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Leadership development practice bundles and organizational performance : the mediating role of human capital and social capital

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LEADERSHIP DEVELOPMENT PRACTICE BUNDLES AND ORGANIZATIONAL PERFORMANCE:

Abstract

There is evidence linking a variety of leadership development practices (LDPs) with individual-level leader outcomes. However, both theoretical and empirical work relating bundles of multiple LDPs and organizational performance is lacking in literature. To address this gap, we proposed and tested a model examining the influence of two LDP bundles on organizational performance with human capital and social capital as mediators. Differentiation LDPs are aimed primarily at building intrapersonal knowledge, skills, and abilities of leaders, while integration LDPs help build their interpersonal knowledge, skills, and abilities. Utilizing a sample of 223 organizations in a growing economy (India), we found that differentiation LDPs were positively associated with human capital, while integration LDPs positively influenced social capital. Further, human capital fully mediated the relationship between differentiation LDP and sales growth. Our study highlights the economic impact of investing in leadership development and the mechanisms underlying the relationship between LDPs and organizational performance.

Keywords: Leadership Development, Sales Growth, Human Capital, Social Capital, India

1. Introduction

Leadership development can be considered a strategic priority for contemporary organizations (McCauley, Kanaga, & Lafferty, 2010). This is because skilled leaders are necessary for the effective design and implementation of business strategy (Augier & Teece, 2009), management of follower attitudes and behaviors (Avolio, Gardner, Walumbwa, Luthans, & May, 2004), regulation of team processes and outcomes (Morgeson, DeRue, & Karam, 2010), and overall organizational performance (Waldman, Ramirez, House, & Puranam, 2001). One indicator of the value placed on leadership development is the reaction of stock markets to the appointment (as CEOs) of ex-managers from organizations that are known for systematically developing their leaders (Lehmborg, Rowe, White, & Philips, 2009). Also, recent estimates suggest that investments in leadership development have continued through economic cycles, with US firms spending \$13.6 billion on leadership development programs in the year 2012 (O'Leonard & Loew, 2012), and 35% of the firms in Europe and 52% in Asia increased their leadership development budget in 2011 (Global Leadership Forecast, 2011).

Given the widespread perception of the importance of leadership development, it is not surprising that various studies have tried to evaluate the effectiveness of different types of developmental programs and experiences (e.g., the meta-analyses of Burke & Day, 1986; Collins & Holton, 2004; Powell & Yalcin, 2010). These results suggest that individual managers experiencing developmental assignments and participating in various developmental programs including formal training, mentoring, and action learning acquire a variety of managerial skills (McCauley, Ruderman, Ohlott, & Morrow, 1994; Dragoni, Tesluk, Russell, & Oh, 2009). In other words, leadership development practices (LDPs) appear to indeed help individual managers become better leaders, and the relative effectiveness of various LDPs in this regard continue to be explored

(Day & Dragoni, 2015).

However, to date, the effects of LDPs on organizational performance remain largely unexplored, both theoretically and empirically (Collins & Holton, 2004; Richard, Holton, & Katsioloudes, 2014). For instance, a search for the term “leadership development” in the abstracts of seven journals that publish leadership-relevant articles (*Academy of Management Journal*, *Human Resource Management*, *Human Resource Management Journal*, *Journal of Applied Psychology*, *Journal of Management*, *Leadership Quarterly*, and *Personnel Psychology*) published during the last decade (2006-2016) reveal 12 quantitative articles, excluding meta-analyses. Of these, only one article, which aims to predict the types of LDPs that firms adopt, appears to focus on multiple LDPs at the organization-level of analysis (Caligiuri & Colakoglu, 2007). Further, there is a dearth of studies estimating the financial impact of LDPs (cf., Avolio et al., 2010; Richard et al., 2014). These gaps can be considered deficiencies in literature given the role of leaders in influencing “the way inputs are combined across different levels of analysis to produce unit outputs, often by influencing the actions of others (Dinh, et al., 2014; p. 43)”. This is because the development of leaders can influence how they mobilize or orchestrate human resources and other resources and influence important organizational outcomes.

In other words, while there is good evidence that LDPs can make individual managers better leaders, there is much less work on whether and how LDPs contribute to organization level performance. We target that gap in the literature in the current study. Drawing on multiple LDPs that are most commonly employed in the leadership development literature on the individual level of analysis, we examine how the implementation of bundles of LDPs by organizations influence organizational level constructs such as human capital, social capital, and, ultimately, or-

organizational level performance. We test our hypotheses utilizing data collected from 223 organizations operating in India, a fast-growing economy where leadership development is becoming a significant priority. Our findings suggest that cross-organizational variance in LDPs is another important piece of the story about how people management contributes to organizational performance and, perhaps, to competitive advantage. We begin by briefly reviewing insights from the extant leadership development literature.

2. Insights from the individual level leadership development literature: Rationales for bundling LDPs

Leadership development is itself an extensive subset of the voluminous leadership literature, which spans the management, psychology, and education fields. Although it is generally accepted that leadership development can be effective, the leadership literature has been home to a protracted debate about the degree to which leadership can be cultivated through LDPs. We will not engage in that debate here, which is peripheral to our research question and lies beyond the scope of this paper. Rather, to apply leadership development insights to the organization level, we must consider two related questions: Firstly, what are the dimensions of leadership development? Secondly, which LDPs (related to these dimensions) should be bundled together to influence organizational performance? Fortunately, previous publications in the individual level leadership development literature address each of these questions. We will briefly describe those two sets of findings, in turn.

2.1. What are the dimensions of leadership development?

In reviewing the leadership development literature, Day and Dragoni (2015) suggest that leaders develop over time along two dimensions: the intrapersonal dimension and the interpersonal dimension. Issues related to intrapersonal development include developing human capital,

such as cognitive, meta-cognitive, and behavioral skills that leaders acquire when moving into higher level leadership positions (e.g., Mumford, Campion, & Morgeson, 2007), psychological processes, such as identity and self-regulation (Lord & Hall, 2005), and the role of learning from previous experiences, such as parental modeling (Zacharatos, Barling, & Kelloway, 2000) and previous positions held (Bettin & Kennedy, 1990). Furthermore, the role of personality (Mumford, et al., 2000) and other deep-seated individual characteristics such as work orientation, mastery orientation, and career-growth orientation (Boyce, Zaccaro & Wisecarver, 2010) can impact leadership development.

Issues related to interpersonal development, on the other hand, concern the capacity for individuals to build relationships with others, such as enhancing a group's social capital and engaging in authentic leadership with followers (e.g., Avolio & Gardner, 2005; Galli & Müller-Stewens, 2012). In his seminal review of the leadership development literature, Day (2000) distinguished between "differentiation" LDPs aimed primarily at directly building the intrapersonal knowledge, skills, and abilities (KSAs) of leaders through the use of assessment tools (e.g., assessment centers and multisource or 360 degree feedback), internal and external formal leadership training, and support (e.g., mentoring and coaching); and "integration" LDPs, e.g., action learning, network events, stretch assignments, job rotations that contribute to organizational goals (e.g., increased revenues, corporate social responsibility) by developing extended social networks, coordination and commitments, while simultaneously building individuals leaders' interpersonal knowledge, skills, and abilities. Day (2000) argued that the intrapersonal leadership development dimension should be more strongly determined by differentiation LDPs, while the interpersonal leadership development dimension should be more strongly determined by integration LDPs. In turn, we can use Day's (2000) arguments as a rationale for bundling (aggregating)

LDPs: Some LDPs are more oriented toward intrapersonal leadership development, while other LDPs are more oriented toward interpersonal leadership development. Given the conceptual overlap between these two bundles of leadership development activities (it is, for instance, not implausible that job rotation builds individual leaders' KSAs as well as their social capital), we expect that LDPs organized along the differentiation and integration dimensions will be conceptually and analytically distinct, but positively correlated.

Indeed, previously published empirical studies indicate that differentiation LDPs can exert a positive influence on the development of both the intrapersonal and interpersonal dimensions of leadership. For instance, together with evidence for the positive effect of traditional leadership training (e.g. Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009), there is evidence that individual coaching can increase self-regulation, coping with job demand, and job performance (Theeboom, Beersma, & van Vianen, 2013), as well as social competencies (Grief, 2007); 360-degree feedback can improve leadership performance (Smither, London, & Reilly, 2005); and mentoring has been shown to lead to leader efficacy and trust between mentor/mentee (Lester, Hannah, Harms, Vogelgesang, & Avolio, 2011). Similar joint effects have also been noted for integration LDPs. For instance, service learning programs have been reported to lead to self-development, a responsible and global mind-set, ethical literacy, cultural intelligence and interpersonal community building skills, which include stakeholder engagement, interpersonal skills, and relationship management (Pless, Maak & Stahl, 2011). Stretch job assignments have been shown to lead to intrapersonal skills such as broader business knowledge, insightfulness, courage to take a stand, commitment to success, and act with integrity, in addition to interpersonal skills such as "bringing out the best in people" and "pulling them around a common goal" (Dragoni et al., 2009; *p.* 737). Job rotation can increase intrapersonal skills such as adaptability

and flexibility and building a broader perspective on the business (Campion, Cheraskin & Stevens, 1994), while action-learning experiences have been found to build personal meaning for individuals (McGregor & Little, 1998) and potentially collective leadership (Raelin, 2006). Finally, network events/offsites where information is exchanged on new products can help in the creation of social capital (Galli & Müller-Stewens, 2012). Thus, one contribution of this study is to evaluate whether differentiation and integration LDPs bundle together on the organization level consistent with the Day (2000) arguments.

3. Adapting leadership development arguments to the organizational level of analysis

While extant research has provided insights regarding the effects of LDPs on individual leaders' skills and behavior, there appears to be a dearth of theoretical and empirical work linking LDPs to performance at the organizational-level of analysis. We propose a model where human and social capital mediate the relationship between LDPs and organizational performance. In this section we begin with a discussion of the organizational-level of analysis and how conceptualizations at this level, though reliant on individual-level psychological and social processes, can make a unique contribution to the literature (3.1), after which we provide a theoretical justification for bundling complementary LDP practices (3.2), followed by a detailed exploration of our model and hypotheses (3.3 and 3.4).

3.1. Rationale for studying constructs at the organizational level of analysis.

There are two different ways of conceptualizing unit properties: (a) global – referring to constructs that are characteristics of the unit whose properties or existence is not predicated upon the perceptions or characteristics of individuals; and (b) shared – emerging from composition (i.e., convergence in individual characteristics create isomorphic collective constructs) or compilation (where the differences between individuals on a trait become the characteristic of the unit).

LDPs contain global properties, i.e., as strategic or policy-driven programs, they are conceived of at the organization level and implemented with an organization goal (e.g., creating talent or competitive advantage) in mind. Different individuals in an LDP program do not receive different LDPs, though arguably they might perceive, and react to, and benefit from, these practices differently.

On the other hand, human capital is a shared organizational level construct emerging from individual level knowledge, skills, abilities, and other characteristics (KSAOs) through composition processes. Specifically, emergence-enabling processes and states such as task complexity (e.g., the extent to which the task requires individuals to coordinate efforts), shared climate, and organizational learning systems help bundle and amplify these KSAOs to create organization level human capital resources (see Ployhart & Moliterno, 2011). Social capital, by definition, is a macro level construct, based as it is, in relationships between people. Sales is a global property of the organization because it is an output of the entire manufacturing or service process. While salespeople might receive credit for the number of goods sold or money earned as a result, the good itself is created through the organization's technical and administrative subsystems.

In this study, we demonstrate the linkage between four organizational level variables of which three demonstrate global properties. I.e. these constructs cannot be decomposed into individual level variables without losing some or most of their essential functions: LDPs, social capital, and sales growth. The other organization level variable emerges from the combination or bundling of individual level KSAOs (human capital). However, it is critical to note that while emergence is its "origin story", a macro view of human capital suggests that it is an organization level resource that can be accumulated or depleted (Ployhart, et al., 2014; Crook, Todd, Combs,

& Woehr, 2011). Further, bundles of HRM practices (selection, training, rewards, empowerment, job security, etc.) have been the primary foci of researchers examining the predictors of organization-level human capital (see meta-analysis by Subramony, 2009; Jiang, Lepak, Hu, & Baer, 2012) and social capital (Jiang & Liu, 2015). By proposing and testing a model with a focus on LDPs as predictors of human capital and social capital, and thereafter, organizational performance, we contribute to extant theory and research in the domains of strategic HRM and leadership development.

3.2. Complementarity between LDPs at the organizational level.

Complementarity implies that doing more of one LDP increases the returns to another LDP (cf. Milgrom & Roberts, 1992). A comprehensive review of complementarities in management literature identified two distinct approaches toward complementarity (Ennen & Richter, 2010; cf. Chadwick, 2010). The interaction approach views complementarity or fit between different (individual) organizational factors or practices (e.g., a specific type of resource and a specific organizational structure) as producing “positive effects above and beyond the individual effects” (Ennen & Richter, 2010: *p.* 217). In contrast, the systems approach focuses on the collective effect of a wide variety of heterogeneous factors or practices acting together to influence specific outcomes. In general, Ennen and Richter (2010) show that systems or bundle effects are, in general, more likely to produce positive synergistic effects than simple interaction effects (i.e., 78% and 44% respectively in Ennen & Richter, 2010).

There are three reasons why system effects (conceptualized here as LDP bundles) are likely to exert stronger effects than either individual practices or one-on-one interactions between them. First, complementarity is created by various practices making “different contributions toward the attainment of a common outcome or influence the same outcome through different and

non conflicting routes” (Subramony, 2009; p. 747). This logic suggests that different practices trigger different, though complementary, psychological and social mechanisms leading to the same outcome. Take, for instance, the finding that combining one-on-one coaching with 360-degree feedback is likely to have a stronger effect on skill development than any one of these practices in itself (Smither, London, Flautt, Vargas, & Kucine, 2003). Multisource feedback provides leaders with insights into their own strengths and developmental needs, while coaching helps them to set and execute goals related to the identified needs and strengths. Thus, by enhancing different though complementary mechanisms, these two practices create a stronger combined effect.

Second, the joint implementation of multiple practices creates a buffer or an “insurance plan” of sorts against the ineffectiveness or failure of one or more practices (Chadwick, 2010). For instance, if the organization is unable to effectively implement leadership training (e.g., due to resource limitations), the existence of other practices such as coaching and 360-degree ensures that leaders still receive development. Third, bundling of practices can be more resource-efficient than implementing separate stand-alone practices. For instance, combining developmental assessment centers with coaching and mentoring allows the sharing of resources (e.g., internal marketing resources, personnel who can serve as assessors and coaches, databases for identifying and tracking participants) that can, in the long term, create efficiencies while also creating a coherent and consistent message sent to the organization regarding the characteristics of, and procedures related to, participation in leadership development (see Bowen & Ostroff, 2004).

As we indicated above, we will utilize Day’s (2000) classification as a guide to bundling LDPs in the current study, which gives us a theoretic rationale for possible complementarities. While most published studies regarding the efficacy of leadership development have investigated

individual LDPs, in actuality, organizations rarely implement such practices in isolation (Douglas & McCauley, 1999). Instead, it is common for multiple leadership development practices (e.g., training, coaching, and mentoring) to be implemented simultaneously. Moreover, given the level of integration required to implement complementary bundles of LDPs, such combinations are unlikely to arise by chance. Indeed, Day (2000) argued that “an overall approach to leadership development as a type of organizational development strategy requires a purposeful transformation toward higher levels of both integration and transformation (p. 586)”. In short, an emphasis on bundles of LDPs is likely to be an important way to evaluate the impact of LDPs, since complementarities can make it difficult to isolate the effects of individual LDPs and key LDPs can covary empirically. Additionally, bundles of LDPs may be greater reflections of managerial intent than individual LDPs, an issue to which we return in the discussion. Lastly, an emphasis on LDP bundles, per our logic in this section, naturally (though not exclusively) locates our study on the organization level of analysis.

3.3. Mechanisms linking LDPs, human capital, and social capital

While the leadership development literature provides insights on how to bundle LDPs, on how individual leaders develop, and on the effects of leaders’ personal development on individual-level outcomes (see Day, Fleenor, Atwater, Sturm, & McKee, 2014), there is little existing theory or evidence to suggest how organization level LDPs are related to organizational performance. To fill this gap, we utilize key elements of resource-based theory (RBT; e.g., Barney, 1991; Barney, Ketchen, & Wright, 2011). A fundamental assumption of RBT is that the acquisition and accumulation of intangible resources such as human capital (i.e., the organizationally-relevant knowledge, skills, abilities, and inherent attributes of employees; Campbell et al., 2012)

and social capital (knowledge embedded within, derived from, and available through social networks; Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998) can help organizations successfully implement their competitive strategy (cf. Barney, et al., 2011; Shaw, Duffy, Johnson, & Lockhart, 2005). Indeed, a recent meta-analytical study of the relationship between strategic assets and organizational performance indicated that human capital assets have significantly stronger positive effects on performance outcomes than tangible assets (Crook, Ketchen, Combs, & Todd, 2008).

We propose that human capital and social capital are strategic resources that are partially accumulated and developed through the actions of leaders. Accordingly, organizational investments in developing leaders through LDPs can enhance leadership skills required to increase the total levels of human- and social-capital within the organization, which can ultimately lead to an increase in organizational performance. Human capital and social capital are two types of complementary intangible resources that affect firm-performance. Recent extensions of RBT have focused on the role of managers and leaders in linking strategic resources such as human capital and social capital to organizational performance (e.g., Ndofor, Sirmon, & He, 2011). Leaders do so by structuring (i.e., acquiring, accumulating, and divesting resources), bundling or integrating, and leveraging resources to gain economic advantages over competitors (Sirmon, Hitt, Ireland, & Gilbert, 2011). Similarly, research on team leadership (Morgeson et al., 2010; p. 17) indicates that leaders are responsible for “ensuring that each team member has the knowledge and skills required to effectively perform his or her role” (i.e., development of human capital), and “developing the team regarding the interpersonal processes associated with effective teamwork, such as developing trust and cohesion in the team, communication, developing shared mental models and transactive memory within the team” (i.e., contributing to social capital creation). Following this

logic, we propose that differentiation- and integration LDPs will both, influence human- and social-capital.

While direct examinations of the relationship between leadership development practices and human capital at the organizational level of analysis are rare, indirect evidence suggests that leadership behaviors are related to the development and retention of employees. For instance, studies have established the role of leadership behaviors in mitigating employee turnover (Tse, Huang, & Lam, 2013), reducing turnover intention (Chang, Wang, & Huang, 2013; Dawley, Houghton, & Bucklew, 2010), enhancing organizational commitment (Kidd & Smewing, 2001); and linked supervisor support with employee development (Maurer, Weiss, & Barbeite, 2003). Thus, it can be argued that leaders who participate in developmental activities aimed at enhancing interpersonal and intrapersonal leadership skills will be more effective at retaining and developing employees, thereby contributing to a higher stock of human capital. Similarly, there is indirect evidence linking unit-level leadership skills and behaviors with social capital. For instance, group-focused transformational leadership promotes high quality reciprocal relationships between team members (Chun, Cho, & Sosik, 2016), empowering behaviors by leaders are related to collaboration among geographically dispersed team members (Hill & Bartol, 2016), and directive task-oriented team leadership behaviors support team-members' linkages and interactions with others in the external environment (Marrone, 2010).

Further, we propose differential effects of the two sets of LDPs on the two forms of intangible assets. Specifically, differentiation LDPs that have a somewhat higher emphasis on the development of intrapersonal leadership skills (as compared to interpersonal competencies) are more likely to influence the creation of human capital, while integration LDPs focused on interpersonal competencies have a somewhat higher likelihood of influencing the creation of social

capital. These propositions are built on the premise that the developmental activities experienced by leaders translate into domain-specific skills that are then utilized for the benefit of their team. Thus, if leaders learn how to diagnose or leverage personal strengths and weaknesses through 360-degree feedback and coaching, they are more likely to use these skills in motivating their employees toward the attainment of task- and developmental goals, thereby promoting human capital. In contrast, if leaders gain skills related to networking and building relationships (through action learning or job rotation), they are likely to act as connectors, linking their subordinates with individuals in other departments, and additionally train their subordinates on building their own social relationships.

Based on the above arguments we hypothesize the following relationships between the LDPs and intangible assets.

Hypothesis 1. Differentiation and integration leadership development practices are positively related to organization level human capital. Differentiation leadership development practices are stronger determinants of human capital than integration leadership development practices.

Hypothesis 2. Differentiation and integration leadership development practices are positively related to organization level social capital. Integration leadership development practices are stronger determinants of social capital than differentiation leadership development practices.

3.4. The mediating role of human capital and social capital

We further propose that human- and social-capital are two different (though, correlated) types of intangible assets that follow different complementary paths to influence sales growth. Recent meta-analytic evidence gathered from 68 studies indicates a generally positive relationship between organization level human capital and organizational performance, such as e.g., sales growth (Crook et al., 2011). Human capital functions as a critical resource for organiza-

tions, since human capital is the resource that coordinates and gives life to organizational capabilities (cf. Chadwick, 2017). Human capital is particularly differentiating when it is organization specific, which is more likely to be the case on the organization level than it is for individual workers (Ployhart et al., 2014), since collective human capital encompasses complex social relationships and interdependencies both between workers and, more broadly, amongst the organization's existing resources and capabilities (cf. Leiblein, 2011). While most tangible resources can be acquired by the organization from strategic factor markets (Maritan & Peteraf, 2011), stocks of human capital that drive exceptional performance need to be built up over time in order to provide the organization with a competitive advantage (cf. Chadwick, 2017; Dierickx & Cool, 1989). Further, the tacit knowledge related to organizational processes and social systems cannot be easily developed by competitors over a compressed time period (Hatch & Dyer, 2004). Thus, stocks of human capital are both positively related to financial organizational performance and amenable to the influence of key organizational leaders. As we argued in the previous section, building leadership capability through LDPs is likely to lead to a higher level of collective human capital within the organization. Given that point and logic presented in this section, we hypothesize that:

Hypothesis 3. Organization level human capital mediates the relationship between differentiation and integration leadership development practices and organizational performance.

In addition to human capital, we propose social capital as a mediator of the relationship between LDP and organizational performance. Central to this argument is the notion of relationships as a form of resource exchange (Rousseau & Ling, 2007). According to this view, positive relationships between organizational members can (a) create efficiencies in the use of resources

by facilitating coordination; (b) expand the resource base of work units by fostering within members a desire to grant each other access to information and skills that would not otherwise be available; (c) create a preference among members for open-ended and generalized reciprocity as opposed to immediate returns, thereby allowing the unit to divert resources to members who need these resources the most (e.g., more help for weaker members); and (d) allow work units to adapt quickly to disruptions (e.g., increased job demands, organizational change). Thus, social capital can have a positive impact on financial organizational performance, especially on proximal indicators of employees' collective effectiveness such as sales growth and productivity, as well as organizations' innovation performance. There is, for example, evidence that social capital can enhance knowledge flow and transfer within the organization, which is positively related to organizational innovation and growth (Maurer, Bartsch, & Ebers, 2011). Thus, we hypothesize that:

Hypothesis 4. Organization level social capital mediates the relationship between differentiation and integration leadership development practices and organizational performance.

4. The Indian context

This study examines the effects of LDPs on organizational performance in India, a fast-growing economy where leadership development is becoming a significant priority. While national economic growth rates (i.e., GDP) have topped 9% in the past decade, it is not untypical for Indian companies to demonstrate sales and workforce growth in the double-digits (Cappelli, Singh, Singh, & Useem, 2015). However, this rapid acceleration has not been accompanied by an increase in leadership capability. As the authors of a recent colloquium on leadership development noted, "If a company had grown at a normal pace, in five to seven years, it would have been ready with its leadership pipeline, systems of training and development . . . however, given

the explosive discontinuous growth, that privilege has been denied to many organizations in India” (Shyamsunder, et al., 2011; p. 62). Others have identified a quantity deficit (i.e., difficulty in filling middle and senior level positions), experience deficit (a lack of breadth in work experience among managers), and competition over high-quality executive talent within Indian organizations (Doshi, Sinha, Moda, & Nahar, 2012).

While several organizations in India emphasize leadership development as a strategic priority, in part through “corporate universities” or management development centers, it has been argued that India’s corporate leaders tend to be stronger on operational effectiveness and execution as opposed to exhibiting visionary or transformational leadership styles (Jones, O’Leonard & Bersin, 2012). Companies that recognize this leadership gap have started to focus on developing their pipeline leaders and taking a holistic yet targeted approach to leadership development. In that spirit, Chachra, Sahni and Bansal (2011) recently identified four critical priorities for developing Indian leaders: (a) emphasizing increased responsibilities earlier in the career, including managing role transitions and becoming more self-aware, (b) learning strategic skills to manage growth instead of relying solely on operational skills, (c) thinking beyond traditional instructor-led training and focusing on innovative action learning (e.g. job assignments, leadership simulations), and (d) utilizing blended learning solutions (e.g. a mix of instructor-led, technology/mobile-enabled and action-learning) to maximize impact. Given these characteristics, we believe that there is likely to be both a high degree of cross-organizational variance in leadership ability and, relatedly, the relationships between LDPs and organizational performance may be quite pronounced in India, making it a good context for examining our research question.

In this study, we examine sales growth as the measure of organizational performance for two key reasons. First, sales growth is often an outcome of “top-line” focused strategic decisions

(e.g., R&D investment, speed of product launch, advertising, mergers and acquisitions) requiring dynamic organizational capabilities (Behadir, Bharadwaj, & Parzen, 2009; Uhlaner, Stel, Duplat, & Zhou, 2013). Given the focus of this paper on leadership capability and leaders' role in accumulating and orchestrating resources, sales growth is an ideal performance measure largely focused on long-term organizational effectiveness. This contrasts with profitability, which can be a result of expense reduction as opposed to any real increase in sales, or with productivity, which can be increased by lowering labor costs through layoffs and downsizing. Second, innovation-driven growth is increasingly being viewed as a strategic priority among Indian firms, and is complemented by efforts by the Government of India to foster entrepreneurial innovation through infrastructural investments and recognition (see Nair, Guldiken, Fainshmidt, & Pezeshkan, 2015).

5. Materials and methods

5.1. Sample

The data for this study were collected in November 2014 using an online survey administered to the full membership of the Indian chapter of Society of Human Resource Management (SHRM), which was estimated to be 1000 HR managers affiliated with for- and non-profit organizations in India. As part of the survey, respondents were expected to report on various items dealing with their organization's leadership development practices. Therefore, the instructions for the survey indicated that they should respond to the survey only if they had responsibility for or significant familiarity with the leadership development practices within their organization. The information collected in the survey referred to the previous fiscal year, which ran from April 1 2013 to March 31 2014. Completed results were received from 223 managers (one per organization), for a response rate of 22%. Of these respondents, 80% were senior executives or middle

managers, 63% managed multiple HR functions, and 15% were managers of the training and development function. The average tenure of the respondents in their organization was 6.32 years.

The organizations in our sample had a median workforce size of 1200, and a median revenue of INR 100 Crores, which equals US \$14.75 Million. Utilizing the criteria provided by the Government of India, 83% of the organizations in this sample can be categorized as ‘large’, 14% as ‘micro or small’, and 3% as ‘medium’ in size (See: <http://www.smechamberofindia.com>). Thirty-two percent (32%) of sample organizations derived their revenue primarily from manufacturing, while 57% of sample organizations derived their revenue primarily from services, and 11% were unclassified. To put our sample in perspective, an Indian organization with the median revenue of INR 100 Crores would be ranked 740th on the list of large companies (see: http://fortuneindia.com/thenext500/2016#Transcorp_International_240). Given that the total number of companies listed on the National Stock Exchange is approximately 5000, it can be concluded that our sample represents the top quartile of all large businesses in India.

5.2. Variables

5.2.1. Leadership development practices

The LDP variables consisted of 13 items measured on a 5 point Likert-type scale ranging from “not at all used” to “used to a very large extent” with the following stem: “Please estimate to what extent the following leadership development activities were used in your organization *in the past fiscal year*”. We specifically referenced the past fiscal year in order to add a time lag between these measures and sales growth, which we measured for the current fiscal year. The developmental practices and experiences included in this scale were derived from the LDP literature (specifically, McCauley, et al., 1994; Douglas and McCauley, 1999; and Day, 2000). A confirmatory factor analysis (CFA) of this scale confirmed that the 2-factor structure (χ^2 [df= 26] =

102.64; RMSEA= 0.07, CFI = 0.95, ECVI = .80) fit the data significantly better ($\Delta\chi^2$ [df= 1] = 24.85; $p = .001$) than a single-factor (χ^2 [df= 27] = 127.49; RMSEA= 0.08, CFI = 0.92, ECVI = .90), confirming that differentiation and integration LDP practices could be viewed as different, though positively correlated, constructs. Additionally, the internal consistency of the items loading on these factors were high (Cronbach Alpha of $\alpha = 0.79$ for the differentiation LDP factor, and $\alpha = 0.85$ for the integration LDP factor). These LDPs, along with their respective descriptive statistics, are presented in Table 1. Note that internal and external leadership training were the most common forms of differentiation practices, while stretch assignments and network events/off-sites were the most common integration practices in the sample.

 Insert Table 1 about here

5.2.2. Human capital and social capital

We measured human and social capital utilizing 9 items from the intellectual capital scale developed and validated by Youndt and Snell (2004). Here again, we asked the respondents to report on the human capital and social capital levels within the organization in the previous year. Because these authors had already established the 2-factor structure of this scale (i.e., human capital and social capital), we conducted a confirmatory factor analysis (CFA) to confirm this structure in our own dataset. We did this by comparing a model with 5 items (e.g., “our people are highly skilled”, “our people are experts in their particular jobs and functions”, or “people develop new ideas and knowledge”) loading on a human capital latent factor and 4 items (e.g., “share information and learn from one another”, “apply knowledge from one area of the company to another”) loading on a social capital latent factor, to one where all 9 items loaded on a single common factor. We found that the 2-factor structure (χ^2 [df= 26] = 58.42; RMSEA= 0.08,

CFI = 0.97, NFI = 0.95) of the scale fit our data significantly better ($\Delta\chi^2$ [df= 1] = 58.02; $p = .001$) than a single-factor (χ^2 [df= 27] = 116.44; RMSEA= 0.12, CFI = 0.91, NFI = 0.89) solution, thereby confirming that, as expected, these items were measuring two different – through correlated – constructs. Next, we established that the internal consistency of the items loading on these factors were high (Cronbach Alpha of $\alpha = 0.87$ for human capital, and $\alpha = 0.83$ for social capital).

5.2.3. *Organizational performance*

We employed a measure of economic performance common in management literature, sales growth or change in sales (e.g., Batt, 2002), which we measured as the difference in total sales between the current fiscal year of the survey and the previous fiscal year (i.e., the time period for which the leadership development practices were reported), log transformed to create a uniform distribution. Sales growth is considered an important performance outcome for organizations in high-growth economies like India.

5.2.4. *Control variables*

We controlled for a number of factors that may plausibly be correlated with LDPs, our mediator variables, and the dependent variable, including: organization size (number of full time equivalent employees), since sales revenue and the use of HRM practices both tend to increase with size (e.g., Datta et al. 2005; Guthrie, 2001), service intensity (percentage of sales generated through services), since industry can affect the relationship between management practices and organizational performance (e.g., Datta et al. 2005; Combs et al., 2006), business strategy (“We follow an overall strategy that emphasizes a lower cost structure and or charging lower prices than our competitor”), which has been demonstrated to affect the management practices/organizational performance relationship (e.g., Chadwick, et al., 2013), and a composite of three HRM

practices derived from the high performance work systems scale (Datta, et al. 2005). These items assessed the percentage of employees covered by the following three HRM practices: employment testing, performance appraisal, and compensation partially contingent on group performance ($\alpha = 0.65$).

6. Results

Descriptive statistics and correlations between the variables in the study are presented in Table 2. We tested the hypotheses using structural equations modeling (SEM) implemented in AMOS 22.0 (Arbuckle, 2015). Differentiation and integration LDP's were operationalized as latent variables with six manifest indicators (scale items) each. Similarly, human capital and social capital were operationalized as latent variables with five and four manifest indicators each. The two LDP bundles were allowed to covary, and so were human capital and social capital. Organization size, service intensity, organizational business strategy, and HRM practices were utilized as controls across all relationships in the model.

 Insert Figure 1 about here

Consistent with Hypothesis 1, differentiation LDP was positively associated with human capital ($B [SE] = 0.44 [0.12]; p = 0.001$) while integration LDP was positively associated with social capital ($B [SE] = 0.35 [0.14]; p = 0.01$). Consistent with our expectations, the relationships between differentiation LDP and social capital ($B [SE] = 0.25 [0.14]; p = 0.07$) and integration LDP and human capital ($B [SE] = 0.10 [0.11]; p = 0.38$) were both non-significant by conventional standards (though the relationship between differentiation LDP and social capital is close to the $p = 0.05$ standard.) Thus, we found support for Hypothesis 1 and for Hypothesis 2, which predicted that differentiation leadership development practices would be stronger determinants of

human capital than integration leadership development practices, while integration leadership development practices would be stronger determinants of human capital than differentiation leadership development practices.

Further, the path from human capital to sales growth was statistically significant ($B [SE] = .07[.03]$; $p = 0.04$; $R^2 = 0.22$), social capital did not predict this outcome ($B [SE] = -.04[.03]$; $p = 0.19$). This model, depicted in Figure 1 ($\chi^2 [277] = 435.40$, $p = 0.001$; $RMSEA = 0.05$; $CFI = 0.93$; $PCFI = 0.73$; $ECVI = 2.86$), demonstrated overall good fit with the data and was a significantly superior fit with the data ($\Delta\chi^2 [4] = 104.39$, $p = 0.001$) than a model without mediation. That is, the latter model was where the paths from the LDP bundles and human capital and social capital, and from these variables to sales growth, were constrained to zero, while the paths from the LDP bundles to sales growth were left unconstrained ($\chi^2 [281] = 539.79$, $p = 0.001$; $RMSEA = 0.06$; $CFI = 0.88$; $PCFI = 0.71$; $ECVI = 3.30$).

Before testing the mediation hypotheses (Hypotheses 3 and 4), we examined the significance of the paths from human capital and social capital to sales growth, noting that the latter path coefficient was not significant ($p = 0.22$). Therefore, we tested the significance of only one of the two hypothesized mediated relationships, i.e., differentiation LDP \rightarrow human capital \rightarrow sales growth utilizing the bootstrapping approach (Shrout & Bolger, 2002) with the Bias Corrected (BC) percentile method (Mooney & Duval, 1993) drawing 1,000 random (with replacement) bootstrap samples of the observations. The results of bootstrapping revealed that the relationship between differentiation LDPs and change in sales was significantly mediated by human capital ($B [SE] = .047 [.033]$, 95% CI: .002 to .138, $\beta = 0.05$; $p = 0.01$). Thus, we found partial support for Hypothesis 3 in that human capital mediated the relationship between differentiation

LDP and sales growth, while social capital did not significantly mediate this relationship. Additionally, neither mediated path from integration LDP to sales growth was significant. Thus we did not find support for Hypothesis 4.

7. Discussion

In this study, we found significant relationships between two related but distinct bundles of LDPs, differentiation LDPs and integration LDPs, and two forms of organization level intangible assets, human capital and social capital. Specifically, we found that differentiation LDPs such as training, coaching, mentoring, and assessment centers aimed at developing the individual skills and capabilities of leaders were significantly related to human capital but not as strongly or as significantly related to social capital. On the other hand, integration LDPs focusing on providing leaders with a broad based understanding of the organization and utilizing social and relational networks (e.g., job rotation, action learning, strategic challenges) are related to social capital, but not human capital. Also, as predicted, we found that human capital mediated the relationship between differentiation LDPs and sales growth. However, contrary to our expectations, social capital did not mediate this relationship, and integration LDPs were not significantly related to sales growth.

Our study and its findings contribute to management literature in three ways. First, in contrast with previous work in the leadership development domain (cf. Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014), we operationalized LDPs at the organization level and examined their influence on organization level performance. This can be seen both as a contribution to leadership development research and as an extension of the large body of literature linking HRM practices to organizational performance (e.g., Combs, et al., 2006). Second, our results demonstrate that LDPs can be aggregated into bundles consistent with the arguments in Day (2000), as

opposed to being treated as separate individual LDPs. Third, we provided an empirical validation of the proposition that investments in leadership development are positively related to human capital and social capital (cf. Day, 2000), albeit at the organization level of analysis, and that these assets, particularly human capital, can in turn be positively linked with organizational performance. Thus, we demonstrated that these intangible assets are important components of the causal mechanisms that link bundles of LDPs with organizational performance.

Contrary to our expectations, we did not find a significant relationship between social capital and sales growth. This might be because, unlike human capital, social capital cannot be easily mobilized toward economic ends. For instance, it takes time to convert a cross-departmental partnership into actions that lead the organization to sell more products; or for relationships to materialize into work-related coordination and performance. Thus, it's possible that the effects of social capital on financial performance are best observed over long periods of time. Additionally, it is possible that a measure of social capital that decomposes the construct into its three components – cognitive, structural, and relational (Kirsch, Ko, & Haney, 2010) might be more effective in surfacing the nuances of how social capital influences organizational performance. For instance, it is possible that integration LDPs help leaders develop skills in working well with people with different backgrounds and perspectives, which might help the organization during challenging situations requiring a coordinated and coherent response. However, cognitive social capital, which refers to shared perspectives and interpretations might be more useful for organizations pursuing a set strategy, such as that of high growth.

This study responds to recent calls for rigorous studies of management phenomena in emerging economies like India (e.g., Budhwar & Varma, 2010), by demonstrating that within

these dynamic contexts, leadership development can help build organizational capability and influence organizational performance. While culture-specific leadership styles have been found to make incremental contributions to subordinate performance (Palrecha, Spangler, & Yammarino, 2012), the general evidence appears to suggest a lot more uniformity or convergence in managers' leadership development needs across cultures (Gentry, Eckert, Munusamy, Stawiski, & Martin, 2014). In an extensive study of leadership development participant needs across seven countries including India, those authors found that "some competencies such as Leading Employees or Resourcefulness or Change Management tended to be chosen more often by managers across countries as competencies needed to succeed in organizations than others . . . while the overall frequency of being chosen as important or not did differ across countries. . . effect sizes of these differences were rather small in nature (Gentry et al., 2014; p. 93)". Thus, it could be argued that the effects of differentiation and integration LDPs could be generalized to organizations across cultural contexts, with the caveat that these differences need to be explicitly tested in future studies.

7.1. Limitations

As with any management research, the current study has several limitations. First, while we asked our respondents to report on the LDPs in the previous year and the performance outcomes in the current year, our study's design itself can be considered cross-sectional. As Crook and his associates (2011) have demonstrated, longitudinal studies typically provide bigger effect sizes for human capital compared to cross-sectional studies because it takes a longer time for these effects to manifest on performance outcomes. Our estimated effects of human capital (and indeed, social capital) may, therefore, be underestimates of the long term influence of these variables.

Perhaps more importantly, it is possible that respondents in organizations with good performance were more likely to report greater use of LDPs, either because they make conscious/subconscious linkages between these variables, or because sample organizations with good performance were more likely to adopt LDPs. However, such linkages do not explain how the human capital and social capital measures could fully mediate the relationships between the two LDPs bundles and the dependent variables. Furthermore, while we attempted to obtain multiple responses from the organizations in our sample to rule out common source variance, we were not successful in having different respondents provide us with different pieces of information about the organization's leadership development practices and outcomes. We encourage other researchers to continue attempting various procedures to obtain such multiple responses.

Some limitations of the current paper point to opportunities for future research. For instance, a mediating variable that could be added to the model depicted in Figure 1 is the organization's stock of leadership skills, which presumably lie in between the LDP bundles and human capital/social capital. It could also be a helpful enhancement to add items regarding firm specificity to the human capital measure, which may strengthen its relationship with organizational performance, and differentiating between managerial and line employees' human capital. Further, because of the way the sample was gathered, our study examined LDP variance within the category of organizations that are conducting leadership development, but perhaps the relationships that we estimated here would be of greater significance when compared to organizations that do not conduct leadership development at all. Additionally, although this study found significant relationships with sales growth, future research that employs a wider range of organizational outcomes could explore the robustness and limitations of LDPs' relationships with organizational performance.

Another limitation pointing to future research opportunities lies with the controls for HRM practices in this study. We employed a limited set of HRM practices from the areas of selection, performance appraisal, and compensation in this study to rule out influences within the organization that did not significantly overlap with training and development. Future studies might utilize more comprehensive lists of strategic HRM practices. Additionally, we note that some of the LDPs listed in Table 1 are similar to common components of HR systems examined in SHRM research (though our practices were targeted towards a particular goal, leadership development, and not the more general HRM practices on these topics that are used in SHRM). Thus, there may be overlap between the LDPs that we examined here and other strategically valuable HRM practices, and future research that more comprehensively captures SHRM constructs could better parse those differences than we could in this study. In fact, our significant results in this study imply that LDPs might plausibly be added to the set of HRM practices that SHRM scholars are commonly employing in their research.

Finally, future studies should explore the differences between LDPs implemented across various leadership roles and types. In the current study, we conceptualized LDPs in terms of capabilities without explicitly considering potential differences in the groups receiving leadership development.¹ We recommend that future studies focusing on the differences in efficacy between LDPs focused on senior leaders, middle managers, and first-level supervisors. For instance, are integration bundles more effective for senior leaders if they include a wide variety of external networking and interaction between leaders from other firms? Similarly, are action learning projects involving coordinated work across functions or business divisions more beneficial for preparing middle managers to influence organizational outcomes, than for senior leaders or first-line

¹ We thank an anonymous Journal of Business Research reviewer for raising this point.

supervisors? (Note that Avolio et al (2009) found that the impact of LDPs on individual managers' performance is higher for first line managers than it is for senior managers.)

8. Conclusion

In conclusion, this study furthers the leadership development literature by demonstrating significant positive relationships between LDPs bundles, intangible assets, and organizational performance within the context of an emerging economy. Thus, this study takes an important step toward establishing the measurable value of leadership development for organizations as well as for the development of individual leaders.

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Table 1
Descriptive Data for Items in the Leadership Development Practices Scale

	<u>Mean*</u>	<u>SD</u>	<u>% Used to a Large and Very Large Extent</u>
<i>Differentiation LDPs Bundle</i>			
Internal Leadership Training	2.95	1.14	32.7
External Leadership Training	2.87	1.12	29.1
Assessment or Development Centers	2.69	1.19	26.0
Formal Mentoring	2.64	1.13	22.4
360° Feedback	2.66	1.26	30.0
Formal Coaching	2.20	1.16	16.2
<i>Integration LDPs Bundle</i>			
Job Rotation	2.61	1.09	21.0
Stretch Assignments	2.93	1.07	31.4
Network Events/ Off-sites	2.84	1.14	30.1
Action Learning	2.73	1.12	26.0
Volunteering/Service Learning	2.25	1.11	13.0
Strategic challenges	2.62	1.09	20.1

* 5 point Likert scale ranging from 1 'not all used', to 5 'used to a very large extent'. n=223

Table 2
Descriptive Statistics and Correlations for Key Variables in the Analysis

	M	SD	1	2	3	4	5	6	7	8
1. Size	11335	32897	-							
2. Service %	57	40	.04	-						
3. HRM Practices	51	26	.20**	.14*	-					
4. Business Strategy	3.30	1.00	.12	.07	.16*	-				
5. Differentiation LDPs	2.67	.81	.15*	.06	.43**	.22**	.84			
6. Integration LDPs	2.66	.83	.12	.08	.33**	.22**	.68**	.85		
7. Human Capital	3.70	.68	.14*	.03	.39**	.18**	.53**	.50**	.87	
8. Social Capital	3.58	.74	.12	.10	.30**	.21**	.46**	.48**	.67**	.83
9. Change in Sales (Log)	24.04	.12	.29**	-.14	.16	.07	.19*	.12	.18*	.06

*p ≤ .05; **p ≤ .01

Note: n=223. Cronbach alpha values **in bold** on the diagonal

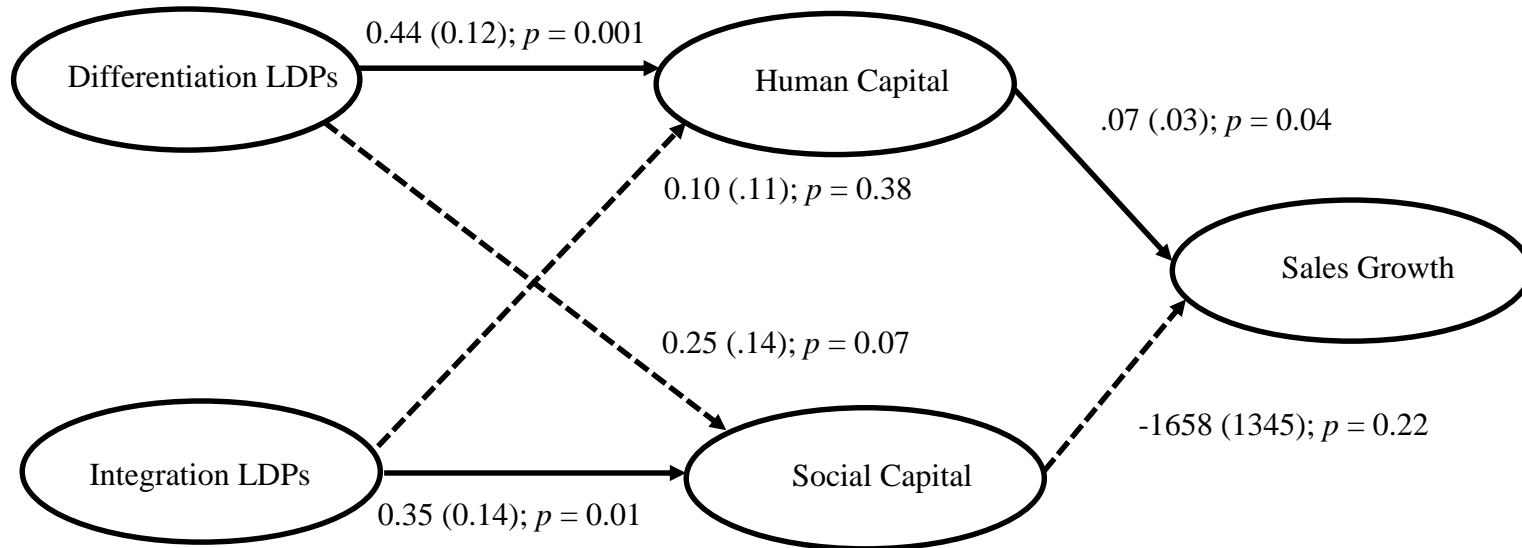


Fig. 1. Structural equations model of the relationship between LDPs, mediating variables, and organizational performance

Notes:

1. All path coefficients are unstandardized (standard errors in parentheses).
2. Indicators, covariances, controls, and non-significant paths are not shown for simplicity of presentation.
3. Controls: Size, Service %, Strategy, HRM Practices
4. Model Fit Statistics: Chi Square [277] = 435.40, $p = .001$; RMSEA = .05; CFI = .93; PCFI = .73; ECVI = 2.86