Relationships between Accounting Performance and Career Decisions

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Abstract

This paper empirically examines whether accounting performance measured at corporate and reporting segment levels affects decisions to promote or dismiss executives in sub-organizations and how the relationship varies in different contexts where supervisors make the decisions for different types of promotions, for workers with different job responsibility, and in organizations with different organizational interdependencies. In a sample of 4,657 executive-years in a Korean conglomerate, the findings indicate that: (1) promotions (dismissals) are positively (negatively) associated with corporate and segment ROAs; (2) corporate and segment ROAs are associated only when promotion decisions involve hierarchical advancement; (3) counter-intuitively, the sensitivity of promotions to accounting performance is weaker for executives with greater decision-making authority and responsibility; and (4) the sensitivity of promotions to accounting performance is stronger when there is greater organizational interdependency. An additional exploratory analysis finds evidence of supervisors' consideration of organizational demand for knowledge transfer in promotion decision-making. Overall, the results indicate that supervisors incorporate accounting information into their evaluations in different manners depending on the decision-making circumstances.

Keywords: *accounting performance, promotions, dismissals, types of promotions, job responsibility, interdependency, intrafirm job mobility, professional relationship*

Data Availability: *All data are derived from public sources identified in the paper.*

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I. INTRODUCTION

Promotions are a popular incentive mechanism used in most organizations (Gibbs 1996; Baker et al. 1988).[1] Previous studies on the topic, albeit few in number, have shown evidence that promotions and dismissals are related to individual workers' performance presented in performance ratings (Medoff and Abraham 1980; Murphy 1992), accounting performance (Blackwell et al. 1994; Cichello et al. 2009), and non-financial performance measures (Campbell 2008). However, the findings from these studies cannot be extrapolated to the relationship between organizational performance and promotions. This is because while organizational performance is a relatively noisy indicator of workers' quality for promotions than individual performance, the efficiency of promotion-based incentives based on organizational performance may be compromised by considerable and relatively persistent costs of promotions and organizational constraints including organization structures and financial resources.

In explicit incentive contexts, organizational performance measures are generally a constant part of incentive contracts as, per agency theory, any incrementally informative performance indicators always improve the efficiency of incentive contracts (Holmström 1979). However, research literature has been silent about the use of organizational performance in implicit incentive contexts. In particular, it has been unanswered whether benefits from using the limitedly informative performance measure exceed the costs and overcome the constraints. The present study fills the void in the literature by presenting empirical evidence of the relationship

[1] Incentive provision is not the only purpose of promotions. Literature discusses job matching as an another important role of promotions (e.g., Baker et al. 1988; Gibbs 1995).

between accounting performance as an organizational performance indicator and promotions (and other career decisions[2]) of workers employed in organizations with different performance.

I analyze the career events of executives working in a large multinational conglomerate, by tracking their profiles, organizational structure, and accounting information from 2002 through 2007. The research setting identified in Korea allows access to data not available in the United States (U.S.). It provides an excellent opportunity to observe the career events of all executives, rather than the top five highest-paid executives, in companies of interest. It enabled me to distinguish different types of career decisions and identify relevant contextual factors while controlling for other factors. The dataset extracted from annual reports tracks the career events of 1,251 executives (4,657 executive-years) working in the conglomerate.

I begin by providing a simple illustration of the career decision-making process through which supervisors can exercise subjectivity. I posit that during the evaluation and decision-making process, supervisors may exercise subjectivity in three ways: selection of evaluation criteria, importance weighting, and adjustment of evaluation results. The concept of information informativeness is relevant to the selection and importance weighting processes of performance measures and evaluation criteria (e.g., Holmström 1979; Banker and Datar 1989; Feltham and Xie 1994). Supervisors may then make some adjustments in the provisional evaluation results. Specifically, to arrive at the decision, they may shift the evaluation results,[3] in consideration of several circumstantial factors such as organizational performance, the level of promotion competition, and organizational capacity to feed promotions.

[2] Career decisions in this paper include promotions, dismissals, and internal job transfers.
[3] As the decision is, by nature, binary (e.g., to promote or not), it involves a certain decision threshold. Thus, small adjustments by supervisors have a critical impact on final decision outcomes, especially for those whose interim evaluation results are around the threshold.

Taking into account the above description, I investigate the effects of corporate and segment return on assets (ROA) on career decisions as a subjective adjustment factor. Then, I consider moderating factors that determine the usefulness of corporate and segment ROAs: promotion types, job responsibility, and intra-organization interdependency. In addition to these analyses, I pursue an exploratory analysis of the association between promotions and cross-unit job transfers.

The results indicate that in general supervisors associate promotions and dismissals of their subordinates with organizational performance. In particular, I find significant fixed effects of accounting performance on career decisions of workers in an organization. Further, while investigating the usefulness of accounting performance in career decisions, I find that supervisors use accounting performance in different ways depending on the decision-making contexts. Specifically, the findings suggest that accounting performance of an organization is tied only to promotions awarded as incentives and to promotions of executives of a relatively low rank or with relatively low responsibility. I also find that the association between accounting performance and promotions is stronger when organizational interdependency, measured as the transferability of workers' knowledge and skills between sub-organizations, is greater. Lastly, analysis results show that promotions are awarded in combination with cross-unit transfers from an organization with good performance to another with poor performance.

This study makes several contributions to existing literature. First, this paper improves our understanding of the performance-promotion relationship involving mid- to low-level executives, which has not been previously addressed. Past studies have shown that promotions are associated with individual workers' performance in different forms (e.g., Medoff and Abraham 1980; Cichello et al. 2009; Campbell 2008). However, no theory or empirical research discusses how organizational performance is linked to promotion-based implicit incentives or how it affects

workers in an organization. This study bridges the gap by providing evidence of how accounting performance of an organization affects all executives, as opposed to a few top-ranking executives in the subunits of the organization.

Second, this paper contributes to the literature on promotions by identifying new determinants of promotions and dismissals, thus responding to calls for research on factors affecting subjective evaluations in promotion decisions. In his comments on Campbell (2008), Gibbs (2008) points this out : "Prior work on promotion systems has demonstrated that subjective merit ratings are correlated with promotions. However, *very little evidence has been presented on what factors are considered in assigning such ratings*" (Gibbs 2008, p. 334: emphasis is added). This research fulfills this need for research. Specifically, it examines how different types of career decisions, job responsibility, and organizational interdependency moderate the relationship between accounting performance and career decision outcomes.

Third, this paper contributes to the management literature on the transfer of knowledge and best practices within an organization (e.g., Gupta and Govindarajan 2000; Minbaeva et al. 2003). In particular, the findings from the exploratory analysis suggest that organizations may utilize promotions and job transfers to improve the efficiency of knowledge diffusion. To the best of my knowledge, this is one of the first studies to report the relationship between organizational performance and job transfers, which represents an interesting avenue of future research.

The remainder of the paper proceeds as follows. Section 2 reviews prior literature and develops the hypotheses. Section 3 introduces the unique institutional setting that permits this research opportunity. Section 4 explains the research design used for testing the hypotheses, while Sections 5 and 6 report the results of the main and additional data analyses respectively.

Lastly, Section 7 summarizes the paper and discusses the study's limitations as well as potential future research directions.

II. LITERATURE AND HYPOTHESES

Career Decision-Making

This section describes a model of career decision-making, highlighting how supervisor's subjectivity is incorporated into a career decision outcome. Essentially, a career decision is the final outcome of a supervisor's subjective evaluation of a candidate's qualities. In career decision-making contexts, subjectivity involves three distinct components: evaluation criteria, relative weights, and an adjustment factor. Specifically, supervisors select measures and evaluation areas and apply relative weights to the evaluation criteria, depending on the type of career decision. Then, the product sum of the relative weights and evaluations of each criterion is subjected to adjustments. Finally, supervisors finalize their decisions in consideration of contextual issues such as the company's financial standing.

This can be presented in notational form as follows:

$$\Phi_{\mathrm{ik}} = \Lambda_i \times \sum_{j=1}^{n} \omega_j \theta_{jk} = \sum_{j=1}^{n} \left(\Lambda_i \omega_j \theta_{jk}\right)$$

$$s.t. \forall \omega_j, \forall \theta_{jk} \in (0,1] \text{ and } \textstyle\sum_{j=1}^{n} \omega_j = 1,$$

where Φ_{ik} is the likelihood of a career decision (e.g., promotion) for an individual evaluatee k in an organization i[4] in which a common adjustment ($\Lambda_i = \sum_{l=1}^{m} \lambda_l$)[5] is applied to *all*

[4] An organization can be either formal or informal. It can be a group of people who share homogeneous characteristics, for example, promotion candidates at a hierarchical level.
[5] A multiplicative specification may be also possible: $\Lambda_i = \prod_{l=1}^{m} \lambda_l$.

organizational members across the board. ω_j is a supervisor's relative weight attached to an evaluation criterion j, and θ_{jk} is evaluatee k's rating on the evaluation criterion j.

Evaluation Criteria and Informativeness Principle

Selection (θ)

The informativeness principle (Holmström 1979) suggests that any performance indicator that provides incremental information should be incorporated into contracts to improve the efficiency of incentives. Thus, in explicit incentive contracting contexts, supervisors select evaluation criteria based on the informativeness of each criterion to form a set of criteria ($\Theta = [\theta_{10}\ \theta_{20}\ \ldots\ \theta_{j0}]$). By and large, the principle holds true even in the context of career decisions.

However, several distinct characteristics of career decisions allow supervisors more discretion in the selection of evaluation criteria. First, career decisions are hardly contracted; they are predominantly implicit. Second, indicators do not necessarily pertain to performance. They may be indicators of worker qualities, such as knowledge, experience, or skill sets, that are informative about success in a different task. Third, they may fulfill functions other than incentive provision. For example, promotions are known to serve an additional role: job matching.

Relative Weighting (ω).

With multiple indicators involved simultaneously in evaluations for career decisions, supervisors ascertain the relative weights (ω_j) of the indicators. The weight selection is in line with the agency theory. That is, supervisors place more emphasis on indicators that are more informative about a candidate's eligibility for promotion. The informativeness of a measure is

associated with the measure's sensitivity and precision (Banker and Datar 1989), and goal congruence (Feltham and Xie 1994).

Individual Performance as Part of a Performance Measure Set (Θ)

Prior studies have shown that good individual performance likely leads to promotion awards. Good performance is evaluated through several different measures. Measures discussed previously include performance ratings in annual performance reviews (Medoff and Abraham 1980; Baker et al. 1988; Baker et al. 1994a, 1994b; Gibbs 1995), accounting performance of ROA measured at subsidiary firms and business units (Blackwell et al. 1994; Cichello et al. 2009), and non-financial performance measures of service quality and employee retention (Campbell 2008).

All these studies, though, only focus on individual performance. Their discussions pertain to the selection of a specific performance indicator(s) and a non-zero weight on the indicator(s). In particular, Medoff and Abraham (1980), in their investigation of the performance ratings and promotions, consider the result of evaluations, or $\sum_{j=1}^{n} \omega_j \theta_{jk}$, as a whole. As a result, they ignore a common adjustment factor (Λ_i) and further decomposition of evaluation results into separate evaluation criteria (θ_{jk}) and weights (ω_j). On the other hand, Blackwell et al. (1994) and Cichello et al. (2009) examine a direct association between accounting performance and career decisions, and consider few variables other than ROA.[6] Therefore, their research settings coincide with a special case: (1) where there are only a few, if not one, evaluation criteria (i.e., j close or equal to one) and (2) where the evaluation criteria (θ_{jk}) are closely linked to ROA, or where ROA measures are highly informative about the promotion candidates' qualities. Similarly,

[6] In Blackwell et al. (1994), the only control variable that is not related to ROA is *Log of Assets*. Similarly, in Cichello et al. (2009), it is *Age* of an executive.

Campbell (2008) focuses on several financial and non-financial performance measures to estimate promotion opportunity but pays little attention to supervisors' subjective adjustment and other dimensions of workers' qualifications for promotions.

Common Adjustment Factor (Λ_i)

The adjustment factor (Λ_i) shifts the likelihood of a career decision upward or downward. This is the case in which supervisors apply a common inflation or discount factor to adjust the evaluation results. As implied by the word "common," an adjustment factor affects the likelihood of career events of *all* the promotion candidates of an organization or those of homogeneous characteristics *en bloc*. In this regard, the adjustment is rather contextual. Examples include accounting performance measured at high-level organizations, the number of contestants in an organization, and an organization's growth potential and capacity to feed promotions. For instance, in promotion decision-making contexts, *ceteris paribus*, executives in organizations with good performance (i.e., relatively high Λ) are more likely to be promoted than those in organizations with poor performance (i.e., relatively low Λ).

Organizational Performance and Career Decisions

The focus of this study is the fixed effects of accounting performance acting as one of the common adjustment factors. The existing evidence on individual performance does not clarify the effects of organizational performance on career decisions. With regard to the use and the effects of organizational performance measures in explicit incentive contracts, agency theory literature prescribes that compensation contracts with multiple performance measures should assign a non-zero weight to an organizational performance indicator to align workers' effort with the organizational performance (Holmström 1979; Feltham and Xie 1994; Datar et al. 2001). As long as promotions are awarded as incentives ultimately to improve the performance of an

organization, it sounds plausible that implicit incentives are also tied to organizational performance.

Promotions are a strong incentive instrument (Gibbons and Murphy 1992; Malcomson 1984). However, the efficiency of promotions as an incentive mechanism may be compromised. On the one hand, career decisions involve considerable and relatively persistent costs, which make organizations more committed to the decisions. In general, promotions involve a monetary raise, additional perks, and accordingly more of the other compensations. Further, compared to the transitory nature of other incentives such as annual bonuses, promotions are relatively persistent. Moreover, inappropriate decisions may lead to a loss of important human capital in the long-run.[7] On the other hand, career decisions are subject to organizational constraints. For example, the number of open positions in an organization and the organization's financial capability to support costly and persistent promotions limit the number of promotions that can be awarded in the organization. Thus, considering that career decisions require considerable commitment from an organization and that organizational performance is a noisy indicator for mid- to low-level executives who only partly contribute to the organizational performance, implicit incentives may not be tied to organizational performance.

Given the opposite predictions, it is an open empirical question whether the likelihood of promotions and dismissals of executives in an organization is associated with the performance of the organization. The first hypothesis tests the effects of accounting performance as a common adjustment factor—whether ROAs measured at corporate and segment levels affect promotions and dismissals of executives in the organizations.

[7] For example, a supervisor may dismiss a worker who has great potential, or may pass over for promotion a capable person who may then decide to leave the firm for better prospects.

H1a: *Promotions (dismissals) of executives are positively (negatively) associated with corporate ROA.*

H1b: *Promotions (dismissals) of executives are positively (negatively) associated with segment ROA.*

Determinants of Usefulness of Accounting Performance

In the following subsections, determinants of the usefulness of accounting performance in career decisions are discussed and their effects on career decisions are hypothesized. The determinants include, but are not limited to, the purpose and the type of promotions, job scope and responsibility, and organizational interdependency.

Purposes and Types of Promotions

The literature on promotions suggests that the effects of accounting (to a lesser extent, objective or quantitative) performance measures on promotion decisions vary with the purpose of the promotions (Gibbs 1995, 2008; Gibbons 1998). Depending on the purpose of the promotions, supervisors exploit different sources of information to estimate subordinates' abilities and/or input of effort, and weigh them differently to make decisions. When promotions are used as incentive mechanisms, proxies for subordinates' effort are related to their (contribution to) past performance—demanding less subjectivity. On the contrary, promotions awarded to match employees' skills and qualities to specific higher-level positions (i.e., sorting) are typically more relevant to subordinates' "potential" contributions to future performance—calling for more discretionary judgments (Gibbs 2008; Gibbons 1998) or information sources other than accounting measures (Campbell 2008). Thus, the usefulness of accounting performance depends on the type of promotion.

Grabner and Moers (2011), from a similar perspective, show that managers use different evaluation criteria when promoting employees for different purposes. If promotions serve as

rewards, they are likely to be significantly associated with accounting performance measures. This is because team performance and individual performance are generally correlated to some extent. On the other hand, if promotions are a means to sort workers based on qualities needed for an upcoming task, supervisors need to evaluate subordinates' qualities, rather than past performance, which may not be correlated with accounting performance. This will lead to a reduced relative weight being assigned to the accounting measure.

> ***H2a:*** *Corporate ROA affects promotions of executives only when promotions involve hierarchical advancement.*
>
> ***H2b:*** *Segment ROA affects promotions of executives only when promotions involve hierarchical advancement.*

Job Scope and Responsibility

An extensive amount of literature has documented a positive (negative) association between CEO and top-management compensation (turnover) and performance (e.g., Antle and Smith 1986; Barro and Barro 1990; Gibbons and Murphy 1990; Murphy and Zimmerman 1993). Executives shoulder greater responsibility for a business unit's performance than middle-level managers and other employees. However, executives below the level of CEOs may lack good accounting performance measures unless they have full discretionary authority to affect the performance of a subunit for which separate accounting performance measures are available. In this regard, few studies have examined the effects of accounting performance on the promotions of mid- or low-level executives whose contributions to firm- or business unit-level performance are less than those of high-level executives.

In explicit contracting contexts, Aggarwal and Samwick (2003) examine a question relevant to the issue. They show that pay-for-performance sensitivity varies with executives' managerial

responsibilities.[8] This indicates that performances measured at different levels are reflected in the compensations of executives with different levels of responsibility.

More importantly, their finding suggests that an executive's managerial responsibility is associated with a performance measure's informativeness about the executive's contribution to the performance outcome. To relate this to a specific measure of performance, ROAs of high-level organizations are more informative about the qualities of high-level executives with greater responsibility. In contrast, ROAs may be inadequately informative about mid- and low-level executives whose managerial decisions contribute to the organizational performances to a lesser extent than executives with greater levels of responsibility. Following this rationale, H3 predicts that promotions and dismissals of executives with greater levels of managerial responsibility are more sensitive to ROAs of high-level organizations.

> ***H3a:*** *The sensitivity of promotions (dismissals) to corporate ROA is stronger when a career decision is made for executives with greater job responsibility.*
>
> ***H3b:*** *The sensitivity of promotions (dismissals) to segment ROA is stronger when a career decision is made for executives with greater job responsibility.*

Intra-organization Interdependencies and Accounting Performance

In decentralized organizations, intra-organization interdependencies may determine the incentive structure and thus the efficiency of compensation contracts (Bushman et al. 1995). In an explicit incentive contracting context, as discussed by Bushman et al. (1995), [9] the incentive

[8] Dividing managers into four groups of different managerial responsibility, Aggarwal and Samwick find that the pay-for-firm-performance sensitivity is strongest for CEOs, followed by oversight executives, then by executives without any responsibility, and lastly, by executives with divisional responsibility. Further, they also find that when more precise, *divisional* performance measures are available, the compensations for executives with divisional responsibility are more sensitive to the *divisional* performance measures than *firm* performance measures. They attribute the pay-performance behavior to different degrees of managerial responsibilities.

[9] They find that division CEOs' compensations are associated with corporate-level performance measures. The findings suggest that aggregate performance measured at a higher-level organization is incorporated into incentive contracts to provide incremental information about collaborative actions of managers at interdependent subunit organizations and ultimately to encourage such behavior.

compensations of business unit managers are tied to the performance aggregated at an organizational level higher than a manager's business unit level, to the extent that a business unit's actions affect another business unit's performance and consequently the parent organization's performance.

A pertinent question in this regard is "Will this relationship still hold even under an implicit incentive context?" Intra-organizational interdependencies may moderate the relationship between promotions and accounting performance aggregated at a higher-level organization. However, the underlying mechanism that establishes the interdependencies' moderating effect in career decisions may differ from what is described by Bushman et al. (1995). They attribute the moderating effect of interdependencies to the *interrelatedness* of actions and performances between organizations that determines the aggregate measures' informativeness.

In contrast, I propose that in career decision-making contexts, it is associated with the *transferability* of workers' knowledge, which includes professional expertise and understanding of businesses and operations. As discussed earlier, promotions are subject to organizational constraints, including the number of promotions that can be awarded in an organization and the organization's financial resources to feed promotions. However, these restrictions may be moderated if the organization can "export" its workers—who deserve promotions but cannot be awarded—to other affiliate organizations under the same parent firm. Conceivably, cross-unit transfers occur more frequently when the set of requisite knowledge and skills is compatible or transferable between units. Thus, measured as the transferability of workers' knowledge and skills, greater interdependency allows organizations to grant more promotions than they can accommodate, as they tie promotions with outgoing transfers. This increases the likelihood of promotion awards in outperforming organizations or in banner years.

To hypothesize the relationship, promotions are expected to be more strongly associated with corporate (segment) ROA when interdependencies between reporting segments (within a reporting segment)[10] are higher, or cross-unit job transfers are more frequent.[11]

H4a: *When more executives are reassigned from one reporting segment to another, the association between corporate ROA and promotions becomes stronger.*

H4b: *When more executives are reassigned from one business unit to another within a reporting segment, the association between segment ROA and promotions becomes stronger.*

III. RESEARCH SETTING AND DATA

To test the hypotheses, I analyze a panel dataset containing 4,657 executive-years working at six subsidiary companies in the largest Korean conglomerate[12] during the period from 2002 to 2007. The data are manually collected from the corporate annual reports filed in the Korean electronic disclosure filing system.[13] The dataset provides a unique research environment that allows me to investigate diverse career events and important contextual variables.

Research Setting: The Careers of Executives in a Korean Conglomerate

The research site for this study is Samsung Group, which is the largest Korean conglomerate of the ones that had been classified as large conglomerates by the Fair Trade Commission (FTC). As of the end of 2009, the conglomerate consists of 64 subsidiaries, of which 28 companies filed

[10] In this study's dataset, accounting performance measures are available only at the top two levels of organizations, i.e., corporate and reporting segment levels. While accounting performance measures are undoubtedly available even below this level of organizations, they are unobservable outside the firm. Therefore, this paper considers the cross-unit job transfers between reporting segments and those within a segment.

[11] While Bushman et al. (1995) measured the degree of interdependencies with product-line or geographic diversification and intersegment sales, I use the number of cross-unit job transfers as a measure for intra-organization interdependencies, assuming that frequent cross-unit transfers indicate compatibility of executives' local knowledge and skills and organizational interdependency.

[12] Frequently referred to as *Chaebols* (or *Jaebeols*).

[13] DART: Data Analysis, Retrieval and Transfer System, http://dart.fss.or.kr

annual reports in DART. Out of these 28 companies, six companies[14] met selection criteria. These subsidiaries operate in diverse industries spanning semi-conductors, display panels, telecommunication devices and equipment, consumer electronics, industrial electronic devices, electronic components, construction, civil engineering, heavy industry goods, ship-building, trading, chemical products, fashion, and textile, among others.

Unlike in U.S. firms, an executive's job title in a Korean company provides two pieces of information: his or her hierarchical rank and his or her role in an organization.[15] The titles representing executives' hierarchical levels in the conglomerate are common to all of its subsidiaries. In the dataset, seven titles for executives' hierarchical ranks are identified.[16] Executives in these companies serve a variety of roles including, but not limited to, CEOs and chief executives at the corporate level, at the business group or division level, or at regional headquarters or foreign subsidiaries, plant managers, and high-level professionals—such as lawyers, researchers, and other experts.

There are several notable features of executive promotions in Samsung. First, human resource management (HRM) practices are comparable to those of U.S. firms. Several studies have documented the conglomerate's successful transition in HRM policies to potential competence and performance rather than prioritizing education history and seniority (Yu and Rowley 2008; Pucik and Lim 2001; Kim and Briscoe 1997; Bae and Lawler 2000). Second,

[14] Six subsidiaries are *Samsung Electronics, Samsung C&T, Samsung Electro-Mechanics, Samsung Heavy Industries, Samsung SDI*, and *Cheil Industries*.

[15] Compensations largely depend on the hierarchical rank. The "dual" structure is typical in Korea and Japan (Pucik and Lim 2001; Ariga et al. 1999). For more detail, see Appendix A.

[16] They are *Hoejang, Buhoejang, Sajang, Busajang, Jeonmu, Sangmu,* and *Sangmu-bo.* There are only five to six persons in the two highest ranks throughout the conglomerate. Moreover, *Hoejang* is the person who exercises practical control over the whole conglomerate and is removed from the sample. For this reason, the three highest levels are collapsed into a single level for analysis purposes. Further, many of these top-level executives are eliminated from the sample as they are the ones at the peak of each corporate hierarchy and therefore, not subject to further promotion. For more details, see Appendix B.

promotions to an executive position in conglomerates are extremely competitive. For example, the likelihood of promotion to an executive[17] in Korea's 100 largest companies is less than one percent and it takes an average of 21 years to acquire an executive title (KEF 2011). Third, both the conglomerate and its executives consider external labor markets secondary and inferior alternatives to internal labor markets. For example, a news report from *Money Today*, a prominent economic and business news provider in Korea, reflects the conglomerate's recent change from strict closure against an outside executive market to exploration of the outside human resources. According to the news article, it is extraordinary that two executives who had been hired from an external executive market were promoted to *Sajang*[18] in the annual promotion announcement for 2011 (Sung 2010).[19]

Sample Selection and Data Collection

Corporate annual reports for the fiscal years of 2001 through 2008 that are available at DART were downloaded to acquire executives' profiles. Unlike in the U.S., Korean companies' annual reports present brief profiles of all the executives in a reporting company. This unique feature enables this study's longitudinal tracking of executives' careers. In total, 13,301 executive-years of profiles for the 28 companies were manually collected. As tracing executives' career paths, changes in organizational structure, and further data processing is a labor intensive endeavor, I limit my attention to a manageable sample size. I restrict the sample to firms that (i)

[17] Since the beginning of a career as a new college graduate

[18] *Sajangs* correspond to CEOs. For more details, see Appendix B.

[19] Nine executives were promoted to *Sajang* during the year. According to the newspaper report, these two executives have worked for the conglomerate for six and seven years, respectively, since their recruitment as executives. This indicates that they had been recruited at a low level—highly likely to be lower than *Busajang* or *Jeonmu*. So, they were not directly recruited from the external CEO market. It also reports that, in the conglomerate's history, there has been only one CEO recruited directly from the outside.

have more than, on average, 30 executives per year,[20] (ii) have at least five years of annual reports during 2001 and 2008, (iii) are not financial institutions, (iv) are not joint ventures with companies outside the conglomerate, and (v) have required data. Further, executive-years (i) whose hierarchical level cannot be identified or properly inferred, (ii) who are immediate family members of the person of material control, and (iii) whose other necessary information is missing are removed from the sample. Lastly, the data for 2001 and 2008 are removed from the sample because they were used to identify career events for 2002 and 2007. As a result, 4,657 executive-year observations from 1,251 unique executives in six companies comply with these conditions. Table 1 describes the sample selection process.

--- INSERT TABLE 1 ABOUT HERE. ---

Executive Profiles. Typical profile data include: name, board directorship, date of birth, hierarchical title, current and/or previous positions (responsibility/job title), and education.[21] A unique ID created as the combination of date of birth and name allows me to track the career changes of executives as long as they stay in a conglomerate. Executive profiles are used to identify executives' career events, i.e., promotions, cross-unit transfers, and dismissals.

Organization Charts. Annual reports provide organization charts in which organizations at the top three levels, including the president and the CEO at the top level, can be identified. Figure 1 provides an example of an organization chart. Next, with the information about an executive's organization membership provided in annual reports, the organizations identified from the charts are matched to each executive-year. Then, the heads of organizations at each level per year can be identified. The information about organization heads, in turn, is

[20] The number of executives of a company is calculated as its average during the period between 2001 to 2008

[21] I also collect newspaper articles and press releases of the conglomerate's annual executive promotions to reconcile discrepancies between the executives' profiles in the annual reports and the press releases.

incorporated into the executive-year dataset, (1) matching an executive-year's current organization membership and the corresponding organization's heads and (2) matching the executive-year's organization membership and the managers at the time of previous promotion.[22]

--- INSERT FIGURE 1 ABOUT HERE. ---

Financial Information. In addition to the executives' profiles, financial information for each reporting segment is collected from annual reports. The financials are collected for reporting segments for businesses based on product groups, with the exception of the largest subsidiary whose reporting segments both in product groups and regions are collected. This is because there are a significant number of executives such as CEOs, CFOs, and plant managers in world-wide regional headquarters and subsidiaries, as compared to other subsidiaries. These reporting segments do not necessarily correspond to Level 2 or Level 3 organizations specified in organization charts. [23] Reporting segments mostly correspond to Level 2 profit center organizations. For these segments, financials are assigned to the exact-match organizations. A few other reporting segments are the combinations of two or three Level 2/3 organizations. A likely cost center Level 2 organization is given its corporate financials. As a result, all the executives who belong to Level 2 and lower-level organizations share the same organizational

[22] For those executives with previous promotions prior to 2001, the best approximation is to consider their organization heads as of 2001 as the ones in the year of previous promotions. Therefore, all executives listed for 2001 appear to have their current organization heads along their hierarchy the same as the heads at the time of previous promotion regardless of the actual year of previous promotions. For this reason, the data for 2001 are removed from the sample.

[23] There are two possible reasons. First, not all these Level 2 and Level 3 organizations are profit centers or revenue generating organizations: for example, Corporate Executive Staff and CTO Strategy Office in Figure 1. Second, even if they may generate revenues, the revenues are (1) primarily internal, (2) vested in other businesses, or (3) insignificant, in terms of the size, to be reported in a separate segment.

performance at a reporting segment level that generally corresponds to Level 2 in organization charts.[24]

IV. RESEARCH DESIGN

Estimation of the Likelihood of Promotions and Dismissals

In this section, I describe the variables incorporated in the study's research models. The hypotheses are tested primarily using mixed-effects logistic regression models[25] with random intercepts that predict the likelihood of executives' promotions and dismissals. The career decision prediction models basically have the following common form that contains corporate and segment level ROAs (*CORPROA* and *SEGROA*), size (*SALES*), growth (*GROWTH*), hierarchical level (*LEVEL*), the number of executives at a level (*NOEXEC*), age (*AGE*), tenure group (*TENURECAT*), education (*EDU*), job area (*JOB*), the speed of promotions (*SPEED*), the presence of a social relationship between a supervisor and a subordinate (*RELATION*), and the length of the relationship (*LENGTH*). Moreover, as these variables are measured at different levels, random effects for multiple levels, u_{0kt} and v_{0t}, are included.

$$\begin{aligned} Pr\left(Decision_{ijk,t+1}\right) = {} & \beta_1 CORPROA_{kt} + \beta_2 SEGROA_{jkt} \\ & + \beta_3 Log\left(SALES_{jkt}\right) + \beta_4 GROWTH_{jkt} + \beta_5 LEVEL_{ijkt} + \beta_6 NOEXEC_{ijkt} \\ & + \beta_7 Log\left(AGE_{ijkt}\right) + \beta_8 SPEED_{ijkt} + \beta_9 RELATION_{ijkt} \\ & + \sum_{l=0}^{2}\left(\beta_{l+10} LENGTH_{l,ijkt} + \beta_{l+13} TENURECAT_{l,ijkt} + \beta_{l+16} EDU_{l,ijkt}\right) \\ & + \sum_{m=0}^{3} \beta_{m+19} JOB_{l,ijkt} + \beta_0 + u_{okt} + v_{0t} + \varepsilon_{ijkt} \qquad \ldots\ldots\ldots\ldots \quad (1) \end{aligned}$$

Promotions and Dismissals

The primary dependent variable of the research is the likelihood of promotions and dismissals for an individual executive. To identify the events of interest, I analyze each

[24] However, this does not necessarily indicate that accounting performances are measured only at corporate and reporting-segment levels. Accounting performance measures may be available at lower level organizations

[25] Mixed-effects models are used to handle the data's longitudinal and multi-level features.

executive's profile information provided in annual reports. Analyzing the data, three types of promotions are identified. Type 1 promotions refer to executives' upward movement in the hierarchy. Type 2 and 3 promotions involve promotions to head an organization. Type 2 (3) promotions apply to cases where executives are promoted to head positions (profit center manager positions) from non-head positions (cost center manager positions). The opposite types of job assignments are also observed: release from head positions (Type 2) and from profit center manager positions (Type 3).[26]

In particular, a hierarchical advancement is identified by comparing the hierarchical level between two consecutive years. Specifically, I count events as promotions when an executive earns a new title for a higher rank. To identify an appointment to head an organization (from a non-head position), the role title of each executive-year is analyzed and coded as a one if the executive takes a head role at any level (even beyond the top three level organizations specified in the organization charts). Then, the latter type of promotion is detected by changes from zero to one in the coded role title. On the other hand, dismissals are identified when an executive's role is changed to an advisory position[27] or when an executive's profile is no longer available. Promotions and dismissals are coded as an indicator variable, assigning a one to promotions (dismissals) in the following year.

It is notable that, while Type 1 promotions generally induce a non-trivial increase in compensation, Types 2 and 3 promotions involve substantial changes in job characteristics (i.e., increase in responsibility and job scope). However, Type 1 promotions are not exclusive of Type 2 or 3 promotions. In this regard, I add another class of promotions, labeled as "Type 1 Only."

[26] Note that the release from a supervisory job is not necessarily a demotion.
[27] Advisory positions are offered to "retired" executives. These retired executives continue to receive 70~90% of the salaries in their last active positions for two to three years depending on the hierarchical ranks at their retirement.

This type of promotion refers to hierarchical advancements that do not involve Type 2 or 3 promotions simultaneously. Type 1 Only promotions are associated with a non-trivial increase in compensation, but do not involve significant changes in job characteristics.

Accounting Performance

The primary independent variable of interest is accounting performance measured in ROA. In this study, ROAs are observable at two levels: the company and the reporting segment. Corporate ROA is computed as a company's net income divided by total assets while reporting segment ROA is the segment's operating profit divided by the segment's total assets. In addition to unadjusted ROA, I also use a relative measure for ROA. Relative ROA is a quintile group, ranging from one to five, based on a reporting segment's ROA in a company by year, with a high numerical value assigned to good performance.

Job Scope and Responsibility

As a critical component in H3, job responsibility is measured in two ways: hierarchical rank and management position. First, I split the full sample into two groups based on the current hierarchical rank and run separate regressions with the split samples. High-level executives are those at the top three levels, accounting for about 22 percent (1,044 executive-years) of the full sample, while low-level executives are the bottom two levels, of which the titles are *Sangmu* and *Sangmubo*. Second, I identify the executives managing Level 2 or 3 organizations. They comprise about the same proportion (22%, 1,030 executive-years) of the full sample as the high-level executives. Based on the classifications, I assume that high-level executives and executives supervising Level 2 or 3 organizations have wider job scope and greater responsibility in terms of their contributions to aggregate accounting performances at high-level organizations.

Intra-organization Interdependency

Intra-organization interdependency is proxied by the frequency of cross-unit job transfers. A cross-unit job transfer is defined as an executive's movement from one organization to another within the conglomerate, regardless of whether the shift involves a promotion. There are four levels of organizations (i.e., company, reporting segment, Level 2, and Level 3 organizations) where cross-unit job transfers can be identified. Among these transfers, this research focuses on job transfers between and within reporting segments. This is because a reporting segment is the lowest level organization where accounting performances can be measured in the dataset.

The frequency variable is operationalized in two ways: (1) the relative frequency computed as the number of events divided by the number of executives within a reporting segment (*Ratio*), and (2) the partitioned ranges of relative frequency (*Group*). For example, the relative frequency of job transfers between reporting segments (*Cross-Segment Transfer*) is computed as the frequency of outgoing cross-segment transfers from a segment divided by the number of executives in the segment. On the other hand, that of job transfers within a reporting segment (*Within-Segment Transfer*) is computed as the frequency of *Within-Segment* transfers within a segment divided by the number of executives in the segment. In addition, these ratios are partitioned into three groups based on their range: (1) zero, (2) between zero and the pooled-median of the ratios,[28] and (3) greater than the pooled-median of the ratios. As a result, *Cross-Segment Transfer* and *Within-Segment Transfer* in the second specification are categorical variables of three groups.

Control Variables

[28] The pooled-median of the ratios is calculated except the observations with zero values.

Size and Growth of a Reporting Segment. Sales and growth in sales are included to capture a reporting segment's capacity to feed promotions.

Hierarchical Level. The variable is included to capture the decreasing promotion opportunities; the number of positions becomes significantly lower as the hierarchical level increases. Numerical values are assigned to each hierarchical level, one for the top level and increasing toward lower levels. Then, by multiplying minus one, they are inversed for intuitive interpretation of coefficients in regression models.

Number of Executives at a Level. The number of executives, at a given level in a reporting segment, accounts for the degree of competition for limited seats in higher-level positions. The variable controls for the level of competition for promotions.

Education and Professional Experience. Education level has been used as a proxy for workers' innate abilities as education level is known to be positively associated with the likelihood of promotion (e.g., Baker et al. 1994a; Lluis 2005). Prior literature has also used proxies for professional experience such as age and tenure in a company or at a job. *Age* is computed as the year of an executive profile subtracted by the birth year while *Tenure* is the number of years since the last hierarchical advancement, i.e., Type 1 promotion.

Professional Background. I also consider an executive's professional discipline. Variables for each discipline are coded as one, indicating administration, marketing and sales, and engineering, respectively; or zero otherwise.

Speed of Promotions. The speed of promotions to date is included to control for the presence of the "fast track," an empirical regularity reported in several promotion studies (Baker et al. 1994b; Ariga et al. 1999). The measure captures how fast an executive has been promoted to the current hierarchical rank, calculated as follows:

$$Speed_{it} = \frac{(6 - Hierarchical\ Level_{it})}{Age_{it} - Tenure_{it}}$$

where subscripts *i* and *t* denote an individual executive and a year, respectively; *Hierarchical Level, Age,* and *Tenure* are as defined earlier in this section.

Social Relations with Subordinates. Supervisors may also consider their social relationships with their subordinates. To determine the presence of a social relationship, I identify the years of the last hierarchical advancement for each executive, and then identify the superiors along the hierarchy at the time of promotion. *Presence of Relationship* is constructed as an indicator of whether an executive's immediate supervisor at levels one through three organizations[29] within his or her current hierarchy was included in the previous chain of command that had promoted him or her. *Length of Relationship,* measured as the number of years since the last promotion, is used as a proxy for the amount and the quality of information that has been communicated between a supervisor and a subordinate since the establishment or renewal of the relationship.

V. EMPIRICAL RESULTS

Description of Career Decisions in Research Sites

Table 2 provides descriptive statistics for the key variables measured at the individual executive-year (Panel A), and reporting segment and corporate levels (Panel B). The sample contains 4,657 executive-years of profile information for 1,251 unique executives working at six companies in a large Korean conglomerate during the period of 2002 through 2007. Therefore, given the annual promotion cycle, an executive may have at most six opportunities for promotions. There are 906 promotions (19% of the sample) during the period. Obviously,

[29] The head of a Level 1 organization (i.e., CEO), in case that executive is a head of Level 2 organization.

hierarchical advancement (i.e., Type 1 promotion) is more frequent (616 times) than promotions to head positions of any level organizations (Type 2 promotion; 353 times) and to profit center manager positions (Type 3 promotion; 161 times). Positive career decisions including promotions and stays account for 88 percent of the cases (4,103 times). On the contrary, negative decisions, or dismissals, (12%) are less frequent than promotions in general (19%), but almost as frequent as Type 1 promotions (13%).

--- INSERT TABLE 2 ABOUT HERE. ---

Panel B presents corporate and reporting segment level variables. The mean (median) sales of a company and a reporting segment are approximately 53.20 (73.30) billion USD and 24.21 (14.49) billion USD,[30] respectively. The mean (median) ROAs at company and reporting segment levels are 7.16% (8.24%) and 8.76% (8.49%), respectively.

Table 3 reports the correlations between variables. Panel A provides the key independent variables, other than accounting/financial performance measures, used in promotion/dismissal estimation models. On the other hand, Panel B shows the correlations between promotions and diverse financial/accounting performances at corporate and reporting segment levels. The correlations support H1; promotions (demotions) are positively (negatively) associated with good organizational performance. Among these aggregate performance measures, I use ROAs at corporate and reporting segment levels.[31]

--- INSERT TABLE 3 ABOUT HERE. ---

[30] Converted from South Korean Won (KRW) at an exchange rate of 1,100 KRW/USD. The average exchange rate for the sample period from 2002 to 2007 (for October of 2012) is 1,082.80 (1,104.90) KRW/USD.

[31] Different measures of performance would not yield significantly different results. In addition, an ROA measure provides consistency and comparability with prior literature such as Blackwell et al. (1994) and Cichello et al. (2009).

Determinants of Promotions and Dismissals

The Effects of Corporate and Segment ROAs

H1 examines whether accounting performance aggregated at a high-level organization (i.e., a company or reporting segment) affects the careers of the executives in sub-organizations. Table 4 reports the results of the logit regressions by type of career decision.

--- INSERT TABLE 4 ABOUT HERE. ---

For promotions of the most comprehensive definition, both corporate and segment ROAs are positive and statistically significant. This suggests that, other things being equal, supervisors seem to adjust promotability of the executives in high-performing organizations upward. Further, the table shows that corporate ROAs are more strongly associated with promotions than segment ROAs.[32] On the other hand, dismissals are negatively related to corporate ROAs, while segment ROAs do not affect dismissals.[33]

Overall, these findings strongly support H1; ROAs at high-level organizations, higher than the level of an organization that an executive manages or directly reports to, affect promotions and dismissals.

Other Determinants of Promotions and Dismissals

In most models in Table 4, size (*Log(Sales)*) and *Growth in Sales* are insignificant. However, consistent with prior literature (e.g., Ederhof 2011; Gibbs 1995), the likelihood of promotions decreases with (1) *Hierarchical Level* due to more limited positions being available at higher

[32] The differences in the coefficients ($\beta_{CORPROA} - \beta_{SEGROA}$=2.6543 and 3.2019 for Panels A and B) are significant with p-values of 0.0614 and 0.0263, respectively.

[33] Untabulated results from an additional analysis, however, report that when estimated without the corporate ROA variable, segment ROAs are significant determinants of both promotions and dismissals with greater p-values (0.005 and 0.000). The inclusion of corporate ROA undermines the magnitude and significance of the segment ROA's effects on these decisions.

levels, and (2) the level of promotion competition, measured as *Number of Executives at a Hierarchical Level*. Interestingly, dismissals are less likely at higher levels. This is probably because, once executives reach a high-level position, dismissals of such high-level executives are by far more costly for firms than dismissals of executives at lower levels, although further promotions of the executives may become less achievable.

As expected, age (*Log(Age)*), the proxy for experience and local knowledge, is positively associated with promotions and, at the same time, with dismissals. On the contrary, another measure of experience, *Tenure*, negatively affects promotions. Thus, staying longer at a hierarchical level decreases the likelihood of promotion. *Education* and *Job Area* have different effects on promotions depending on the context in which the career decision is made. Finally, *Speed of Promotions* is significantly associated with promotions and dismissals. This supports the presence of "fast track," (e.g., Baker et al. 1994a) in which executives who have reached the current ranks faster than others are more likely to receive another promotion. In sum, the determinants of promotions specified in this study are generally consistent with our prior beliefs about the factors affecting career decisions.

The negative and significant coefficients on *Presence of Relationship* are at the 1 percent level except for Type 2 promotions. This contrasts with an intuitive expectation that the relationship would positively affect the likelihood of promotions. The negative and significant coefficient (β=-0.332, p=0.011) in the dismissal prediction model, however, suggests that subordinates who have good relationships with their supervisors are less likely to be dismissed. The results also show that the indicators for the ranges of *Length of Relationship* carry positive and significant coefficients in most models, including the dismissal prediction model, except for Types 2 and 3 promotions. The findings indicate that a long relationship with the current

supervisor who awarded a previous promotion to an executive increases the likelihood of the executive's promotion and dismissal.

Moderators Affecting the Relationship between Accounting Performance and Promotion

Purposes and Types of Promotions

H2 tests how supervisors evaluate the usefulness of corporate and segment ROAs depending on the purpose or type of promotion. As discussed earlier, Types 2 and 3 promotions are associated with substantial changes in tasks that require different sets of skills, whereas Type 1 and Type 1 Only promotions involve minimum changes in tasks. Therefore, the analysis examines how the coefficients on corporate and segment ROAs vary with promotion types that involve different degrees of change in job characteristics.

The results in Table 4 show that the coefficients on ROA measures are positive and significant in *Type 1* and *Type 1 Only* columns, while they are not significant for the other types of promotions. Given that hierarchical ranks are a predominant determinant of monetary compensation in this conglomerate (Pucik and Lim 2001), this finding suggests that, consistent with H2, supervisors relate promotions to good organizational performance only when they award promotions as incentives.

For an extended analysis, I partition the whole executive-years sample into two groups based on managerial responsibility: non-manager executives and executives with supervisory responsibility. I further sort profit center managers among the manager executives. Then, possible promotion types are identified for each group. For example, for cost center manager executives, hierarchical advancements (*Type 1*) and appointments to profit center managers (*Type 3*) are the possible types. Finally, these are regressed by each group of executives.

Table 5 shows that Type 1 and Type 1 Only promotions with non-trivial compensation increase and a minimum level of job change are positively and significantly associated with the ROA measures, regardless of responsibility or job type in the current position. In contrast, promotions involving significant task changes—(1) appointments to manager positions in any organizations for non-manager executives (*Type 2*, in the fourth column) and (2) appointments to profit center manager positions for cost center managers (*Type 3*, in the eighth column)—are not attributable to the ROA measures. Again, the findings support H2 that accounting performance affects only hierarchical advancements (Type 1 promotions).

--- INSERT TABLE 5 ABOUT HERE. ---

In sum, hierarchical advancements with non-trivial compensation increases seem to function as implicit incentive provision mechanisms. This suggests that supervisors consider accounting performance of an organization when they make promotion decisions for incentive provision purposes, while they find the accounting measures less useful in matching jobs.

Job Scope and Responsibility

To test H3, I run career decision prediction models with groups of executives partitioned based on hierarchical levels and management positions. If supervisors acknowledge individual executives' different degrees of responsibility and contribution to organizational accounting performance, high-level executives and managers of Level 2 or 3 organizations (low-level executives and non-Level 2/3 managers) are likely to be more strongly (weakly) associated with accounting performance. In other words, a stronger association between accounting performance and career decisions for executives with greater responsibility may indicate that, when evaluating these executives, supervisors place greater importance on ROAs of high-level organizations.

Table 6 provides the evidence contrary to this prediction. In the promotion models for the two groups (columns 2, 3, 6, and 7), ROA measures are not significant determinants of promotions for executives in *High Level* or *Lev 2/3 Manager* groups, while they are positively and significantly related to promotions of executives classified otherwise. The findings indicate that supervisors place considerable weight on accounting performance at high-level organizations when they evaluate executives with less responsibility or narrower job scope.

--- INSERT TABLE 6 ABOUT HERE. ---

Several causes, solely or in combination, may explain this finding. First, firms may motivate executives with less responsibility to collaborate with organizations higher than the organization that they manage or directly report to, and reward them based on the performance measured at higher-level organizations. Second, supervisors may make limited efforts to evaluate executives at low levels or with less responsibility. In other words, they may resort to performance measures that are either relatively easy-to-measure or readily available without exploring or considering other sources of information. The findings for executives with greater responsibility, on the contrary, suggest that, in evaluating executives with greater job responsibility, supervisors may include more evaluation criteria and weigh these alternative, perhaps more informative evaluation criteria more heavily than accounting performance. Third, promotions of executives with greater (less) responsibility may be more (less) constrained by organizational structure. For example, given that dismissals of high-ranking executives for good performance are unlikely, organizational structure changes to create positions at higher (lower) level organizations is more (less) costly and infrequent. Thus, the extent to which the structure or capacity constraint limits supervisors' promotion awards increases with an executive's job responsibility. On the other

hand, promotions often follow the dismissals of superordinates when organizational performance is poor, which also offsets the positive effects of performance on promotions. Although the current dataset does not allow me to distinguish these potential explanations, they commonly point out that supervisors consider the costs and constraints as well as the benefits of promotions to evaluate the usefulness of accounting performance

In contrast, dismissals are negatively associated with ROA measures for all groups of executives. Therefore, executives with greater responsibility actually bear greater responsibility for poor performance. On the other hand, strong relationships between poor performance and dismissal for executives with limited decision-making authority may suggest that these executives take "undue" responsibility for the organization's accounting performance compared to their relatively small contribution. Alternatively, the finding may indicate that supervisors use poor organizational performance as a good pretext for dismissals.

In summary, the findings in Table 6 are in stark contrast to H3. The results suggest that when supervisors make promotion decisions for executives with greater responsibility, they seem to incorporate more alternative sources of information about executives' qualities for promotions. The adoption of other evaluation criteria reduces the relative weights of the criteria correlated with ROA measures. Thus, overall correlations between promotions and ROA diminish, which is shown in the results.

Intra-organization Interdependency

H4 predicts that intra-organization interdependency increases the sensitivity of the likelihood of promotions to accounting performance measured at higher-level organizations rather than the organization to which an executive directly reports. To test this hypothesis, I operationalize intra-organization interdependency as the frequency of executives' cross-unit

transfers in different specifications: relative frequency (*Ratio*) and its partition (*Group*). These variables and their interaction terms with ROA measures are incorporated into the established promotion prediction model, or Equation (1).

H4 is supported if the interaction terms between the frequency variable and the ROA measures are positive and significant. Table 7 presents the results. Each column represents different specifications of the frequency of cross-unit transfers—i.e., the relative frequency of the event, and the partitions of the relative frequency. In *Ratio* model, the coefficient of the interaction term between *Cross-Segment Transfer* and *Corporate ROA* is significant and positive (β=34.256 and p = 0.007). This suggests that if cross-segment transfers are more frequent (i.e., greater interdependencies between segments), promotions are more strongly associated with corporate ROA. With a categorical variable specification, the *Group* model provides stronger results. Both interaction terms are positive and significant ($\beta_{INT\_CORPROA}$=3.28, p = 0.009; β_{INT_SEGROA}=0.644, p = 0.089).[34]

--- INSERT TABLE 7 ABOUT HERE. ---

Overall, the findings in Table 7 generally support H4. In particular, with greater interdependency between sub-organizations, or greater transferability of workers' knowledge and skills, supervisors can improve the strength of promotion-based incentives by associating more promotions with the accounting performance measured at high-level organizations.

VI. ADDITIONAL ANALYSIS

Cross-Unit Mobility and Promotions

[34] In addition to the analysis, I examine the combined effects of ROA measures including the main and the interaction effect. As presented at the bottom of the table, the sums of the coefficients on ROA variables and corresponding interaction terms ($\beta_{CORPROA} + \beta_{Int\_COPRROA}$ and $\beta_{SEGROA} + \beta_{Int\_SEGROA}$) remain positive and (in most cases) significant with additional cross-unit transfer variables incorporated.

The additional analysis explores the relationships among accounting performance, promotions, and job transfers across business units. In particular, I examine how cross-unit transfers and career decisions are associated. Regarding intra- and inter-firm job transfers, the literature on human capital and knowledge management implicitly associates job mobility with knowledge transfer or sharing and diffusion of best practices. (e.g., Boschma et al. 2009; Minbaeva et al. 2003).[35] However, there is little research dedicated to intra-firm cross-organizational job mobility—both lateral transfers and promotions.[36] For this reason, the following analysis is driven by an empirical motivation.

Research Model

To investigate the association, the multi-level logit regression model is specified as follows:

$$\begin{aligned} Pr\left(XSEGTR_{ijk,t+1}\right) = {} & \beta_0 + \beta_1 HIGHPERF_{jkt} + \beta_2 Log\left(SALES_{jkt}\right) + \beta_3 GROWTH_{jkt} \\ & + \Sigma\left(\beta_{l+3} DECISION_{l,ijkt+1} + \beta_{l+6} HIGHPERF_{jkt} * DECISION_{l,ijkt+1}\right) \\ & + \Sigma\left(\beta_{m+10} JOBRESP_{m,ijkt} + \beta_{2m+10} HIGHPERF_{jkt} * JOBRESP_{m,ijkt}\right) \\ & + \Sigma\beta Controls + u_{0kt} + \varepsilon_{ijtk} \end{aligned} \qquad \ldots\ldots\ldots\ldots \textit{(2)}$$

where *XSEGTR* is cross-segment transfers at *t+1*, *HIGHPERF* as a proxy for good organizational performance is an indicator of an executive's segment ROA being among the top two quintile groups, $DECISION_l$—*l* for the type (e.g., 1, 2, and 3 for each promotion type)—indicates the types of career decisions for *t+1*, $JOBRESP_m$ is an indicator variable for job responsibility and scope—*m* for the number of classifications. In addition to these key variables,

[35] The research contexts of the literature have mostly been intra-firm knowledge transfer in multi-national corporations (MNCs) (e.g., Minbaeva et al. 2003) or inter-firm knowledge transfer through, for example, external labor market transactions (e.g.,Song et al. 2003) or strategic alliances (e.g., Mowery et al. 1996). Specifically, the additional analysis investigates whether firms use promotions and cross-unit transfers to transfer knowledge and diffuse good practices from an outperforming organization to another as predicted in knowledge transfer arguments.

[36] There are two, but not exhaustive, reasons for the lack of research about this topic. First, lateral transfers are rare (Baker et al. 1994a). Second, as the features of within- and cross-unit transfers may not be different from each other, there has been no need for separate research.

I also control for the size of a reporting segment, as a proxy for the capacity to feed promotions (*Log(SALES)*), and its growth (*GROWTH*).

In addition, I run separate regressions[37] without interaction terms for each performance group (i.e., high and low) sorted based on the quintile rank based on segment ROA per year. This addresses Ai and Norton's (2003) concern about the interpretation of interaction terms in non-linear regression models and also facilitates more intuitive interpretations.

--- INSERT TABLE 8 ABOUT HERE. ---

The Findings

Cross-Unit Transfers and Hierarchical Advancements. The first question is whether cross-unit transfers are associated with hierarchical advancements (i.e., Promotion Type 1). If promotions function as rewards for good performance, they are more likely to be made within the good performing unit than to another (probably poorly performing) unit. To address this question, the analysis examines the interaction terms with the indicator for *High Relative Performance* (*HRP*) group. These interaction terms represent the difference of the coefficients for the main effects, such as *Promotion: Type X*[38] and *Release: Type X*, between *HRP* group and the other. In Table 8, the coefficients for the interaction term between *Promotion: Type 1* and *HRP* in Models 1 and 2 are negative and significant ($\beta^{P}_{INT\_T1}$=-0.781 and -0.790, p=0.053 and 0.051, respectively) while the coefficients for the main effect of *Promotion: Type 1* are insignificant in both models. The findings are consistent with the difference in the coefficients in separate regressions for each performance group. The coefficients for *Promotion: Type 1* are

[37] $Pr(XSEGTR_{ijk,t+1}) = \beta_1 Log(SALES_{jkt}) + \beta_2 GROWTH_{jkt} + \Sigma\beta_{l+2} DECISION_{l,ijkt+1} + \Sigma\beta_{m+l+2} JOBRESP_{m,ijkt} + \Sigma\beta Controls + \beta_0 + u_{0kt} + \varepsilon_{ijtk}$ …… *(3)*

[38] *X* is a variable for different types of career decisions.

negative and significant in both models for the *HRP* group (β_{T1}^{P}=-0.675 and -0.627, p=0.059 and 0.092), while they are positive and insignificant for the *Low Relative Performance* (*LRP*) group (β_{T1}^{P}=0.281 and 0.419, p=0.321 and 0.147). The results indicate that (1) in relatively low-performing segments, executives' hierarchical advancements have nothing to do with cross-segment transfers; and (2) in relatively high-performing segments, executives' hierarchical advancements do not coincide with cross-segment transfers. This suggests that hierarchical advancements occur mainly within a segment.

Cross-Unit Transfers of Executives with Greater Responsibility. The second question is related to the knowledge transfer perspective in human capital and knowledge management literature. If the cross-unit transfers—especially reallocating executives from one high-performing business unit to another—are used as a means to spread best practices, they are more likely to occur for executives with greater job responsibility and/or decision authority than those with less or none. This is because the efficiency of knowledge diffusion may be maximized when incoming executives have greater job responsibility or decision-making authority.

To address the second question, the coefficients of the variables relevant to job responsibility/scope, i.e., *High-Level Executives, Lev 2/3 Manager, Heads of Organizations*, and *Profit Center Manager*, are examined. In Panel A of Table 8, I find that, with the exception of *High-Level Executives*, all other indicators, proxies for greater responsibility and/or broader job scope, are positively associated with cross-unit job transfers of executives in the *HRP* group, while none of these indicators are significant for the *LRP* group. According to these findings, executives who have acquired a high-rank position in a high-performing segment are less likely to be relocated to another (potentially poorly performing) segment. On the other hand, the talent,

skills, and knowledge of executives with supervisory roles in high-performing segments are likely to be exported to other segments while counterparts in poorly performing segments are not.

Cross-Unit Transfers and Assignment/Release of a Supervisory Role. The third question is an extension of the second question. Similar to the previous rationale, the cross-unit transfers aiming at knowledge transfer are more likely to accompany increased job responsibility and/or decision authority than the loss of a supervisory position. To investigate whether this is the case, I compare the coefficients for *Promotion: Type X* (β_X^P) with their counterparts for *Release: Type X* (β_X^R), testing $\beta_X^P = \beta_X^R$. Panel B of Table 8 reports the results. In *Cross-Segment Transfer Model 1*, the difference between the coefficients for *Promotion: Type 2 or 3* (β_{T23}^P) and *Release: Type 2 or 3* (β_{T23}^R) for the *HRP* group is significant (p=0.002). This suggests that executives departing from high-performing segments are more likely to be appointed to manager positions or to profit center managers (i.e., Type 2 or 3 promotions) than to be released from such a supervisory task. On the contrary, for the *LRP* group, the sign on the difference is reversed ($\beta_{T23}^P - \beta_{T23}^R$ =-0.423). The negative sign suggests that executives with relatively poor performance are more likely to lose their supervisory positions when they are reassigned to another segment. However, the difference is not significant (p=0.277).

Separating Type 2 and Type 3 events, *Cross-Segment Transfer Model 2* also provides consistent evidence. Comparing the associations between Type 2 career events and cross-segment transfers, the difference ($\beta_{T2}^P - \beta_{T2}^R$=1.592) is significant ($p$=0.0118) for the *HRP* group while that of the *LRP* group ($\beta_{T2}^P - \beta_{T2}^R$=0.859) is not ($p$=0.1645). Again, for executives departing from a high-performing segment, Type 2 promotions are more likely than release from a supervisory job, while this observation does not hold true for executives in an *LRP* group. In

contrast, *Release: Type 3* is more likely than *Promotion: Type 3* for executives transferring from a low-performing segment ($\beta_{T3}^{P} - \beta_{T3}^{R}$=-2.581, p=0.000).

VII. CONCLUSION

This paper examines how accounting performance measured at corporate and segment levels affects promotions and dismissals of executives belonging to units within an organization. Existing evidence points at the association between individual performance and career decisions (e.g., Medoff and Abraham 1980; Blackwell et al. 1994; Cichello et al. 2009; Campbell 2008) and agency theory prescribes a non-zero weight for an organizational performance indicator in explicit incentive contracts (Holmström 1979; Feltham and Xie 1994). Despite these, we know little about the effect of organizational performance on the career decisions of workers whose contribution to the organizational performance is limited.

To fill the void in the literature, I investigate the fixed effects of accounting performance measured at corporate and segment levels on the career decisions of all executives in the organization. This allowed an empirical test of a supervisor's subjective adjustment of evaluation results. I also identified different decision-making circumstances where the usefulness of accounting performance varies.

Overall, the analysis confirms that supervisors do associate career decisions with accounting performance and they use accounting performance in different ways, depending on the decision-making contexts. First, I find significant fixed effects of accounting performance of an organization on the career decisions of all executives in the organization. Second, the test of H2 shows that the fixed effects are significant only for the promotions awarded as incentives or those involving a hierarchical advancement and accordingly, a non-trivial compensation increase.

Third, the promotions of executives with greater job responsibility or at higher ranks are less sensitive to corporate and segment ROAs. The finding is contrary to my prediction that promotions of high-rank executives who are more responsible for organizational performance should be more strongly tied to the accounting performance of an organization. However, the finding may indicate that the costs and capacity constraint may outweigh the marginal incentives from promotions of high-rank executives that are awarded based on organizational performance. Fourth, I also find that promotion opportunities are more sensitive to corporate or segment ROAs when cross-unit transfers between or within segments are frequent. Finally, the investigation of the association between promotions and cross-unit transfers shows that (1) outgoing transfers from a high-performing segment are more likely for executives in supervisory positions and (2) such job transfers are more likely to accompany appointments to managerial positions than releases from supervisory positions.

Taken together, the findings present an interesting picture regarding cross-unit transfers as a way to overcome an organizational capacity constraint (i.e., the number of possible promotions that an organization can award) and to transfer knowledge across the organization. The results show that the conglomerate often awards promotions in combination with cross-unit transfers to relatively poorly performing business units where dismissals are more likely and thus more open positions are expected. The combination of promotion and outgoing transfer eases the organizational capacity constraint, and, as a result, helps to retain the intensity of promotion-based incentives with least organizational growth (Baker et al. 1988; Jensen 1986). This finding is also consistent with the argument that the combination helps to improve the efficiency of intra-firm knowledge transfer or best practice diffusion.

This study has several limitations, however. The dataset is comprehensive but not complete; although it provides a unique research setting where organizational factors and diverse career events can be investigated at the same time, it does not include low-level organizations' performance (e.g., at the division level) that may be highly correlated with career decisions. Moreover, this paper examines career decision outcomes rather than supervisors' subjective ratings for career decisions, assuming that career decisions are projections of supervisors' subjective evaluations. In that regard, exclusive and confidential data (e.g., supervisors' ratings of their subordinates for career decisions) that may complement the publicly available information could have enriched this study. Owing to the lack of such information, I cannot completely dismiss alternative explanations for some of the observed phenomena. However, this limitation opens an opportunity for future, related studies, as complementary data can be acquired. Follow-up field studies that overcome the data accessibility issue can build on the main findings from this archival study. In addition, other factors that may affect supervisors' subjective evaluations, but are not necessarily related to accounting performance, can be studied in greater depth. For example, one interesting topic of investigation would be why or how, rather than whether, supervisors' consideration of organizational demand for knowledge transfer or social relationships between a supervisor and subordinates affects career decisions.

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APPENDIX A
Executive Titles in Korea—Positions and Roles[39]

In Korean companies, a worker usually bears a job title that displays (i) a hierarchical rank and (ii) a role in an organization.[40] The "dual" career system in Korean conglomerates may be analogized military officers' ranks and roles. For example, a major general (i.e., two-star general) represents a military rank below lieutenant generals and above brigadier generals, but it does not provide information as to the role that the person in the rank serves. Major generals in the Army serve as division commanders or as high-level officers at major commands and the Pentagon,[41] which indicates separation of ranks and jobs. In a similar manner, a *Sajang*[42] which literally means "the head of a company" need not be the highest ranked officer (e.g. CEO) of a company. A *Sajang* may be a division head or a CFO, depending on his or her role. Therefore, executives can have a title as "*Sajang* / Division Manager of ABC business," but *Sajang* represents their hierarchical position, which is typically next to *Hoejang* and *Bu-hoejang*. The subsequent title provides information about the executive's role and the organization to which he or she belongs. Therefore, the title as a whole implies that an individual is one of the top few executive officers and playing a division manager role in ABC's business division. Similarly, job titles such as *Sajang*, *Sangmu* or *Jeonmu* do not provide any information about a person's role in an organization.

Table A1 describes the hierarchical levels used for executives in Samsung. In a typical large Korean firm, a *Hoejang* and a *Sajang* constitute a top management team, consisting of about five

[39] Pucik and Lim (2001) provide almost identical descriptions of Korean companies' job assignment and title.
[40] Pucik and Lim (2001) refer to it as a 'dual career system.'
[41] http://usmilitary.about.com/od/army/a/majgen.htm
[42] "社長" in Chinese Characters, pronounced as [*sajaŋ*] in Korean. A *Sajang*, in most cases, is the head of a company.

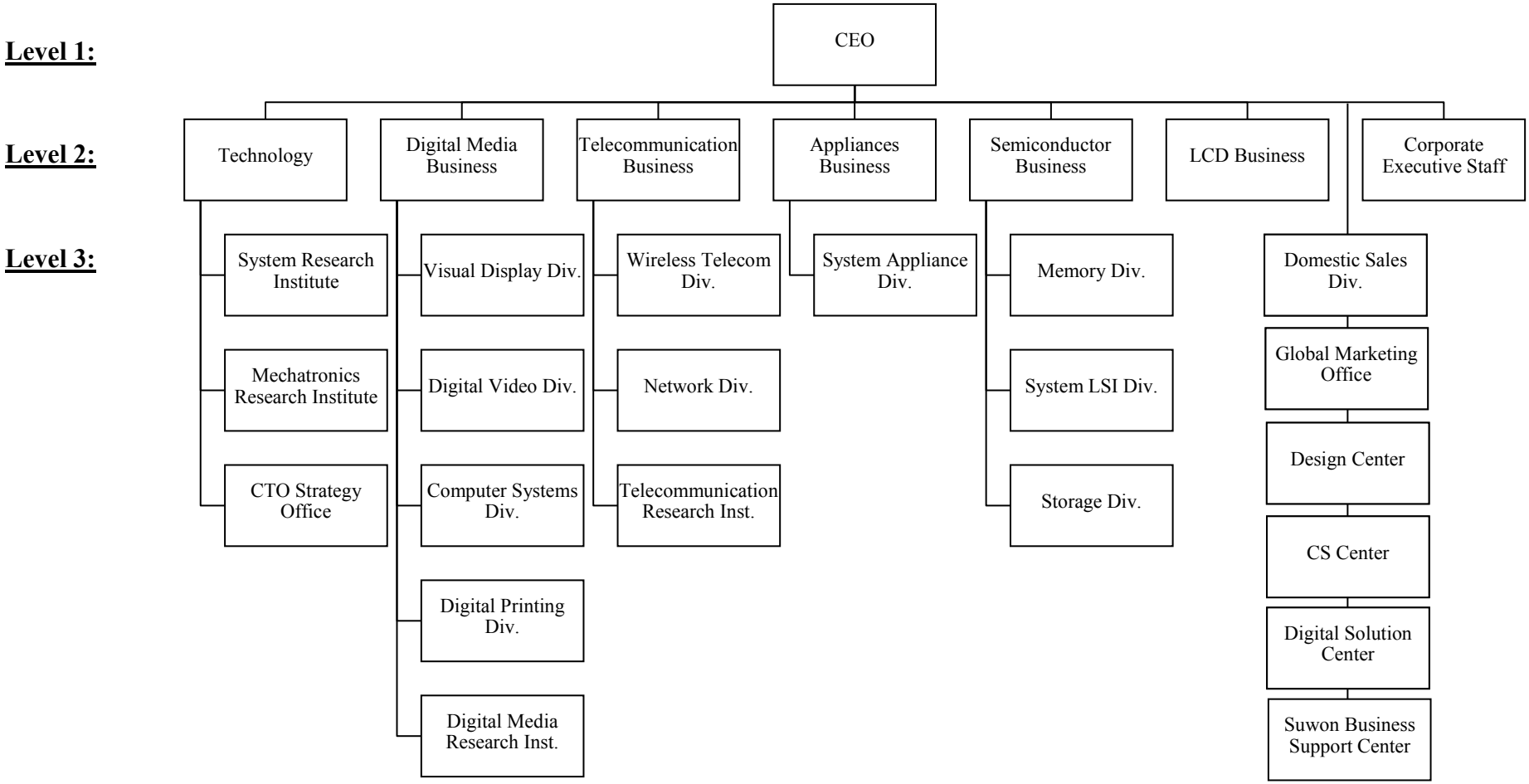
top executives. Next, executives with *Bu-sajang* to *Jeonmu* titles are considered senior executives while *Sangmu* and *Sangmubo* are junior executives.

Table A1
Titles for Hierarchical Ranks for Executives in Samsung and Proportion in the Sample

Title for Rank [a]	No. of Executive-Years [c]	Proportion	Accumulated Proportion
Hoejang **(會長)** [b]	-	-	-
Bu-hoejang **(副會長)**	7	0.15%	0.15%
Sajang **(社長)**	86	1.85%	2.00%
Bu-sajang **(副社長)**	348	7.47%	9.47%
Jeonmu **(專務)**	603	12.95%	22.42%
Sangmu **(常務)**	1,732	37.19%	59.61%
Sangmubo **(常務補)**	1,881	40.39%	100.00%
	4,657		

[a] Provided in a hierarchical order (from the highest)
[b] *Hoejang* is not included in the sample.
[c] The number of executive-years at each hierarchical rank

Figure 1
An Example of an Organization Chart [a]



[a] The organization chart of Samsung Electronics for 2005 is shown.

Table 1
Sample Selection

	No. of companies	No. of executive-years	
No. of executive-years collected	28		11,980
Executive-years in [a]			
- companies with less than 30 executives per year and with less than 5 years of measurement	17	1,762	
- joint ventures	1	63	
- companies for which organization charts are not available	1	256	
- financial firms	3	1,318	
- Year 2008	-	836	4,235
Executives with unidentifiable hierarchical titles	-		365
Known owner family members	-		62
Executives with other missing variables	-		2,039
Heads of Level 1 organizations	-		48
Executives for Year 2001	-		574
Final number of executive-year observations	6		4,657

[a] Companies are excluded in the following sequence.

Table 2
Descriptive Statistics

1. Executive-Level Variables	Mean	Std Dev	25%	Median	75%
Career Decisions					
- Promotion	0.19	0.40	0.00	0.00	0.00
Hierarchical advancements	0.13	0.34	0.00	0.00	0.00
Appointment to a head	0.08	0.26	0.00	0.00	0.00
Appointment to a profit center head	0.03	0.18	0.00	0.00	0.00
- Release from supervisory positions					
From a supervisory task	0.05	0.23	0.00	0.00	0.00
From a profit center manager position	0.02	0.13	0.00	0.00	0.00
- Dismissal	0.12	0.32	0.00	0.00	0.00
Job Responsibility					
High-level executives	0.22	0.42	0.00	0.00	0.00
Head of Level 2 or 3 organizations	0.22	0.42	0.00	0.00	0.00
Head of profit centers	0.19	0.39	0.00	0.00	0.00
Cross-Unit Transfers					
- Cross-segment transfer					
Ratio	0.06	0.08	0.00	0.43	0.09
Group	0.97	0.83	0.00	1.00	2.00
- Within-segment transfer					
Ratio	0.06	0.10	0.00	0.01	0.06
Group	0.80	0.83	0.00	1.00	2.00
Relationship					
Presence of Relationship	0.62	0.48	0.00	1.00	1.00
Length of Relationship	1.50	1.72	0.00	1.00	2.00
Age	49.64	3.75	47.00	49.00	52.00
Tenure	2.97	1.83	1.00	3.00	4.00
Job_Area					
Administration	0.45	0.50	0.00	0.00	1.00
Marketing/Sales	0.24	0.43	0.00	0.00	0.00
Engineer/Technician/Developer	0.31	0.46	0.00	0.00	1.00
Education					
College degree or below	0.74	0.44	0.00	1.00	1.00
Master's degree	0.18	0.38	0.00	0.00	0.00
Doctorate degree	0.08	0.27	0.00	0.00	0.00
Speed of Promotions	3.96	1.87	2.22	4.00	4.55

Table 2 (continued)

2. Organization-Level Variables	Mean	Std Dev	25%	Median	75%
No. of Executives in a Reporting Segment	59.69	43.72	29.00	44.00	77.00
No. of Executives in a Level	20.13	16.07	7.00	16.00	29.00
Degree of Hierarchical Levels	4.07	1.00	4.00	4.00	5.00
Corporate-Level Financials					
ROA (%)	7.16	4.71	3.65	8.24	10.01
Total assets [a]	49.05	34.78	10.63	62.73	73.97
Sales [a]	53.20	38.58	9.72	73.30	78.03
Reporting Segment Level Financials					
ROA (%)	8.76	12.85	3.45	7.49	11.07
Quintile in ROA	2.26	1.16	1.00	2.00	3.00
Total assets [a]	22.29	27.84	3.15	9.36	28.26
Net sales [a]	24.21	28.78	5.05	14.49	22.90
Sales growth	11.92	49.40	0.10	7.84	23.13

[a] In billions USD converted assuming an approximate F/X rate of 1,100 KRW/USD. The average exchange rate for the sample period from 2002 to 2007 (for October of 2012) is 1,082.80 (1,104.90) KRW/USD.

Table 3
Correlations between Variables

Panel A: Correlations between Determinants of Career Decisions

	1	2	3	4	5	6	7	8	9
1. Promotion									
2. Dismissal	-0.19***								
3. Cross-Segment Transfers	0.13***	-0.10***							
4. Within-Segment Transfers	0.11***	-0.09***	-0.06***						
5. Same Immediate Supervisor	-0.05***	-0.05***	-0.03*	-0.01					
6. Hierarchical Level	-0.13***	0.08***	-0.02	-0.02	0.01				
7. No. of Executives at a Level	0.02	-0.05***	-0.06***	-0.05***	0.04**	-0.35***			
8. Log(Age)	-0.06***	0.21***	-0.06***	0.01	-0.10***	0.64	-0.37***		
9. Tenure	-0.01	0.03*	0.01	0.04***	-0.06***	0.13	-0.06	0.09***	
10. Education	-0.01	0.00	-0.04***	-0.01	0.05***	0.09***	-0.01	-0.10***	-0.01***

*, **, *** Significant at 10 percent, 5 percent, and 1 percent, respectively, all based on two-tailed tests.

Promotion is an indicator for an executive's hierarchical advancement, an executive's appointment to a head of an organization (from a non-head position), or an executive's appointment to a head of a profit center in the following year. ***Dismissal*** is an indicator for an executive's appointment to an advisory position or for an executive's profile being unavailable in the following year(s). ***Cross-Segment Transfer***s refer to executives' job reassignments from one reporting segment to another. ***Within-Segment Transfers*** refer to executives' job reassignments from a Level 3 organization to another "within" a reporting segment. ***Same Immediate Supervisor*** is an indicator for the current supervisor's having awarded an executive's previous promotion. ***Hierarchical Level*** is constructed so that a higher numerical value indicates a higher level. ***Number of Executives at a Level*** is the number of executives at a hierarchical level in a reporting segment. ***Log(Age)*** is a natural logarithm of an executive's age calculated as the year of annual reports minus the year of birth. ***Tenure*** is the number of years since the last Type 1 promotion (i.e., a hierarchical advancement). ***Education*** is 0 for college graduates or below, 1 for master's degree holders, and 2 for doctoral degree holders.

Table 3 (continued)

Panel B: Correlations between Promotions and Financial Performance Measures

	1	2	3	4	5	6	7	8	9	10	11	12	13
Career Decisions													
1. Promotion													
2. Type 1 Promotion	0.75***												
3. Type 2 Promotion	0.55***	0.04***											
4. Type 3 Promotion	0.36***	0.03**	0.18***										
5. Dismissal	-0.19***	-0.14***	-0.11***	-0.07***									
Corporate Level													
6. Stock Returns	0.06***	0.07***	-0.01	0.02	-0.04***								
7. Corporate ROA	0.04***	0.03**	0.05***	-0.03*	-0.09***	-0.10***							
8. Corporate Profit Margin	0.05***	0.04***	0.06***	-0.02	-0.10***	-0.05***	0.98***						
Segment Level													
9. Segment ROA	0.04***	0.05***	0.03*	-0.02	-0.07***	0.05***	0.25***	0.27***					
10. Industry-Adjusted ROA	0.03*	0.03*	0.02	-0.01	-0.02	0.05***	0.08***	0.12***	0.93***				
11. ROA Relative to Segments	0.06***	0.03**	0.08***	-0.02	-0.06***	-0.02	0.15***	0.15***	0.44***	0.36***			
12. ROA Groups	0.07***	0.06***	0.05***	-0.02	-0.11***	0.02	0.48***	0.49***	0.62***	0.49***	0.72***		
13. Segment Profit Margin	0.09***	0.05***	0.10***	-0.02	-0.06***	0.00	0.46***	0.47***	0.39***	0.27***	0.48***	0.62***	
14 Growth in Sales	0.00	0.00	0.00	-0.01	0.00	-0.12***	0.19***	0.16***	0.07***	0.00	0.08***	0.13***	0.06***

*, **, *** Significant at 10 percent, 5 percent, and 1 percent, respectively, all based on two-tailed tests.

Promotion is an indicator for an executive's hierarchical advancement (***Type 1***), an executive's appointment to a head of an organization (from a non-head position) (***Type 2***), or an executive's appointment to a head of a profit center (***Type 3***) in the following year. ***Dismissal*** is an indicator for an executive's appointment to an advisory position or for an executive's profile being unavailable in the following year(s). ***Stock Returns*** refers to the buy-and-hold stock return for the period corresponding to a company's fiscal year. ***Corporate ROA*** is computed as net income divided by total assets per company. ***Corporate Profit Margin*** is computed as net income divided by total sales per company. ***Segment ROA*** is computed as operating profit divided by total assets measured per reporting segment. ***ROA Relative to Segments*** is the quintile rank in ROA within a company per year for which the numerical assignment increases with the relative performance. ***Industry-Adjusted ROA*** is ROA minus the industry average ROA provided at *FnGuide.com*. ***ROA Groups*** are assigned based on *Segment ROA*, by partitioning the ranges of ROA at 0%, 5%, 10%, 15% respectively; for example, *Segment ROA* below 0% is classified to Group 1 while *Segment ROA* above 15% is to Group 5. ***Segment Profit Margin*** is computed as operating income divided by total sales per reporting segment. ***Sales growth*** is the growth rate in sales of a segment between years *t-1* and *t*.

Table 4
Accounting Performance, Promotions, and Dismissals

	Promotions [a]					Dismissals
	Types 1, 2, & 3	**Type 1**	**Type 1 Only**	**Type 2**	**Type 3**	
Corporate ROA	**4.178*****	**8.096*****	**8.850*****	**-0.551**	**-0.962**	**-12.778*****
	(3.289)	(4.996)	(5.039)	(-0.280)	(-0.439)	(-7.188)
Segment ROA	**0.976****	**1.359*****	**1.065****	**0.491**	**-0.595**	**-0.651**
	(2.309)	(2.678)	(2.208)	(0.730)	(-0.856)	(-1.055)
Log(Sales)	0.057	0.005	0.029	0.214*	-0.082	0.196**
Growth in Sales	-0.117	-0.190	-0.185	0.008	-0.031	0.163*
Hierarchical Level	-2.038***	-5.191***	-5.081***	-0.270	1.582*	-2.087***
No. of Executives at a Level	-0.030***	-0.045***	-0.039***	-0.008	-0.012	-0.009*
Log(Age)	2.746**	9.830***	10.247***	-3.146*	-2.888	17.248***
Tenure: [3.5]	0.071	-0.167	-0.239**	0.296**	0.320*	-0.067
Tenure: [6, ∞)	-0.292*	-0.865***	-0.859***	0.043	0.277	-0.051
Education: Master's	-0.057	-0.077	-0.115	-0.086	0.306	0.152
Education: Doctorate	0.188	0.494***	0.446**	0.016	-0.369	0.262
Job Area: Marketing/Sales	0.009	-0.273**	-0.390***	0.326**	0.588***	-0.060
Job Area: Engineer/Research	-0.142	-0.377***	-0.418***	0.060	0.368*	0.058
Speed of Promotion	0.671***	2.026***	1.977***	0.020	-0.767*	0.789***
Presence of Relationship	-0.784***	-1.520***	-1.318***	-0.012	-0.589***	-0.332**
Length of Relationship: [3.5]	1.163***	1.963***	1.730***	0.210	0.480*	0.349**
Length of Relationship: [6, ∞)	0.945***	1.758***	1.702***	-0.534	0.254	0.498*
Intercept	-23.832***	-69.321***	-70.860***	4.641	18.801	-83.695***
S.D. (u_0)	-14.712	-16.201	-1.679	-13.823	-21.282	-0.456
S.D. (v_0)	-0.741***	-0.501**	-0.716**	-0.481**	-1.634**	-2.047**
Log-Likelihood	-2,245.79	-1,546.80	-1,420.29	-1,196.20	-678.34	-1,495.08
Prob > χ^2	0.000	0.000	0.000	0.000	0.003	0.000

*, **, *** Significant at 10 percent, 5 percent, and 1 percent, respectively, all based on two-tailed tests. N=4,657 for all models. *t*-statistics for the coefficients on ***Corporate and Segment Level ROAs*** are reported in parentheses. *t*-statistics for other variables are omitted in the interest of space.

Corporate ROA is computed as net income divided by total assets per company. ***Segment ROA*** is computed as operating profit divided by total assets measured per reporting segment. ***Sales*** is measured per reporting segment. ***Sales Growth*** is the growth rate in sales of a segment between years *t-1* and *t*. ***Hierarchical Level*** is constructed so that a higher numerical value indicates a higher level. ***Number of Executives at a Level*** is the number of executives at a hierarchical level in a reporting segment. ***Log(Age)*** is a natural logarithm of an executive's age calculated as the year of annual reports minus the year of birth. ***Tenure*** (i.e., years in the hierarchical rank) is categorized into three groups: tenure groups of (1) less than or equal to two years, (2) greater than or equal to three years and less than or equal to five years, and (3) greater than or equal to six years. Dummy variables are used to accommodate the non-linear nature of the variable. ***Education*** is

categorized into three groups based on the final degree: executives with (1) lower than and including college degrees, (2) master's degrees, and (3) doctorate degrees. Dummy variables are used to accommodate the non-linear nature of the variable. The base (i.e., 0) is for the (lower than) college degree group. ***Job Area*** is categorized into three groups: executives in (1) general administration and management, (2) marketing and sales, and (3) engineering and research. Dummy variables are used to accommodate the non-linear nature of the variable. The base is for the general administration and management group. ***Speed of Promotion*** captures how fast an executive has been promoted to the current hierarchical rank, calculated as $\frac{(6-Hierarchical\ Level_{it})}{Age_{it}-Years\ at\ the\ Level_{it}}$. ***Presence of Relationship*** is an indicator of the current supervisor's having awarded an executive's previous promotion. ***Length of Relationship*** referring to the number of years since the last promotion awarded by the current immediate supervisor is categorized into three groups: (1) less than or equal to two years, (2) greater than or equal to three years and less than or equal to five years, and (3) greater than or equal to six years. Dummy variables are used to accommodate the non-linear nature of the variable.

[a] ***Type 1 Promotion*** involves a hierarchical advancement. ***Type 1 Only*** refers to a hierarchical advancement that does not involve an appointment to a head position. ***Type 2 Promotion*** refers to an appointment to head an organization (e.g., department, division). ***Type 3 Promotion*** refers to an appointment to head a profit center.

Table 5
Promotion Types [a] and Accounting Performance

	Non-Head Positions			Head Positions				
				All	Cost Center Manager			PCtr Mgr
	Type 1 & 2 [a]	Type 1 Only [a]	Type 2 [a]	Type 1 [a]	Type 1 & 3 [a]	Type 1 Only [a]	Type 3 [a]	Type 1 [a]
Corporate ROA	**5.989*****	**19.634*****	**1.339**	**3.358****	**2.866**	**5.731****	**-1.873**	**7.908****
	(2.593)	(3.862)	(0.585)	(2.152)	(1.534)	(2.559)	(-0.640)	(2.303)
Segment ROA	**1.169**	**0.292**	**0.948**	**0.874****	**0.894***	**1.242****	**-0.546**	**1.455**
	(1.220)	(0.143)	(1.086)	(2.035)	(1.810)	(2.230)	(-0.560)	(1.435)
Log(Sales)	-0.302**	-0.001	-0.333***	0.124	0.111	0.206*	-0.069	0.074
Growth in Sales	-0.188	-1.568**	0.277	-0.090	-0.341	-0.620*	-0.092	0.114
Hierarchical Level	-0.359	-4.293**	-0.121	-2.874***	-1.874**	-5.532***	1.809*	-6.091***
No. of Executives at a Level	-0.016*	-0.035**	-0.006	-0.035***	-0.039***	-0.052***	-0.012	0.001
Log(Age)	0.193	6.491	-0.088	6.363***	5.054***	10.940***	-2.630	12.683***
Tenure: [3.5]	0.055	-0.454*	0.264*	-0.008	-0.055	-0.291*	0.415*	0.134
Tenure: [6, ∞)	-0.317	-0.839	-0.057	-0.431**	-0.469**	-1.112***	0.358	-0.473
Education: Master's	-0.209	-0.183	-0.196	-0.003	-0.044	-0.344	0.484*	0.301
Education: Doctorate	-0.275	-0.511	-0.268	0.447**	0.495**	0.816***	-0.507	-0.291
Job Area: Marketing/Sales	0.102	-0.639*	0.429**	-0.056	-0.024	-0.408**	0.733***	-0.247
Job Area: Engineer/Research	0.201	-1.080***	0.592***	-0.168	-0.136	-0.442**	0.473*	-0.252
Speed of Promotion	0.11	1.44	0.18	1.00***	0.52	2.10***	-0.82	2.60***
Presence of Relationship	-0.499***	-1.322***	-0.131	-1.217***	-1.232***	-1.436***	-0.625**	-1.128***
Length of Relationship: [3.5]	1.019***	1.784***	0.416**	1.568***	1.602***	1.825***	0.684**	1.553***
Length of Relationship: [6, ∞)	0.558	2.252***	-0.688	1.445***	1.607***	1.780***	0.720	1.310**
Intercept	1.48	-51.94*	3.33	-43.73***	-32.20***	-78.20***	18.82	-88.12***
S.D. (u_0)	-23.41	-13.66	-16.54	-10.66	-1.08**	-15.40	-13.41	-15.35
S.D. (v_0)	-0.72*	0.08	-1.08**	-0.90***	-1.09	-0.51**	-0.47	-0.86**
Log-Likelihood	-851.05	-322.08	-740.40	-1,285.91	-970.06	-747.11	-416.62	-298.66
Observations	1,431	1,431	1,431	3,226	2,328	2,328	2,328	898
Prob > χ^2	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000

*, **, *** Significant at 10 percent, 5 percent, and 1 percent, respectively, all based on two-tailed tests. *t*-statistics for the coefficients on ***Corporate and Segment Level ROAs*** are reported in parentheses. *t*-statistics for other variables are omitted in the interest of space.

Corporate ROA is computed as net income divided by total assets per company. ***Segment ROA*** is computed as operating profit divided by total assets measured per reporting segment. ***Sales*** is measured per reporting segment. ***Sales growth*** is the growth rate in sales of a segment between years *t-1* and *t*. ***Hierarchical Level*** is constructed so that a higher numerical value indicates a higher level. ***Number of Executives at a Level*** is the number of executives at a hierarchical level in a reporting segment. ***Log(Age)*** is a natural logarithm of an executive's age calculated as the year of annual reports minus the year of birth. ***Tenure*** (i.e., years in the hierarchical rank) is categorized into three groups: tenure groups of (1) less than or equal to two years, (2) greater than or equal to three years and less than or equal to five years, and (3) greater than or equal to six years. Dummy variables are used to accommodate the non-linear nature of the variable. ***Education*** is categorized into three groups based on the final degree: executives with (1) lower than and including college degrees, (2) master's degrees, and (3) doctorate degrees. Dummy variables are used to accommodate the non-linear nature of the variable. The base (i.e., 0) is for the (lower than) college degree group. ***Job Area*** is categorized into three groups: executives in (1) general administration and management, (2) marketing and sales, and (3) engineering and research. Dummy variables are used to accommodate the non-linear nature of the variable. The base is for the general administration and management group. ***Speed of Promotion*** captures how fast an executive has been promoted to the current hierarchical rank, calculated as $\frac{(6-Hierarchical\ Level_{it})}{Age_{it}-Years\ at\ the\ Level_{it}}$. ***Presence of Relationship*** is an indicator of the current supervisor's having awarded an executive's previous promotion. ***Length of Relationship*** referring to the number of years since the last promotion awarded by the current immediate supervisor is categorized into three groups: (1) less than or equal to two years, (2) greater than or equal to three years and less than or equal to five years, and (3) greater than or equal to six years. Dummy variables are used to accommodate the non-linear nature of the variable.

[a] ***Type 1 Promotion*** involves a hierarchical advancement. ***Type 1 Only*** refers to a hierarchical advancement that does not involve an appointment to a head position. ***Type 2 Promotion*** refers to an appointment to head an organization (e.g., department, division). ***Type 3 Promotion*** refers to an appointment to head a profit center.

Table 6
Job Responsibility and Accounting Performance

	Promotions		Dismissals		Promotions		Dismissals	
	High Level [a]	Low Level [b]	High Level [a]	Low Level [b]	Lev 2/3 Managers [c]	Others	Lev 2/3 Managers [c]	Others
Corporate ROA	**1.566**	**5.409*****	**-11.757*****	**-10.614*****	**3.806**	**4.417*****	**-10.213*****	**-12.618*****
	(0.590)	(3.794)	(-2.977)	(-5.187)	(1.270)	(3.122)	(-3.100)	(-5.797)
Segment ROA	**0.451**	**1.104****	**-4.138****	**-0.270**	**-0.072**	**0.973****	**-0.747**	**-0.851**
	(0.549)	(2.396)	(-2.096)	(-0.444)	(-0.061)	(2.192)	(-0.577)	(-1.127)
Log(Sales)	0.068	0.062	0.297*	0.107	-0.046	0.029	0.070	0.364**
Growth in Sales	0.086	-0.349*	0.355**	0.115	0.259	-0.254*	0.218	0.125
Hierarchical Level	-4.176***	-2.789***	-3.118***	-6.029***	-3.659***	-1.450**	-2.026**	-2.249***
No. of Executives at a Level	-0.021	-0.029***	0.016	-0.004	0.010	-0.031***	-0.004	-0.014**
Log(Age)	8.095**	3.398**	26.889***	20.674***	10.931***	1.386	18.265***	17.896***
Tenure: [3.5]	0.277	0.067	-0.145	-0.101	0.057	0.072	-0.044	-0.105
Tenure: [6, ∞)	-0.006	-0.308*	-0.069	-0.222	-0.480	-0.273	0.150	-0.149
Education: Master's	-0.180	-0.037	0.106	0.163	0.023	-0.076	0.171	0.181
Education: Doctorate	-0.115	0.367**	0.578*	0.237	0.128	0.175	-0.094	0.449**
Job Area: Marketing/Sales	0.092	-0.010	-0.025	-0.010	-0.004	0.025	-0.332	0.076
Job Area: Engineer/Research	-0.020	-0.183*	-0.442*	0.162	0.188	-0.141	-0.235	0.141
Speed of Promotion	1.61***	0.92**	1.28***	2.59***	1.43**	0.43	0.82*	0.85**
Presence of Relationship	-0.149	-0.886***	-0.134	-0.279*	-0.712***	-0.789***	-0.591**	-0.283*
Length of Relationship: [3.5]	0.564**	1.230***	0.362	0.125	1.045***	1.220***	0.759**	0.178
Length of Relationship: [6, ∞)	-0.626	1.165***	0.318	-0.040	0.891*	0.999***	0.518	0.500
Intercept	-56.63***	-30.75***	-129.79***	-119.18***	-64.48***	-14.61*	-85.85***	-89.71***
S.D. (u_0)	-21.49	-10.90	-0.61	-0.56	-1.22*	-17.08	-0.60	-0.65
S.D. (v_0)	-22.53	-0.66***	-20.79	-1.19***	-1.43	-0.78***	-1.40	-1.15**
Log-Likelihood	-412.11	-1,813.44	-389.61	-1,084.90	-384.97	-1,845.77	-359.68	-1,128.15
Observations	1,044	3,613	1,044	3,613	1,030	3,627	1,030	3,627
Prob > χ^2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*, **, *** Significant at 10 percent, 5 percent, and 1 percent, respectively, all based on two-tailed tests. *t*-statistics for the coefficients on ***Corporate and Segment Level ROAs*** are reported in parentheses. *t*-statistics for other variables are omitted in the interest of space.

Corporate ROA is computed as net income divided by total assets per company. ***Segment ROA*** is computed as operating profit divided by total assets measured per reporting segment. ***Sales*** is measured per reporting segment. ***Sales growth*** is the growth rate in sales of a segment between years *t-1* and *t*. ***Hierarchical***

Level is constructed so that a higher numerical value indicates a higher level. ***Number of Executives at a Level*** is the number of executives at a hierarchical level in a reporting segment. ***Log(Age)*** is a natural logarithm of an executive's age calculated as the year of annual reports minus the year of birth. ***Tenure*** (i.e., years in the hierarchical rank) is categorized into three groups: tenure groups of (1) less than or equal to two years, (2) greater than or equal to three years and less than or equal to five years, and (3) greater than or equal to six years. Dummy variables are used to accommodate the non-linear nature of the variable. ***Education*** is categorized into three groups based on the final degree: executives with (1) lower than and including college degrees, (2) master's degrees, and (3) doctorate degrees. Dummy variables are used to accommodate the non-linear nature of the variable. The base (i.e., 0) is for the (lower than) college degree group. ***Job Area*** is categorized into three groups: executives in (1) general administration and management, (2) marketing and sales, and (3) engineering and research. Dummy variables are used to accommodate the non-linear nature of the variable. The base is for the general administration and management group. ***Speed of Promotion*** captures how fast an executive has been promoted to the current hierarchical rank, calculated as $\frac{(6-Hierarchical\ Level_{it})}{Age_{it}-Years\ at\ the\ Level_{it}}$. ***Presence of Relationship*** is an indicator of the current supervisor's having awarded an executive's previous promotion. ***Length of Relationship*** referring to the number of years since the last promotion awarded by the current immediate supervisor is categorized into three groups: (1) less than or equal to two years, (2) greater than or equal to three years and less than or equal to five years, and (3) greater than or equal to six years. Dummy variables are used to accommodate the non-linear nature of the variable.

[a] ***High Level*** refers to the likelihood of promotions or dismissals of executives at hierarchical levels of one through three.

[b] ***Low Level*** refers to the likelihood of promotions or dismissals of executives at hierarchical levels of four and five.

[c] ***Lev 2/3 Manager*** is an indicator for executives heading Level 2 or 3 organizations.

Table 7
Intra-organization Interdependency, Accounting Performance, and Promotions

	Dependent: Pr(Promotions)	
	Ratio [a]	**Group** [b]
Corporate ROA	-0.137	-2.074
Cross-Segment Transfer	1.534	0.050
Interaction with Corporate ROA	**34.256*****	**3.28*****
Segment ROA	1.329***	0.468
Within-Segment Transfer	3.487***	0.30***
Interaction with Segment ROA	**1.678**	**0.644***
Log(Sales)	0.274***	0.184**
Growth in Sales	-0.02	0.02
Hierarchical Level	-2.237***	-2.266***
No. of Executives at a Level	-0.031***	-0.030***
Log(Age)	3.574***	3.734***
Tenure: [3.5]	0.055	0.051
Tenure: [6, ∞)	-0.359**	-0.367**
Education: Master's	-0.022	-0.026
Education: Doctorate	0.228	0.215
Job Area: Marketing/Sales	-0.009	0.001
Job Area: Engineer/Research	-0.141	-0.126
Speed of Promotion	0.750***	0.771***
Presence of Relationship	-0.82***	-0.78***
Length of Relationship: [3.5]	1.17***	1.17***
Length of Relationship: [6, ∞)	0.817***	0.804***
Intercept	-31.96***	-31.17***
S.D. (u_0)	-19.70	-19.06
S.D. (v_0)	-0.61***	-0.76***
Log-Likelihood	-2,196.17	-2,210.81
Observations	4,657	4,657
Prob > χ^2	0.000	0.000
$\boldsymbol{\beta_{CORPROA} + \beta_{Int\_CROA} = 0}$	**34.119*****	1.207
χ^2	(8.32)	(0.73)
$\boldsymbol{\beta_{SEGROA} + \beta_{Int\_SROA} = 0}$	**3.008***	**1.112****
χ^2	(3.38)	(6.11)

*, **, *** Significant at 10 percent, 5 percent, and 1 percent, respectively, all based on two-tailed tests. N=4,657 for all models. *t*-statistics for all variables are omitted in the interest of space.

Corporate ROA is computed as net income divided by total assets per company. ***Cross-Segment Transfer***s refer to executives' job reassignments from one reporting segment to another. ***Segment ROA*** is computed as operating profit divided by total assets measured per reporting segment. ***Within-Segment Transfers*** refer to executives' job reassignments from a Level 3 organization to another "within" a reporting segment. ***Sales*** is measured per reporting segment. ***Sales Growth*** is the growth rate in sales of a segment between years *t-1* and *t*. ***Hierarchical Level*** is constructed so that a higher numerical value indicates a higher level. ***Number of Executives at a Level*** is the number of executives at a hierarchical level in a reporting segment. ***Log(Age)*** is a natural logarithm of an executive's age calculated as the year of annual reports minus the year of birth. ***Tenure*** (i.e., years in the hierarchical rank) is categorized into three groups: tenure groups of (1) less than or equal to two years, (2) greater than or equal to three years and less than or equal to five years, and (3) greater than or equal to six years. Dummy variables are used to

accommodate the non-linear nature of the variable. ***Education*** is categorized into three groups based on the final degree: executives with (1) lower than and including college degrees, (2) master's degrees, and (3) doctorate degrees. Dummy variables are used to accommodate the non-linear nature of the variable. The base (i.e., 0) is for the (lower than) college degree group. ***Job Area*** is categorized into three groups: executives in (1) general administration and management, (2) marketing and sales, and (3) engineering and research. Dummy variables are used to accommodate the non-linear nature of the variable. The base is for the general administration and management group. ***Speed of Promotion*** captures how fast an executive has been promoted to the current hierarchical rank, calculated as $\frac{(6-Hierarchical\ Level_{it})}{Age_{it}-Years\ at\ the\ Level_{it}}$. ***Presence of Relationship*** is an indicator of the current supervisor's having awarded an executive's previous promotion. ***Length of Relationship*** referring to the number of years since the last promotion awarded by the current immediate supervisor is categorized into three groups: (1) less than or equal to two years, (2) greater than or equal to three years and less than or equal to five years, and (3) greater than or equal to six years. Dummy variables are used to accommodate the non-linear nature of the variable.

[a] In **Ratio** model, ***Cross-Unit Transfer*** is specified as the ratio of the frequency of a type of transfers to the number of executives in a reporting segment. For example, ***Cross-Segment Transfer*** is computed as the frequency of *outgoing,* rather than incoming, cross-segment transfers from a segment divided by the number of executives in the segment. ***Within-Segment Transfer*** is computed as the frequency of cross-unit transfers *within* a segment divided by the number of executives in the segment.

[b] In **Group** model, the ratios specified in the **Ratio** model are divided into three groups: (1) zero, (2) between zero and the pooled-median of the ratios, and (3) greater than the pooled-median of the ratios. Thus, ***Cross-Segment Transfer*** is specified as a categorical variable of three groups.

Table 8
Cross-Unit Job Mobility and Promotions

Panel A: Regressions of Cross-Unit Transfers

	Dependent: Cross-Segment Transfer [a]		Cross-Segment Transfer Model 1 [b]		Cross-Segment Transfer Model 2 [c]	
	Model 1 [b]	Model 2 [c]	High Relative Performance [d]	Low Relative Performance [d]	High Relative Performance [d]	Low Relative Performance [d]
High Relative Performance	-0.385	-0.481				
Promotion: Type 1	0.110	0.201	**-0.675***	0.281	**-0.627***	0.419
Interaction w/ High Performance	**-0.781***	**-0.790***				
Promotion: Type 2		**1.626*****			**2.140*****	**1.601*****
Interaction w/ High Performance		0.306				
Promotion: Type 3		**1.318*****			**2.664*****	**1.032****
Interaction w/ High Performance		**1.004****				
Promotion: Type 2 or 3	**2.103*****		**2.676*****	**1.968*****		
Interaction w/ High Performance	0.382					
Release: Type 2		**0.881*****			0.548	**0.743****
Interaction w/ High Performance		-0.363				
Release: Type 3		**3.389*****			**2.160*****	**3.613*****
Interaction w/ High Performance		**-1.499***				
Release: Type 2 or 3	**2.263*****		**1.283*****	**2.391*****		
Interaction w/ High Performance	**-1.072*****					
High-Level Executives	-0.177	-0.205	**-0.770****	-0.197	**-0.810****	-0.226
Interaction w/ High Performance	-0.388	-0.416				
Lev 2/3 Managers	**0.493****	**0.800*****	**0.945*****	0.059	**1.102*****	0.552
Interaction w/ High Performance	0.293	0.097				
Heads of Organizations	-0.105	-0.110	**0.870****	0.018	**0.783***	0.018
Interaction w/ High Performance	0.588	0.563				
Profit Center Managers	0.23	**-0.58***	**1.07****	0.13	**0.91***	**-0.83****
Interaction w/ High Performance	0.57	**1.16****				
Log(Sales)	0.073	0.123	0.441***	0.050	0.500***	0.127
Growth in Sales	-0.337	-0.347	-1.455**	0.585	-1.250	0.417
Intercept	-4.69***	-5.41***	-11.80***	-4.03**	-13.01***	-5.35***
S.D. (u_0)	-0.35*	-0.35*	-0.16	-1.65	0.33	-1.01
Log-Likelihood	-1,002.25	-992.77	-370.47	-346.01	-364.14	-341.43
Observations	4,657	4,657	2,212	1,358	2,212	1,358
Prob > χ^2	0.000	0.000	0.000	0.000	0.000	0.000

Table 8 (continued)

Panel B: Comparisons of Coefficients

	Cross-Segment Transfer Model 1		Cross-Segment Transfer Model 2	
	High Relative Performance	**Low Relative Performance**	**High Relative Performance**	**Low Relative Performance**
$\boldsymbol{\beta^{P}_{T23} - \beta^{R}_{T23} = 0}$	**1.392*****	-0.423		
χ^2	**(3.13)**	(-1.09)		
$\boldsymbol{\beta^{P}_{T2} - \beta^{R}_{T2} = 0}$			**1.592****	0.859
χ^2			**(6.330)**	(1.930)
$\boldsymbol{\beta^{P}_{T3} - \beta^{R}_{T3} = 0}$			0.503	**-2.581*****
χ^2			(0.350)	**(17.610)**

*, **, *** Significant at 10 percent, 5 percent, and 1 percent, respectively, all based on two-tailed tests. *t*-statistics for variables are omitted in the interest of space.

High Relative Performance is an indicator for whether a reporting segment's ROA quintile belongs to the highest two, while ***Low Relative Performance*** is an indicator that it belongs to the lowest two. Thus, the midst quintile does not belong to any group. ***Promotions or Releases Type X*** are indicators for whether promotions or job re-assignments are associated with a hierarchical movement (***Type 1***), an appointment to or release from a head position (***Type 2***), an appointment to or release from a profit center manager position (***Type 3***), or combinations of these. ***High-Level Executives*** is an indicator for executives at the top three hierarchical levels. ***Lev 2/3 Managers*** indicates executives heading Level 2 or 3 organizations. ***Heads of Organizations*** is an indicator for executives who carry "manager" title for any organizations that directly report to Levels 1 to 3 organization managers. ***Profit Center Manager*** is an indicator for executives who supervise profit centers. ***Sales*** is measured per reporting segments. ***Sales growth*** is the growth rate in sales of a segment between years *t-1* and *t*. ***Hierarchical Level*** is constructed so that a higher numerical value indicates a higher level.

[a] The dependent variable for all regression models in Table 8 is the likelihood of *Cross-Segment Transfer*.

[b] Model 1 combines promotions Types 2 and 3, i.e., appointments to a manager of any type of organization.

[c] Model 2 separates promotions Types 2 and 3.

[d] *High (Low) Relative Performance* is the subset of executives whose reporting segment ROA is top (bottom) two quintiles within a company per year.