoint of the appointment date of the current president and the reason for the resignation of the predecessor in order to use the data in empirical studies.

Although abundant information on managerial turnover in Russia is available from these survey papers, most of them simply show the percentage of enterprises that experienced a CEO replacement during a given survey period but not changes in the turnover rate over time. Therefore, we estimated the annual CEO turnover for each year from 1993 to 2003 by examining the relevant data available in 14 papers. **Figure 1** plots simple means as well as weighted means by sample size in individual surveys. Dolgopyatova (2003) suggested that CEO turnover increased after the 1998 financial crisis. However, **Figure 1** suggests that it is highly possible that such an upward trend started earlier than that event. In fact, the differences between the average turnover for 1996 and that for 1997 are statistically significant at the 1% level by the one-tail test ($t = 3.55$, $p = 0.004$), whereas the differences between 1997 and 1998 are not significant ($t = 0.474$, $p = 0.323$). Furthermore, a regression analysis of CEO turnover that was adapted from the reform years (setting 1993 to 1 as the starting point) and using a level-shift dummy (set at 1 for 1997 onwards) as explanatory variable, led to the conclusion that there was a statistically significant average divergence of 5.8% in CEO turnover between the two subperiods of 1993 to 1996 and 1997 to 2003.⁴

As indicated in **Figure 2**, after the mass privatization of state-owned enterprises conducted in early 1990s, the year of 1997 became the first year when the average share of insider ownership fell below 50%.⁵ In the same year, the average age of top managers was nearly as high as their retirement age, with the proportion of CEOs older than 60 topping 28%. In addition, the average CEO tenure (7 to 8 years) and turnover frequency (10 to 11%) for Russian corporations over the past few years have been

almost the same as those for American and Japanese companies. In terms of the frequency of outside CEO succession (40 to 50%), Russian firms have kept their level 10 to 20% higher than the average for corporations in developed countries (Weisbach, 1988; Martin and McConnell, 1991; Kang and Shivdasani, 1995; Muravyev, 2001; Rachinsky, 2002; Muravyev, 2003a; Abe and Oguro, 2004; Yasin, 2004). Therefore, the increasing upward trend of CEO turnover frequency shown in **Figure 1** can be attributed to the accelerated development of flexibility of CEO appointment against the background of declining insider control and the aging of Soviet-generation managers (so-called “red executives”).

Table 1 lists empirical studies scrutinizing the linkage between CEO turnover and corporate restructuring in Russia. All studies, except the one by Linz (1996), highlight the critical effects of ownership structure on managerial renewal. They share the following four common perceptions. First, outside ownership is positively and highly statistically correlated with CEO turnover frequency. Second, in contrast, insider shareholding significantly hampers CEO changes as 40 to 50% of enterprises with dominant ownership by managers and worker collectives have a holdover CEO from the Soviet days, a much higher proportion compared with that in other types of corporations (15 to 20%). Third, substantial changes in ownership structure resulting from the replacement of the largest or dominant shareholders are highly likely to cause CEO turnover. Fourth, the higher the investment share of a top shareholder and the ownership concentration rate are, the more frequently CEO turnover occurs.⁶ Moreover, there are two other noteworthy points, first that the government does not necessarily speak for the current management, considering that state ownership increases CEO turnover as well (Kapelyushnikov, 2001; Muravyev, 2001, 2003a). Second, the frequency of insider CEO succession is positively correlated with shareholding by insiders and the federal government, while the presence of outside investors and local governments enhances the possibility of outsider succession (Muravyev, 2003b; Kapelyushnikov and Demina, 2005).

Table 2 shows the results from vote-counting analysis of the impact of different types of owners and changes in ownership structure on CEO turnover based on the 12 estimation results available in the papers listed in **Table 1**.⁷ Here, multiple estimation results were taken from one study only when regression modeling, analysis period and other conditions were substantially different from others in that study. In cases in which more than one estimation result was available from one study regarding the same subject, the most appropriate was selected by judging the coefficient of determination (R^2) and selection of control variables and by considering the simultaneous equation bias, among other factors.

This table confirms the reversed relationship between insiders and outsiders regarding the direction of their impact on CEO turnover. Except for the state ownership, all types of outside owners had a positive impact on managerial turnover, if

they are estimated statistically significant at the 5% level or less. Domestic individual shareholders and financial institutions enjoy a relatively high probability to affect the renewal of company top officers in comparison with domestic nonfinancial corporate shareholders and foreign investors. Changes in ownership structure also exert positive effects on CEO turnover.

Regarding the interrelation between managerial turnover and corporate performance, eight studies shown in **Table 1** examine the effects of the renewal of top-notch managers on ex post corporate performance and restructuring activities. Four of them evaluate the refreshment of management as positive (Barberis et al., 1996; Klepach, Kuznetsov and Kryuchkova, 1996; Filatotchev, Wright, Buck and Dyomina, 1999; Krueger, 2004), and the other four have a neutral or negative view of its influence (Rachinsky, 2001; Peng, Buck and Filatotchev, 2003; Dolgopyatova and Kuznetsov, 2004; Yasin, 2004), leaving room for further discussion.

A more debatable aspect in this regard is the reverse angle of the relationship between these two elements, that is, to the role of corporate performance as a trigger of CEO turnover. The majority of researchers do not provide clear evidence that corporate performance affects the frequency of managerial turnover. Many papers have suggested an extremely limited correlation between these two factors (Kapelyushnikov, 2001; Dolgopyatova and Kuznetsov, 2004) or denied a significant correspondence (Goltsman, 2000; Yasin, 2004). An exhaustive event study by Rachinsky (2002) covering 110 listed corporations also supports these mainstream views. According to his study, only 19.5% of all 113 CEOs who left their post from 1997 to 2001 resigned to take responsibility for the worsening of their business results.⁸ This percentage is much lower than that of CEOs who stepped down for nonmanagerial reasons, such as career changes, age-limit retirements, internal reassignments resulting from organizational changes and nonmanagerial problems (51.3% in total), and even lower than that of those who resigned for other reasons, such as managerial intervention by local governments, social conflicts including labor disputes, legal procedures concerning corporate rehabilitation, takeover and others (24.8% in total). Judging from the above findings, Rachinsky (2002) states that it is difficult, even in listed companies, to drive out top management on the grounds of poor performance, and consequently, CEO changes are not sensitive to corporate performance in Russia.

In contrast, the remaining two studies, Muravyev (2003a) and Kapelyushnikov and Demina (2005) demonstrate that poor corporate performance is positively related to managerial turnover. Using data obtained in the survey of 437 Russian enterprises, Muravyev (2003a) regressed CEO turnover in the period from January 1999 to May 2000 on industry-adjusted labor productivity and other control variables including ownership structure, board composition and company size, etc., and found a statistically robust relationship between past performance and turnover frequency.

He concludes “the fact that bad managers (either incompetent or opportunistic) are punished implies that the widely held assumption about virtual nonexistence of corporate governance in Russia is not valid” (p.168).

Kapelyushnikov and Demina (2005) is the most recent study on managerial turnover in Russia. Using the results of a longitudinal questionnaire survey of industrial firms⁹ carried out in 1997–2003, they performed PROBIT estimation of the CEO-turnover model, and confirmed that on average the possibility of CEO replacement in loss-making firms is 8.5% higher than that in profitable corporations. Moreover, Kapelyushnikov and Demina (2005) also examined the impact of corporate performance on new CEO appointment and substantiated that appointment of incumbent workers to top management is less probable in underperformed enterprises than in profitable ones. Indeed, according to their regression results, the possibility of succession by insiders to company presidents in loss-making firms is 68.8% lower on average than in well-performing firms. Because their dataset consists of many unlisted firms and ex-state-owned privatized firms, their empirical evidence may suggest that the positive link between poor performance and CEO renewal becomes usual governance practice in daily management life in contemporary Russia.

Although their empirical analyses clearly indicates that bad corporate performance enhances CEO turnover in Russian firms, Muravyev (2003a) and Kapelyushnikov and Demina (2005) are still in the minority. In the following sections, we will show additional evidence supporting the empirical relationship between corporate performance and managerial turnover, relying on a complete new dataset of Russian corporations.

3. Hypothesis and Empirical Methodology

As we discussed in the previous section, most prior studies on Russian companies do not find a significant impact of company performance on CEO turnover. We can think of various reasons for the absence of correlation between these two factors in Russia. It is possible that previous literature simply did not have a sufficient number of observations of turnover events. Another possibility is that the CEO in Russia does not play the same role in other countries such as the United States. In the US, the CEO is the bridge between the board of directors and management team, and is solely responsible for management outcomes. That is, the CEO is very powerful. In other developed countries like in Japan, CEOs or company presidents are not as powerful as American top managers are. Rather, they are regarded only as one of the key members of management team. In such a case, when company performance is poor, it does not have to be the CEO who should take the whole responsibility, but other management members are to be blamed. Furthermore, in these countries it is highly likely that the management team in a company should take collective

responsibility and resign as a group when the company produces extremely bad performance or there is a great scandal about its corporate affairs.

Because of the 70-year-long history of the risk-averse way of life in the Soviet period and the Continental European nature of corporate law, the management system in Russian corporations, especially in the former socialist enterprises, inclines toward the team leadership and the collective decision-making practice on everyday management. Indeed, Russian company presidents generally do not stand aloof from other executives, or they do not have sole responsibility for all company matters including poor performance. In other words, Russian managers often share the fruits of collective achievements in corporate management, and at the same time, they jointly sustain damage from any failure as a team member. Consequently, it is conceivable that not only the CEO, but also other high-ranking officers leave their company in response to bad corporate performance caused mainly by their mistakes. It is also possible that the entire management team in a Russian company may resign together due to an irrecoverable loss in its shareholder wealth or company reputation.

Furthermore, it may be optimal for outside shareholders, who have a certain insight into management style in a company they own, to call for resignation not of its president but of another senior manager(s) depending on the seriousness of company problems. It can be justified, when outside shareholders expect that the CEO dismissal may not bring positive effects on ex post management of that company enough to offset the loss of CEO's firm-specific knowledge and experiences. It is particularly true for dominant shareholders who can easily access inside information of management activities in their companies.

If the above discussions would be very much nearer the mark concerning company management life in current Russia, we had better examine the impact of corporate performance not on CEO turnover alone, but also on managerial turnover in a whole company. Relying on this presumption, we attempt to investigate turnover of not only CEOs, but also other high-ranking managers who are in charge of finance, accounting, planning, marketing, or sales management. There are four possible events to examine. They are turnover of both CEO and senior managers (Type I), turnover of only CEO (Type II), turnover of only senior managers (Type III) and no turnover (Type IV). It means that we now have four mutually exclusive outcomes.

Let the value to the i th company of choosing turnover type j ($j = 1, \dots, 4$), be y_{ij}^* , and assume y_{ij}^* depends on company performance (*Performance*), corporate governance related variables such as ownership structure (*CG*) and other variables including firm size, legal form of incorporation, industrial dummies (X) and an error term ε_{ij} :

$$y_{ij}^* = a^j + \beta_1^j \text{Performance}_i + \beta_2^j \text{CG}_i + \beta_3^j X_i + \varepsilon_{ij}. \quad (1)$$

Using Type IV (No turnover) as the base case, we adopt the multinomial PROBIT (MNP) model to estimate the relationship between company performance and the type of turnover.¹⁰

The probability of observing Type j turnover, $y_{ij}=1$ is:

$$P_{ij} = \Pr[y_{ij} = 1] = \Pr[y_{ij}^* > y_{ik}^*, \forall k \neq j | Performance_i, CG_i, X_i].^{11} \quad (2)$$

If there are only two outcomes such as No turnover and CEO turnover, (2) can be written as a standard PROBIT or LOGIT model.

4. Data Description

To perform regression analysis based on the abovementioned methodology, we employ detailed micro data of Russian nonfinancial joint-stock companies with more than 100 employees. The data derives from the joint enterprise survey conducted in 2005 by Hitotsubashi University and State University Higher School of Economics.¹² Our survey is unique in several aspects. First, it contains more than 100 questions on detailed company management, capital and ownership structures, board composition, as well as the relationship between managers and shareholders and other stakeholders. Second, the questionnaires were filled in after interviews with company executives. Third, 822 companies located in 64 regions of the 89 constituent entities of the Russian Federation replied with valid answers to the survey. The proportional distribution of these companies by federal region is very close to that of the actual regional distribution of business organizations according to the official statistics (see **Table 3**). Finally, the sectoral composition of the surveyed firms is also well representing the actual distribution of medium and large-scale joint-stock companies by industry.¹³

Out of 822 observations, we dropped workers' joint-stock companies (people's enterprises) due to the specific nature of their internal control system stipulated by the special law on these legal entities.¹⁴ We also dropped companies that refused to answer to at least one of the questions regarding managerial turnover, relationship between shareholders and managers and company performances, which gives us 602 observations.

Our survey contains many items on turnover of not only CEO or board members, but of senior managers. One of the drawbacks of the survey is its weakness in accounting information. Most surveyed companies are not listed. Although we asked questions on company performance such as profit, dividend and sales growth, such variables most likely contain many measurement errors. In the following empirical analyses, it is important to take it into account the characteristics of the data.¹⁵

The variables we use in our empirical model (2) are as follows:

y: The CEO turnover dummy takes unity if the CEO left the company between 2001 and 2004 on the initiative of shareholders, otherwise, the dummy takes zero. Turnover dummy of senior managers takes a value of 1 if the company reports that many managers who are in charge of finance, accounting planning, marketing and sales left the company between 2001 and 2004. The turnover index is created from these two dummy variables, which gives us four mutually exclusive outcomes.

Performance: As independent variables representing corporate performance, we utilize two different indices: That is, first, a dividend payment dummy (*DIVPAY*) that takes unity when dividends on common stock were paid between 2001 and 2004, otherwise zero, and second, a sales growth index (*SALGRO*) that captures the relative sales growth to the industrial average from 2000 to 2004. The original variable is an index (1 for doubled or more sales growth during the period, 2 for 1.5 times less than doubled, 3 for less than 1.5 times, 4 for not changed and 5 for declined). We take the industrial averages of the variable and subtract the mean from the company level variable.

CG: As independent variables of governance mechanism, we adapt two ownership variables taking into account the findings of the prior studies on managerial turnover in Russia, as mentioned in Section 2. They consist of first an index for ownership share by foreign investors (*OWNFOR*) that takes 0 for zero, 1 for 10% or less, 2 for 10.1–25%, 3 for 25.1–50%, 4 for 50.1–75 and 5 for more than 75% and second, a dummy for existence of dominant shareholders (*DOMSHA*). The dominant shareholder is defined as the shareholder who owns more than 50% of common stock and has controlling interest.¹⁶

X: Furthermore, we introduce the next three variables to control other firm specificity. Namely, (a) Natural logarithms of the number of employment as a proxy of company size (*COMSIZ*), (b) Open joint-stock company dummy (*OPECOM*),¹⁷ and (c) Industrial dummies for nine classifications.

Table 4 shows the descriptive statistics for all the 602 observations and those for each turnover type. Among 602 companies, 68 firms (11.3%) report that they experienced turnover of both CEO and managers (Type I). Combining Type I and II, about 27% of companies went through turnover of CEO initiated by shareholders. *SALGRO* is positive for no turnover case (Type IV), but positive for all other cases, which suggests companies that experienced any type of turnovers grew slower than other companies. The mean of *DIVPAY* is 0.45 for Type IV and 0.28 for CEO sole turnover (Type II), which suggests companies whose CEO resigned recently did not pay dividends. There tend to be more open joint-stock companies that experienced Type I turnover. Companies with more foreign shareholders went through more Type I and Type II turnover than other types of turnover. The most noticeable point of **Table 4** is probably the role of dominant shareholders in turnover. More than 90% of companies whose CEO and managers resigned had a dominant shareholder, while less

than 70% of the companies that did not experience any managerial turnover had a dominant shareholder. On the whole, **Table 4** suggests that a company that has a dominant shareholder, low sales growth and more ownership share by foreigners experienced Type I turnover. A company without dividend payments went through Type II turnover. Overall, these findings seem to be consistent with the hypothesis we discussed in the previous section.

5. Empirical Results

In this section, to evaluate the impacts of corporate performance and governance mechanism on managerial turnover, we conduct regression analysis in multivariate setting. Our analysis begins with an examination of the determinants of CEO turnover by the LOGIT model, taking the CEO turnover dummy as a dependent variable. Next, we perform the multinomial PROBIT estimation of managerial turnover using the four mutually exclusive turnover indices capturing the magnitude of managerial removal in the scale of whole company.

Table 5 contains the standard LOGIT estimates. Model [L1] in **panel A** of **Table 5** uses the full sample consisting of total 602 companies. In addition, in order to validate the robustness of the estimation results, a supplementary estimation is performed using the following three cases. That is, we estimate the model [L2] using the full sample excluding all firms with no dividend payment. Model [L3] uses the sample with negative relative sales growth index and Model [L4] is estimated based on the sample with no dividend payments and negative relative sales growth. Models [L5] to [L8] in **panel B** of **Table 5** utilize the same sample criteria as Model [L1] to [L4], respectively. The only difference is Models [L5] to [L8] do not include industrial dummies in the control variables. The marginal effects of each independent variable are reported in the next column to the coefficients.¹⁸

Results of Model [L1] and [L5] show that company performance represented by *DIVPAY* and *SALGRO* do not have significant effects on CEO turnover. We can observe several positive significant effects of foreign ownership (*OWNFOR*) and presence of a dominant shareholder (*DOMSHA*) on dismissal of CEO initiated by shareholders. Results in Model [L2], [L3], [L6] and [L7] suggest that a company with poor performance tends to experience CEO removal more if their ownership share by foreign investors is high or if there exists a dominant shareholder. A serious problem in this specification is statistically weak effects of performance on CEO turnover in Model [L1] and [L5] full sample estimation. Largely, our LOGIT estimates in **Table 5** confirm the main findings of preceding studies, which suggest the weak correlation between corporate performance on CEO turnover, and the significant impact of ownership structure on top management removal.

Next, we look into the joint turnover of company presidents and senior managers in our samples. **Table 6** reports the regression results by the multinomial PROBIT maximum likelihood. The base category for our MNP estimation is the firms with no turnover events (Type IV). Models [M1] to [M8] use the same sample criteria and control variables as Model [L1] to [L8], respectively. This time, we can confirm negative significant impacts of performance on CEO turnover (Type II). That is to say, *DIVPAY* has negative significant effects on CEO dismissal under all the specifications. Although *SALGRO* does not have statistically significant impacts on CEO removal, the sign is negative under all the specifications, which suggests that poor company performance in terms of sale growth induces turnover of top managers. The MNP estimation results contrast with previous literature and our LOGIT regression analysis reported in **Table 5**.

We think that the difference occurs for two reasons. The first is the fact the multinomial PROBIT model is statistically more powerful than the standard LOGIT model. Notice that although the *DIVPAY* dummy variable in **Table 5** is insignificant, the sign is negative. Utilizing information of various turnovers simultaneously, we can increase the statistical powers to reject the null hypothesis. The second reason is the importance of distinction between CEOs' and other high-ranking managers' turnover. As we discussed in Section 3, when company performance is poor, it does not have to be always the CEO who is responsible for it. It is likely that other senior manager(s) may resign instead of the company president especially if companies are running under a collective management system. Although it is almost impossible to identify who should take the responsibility from the data, by controlling for ownership structure and other company characteristics, we think we can get information on how companies react differently to realization of bad company performances.

Another noteworthy result in **Table 6** is that the shareholding by foreign investors (*OWNFOR*) has positive and significant effects on CEO sole turnover (Type II), although the effects on other turnovers are not significant. The effects of dominant shareholder dummy (*DOMSHA*) is significant in Type I turnover, that is, turnover of both CEO and senior managers, but not significant in CEO only turnover. As for Type III turnover – turnover of senior managers only, *DOMSHA* is positive and significant when the sample is limited to firms with no dividend payment and lower sales growth than industrial average (Models [M4] and [M8]). We interpret this result as follows. It is very difficult for foreign owners to monitor activities of the CEO and other company managers in Russian firms due to several reasons including weak disclosure requirements and managers' hostile attitude to foreigners. Therefore, when the outcome from company management is poor, foreign investors are unable to identify what is the main cause of this bad performance. In such a case, the foreign shareholders may simply call for the CEO to take the responsibility following the western practices.

On the other hand, if the dominant shareholder, who is in many cases either a rich Russian private investor or a nonfinancial corporate shareholder including holding companies and other business groups, exists in a company, such a shareholder has a strong incentive to monitor the activities of its company managers. With intensive monitoring, it might be possible for him or her to identify who is really responsible for the poor outcome. Hence, the dominant shareholders with deep insight into management activities in companies they fund may exert pressure on an individual manager to resign for his/her bad performance possibly through their unofficial contact with the management. It is also possible for them to call on the whole management team to leave their companies, when, for instance, bad corporate performance has its roots in the ineffective coordination of collective decision making on strategic management matters or in terrible opportunistic behavior as a team. Comparing the marginal effects of Model [M3] with that of [M1], the former coefficient of *DOMSHA* is greater than the latter. Recall that Model [M3] uses the observations with lower sales growth. That is, the dominant shareholders increase the turnover of both CEO and senior managers when the company performance measured by sales growth is poor. This is consistent with the view that the dominant shareholder is playing a disciplinary role for Russian companies.

Turnover of a CEO or senior managers could take place when internal conflict occurs between outside shareholders and management. In Russia, company infighting is not an extraordinary case, rather an everyday incident. In fact, 206 or 25.1% of 822 surveyed firms responded that they experienced a harsh internal conflict(s) at least once from 2001 to 2004.¹⁹

Apparently, the internal conflict is not a random event. Poor company performance, or ownership structure and other company characteristics could trigger the conflict. There is a possibility that the statistical relationship between turnover and other variables is spurious and the conflict could explain the turnover. To check this possibility, we perform additional multinomial PROBIT regressions by including an internal conflict dummy (*INTCON*), in which the value of 1 is assigned to companies that experienced infighting between managers and shareholders in 2001–04, in independent variables.

Table 7 shows the results.²⁰ First of all, we can observe that the log likelihood of Model [M9] is -620.49 in **panel A** of **Table 7**, which is much larger than that of Model [M1] (-640.85) in **panel A** of **Table 6**. This implies that internal conflict itself has a large explanatory power for our turnover model. Second, although it is not significant at the 5% level in Type I of Model [M9], generally, *INTCON* has positive significant effects on various turnovers. Third, there are not remarkable differences in estimated coefficients of other variables such as *DIVPAY*, *OWNFOR* and *DOMSHA* between the MNP estimations with and without the internal conflict dummy variable. Since it is possible that the estimated coefficients of *INTCON* are biased due to the

correlation between this variable and error terms, we should be careful to interpret the results. However, it is safe to say that the relationships between turnover and company characteristics such as corporate performance and ownership structures observed in **Table 4** are not spurious due to the effects of the intracompany infighting.

6. Concluding Remarks

Although the corporate governance literature provides much empirical evidence of the significant association between corporate performance and CEO turnover in developed countries, the majority of research on Russian firms is quite negative in this respect. The little correlation between two factors may be due to not having a sufficient number of observations of turnover events. It is also possible that the reason of the nonsignificant relation between bad performance and CEO turnover in the prior studies is that the authors implicitly assume that the Russian manner of managerial dismissal is very similar to that in the United States, disregarding the collective nature of the management system in Russian firms, especially in the ex-socialist enterprises.

Using a unique firm-level dataset obtained from our large-scale enterprise survey conducted in 2005, we attempted to deal with the above two problems. The estimation results of the multinomial PROBIT model reported in the previous section strongly suggest that nonpayment of dividends as a proxy of bad corporate performance is significantly correlated with managerial turnover in stark contrast to the standard LOGIT estimation of CEO turnover as the preceding studies do. It is possible that utilizing information of various turnovers simultaneously, we can increase the statistical powers to reject the null hypothesis.

We also find that the presence of a dominant shareholder or foreign investor is another important factor in causing managerial dismissal in Russian corporations. This finding is mostly consistent with the preceding work. However, it is more important to point out from the analytical viewpoint that these two kinds of shareholders may have different effects on managerial turnover in terms of its magnitude. That might be because there is a perceptible difference in behavioral patterns between Russia and foreign investors. The large shareholding may also play a significant role to inspire dominant shareholders to conduct intensive monitoring over management activities in companies they own. Not simply removing company presidents in response to poor management outcomes, dominant shareholders may utilize human capital in their companies more effectively than minority shareholders including foreign investors do.

At any rate, the presence of the empirical relationship between dividend payment and managerial turnover indicates the growing respect to shareholder wealth in Russia among domestic investors. As the transition to a market economy will go further, we

may see more visible change in empirical results of this country even in the near future.

Endnotes

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¹ See Coughlan and Schmidt (1985), Weisbach (1988), Martin and McConnell (1991), Kang and Shivdasani (1995), Denis et al. (1997), Goyal and Park (2002), Abe and Oguro (2004), Huson et al. (2004), and others.

² In this paper, CEOs denote not only chief executive officers in the western terms, but also company presidents and general directors.

³ This section quotes to Iwasaki (2006), but it is substantially modified for discussion in this paper.

⁴ The OLS estimation result is as follows:

$$\text{Turnover} = 7.64^* - 0.27\text{Reformyear} + 5.79^*\text{After1997},$$

(8.00) (1.18) (4.69)

$$N=56, R^2=0.480, \text{Adj. } R^2=0.461, F=24.484^*.$$

The *t*-values are in parentheses. * denotes that the coefficient is significant at the 1% level.

⁵ During mass-privatization period from August 1992 to June 1994, 67% of all state-owned enterprises eligible for privatization adopted an option plan in which management and employees were allowed to acquire a maximum of 51% of a firm’s total stock at 70% of face value. As a result, the vast majority of the privatized firms had been heavily controlled by insiders. However, in the second half of 1990s the shareholding by insiders was remarkably decreased mainly due to massive selling own shares by rank and file workers (Iwasaki, 2006).

⁶ For instance, a survey covering 334 industrial firms revealed that, as of the end of 2001, the largest shareholders in enterprises whose CEOs were appointed in or after 1998 had an average ownership of 45.1%, whereas those in enterprises whose CEOs had been in office for 10 years had an average ownership of 24.2% (Dolgopyatova, 2003).

⁷ For details of vote-counting method, see Hunter and Schmidt (2004).

⁸ CEO turnover occurred in 69 of the 110 companies surveyed. Twenty companies experienced the phenomenon twice, and 9 companies experienced it three or more times during the survey period (op. cit.).

⁹ It is called the “Russian Economic Barometer” survey project – one of representative longitudinal enterprise surveys in Russia. More information is available at: <http://www.imemo.ru/barom/>.

¹⁰ In this paper, we do not use the multinomial LOGIT (MNL) model for our empirical analysis because IIA assumption for MNL is rejected. Since MNP with a general

covariance matrix takes a prohibitively long time to converge, we assume that all the covariances between type i residuals and type j residuals except for diagonal elements are identical.

- ¹¹ See Stern (1997) for detail of the procedure to work with MNP model.
- ¹² Dolgopyatova and Iwasaki (2006) give a comprehensive explanation of the survey including the sampling procedures, questionnaires, sample statistics, and comparisons with other surveys.
- ¹³ The detailed sectoral breakdown of the 822 companies is as follows: (1) Fuel and energy (66 firms or 8.0%), (2) Metallurgy (36 firms or 4.4 cent), (3) Machine-building and metal working (255 firms or 31.0%), (4) Chemical and petroleum (33 firms or 4.0%), (5) Wood, paper, and paper products (63 firms or 7.7%), (6) Light industry (51 firms or 6.2%), (7) Food industry (169 firms or 20.6%), (8). Construction materials (78 firms or 9.5%), and (9) Communications (71 firms or 8.6%).
- ¹⁴ For more details on workers' joint-stock company, see Iwasaki (2003).
- ¹⁵ Another thing to be noticed is its response rate. Because our survey was interview based, the response rate was not expected to be high. The ratio is approximately one third. That is, one of three company executives refused to participate in the survey (Dolgopyatova and Iwasaki, 2006, p. 8).
- ¹⁶ Although, the survey covers current board composition, it did not ask the composition before the turnover event. Although we could include the board composition in our explanatory variables, we did not so because (1) turnover or top executives likely precede changes in board composition so that the endogeneity issue is serious, (2) in many cases, when we include information of the outside board member ratio, our likelihood functions fail to converge, and (3) for some cases in which we could obtain the maximum, the outside board member ratio is not statistically significant.
- ¹⁷ There are two types of stock corporations in Russia – open and closed companies. Stock of a closed company cannot be traded without permission of all other stockholders. To be a closed company, several criteria such as the number of shareholders and the amount of capital should be met. For more details on this matter, see Iwasaki (2003).
- ¹⁸ The marginal effects in the LOGIT model are calculated as $\partial Y/\partial x_i = \Lambda(x_i, \beta)[1 - \Lambda(x_i, \beta)]\beta$, where Y is a dichotomous dependent variable, x is a vector of independent variables including constant term, β is a parameter vector, and $\Lambda(\cdot)$ indicates the logistic cumulative distribution function. In the multinomial PROBIT models, $\Lambda(\cdot)$ is substituted the standard normal distribution function.
- ¹⁹ See page 52 in Dolgopyatova and Iwasaki (2006).
- ²⁰ Sample size becomes smaller in Table 7 because some companies refused to answer to the question about the occurrence of the internal conflict.

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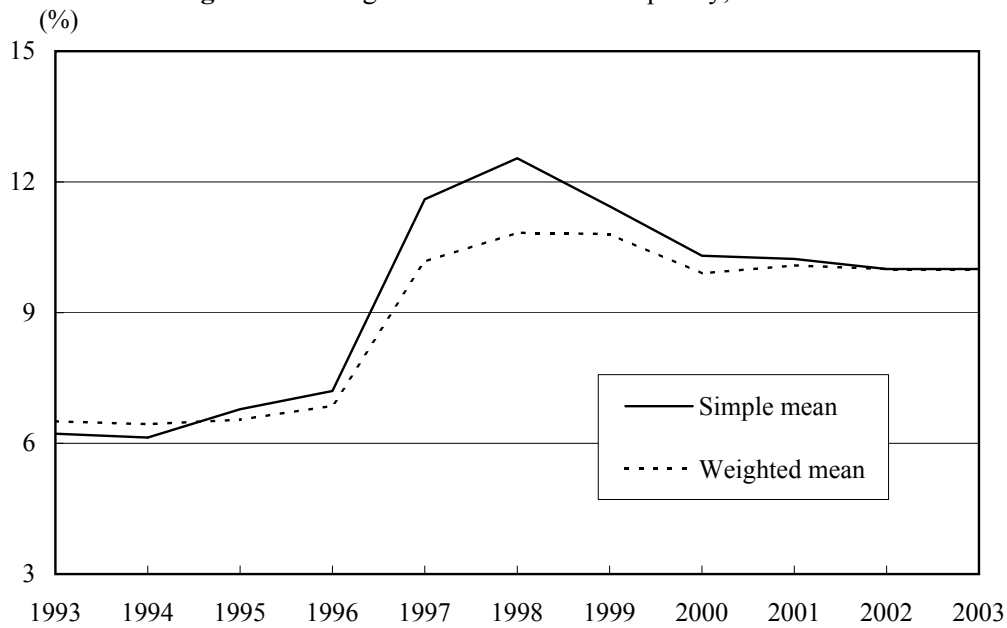
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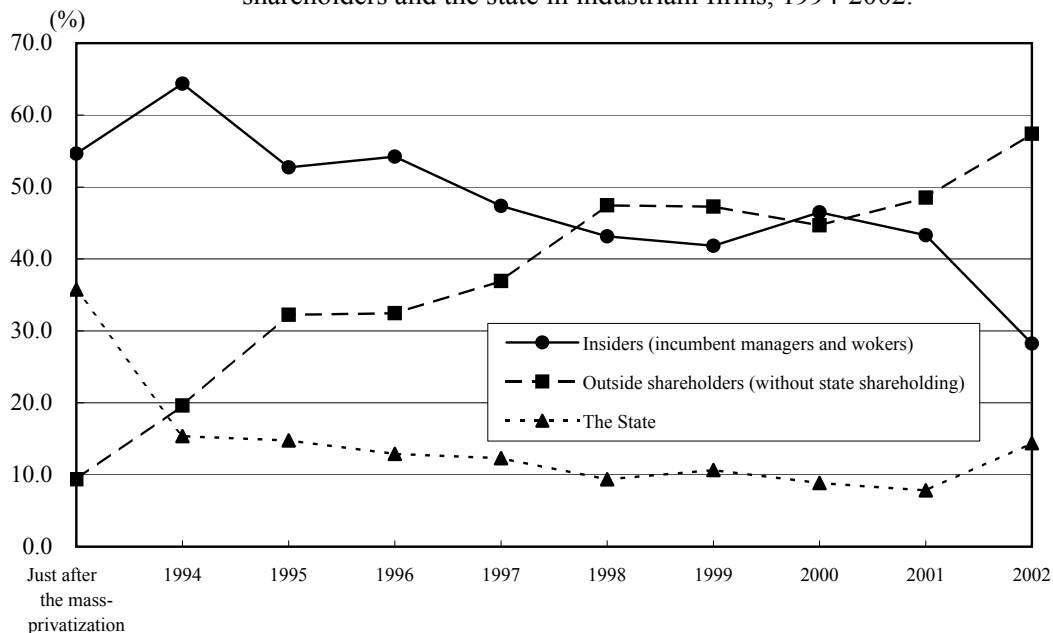
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Figure 1: Changes in CEO turnover frequency, 1993-2003.



Source : Authors' illustration based on Klepach, Kuznetsov, and Kryuchkova (1996) (covering 66 firms); Linz (1996) (1,714 firms); Filatotchev, Wright, and Bleaney (1999) (314 firms); Filatotchev, Wright, Buck, and Dyomina (1999) (98 firms); Radygin and Arkhipov (2000) (872 firms); Goltsman (2000) (217 firms); Kapelyushnikov (2001) (135 to 156 firms); Rachinsky (2001, 2002) (110 firms); Gurkov (2002) (530 firms); Muravyev (2003a) (413 firms); Dolgopyatova (2003) (523 firms); Dolgopyatova (2004) (20 firms); and Dolgopyatova and Kuznetsov (2004) (328 firms).

Figure 2: Changes in average ownership share by insiders, outside shareholders and the state in industrial firms, 1994-2002.



Source : Authors' illustration. The ownership share of each category of shareholders was calculated basing on the survey results reported in 25 different papers investigated into the ownership structure of industrial firms for various periods. For more details, see Iwasaki (2006).

Table 1: Studies of managerial turnover in Russian firms.

Paper	Analysis period	Tested interrelations ^a	Empirical method ^b
Barberis et al. (1996)	1992-1993	II	RA (OLS, 2SLS)*
Frydman, Pistor, and Rapaczynski (1996)	1994	I	RA (LOG)
Klepach, Kuznetsov, and Kryuchkova (1996)	1995	II	DS
Linz (1996)	1992-1995	I	RA (PRO)
Filatotchev, Wright, and Bleaney (1999)	1992-1996	I	DS
Filatotchev, Wright, Buck, and Dyomina (1999)	1995-1998	III	DS, RA (LOG)
Basargin and Perevalov (2000)	1994-1999	I	RA (PRO)
Goltsman (2000)	1999	I	RA (PRO, TOB)
Bevan et al. (2001)	2000	I	DS
Kapelyushnikov (2001)	2001	I	DS
Muravyev (2001, 2003a)	1999-2000	I	DS, RA (PRO)
Rachinsky (2001)	1997-2000	II	RA (OLS)
Rachinsky (2002)	1997-2001	I	DS, CS
Dolgopyatova (2003a)	2001	I	DS
Peng, Buck, and Filatotchev (2003)	1995	II	RA (PRO)
Wright et al. (2003)	1997	I	DS
Dolgopyatova (2004c)	2003	I	DS
Dolgopyatova and Kuznetsov (2004)	2001	III	DS
Krueger (2004)	1994-1997, 1999	II	RA (OLS)
Yasin (2004)	2003	III	DS, PS
Kapelyushnikov and Demina (2005)	1995-2003	I	DS, RA (PRO)

Source: Compiled by the authors.

Notes: ^a Each code represents the following: I: Ownership structure and/or corporate performance have an impact on managerial turnover; II: Managerial turnover has an impact on corporate performance and/or restructuring; III: I+II

^b Each code represents the following: CS: Case study; DS: Descriptive statistical analysis (t-test of differences in means, ANOVA, etc.); RA: Regression analysis (OLS: Ordinary least squares; 2SLS: Two-stage least squares; PRO: Probit; LOG: Logit; TOB: Tobit;

*: Analysis dealing with selection bias for privatized enterprises); PS: Point systems for individual survey items

Table 2: Results from vote-counting analysis of impact of different types of owners and changes in ownership structure on CEO turnover.

Type of owner	Number of samples				Composition (%)			
	Significantly negative	Not significant	Significantly positive	Total	Significantly negative	Not significant	Significantly positive	Total
Insiders	2	1	0	3	66.7	33.3	0.0	100.0
Workers	3	1	0	4	75.0	25.0	0.0	100.0
Outsiders	0	2	2	4	0.0	50.0	50.0	100.0
Domestic individuals	0	1	2	3	0.0	33.3	66.7	100.0
Domestic corporations	0	5	2	7	0.0	71.4	28.6	100.0
Financial institutions	0	2	3	5	0.0	40.0	60.0	100.0
Foreign investors	0	2	1	3	0.0	66.7	33.3	100.0
State	2	2	2	6	33.3	33.3	33.3	100.0
Changes in ownership structure	0	0	2	2	0.0	0.0	100.0	100.0

Source : Compiled by the authors based on the preceding studies listed in Table 1.

Note : The significance level for the verification was set to the 5% level.

Table 3: Regional distribution of surveyed firms and comparison with official statistics on that of business organizations.

	Enterprise survey		Official statistics (as of January 1, 2004)	
	Number	Share (%)	Number	Share (%)
Russian Federation	822	100.0	468,841	100.0
Central Federal District	265	32.2	165,453	35.3
North West Federal District	97	11.8	66,452	14.2
South Federal District	71	8.6	51,841	11.1
Privolzhsky (Volga) Federal District	197	24.0	69,767	14.9
Ural Federal District	83	10.1	36,413	7.8
Siberian Federal District	85	10.3	54,741	11.7
Far East Federal District	24	2.9	24,174	5.2

Source : Dolgopyatova and Iwasaki (2006, p.15). Official statistics are quoted to the released data by the Russian Statistical Service.

Table 4: Descriptive statistics of independent variables by company group in terms of turnover type.

	Observations	<i>DIVPAY</i>	<i>SALGRO</i>	<i>OWNFOR</i>	<i>DOMSHA</i>	<i>COMSIZ</i>	<i>OPECOM</i>
	number (%)	mean (S.D)	mean (S.D)	mean (S.D)	mean (S.D)	mean (S.D)	mean (S.D)
All firms	602 (100.0)	0.392 (0.489)	-0.029 (1.249)	0.364 (1.054)	0.728 (0.446)	6.464 (1.251)	0.688 (0.464)
Firms with turnover of CEO and senior managers (Type I)	68 (11.3)	0.426 (0.498)	-0.132 (1.234)	0.618 (1.350)	0.912 (0.286)	6.802 (1.506)	0.794 (0.407)
Firms with CEO turnover only (Type II)	75 (12.5)	0.280 (0.452)	-0.051 (1.406)	0.693 (1.559)	0.760 (0.430)	6.614 (1.308)	0.667 (0.475)
Firms with turnover of senior managers only (Type III)	107 (17.8)	0.318 (0.468)	-0.149 (1.220)	0.336 (0.941)	0.738 (0.442)	6.393 (1.203)	0.729 (0.447)
Firm with no turnover (Type IV)	352 (58.5)	0.432 (0.496)	0.032 (1.226)	0.253 (0.852)	0.682 (0.466)	6.389 (1.190)	0.659 (0.475)

Source : Authors' calculation.

Table 5: LOGIT regression analysis of the impacts of corporate governance and performance on CEO turnover.

A. Estimation with industrial effects

Model ^a	[L1]		[L2]		[L3]		[L4]	
	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx
<i>COMSIZ</i>	0.1635 (1.86)	0.0283 (1.87)	0.1364 (1.12)	0.0252 (1.12)	0.2266* (2.07)	0.0404* (2.08)	0.2600 (1.67)	0.0517 (1.68)
<i>OWNFOR</i>	0.2594** (2.95)	0.0449** (2.95)	0.2621* (2.42)	0.0484* (2.43)	0.1926 (1.79)	0.0344 (1.79)	0.2017 (1.56)	0.0401 (1.56)
<i>DOMSHA</i>	0.7696** (3.05)	0.1205*** (3.45)	0.3338 (1.11)	0.059 (1.16)	0.8494* (2.45)	0.1352** (2.83)	0.3369 (0.82)	0.0642 (0.86)
<i>OPECOM</i>	0.1221 (0.52)	0.0209 (0.53)	-0.0222 (-0.08)	-0.0041 (-0.08)	-0.4026 (-1.32)	-0.0747 (-1.28)	-0.6106 (-1.70)	-0.1269 (-1.65)
<i>SALGRO</i>	-0.0033 (-0.04)	-0.0006 (-0.04)	-0.029 (-0.30)	-0.0054 (-0.30)				
<i>DIVPAY</i>	-0.3933 (-1.79)	-0.0665 (-1.84)			-0.6143* (-2.07)	-0.1054* (-2.17)		
Constant	-2.7456*** (-3.79)		-2.3804* (-2.35)		-2.5268** (-2.75)		-2.0095 (-1.62)	
Industrial dummies	Yes		Yes		Yes		Yes	
<i>N</i>	602		366		337		208	
Log likelihood	-312.4620		-199.5589		-176.4265		-117.0546	

B. Estimation without industrial effects

Model ^a	[L5]		[L6]		[L7]		[L8]	
	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx
<i>COMSIZ</i>	0.1714* (2.06)	0.0299* (2.07)	0.1417 (1.24)	0.0265 (1.25)	0.2525* (2.42)	0.0459* (2.44)	0.2982* (2.09)	0.0600* (2.10)
<i>OWNFOR</i>	0.2443** (2.92)	0.0427** (2.92)	0.1970* (2.00)	0.0369* (2.00)	0.1888 (1.86)	0.0343 (1.86)	0.1554 (1.33)	0.0313 (1.33)
<i>DOMSHA</i>	0.7597** (3.04)	0.1202*** (3.45)	0.3656 (1.24)	0.0653 (1.31)	0.8342* (2.47)	0.1356** (2.84)	0.3637 (0.93)	0.0699 (0.98)
<i>OPECOM</i>	0.1247 (0.55)	0.0215 (0.56)	0.0134 (0.05)	0.0025 (0.05)	-0.3753 (-1.28)	-0.0706 (-1.24)	-0.5477 (-1.58)	-0.1145 (-1.54)
<i>SALGRO</i>	-0.0072 (-0.09)	-0.0013 (-0.09)	-0.0388 (-0.40)	-0.0073 (-0.40)				
<i>DIVPAY</i>	-0.3458 (-1.63)	-0.0591 (-1.67)			-0.5599 (-1.96)	-0.0981* (-2.05)		
Constant	-2.9341*** (-5.22)		-2.3375** (-3.16)		-3.0387*** (-4.34)		-2.8181** (-3.07)	
Industrial dummies	No		No		No		No	
<i>N</i>	602		366		337		208	
Log likelihood	-315.0965		-203.0402		-179.5852		-119.7881	

Source : Authors' estimation.

Notes : ^a Model [L1] and [L5] are estimated using full sample; Model [L2] and [L6] - firms without dividend payment; Model [L3] and [L7] - firms with lower sales growth than industrial average; Model [L4] and [L8] - firms without dividend payment and with lower sales growth than industrial average.

^b dF/dx denotes marginal effects of independent variables.

^c t-values are in parentheses. *, **, and *** denote 5%, 1%, and 0.01% significance, respectively.

Table 6: Multinomial PROBIT regression analysis of the impacts of corporate governance and performance on managerial turnover taking its magnitude into consideration.

A. Estimation with industrial effects

Model ^a	[M1]		[M2]		[M3]		[M4]		
	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx	
Firms with turnover of CEO and senior managers (Type I)	<i>CONSIZE</i>	0.1338 (1.57)	0.0145 (1.35)	0.1577 (1.29)	0.0043 (1.08)	0.2600* (2.42)	0.0460* (2.43)	0.3121* (1.98)	0.0239* (1.97)
	<i>OWNFOR</i>	0.2021* (2.26)	0.0195 (1.78)	0.1399 (1.12)	0.0025 (0.59)	0.1132 (0.97)	0.0162 (0.78)	0.0523 (0.32)	0.0015 (0.12)
	<i>DOMSHA</i>	1.0467*** (3.85)	0.1038*** (4.71)	0.5959 (1.87)	0.0133 (1.66)	1.0405** (2.89)	0.1529*** (3.60)	0.6577 (1.56)	0.0401 (1.72)
	<i>OPECOM</i>	0.3457 (1.47)	0.0381 (1.42)	0.2900 (0.99)	0.0073 (0.82)	-0.0628 (-0.20)	-0.0082 (-0.14)	-0.1481 (-0.39)	-0.0085 (-0.27)
	<i>SALGRO</i>	-0.0501 (-0.64)	-0.0039 (-0.39)	-0.0796 (-0.82)	-0.002 (-0.60)				
	<i>DIVPAY</i>	-0.1524 (-0.73)	0.0061 (0.23)			-0.4162 (-1.49)	-0.0611 (-1.30)		
	Constant	-3.0772*** (-4.23)		-3.4906** (-3.20)		-3.6890*** (-3.87)		-3.4274** (-2.58)	
Firms with CEO turnover only (Type II)	<i>CONSIZE</i>	0.125 (1.50)	0.0157 (1.29)	0.0878 (0.75)	0.0111 (0.55)	0.1127 (1.02)	0.0016 (0.40)	0.1245 (0.80)	0.0053 (0.55)
	<i>OWNFOR</i>	0.2135* (2.56)	0.0255* (2.18)	0.2472* (2.51)	0.0419* (2.49)	0.2298* (2.22)	0.0073 (1.92)	0.2778* (2.23)	0.0170* (2.13)
	<i>DOMSHA</i>	0.3058 (1.44)	0.0169 (0.58)	0.2128 (0.80)	0.0107 (0.23)	0.4554 (1.53)	0.0069 (0.75)	0.3387 (0.90)	0.0142 (0.72)
	<i>OPECOM</i>	-0.0121 (-0.06)	-0.019 (-0.59)	-0.0403 (-0.16)	-0.0293 (-0.64)	-0.4216 (-1.47)	-0.0185 (-1.32)	-0.4575 (-1.33)	-0.0317 (-1.20)
	<i>SALGRO</i>	-0.0052 (-0.07)	0.0038 (0.35)	-0.0174 (-0.20)	0.002 (0.13)				
	<i>DIVPAY</i>	-0.6183** (-2.95)	-0.0758** (-2.73)			-0.7483** (-2.61)	-0.0217* (-2.25)		
	Constant	-1.8564** (-2.79)		-1.8015 (-1.96)		-1.2989 (-1.50)		-1.3034 (-1.09)	
Firms with turnover of senior managers only (Type III)	<i>CONSIZE</i>	0.0217 (0.27)	-0.0049 (-0.32)	0.0731 (0.66)	0.0098 (0.43)	0.0649 (0.62)	-0.0005 (-0.08)	0.0575 (0.39)	0.000 (-0.00)
	<i>OWNFOR</i>	0.0873 (0.98)	0.0028 (0.17)	0.0678 (0.63)	-0.0005 (-0.02)	0.1494 (1.39)	0.0071 (1.09)	0.1633 (1.21)	0.0019 (0.97)
	<i>DOMSHA</i>	0.2471 (1.28)	0.010 (0.28)	0.4635 (1.79)	0.0819 (1.70)	0.3400 (1.28)	0.0054 (0.36)	0.8916* (2.29)	0.0084* (2.18)
	<i>OPECOM</i>	0.2267 (1.15)	0.0351 (0.99)	0.3388 (1.39)	0.0734 (1.54)	0.0743 (0.28)	0.0074 (0.48)	0.3108 (0.92)	0.0053 (1.33)
	<i>SALGRO</i>	-0.0864 (-1.27)	-0.0158 (-1.23)	-0.080 (-0.97)	-0.0162 (-0.94)				
	<i>DIVPAY</i>	-0.3824* (-2.05)	-0.0488 (-1.45)			-0.4404 (-1.76)	-0.0186 (-1.29)		
	Constant	-0.9618 (-1.52)		-2.3899* (-2.56)		-1.6255 (-1.84)		-2.3675 (-1.85)	
Industrial dummies	Yes		Yes		Yes		Yes		
<i>N</i>	602		366		337		208		
Log likelihood	-640.8457		-403.6555		-356.3318		-226.3168		

(continuing)

Table 6. (continued)

B. Estimation without industrial effects

Model ^a	[M5]		[M6]		[M7]		[M8]		
	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx	
Firms with turnover of CEO and senior managers (Type I)	<i>CONSIZE</i>	0.1367 (1.71)	0.0157 (1.55)	0.1817 (1.61)	0.0226 (1.58)	0.2653** (2.67)	0.0353** (2.61)	0.3724** (2.58)	0.0534** (2.60)
	<i>OWNFOR</i>	0.1769* (2.08)	0.0164 (1.56)	0.0573 (0.51)	-0.0007 (-0.05)	0.0977 (0.90)	0.0029 (0.20)	-0.0161 (-0.11)	-0.0191 (-0.89)
	<i>DOMSHA</i>	1.0349*** (3.88)	0.1050*** (4.80)	0.6400* (2.07)	0.0601 (1.90)	1.0354** (2.97)	0.1086*** (3.48)	0.7273 (1.78)	0.0611 (1.26)
	<i>OPECOM</i>	0.3617 (1.60)	0.0389 (1.49)	0.3474 (1.26)	0.0358 (1.08)	-0.026 (-0.09)	0.0041 (0.10)		
	<i>SALGRO</i>	-0.0548 (-0.71)	-0.0045 (-0.45)	-0.0793 (-0.84)	-0.0075 (-0.61)				
	<i>DIVPAY</i>	-0.1855 (-0.93)	0.0009 (0.04)			-0.4471 (-1.69)	-0.0302 (-0.87)	-0.0601 (-0.17)	-0.0072 (-0.13)
	Constant	-3.2185*** (-5.69)		-3.1155*** (-4.08)		-3.5787*** (-5.08)		-3.9315*** (-4.05)	
Firms with CEO turnover only (Type II)	<i>CONSIZE</i>	0.1249 (1.57)	0.0165 (1.41)	0.0625 (0.57)	0.0043 (0.24)	0.126 (1.21)	0.0118 (0.76)	0.127 (0.88)	0.0075 (0.31)
	<i>OWNFOR</i>	0.2165** (2.71)	0.0273* (2.39)	0.2268* (2.47)	0.0368* (2.50)	0.2439* (2.51)	0.0316* (2.27)	0.2755* (2.44)	0.0448* (2.42)
	<i>DOMSHA</i>	0.2959 (1.42)	0.0169 (0.58)	0.2482 (0.97)	0.0073 (0.17)	0.4315 (1.50)	0.0318 (0.81)	0.3974 (1.12)	0.009 (0.15)
	<i>OPECOM</i>	0.0038 (0.02)	-0.0191 (-0.60)	-0.0270 (-0.11)	-0.0323 (-0.77)	-0.4069 (-1.51)	-0.076 (-1.63)	-0.4433 (-1.37)	-0.1065 (-1.69)
	<i>SALGRO</i>	-0.0106 (-0.15)	0.0031 (0.29)	-0.0262 (-0.30)	0.0015 (0.10)				
	<i>DIVPAY</i>	-0.5575** (-2.78)	-0.0667* (-2.44)			-0.6544* (-2.43)	-0.0705 (-1.93)		
	Constant	-2.0897*** (-4.07)		-1.6522* (-2.39)		-1.8712** (-2.84)		-1.8507* (-2.07)	
Firms with turnover of senior managers only (Type III)	<i>CONSIZE</i>	0.0042 (0.06)	-0.0088 (-0.61)	0.0369 (0.36)	-0.0016 (-0.08)	0.0335 (0.35)	-0.0084 (-0.44)	0.0691 (0.52)	-0.0073 (-0.27)
	<i>OWNFOR</i>	0.0794 (0.92)	0.0017 (0.11)	0.0604 (0.59)	0.000 (0.00)	0.1321 (1.30)	0.0144 (0.74)	0.1546 (1.29)	0.0216 (0.90)
	<i>DOMSHA</i>	0.2102 (1.11)	0.0028 (0.08)	0.4522 (1.81)	0.0633 (1.39)	0.3048 (1.19)	0.0147 (0.30)	0.9392* (2.55)	0.1439* (2.53)
	<i>OPECOM</i>	0.2717 (1.42)	0.0433 (1.26)	0.3561 (1.53)	0.0656 (1.50)	0.1132 (0.44)	0.0431 (0.90)	0.3465 (1.07)	0.1013 (1.71)
	<i>SALGRO</i>	-0.0836 (-1.23)	-0.0151 (-1.17)	-0.0799 (-0.97)	-0.0135 (-0.81)				
	<i>DIVPAY</i>	-0.3925* (-2.20)	-0.0522 (-1.60)			-0.4978* (-2.08)	-0.0622 (-1.39)		
	Constant	-1.1865* (-2.45)		-1.6296* (-2.46)		-1.2460* (-2.03)		-2.1666* (-2.49)	
Industrial dummies	No		No		No		No		
<i>N</i>	602		366		337		208		
Log likelihood	-651.9376		-417.5589		-372.1353		-241.4160		

Source : Authors' estimation. The base category for estimation is the firms with no turnover (Type IV).

Notes : ^a Model [M1] and [M5] are estimated using full sample; Model [M2] and [M6] - firms without dividend payment; Model [M3] and [M7] - firms with lower sales growth than industrial average; Model [M4] and [M8] - firms without dividend payment and with lower sales growth than industrial average.

^b dF/dx denotes marginal effects of independent variables.

^c t-values are in parentheses. *, **, and *** denote 5%, 1%, and 0.01% significance, respectively.

Table 7: Multinomial PROBIT regression analysis of the impacts of corporate governance, corporate performance, and internal conflict on managerial turnover taking its magnitude into consideration.

A. Estimation with industrial effects

Model ^a	[M9]		[M10]		[M11]		[M12]		
	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx	
Firms with turnover of CEO and senior managers (Type I)	<i>CONSIZ</i>	0.1215 (1.41)	0.0143 (1.31)	0.1344 (1.10)	0.0037 (0.99)	0.2553* (2.31)	0.0450* (2.33)	0.2821 (1.77)	0.015 (1.75)
	<i>OWNFOR</i>	0.1938* (2.15)	0.019 (1.70)	0.1252 (0.99)	0.0021 (0.55)	0.0865 (0.73)	0.0119 (0.57)	0.006 (0.04)	-0.0007 (-0.08)
	<i>DOMSHA</i>	1.0020*** (3.65)	0.1020*** (4.48)	0.5356 (1.66)	0.0116 (1.53)	1.0525** (2.88)	0.1536*** (3.59)	0.6181 (1.44)	0.0267 (1.62)
	<i>OPECOM</i>	0.3205 (1.34)	0.0367 (1.32)	0.2890 (0.96)	0.0065 (0.78)	-0.083 (-0.25)	-0.0116 (-0.20)	-0.1296 (-0.32)	-0.0054 (-0.24)
	<i>SALGRO</i>	-0.0608 (-0.77)	-0.0046 (-0.45)	-0.1005 (-1.02)	-0.0023 (-0.73)				
	<i>DIVPAY</i>	-0.2193 (-1.03)	-0.0006 (-0.02)			-0.5205 (-1.80)	-0.0772 (-1.63)		
	<i>INTCON</i>	0.4005 (1.8800)	0.0430 (-1.3900)	0.5371 (-1.8600)	0.0134 (-1.0900)	0.8579** (-2.9400)	0.1616* (-2.5100)	1.0816** (-2.7600)	0.0849 (-1.8700)
	Constant	-2.9361*** (-3.98)		-3.3167** (-3.02)		-3.7354*** (-3.83)		-3.3210* (-2.48)	
Firms with CEO turnover only (Type II)	<i>CONSIZ</i>	0.0899 (1.04)	0.0105 (0.87)	0.0647 (0.55)	0.0087 (0.43)	0.1021 (0.90)	0.0012 (0.31)	0.1127 (0.72)	0.0032 (0.54)
	<i>OWNFOR</i>	0.1987* (2.31)	0.0223 (1.91)	0.2091* (2.05)	0.0351* (2.02)	0.1956 (1.82)	0.0057 (1.60)	0.2273 (1.72)	0.0088 (1.69)
	<i>DOMSHA</i>	0.2489 (1.14)	0.0094 (0.32)	0.1226 (0.45)	-0.0025 (-0.05)	0.4117 (1.35)	0.0049 (0.55)	0.2784 (0.72)	0.0076 (0.61)
	<i>OPECOM</i>	-0.008 (-0.04)	-0.0151 (-0.47)	0.0139 (0.05)	-0.0169 (-0.36)	-0.3953 (-1.31)	-0.0152 (-1.15)	-0.4304 (-1.18)	-0.0185 (-1.03)
	<i>SALGRO</i>	-0.0229 (-0.31)	0.0016 (0.16)	-0.0325 (-0.37)	0.0004 (0.02)				
	<i>DIVPAY</i>	-0.7447*** (-3.38)	-0.0881** (-3.23)			-0.8779** (-2.93)	-0.0228* (-2.46)		
	<i>INTCON</i>	0.4425* (2.0900)	0.0572 (-1.6800)	0.4370 (-1.5800)	0.0597 (-1.1000)	0.5904 (-1.9600)	0.0118 (-0.9300)	0.4476 (-1.0700)	0.0121 (-0.6000)
	Constant	-1.5394* (-2.24)		-1.6151 (-1.71)		-1.2402 (-1.40)		-1.2142 (-1.00)	
Firms with turnover of senior managers only (Type III)	<i>CONSIZ</i>	0.0091 (0.11)	-0.0057 (-0.37)	0.0426 (0.38)	0.0047 (0.20)	0.0583 (0.55)	-0.0007 (-0.12)	-0.0094 (-0.06)	0.000 (-0.41)
	<i>OWNFOR</i>	0.0889 (0.99)	0.0043 (0.25)	0.0596 (0.55)	0.0001 (0.01)	0.1375 (1.26)	0.0068 (1.06)	0.128 (0.92)	0.0004 (0.79)
	<i>DOMSHA</i>	0.2223 (1.14)	0.008 (0.23)	0.4007 (1.53)	0.0754 (1.51)	0.3498 (1.30)	0.006 (0.40)	0.8595* (2.14)	0.002 (1.92)
	<i>OPECOM</i>	0.1707 (0.86)	0.0249 (0.67)	0.3066 (1.23)	0.0643 (1.30)	0.0184 (0.07)	0.0039 (0.24)	0.3163 (0.88)	0.0012 (1.21)
	<i>SALGRO</i>	-0.0966 (-1.41)	-0.0171 (-1.30)	-0.098 (-1.17)	-0.0195 (-1.11)				
	<i>DIVPAY</i>	-0.3858* (-2.03)	-0.0445 (-1.28)			-0.4870 (-1.91)	-0.0192 (-1.35)		
	<i>INTCON</i>	0.1119 (-0.5600)	-0.0094 (-0.25)	0.3562 (-1.3600)	0.0493 (-0.8400)	0.5614* (-2.0600)	0.0199 (-1.0100)	1.0681** (-2.8500)	0.0061 (-1.3100)
	Constant	-0.7967 (-1.23)		-2.1102* (-2.22)		-1.605 (-1.79)		-1.9969 (-1.54)	
Industrial dummies	Yes		Yes		Yes		Yes		
<i>N</i>	586		358		327		201		
Log likelihood	-620.4855		-394.0279		-339.7735		-213.5993		

(continuing)

Table 7. (continued)

B. Estimation without industrial effects

Model ^a		[M13]		[M14]		[M15]		[M16]	
		Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx	Coef.	dF/dx
Firms with turnover of CEO and senior managers (Type I)	<i>CONSIZ</i>	0.1274 (1.58)	0.0157 (1.52)	0.1600 (1.41)	0.0212 (1.47)	0.2626** (2.58)	0.0349** (2.58)	0.3479* (2.37)	0.0524* (2.51)
	<i>OWNFOR</i>	0.1697* (1.98)	0.016 (1.50)	0.0428 (0.38)	-0.0014 (-0.10)	0.0737 (0.67)	0.0008 (0.05)	-0.0619 (-0.42)	-0.0233 (-1.08)
	<i>DOMSHA</i>	0.9932*** (3.69)	0.1033*** (4.58)	0.5766 (1.85)	0.056 (1.71)	1.0531** (2.98)	0.1089*** (3.49)	0.6843 (1.64)	0.0581 (1.15)
	<i>OPECOM</i>	0.3375 (1.46)	0.0372 (1.38)	0.3627 (1.28)	0.0371 (1.10)	-0.0433 (-0.14)	0.0016 (0.04)	-0.0157 (-0.04)	-0.0036 (-0.06)
	<i>SALGRO</i>	-0.0622 (-0.80)	-0.0048 (-0.48)	-0.0957 (-1.00)	-0.0091 (-0.73)				
	<i>DIVPAY</i>	-0.2435 (-1.20)	-0.0049 (-0.19)			-0.5526* (-2.03)	-0.0403 (-1.18)		
	<i>INTCON</i>	0.3685 (1.7600)	0.0409 (-1.3500)	0.5686* (-2.0400)	0.0626 (-1.4300)	0.8416** (-2.9500)	0.0952* (-1.9700)	1.0340** (-2.7600)	0.1174 (-1.7000)
	Constant	-3.1842*** (-5.52)		-3.0640*** (-3.99)		-3.7258*** (-5.11)		-3.9664*** (-4.02)	
Firms with CEO turnover only (Type II)	<i>CONSIZ</i>	0.0972 (1.18)	0.0122 (1.05)	0.0433 (0.39)	0.0028 (0.15)	0.1182 (1.11)	0.011 (0.71)	0.1137 (0.78)	0.0085 (0.34)
	<i>OWNFOR</i>	0.2066* (2.51)	0.0248* (2.19)	0.1958* (2.06)	0.0319* (2.11)	0.2144* (2.14)	0.0274* (1.96)	0.2294 (1.96)	0.0401* (2.09)
	<i>DOMSHA</i>	0.2453 (1.15)	0.0101 (0.34)	0.1773 (0.68)	-0.0021 (-0.05)	0.3973 (1.36)	0.0256 (0.65)	0.3483 (0.97)	0.002 (0.03)
	<i>OPECOM</i>	0.0078 (0.04)	-0.0156 (-0.50)	0.0229 (0.09)	-0.0221 (-0.52)	-0.3844 (-1.36)	-0.0683 (-1.44)	-0.3857 (-1.15)	-0.0988 (-1.50)
	<i>SALGRO</i>	-0.0267 (-0.36)	0.001 (0.09)	-0.0355 (-0.41)	0.001 (0.07)				
	<i>DIVPAY</i>	-0.6696** (-3.20)	-0.0781** (-2.93)			-0.7612** (-2.73)	-0.0800* (-2.20)		
	<i>INTCON</i>	0.3955 (1.9000)	0.0519 (-1.5500)	0.3937 (-1.4600)	0.0379 (-0.7900)	0.6023* (-2.0800)	0.0468 (-1.0000)	0.4851 (-1.2500)	-0.0088 (-0.14)
	Constant	-1.9780*** (-3.72)		-1.5935* (-2.29)		-1.9202** (-2.84)		-1.8350* (-2.02)	
Firms with turnover of senior managers only (Type III)	<i>CONSIZ</i>	-0.0072 (-0.09)	-0.0098 (-0.66)	0.0094 (0.09)	-0.006 (-0.29)	0.0226 (0.23)	-0.0102 (-0.52)	0.0181 (0.13)	-0.018 (-0.63)
	<i>OWNFOR</i>	0.0786 (0.91)	0.0025 (0.15)	0.050 (0.49)	-0.0001 (-0.01)	0.1154 (1.12)	0.0134 (0.67)	0.1116 (0.91)	0.0162 (0.66)
	<i>DOMSHA</i>	0.1881 (0.99)	0.001 (0.04)	0.4046 (1.60)	0.0591 (1.26)	0.3159 (1.22)	0.0189 (0.38)	0.9066* (2.41)	0.1421* (2.41)
	<i>OPECOM</i>	0.2268 (1.17)	0.0353 (0.99)	0.3321 (1.40)	0.0581 (1.29)	0.0797 (0.30)	0.0359 (0.71)	0.3833 (1.13)	0.1043 (1.70)
	<i>SALGRO</i>	-0.0917 (-1.34)	-0.0161 (-1.22)	-0.094 (-1.13)	-0.0156 (-0.93)				
	<i>DIVPAY</i>	-0.3939* (-2.17)	-0.0481 (-1.43)			-0.5402* (-2.23)	-0.065 (-1.42)		
	<i>INTCON</i>	0.0812 (-0.4200)	-0.0131 (-0.35)	0.3315 (-1.3000)	0.0305 (-0.5700)	0.5905* (-2.2300)	0.0673 (-1.1900)	0.9755** (-2.7700)	0.1546 (-1.9000)
	Constant	-1.0762* (-2.19)		-1.4677* (-2.20)		-1.2624* (-2.02)		-2.0271* (-2.28)	
Industrial dummies	No		No		No		No		
<i>N</i>	586		358		327		201		
Log likelihood	-631.8927		-408.1288		-355.3182		-229.6789		

Source : Authors' estimation. The base category for estimation is the firms with no turnover (Type IV).

Notes : ^a Model [M9] and [M13] are estimated using full sample; Model [M10] and [M14] - firms without dividend payment; Model [M11] and [M15] - firms with lower sales growth than industrial average; Model [M12] and [M16] - firms without dividend payment and with lower sales growth than industrial average.

^b dF/dx denotes the marginal effects of the independent variables.

^c t-values are in parentheses. *, **, and *** denote 5%, 1%, and 0.01% significance, respectively.