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Differences in Managerial Jobs at the Bottom, Middle, and Top: A Review of Empirical Research

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It has become popular in the practices of leadership development and talent management to segment managers at different organizational levels in order to focus on the unique requirements thought to characterize jobs at each level. This movement has been spurred by popular books that emphasize differences in the nature of managerial work at different hierarchical levels. Seemingly independent of popular work in this area has been scientific research to describe differences in managerial jobs across organizational levels. The present article summarizes the extensive research literature on level differences in managerial jobs in terms of three broad generalizations: The number of distinct management levels, five different ways to

characterize work at each level, and how radical differences in work at each level pose adaptive challenges to managers who transition into positions of greater authority and responsibility. The article closes with commentary on the current state of theory and research and offers suggestions for future research needed to guide and support practice.

One of the most influential ideas of the past decade concerning the practices of leadership development and talent management is the notion that job requirements change dramatically with organizational level. This idea is often referred to as the *leadership pipeline*, following a bestselling book by that name, in which the General Electric (GE) Company's approach to developing leaders was described (Charan, Drotter, & Noel, 2001). It is less well known that GE's way of segmenting different levels of management for distinct training and development activity was designed and implemented three decades earlier (Mahler & Wrightnour, 1973). Nonetheless, it has become standard best practice to give explicit attention to level differences in how organizations approach talent management and development (Kaiser, 2005). Consulting psychologists also frequently apply this concept; for example, Freedman (1998) described the psychological challenges faced by recently promoted managers as they try to adapt to fundamental differences in job requirements. Also, the highly popular book *What Got You Here Won't Get You There* (Goldsmith & Reiter, 2007) provides career advice to managers on the basis of the assumption that the success formula changes with each step up the corporate ladder.

The idea that the performance requirements of managerial jobs change across organizational levels has a long history in the behavioral sciences. Its roots can be traced to Max Weber's (1925/1947) seminal theory of organizations and the nature of bureaucracy. Subsequent scholars, including R. L. Katz (1955), Mann (1965), D. Katz and Kahn (1978), Jaques (1989), Day and Lord (1988), and Hunt (1991) have articulated a number of distinctions among jobs at different levels of management.

It is noteworthy that most popular treatments of the leadership pipeline concept seem all but to ignore the relevant research literature. For example, neither *The Leadership Pipeline* nor *What Got You Here . . .* references a single empirical study or formal theory. Further, these popular treatments do not rely on any data or systematic evaluation of their underlying assumptions (R. Charan, personal communication, January 17, 2002). It seems that practitioners whose work is influenced by this popular literature take it as an article of faith that such concepts and prescriptions are valid.

We take a more evidence-based approach to the issue of level differences in managerial job requirements. The purpose of this article was to review the extensive research literature characterizing the distinctions among managerial jobs across the hierarchy. The intent was to provide practitioners familiar with popular books such as *The Leadership Pipeline* and *What Got You Here . . .* and

associated best practices with a summary of what empirical research on level differences has found. We close by identifying additional empirical research needed to guide and support practical applications in this area.

DOMINANT THEMES IN THE RESEARCH LITERATURE

There is a substantial empirical literature that describes how managerial roles differ across organizational levels in large bureaucratic organizations. Much of this work has been conducted in the spirit of job analysis, consisting of ethnographic observations of managers at multiple levels (e.g., Luthans, Rosenkrantz, & Hennessey, 1985; Mintzberg, 1980) and polling incumbents about how they spend their time or asking superiors and other subject-matter experts about what they think is required for effective performance (e.g., Kraut, Pedigo, McKenna, & Dunnette, 1989; Tornow & Pinto, 1976). Complementing these inductive approaches are deductive theoretical formulations of organizations as complex, multilevel systems that require a variety of leadership roles (e.g., Katz & Kahn, 1978; Jaques, 1989). Three broad generalizations can be made from these two bodies of research.

First, although organizations vary with regard to the number of levels in their hierarchies, at least three distinct levels of management can be identified in most organizations wherein requirements within a level are similar but are qualitatively different across levels (Hunt, 1991; Katz & Kahn, 1978; Zaccaro, 2001). Second, the nature of work at each level has been distinguished in terms of a number of dimensions, including time horizon (Jaques, 1989), functional activities (Katz & Kahn, 1978), primary requisite skills (Katz, 1955; Mann, 1965), and organizational responsibilities (Freedman, 1998; Mahler & Wrightnour, 1973). Third, the literature on leadership development and derailment suggest that managers frequently have difficulty making upward transitions because such moves require modifying previously reinforced behaviors and learning new skills, values, and perspectives (Freedman, 1998, 2005; Hogan, Hogan, & Kaiser, 2010; McCall, 2009; McCall & Lombardo, 1983; McCall, Lombardo, & Morrison, 1988). The following literature review is organized around these three dominant themes.

Three Levels

Two streams of research suggest that most large organizations can be characterized by three distinct levels of management. The earlier work in this area culminated in the systems framework of Katz and Kahn (1978), who argued for three types of leadership arising from differing organizational needs at three organizational levels. From top to bottom, those needs (and the levels at which they predominate) were creation of structure (executive), interpretation of structure (middle management), and application of structure (supervisory).

Jaques's (1978) extension of this work evolved into stratified systems theory (SST; Jacobs & Jaques, 1987; Jaques, 1989), which has inspired the present generation of multilevel theories (see Hunt, 1991; Osborn, Hunt, & Jauch, 2002; Phillips & Hunt, 1992; Zaccaro, 2001). Jaques (1989) distinguished among levels on the basis of the degree of complexity inherent in the tasks required to perform the jobs at each level. For example, executive jobs involve the coordination of multiple discrete business units, linking the internal and external environments, and setting strategic direction in an ambiguous, long-term context. In contrast, supervisory jobs are contained within a single functional unit or domain and largely concerned with only the local, internal environment and well-defined activities focused on the near term. SST holds that no more than seven specific levels are required to adequately characterize differences in complexity across the hierarchy in any organization. These seven narrowly defined levels can be grouped into three higher order levels: Systems, organizational, and production. This three-level scheme corresponds to the distinctions made by Katz and Kahn (1978).

In a comprehensive review of the literature, Zaccaro (2001) noted that although various theories posit between three and seven different organizational levels, the empirical evidence supports only three general domains where the jobs within each domain are highly similar in terms of the work required but qualitatively distinct among domains. Hunt and Ropo (1995) also pointed out that for any specific organization, it may be useful to make finer distinctions, but for normative research and cross-organizational comparisons, three levels are often sufficient. Here, we refer to these three levels as bottom (supervisory), middle (middle management), and top (executive).

Nature of Work at Each Level

Several perspectives have distinguished among work at the bottom, middle, and top. Each perspective considers a unique aspect of the performance domain. Taken together, they help to define the job requirements for management at each level and provide a basis for identifying similarities and differences.

Time horizon

Contemporary theories of level differences rest upon the concept of job complexity and Ashby's (1952) principle of requisite variety, which implies that as job complexity increases with organizational level, managerial effectiveness depends on a commensurately increasing level of cognitive complexity. Although job complexity has been defined differently by different authors, Jaques' notion of time span of discretion has been the dominant method used to operationalize the complexity of managerial jobs (Hunt, 1991; Jacobs & Jaques, 1987; Jaques, 1978, 1989). Under this definition, it is assumed that longer periods of time between action and its consequences indicate higher job complexity.

Thus, the primary way to distinguish levels in SST is by the time frame in which managers must consider their activities. At lower levels, supervisors typically learn the consequences of their actions within days or weeks. Top executives, however, may not discover the effects of their decisions until decades later (e.g., the decision by U.S. automobile executives in the 1970s to lobby government for lenient emission standards rather than invest in greater fuel efficiency).

According to Jacobs and Jaques (1987), the time spans for the three organizational levels considered here are three months to two years for supervisory jobs, two to five years (perhaps as much as 10 years) for middle management, and 10 to 20-plus years for executive jobs. We note that most research and theory on time horizon of managerial work was published before 1990; we are not aware of more recent research that considers whether the accelerated pace of change in modern organizations has affected the estimates provided by Jaques and colleagues. It is possible that these estimates are no longer applicable. Nonetheless, although the exact lengths of the three time frames could be debated, it seems reasonable to posit that jobs involving longer latencies between actions and their consequences place higher cognitive demands on incumbents.

Functional Activities

The specific activities carried out at each level of management are also thought to change substantively, with higher level jobs requiring larger numbers of discrete tasks that are also more varied and less well defined (i.e. greater complexity). The systems model of Katz and Kahn (1978) has been influential in the delineation of these functional activities across three levels of leadership. At the top are activities involving what they termed the *origination of structure*, defined as the creation of organizational structure and policy. In more recent conceptions, this has been elaborated to include setting strategic direction and maintaining an organizational culture to support it (Hunt, 1991; Zaccaro, 2001). Other major activities of executives include monitoring the external environment for threats and opportunities, linking the organization to the larger external environment, building consensus among stakeholders on strategic imperatives, and securing capital resources (Kraut et al., 1989; Luthans et al., 1985; Mintzberg, 1980; Zaccaro, 2001). This emphasis on interfacing with the external environment is mirrored by how little time executives typically spend directly supervising their subordinates compared with managers at lower levels (Kraut et al., 1989; Tornow & Pinto, 1976).

The Next level down in Katz and Kahn's (1978) model involved *interpolation of structure*—middle levels of management are responsible for interpreting and communicating strategy and policy that originates at the executive level. This function includes translating the strategic big picture into specific operating goals, allocating resources across functional units, and solving organizational-coordination problems through cross-functional integration. Although the importance of middle management has been questioned as part of recent trends toward flatter organizational designs, some researchers have

argued that it serves an important role. According to these authors, who tend to use ethnographic and observational methods (e.g., Huy, 2001; Mintzberg, 1980), a more complete examination of middle management reveals the role it plays in developing strategy, securing commitment to overall organizational goals, and helping organization members at lower levels cope with change.

For example, middle managers play an active role in developing strategy by providing executives with feedback from customers, employees, and operating conditions (Huy, 2001; Mintzberg, 1980). Middle managers also spend significant time aligning different functional units with the strategic goals of the larger organization and in helping members in different parts of the organization understand, accept, and contribute to change initiatives (Huy, 2001; Tornow & Pinto, 1976). These roles position middle management as a nexus for information flow up, down, and throughout organizations (Kaplan, 1984; Mintzberg, 1980).

In recent years, the emotional support role of middle management has gained attention. As globalization, deregulation, downsizing, and technological advances have quickened the pace of change, organization members are reporting increasing anxiety. Because executives tend to be externally focused, it has generally become middle management's role to restore psychological safety in the workplace, such as by providing support and assurance to employees (Huy, 2002).

At the lowest level in Katz and Kahn's (1978) framework, supervisory leadership was described as *applying existing structure*, defined as the routine use of standard operating procedures to deal with familiar problems in implementation and execution. Comparing the executive role with the supervisor role reveals major differences in job complexity. Whereas executives are charged with identifying, defining, and addressing the novel problem of setting direction in an ambiguous context where options seem unbounded and goals are not provided, supervisors are charged with applying an existing structure. Accordingly, supervisors must distribute resources, assign specific tasks, and manage the employees and teams who execute the organization's core work. The application of existing structure involves selecting from a finite set of known options to deal with expected problems in a relatively stable environment to achieve predefined goals (Osborn et al., 2002). In other words, supervisors primarily deal with technical problems, whereas executives confront mostly adaptive problems (Heifetz & Laurie, 2001). The key activity of managers at this lowest level is the supervision of employees responsible for carrying out the day-to-day work of the organization (Hill, 1992; Kraut et al., 1989; Tornow & Pinto, 1976).

Zaccaro (2001) observed that managers at all levels must carry out the indirect leadership activities of direction setting and implementation as well as the direct leadership roles involved in interpersonal influence. He also suggested that the specifics of those roles vary with organizational level, consistent with others who have also disconfirmed stereotypes of lower level managers as automaton doers and executives as reflective thinkers (e.g., Huy, 2001; Mintzberg, 1980). For example, although executives may set long-term strategy on the basis of trends in

the external environment, being strategic for a first-line supervisor might mean deciding which of several production problems should be a top priority in a given week. Conversely, some have argued that executive positions require a certain degree of involvement in tactical problem solving in addition to the more strategic role of setting the company's direction (Kaplan & Kaiser, 2003, 2006). This line of thinking suggests that although some responsibilities may be analogous across levels, the behaviors required to carry them out can be different.

Primary Skills

Another way to distinguish among the three levels of management involves the distinct skills needed by incumbents at each level. The skills typology proposed by Katz (1955) and recommended by Mann (1965) has been popular for this purpose. This system classifies management skills into three general domains: Conceptual skills—proficiency with ideas, analytical and logical thinking, deductive and inductive reasoning, systems thinking, and mentally representing complex information and manipulating it to form integrative concepts and anticipate the consequences of alternative courses of action; human or interpersonal skills—competence with people as demonstrated in communication, forming and maintaining relationships, and showing concern for the feelings and desires of others; and technical skills—including proficiency with things such as specialized methods, processes, knowledge, and techniques.

Katz (1955) and Mann (1965) suggested that managers at all levels use all three types of skills. They also argued that the relative importance of each skill domain varies with organizational level, suggesting that a different set of skills is primary at each level. Specifically, technical skills were regarded as most important for supervisors, interpersonal skills for middle managers, and conceptual skills for executives. This is consistent with the functional activities at each level of management, described earlier. That is, technical skills are required for supervisors to solve routine or anticipated problems in production; interpersonal skills are critical for the communication, coordination, and emotional roles of middle management; and conceptual skills are necessary for executives to integrate internal capability with external opportunities to create a vision for strategically positioning the organization in a competitive environment. Recent job-analytic findings based on incumbent ratings support the proposition that various leadership skills are important at each level, but their relative importance varies with organizational level (Mumford, Campion, & Morgeson, 2007).

Organizational Responsibility

A final way to describe level differences is in terms of organizational responsibilities. This method corresponds to how levels are typically distinguished in practice (Freedman, 1998, 2005; Kates & Downey, 2005). The supervisory level

is the lowest one at which incumbents have responsibility for the performance of others, typically nonmanagerial employees (Hill, 1992). These jobs include firstline supervisors and department managers. They typically operate within a single functional area (e.g., production, sales, human resources) inside a single, self-contained organizational unit.

The primary responsibility of middle management is coordination of multiple functions. The individuals who report to middle managers are managers themselves or other highly specialized professionals. A distinguishing characteristic of middle managers is that they frequently oversee the work of others with subject-matter expertise in areas about which the middle managers possess little knowledge or experience (Freedman, 1998; Kates & Downey, 2005). Middle managers coordinate and integrate multiple functional areas, and a frequent challenge is to influence people to set aside their local concerns and instead contribute to broader organizational goals. In for-profit organizations, middle managers often have profit and loss responsibilities and are accountable for the performance of a single business unit that offers a particular product or service line.

Whereas middle managers coordinate cross-functional activities in a single business or organizational unit, executives are generally responsible for coordinating a portfolio of businesses or functional units. It is not uncommon for executives to have little past experience with the organizations, industries, or markets in which they operate (Groysberg, McLean, & Nohria, 2006; Huy, 2001). Executives are usually accountable to extraorganizational constituents such as boards of directors and shareholders in publicly traded firms, owners in private companies, or politicians in government institutions (Gandossy & Sonnenfeld, 2004).

Summary

Several perspectives have been used to distinguish among three distinct levels of management in large, traditional bureaucratic organizations. Following Hunt's (1991) suggestion, we agree that identifying the organizational level of a given managerial job should be less about titles and tenure and more about the nature of the work. Variation in the nature of work at each level provides a basis for understanding fundamental differences in the behaviors required to effectively perform at different organizational levels. Table 1 summarizes past research on differences among jobs at the bottom, middle, and top.

Navigating Transitions

Our third and final generalization about level differences comes from research on derailment—when promising managers with a successful track record get fired, demoted, or stalled in their career progression (McCall & Lombardo, 1983). Hogan, Hogan, and Kaiser (2010) and Gentry and Chappelow (2009) recently

TABLE 1
 Summary of the Nature of Work at Three Organizational Levels

<i>Level</i>	<i>Time span</i>	<i>Responsibilities</i>	<i>Functional activities</i>	<i>Primary skills</i>
Top (executive)	Long (5 to 20+ years)	Performance of a corporation or group of businesses	Creation of structure: link organization to external environment, develop consensus about the future, set policy and strategic direction, shape organizational culture to support strategy, secure capital resources	Conceptual
Middle (middle management)	Medium (2 to 5 years)	Performance of multiple functional units or a division	Interpretation of structure: translate strategy and policy into operating plans, coordinate diverse functional units, allocate resources across functions, serve as communication nexus throughout the organization, help employees cope with change	Interpersonal
Bottom (supervisory)	Short (2 weeks to 2 years)	Performance of small group or team within a single function	Application of structure: assign tasks, execute operating plans, supervise and direct the day-to-day core work, anticipate and solve production problems, distribute resources to individuals and teams	Technical

summarized this literature, and both summaries concluded that about half of the executives end up derailing. Lombardo and Eichinger (2005) estimated that about one third of managers identified as having high potential derail before reaching success at the top. It is interesting to note that the majority of managerial derailments occur after making an upward transition, often when moving from middle management to the executive level (cf. Hogan et al., 2010; Kates & Downey, 2005). As McCall and Lombardo (1983) observed in the first published study on derailment, the reasons why executives derail are “all connected to the fact that situations change as one ascends the organizational hierarchy” (p. 11).

Several factors appear to make failure more likely during an upward transition. First, level differences in job requirements are often poorly articulated by organizations, and individuals frequently receive insufficient preparation and support prior to, or during, a transition (Downey, March, & Berkman, 2001; Freedman, 1998, 2005; Hogan et al., 2010; Kates & Downey, 2005). Second, promotion decisions are usually based more on past performance than on fit with requirements in the next job. Lacking certain knowledge, skills, abilities, and other characteristics may be irrelevant to performance at lower levels but when required at higher levels, the deficiencies become glaring (Lombardo & Eichinger, 2006; McCall & Lombardo, 1983). A good example is strategic thinking, which may not be critical to a middle manager but which is imperative for an executive. Third, “strengths become weaknesses” (McCall & Lombardo, 1983, p. 11), meaning that the behaviors reinforced by success in prior roles can become liabilities in more senior roles when the behavior is no longer functionally appropriate. For example, reliance on deep technical expertise may help a functional head, but hobble a senior executive because breadth of perspective is more important than depth of knowledge at the top. Last, a history of reinforcement can make a particular behavior pattern resistant to modification even after it becomes counterproductive. Freedman (2005) described this as a behavioral addiction, and Berglas (2009) referred to this as perseveration in their independent accounts of executive derailment.

Kaplan and Kaiser (2003, 2006) reported that newly appointed executives were often faulted by their coworkers for excessive use of self-assertive and directive influence methods and overinvolvement in technical problems and tactical issues. They also noted that the weaknesses most commonly reported among new executives represented the other side of the coin: Lacking an empowering, participative style and lacking a broad strategic mindset. Lombardo and Eichinger (2006) drew similar conclusions from their analysis of competency assessments for hundreds of executives in a range of industries.

Freedman (1998, 2005) described how upward transitions present managers with discontinuous changes in job requirements for which they may be ill prepared. At each transition, managers are confronted by at least three separate but related challenges: Letting go of anachronistic perspectives, values, and skills; refining those that continue to be useful; and developing new ones. Coping

with these challenges requires adaptive changes in preferred activities, behavior patterns, and mental models. Freedman (1998, 2005) suggested that organizational decision makers tend to underestimate these psychological challenges; consequently, rather than receiving adequate preparation and support, managers making upward transitions are often asked to “sink or swim.”

Observations and Future Directions

We made two overarching observations in reviewing the empirical literature on level differences in managerial jobs. First, nearly all of the studies are descriptive in nature. That is, the research tends to focus on characterizing jobs at different levels as a basis for describing how the work at each level is similar to or different from work at other levels. Most of this research has been conducted within the paradigm of job analysis, with an emphasis on asking what incumbent managers do and how they spend their time. This is a potential weakness of the descriptive literature because it is questionable to assume that incumbents can reliably describe the critical aspects of their work. There is considerable variability in how accurately individuals can report what is required to do their jobs effectively (Morgeson & Campion, 1997). There is also more disagreement than agreement between trained observers' descriptions of the frequency and importance of various managerial activities and those managers' own reports (McCall, Morrison, & Hannan, 1978). Moreover, if as many as half of executives eventually fail or derail (Gentry & Chappelow, 2009; Hogan et al., 2010), then their daily activities probably do not characterize effective performance. It is unclear how job descriptive methods may systematically bias the literature, but we note the possibility that the literature may reflect more of how managerial work is perceived and less of the reality of what the organization needs from their jobs.

Our second observation is that, although it is extensive, the literature on level differences is not definitive. This point builds on the previous observation. The aforementioned research suggests how managerial jobs differ at the bottom, middle, and top and therefore implies that the behaviors required for managerial effectiveness may be different at different levels. However, little research has tested the implication that the effectiveness of certain managerial behaviors depends on organizational level. Other researchers have noted that there have been no published studies that document differences in the performance dimensions that predict effectiveness across levels in a variety of organizations (Hunt, 1991; Yukl, 2006; Zaccaro, 2001). Rather, most studies have been descriptive and job analytic, based on jobs in a single organization (e.g., Kraut et al., 1989). Confirmatory tests of the major propositions derived from the descriptive research represent one way to make a more definitive case. To that end, we next describe a few topics that are particularly important to explore in future research to solidify the empirical basis for work on level differences.

Inconsistencies in the Literature

Although there is considerable consistency between conceptions of cross-level differences in the popular and scholarly literatures, there are also some inconsistencies. For example, some practitioner frameworks describe the importance of delegation and participative skills at the lower levels (Charan et al., 2001), whereas research-based arguments posit their importance as emerging higher up (Vecchio & Boatright, 2002). Similarly, it is common in practice to portray senior jobs as strategic and lower level jobs as tactical, but researchers suggest that this distinction may be less substantive than is often assumed (Huy, 2001; Mintzberg, 1980). As Zaccaro (2001) pointed out, managers at all levels are responsible for both setting direction and implementing that direction. Future research is needed to determine how performing these same responsibilities may be similar or different depending on the organizational level at which it takes place. For example, perhaps the behaviors required to set direction are unique for middle managers compared to executives, or perhaps the appropriate level of tactical involvement in implementation is less extensive for executives than it is for middle managers.

The academic literature is also somewhat internally inconsistent. For example, Zaccaro (2001) argued that both conceptual and social skills are central for executive jobs, whereas Katz (1955) and Mann (1965) suggested that conceptual skill is unequivocally the most important aptitude at the top. Further, Mumford et al. (2007) concluded that incumbents' importance ratings for interpersonal/social skills and cognitive/conceptual skills are the least strongly related to organizational level. Given the lack of predictive studies in the literature, these remain open empirical questions. Such research is important for practitioners in that it is common in practice to emphasize technical skills for the supervisory level, interpersonal skills for the middle-management level, and conceptual skills for the executive level. Empirical guidance would clearly be helpful for practitioners.

Incremental Gains or Discontinuous Change?

Another inconsistency in the research literature is worth singling out. Specifically, different streams of inquiry lead to different conclusions about the extent to which the behaviors, skills, and knowledge needed for effective performance are similar versus radically different at different organizational levels. For instance, research on skills among middle- and upper-level officers in the U.S. Army concluded that the skill-sets are fundamentally the same, but upper-level officers simply need higher levels of those skills (Mumford, Marks, Connelly, Zaccaro, & Riter-Paulmon, 2000). A similar finding has been reported for managerial jobs in business organizations (Mintzberg, 1980). In fact, Mumford et al.'s (2007) leadership strataplex model specifically posits that higher level jobs require more of all leadership skills. The model also assumes that skills do not decrease in

importance—the skills important for supervisors remain important for executives, just more so—which directly contradicts the idea of discontinuities. In contrast, research on derailment and transitions does support the idea of discontinuities. This research emphasizes how some of the skills needed for effective performance at one level can become a liability at a higher level (Freedman, 1998; Hogan et al., 2010; McCall & Lombardo, 1983), such as when personal involvement in solving problems looks like desirable initiative in middle management but maddening micromanagement at executive levels. This basic idea is at the core of the maxim in modern management that “strengths can become weaknesses” (McCall & Lombardo, 1983, p. 11).

We are aware of no previous research that directly tests the viability of the continuity of skills versus discontinuity of skills perspectives, and this is a serious omission from existing research. As De Meuse, Dai, and Wu (this issue) point out, there are three possibilities: (a) Managers use the same skills and build them up incrementally to perform effectively at successive levels, (b) managers must add new skills and shed some old ones to be successful as they move up (e.g., Freedman, 1998, 2005), or (c) perhaps a combination of incremental skill development in some areas and radical changes in skill sets in other areas is needed for continued success across the hierarchy. The matter is a gaping empirical question with significant implications for practice.

Direct Predictive Test

Perhaps the most glaring deficiency of the extant literature is the lack of any direct empirical tests of the propositions derived from theory and job-analytic research. A finding that specific behaviors are differentially predictive of performance at different organizational levels would have important implications for theory, research, and practice. First, it would provide direct support for previously untested theoretical propositions about differing job requirements across levels and call into question theories of management and leadership that fail to distinguish among multiple definitions of effectiveness for different levels (Day & Lord, 1988). Second, researchers may need to begin to consider organizational level when choosing the most appropriate way to measure leadership effectiveness in their studies (Kaiser, Hogan, & Craig, 2008; Kaiser & Overfield, 2010). If relations between leader behavior and effectiveness are examined with data that collapse across organizational level, real effects might be obscured or spurious effects detected. Lastly, practitioners involved in the selection and development of managers would have an empirically supported basis for tailoring their efforts to the particular demands of the levels at which they are working. Managers facing upward transitions might thus be better chosen and made better prepared for their new roles, potentially reducing rates of failure and derailment.

Unfortunately, absent such direct support for presumed differences in the behavioral requirements for effectiveness at different levels, the current trend for organizations to adopt the leadership pipeline model seems to have some support from the scholarly literature but not definitive support. Although the theoretical literature strongly supports the expectation that job demands will vary across organizational levels, and the job-descriptive literature confirms that organization members believe that they vary, specific details regarding exactly which behaviors actually vary between which levels, by how much, and in what directions, are missing. Such detailed empirical findings would be required in order to declare that the pipeline model rests on a firm scientific basis.

Additional Sources of Difference

Thus far, theory has focused on four primary sources of differences in the nature of work at different levels: Complexity (e.g., time horizon), functional activities, organizational responsibilities, and requisite skills. However, there may be other sources of difference that have yet to be fully considered. For example, characteristics of organizations such as size, stage in life cycle, or sector (e.g., public, private, military) may interact with level to influence the nature of managerial work. Not only might predictors of effectiveness vary across levels, but they might also vary across organization types, within level. Factors that predict effectiveness for chief executive officers of private for-profit businesses might differ from those that predict effectiveness for military generals, even though both would ostensibly be considered to be executive-level positions. Similarly, what it takes to be an effective middle manager in a startup company may be different from what middle managers need to do to be effective in a mature company. Future theory should attempt to identify and consider a fuller range of contextual variables that might interact in the prediction of leadership effectiveness at different organizational levels, and future research should directly test the resulting propositions, empirically.

In sum, theory and practice seem to have outpaced research on the topic of cross-level differences in managerial effectiveness determinants. Although there is certainly room to expand and refine theory and improve practice in this area, our most pressing need is for empirical tests of long-standing propositions and points of contention in the literature.

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