Kwansei Gakuin University
Social Sciences Review
Vol.19, 2014
Nishinomiya, Japan

TMTs' Characteristics, Organizational Slack, and Organizational Performance: A Review of Prior Literature

Osamu SUZUKI

Author Note

Research conducted by Osamu Suzuki, Institute of Business and Accounting, Kwansei Gakuin University.

Correspondence concerning this paper should be addressed to Osamu Suzuki,

Abstract

In this manuscript, we aim to reconcile mutually contradictory arguments concerning the influence of organizational slack on innovation by taking into account the moderating effects of the characteristics of top management teams (TMTs). Building on prior upper echelons research, we argue that organizational slack positively influences innovation to the extent that the members of the TMT have a high level of education, job functions that are output-oriented, or short organizational (or industry) tenure. Our argument informs future research on organizational slack, upper echelons theory, and the resource-based view.

Keywords: organizational slack, innovation, upper echelons theory, resource-based view

TMTs' Characteristics, Organizational Slack, and Organizational Performance: A Review of Prior Literature

In this manuscript, we aim to reconcile mutually contradictory arguments on the influence of organizational slack on innovation. Organizational slack has been defined as a resource whose usage has not been specified (Bourgeois, 1981; Cyert & March, 1963). Thus, managers are allowed substantial discretion in deciding its usage. Some authors argue that organizational slack enables innovation by providing resources that managers can use in a flexible way to pursue initiatives that have less predictable outcomes (Greve, 2003; Meyer, 1982; Singh, 1986). Most

resources are provided to an organization by its stakeholders, who expect managers to be accountable for the productive usage of their resources. However, by definition, no particular usage is specified for organizational slack. Accordingly, organizational slack is used at the managers' discretion in that managers are not accountable for the usage of organizational slack to their stakeholders. Such "irresponsible" (Levinthal & March, 1981, p. 309) resources are particularly appropriate for the pursuit of innovation, because innovation outcomes are typically uncertain and unpredictable.

Interestingly enough, the high degree of flexibility associated with the usage of organizational slack is criticized by those who see organizational slack as a source of managerial complacence and inaction, rather than innovation (Bromiley, 1991; Latham & Braun, 2009; Palmer & Wiseman, 1999; Wiseman & Bromiley, 1996). They argue that organizations with organizational slack are insulated or buffered from competitive dynamism (Thompson, 1967) because performance decline does not directly threaten the survival of organizations with a reserve of resources like organizational slack. In other words, managers can use organizational slack to cover financial losses, thereby tolerating performance problems. Consequently, the more organizational slack there is available, the less likely it is that the organization actively pursues innovation: this is because risk-seeking behaviors, including innovation, are motivated by an explicit recognition of failures (Cyert & March, 1963; Desai, 2008).

Managerial Discretion

The stark discrepancy between the two camps of authors indicates that the prior work may not have properly considered important theoretical constructs that moderate the relationship between organizational slack and innovation. For example, organizational slack may have differential influences on innovation, depending on some organizational characteristics. In other words, there may be some moderators that determine whether organizational slack affects innovation positively or negatively.

A common perspective shared by the mutually contradictory arguments described above is that organizational slack enables managerial discretion (Hambrick & Abrahamson, 1995; Hambrick & Finkelstein, 1987). Managerial discretion is defined as the "latitude of managerial action" (Hambrick & Finkelstein, 1987, p. 371). Managerial discretion may be either high or low, depending on the characteristics of the task environments, organizations, and individuals. Organizational slack is one of the most typical organizational antecedents of managerial discretion (Hambrick & Finkelstein, 1987, p. 385). Therefore, it is more precise to argue that the authors disagree on the influence of

managerial discretion on innovation, rather than the influence of organizational slack on innovation. In other words, it is important to consider how managers' willingness to pursue innovation is affected when they are allowed to exercise a high degree of managerial discretion enabled by organizational slack.

In this manuscript, we propose hypothetical propositions to argue that organizational slack differentially influences innovation depending on organizational characteristics defined by the top managers' attitudes toward innovation. Our argument is that organizational slack enables a higher level of managerial discretion that then allows "managerial predispositions" (Finkelstein & Hambrick, 1990, p. 488), which may be either positive or negative toward innovation, to be more explicitly reflected in the degree of innovation pursued by the focal organization.

Accordingly, we expect that organizational slack positively influences innovation in organizations that are led by innovative or risk-seeking managers. On the other hand, conservative or risk-avoiding managers may find excuses to avoid innovation when more organizational slack is available, thereby showing a negative association between organizational slack and innovation.

Upper Echelons Perspectives: Top Managers' Cognition and Values

We ground our argument on the theory of upper echelons (Hambrick, 2007; Hambrick & Mason, 1984), which posits that we can explain organizational behavior as well as organizational performance by the top management teams (TMTs)' demographic characteristics. TMTs generally exercise substantial influence on organizational decisions. Therefore, it is reasonable to expect that their cognitive base and values influence organizational decisions by defining the types of information to which TMTs pay close attention, or manners in which that information is filtered and selected as important. Unfortunately, cognitive base and values are very difficult to measure directly. Therefore, upper echelons scholars instead employ the demographic characteristics of TMTs to operationalize these theoretical constructs.

Because we are interested in explaining organizational differences in terms of their degrees of innovation, we focus our review of prior work on upper echelons research that examines the influence of TMTs on innovation or organizational risk taking, rather than upper echelons theory *per se*. Unfortunately, aside from limited exceptions (Bantel & Jackson, 1989; Boeker, 1997; Kimberly & Evanisko, 1981; West & Anderson, 1996), most upper echelons research examines the influences of TMTs' characteristics on organizational growth, profitability, or diversification (Carpenter, Geletkanycz, & Sanders, 2004). Therefore, our review also includes prior work on strategic conformity (Boeker, 1997; Finkelstein & Hambrick, 1990; Geletkanycz & Hambrick, 1997; Hambrick, Geletkanycz, &

Fredrickson, 1993), because the extent to which TMTs adhere to prior decisions or to industry norms also influences organizational contexts that either positively or negatively influence their pursuit of innovation.

According to the prior work, the demographic characteristics of TMTs that influence innovation include their educational level (Bantel & Jackson, 1989; Kimberly & Evanisko, 1981), functional backgrounds (Chaganti & Sambharya, 1987; Song, 1982; Strandholm, Kumar, & Subramanian, 2004), and organizational (or industry) tenure (Boeker, 1997; Finkelstein & Hambrick, 1990; Geletkanycz & Hambrick, 1997; Hambrick et al., 1993; Jackson, 1990; West & Anderson, 1996). We discuss them in turn below.

In this manuscript, we focus our discussion on the central tendency of TMTs to exhibit certain similar characteristics (Jackson, 1990), rather than on the distribution of each TMT members' characteristics. Although many prior studies have reported that the demographic diversity of TMTs positively influences innovation (Bantel & Jackson, 1989; Jackson, Joshi, & Erhardt, 2003; Pelled, Eisenhardt, & Xin, 1999; Webber & Donahue, 2001), TMT members who share few similarities with each other are less likely to share normative as well as cause-effect beliefs (Chattopadhyay, Glick, Miller, & Huber, 1999). Therefore, it may not be theoretically appropriate to employ the behavioral theory of the firm (Cyert & March, 1963), which is an underlying theory of organizational slack, to explain the influence of TMTs' demographic diversity. This is because the behavioral theory of the firm is essentially a theory of attention (Bromiley & Harris, 2014; March, 1981) as is indicated by the fact that one of the key theoretical constructs of the behavioral theory of the firm is bounded rationality (March & Simon, 1958). That is, the attention of the TMTs is an indispensable construct of the behavioral theory of the firm; however, it would be difficult to define the "TMTs' attention" to the extent that the demographic diversity of the TMTs is high. The same argument applies to the upper echelons theory because it focuses on the demographic characteristics of the TMTs as a proxy variable of the TMTs' cognition (Hambrick & Mason, 1984) or attention (Finkelstein & Hambrick, 1990).

Moderating Roles of the Top Management Teams' Characteristics

The Educational Level of TMTs and Organizational Slack

Prior studies have found that the educational level of TMTs is a characteristic that has the most direct relationship with innovation. Namely, organizations managed by TMTs that have higher levels of education are more likely to adopt technological as well as administrative innovation (Bantel & Jackson, 1989; Kimberly & Evanisko, 1981).

One explanation underlying this relationship is that a higher educational

level is associated with higher cognitive abilities (Bantel & Jackson, 1989). Scholars argue that higher cognitive abilities are one of the important enablers of an effective search for new technologies, procedures, and knowledge (Cyert & March, 1963; March & Simon, 1958), an important antecedent of successful innovation. This is because those with higher cognitive abilities can search for alternatives across a broader search landscape. A wider search generates more promising innovation candidates. Furthermore, higher cognitive abilities enable TMTs with higher levels of education to evaluate alternatives more precisely and efficiently, increasing the likelihood that successful innovation initiatives are identified.

It may also be possible that the educational level of TMTs positively influences innovation by way of the TMTs' ties to those outside their industry. By definition, TMTs with higher levels of education spent a longer time studying than TMTs with lower levels of education. Consequently, the former is more likely to benefit from a larger alumni network than the latter, which enables TMT members to more effectively develop ties beyond their own industries. This difference pertains to our discussion because ties beyond the industry boundary free the TMTs from the industrial norm that constrains the strategy formulation efforts of the TMT (Geletkanycz & Hambrick, 1997). Accordingly, we argue that TMTs with higher levels of education more actively pursue innovation when they consider their organizations' strategies, organizational structures, or organizational procedures.

One of the most frequently cited studies by Bantel and Jackson (1989) examines the relationship between the characteristics of TMTs and innovation in the context of the U.S. commercial bank industry. They show a statistically positive association between executive educational levels and the extent to which the executives' organizations adopt technical/administrative innovation (although no statistically positive relationship is observed when administrative innovation alone is used as a measure of innovation). Kimberly and Evanisko (1981) observe a similar relationship in hospitals: they show a positive association between hospital administrators' educational levels and the degree to which they adopt technological and administrative innovation. Building on their findings, we argue that TMTs with higher levels of education are more willing to pursue innovation at their organization possibly because they recognize more innovation opportunities and evaluate innovation alternatives more precisely and efficiently, from less constrained perspectives.

On the contrary, TMTs may be more reluctant to pursue innovation if their educational level is lower. As discussed above, conducting a broad search for innovation opportunities tends to be more difficult when the TMTs' cognitive

abilities are lower. The local nature of the search may not necessarily mean that the search effort by a TMT with a lower level of education is fruitless, because one can refine and deepen existing internal knowledge by focusing the scope of search locally. However, the expected returns from searching within well-known local fields would be modest and rare at best, because the most promising opportunities would have already been identified and exploited. In other words, TMTs with lower levels of education are more likely to experience a technological stalemate or exhaustion (Ahuja & Katila, 2004; Mensch, 1979). Consequently, to the extent that TMTs with lower levels of education anticipate lower expected returns from their innovation, they are more likely to use excess resources for initiatives other than innovation. They may use organizational slack for capacity increases (including overseas expansion or acquisitions), promotional activities (including consumer campaigns and advertisements), or additional hiring, but not for innovation.

In short, given the differences in terms of search scope, we expect that TMTs with different levels of education use organizational slack differently, thereby realizing different outcomes. Accordingly, we argue that organizational slack differentially influences innovation depending on the TMTs' level of education.

More specifically, TMTs that have higher levels of education (and are more aggressive toward innovation), allocate more resources for innovation to the extent that more organizational slack is available. This is because they always search for opportunities to pursue innovation, and the only obstacle for them is a lack of available resources.

On the contrary, TMTs with lower levels of education are reluctant to innovate; therefore, increases in organizational slack do not motivate them to pursue innovation. As discussed above, their cognitive capacity is insufficient to conduct a broad, distant search. Furthermore, organizational slack buffers organizations from variations in the external environment (Thompson, 1967), further decreasing the interest of these TMTs in external knowledge and information. Decreases in expected returns from innovation are followed by actual decreases in innovation as available organizational slack increases.

Put differently, the degree to which TMTs are aggressive (or reluctant) toward innovation determines which of the two mutually contradictory arguments on the relationship between organizational slack and innovation dominates. Therefore, our first proposition is stated as follows.

Proposition 1: *The higher the TMT's level of education, the more positively organizational slack is associated with innovation.*

TMTs' Functional Backgrounds and Organizational Slack

As for the functional characteristics of TMTs, authors are particularly interested in the distinction between output-orientation functions and

throughput-orientation functions when they discuss the influence of TMTs' characteristics on their organizations' innovation (Hambrick & Mason, 1984). This distinction pertains to our discussion because those two types of functions differ in their inherent degrees of uncertainty. Specifically, uncertainty in terms of available information and goal attainment is higher for output-orientation functions than for throughput-orientation functions. We argue that this difference is reflected in different degrees of risk tolerance inherent in output-orientation functions and throughput-orientation functions.

Output-orientation functions are defined as those functions that "emphasize growth and the search for new domain opportunities and are responsible for monitoring and adjusting products and markets" (Hambrick & Mason, 1984, p. 199). As such, those functions are most concerned with making sure that organizations' output quality, quantity, and timeliness meet and possibly exceed customers' needs and expectations. Specific examples of output-orientation functions include sales, marketing, and research and development (R&D). Due to their close attention to external stakeholders—including customers, suppliers, distributors, regulators, and competitors—output-orientation functions are also called "external operations" (Strandholm et al., 2004).

On the other hand, the locus of attention of throughput-orientation functions is the organization's internal operation, because they "work at improving the efficiency of the transformation process" (Hambrick & Mason, 1984, p. 199). Therefore, throughput-orientation functions are most closely concerned with streamlining internal operational processes and procedures. Examples of throughput-orientation functions include manufacturing, process engineering, and accounting. As the foregoing discussion indicates, throughput-orientation functions are also called "internal operations" (Strandholm et al., 2004).

The distinction between output-orientation functions and throughput-orientation functions is relevant to our discussion because the functional experience and job-related perspectives of TMT members strongly influences TMT members' selective perception of information and goal orientation. Undoubtedly, what TMT members know and aspire to achieve drives TMT members' decisions about innovation. In other words, TMT members with different functional backgrounds are expected to be different in terms of their attitudes toward innovation.

Selective perception, or TMT members' selective recognition and appreciation of information, determines to what extent TMT members with particular functional backgrounds search for and identify innovation initiatives. For example, TMT members with output-orientation functions are expected to be more attentive to information concerning changing customer needs and competitors' actions.

However, in the case of TMT members with throughput-orientation functions, information on manufacturing process yields or cost reduction commands more of their attention. It is apparent that the output-orientation functions' locus of attention is outside the boundaries of the organizations, while the focus of throughput-orientation functions is inside the organization. This implies that the former faces a relatively high degree of uncertainty because obtaining precise information about customers or competitors can be difficult. The amount of available information may also be very limited. On the other hand, the latter—the throughput-orientation functions—operate under a relatively low degree of uncertainty. Most information about the organization itself is readily available and is generally more precise. Given such differences in the degree of uncertainty associated with available information, it is highly conceivable that the former is characterized by a higher degree of risk tolerance than the latter. Accordingly, we argue that managers engaged in output-orientation functions are more willing to pursue innovation that may enable drastic increases in their customer responsiveness and competitive adaptability. On the other hand, managers engaged in throughput-orientation functions are more interested in refining (rather than innovating) in incremental manners what they are already doing reasonably well.

TMT members with different functional backgrounds may also have different organizational goals to achieve that differentially influence the extent to which they pursue innovation. For example, TMT members with an output-orientation place more emphasis on achieving customer satisfaction and competitive advantage. On the other hand, TMT members with a throughput-orientation emphasize meeting budgets and increasing operational efficiency. The difference pertains to the extent to which managers engaged in those two types of functions are willing to tolerate risks because the degree of uncertainty associated with respective goal attainment differs. TMT members with an output-orientation are more willing to tolerate risks because satisfying customers and addressing competitive threats involve a high degree of uncertainty due to interactions with multiple outsiders. No matter how carefully TMT members prepare before performing an action, it is very difficult to precisely predict (or control) customers' or competitors' reactions. Compared to the challenges of output-orientation functions, throughput-orientation tasks of streamlining internal operations and reducing costs are relatively straightforward and predictable. These tasks are also more controllable because they seldom involve substantial interactions with those outside the organization. Accordingly, these differences also influence the extent to which TMT members with different functional backgrounds are willing to pursue innovation. Specifically, managers engaged in output-orientation functions are

characterized by risk-seeking attitudes that allow them to aggressively pursue uncertain and unpredictable innovation initiatives, while those engaged in throughput-orientation functions are more interested in allocating resources to projects with certain and predictable outcomes, including those aiming for streamlining internal operations and raising operational efficiency.

To date, most research that has examined the influence of TMTs' functional backgrounds on organizational performance is concerned with overall organizational performance rather than with innovation. The closest studies to our particular interest are those that examine the relationship between the functional backgrounds of TMTs and their organizations' strategic orientation toward risk-taking and flexibility. Although risks and having a flexible strategic orientation is not exactly the same as pursuing innovation, it is fair to argue that organizations characterized by such strategic orientations are more likely to pursue innovation.

It has been reported that TMTs whose backgrounds are more oriented toward external operations (including marketing, sales, and R&D) are more likely to adopt market-focused strategic adaptive responses, which are characterized as innovative and risky (Strandholm et al., 2004). Furthermore, the functional background of the upper echelons is also shown to be associated with more general categories of strategic orientation (Chaganti & Sambharya, 1987). More specifically, TMTs whose backgrounds are oriented more toward output-orientation functions are associated with the "prospector strategy," or a strategic orientation toward actively pursuing new opportunities through adopting innovation (Miles, Snow, Meyer, & Coleman, 1978).

Accordingly, we expect that TMTs characterized by output-orientation functions are more willing to pursue innovation. Conversely, TMTs characterized by throughput-orientations functions are expected to be more conservative and risk-avoiding, preferring certain and incremental approaches, rather than innovation.

Given the differences in terms of the degree of risk tolerance, we expect that TMTs with different functional orientations use organizational slack differently, thereby realizing different outcomes. More specifically, TMTs that are characterized by output-orientation functions and are more aggressive toward innovation allocate more resources for innovation to the extent that more organizational slack is available. This is because they always search for opportunities to pursue innovation, and the only obstacle for them is a lack of available resources.

On the contrary, we expect that organizational slack would be used to avoid innovation to the extent that the internally-oriented and risk-avoiding

characteristics of TMTs with throughput-orientation are explicit. Because organizational slack buffers organizations from competitive pressures (Thompson, 1967), internally-oriented and risk-avoiding TMTs would have fewer opportunities to be conscious of potential organizational failure (and decline) when more organizational slack is available. Because potential as well as actual failure strongly motivates one to make risk-seeking choices (Cyert & March, 1963; Desai, 2008; Kahneman & Tversky, 1979), we expect that organizational slack exacerbates the risk-avoiding attitude of TMTs characterized by throughput-oriented functions. Accordingly, their willingness to tolerate risks associated with innovation is further decreased. In other words, organizational slack provides the TMTs with excuses for not taking risks. Therefore, our second and third propositions are formally stated as follows.

Proposition 2: *The more strongly the TMT is characterized by output-orientation functions, the more positively organizational slack is associated with innovation.*

Proposition 3: *The more strongly the TMT is characterized by throughput-orientation functions, the more negatively organizational slack is associated with innovation.*

TMTs' Organizational Tenure and Organizational Slack

It is widely known that TMTs with longer organizational (or industry) tenure are more willing to maintain current strategy, organizational structure, and organizational procedures (Boeker, 1997; Finkelstein & Hambrick, 1990; Hambrick et al., 1993). Accordingly, we argue that they are less willing to pursue innovation. There are several reasons for the negative influence of longer organizational (or industry) tenure on innovation.

First, the influence of organizational (or industry) tenure has been explained in the literature from the perspective of psychology. Specifically, the longer TMTs involve themselves in a certain course of action, the more committed they become to it (Ross & Staw, 1993; Staw & Ross, 1989). This is partially because they prefer to see themselves as consistent. They also are less willing to admit that they made wrong decisions (or at least, they were not able to anticipate that they would have to revise their choices later). Innovation requires a considerable degree of change in terms of strategy, organizational structure, or routinized processes; however, TMTs with longer organizational (or industry) tenure grow increasingly reluctant to make those changes.

Theories of organizational capability or organizational learning also help to explain why longer organizational (or industry) tenure inhibits innovation. The term "organizational routine" refers to patterned actions or procedures that organizational members (including TMT members) follow without conscious

decisions or deliberate calculations (Cyert & March, 1963; Nelson & Winter, 1982). As such, organizational routines are manifestations of organizational capabilities (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997). With organizational routine, organizational members can process tasks efficiently and uneventfully. That is, organizational members accumulate organizational routines as they gain more competence. Because this process of competence building takes time to be effective (Dierickx & Cool, 1989), we expect that TMTs with longer organizational (or industry) tenure accumulate more organizational routines than TMTs with shorter tenure. It may be interesting to consider how this accumulation of organizational routines influences TMTs' attitudes toward innovation. Scholars have debated the influence of organizational routines. Although some authors have argued that organizational routines are sources of organizational changes and flexibility (Feldman & Pentland, 2003; Pentland & Rueter, 1994; Rerup & Feldman, 2011), the more widely accepted understanding is that organizational routines are associated with stability and rigidity (Benner & Tushman, 2002; Leonard-Barton, 1992; Sørensen & Stuart, 2000), antagonists to innovation. Accordingly, we expect that TMTs with longer organizational (or industry) tenure are less likely to pursue innovation.

When organizational competence is earned through organizational learning, the learning *per se* may preclude the adoption of innovation. The longer the TMTs' organizational (or industry) tenure is, the more they learn effective approaches to manage their organizations or appropriate ways to compete in their industry. That is, TMTs become more competent as they learn. However, the competence enabled by learning can also be constraining because competent TMTs are less willing to search for alternative approaches (Cyert & March, 1963; Levitt & March, 1988). They feel they already manage their organizations well enough. They may also feel that changes would disrupt their organizations. Because longer tenure is generally associated with more learning, we expect that TMTs with longer organizational (or industry) tenure are more likely to suffer from this competence trap (Levitt & March, 1988).

Furthermore, longer organizational (or industry) tenure may influence TMTs' cognition as well. Innovation requires searching across a broad field of alternatives, but "the long-tenured executives may have difficulty envisioning anything but the *status quo*" (Hambrick et al., 1993, p. 404). Likewise, longer industry tenure also impedes a new generation of alternatives because learning vicariously (Baum, Xiao Li, & Usher, 2000; Bresman, 2013; Posen & Chen, 2013; Tuschke, Sanders, & Hernandez, 2014) from competitors' experiences increasingly constrains a TMT's "strategic frame," which guides strategy reformulation (Huff, 1982). In other words, learning that is borrowed from industry peers is

constraining because it is "shared or interlocking metaphors or worldviews" that industry participants perceive as the taken-for-granted assumptions (Huff, 1982, p. 125).

The negative association between longer organizational (or industry) tenure and innovation can also be explained by group dynamics in TMTs. The longer the TMT members have worked together, the more cohesive they become because "strategic issue processing groups are likely to be more heterogeneous early in CEO's tenure and more homogeneous later in his or her tenure" (Jackson, 1990, p. 365). Consequently, TMTs with longer organizational (or industry) tenure are less innovative, because a cohesive network is characterized by a lower likelihood to generate innovative knowledge (Fleming, Mingo, & Chen, 2007).

A high degree of cohesiveness does not necessarily mean that TMT members with long organizational (or industry) tenure always share the same opinions. It has been reported that the longer the TMT's tenure is, the more substantially each member disagrees on his or her evaluation of achievements resulting from innovation initiatives (West & Anderson, 1996). In other words, the longer the TMT's tenure is, the more obstacles they face to identify innovation initiatives that satisfy everyone on the TMT.

To date, not many studies have directly examined the relationship between TMTs' organizational (or industry) tenure and innovation. However, many studies corroborate that TMTs with longer organizational (or industry) tenure show a higher likelihood to maintain prior strategies, policies, and products, as shown below. Specifically, it has been shown that TMTs with longer organizational tenure are characterized by strategic persistence, or strategies that conform to the central tendencies of their industry (Finkelstein & Hambrick, 1990). Likewise, executives with longer industry tenure reveal a stronger "commitment to the status quo," indicating that those with longer involvement feel more comfortable with maintaining current policies and executive profiles toward the future (Hambrick et al., 1993). Furthermore, the organizational tenure of TMTs is also negatively associated with strategic changes in terms of the degree of diversification across product-markets (Boeker, 1997). Although most prior studies have shown a negative linear relationship between the organizational (or industry) tenure of TMTs and organizational change (or flexibility), one study reports a curvilinear (U-shaped) relationship between the organizational tenure of TMTs and their strategic conformity (Geletkanycz & Hambrick, 1997).

Given that long-tenured TMTs are reluctant to change the status quo, we argue that the negative influences of organizational slack on innovation would be dominant to the extent that TMTs' organizational (or industrial) tenure is longer. Organizational slack is an indication of the appropriateness of prior choices

because organizational slack is accumulated via prior successes (Cyert & March, 1963). Therefore, TMTs with a strong commitment to the status quo would find it easier to legitimize their choices to maintain the current strategy or organizational structure when more organizational slack is available. In other words, TMTs with longer organizational (or industry) tenure use organizational slack to maintain the status quo.

However, TMTs that have shorter organizational (or industry) tenure (and are more aggressive toward innovation) allocate more resources for innovation to the extent that more organizational slack is available. For those TMTs that always search for opportunities to pursue innovation, the only obstacle is a lack of available resources.

Proposition 4: *The longer the TMT's organizational tenure, the more negatively organizational slack is associated with innovation.*

Discussion

Our first contribution in this manuscript is that we have reconciled mutually contradictory arguments concerning the influence of organizational slack on innovation. Organizational theory scholars argue that there is a positive relationship by emphasizing the flexibility enabled by organizational slack (Greve, 2003; Meyer, 1982; Singh, 1986). Others, particularly agency theory scholars, oppose this view by arguing that organizational slack renders organizations complacent, irresponsive to competitive threats, and risk-avoiding (Fama, 1980; Jensen & Meckling, 1976). To date, efforts to reconcile these arguments have been insufficient. In this manuscript, we try to accommodate these two perspectives by employing the upper echelons theory. Given that the behavioral theory of the firm is essentially a theory about the attention of the TMTs (Bromiley & Harris, 2014; March, 1981), it would be inaccurate to explain the influences of organizational slack without properly taking the TMTs' cognitive base or values into account. In future studies on organizational slack, it is imperative to properly controlling for the influences of the TMTs' demographic characteristics.

A more general implication of our argument is that the characteristics of managers determine which aspects of a resource's performance influences would be dominant if the focal resource is characterized by positive as well as negative performance contributions. It is clear that managers use resources to realize favorable organizational outcomes, rather than favorable performance is automatically enacted by resources. In other words, managers with different characteristics achieve different performance outcomes even if they use identical resources. In particular, when there are resources that can be used in a flexible manner for a wide variety of usages, it is reasonable to expect that managers'

influences on organizational performance are substantial. This perspective complements a practice-based view that emphasizes the performance contribution of "imitable activities or practices, often in the public domain" (Bromiley & Rau, 2014, p. 1249). The view is motivated by a critique of the resource-based view's exclusive attention to valuable, rare, inimitable, and unsubstitutable resources (Barney, 1991). Organizational slack may not be particularly rare, inimitable, or unsubstitutable. However, we argue that organizational slack enables managers with particular characteristics to outcompete via innovation. Likewise, even imitable and transferable resources enable a favorable performance if managers select appropriate usages. Accordingly, we can refine the central tenets of the resource-based view by showing that the VRIO framework (Barney, 2002) may not be a very useful tool to explain the performance contribution of resources that do not have narrowly designated usages, like organizational slack. The more flexible the usage of the focal resource, the more substantially we need to take into account the characteristics of the TMTs to complement our evaluation of the focal resource in terms of the extent to which it satisfies the VRIO criterion. Therefore, future research that employs the resource-based view should be informed by upper echelons theory as well as by the attention-based view (Joseph & Ocasio, 2012; Li, Maggitti, Smith, Tesluk, & Katila, 2013; Ocasio, 1997) because not only the demographic characteristics of TMTs but also their locus of attention influences the usage of resources.

Our second contribution is germane to a bridge between the theory of organizational slack (Bourgeois, 1981; Cyert & March, 1963; Nohria & Gulati, 1996; Singh, 1986) and upper echelons theory (Hambrick, 2007; Hambrick & Mason, 1984).

Despite a rich accumulation of prior research on the relationship between organizational slack and innovation (Greve, 2003; Meyer, 1982; Singh, 1986), very few examine the influence of organizational slack by properly taking the characteristics of TMTs into account. Because organizational slack is an important antecedent of managerial discretion (Hambrick & Finkelstein, 1987), explicating the influence of organizational slack on innovation requires properly considering TMTs' "managerial predispositions" (Finkelstein & Hambrick, 1990, p. 488) that decide how managers behave when they are allowed to exercise a high degree of managerial discretion. On the other hand, the behavioral theory of the firm, and the theory of organizational slack in particular, may contribute to the upper echelons research by informing how to open up "the proverbial black box" (Hambrick, 2007, p. 337) that conceals how the demographic characteristics of TMTs influence their attention as well as their interpretation. In other words, our argument uncovers a close association between the theory of organizational slack

and the upper echelons theory. Although the interaction effects of the TMTs' characteristics and organizational slack are examined (Finkelstein & Hambrick, 1990), we still have more to understand about how the relationship between organizational slack and innovation changes as the TMTs' demographic characteristics vary. In this manuscript, we tried to provide a clue to clarifying a mutually enriching relationship between the theory of organizational slack and upper echelons theory.

One way the former informs the latter is via a unique operationalization of managerial discretion by using organizational slack as its measure at an organizational level. Managerial discretion is one of the most important theoretical constructs used by upper echelons scholars, as is shown by studies that examine the moderating roles of managerial discretion for the influences of TMTs (Finkelstein & Hambrick, 1990; Haleblian & Finkelstein, 1993). In most prior research, authors have operationalized managerial discretion by employing such industrial characteristics as the degree of dynamism and uncertainty that focal organizations face (Finkelstein & Hambrick, 1990; Haleblian & Finkelstein, 1993; Hambrick & Abrahamson, 1995). Other authors argue that more macro aspects such as a country's culture or institutions should be considered as a useful measure of managerial discretion (Crossland & Hambrick, 2007). However, upper echelons research that operationalizes managerial discretion at an organizational level is surprisingly limited, although organizational slack is one of the most typical sources of managerial discretion (Hambrick & Finkelstein, 1987). Rare exceptions include Finkelstein and Hambrick (1990) and Rajagopalan and Finkelstein (1992), who try to indirectly operationalize managerial discretion via the firms' strategic orientation. Our use of organizational slack as a measure of managerial discretion at an organizational level informs future research that aims to examine the effects of varying degrees of managerial discretion in more detail by employing a comparison across organizations (rather than across industries or countries).

Thirdly, our arguments indicate an interesting avenue for future research by uncovering a complicated relationship between organizational slack and the characteristics of TMTs. It is reported that organizational slack moderates the relationship between TMTs' characteristics and organizational performance (Finkelstein & Hambrick, 1990). We extended this argument by uncovering another important aspect of this relationship. Namely, the influences of organizational slack on innovation are also moderated by the TMTs' characteristics. That is, the extent to which TMTs aggressively pursue innovation moderates the relationship between organizational slack and innovation. Prior research uncovers that differences in TMTs' attitudes toward innovation is

irrelevant when organizational slack, or managerial discretion, is limited. We went a step further to untangle a complicated relationship between organizational slack and the characteristics of the TMTs by showing that the influences of organizational slack on innovation may be opposite between risk-seeking TMTs and risk-avoiding TMTs. One implication of the prior finding is that it is useful to increase organizational slack (and managerial discretion) so that the characteristics of TMTs are leveraged for positive organizational performance. However, we show that more organizational slack is not necessarily better because the appropriate amount of organizational slack (in terms of generating more innovation) differs to the extent that the characteristics of TMTs are positive toward innovation.

References

Ahuja, G., & Katila, R. (2004). Where do resources come from? The role of idiosyncratic situations. *Strategic Management Journal*, *25*(8-9), 887-907.

Bantel, K. A., & Jackson, S. E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal*, *10*(S1), 107-124.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99-120.

Barney, J. B. (2002). *Gaining and sustaining competitive advantage, Second edition*. Upper Saddle River, NJ: Pearson Education.

Baum, J. A. C., Xiao Li, S., & Usher, J. M. (2000). Making the next move: How experiential and vicarious learning shape the locations of chains' acquisitions. *Administrative Science Quarterly*, *45*(4), 766-801.

Benner, M. J., & Tushman, M. (2002). Process management and technological innovation: A longitudinal study of the photography and paint industries. *Administrative Science Quarterly*, *47*(4), 676-706.

Boeker, W. (1997). Strategic change: The influence of managerial characteristics and organizational growth. *Academy of Management Journal*, *40*(1), 152-170.

Bourgeois, L. J. (1981). On the measurement of organizational slack. *Academy of Management Review*, 6(1), 29-39.

Bresman, H. (2013). Changing routines: A process model of vicarious group learning in pharmaceutical R&D. *Academy of Management Journal*, *56*(1), 35-61.

Bromiley, P. (1991). Testing a causal model of corporate risk taking and performance. *Academy of Management Journal*, *34*(1), 37-59.

Bromiley, P., & Harris, J. D. (2014). A comparison of alternative measures of organizational aspirations. *Strategic Management Journal*, *35*(3), 338-357.

Bromiley, P., & Rau, D. (2014). Towards a practice-based view of strategy. *Strategic Management Journal*, *35*(8), 1249-1256.

Carpenter, M. A., Geletkanycz, M. A., & Sanders, W. G. (2004). Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management*, *30*(6), 749-778.

Chaganti, R., & Sambharya, R. (1987). Strategic orientation and characteristics of upper management. *Strategic Management Journal*, *8*(4), 393-401.

Chattopadhyay, P., Glick, W. H., Miller, C. C., & Huber, G. P. (1999). Determinants of executive beliefs: Comparing functional conditioning and social influence. *Strategic Management Journal*, *20*(8), 763-789.

Crossland, C. & Hambrick, D. C. (2007). How national systems differ in their constraints on corporate executives: a study of CEO effects in three countries. *Strategic Management Journal*, *28*(8), 767-789.

Cyert, R., & March, J. G. (1963). *Behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice Hall.

Desai, V. M. (2008). Constrained growth: How experience, legitimacy, and age influence risk taking in organizations. *Organization Science*, *19*(4), 594-608.

Dierickx, I., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, *35*(12), 1504-1511.

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, *21*(10/11), 1105-1121.

Fama, E. F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, *88*(2), 288-307.

Feldman, M. S., & Pentland, B. T. (2003). Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, *48*(1), 94-118.

Finkelstein, S., & Hambrick, D. C. (1990). Top-management-team tenure and organizational outcomes: The moderating role of managerial discretion. *Administrative Science Quarterly*, *35*(3), 484-503.

Fleming, L., Mingo, S., & Chen, D. (2007). Collaborative brokerage, generative creativity, and creative success. *Administrative Science Quarterly*, *52*(3), 443-475.

Geletkanycz, M. A., & Hambrick, D. C. (1997). The external ties of top executives: Implications for strategic choice and performance. *Administrative Science Quarterly*, *42*(4), 654-681.

Greve, H. R. (2003). A behavioral theory of R&D expenditures and innovations: Evidence from shipbuilding. *Academy of Management Journal*, *46*(6), 685-702.

Haleblian, J., & Finkelstein, S. (1993). Top management team size, CEO

dominance, and firm performance: The moderating roles of environmental turbulence and discretion. *Academy of Management Journal*, *36*(4), 844-863.

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, *9*(2), 193-206.

Hambrick, D. C., & Finkelstein, S. (1987). Managerial discretion: A bridge between polar views of organizational outcomes. In B. Staw & L. L. Cummings (Eds.), *Research in organizational behavior, Vol. 9* (pp. 369-406). Greenwich, CT: JAI Press.

Hambrick, D. C., Geletkanycz, M. A., & Fredrickson, J. W. (1993). Top executive commitment to the status quo: Some tests of its determinants. *Strategic Management Journal*, *14*(6), 401-418.

Hambrick, D. C., & Abrahamson, E. (1995). Assessing managerial discretion across industries: A multimethod approach. *Academy of Management Journal*, *38*(5), 1427-1441.

Hambrick, D. C. (2007). Upper echelons theory: An update. *The Academy of Management Review*, *32*(2), 334-343.

Huff, A. S. (1982). Industry influences on strategy reformulation. *Strategic Management Journal*, 3(2), 119-131.

Jackson, S. E. (1990). Consequences of group composition for the interpersonal dynamics of strategic issue processing. In P. Shrivastava, A. Huff, & J. Dutton (Eds.), *Advances in strategic management, Vol. 8* (pp. 345-382). Greenwich, CT: JAI Press.

Jackson, S. E., Joshi, A., & Erhardt, N. L. (2003). Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management*, *29*(6), 801-830.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305-360.

Joseph, J., & Ocasio, W. C. (2012). Architecture, attention, and adaptation in the multibusiness firm: General Electric from 1951 to 2001. *Strategic Management Journal*, *33*(6), 633-660.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, *47*(2), 263-291.

Kimberly, J. R., & Evanisko, M. J. (1981). Organizational innovation: The influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. *Academy of Management Journal*, *24*(4), 689-713.

Latham, S. F., & Braun, M. (2009). Managerial risk, innovation, and

organizational decline. *Journal of Management*, *35*(2), 258-281.

Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, *13*(Summer Special Issue), 111-125.

Levinthal, D. A., & March, J. G. (1981). A model of adaptive organizational search. *Journal of Economic Behavior and Organization*, *2*(4), 307-333.

Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology*, *14*, 319-340.

Li, Q., Maggitti, P. G., Smith, K. G., Tesluk, P. E., & Katila, R. (2013). Top management attention to innovation: The role of search selection and intensity in new product introductions. *Academy of Management Journal*, *56*(3), 893-916.

March, J. G., & Simon, H. A. (1958). *Organizations*. New York, NY: John Wiley & Sons, Inc.

March, J. G. (1981). Decisions in organizations and theories of choice. In A. H. Van de Ven & W. F. Joyce (Eds.), *Perspectives on organization design and behavior* (pp. 205-248). New York: John Wiley & Sons.

Mensch, G. (1979). *Stalemate in technology*. Cambridge, MA: Ballinger.

Meyer, A. D. (1982). Adapting to environmental jolts. *Administrative Science Quarterly*, *27*(4), 515-537.

Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J., Jr. (1978). Organizational strategy, structure, and process. *The Academy of Management Review*, *3*(3), 546-562.

Nelson, R. R., & Winter, S. G. (1982). *An evolutionary theory of economic change*. Cambridge, MA: Harvard University Press.

Nohria, N., & Gulati, R. (1996). Is slack good or bad for innovation? *Academy of Management Journal*, *39*(5), 1245-1264.

Ocasio, W. C. (1997). Towards an attention-based view of the firm. *Strategic Management Journal*, *18*(1), 187-206.

Palmer, T. B., & Wiseman, R. M. (1999). Decoupling risk taking from income stream uncertainty: A holistic model of risk. *Strategic Management Journal*, *20*(11), 1037-1062.

Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict, and performance. *Administrative Science Quarterly*, *44*(1), 1-28.

Pentland, B. T., & Rueter, H. H. (1994). Organizational routines as grammars of action. *Administrative Science Quarterly*, *39*(3), 484-510.

Posen, H. E., & Chen, J. S. (2013). An advantage of newness: Vicarious learning despite limited absorptive capacity. *Organization Science*, *24*(6), 1701-1716.

Rajagopalan, N., & Finkelstein, S. (1992). Effects of strategic orientation and environmental change on senior management reward systems. *Strategic Management Journal*, *13*(S1), 127-141.

Rerup, C., & Feldman, M. S. (2011). Routines as a source of change in organizational schemata: The role of trial-and-error learning. *Academy of Management Journal*, *54*(3), 577-610.

Ross, J., & Staw, B. M. (1993). Organizational escalation and exit: Lessons from the shoreham nuclear power plant. *Academy of Management Journal*, *36*(4), 701-732.

Sørensen, J. B., & Stuart, T. E. (2000). Aging, obsolescence, and organizational innovation. *Administrative Science Quarterly*, *45*(1), 81-112.

Singh, J. V. (1986). Performance, slack, and risk taking in organizational decision making. *Academy of Management Journal*, *29*(3), 562-585.

Song, J. H. (1982). Diversification strategies and the experience of top executives of large firms. *Strategic Management Journal*, *3*(4), 377-380.

Staw, B. M., & Ross, J. (1989). Understanding behavior in escalation situations. *Science*, *246*(4927), 216-220.

Strandholm, K., Kumar, K., & Subramanian, R. (2004). Examining the interrelationships among perceived environmental change, strategic response, managerial characteristics, and organizational performance. *Journal of Business Research*, *57*(1), 58-68.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509-533.

Thompson, J. D. (1967). *Organizations in action: Social science bases of administrative theory*. New York, NY: McGraw-Hill, Inc.

Tuschke, A., Sanders, W. G., & Hernandez, E. (2014). Whose experience matters in the boardroom? The effects of experiential and vicarious learning on emerging market entry. *Strategic Management Journal*, *35*(3), 398–418.

Webber, S. S., & Donahue, L. M. (2001). Impact of highly and less job-related diversity on work group cohesion and performance: A meta-analysis. *Journal of Management*, *27*(2), 141-162.

West, M. A., & Anderson, N. R. (1996). Innovation in top management teams. *Journal of Applied Psychology*, *81*(6), 680-693.

Wiseman, R. M., & Bromiley, P. (1996). Toward a model of risk in declining organizations: An empirical examination of risk, performance and decline. *Organization Science*, *7*(5), 524-543.