

ARTICLES FOR FACULTY MEMBERS

TALENT MANAGEMENT AND JOB PERFORMANCE

Title/Author	A meta-analysis of the interactive, additive, and relative effects of cognitive ability and motivation on performance / Van Iddekinge, C. H., Aguinis, H., Mackey, J. D., & DeOrtensiis, P. S.
Source	<i>Journal of Management</i> Volume 44 Issue 1 (Jan 2018) Pages 249-279 https://doi.org/10.1177/0149206317702220 (Database: http://www.hermanaguinis.com/)

Title/Author	Driving employee performance through talent management / Wadhwa, S., & Tripathi, R.
Source	<i>International Journal of Environment, Workplace and Employment</i> Volume 4 No 4 (July 2018) Pages 288-313 https://doi.org/10.1504/IJEW.2018.093412 (Database: https://fardapaper.ir/)

Title/Author	Exploring millennial psychological contract expectations across talent segments / Pant, J.J., Venkateswaran, V.
Source	<i>Employee Relations</i> Volume 41 Issue 4 (June 2019) Pages 773-792 https://doi.org/10.1108/ER-04-2018-0096 (Database: Emerald Insight)

ARTICLES FOR FACULTY MEMBERS

TALENT MANAGEMENT AND JOB PERFORMANCE

Title/Author	Investigate the effects of behavioral factors on job performance: a conceptual paper / Magableh, A. N., Omar, K., & Al-Tarawneh, J. T.
Source	<i>Studies in Computational Intelligence</i> Volume 974 (May 2021) Pages 345-358 https://doi.org/10.1007/978-3-030-73057-4_27 (Database: ResearchGate)

Title/Author	Self-determination theory in human resource development: new directions and practical considerations / Rigby, C. S., & Ryan, R. M.
Source	<i>Advances in Developing Human Resources</i> Volume 20 Issue 2 (May 2018) Pages 133–147 https://doi.org/10.1177/1523422318756954 (Database: https://institute.welcoa.org/)

Title/Author	Talent management practices and job performance of librarians in university libraries in Nigeria / Omotunde, O. I., & Alegbeleye, G. O.
Source	<i>The Journal of Academic Librarianship</i> Volume 47 Issue 2 (March 2021) 102319 https://doi.org/10.1016/J.ACALIB.2021.102319 (Database: ScienceDirect)

ARTICLES FOR FACULTY MEMBERS

TALENT MANAGEMENT AND JOB PERFORMANCE

Title/Author	The impact on employees' job performance of exercising self-directed learning within personal development plan practice / Lejeune, C., Beausaert, S., & Raemdonck, I.
Source	<i>International Journal of Human Resource Management</i> Volume 32, No.5 (Nov 2018) Pages 1086-1112 https://doi.org/10.1080/09585192.2018.1510848 (Database: Taylor & Francis Online)

Title/Author	The relationship between talent management, job satisfaction and voluntary turnover intentions of employees in a selected government institution / Barkhuizen, N. E., & Gumedé, B.
Source	<i>SA Journal of Human Resource Management</i> Volume 19 (Feb 2021) a1396 Pages 1-12 https://doi.org/10.4102/SAJHRM.V19I0.1396 (Database: AOSIS publishing https://sajhrm.co.za/)

Title/Author	The role of high-performance work system and human capital in enhancing job performance / Imran, R., Atiya, T.M.S.
Source	<i>World Journal of Entrepreneurship, Management and Sustainable Development</i> Volume 16 Issue 3 (June 2020) Pages 195-206 https://doi.org/10.1108/WJEMSD-09-2019-0074 (Database: Emerald Insight)

ARTICLES FOR FACULTY MEMBERS

TALENT MANAGEMENT AND JOB PERFORMANCE

Title/Author	A meta-analysis of the interactive, additive, and relative effects of cognitive ability and motivation on performance / Van Iddekinge, C. H., Aguinis, H., Mackey, J. D., & DeOrtentiis, P. S.
Source	<i>Journal of Management</i> Volume 44 Issue 1 (Jan 2018) Pages 249-279 https://doi.org/10.1177/0149206317702220 (Database: http://www.hermanaguinis.com/)



Check for updates

Journal of Management
Vol. 44 No. 1, January 2018 249–279
DOI: 10.1177/0149206317702220
© The Author(s) 2017
Reprints and permissions:
sagepub.com/journalsPermissions.nav

A Meta-Analysis of the Interactive, Additive, and Relative Effects of Cognitive Ability and Motivation on Performance

Chad H. Van Iddekinge

Florida State University

Herman Aguinis

George Washington University

Jeremy D. Mackey

Auburn University

Philip S. DeDenttiis

Michigan State University

We tested the longstanding belief that performance is a function of the interaction between cognitive ability and motivation. Using raw data or values obtained from primary study authors as input ($k = 40$ to 55 ; $N = 8,507$ to $11,283$), we used meta-analysis to assess the strength and consistency of the multiplicative effects of ability and motivation on performance. A triangulation of evidence based on several types of analyses revealed that the effects of ability and motivation on performance are additive rather than multiplicative. For example, the additive effects of ability and motivation accounted for about 91% of the explained variance in job performance, whereas the ability-motivation interaction accounted for only about 9% of the explained variance. In addition, when there was an interaction, it did not consistently reflect the predicted form (i.e., a stronger ability-performance relation when motivation is higher). Other key findings

Acknowledgments: This article was accepted under the editorship of Patrick M. Wright. A previous version of this paper was presented at the meetings of the Academy of Management, Philadelphia, 2014. We thank Brian Hoffman and two anonymous reviewers for their useful and constructive feedback, which allowed us to improve our manuscript substantially. We also thank Huy Le for his guidance with the range restriction corrections. In addition, we thank Fred Oswald for his help with the regression analysis. Finally, we are grateful to the many authors who shared their data, ran analyses we requested, and answered our questions about their research. This study would not have been possible without their willingness to help us.

Supplemental material for this article is available with the manuscript on the JOM website.

Corresponding author: Chad H. Van Iddekinge, Department of Management, College of Business, Florida State University, Tallahassee, FL 32306-1110, USA.

E-mail: cvanidde@business.fsu.edu

include that ability was relatively more important to training performance and to performance on work-related tasks in laboratory studies, whereas ability and motivation were similarly important to job performance. In addition, statelike measures of motivation were better predictors of performance than were traitlike measures. These findings have implications for theories about predictors of performance, state versus trait motivation, and maximal versus typical performance. They also have implications for talent management practices concerned with human capital acquisition and the prediction of employee performance.

Keywords: ability; motivation; performance; interactions; relative importance; meta-analysis

Individual performance is one of the most central and frequently studied constructs in management and related fields (Campbell & Wiernik, 2015; Cascio & Aguinis, 2008; Dalal, Bhave, & Fiset, 2014). Conceptual models and considerable empirical evidence suggest that two key determinants of performance are cognitive ability and motivation. Cognitive ability is the capacity to mentally process, understand, and learn information (Hunter & Schmidt, 1996). Ability relates to performance primarily through job knowledge, such that high-ability workers tend to demonstrate higher performance because they are better able to acquire and use job-relevant knowledge compared to those who possess lower levels of ability (F. L. Schmidt, Hunter, & Outerbridge, 1986).

Motivation is "an unobservable force that directs, energizes, and sustains behavior" (Diefendorff & Chandler, 2011: 66; see also Kanfer, Chen, & Pritchard, 2008; Mitchell & Daniels, 2003). Motivation relates to performance by influencing the direction, intensity, and persistence of effort (Blau, 1993; Campbell, 1990; Kanfer, 1990). Specifically, motivation is reflected in the choices workers make about whether to expend effort, the level of effort they expend, and how much they persist in that level of effort (Campbell, 1990). Furthermore, these choices can be enduring, such as individuals who generally work with great effort, or situation specific, such as workers who devote effort toward a specific task or in a particular context.

A longstanding belief exists that ability and motivation interact to affect performance, such that the relation between ability (motivation) and performance depends on, or is moderated by, motivation (ability; Maier, 1955; Murphy & Russell, in press; Vroom, 1964). Stated more formally, $\text{Performance} = f(\text{Ability} \times \text{Motivation})$. This *multiplicative model* predicts that when individuals possess little or no motivation, they will demonstrate similarly low levels of performance regardless of their ability level. However, as individuals begin to exert some level of effort, differences in ability can play a role, and the relation between ability and performance becomes positive, such that high-ability individuals will outperform low-ability individuals. Thus, the multiplicative model is noncompensatory in that performance is predicted to be low whenever ability *or* motivation is low. This is different from an *additive model* in which the effects of ability and motivation on performance are independent and compensatory (Mount, Barrick, & Strauss, 1999; Sackett, Gruys, & Ellingson, 1998). For instance, in an additive model, individuals' level of motivation would not affect the relation between ability and performance. Moreover, individuals who possess a lower level of motivation could compensate for this deficit to some extent by demonstrating a higher level of ability.

The belief in the veracity of the multiplicative model seems justified given that many well-established theories predict or assume an interactive relation between ability and motivation. For example, expectancy theory posits that “the effects of ability and motivation on performance are not additive but interactive” (Vroom, 1964: 203). Another example is goal-setting theory (Locke & Latham, 1990), which predicts that ability and goals (as a motivating factor) interact to affect performance. Specifically, the effect of ability on performance is predicted to be stronger when people set difficult goals than when they set easy goals. Similarly, Lawler and Porter’s (1967) model of managerial attitudes and performance posits that ability interacts with effort to affect performance. The idea that ability and motivation have an interactive effect on performance also is evident within theory and models on the antecedents and determinants of job performance. For example, Campbell’s well-known theory (e.g., McCloy, Campbell, & Cudeck, 1994) predicts that declarative knowledge and procedural knowledge and skills (of which ability is an immediate precursor) interact with motivation to affect performance. Finally, propositions related to the multiplicative model can be found in theory and research on resource allocation (e.g., Hobfoll, 1989; Kanfer & Ackerman, 1989) that consider variables such as ability to be resources people can deploy to achieve a desired outcome.

In short, various theoretical bases exist to support the multiplicative model. Furthermore, researchers have suggested the idea that $\text{Performance} = f(\text{Ability} \times \text{Motivation})$ is “empirically, logically, and psychologically convincing” (Porter & Lawler, 1968: 33) and have referred to it as a “well-accepted truism” (Bell & Kozlowski, 2002b: 497). This idea can be found in textbooks widely used in undergraduate, graduate, and executive courses (e.g., Bauer & Erdogan, 2010; Gómez-Mejía, Balkin, & Cardy, 2007; Landy & Conte, 2004). There even is anecdotal evidence that beliefs in the multiplicative model influence the advice consultants provide organizations (Cerasoli, 2014).

Despite the strong theoretical and logical basis for the multiplicative model, the number of direct tests of this model is surprisingly small. In addition, of the studies that have been conducted, some have reported evidence of an ability-motivation interaction on performance (e.g., Fleishman, 1958; French, 1957; Perry, Hunter, Witt, & Harris, 2010), whereas others have failed to find evidence of an interaction effect (e.g., Dachler & Mobley, 1973; Gavin, 1970; Terborg, 1977). Furthermore, some studies have found evidence of an interaction, but its form was not consistent with theory (e.g., Kanfer & Ackerman, 1989; Latham, Seijts, & Crim, 2008; Wright, Kacmar, McMahan, & Deleeuw, 1995). A related research stream has assessed whether ability interacts with personality variables to predict performance (e.g., Mount et al., 1999; Sackett et al., 1998).

Adding to the lack of clarity regarding the validity of the multiplicative model, the designs and measures used in many studies make it difficult to draw clear conclusions. For example, some studies (e.g., Fleishman, 1958) have assessed ability using measures with questionable construct validity, such as initial performance on an experimental task, self-ratings, or tenure. Other studies (e.g., Hollenbeck, Brief, Whitener, & Pauli, 1988) have measured motivation using variables that may not directly capture the underlying construct, such as self-esteem, integrity, or broad measures of conscientiousness. Other empirical work (e.g., Terborg, 1977) has included variables (i.e., statistical controls) in addition to ability, motivation, and performance, which complicates the interpretation and comparison of findings across studies (Bernerth & Aguinis, 2016). Finally, most research has tested the multiplicative hypothesis

using significance tests of incremental variance explained. Thus, low or differential levels of statistical power, which are known problems in research that examines interaction effects (e.g., Aguinis, Beatty, Boik, & Pierce, 2005; Murphy & Russell, *in press*), often make it difficult to draw conclusions from tests of the multiplicative model.

Present Study

We conducted the present study to provide a comprehensive test of a longstanding hypothesis regarding how two of the most central and widely studied individual differences in management and related fields—ability and motivation—relate to performance. To do so, we engaged in a multistage data collection process that began by identifying published and unpublished studies that included measures of ability, motivation, and performance. Next, we requested raw data from the original authors, which we used to calculate the multiplicative effects of ability and motivation on performance for each study. We then used meta-analysis to assess the level and consistency of support for the multiplicative model across the primary studies. We also used meta-analysis to assess the relative importance of ability versus motivation for explaining variance in performance. Taken together, this methodology enabled us to test the multiplicative hypothesis in a way that overcomes many of the challenges and limitations of previous research.

Our study makes several contributions. First, the findings contribute to theory by testing a hypothesis that can be found in several highly influential theories. Although previous research has tested the Ability \times Motivation hypothesis, the findings have been inconsistent and have failed to provide clear conclusions regarding the level of support for this model. By focusing on studies whose designs and measures reflect the constructs of interest, collecting previously unreported data obtained directly from authors, and cumulating results across a large number of studies, the present meta-analysis provides a direct test of the interactive effects of ability and motivation on performance.

Second, we extend existing research by investigating a number of potential boundary conditions of the multiplicative model. For example, it has been suggested that support for this model may be stronger in lab settings than in field settings and stronger for more complex jobs or tasks than for less complex ones (e.g., Sackett et al., 1998; Terborg, 1977). We test both of these possibilities. Researchers also have noted that motivation can be enduring (i.e., a trait) or situation specific (i.e., a state; e.g., Chen, Gully, Whiteman, & Kilcullen, 2000; Kanfer & Heggestad, 1997). We examine whether the trait versus state motivation affects support for the multiplicative model. In addition, we explore several other factors that could affect support for the multiplicative model, including publication status (published vs. unpublished studies), type of organization (civilian vs. military), study sample size, performance dimension (task vs. contextual performance), and the manner with which performance is operationalized (objective vs. subjective measures). An examination of these factors enabled us to explore situations when the multiplicative effects may be stronger or weaker, as well as to provide information to guide future research and make context-specific recommendations for practice.

Third, the present study also improves our understanding of the relative importance of ability and motivation. Although many primary and meta-analytic studies have examined how ability relates to performance *or* how motivation relates to performance, surprisingly few

studies have directly compared the importance of these two predictors, particularly based on data from the same set of primary studies. Our results shed light on whether ability or motivation is relatively more important to performance in general, as well as in different contexts (e.g., during training vs. on the job). Furthermore, to our knowledge, we provide the first meta-analytic test of the trait versus state motivation distinction as it relates to the prediction of performance. Our findings regarding this distinction contribute to the literature on the prediction of performance, as well as to the vast body of work on motivation, by highlighting which operationalization of motivation is the best predictor of performance and when.

Finally, the present findings inform how organizations should use data on ability and motivation to facilitate staffing decisions. For example, if ability and motivation combine multiplicatively, this suggests that applicants may need to possess a high level of both variables to perform well on the job. This, in turn, could reduce the pool of potentially acceptable applicants. Conversely, if ability and motivation combine additively rather than multiplicatively to influence performance, it may be possible to select job applicants who possess a high level of one variable but a more moderate level of the other. The results also have implications for other human resources practices that attempt to affect, or are influenced by, ability and motivation, including training and incentive practices.

Hypotheses and Research Questions

Tests of the Multiplicative Model

As we mentioned, propositions concerning the multiplicative model can be found in several theories and models of job performance. The idea that ability and motivation interact to influence performance also has logical appeal. At the same time, empirical evidence for the Performance = f (Ability \times Motivation) hypothesis is inconclusive and often difficult to interpret. As such, it was difficult to hypothesize what we expected to find. We did anticipate that any support we might find for the multiplicative model would be modest. For one, the likely strong main effects of ability and motivation may make it difficult for the interaction between the two variables to explain a large amount of additional variance in performance (Murphy & Russell, *in press*). Furthermore, the incremental contribution of interaction effects beyond first-order (i.e., “main”) effects tends to be quite small (Aguinis et al., 2005).

Thus, the first goal of our study was to assess the level and consistency of support for the multiplicative model. The novel methodological approach we used enabled us to test the multiplicative hypothesis in a more valid and comprehensive manner than past research. First, we focused on studies that avoided the design and measurement limitations noted above (e.g., use of proxies to measure ability and/or motivation). Second, we obtained raw data or analysis output from the original authors. This was important because it helped to ensure all the data were treated in the same way and analyzed using a consistent approach. Third, in contrast to previous research that has tended to focus on the statistical significance of ability-motivation interactions, we focused on effect sizes. Specifically, we examined support for the multiplicative model by calculating the amount of change in the multiple correlation coefficient (R) between the additive and multiplicative models, as well as by assessing the relative importance of ability, motivation, and the ability-motivation interaction for explaining variance in performance.

In addition, prior studies that have found evidence of an ability-motivation interaction have not always interpreted the nature of the interaction. To address this omission, we calculated simple slopes for the ability-performance relationship across different levels of motivation. Fourth, we then used meta-analysis to assess the mean and variability of the multiplicative effect across studies, as well as the consistency of the magnitude and direction of differences between the simple slopes. This methodology avoids common problems in testing interaction effects, including low statistical power (i.e., we focused on effect sizes based on dozens of studies and thousands of observations) and low reliability of the product term (which we corrected for in our analyses). Finally, cumulating effects across primary studies also allowed us to investigate potential boundary conditions of the multiplicative model, as well as factors that may moderate the relative importance of ability and motivation to performance. We describe these boundary conditions next.

Boundary Conditions of the Multiplicative and Relative Effects of Ability and Motivation

Conceptualization of motivation. Work motivation is a broad construct that has been defined and measured in many ways. We reviewed existing definitions of work motivation and found that most of them share two common elements. First, they refer to “unobservable forces” that energize behavior. The forces that energize behavior are innumerable and originate both within and outside workers. For example, Diefendorff and Chandler noted that “motivation for a given activity at a particular point in time may be shaped by an infinite number of factors, including biological processes, needs, values, group norms, personality, emotions, job characteristics, cultural context, and many others” (2011: 66). Moreover, the factors that motivate workers are personal, and different workers have different needs and think different features of the work environment are important (Mitchell & Daniels, 2003).

Second, most definitions refer to the idea that work motivation directly affects the direction, intensity, and duration or persistence of effort. Motivation is reflected in the choices workers make about whether to expend effort, the level of effort they expend, and how much they persist in that level of effort (Campbell, 1990). Furthermore, these choices can be enduring, such as employees who generally exhibit high levels of effort, or situation specific, such as employees who devote effort toward a specific task. Following previous definitions, we define work motivation as an unobservable force that initiates work-related behavior and determines its direction, intensity, and duration.

Several theories and areas of research distinguish between traits and states (Steyer, Schmitt, & Eid, 1999). For example, researchers have identified differences between trait and state affect (e.g., D. Watson, Clark, & Tellegen, 1988), anger (e.g., Gibson & Callister, 2010), anxiety (Speilberger, Sydeman, Owen, & Marsh, 1999), and self-efficacy (Bandura, 1997). Similarly, motivation can be enduring (i.e., a trait) or situation specific (i.e., a state; e.g., Chen et al., 2000; Kanfer & Heggestad, 1997). Trait motivation reflects a relatively stable tendency to exert effort and demonstrate persistence on work tasks. Measures such as achievement motivation, achievement striving, and work drive are thought to capture trait motivation (Chen, Gully, & Eden, 2004; Kanfer & Heggestad, 1997; Perry et al., 2010). In contrast, state motivation reflects workers’ level of motivation at a specific moment in time. Measures of state motivation typically assess the amount of time, effort, or attention devoted

to a task (Chen et al., 2004). Goal-related measures also are thought to capture state motivation because goals help direct workers' effort toward specific tasks (Katerberg & Blau, 1983).

Results of previous research suggest that the way motivation is conceptualized may affect support for the multiplicative model. For example, Hirschfeld, Lawson, and Mossholder (2004) found that the ability-motivation interaction was stronger when the motivation measure was more task specific (i.e., academic motivation) than when it was more general (i.e., achievement motivation). Similarly, Perry et al. (2010) found greater support for the multiplicative model with a measure that focused more directly on motivation (i.e., achievement striving) than for measures that assessed less relevant constructs (e.g., other facets of conscientiousness). However, we are not aware of a theoretical basis to hypothesize that support for the multiplicative model will be stronger or weaker for any specific conceptualization of motivation. Thus, we pose the following research question:

Research Question 1: Does the way motivation is conceptualized (i.e., trait vs. state) affect the strength of the multiplicative effect of ability and motivation on performance?

We also examine whether the trait versus state distinction affects the relative importance of motivation to performance. Various theories and models propose that distal, traitlike motivational variables affect outcomes such as performance via more proximal, statelike variables. For example, cognitive choice theories of motivation (e.g., goal-setting theory, expectancy theory) propose that distal variables such as achievement motivation affect performance primarily by influencing more proximal variables such as goal choice and intended effort (Kanfer, 1990). In support of this idea, Phillips and Gully (1997) found evidence that traitlike variables such as locus of control and need for achievement relate to academic performance through statelike variables such as specific self-efficacy and self-set goals. Similarly, Chen et al. (2000) found that statelike variables such as goals and state anxiety were better predictors of academic performance than traitlike variables such as general self-efficacy and goal orientation.

Thus, theory and prior research suggest that statelike motivation will tend to have a strong, direct effect on outcomes such as performance. In contrast, traitlike motivation is thought to affect outcomes indirectly through their influence on more proximal variables and, thus, have a weaker effect on the outcomes. This leads to our first hypothesis:

Hypothesis 1: The relative importance of motivation to performance will be stronger for state motivation compared to trait motivation.

Study setting. Researchers have suggested that interaction effects are more likely to be found in laboratory settings than field settings (e.g., McClelland & Judd, 1993). The rationale is that laboratory studies enable researchers to measure variables more precisely and to control for extraneous sources of variance better than in field studies and thereby maximize the ability to detect interactions. Relative to field studies, laboratory studies also are more likely to use experimental designs and manipulations that enable researchers to induce a range of motivational levels. In contrast, motivation may be less varied in field settings where extremely low levels of motivation may not be present (i.e., because all employees need some minimum level of motivation to perform their jobs) and/or where extremely high levels of motivation may not be present over longer periods. Similarly, laboratory studies are

less likely to include variables with nonoptimal distributions (e.g., low variance in measures of performance), which can lower the size of the parameter estimate for the interaction effect and statistical power to detect it (Aguinis, Edwards, & Bradley, *in press*). In sum, we hypothesize the following:

Hypothesis 2: The multiplicative effects of ability and motivation on performance will be stronger in laboratory studies than in field studies.

Study setting also may serve as a boundary condition for the relative importance of ability versus motivation. Laboratory studies typically are short-term and focus more on maximal performance than on typical performance. This is relevant because ability tends to be a better predictor of maximal performance, whereas noncognitive variables tend to be better predictors of typical performance (e.g., Beus & Whitman, 2012; DuBois, Sackett, Zedeck, & Fogli, 1993). Similarly, criteria in training studies (e.g., training test scores) tend to assess knowledge acquisition, of which ability is a key antecedent (e.g., F. L. Schmidt et al., 1986). In contrast, motivation may be more constrained (i.e., to be relatively high) in laboratory and training settings. For example, many training contexts (e.g., new hire training) may represent strong situations (Mischel, 1973), such that trainees tend to be highly motivated to learn job-relevant knowledge and skills. This, in turn, may constrain variability in motivation and attenuate relations between motivation and performance. Thus, we propose the following hypothesis:

Hypothesis 3: Ability will be more important than motivation to training performance and to performance in laboratory studies designed to simulate job performance.

The relative importance of ability and motivation to job performance seems less certain. Previous research suggests that general mental ability is one of the best predictors of job performance, particularly task performance (F. L. Schmidt & Hunter, 1998). At the same time, motivation is thought to be a key determinant of performance (e.g., Campbell, McCloy, Oppler, & Sager, 1993), and certain motivation-related variables (e.g., goal setting, incentives) have been found to demonstrate moderate to strong relations with performance (e.g., Guzzo, Jette, & Katzell, 1985; Locke, Feren, McCaleb, Shaw, & Denny, 1980; Tubbs, 1986). Furthermore, in contrast to laboratory and training studies, job performance studies tend to use measures that focus more on typical performance, of which motivation may be a better predictor than ability. Therefore, we explore the following research question:

Research Question 2: Is ability or motivation more important to job performance?

Operationalization of performance. We also examined whether the manner in which the criterion is operationalized influences conclusions regarding the effects of ability and motivation on performance. Specifically, we expected that ability will be relatively more important than motivation when performance is measured objectively, whereas motivation will be more important when performance is measured subjectively. This expectation was based on two factors. First, construct relations tend to be stronger when measures are aligned on factors such as type and specificity of measurement (e.g., Hogan & Holland, 2003). Therefore, it is possible that ability—an objectively measured predictor—will better predict objective

performance measures, whereas motivation—a subjectively measured predictor—will better predict subjective performance measures. Second, objective performance measures (e.g., sales) tend to focus on task-related performance and, as noted, ability is thought to be a strong predictor of task performance. In contrast, subjective performance measures (e.g., supervisor ratings) tend to assess task performance, as well as nontask factors such as citizenship behaviors and counterproductive work behavior (CWB; Rotundo & Sackett, 2002). This is noteworthy because motivation-related variables are thought to predict nontask factors that often are considered in subjective performance measures. This leads us to hypothesize the following:

Hypothesis 4: Ability will be more important than motivation when performance is measured objectively, whereas motivation will be more important than ability when performance is measured subjectively.

Additional factors. In addition to the aforementioned boundary conditions for which we had specific hypotheses or research questions, we explored six other variables that could affect support for the multiplicative model. We examined these particular variables given past theoretical and empirical interest in each of them.

First, studies with statistically significant findings are, in some situations, more likely to be published than studies whose results are not significant (e.g., Dalton, Aguinis, Dalton, Bosco, & Pierce, 2012). Although most of the studies in our meta-analysis did not focus on the multiplicative model, we explored whether support for this model differed between published and unpublished studies. Second, type of organization (i.e., civilian vs. military) is a commonly reported potential moderator in meta-analyses, and we examined the possible influence of this variable as well. For example, perhaps the structured environment of military organizations constrains the influence of individual differences (and their interactions) on performance.

Third, as discussed, many studies do not have sufficient sample sizes (and, in turn, statistical power) to detect interaction effects (Aguinis et al., in press; Murphy & Russell, in press). Thus, we also explore the influence of study sample size on support for the multiplicative model. Fourth, ability-motivation interactions could be stronger for more complex jobs or tasks (Sackett et al., 1998; Terborg, 1977). In these situations, individual differences in ability are likely to have a large effect on performance; thus, employees' motivation to deploy their abilities may be particularly important. Therefore, we explore the potential role of job complexity.

Fifth, as noted, prior research suggests that ability tends to be a better predictor of task performance, whereas noncognitive variables tend to be better predictors of other dimensions of performance, such as contextual performance and CWB (e.g., Hattrup, O'Connell, & Wingate, 1998; LePine & Van Dyne, 2001; Mount, Oh, & Burns, 2008). We therefore explore whether support for the multiplicative model varies based on whether the criterion reflects task versus contextual performance. Finally, when two variables have strong bivariate or additive effects on an outcome, there may not be much "room" for the interaction between the variables to explain additional variance in the outcome (e.g., Murphy & Russell, in press). For this reason, we also explore whether relations between ability and performance and between motivation and performance affect the strength of the ability-motivation interaction on performance.

Method

Literature Search

We began by searching online and electronic databases, including ABI/INFORM Collection, Academic Source Complete, Business Source Complete, Education Resources Information Center (ERIC), Google Scholar, JSTOR, ProQuest Dissertations & Theses, PsycINFO, and Web of Science, for studies that included measures of ability, motivation, and performance. We used many combinations of key terms in an attempt to be as comprehensive as possible. For ability, we used the following search terms: *ability, aptitude, cognitive ability, competence, GMA* (i.e., general mental ability), *intelligence, IQ, and mental ability*. For motivation, we used the following terms: *achievement* (to capture *achievement striving, need for achievement*, and related terms), *attentional focus/resources, diligence, effort, goal* (to capture *goals, goal setting, goal commitment*, and related terms), *hard work, intensity, mental effort/workload, motivation, on-task/off-task thoughts, persist/persistence, time spent, work ethic*, and *work orientation*. For performance, we used the following terms: *absence/absent, citizenship, contextual performance, counterproductive work behavior* (and *CWB*), *deviance, effectiveness, extra-role* (and *extra role* and *extrarole*), *lateness, organizational citizenship behavior* (and *OCB*), *performance, productivity, prosocial behavior, sales, supervisor ratings, tardiness, training, and withdrawal*.

In addition, we searched for studies that included particular measures of ability (e.g., Wonderlic Personnel Test; Wonderlic Associates, 1999), motivation (e.g., Kanfer, Ackerman, Murtha, Dugdale, & Nelson, 1994), or performance (e.g., Williams & Anderson, 1991). Finally, we reviewed the references sections of the studies we obtained to identify additional sources. Our searches yielded over 3,000 studies to review for possible inclusion in the meta-analysis.

Inclusion Criteria

We used nine criteria to determine whether to include the identified studies in the meta-analysis. We summarize the criteria below and provide further details about them online in Appendix A of the supplemental file. First, we included only studies that measured ability, motivation, and performance because we needed data on all three variables to create and test the ability-motivation interaction (as well as to directly compare the relative importance of ability and motivation). Second, we included only studies conducted (a) in field settings in which the criteria reflected job or training performance or (b) in laboratory settings designed to simulate job or training performance. Third, we included only studies that examined relations among ability, motivation, and performance at the individual level of analysis. Fourth, we included only studies in which the results were based on the full range of participants in the sample. We excluded studies in which the variance in the predictors, criteria, or both was intentionally enhanced. Fifth, we included only independent samples, and we used the method described by Wood (2008) to identify (and exclude) studies in which a sample appeared to overlap with a sample from another article authored by the same researchers. When possible, we tried to confirm apparent instances of sample overlap with the study authors.

Sixth, we included only studies that measured ability using objective tests that assessed one or more types of cognitive abilities, such as quantitative, verbal, or spatial ability. Seventh, consistent with how we defined work motivation, we included only motivation

measures that assessed the tendency to demonstrate work effort (i.e., trait motivation) or the amount of effort devoted to a particular task (i.e., state motivation). Trait motivation was assessed by measures such as achievement motivation and work drive. Some researchers have suggested that conscientiousness captures overall motivation tendencies (e.g., Chen et al., 2000; Diefendorff & Chandler, 2011; F. L. Schmidt & Hunter, 1992). However, conscientiousness is a broad, multifaceted construct, and some of its subfacets (achievement striving in particular) are more closely linked to motivation and effort than other subfacets (e.g., dependability, order). Therefore, we did not include conscientiousness as a proxy for trait motivation. Studies assessed state motivation using measures such as task-specific effort, amount of time spent on a task (e.g., time spent studying training materials), and goals.

Eighth, we included studies in which the performance measure(s) reflected one or more of the following: task performance, contextual performance, CWB, or overall performance. Furthermore, we included only studies that measured job performance using supervisor ratings, peer ratings, or some objective criterion (e.g., sales). The one exception is that, consistent with previous meta-analyses (e.g., Gonzalez-Mulé, Mount, & Oh, 2014), our meta-analysis included self-reports of CWB. For studies that measured training performance, the criteria reflected exam scores, grades, or instructor ratings. Also, for laboratory studies, performance was measured with scores on simulated work tasks or by observer ratings of performance. Finally, we included only studies for which we or the original authors (see below) could estimate effects for a model that included ability, motivation, and the interaction between the two as predictors of performance without any other variables in the model (e.g., statistical controls).

We found 57 studies that appeared to meet all the criteria. However, none of the studies included all the statistics needed for the meta-analysis, especially correlations between the ability-motivation product term and the other variables. Therefore, we had to attempt to locate and contact the authors of every study to request the relevant results or the raw data so that we could perform the analyses. We located contact information for authors of 56 studies, and 48 (85.7%) responded to our request for data. Of the authors who responded, 33 sent us the raw data, or they ran the analyses using IBM SPSS syntax we provided and sent us the output (we provide this syntax in Appendix B in the online supplemental file). Of the authors who did not provide us data, most indicated that they no longer had the data or could not locate them. A few authors indicated that they could not make time to look for the data or that they did not want to share their data.

The data collection process yielded 56 independent samples, which comprised 39 journal articles, 16 dissertations and theses, and 1 conference paper. Two of the authors independently coded 50% of the studies. Before analyzing the data, we determined the percentage of times the two coders recorded the same sample size, reliability estimates, correlations, and regression coefficients. The level of rater agreement ranged from 98.3% to 100% across the coded variables. Considering the high level of intercoder agreement, the first author coded the remaining primary studies.¹

Data-Analytic Approach

We used Hunter and Schmidt's (2004) psychometric meta-analysis procedures to analyze the data. We provide an overview of the analyses below and describe further details in

Appendix C of the online supplemental file. First, we recorded zero-order correlations among ability, motivation, and performance. To estimate the multiplicative model, we also needed correlations between the ability-motivation product term and the other variables. Although correlations for the product term were not reported in any of the original primary studies, we obtained them (or the raw data to compute the correlations) from many of the original authors. For these studies, we (or the original authors) standardized scores for the ability and motivation measures and computed a new variable that reflected the product of the two components. We then recorded the zero-order correlations between the product term and ability, motivation, and performance.

Second, we computed composite variables for primary studies that included multiple measures of ability, motivation, and/or performance. Third, because we were interested primarily in relations at the construct level and not at the measure level (Hunter & Schmidt, 2004; Le, Schmidt, & Putka, 2009), we corrected the observed correlations for measurement error in all the variables. We also report relations corrected for both measurement error and range restriction. Fourth, we used the observed and corrected correlations among ability, motivation, and performance to estimate the additive effects of ability and motivation on performance. This analysis yielded observed and corrected *R*s and standardized regression coefficients for each study. We used the same observed and corrected correlations, plus the correlations involving the ability-motivation product term, to estimate the multiplicative effects of ability and motivation.

Fifth, we computed relative weight statistics (*RWs*) for both the multiplicative and additive model. Relative weight analysis (Johnson, 2000) assesses the contribution each predictor makes to the regression model, considering each predictor's individual effect and its effect when combined with the other predictors (LeBreton, Hargis, Griepentrog, Oswald, & Ployhart, 2007). The resulting relative weights indicate the percentage of variance in the criterion each predictor explains. These analyses were ideally suited for our purposes because they focus on effect sizes and, thus, minimize concerns about low or differential levels of statistical power across the primary studies. Finally, we conducted a simple slopes analysis for each study to interpret the nature of any ability-motivation interactions we might find.

Each of the above sets of results is based on different sets of primary studies. First, zero-order correlations among ability, motivation, and performance, as well as the additive and relative effects of ability and motivation on performance, are based on 55 independent samples ($N = 11,283$).² Second, tests of the interactive effects of ability and motivation are based on 40 samples ($N = 8,507$) for which we had information concerning the multiplicative model. Third, the simple slopes analyses are based on 39 samples ($N = 7,499$) for which the primary authors shared the raw data needed to conduct these analyses.

Results

Correlations Among Ability, Motivation, and Performance

Zero-order correlations among the variables are shown in Table 1. For this and subsequent tables, we report observed estimates, estimates corrected for measurement error, and estimates corrected for measurement error and range restriction. When discussing the results, we focus on the last set of estimates (which we refer to as the "corrected" estimates). The first line shows results based on data from all the primary studies combined (i.e., "Overall"). The mean

Table 1
Meta-Analytic Estimates of Correlations Among Ability, Motivation, and Performance

Analysis	<i>k</i>	<i>N</i>	Ability and motivation			Ability and performance			Motivation and performance		
			<i>r</i>	ρ_1	ρ_2	95% CI	SD_{ρ_2}	<i>r</i>	ρ_1	ρ_2	95% CI
Overall	55	11,283	.04	.05	.07	.03, .11	.13	.26	.33	.44	.38, .50
Motivation construct								.22	.21	.29	.24, .35
Trait motivation	39	7,779	.02	.03	.04	.00, .08	.11	.22	.30	.39	.32, .47
State motivation	19	4,303	.07	.08	.12	.05, .19	.15	.34	.40	.55	.47, .61
Performance context									.23	.23	.17, .47
Job performance	28	4,718	.03	.04	.06	.01, .12	.13	.18	.26	.31	.23, .40
Training performance	15	3,720	.01	.01	.02	-.03, .07	.07	.27	.33	.45	.35, .55
Laboratory study performance	17	3,602	.07	.08	.12	.04, .20	.16	.37	.44	.59	.53, .64
Performance measure									.11	.15	.09, .21
Subjective	32	5,520	.02	.03	.04	-.02, .09	.13	.17	.25	.32	.23, .40
Objective	29	6,810	.05	.06	.09	.03, .14	.14	.33	.38	.51	.45, .58
Publication status									.17	.21	.19, .34
Published	38	7,842	.04	.05	.07	.02, .12	.13	.25	.32	.42	.34, .50
Unpublished	17	3,443	.04	.04	.07	-.01, .14	.14	.29	.37	.48	.39, .57
Type of organization									.18	.27	.21, .34
Civilian	31	5,340	.02	.03	.04	-.11, .18	.11	.24	.31	.40	.31, .49
Military	7	2,341	.03	.04	.06	-.03, .14	.10	.16	.21	.31	.17, .44
Performance dimension									.18	.22	.23, .29
Task performance	8	1,364	.02	.03	.05	-.04, .15	.11	.12	.17	.01, .35	.23, .35
Contextual performance	5	1,067	.01	.01	.02	-.09, .13	.11	.13	.19	.23	.05, .40

Note: *k* = number of correlations from independent samples; *N* = total number of participants across samples; *r* = sample size-weighted mean observed correlation; ρ_1 = correlation corrected for measurement error in the predictor and criterion; ρ_2 = correlation corrected for range restriction in the predictor and measurement error in the predictor and criterion; 95% CI = lower and upper bounds of the 95% confidence interval for ρ_2 ; SD_{ρ_2} = standard deviation of ρ_2 .

corrected correlation between ability and motivation was .07, the mean corrected correlation between ability and performance was .44, and the mean corrected correlation between motivation and performance was .29. These results suggest that (a) ability and motivation are independent of one another and (b) both variables were related to performance.

Tests of the Multiplicative Model

We assessed support for the multiplicative model in four ways. First, we examined the change in R between the additive model and the multiplicative model. We focused on R , rather than on R^2 , so readers can more easily compare the effects to those typically reported in the literature (e.g., Bosco, Aguinis, Singh, Field, & Pierce, 2015). Second, we examined the relative importance of ability, motivation, and the ability-motivation interaction to performance.

Table 2 displays results for the first two sets of analyses. The overall corrected change in R from the additive model to the multiplicative model was .02. Thus, inclusion of the ability-motivation interaction resulted in only a slight increase in the prediction of performance beyond the additive effects of ability and motivation. As shown on the first row and last three columns of Table 2, the overall corrected relative weight percentages for ability, motivation, and the ability-motivation interaction were 60.1%, 30.5%, and 9.4%, respectively. Thus, the additive effects of ability and motivation accounted for about 91% of the explained variance in job performance, whereas the ability-motivation interaction accounted for only about 9% of the explained variance.

The third way we assessed support for the multiplicative model was to compute simple slopes for the ability-performance relationship across different levels of motivation. Results of the simple slopes analyses are shown in Table 3. We conducted these analyses using the SPSS macros developed by O'Connor (1998) that estimate the direction and strength of the relation between ability and performance at three levels of motivation: 1 SD below the mean, the mean, and 1 SD above the mean. Because these analyses are based on raw data, results reflect the observed (i.e., uncorrected) relations among the variables. Overall, relations between ability and performance tended to increase slightly as motivation increased from low (.22) to moderate (.24) to high (.25). This small, positive trend was fairly consistent across the different sets of analyses.

Finally, as an additional way to interpret the results, we examined the strength and direction of the multiplicative effect in one other way. Specifically, there were 67 individual analyses with available data to calculate the simple slopes (i.e., some of the 39 independent samples included multiple motivation measures and/or criterion measures). In 23 cases (34.3%), the change in slopes (i.e., from low motivation to high motivation) was positive and .10 or higher in magnitude. In 27 cases (40.3%), the change in slopes was trivial, that is, between .00 and $+/- .09$. And in 17 cases (25.4%), the change in slopes was negative and $- .10$ or lower in magnitude. These findings are consistent with earlier results and suggest that, in most cases, the ability-motivation interaction was very small. Furthermore, when the interaction was larger, in some cases it was positive (i.e., the ability-performance relation increased as motivation increased) and in some cases it was negative (i.e., the ability-performance relation decreased as motivation increased).

Table 2
Meta-Analytic Estimates of the Additive and Multiplicative Effects of Ability and Motivation on Performance

Analysis	k	N	R ₁	R ₂	RW_A	RW_M	RW_1	Observed estimates		Estimates corrected for measurement error		Estimates corrected for measurement error and range restriction								
								R	ΔR	RW_A	RW_M	RW_1								
Overall	40	8,507	.37	.38	.01	.54.0	.36.7	.9.3	.48	.50	.02	.51.7	.37.7	.10.6	.56	.58	.02	.60.1	.30.5	.9.4
Motivation construct																				
Trait motivation	30	5,767	.30	.32	.02	.58.4	.29.6	.12.0	.42	.45	.03	.55.9	.30.3	.13.8	.51	.54	.03	.61.0	.27.1	.11.9
State motivation	13	3,539	.44	.45	.01	.56.1	.40.3	.3.7	.54	.54	.00	.54.4	.41.5	.4.1	.63	.64	.01	.66.9	.29.3	.3.7
Performance context																				
Job performance	19	2,964	.30	.32	.02	.32.5	.50.3	.17.2	.44	.49	.05	.29.7	.51.2	.19.1	.48	.52	.04	.36.1	.46.9	.17.0
Training performance	13	3,256	.31	.32	.01	.72.1	.17.7	.10.2	.39	.41	.02	.70.0	.18.2	.11.8	.50	.52	.02	.76.5	.13.2	.10.3
Laboratory performance	13	3,044	.48	.48	.00	.59.5	.38.5	.2.0	.58	.59	.01	.57.6	.40.0	.2.5	.68	.68	.00	.69.0	.28.7	.2.3
Performance measure																				
Subjective	23	3,701	.29	.31	.02	.32.8	.49.6	.17.6	.43	.48	.05	.29.7	.50.7	.19.6	.48	.52	.04	.36.4	.45.7	.17.9
Objective	22	5,762	.40	.41	.01	.68.0	.27.5	.4.5	.48	.49	.01	.66.3	.28.5	.5.2	.58	.59	.01	.75.6	.19.9	.4.5
Publication status																				
Published	29	6,219	.33	.35	.02	.55.0	.32.7	.12.4	.45	.48	.03	.52.2	.33.8	.14.0	.53	.56	.03	.58.8	.29.0	.12.2
Unpublished	11	2,288	.45	.45	.00	.51.2	.47.7	.1.1	.57	.57	.00	.50.5	.48.3	.1.3	.65	.65	.00	.63.6	.34.4	.2.0
Type of organization																				
Civilian	22	2,876	.30	.33	.03	.42.6	.36.3	.21.0	.45	.51	.06	.38.9	.37.2	.24.0	.50	.55	.05	.45.5	.33.1	.21.5
Military	4	1,579	.28	.28	.00	.36.3	.55.8	.7.8	.38	.39	.01	.34.9	.56.7	.8.4	.44	.45	.01	.45.2	.47.8	.7.0
Performance dimension																				
Task performance	5	700	.23	.26	.03	.29.3	.42.7	.28.0	.33	.39	.05	.26.5	.43.2	.30.4	.35	.41	.06	.37.9	.34.5	.27.6
Contextual performance	4	609	.25	.26	.02	.28.0	.59.4	.12.6	.38	.41	.03	.26.9	.59.3	.13.8	.43	.48	.05	.37.3	.48.5	.14.2

Note: Some of the ΔR values are .01 larger or smaller than the differences between R_1 and R_2 because of rounding. Similarly, some of the RW values do not sum to exactly 100 due to rounding. k = number of correlations from independent samples; N = total number of participants across samples; R_1 = sample size-weighted mean multiple correlation for the additive model; R_2 = sample size-weighted mean multiple correlation for the multiplicative model; ΔR = change in R from the additive model to the multiplicative model; RW_A = sample size-weighted mean relative weight for ability, expressed as the percentage of explained variance in performance for which ability accounts; RW_M = sample size-weighted mean relative weight for motivation; RW_1 = sample size-weighted mean relative weight for the ability-motivation interaction.

Table 3
Sample Size–Weighted Mean Standardized Simple Slopes for Ability–Performance Relations at Different Levels of Motivation

Analysis	<i>k</i>	<i>N</i>	−1 SD		<i>M</i>		+1 SD	
			Slope	95% CI	Slope	95% CI	Slope	95% CI
Overall	39	7,499	0.22	0.16, 0.28	0.24	0.19, 0.29	0.25	0.19, 0.30
Motivation construct								
Trait motivation	29	4,759	0.17	0.09, 0.24	0.18	0.12, 0.24	0.19	0.13, 0.26
State motivation	13	3,539	0.31	0.23, 0.39	0.31	0.25, 0.37	0.32	0.26, 0.37
Performance context								
Job performance	19	2,964	0.12	0.03, 0.21	0.14	0.07, 0.21	0.15	0.07, 0.24
Training performance	12	2,248	0.22	0.12, 0.32	0.24	0.16, 0.40	0.26	0.18, 0.35
Laboratory study performance	13	3,044	0.34	0.28, 0.41	0.34	0.29, 0.39	0.34	0.28, 0.39
Performance measure								
Subjective	23	3,701	0.12	0.04, 0.20	0.14	0.08, 0.20	0.16	0.08, 0.24
Objective	21	4,754	0.30	0.22, 0.37	0.30	0.24, 0.36	0.31	0.26, 0.36
Publication status								
Published	28	5,211	0.20	0.12, 0.27	0.21	0.02, 0.40	0.23	0.01, 0.44
Unpublished	11	2,288	0.28	0.20, 0.36	0.29	0.21, 0.37	0.30	0.21, 0.39
Type of organization								
Civilian	22	2,876	0.15	0.05, 0.24	0.19	0.11, 0.26	0.22	0.13, 0.31
Military	4	1,579	0.13	0.01, 0.25	0.13	0.02, 0.23	0.12	0.01, 0.24
Performance dimension								
Task performance	5	700	0.02	−0.21, 0.25	0.07	−0.12, 0.25	0.12	−0.05, 0.29
Contextual performance	4	609	−0.01	−0.10, 0.09	0.04	−0.04, 0.13	0.10	−0.06, 0.26

Note: *k* = number of correlations from independent samples; *N* = total number of participants across samples; 95% CI = lower and upper bounds of the 95% confidence interval. Simple slopes reflect (uncorrected) standardized regression coefficients for ability and performance at low (−1 SD), moderate (mean), and high (+1 SD) levels of motivation.

In sum, evidence from these analyses converges to suggest a lack of support for the multiplicative model. The ability–motivation interaction provided little incremental prediction beyond the additive effects of ability and motivation and accounted for only a small percentage of the explained variance in performance. Moreover, when there was an interaction, sometimes it reflected the predicted form (i.e., a stronger ability–performance relation when motivation is higher) and sometimes it did not.

Boundary Conditions of Multiplicative and Relative Effects

Conceptualization of motivation. Research Question 1 asked whether the way motivation is conceptualized—as a trait or as a state—would affect the strength of the multiplicative effects of ability and motivation on performance. Table 2 shows that the mean corrected relative weight percentage for the ability–motivation interaction was 11.9% for measures of trait motivation and 3.7% for measures of state motivation. This suggests that evidence of an ability–motivation interaction was somewhat stronger when motivation was conceptualized as a trait than when it was conceptualized as a state. However, in both cases, the multiplicative effect was small.

Hypothesis 1 predicted that state motivation would be relatively more important to performance compared to trait motivation. Mean corrected correlations for trait and state measures and performance were .23 versus .37, respectively (see Table 1). This provides support for Hypothesis 1 and suggests that statelike motivation measures are better predictors of performance than traitlike measures.

Study setting. Hypothesis 2 predicted that the multiplicative effects of ability and motivation on performance would be stronger in laboratory settings compared to field settings. Results in Table 2 suggest an opposite pattern. Specifically, the overall corrected relative weight for the ability-motivation interaction was larger for job performance (17.0%) and training performance (10.3%) than for laboratory study performance (2.3%). Thus, Hypothesis 2 was not supported.

Hypothesis 3 predicted that ability would be relatively more important than motivation to performance during training, as well as in laboratory studies designed to simulate work tasks. Table 4 provides estimates of the additive and relative effects of ability and motivation on performance. We found that ability was indeed a much stronger predictor than motivation of both training performance (corrected RW_s = 83.0% vs. 17.0%) and laboratory study performance (corrected RW_s = 70.8% vs. 29.2%). Thus, Hypothesis 3 was supported.

Research Question 2 addressed whether ability or motivation would be relatively more important to job performance. Interestingly, the results reported in Table 4 revealed that ability and motivation contributed equally to the explained variance in job performance (both RW_s = 50.0%). This suggests that the two variables are similarly important to how well employees perform their jobs.

Operationalization of performance. Hypothesis 4 predicted that ability would be more important when performance is measured objectively, whereas motivation would be more important when performance is measured subjectively. Table 4 shows that ability was indeed a better predictor of objective performance measures (corrected RW_s = 77.7% for ability vs. 22.3% for motivation). In contrast, ability and motivation contributed about equally to the variance explained in subjective performance measures (both corrected RW_s = 50.0%). These results provide partial support for Hypothesis 4 and suggest that the relative importance of ability versus motivation depends on how job performance is measured.

One complicating factor is that study setting and performance measure covaried in our data set. Specifically, job performance studies tended to measure performance subjectively (e.g., using supervisor ratings), whereas laboratory studies tended to measure performance objectively (e.g., with scores on simulated job tasks). Training performance studies used a mix of subjective and objective criterion measures.

To explore the relative influence of study setting and performance measure on the size of the ability-performance relation, we conducted a weighted least squares (WLS) multiple regression analysis (Steel & Kammerer-Mueller, 2002) with performance context (job vs. training vs. lab) and performance measure (objective vs. subjective) as independent variables and ability-performance correlations as the dependent variable. To represent the three performance contexts, we created two dummy variables: one for job performance (coded as 1) versus training and laboratory study performance (coded as 0) and another for laboratory performance (coded as 1) versus job and training performance (coded as 0). In addition, we

Table 4
Meta-Analytic Estimates of the Additive and Relative Effects of Ability and Motivation on Performance

Analysis	Additive effects						Relative effects of ability						Relative effects of motivation					
	R	R_{c1}	R_{c2}	$SD R_{c2}$	β	RW	β_{c1}	RW_1	β_{c2}	$SD \beta_{c2}$	RW_2	β	RW	β_{cl}	RW_1	β_{c2}	$SD \beta_{c2}$	RW_2
Overall	.36	.48	.56	.17	.025	.581	.32	.562	.41	.22	.651	.20	.41.9	.28	.43.8	.26	.16	.34.9
Motivation construct																		
Trait motivation	.30	.43	.51	.16	.022	.62.3	.29	.60.8	.38	.23	.66.7	.14	.37.7	.22	.39.2	.21	.17	.33.3
State motivation	.45	.54	.63	.15	.032	.58.1	.37	.55.8	.50	.14	.68.5	.27	.41.9	.33	.44.2	.31	.13	.31.5
Performance context																		
Job performance	.30	.45	.49	.16	.017	.44.3	.24	.42.2	.29	.21	.50.0	.20	.55.7	.31	.57.8	.30	.16	.50.0
Training performance	.31	.38	.49	.16	.027	.78.3	.33	.76.3	.45	.19	.83.0	.11	.21.7	.15	.23.7	.14	.07	.17.0
Laboratory performance	.48	.58	.68	.12	.034	.60.9	.41	.59.4	.54	.12	.70.8	.26	.39.1	.33	.40.6	.31	.17	.29.2
Performance measure																		
Subjective	.30	.46	.49	.16	.017	.44.6	.24	.42.5	.30	.20	.50.0	.20	.55.4	.31	.57.5	.30	.16	.50.0
Objective	.41	.48	.59	.16	.031	.69.7	.37	.67.8	.49	.17	.77.7	.19	.30.3	.24	.32.2	.22	.15	.22.3
Publication status																		
Published	.34	.46	.54	.16	.024	.58.1	.30	.56.1	.40	.23	.64.2	.17	.41.9	.25	.43.9	.24	.15	.35.8
Unpublished	.41	.52	.60	.19	.028	.58.2	.35	.56.3	.46	.18	.67.1	.25	.41.8	.34	.43.7	.31	.16	.32.9
Type of organization																		
Civilian	.31	.44	.51	.17	.023	.63.1	.31	.61.4	.39	.24	.67.5	.15	.36.9	.22	.38.6	.21	.14	.32.5
Military	.29	.41	.47	.15	.015	.42.6	.19	.39.4	.28	.16	.50.9	.21	.57.4	.32	.60.6	.31	.15	.49.1
Performance dimension																		
Task performance	.25	.35	.37	.13	.012	.44.5	.16	.42.3	.16	.24	.53.3	.18	.55.5	.26	.57.7	.25	.07	.46.7
Contextual performance	.26	.41	.44	.11	.012	.40.6	.18	.39.1	.21	.19	.46.9	.20	.59.4	.32	.60.9	.31	.12	.53.1

Note: See Table 1 for k and N for each set of estimates. R = sample size-weighted mean multiple correlation; $R_{cl} =$ sample size-weighted mean multiple correlation corrected for range restriction in the predictors and measurement error for measurement error in all the variables; $R_{c2} =$ sample size-weighted mean multiple correlation corrected for range restriction of R_{c2} ; $\beta =$ sample size-weighted mean standardized regression coefficient; $\beta_{cl} =$ sample size-weighted mean standardized regression coefficient corrected for measurement error in predictor and criterion variables; $SD \beta_{cl} =$ standard deviation of β_{cl} ; $\beta_2 =$ sample size-weighted mean standardized regression coefficient corrected for range restriction in the predictor and measurement error in the predictor and criterion; $SD \beta_{c2} =$ standard deviation of β_{c2} ; $RW =$ sample size-weighted mean relative weight expressed as the percentage of explained variance in performance for which the predictor (ability or motivation) accounts; $RW_1 =$ sample size-weighted mean relative weight based on correlations corrected for measurement error in the predictor and criterion; $RW_2 =$ sample size-weighted mean relative weight based on correlations corrected for range restriction in the predictor and measurement error in the predictor and criterion.

weighted each study by the inverse of the sampling error variance, such that studies with less sampling error received greater weight than studies with more sampling error (Hedges & Olkin, 1985; Steel & Kammeyer-Mueller, 2002).

Interestingly, results revealed that the dummy code representing the two types of performance measure was significant ($\beta = 0.52, p = .02$), whereas the performance context dummy codes were not ($\beta = -0.08$ and -0.02 , both $p > .05$). This suggests that relations between ability and performance were stronger when performance was measured objectively, regardless of the performance context (e.g., on the job vs. during training). We then conducted this same analysis using motivation-performance correlations as the dependent variable. We found the opposite pattern of results this time, such that performance context (i.e., laboratory performance vs. job and training performance) was significant ($\beta = 0.50, p < .01$), whereas performance measure was not ($\beta = -0.03, p = .90$). Job performance versus training and laboratory performance also was nonsignificant ($\beta = 0.30, p = .20$). In other words, relations between motivation and performance were stronger in laboratory settings than in job and training settings, regardless of whether performance was measured objectively or subjectively.

Additional factors. In these analyses, we explored additional factors that might affect support for the multiplicative model. Table 2 displays results for the categorical factors (and Table 3 presents the corresponding simple slopes results). Regarding publication status, the corrected relative weight for the ability-motivation interaction was 12.2% among published studies and 2.0% among unpublished studies. This suggests a tendency for published studies to find stronger support for the multiplicative model, although even in published studies, support for the model was quite weak. We discovered a similar trend for type of organization, such that the interaction effect was stronger among studies conducted in civilian organizations ($RW = 21.5\%$) compared to military organizations ($RW = 7.0\%$). However, we caution that only four military samples were available for this analysis. Regarding performance dimension, the strongest support for the multiplicative model (across all the analyses we conducted) came from several studies in which the criterion reflected task performance ($RW = 27.6\%$). In contrast, the multiplicative model explained less variance when the criterion reflected contextual performance ($RW = 14.2\%$).³

The other three factors are continuous, so we calculated zero-order correlations between these factors and the corrected relative weights for the ability-motivation interaction (please note that the correlations in this paragraph are not reported in any of the tables). The correlation for study sample size was $-.27 (p = .07)$. This suggests that the interactive effect was stronger in smaller samples than in larger samples. To measure job complexity, we used O*NET data regarding two generalized work activities (processing information and analyzing data or information) that reflect the description of job complexity provided by Morgeson and Humphrey (2006). For each job, we recorded scores for these two variables and then averaged the scores to create a measure of job complexity ($\alpha = .87$). The correlation for job complexity was $.06 (p = .80)$, which indicates that the complexity of the job did not affect support for the multiplicative model. The last analysis explored whether relations between ability and performance and between motivation and performance affected the strength of the ability-motivation interaction on performance. The ability-performance relation correlated $-.47 (p < .01)$ with the interaction effect, and the motivation-performance relation correlated

Table 5
Correlations Between Boundary Condition Variables and the Ability-Motivation Interaction

Variable	1	2	3	4	5	6	7
1. Corrected relative weight for ability-motivation interaction							
2. Publication status	.36**						
3. Study setting	-.43**	-.50**					
4. Sample size	-.42**	.02	-.01				
5. Motivation construct	-.35**	-.48**	.57**	.11			
6. Performance measure	-.55**	-.46**	.57**	.46**	.60**		
7. Ability-performance correlation	-.68**	-.34**	.46**	.36**	.41**	.60**	
8. Motivation-performance correlation	-.32*	-.19†	.22†	-.08	.43**	-.06	.19

Note: Ns ranged from 46 to 49 independent samples. Publication status was coded 0 = unpublished study and 1 = published study. Study setting was coded 0 = field setting and 1 = laboratory setting. Motivation construct was coded 0 = trait motivation and 1 = state motivation. Performance measure was coded 0 = subjective measure and 1 = objective measure.

† $p < .10$.

* $p < .05$.

** $p < .01$.

–.21 ($p = .14$) with the interaction effect. These results suggest that support for the multiplicative model was stronger when the relation between ability and performance was weaker.

Multivariate analyses of boundary conditions. Finally, we conducted a WLS regression analysis to explore the relative influence of all the potential boundary conditions. In this analysis, the cases were the independent samples for which we had data for the multiplicative model. The dependent variable was the corrected relative weight for the ability-motivation interaction for each study.⁴ The independent variables included the following binary-coded (0 vs. 1) variables: publication status (published vs. unpublished), study setting (field vs. laboratory), motivation construct (trait vs. state), and performance measure (subjective vs. objective). The model also included three continuous independent variables: sample size, the corrected correlation between ability and performance, and the corrected correlation between motivation and performance.⁵

Tables 5 and 6 present correlations among the variables and WLS regression results, respectively. It is interesting that all of the primary study characteristics correlated significantly with the ability-motivation interaction. Specifically, the interaction was stronger when the study was published, when the study was conducted in a field setting, when the sample size was smaller, when trait motivation was measured, when performance was measured subjectively, and when ability-performance and motivation-performance relations were weaker. The WLS regression model with these variables as predictors of the ability-motivation interaction was significant ($F_{7,45} = 8.55$, $p < .001$, adjusted $R^2 = .54$). Three variables remained significant when variance due to the other variables was controlled within this analysis: sample size ($b = -0.22$, $p = .09$), the ability-performance correlation ($b = -0.39$, $p = .01$), and the motivation-performance correlation ($b = -0.34$, $p = .02$). We also conducted

Table 6**Weighted Least Squares Regression Results for Boundary Conditions as Predictors of the Ability-Motivation Interaction**

Predictor	<i>b</i>	SE	β	<i>t</i>	RW (%)
Publication status	7.42	8.56	0.11	0.87	6.73
Study setting	-7.80	9.15	-0.12	-0.85	9.54
Sample size	-0.03	0.02	-0.22	-1.71†	16.23
Motivation construct	16.55	10.76	0.25	1.54	3.62
Performance measure	-15.12	11.85	-0.26	-1.28	15.96
Ability-performance correlation	-42.09	14.52	-0.39	-2.90**	35.13
Motivation-performance correlation	-52.32	20.57	-0.34	-2.54*	12.79

Note: *Ns* ranged from 46 to 49 independent samples. Publication status was coded 0 = unpublished study and 1 = published study. Study setting was coded 0 = field setting and 1 = laboratory setting. Motivation construct was coded 0 = trait motivation and 1 = state motivation. Performance measure was coded 0 = subjective measure and 1 = objective measure. Analyses are based on a random-effects model. *b* = unstandardized regression coefficient; SE = standard error; β = standardized regression coefficient; *t* = *t* statistic; RW = relative weight.

†*p* < .10.

**p* < .05.

***p* < .01.

a relative weight analysis. The results in Table 6 show that the ability-performance correlation was the most important predictor (*RW* = 35.13%), followed by sample size (*RW* = 16.23%) and performance measure (*RW* = 15.96%).

Discussion

We addressed a foundational question in management and other fields concerned with employee performance: What is the functional form of the joint effects of cognitive ability and motivation on performance? Given the centrality of performance to theory and practice, and the abundant conceptual and empirical work on ability and motivation as key predictors of performance, our results have implications for management theory, future research, and practice.

Implications for Theory and Research

A key finding is that available evidence does not provide strong or consistent support for the hypothesis that $\text{Performance} = f(\text{Ability} \times \text{Motivation})$. This conclusion is based on a triangulation of evidence based on raw data from dozens of primary studies that did not suffer from some of the problems that have limited prior research on the multiplicative model. First, moderated multiple regression analyses revealed that the overall corrected change in *R* from the additive model to the multiplicative model is .02. Thus, the ability-motivation interaction tends to provide very little incremental prediction beyond the additive effects of ability and motivation. Second, relative importance analyses showed that ability, motivation, and the ability-motivation interaction account for an average of 60.1%, 30.5%, and 9.4% (respectively) of the explained variance in performance. This suggests that in most cases, the

interactive effect is relatively unimportant to performance. Third, simple slopes analyses suggested that the ability-performance relationship remains fairly consistent across levels of motivation. And fourth, even in cases where the interactive effect appears nontrivial, the direction of the effect is not consistent. That is, in some cases the ability-performance relation is stronger when motivation is higher, and in other cases, the ability-performance relation is weaker when motivation is higher.

The lack of support for the multiplicative model is particularly noteworthy because we focused on effect sizes and applied corrections for statistical and methodological artifacts. As such, the lack of evidence for the multiplicative model cannot be attributed to common problems with testing interaction effects, such as low statistical power and low reliability of the product term (Aguinis et al., *in press*). In addition, interactions can be difficult to detect when the two predictors are highly correlated, which decreases the likelihood that the interaction between the two variables will provide unique information (Murphy & Russell, *in press*). This also was not an issue in the present study because correlations between ability and motivation tend to be very small.

An additional contribution is our examination of situations when the multiplicative model may be more viable. Results reveal that the interactive effects of ability and motivation on performance generally are small in both published and unpublished studies, in both laboratory and field settings, in both civilian and military organizations, in both complex and less complex jobs, for both trait and state motivation measures, and for both objective and subjective performance measures. The two situations that appear most conducive to finding an ability-motivation interaction are (a) when the sample size is smaller and (b) when the bivariate effects of ability and motivation on performance (particularly ability) are weaker. The finding that small-sample studies are more likely to find support for the multiplicative model is counterintuitive given that small samples often lack sufficient statistical power to detect interaction effects (Aguinis, 1995). However, we focused on the size of ability-motivation interactions rather than on their statistical significance. The fact that interactive effects are stronger in smaller samples suggests that even when an interaction is evident, it may be “driven” by a small subset of cases (e.g., individual employees who possess particularly low or high levels of ability and/or motivation) that has an inordinate influence on results within smaller samples.

Overall, the present findings suggest quite clearly that the effects of ability and motivation on performance are additive rather than multiplicative. The lack of support for the multiplicative hypothesis suggests the need to revisit theories and models that predict or imply an interactive relation between ability and motivation. For example, job performance theories and models should specify that ability and motivation exert independent effects on performance rather than interactive effects. In addition, ability may not be a resource that only highly motivated individuals allocate towards tasks. Similarly, it appears that goals—and individuals’ commitment to those goals—demonstrate independent effects on performance and do not help higher-ability individuals more than lower-ability individuals. This conclusion also has implications for the types of designs required in future research. For example, *a priori* estimates of statistical power can focus on additive effects rather than on interactive effects. This, in turn, can substantially reduce sample size requirements and make future research more practically feasible.

The present findings also have implications for understanding the relative importance of ability and motivation. For example, we found that relations between motivation and

performance (as well as the importance of motivation relative to ability) are stronger when measures reflect state motivation (e.g., time spent on a task) than when they reflect trait motivation (e.g., achievement motivation). This finding provides support for the trait versus state distinction (Chen et al., 2000; Kanfer & Heggestad, 1997) and addresses calls for meta-analytic research to directly compare the predictive validity of different motivational constructs (e.g., Diefendorff & Chandler, 2011).

Our results also provide support for the maximal-typical performance distinction (DuBois et al., 1993) by showing that ability is relatively more important than motivation to training performance and to performance on simulated job tasks in laboratory studies, both of which tend to focus on maximal performance (e.g., they are short-term). The fact that ability appears to be much more important than motivation to training performance is intriguing. One possibility is that training—particularly new hire training—represents a strong situation (Mischel, 1973), such that trainees tend to be highly motivated to learn job-relevant knowledge and skills. This, in turn, may constrain the variance in motivation and attenuate relations between motivation and performance. In contrast, ability and motivation appear to be approximately equally important to job performance, the measures of which tend to assess typical performance over long periods. This discovery was somewhat unexpected given the strong track record of ability as a predictor of performance (e.g., F. L. Schmidt & Hunter, 1998) and suggests that motivation may be just as important to job performance as ability.

Implications for Talent Management Practices

The present findings also point to actionable steps organizations can take to improve how they acquire and manage talent. First, our results reveal that ability and motivation are weakly correlated. The fact that ability and motivation largely are independent, and that both variables tend to demonstrate relations with performance, suggests that organizations should measure both variables to predict future performance. In other words, talent management systems that emphasize ability at the expense of motivation, or vice versa, are likely to be suboptimal for influencing or predicting future performance.

Second, the general lack of support for the multiplicative model suggests that job applicants should be allowed to compensate for lower scores on ability measures with higher scores on motivation measures and vice versa. For instance, instead of requiring a minimum score on a cognitive ability test and a minimum score on a motivation measure (i.e., a multiple cutoffs or hurdles approach), it may be more effective to set a minimum total score for the two measures combined. Third, if ability and motivation interact to influence performance, this would suggest that interventions designed to increase motivation (e.g., incentive plans) should target employees who possess a high level of ability. The present results challenge this idea and suggest that interventions should focus on employees of all ability levels.

Fourth, our findings suggest that compared to motivation, ability is much more important to performance during training and in laboratory studies designed to simulate job performance. Thus, practitioners should be aware that findings from training and laboratory studies may overestimate the importance of ability and underestimate the importance of motivation to on-the-job performance. Fifth, we found that ability is a better predictor of objective performance measures. The implication is that the type of performance organizations would most like to influence should inform the individual differences they assess during the selection process or try to influence through training and development or incentive programs. For

instance, the present findings suggest that if outcomes such as sales or productivity are more strategically critical than supervisor evaluations of employee performance, organizations should focus on ability. On the other hand, if an organization is particularly interested in improving supervisor evaluations, then it should focus on motivation.

Limitations and Directions for Future Research

We acknowledge several potential limitations of our research. First, despite an extensive search for primary studies, the number of independent samples available for some analyses was small. For example, most studies that met the inclusion criteria used traitlike measures of motivation; fewer studies have included ability, performance, and statelike measures of motivation. In particular, surprisingly little research has measured effort directly, particularly in field settings. Given the theoretical importance of effort to work motivation, we encourage more research on this key construct. For example, we found that measures of various constructs contain items about the amount or duration of effort devoted to work tasks, including measures of conscientiousness, engagement, work involvement, and organizational citizenship behavior. It would be helpful for future research to delineate the similarities and differences among these constructs and measures to bring the measurement of effort into clearer focus. Our study also points to the need for additional research concerning how to best measure effort, including measures that can be used in high-stakes settings in which issues such as response distortion may be a concern.

Second, a requirement of the present meta-analysis was that all studies had to include measures of ability, motivation, *and* performance. As discussed, focusing on studies that measured all three constructs enabled us to (a) calculate the ability-motivation interaction and estimate its effects on performance and (b) directly compare the relative importance of ability and motivation to performance. A potential limitation of this approach was that the meta-analysis includes only a portion of studies that have measured ability and performance (but not motivation) and studies that have measured motivation and performance (but not ability). As a result, some of the correlations may differ from what we might have found had our results been based on a larger set of primary studies. For example, although the mean correlations we found between ability and performance are in line with ability-performance correlations from several previous meta-analyses, these correlations are somewhat different (i.e., smaller) than correlations reported in some other meta-analyses. For example, our mean observed correlation of .18 between ability and job performance is very similar to observed correlations of .14 to .20 reported in studies such as Berry, Clark, and McClure (2011), Bertua, Anderson, and Salgado (2005), Gonzalez-Mulé et al. (2014), and Nathan and Alexander (1988). In contrast, the .18 correlation is smaller than the observed correlation of .25 from Hunter (1983), whose values have been used in subsequent meta-analyses (e.g., F. L. Schmidt & Hunter, 1998).

Several factors may contribute to the somewhat lower ability-performance relations we observed compared to some previous meta-analyses. For example, some studies were based solely or primarily on studies designed to validate a particular ability test, such as Hunter's (1983) meta-analysis of the General Aptitude Test Battery. In contrast, a variety of ability tests are represented in the present meta-analysis, and the ability-performance relation was not the primary focus of most of the studies we cumulated. In fact, in the present study,

corrected correlations between ability and performance were slightly larger in unpublished studies than in published studies ($rs = .48$ vs. $.42$; see Table 1). Furthermore, some ability meta-analyses have included job knowledge and/or work sample tests as measures of job performance, whereas we did not include such criteria because they do not assess on-the-job performance. This is relevant because ability tends to correlate more strongly with job knowledge and work sample tests than with performance ratings and productivity records (e.g., Nathan & Alexander, 1988). Finally, some of the artifact corrections we used also may be different from the corrections used in some previous meta-analyses. For example, range restriction values (u) for ability in some of the subsets of studies in our meta-analysis appear to be somewhat larger (and, thus, more conservative) than values used by several previous meta-analyses (e.g., Hunter, 1983; Salgado, Anderson, Moscoso, Bertua, & de Fruyt, 2003).

Regardless of the reason(s), we do not believe relations involving ability are systematically different (e.g., lower) than relations involving motivation because both sets of estimates were taken from the same studies. Thus, we have no reason to believe the sometimes smaller ability-performance relations we observed compared to some previous meta-analyses should affect conclusions regarding the relative importance of ability versus motivation or the validity of the additive versus multiplicative models.

Third, although we made extra efforts to try to understand and correct for the effects of range restriction (please see Appendix C in the online supplemental file), this proved to be a challenging endeavor. For example, many studies did not report enough information for us to determine whether range restriction may be relevant, and if so, the specific nature of the restriction (e.g., direct vs. indirect). Furthermore, studies were more likely to provide information concerning whether and how ability scores were restricted, whereas there tended to be less information about possible restriction on motivation. Thus, in some instances, the range restriction-corrected results may underestimate the magnitude of relations involving motivation. Finally, even when we could be reasonably confident about the range restriction mechanism(s) within particular samples, we often did not have all the information needed to implement the most appropriate corrections. Thus, we sometimes had to make assumptions and/or use values from other studies in the data set. In spite of these considerations, given the consistency of results across types of analyses, it is unlikely that implementing additional or alternative range restriction corrections would have changed our substantive conclusions.

Fourth, we found several variables that appear to moderate the relative importance of ability and motivation to performance, such as the study setting (laboratory vs. field) and how performance was measured (objectively vs. subjectively). However, even after accounting for these variables, there sometimes was considerable variance in estimates across primary studies that was not due to the moderators or statistical artifacts. Thus, future research could examine additional potential moderators. For example, there is evidence that ability is relatively more important when individuals first start a job, whereas motivation is relatively more important later on (e.g., Zyphur, Bradley, Landis, & Thoreson, 2008). Relatedly, most of the research we reviewed was cross-sectional and examined relations between individuals. Future research might adopt an intraindividual approach to examine whether relations among ability, motivation, and performance change within individuals over time (for examples, see Kanfer & Ackerman, 1989; Yeo & Neal, 2008).

Finally, the present study used meta-analysis to cumulate interaction effects. As such, we hope our study will serve as a model for researchers who wish to understand the magnitude

and consistency of interactive effects in other domains. However, our experience suggests that meta-analyzing interactions can be quite challenging. For example, primary studies very rarely include the exact same variables in their analyses or report all the statistics researchers need to estimate interactive relations. Thus, meta-analysts must be willing to devote substantial time and effort to obtain the relevant data or statistics from the primary study authors. We urge primary researchers who study interactions to report correlations among all the variables, including the product terms, so that the results can be included in future meta-analyses.

Conclusions

The results of the present study have the potential to “change the conversation” regarding theories that predict that $\text{Performance} = f(\text{Ability} \times \text{Motivation})$, as well as how these theories are disseminated to students in classrooms, to decision makers in organizations, and in the media and public discourse. Overall, our findings suggest that including ability-motivation interactions in future theoretical explanations or empirical models will add complexity to theories and models but not necessarily increase understanding or prediction of performance. Instead, our findings suggest that, in most cases, researchers and practitioners can focus on the more parsimonious additive effects of ability and motivation on performance. In addition, we hope our study will serve as a catalyst for future research to use meta-analysis to better understand interactive relations in other domains. Finally, we hope some of our findings about the compensatory contributions of ability and motivation will be useful to practitioners when they design talent management systems and interventions aimed at predicting and improving employee performance.

Notes

1. The main codes and values for each primary study are available from the first author upon request.
2. One of the 56 primary studies we found was a large-sample study conducted in a military training context (Carretta, Teachout, Ree, Barto, King, & Michaels, 2014; $N = 9,396$). Although the multiplicative model results from this study generally were consistent with the overall results from the other 55 studies, the magnitude of the correlations and additive effects were notably different (i.e., lower) than the average of the other studies in the data set. As such, this study emerged as a strong influential case in many of the analyses. Rather than reporting results with and without this study each time, we decided to exclude this study from the meta-analysis.
3. To avoid the potentially confounding effects of performance dimension (task vs. contextual) and performance measure (objective vs. subjective), we limited these analyses to subjective measures of task and contextual performance.
4. We found highly similar results using other measures that reflect the strength of the ability-motivation interaction, such as the percentage of change in R (from the additive model to the multiplicative model) and the change in simple slopes.
5. The WLS regression analysis did not include organizational context, job complexity, or performance dimension because these factors were not relevant to laboratory studies. However, neither organizational context nor job complexity was a significant predictor of the ability-motivation interaction when we limited the analysis to field studies. In addition, the small number of task versus contextual performance studies prevented us from including this factor in multivariate analyses.

References

*References marked with an asterisk were included in the meta-analysis.

- *Abod, E. T. 2001. *Interpersonal characteristics and citizenship climate as predictors of contextual performance in organizations*. Unpublished doctoral dissertation, George Mason University, Fairfax, VA.
- Aguinis, H. 1995. Statistical power problems with moderated multiple regression in management research. *Journal of Management*, 21: 1141-1158.
- Aguinis, H., Beaty, J. C., Boik, R. J., & Pierce, C. A. 2005. Effect size and power in assessing moderating effects of categorical variables using multiple regression: A 30-year review. *Journal of Applied Psychology*, 90: 94-107.
- Aguinis, H., Edwards, J. R., & Bradley, K. J. in press. Improving our understanding of moderation and mediation in strategic management research. *Organizational Research Methods*. doi:10.1177/1094428115627498
- Bandura, A. 1997. *Self-efficacy: The exercise of control*. New York: Freeman.
- *Barrick, M. R., Mount, M. K., & Strauss, J. P. 1993. Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology*, 78: 715-722.
- *Barros, E., Kausel, E. E., Cuadra, F., & Diaz, D. A. 2014. Using general mental ability and personality traits to predict job performance in three Chilean organizations. *International Journal of Selection and Assessment*, 22: 432-438.
- Bauer, T. N., & Erdogan, B. 2010. *Organizational behavior* (v1.1). Nyack, NY: Flat World Knowledge.
- *Bell, B. S., & Kozlowski, S. W. J. 2002a. Adaptive guidance: Enhancing self-regulation, knowledge, and performance in technology-based training. *Personnel Psychology*, 55: 267-306.
- Bell, B. S., & Kozlowski, S. W. J. 2002b. Goal orientation and ability: Interactive effects on self-efficacy, performance, and knowledge. *Journal of Applied Psychology*, 87: 497-505.
- *Bell, B. S., & Kozlowski, S. W. J. 2008. Active learning: Effects of core training design elements on self-regulatory processes, learning, and adaptability. *Journal of Applied Psychology*, 93: 296-316.
- Bernerth, J. B., & Aguinis, H. 2016. A critical review and best-practice recommendations for control variable usage. *Personnel Psychology*, 69: 229-283.
- Berry, C. M., Clark, M. A., & McClure, T. K. 2011. Racial/ethnic differences in the criterion-related validity of cognitive ability tests: A qualitative and quantitative review. *Journal of Applied Psychology*, 96: 881-906.
- Bertua, C., Anderson, N., & Salgado, J. F. 2005. The predictive validity of cognitive ability tests: A UK meta-analysis. *Journal of Occupational and Organizational Psychology*, 78: 387-409.
- Beus, J. M., & Whitman, D. S. 2012. The relationship between typical and maximum performance: A meta-analytic examination. *Human Performance*, 25: 355-376.
- *Black, J. 2000. Personality testing and police selection: Utility of the "Big Five." *New Zealand Journal of Psychology*, 29: 2-9.
- *Blau, G. 1993. Operationalizing direction and level of effort and testing their relationships to individual job performance. *Organizational Behavior and Human Decision Processes*, 55: 152-170.
- *Bono, J. E. 2001. *Self-determination at work: The motivational effects of transformational leadership*. Unpublished doctoral dissertation, University of Iowa, Iowa City.
- Bosco, F. A., Aguinis, H., Singh, K., Field, J. G., & Pierce, C. A. 2015. Correlational effect size benchmarks. *Journal of Applied Psychology*, 100: 431-449.
- *Bradley, J. P. 1997. Predicting basic military officer training performance with three types of personality measures: Self-reports, interviewer ratings and reference ratings. *Dissertation Abstracts International: Section B. Sciences and Engineering* (Order no. AAMNQ28477).
- *Brown, K. G. 1996. *Motivational and informational consequences of errors in early skill acquisition: The effects of individual differences and training strategy on perceptions of negative feedback*. Unpublished doctoral dissertation, University of Iowa, Iowa City.
- Campbell, J. P. 1990. Modeling the performance prediction problem in industrial organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology*: 687-732. Palo Alto, CA: Consulting Psychologists Press.
- Campbell, J. P., McCloy, R. A., Oppler, S. H., & Sager, C. E. 1993. A theory of performance. In N. Schmitt & W. C. Borman (Eds.), *Personnel selection in organizations*: 35-70. San Francisco: Jossey-Bass.
- Campbell, J. P., & Wiernik, B. M. 2015. The modeling and assessment of work performance. *Annual Review of Organizational Psychology and Organizational Behavior*, 2: 47-74.
- Carretta, T. R., Teachout, M. S., Ree, M. J., Barto, E. L., King, R. E., & Michaels, C. F. 2014. Consistency of the relations of cognitive ability and personality traits to pilot training performance. *The International Journal of Aviation Psychology*, 24: 247-264.
- Cascio, W. F., & Aguinis, H. 2008. Research in industrial and organizational psychology from 1963 to 2007: Changes, choices, and trends. *Journal of Applied Psychology*, 93: 1062-1081.
- Cerasoli, C. P. 2014. *Performance = Ability \times Motivation: Exploring untested moderators of a popular model*. Unpublished doctoral dissertation, State University of New York, Albany.

- Chen, G., Gully, S. M., & Eden, D. 2004. General self-efficacy and self-esteem: Toward theoretical and empirical distinction between correlated self-evaluations. *Journal of Organizational Behavior*, 25: 375-395.
- Chen, G., Gully, S. M., Whiteman, J.-A., & Kilcullen, R. N. 2000. Examination of relationships among trait-like individual differences, state-like individual differences, and learning performance. *Journal of Applied Psychology*, 85: 835-847.
- *Corker, K. S. 2012. Enhancing achievement through intervention: How conscientiousness and cognitive ability impact responses to goal setting and implementation intentions interventions. *Dissertation Abstracts International: Section B. Sciences and Engineering* (Order no. AAI3512848).
- Dachler, H. P., & Mobley, W. H. 1973. Construct validation of an instrumentality-expectancy-task-goal model of work motivation: Some theoretical boundary conditions. *Journal of Applied Psychology*, 58: 397-418.
- Dalal, R. S., Bhave, D. P., & Fiset, J. 2014. Within-person variability in job performance: A theoretical review and research agenda. *Journal of Management*, 40: 1396-1436.
- Dalton, D. R., Aguinis, H., Dalton, C. A., Bosco, F. A., & Pierce, C. A. 2012. Revisiting the file drawer problem in meta-analysis: An empirical assessment of published and non-published correlation matrices. *Personnel Psychology*, 65: 221-249.
- Diefendorff, J. M., & Chandler, M. M. 2011. Motivating employees. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology (vol. 3): Maintaining, expanding, and contracting the organization*: 65-135. Washington, DC: American Psychological Association.
- DuBois, C. L. Z., Sackett, P. R., Zedeck, S., & Fogli, L. 1993. Further exploration of typical and maximum performance criteria: Definitional issues, prediction, and white-black differences. *Journal of Applied Psychology*, 78: 205-211.
- *Fisher, S. L., & Ford, J. K. 1998. Differential effects of learner effort and goal orientation on two learning outcomes. *Personnel Psychology*, 51: 397-420.
- Fleishman, E. A. 1958. A relationship between incentive motivation and ability level in psychomotor performance. *Journal of Experimental Psychology*, 56: 78-81.
- French, E. G. 1957. Effects of interaction of achievement, motivation, and intelligence on problem-solving success. *American Psychologist*, 12: 399-400.
- Gavin, J. F. 1970. *Ability, effort, and role perception as antecedents of job performance*. Washington, DC: American Psychological Association.
- Gibson, D. E., & Callister, R. R. 2010. Anger in organizations: Review and integration. *Journal of Management*, 36: 66-93.
- Gómez-Mejía, L. R., Balkin, D. B., & Cardy, R. L. 2007. *Managing human resources* (vol. 5). Upper Saddle River, NJ: Pearson Education.
- Gonzalez-Mulé, E., Mount, M. K., & Oh, I.-S. 2014. A meta-analysis of the relationship between general mental ability and nontask performance. *Journal of Applied Psychology*, 99: 1222-1243.
- Guzzo, R. A., Jette, R. D., & Katzell, R. A. 1985. The effects of psychologically based intervention programs on worker productivity: A meta-analysis. *Personnel Psychology*, 38: 275-291.
- *Hausdorf, P. A., & Risavy, S. D. 2015. Predicting training and job performance for transit operators. *International Journal of Selection and Assessment*, 23: 191-195.
- Hattrup, K., O'Connell, M. S., & Wingate, P. H. 1998. Prediction of multidimensional criteria: Distinguishing task and contextual performance. *Human Performance*, 11: 305-319.
- Hedges, L. V., & Olkin, I. 1985. *Statistical methods for meta-analysis*. Orlando: Academic Press.
- Hirschfeld, R. R., Lawson, L., & Mossholder, K. W. 2004. Moderators of the relationship between cognitive ability and performance: General versus context-specific achievement motivation. *Journal of Applied Social Psychology*, 34: 2389-2409.
- Hobfoll, S. E. 1989. Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44: 513-524.
- Hogan, J., & Holland, B. 2003. Using theory to evaluate personality and job-performance relations: A socioanalytic perspective. *Journal of Applied Psychology*, 88: 100-112.
- Hollenbeck, J. R., Brief, A. P., Whitener, E. M., & Pauli, K. E. 1988. An empirical note on the interaction of personality and aptitude in personnel selection. *Journal of Management*, 14: 441-451.
- *Huang, L. 2012. *A multifocal framework of personality applied to training and transfer*. Unpublished doctoral dissertation, Michigan State University, East Lansing.
- Hunter, J. E. 1983. *Test validation for 12,000 jobs: An application of job classification and validity generalization analysis to the General Aptitude Test Battery (GATB)*. Washington, DC: U.S. Department of Labor, U.S. Employment Service.

- Hunter, J. E., & Schmidt, F. L. 1996. Intelligence and job performance. *Psychology, Public Policy, and Law*, 2: 447-472.
- Hunter, J. E., & Schmidt, F. L. 2004. *Methods of meta-analysis: Correcting error and bias in research findings* (2nd ed.). Thousand Oaks, CA: Sage.
- *Iliescu, D., Ilie, A., Ispas, D., & Ion, A. 2012. Emotional intelligence in personnel selection: Applicant reactions, criterion, and incremental validity. *International Journal of Selection and Assessment*, 20: 347-358.
- Johnson, J. W. 2000. A heuristic method for estimating the relative weights of predictor variables in multiple regression. *Multivariate Behavioral Research*, 35: 1-19.
- Kanfer, R. 1990. Motivation theory and industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology*, vol. 1: 75-170. Palo Alto, CA: Consulting Psychologists Press.
- Kanfer, R., & Ackerman, P. L. 1989. Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition. *Journal of Applied Psychology*, 74: 657-690.
- Kanfer, R., Ackerman, P. L., Murtha, T. C., Dugdale, B., & Nelson, L. 1994. Goal setting, conditions of practice, and task performance: A resource allocation perspective. *Journal of Applied Psychology*, 79: 826-835.
- Kanfer, R., Chen, G., & Pritchard, R. D. 2008. Work motivation: Forging new perspectives and directions in the post-millennium. In R. Kanfer, G. Chen, & R. D. Pritchard (Eds.), *Work motivation: Past, present, and future*: 601-632. New York: Taylor & Francis.
- Kanfer, R., & Heggestad, E. D. 1997. Motivational traits and skills: A person-centered approach to work motivation. *Research in Organizational Behavior*, 19: 1-56.
- Katerberg, R., & Blau, G. J. 1983. An examination of level and direction of effort and job performance. *Academy of Management Journal*, 26: 249-257.
- *Kozlowski, S. W. J., & Bell, B. S. 2006. Disentangling achievement orientation and goal setting: Effects on self-regulatory processes. *Journal of Applied Psychology*, 91: 900-916.
- *Krajewski, H. T., Goffin, R. D., McCarthy, J. M., Rothstein, M. G., & Johnston, N. 2006. Comparing the validity of structured interviews for managerial-level employees: Should we look to the past or focus on the future? *Journal of Occupational and Organizational Psychology*, 79: 411-432.
- Landy, F. J., & Conte, J. M. 2004. *Work in the 21st century: An introduction to industrial and organizational psychology*. New York: McGraw-Hill.
- *Latham, G. P., Seijts, G., & Crim, D. 2008. The effects of learning goal difficulty level and cognitive ability on performance. *Canadian Journal of Behavioural Science*, 40: 220-229.
- Lawler, E. E. I., & Porter, L. W. 1967. Antecedent attitudes of effective managerial performance. *Organizational Behavior and Human Performance*, 2: 122-142.
- Le, H., Schmidt, F. L., & Putka, D. J. 2009. The multifaceted nature of measurement artifacts and its implications for estimating construct-level relationships. *Organizational Research Methods*, 12: 165-200.
- LeBreton, J. M., Hargis, M. B., Griepentrog, B., Oswald, F. L., & Ployhart, R. E. 2007. A multidimensional approach for evaluating variables in organizational research and practice. *Personnel Psychology*, 60: 475-498.
- *Lee, Y.-T., Stettler, A., & Antonakis, J. 2011. Incremental validity and indirect effect of ethical development on work performance. *Personality and Individual Differences*, 50: 1110-1115.
- *LePine, J. A., & Van Dyne, L. V. 2001. Voice and cooperative behavior as contrasting forms of contextual performance: Evidence of differential relationships with Big Five personality characteristics and cognitive ability. *Journal of Applied Psychology*, 86: 326-336.
- Locke, E. A., Feren, D. B., McCaleb, V. M., Shaw, K. N., & Denny, A. T. 1980. The relative effectiveness of four methods of motivating employee performance. In K. D. Duncan, M. M. Gruneberg, & D. Wallis (Eds.), *Changes in working life*: 363-388. New York: Wiley.
- Locke, E. A., & Latham, G. P. 1990. *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.
- Maier, N. R. F. 1955. *Psychology in industry: A psychological approach to industrial problems*. Boston: Houghton-Mifflin.
- *Marcus, B., Goffin, R. D., Johnston, N. G., & Rothstein, M. G. 2007. Personality and cognitive ability as predictors of typical and maximum managerial performance. *Human Performance*, 20: 275-285.
- McClelland, G. H., & Judd, C. M. 1993. Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin*, 114: 376-390.
- *McCloy, R. A., Campbell, J. P., & Cudeck, R. 1994. A confirmatory test of a model of performance determinants. *Journal of Applied Psychology*, 79: 493-505.

- Mischel, W. 1973. Toward a cognitive social learning reconceptualization of personality. *Psychological Review*, 80: 252-253.
- Mitchell, T. R., & Daniels, D. 2003. Motivation. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology: Industrial and organizational psychology*, vol. 12: 225-254. Hoboken, NJ: John Wiley & Sons.
- Morgeson, F. P., & Humphrey, S. E. 2006. The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91: 1321-1339.
- *Motowidlo, S. J., & Van Scotter, J. R. 1994. Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, 4: 475-480.
- Mount, M. K., Barrick, M. R., & Strauss, J. P. 1999. The joint relationship of conscientiousness and ability with performance: Test of the interaction hypothesis. *Journal of Management*, 25: 707-721.
- *Mount, M. K., Oh, I.-S., & Burns, M. 2008. Incremental validity of perceptual speed and accuracy over general mental ability. *Personnel Psychology*, 61: 113-139.
- Murphy, K. R., & Russell, C. J. in press. Mend it or end it: Redirecting the search for interactions in the organizational sciences. *Organizational Research Methods*. doi:10.1177/1094428115625322
- *Mussel, P. 2013. Introducing the construct curiosity for predicting job performance. *Journal of Organizational Behavior*, 34: 453-472.
- *Mussel, P., Spengler, M., Litman, J., & Schuler, H. 2011. Development and validation of the German work-related curiosity scale. *European Journal of Psychological Assessment*, 28: 109-117.
- Nathan, B. R., & Alexander, R. A. 1988. A comparison of criteria for test validation: A meta-analytic investigation. *Personnel Psychology*, 41: 517-535.
- O'Connor, B. P. 1998. All-in-one programs for exploring interactions in moderated multiple regression. *Educational and Psychological Measurement*, 58: 833-837.
- *Ono, M., Sachau, D. A., Deal, W. P., Englert, D. R., & Taylor, M. D. 2011. Cognitive ability, emotional intelligence, and the Big Five personality dimensions as predictors of criminal investigator performance. *Criminal Justice and Behavior*, 38: 471-491.
- *Perry, S. J., Hunter, E. M., Witt, L. A., & Harris, K. J. 2010. $P = f(\text{Conscientiousness} \times \text{Ability})$: Examining the facets of conscientiousness. *Human Performance*, 23: 343-360.
- Phillips, J. M., & Gully, S. M. 1997. Role of goal orientation, ability, need for achievement, and locus of control in self-efficacy and goal-setting process. *Journal of Applied Psychology*, 82: 792-802.
- *Ployhart, R. E. 1999. An interactionist approach to assessing personality in work contexts: Construct validation of a predictor of customer service performance. *Dissertation Abstracts International: Section B. Sciences and Engineering* (Order no. AAI9948157).
- Porter, L. W., & Lawler, E. E. I. 1968. *Managerial attitudes and performance*. Homewood, IL: Irwin-Dorsey.
- *Pulakos, E. D., Schmitt, N., Dorsey, D. W., Arad, S., Hedge, J. W., & Borman, W. C. 2002. Predicting adaptive performance: Further tests of a model of adaptability. *Human Performance*, 15: 299-323.
- *Robinson, R. P. 2009. The effect of individual differences on training process variables in a multistage computer-based training context. *Dissertation Abstracts International: Section B. Sciences and Engineering* (Order no. AAI3361738).
- *Robson, S. M., Abraham, J. D., & Weiner, J. 2010. Characteristics of successful direct support professionals: An examination of personality and cognitive ability requirements. *International Journal of Selection and Assessment*, 18: 215-219.
- Rotundo, M., & Sackett, P. R. 2002. The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of Applied Psychology*, 87: 66-80.
- Sackett, P. R., Gruys, M. L., & Ellingson, J. E. 1998. Ability-personality interactions when predicting job performance. *Journal of Applied Psychology*, 83: 545-556.
- Salgado, J. F., Anderson, N., Moscoso, S., Bertua, C., & de Fruyt, F. 2003. International validity generalization of GMA and cognitive abilities: A European community meta-analysis. *Personnel Psychology*, 56: 573-605.
- *Savoy, P. J. 2004. *Development and validation of a measure of self-directed learning competency*. Unpublished doctoral dissertation, Kent State University, Kent, OH.
- *Scheu, C. R. 2008. Using goal orientation to develop customized learning environments: An interactionist approach. *Dissertation Abstracts International: Section B. Sciences and Engineering* (Order no. AAI3332007).
- Schmidt, F. L., & Hunter, J. E. 1992. Development of a causal model of processes determining job performance. *Current Directions in Psychological Science*, 1: 89-92.

- Schmidt, F. L., & Hunter, J. E. 1998. The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin*, 124: 262-274.
- Schmidt, F. L., Hunter, J. E., & Outerbridge, A. N. 1986. The impact of job experience and ability on job knowledge, work sample performance, and supervisory ratings of job performance. *Journal of Applied Psychology*, 71: 432-439.
- *Schmidt, G. B. 2008. *Learning and performance goals: Disentangling the effects of goal specificity*. Unpublished master's thesis, Michigan State University, East Lansing.
- *Seijts, G., & Crim, D. 2009. The combined effects of goal type and cognitive ability on performance. *Motivation and Emotion*, 33: 343-352.
- Speilberger, C. D., Sydeman, S. J., Owen, A. E., & Marsh, B. J. 1999. Measuring anxiety and anger with the State-Trait Anxiety Inventory (STAII) and the State-Trait Anger Expression Inventory (STAXI). In M. E. Maruish (Ed.), *The use of psychological testing for treatment planning and outcomes assessment* (2nd ed.): 993-1021. Mahwah, NJ: Erlbaum.
- *Stanhope, D. S., Pond, S. B., III, & Surface, E. A. 2013. Core self-evaluations and training effectiveness: Prediction through motivational intervening mechanisms. *Journal of Applied Psychology*, 98: 820-831.
- Steel, P. D., & Kammeyer-Mueller, J. D. 2002. Comparing meta-analytic moderator estimation techniques under realistic conditions. *Journal of Applied Psychology*, 87: 96-111.
- Steyer, R., Schmitt, M., & Eid, M. 1999. Latent state-trait theory and research in personality and individual differences. *European Journal of Personality*, 13: 389-408.
- Terborg, J. R. 1977. Validation and extension of an individual differences model of work performance. *Organizational Behavior and Human Performance*, 18: 188-216.
- *Tolli, A. P. 2009. *Motivational and self-regulatory responses to interruptions*. Unpublished doctoral dissertation, University of Akron, Akron, OH.
- Tubbs, M. E. 1986. Goal-setting: A meta-analytic examination of the empirical evidence. *Journal of Applied Psychology*, 71: 474-483.
- *Van Iddekinge, C. H., Ferris, G. R., & Heffner, T. S. 2009. Test of a multistage model of distal and proximal antecedents of leader performance. *Personnel Psychology*, 62: 463-495.
- *Vasilopoulos, N. L., Cucina, J. M., & Hunter, A. E. 2007. Personality and training proficiency: Issues of bandwidth-fidelity and curvilinearity. *Journal of Occupational and Organizational Psychology*, 80: 109-131.
- Vroom, V. H. 1964. *Work and motivation*. New York: Wiley.
- *Watson, A. M., & Surface, E. A. 2012. *Trainee characteristics and achievement during special operations forces initial acquisition foreign language training*. Raleigh, NC: SWA Consulting.
- Watson, D., Clark, L. A., & Tellegen, A. 1988. Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54: 1063-1070.
- *Weilbaecher, A. D. 2000. Self-report personality measures of fake good in employment selection. *Dissertation Abstracts International: Section B. Sciences and Engineering* (Order no. AAI9985678).
- Williams, L. J., & Anderson, S. E. 1991. Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17: 601-617.
- Wonderlic Associates. 1999. *Wonderlic personnel test and scholastic level exam*. Libertyville, IL: Author.
- Wood, J. A. 2008. Methodology for dealing with duplicate study effects in a meta-analysis. *Organizational Research Methods*, 11: 79-95.
- *Wright, P. M., Kacmar, K. M., McMahan, G. C., & Deleeuw, K. 1995. $P=f(M \times A)$: Cognitive ability as a moderator of the relationship between personality and job performance. *Journal of Management*, 21: 1129-1139.
- *Yeo, G. B., & Neal, A. 2004. A multilevel analysis of effort, practice, and performance: Effects of ability, conscientiousness, and goal orientation. *Journal of Applied Psychology*, 89: 231-247.
- Yeo, G., & Neal, A. 2008. Subjective cognitive effort: A model of states, traits, and time. *Journal of Applied Psychology*, 93: 617-631.
- *Ziegler, M., Bensch, D., Maab, U., Schult, V., Vogel, M., & Bühner, M. 2014. Big Five facets as predictor of job training performance: The role of specific job demands. *Learning and Individual Differences*, 29: 1-7.
- Zyphur, M. J., Bradley, J. C., Landis, R. S., & Thoreson, C. J. 2008. The effects of cognitive ability and conscientiousness on performance over time: A censored latent growth model. *Human Performance*, 21: 1-27.

SELECTIVE DISSEMINATION OF INFORMATION (SDI)

Title/Author	Driving employee performance through talent management / Wadhwa, S., & Tripathi, R.
Source	<i>International Journal of Environment, Workplace and Employment</i> Volume 4 No 4 (July 2018) Pages 288–313 https://doi.org/10.1504/IJWE.2018.093412 (Database: https://fardapaper.ir/)

Driving employee performance through talent management

S. Wadhwa*

Department of Management,
Graphic Era University,
Dehradun, Uttarakhand, 15216, India
Fax: +91-135-2644025
Email: shilpawadhwa06@gmail.com

*Corresponding author

R. Tripathi

Department of Administration,
Tight Security Limited,
P.O. Box 7557, Uganda, East Africa
Fax: +256 (0) 414 533 815
Email: rashmi.tripathi2013@gmail.com

Abstract: The purpose of this study is to investigate talent management practices through relevant literature, shedding more light on practices prevalent in commercial banks in India and their relationship with employee performance and providing suggestions to banks so that the banks may use the best of talent management practices to make their employees perform well on the job. The paper opted a survey of approximately 600 bank employees comprising both public and private sector banks operating in Haryana (India). The study covers six selected commercial banks in all, taking three from public sector namely SBI, PNB and OBC and three from the private sector, HDFC, ICICI and Axis Bank. We hypothesised that all the talent management practices significantly enhance the employee performance in both public and private sector banks. The results of the analysis of variance signify that the F- statistic value is 226.311 and is significant at the $p < 0.001$.

Keywords: talent management practices; employee performance; public and private sector banks.

Reference to this paper should be made as follows: Wadhwa, S. and Tripathi, R. (2018) 'Driving employee performance through talent management', *Int. J. Environment, Workplace and Employment*, Vol. 4, No. 4, pp.288–313.

Biographical notes: Shilpa Wadhwa worked four years in academics as an Assistant Professor in Graphic Era Hill University, Dehradun. Since 2011, she has been a Research Scholar at the Graphic Era University, an other wing of Graphic Era Educational Society. She has done an MBA in HR specialisation from GEU and a post graduate diploma in Business Entrepreneurship Management from EDII, Ahmadabad. She teaches Human Resource Management, Organisational Behaviour, Performance and Compensation Management and Training and Development to undergraduate

and postgraduate management students at GEHU. Her current research interests are talent management and cross-culture employment practices in Indian and global context.

Rashmi Tripathi is having 13 years of teaching experience in academics and industry with expertise in Recruitment, Training, Business Communication, Industrial Relations and Organisational Behaviour. She has been teaching MBA students in India and has been associated with Graphic Era University, University of Petroleum and Energy Studies and International Institute for Special Education. She has conducted various research studies for Government of India, viz., study "Evaluation of Rural Telephones – VPTs" in Uttarakhand State sponsored by Planning Commission of India, Mid-term review of "Customized Farmer Training Programme", Implemented by AFC under RKVY, Uttar Pradesh, 2011. She is currently working as an HR Business Consultant with a security services company in Uganda (East Africa). She is certified in FIRO-B and FIRO Business program from CPP, CA, USA.

This paper is a expanded version of a paper entitled 'Driving business value through talent management' presented at *First International On-Line Conference on Research in Science, Engineering and Management (IOCRSEM – 2014)*, Women's Institute of Technology, Uttarakhand Technical University, Dehradun, India, 20 August, 2014.

1 Introduction

Different industries have defined the term Talent and Talent Management in their own terminology and organisations can prefer to accept their own interpretations instead of accepting universal or prescribed definitions. Both the terms 'talent' and 'talent management' are described as follows:

Talent consists of those individuals that may make the greatest difference to organisational performance either by their contribution or by demonstrating highest levels of potential in longer-term (CIPD Factsheet, 2012).

1.1 Talent management

Talent management (TM) is the systematic attraction, identification, retention, development, engagement and deployment of those individuals who have a high potential and those who are of particular value to the organisation. (CIPD Factsheet, 2012) Thus, TM is referred to as the system of incorporating new employees, developing and retaining existing employees and drawing attention to highly skilled employees to work for an organisation.

The concept of Talent Management that was derived from the World War II (Cappelli, 2008), however the strategic importance of Talent Management has been realised when McKinsey consultant's group considered human resource as 'War for Talent' (Scullion and Collings, 2010). For McKinsey, talent means the best and brightest and most of the organisations adopted term to refer to their 'A Level' employees who rank in top 10% to 20%. Such war for talent was realised because of talent shortage, that becomes one of the greatest HR concerns for organisations (Makela et al., 2010). After

that, organisations interested in maximising productivity and effectiveness adopted systematic and rigorous approaches for attracting, selecting, developing and retaining talented key employees (Huselid et al., 2005). Thus, the origin of talent management may be traced with the realisation of the immense value of the human asset for organisational success surpassing every other resource.

1.2 Talent management practices

Talent Management practices are those areas that help in developing, retaining and utilising people with required skills and aptitude to meet the current and future business needs. The foundation of Talent Management is based on certain Talent Management practices such as:

- *workforce planning*: talent strategy should be tightly aligned with business strategy to find out the quality and quantity of talented personnel required
- *recruitment and selection*: hiring right skills is more important than developing them
- *engagement and retention*: developing and implementing practices that reward and support employees
- *employee development*: ensuring continuous informal and formal learning and development
- *leadership development*: specific development programs for existing and future leaders
- *performance management*: specific processes which nurture and support performance, including feedback/measurement
- *succession management*: to develop and elevate talent over time
- *organisation culture*: development of a positive, progressive and high-performance work environment.

1.3 Talent management in banking industry

The Banking sector is one of biggest service sectors in India. The Indian banking system comprises various public and private sector banks serving billions of Indian customers efficiently every day. (Indian Banking Industry-Sectoral report, IBEF). In such a service-oriented industry, people are among most important assets.

Various experts from the banking sector have expressed their views on Talent Management as follows:

According to Chakrabarty (2011), it is the people that make an organisation achieve competitive advantage in this tough and competitive world and banks have to efficiently utilise these people as their employees during each phase starting from recruitment to training and development. Nonetheless, banks face confrontation that makes the management of right talent a difficult task for them. Such challenges comprise fool-proofing, low productivity and efficiency, lack of competition in the banking segment, an aging workforce. Also, the dynamic business environment in banks coupled with the impending entry of new banks is leading to immense pressure of choosing the

best fit from a pool of applicants and retaining the existing talent. (Dr. K.C. Chakrabarty, Deputy Governor of the Reserve Bank of India 2014). Given such conditions, an important question arises as to how can a bank tap full efficiency of every employee, retain and develop career aspects of talent at a reasonable cost?

According to many experts from the banking sector, inadequate nurturing of talent is one of the main reason behind the talent-crisis in organisations in addition to high levels of employee turnover rate. It involves developing and retaining high-performers, as well as looking outside, if necessary, to secure right talent. The benefits of effective talent management may range from high employee satisfaction and low attrition rates to higher productivity and business continuity. Most financial institutions do realise the need for effective talent management to be fair.

Many private banks like HSBC, Standard Chartered, Barclays and Goldman Sachs have instituted a special role in order to oversee talent management throughout the organisation. In 2012, in the response to its top management woes, Citigroup, had created its first-ever position of head of talent management to concentrate on all aspects of senior-level executive development while Standard Chartered has been actively focusing on talent management over the last few years to build leadership capacity and turn talented managers into true leaders. (Peter Sands, group chief executive at Standard Chartered in the bank's 2006 Annual Report). It was because of such a strategic initiative that during the last few years, Standard Chartered bank was able to increase the proportion of women at senior levels and successfully increase the percentage of high performing, highly efficient junior and middle management employees by 26% and 37%, respectively.

Padmaja Alaganandan, Executive Director of consulting firm stated that the public sector banks in the country face a huge test regards to talent and leadership skill availability. In terms of numbers, this would translate to a manpower shortfall of four to five lakhs. Bridging this shortfall would need focus on fast-tracking high potential talent which is possible by proper identification, development and retention. Thus, a bank needs to understand how to implement these strategies in an effective way that not only uplifts the performance of an individual but also of the corporate.

2 Problem statement

In today's dynamics, the labour market is described by the increase in labour mobility, globalisation, shifting demographics, a reduced product lifecycle, an aging workforce and technological advancements (A report prepared by Future of work, 2012). The importance of talent management in organisational operations cannot be embellished. It has become mandatory for banking industry; private and public banks to understand the increasing importance of identifying, sourcing and utilising talented employees. In recent times, private banks are losing some of its employees to other organisations. On the other hand, there has been a shortage of talent in public sector banks in the last few years (Anil Khandelwal, chairman and managing director of Bank of Bododa, 2007) resulting in banks recruiting every year. Proper governance, effective leadership and guiding management system are required to make the work environment conducive to the manpower.

On the other hand, there has been a talent shortage in public sector banks in the last few years (Anil Khandelwal, chairman and managing director of Bank of Bododa, 2007) thus, banks are now recruiting every year. Proper governance leadership and management system is required to make the work environment conducive to the manpower.

Researchers in the past have given different perspectives on the talent management practices. It could be analysed that, so far limited research has been done on Talent Management practices in relation to the banking sector in India. There are so many studies conducted showing the correlation between the talent management practices and employee performance but gap appears in the implementation of the two. The primary objective of the research is to bridge the gap by intensely examining this process through the appropriate literature, keeping bull's eye in the relationship of talent management practices and performance of the employee and providing recommendations to the banks as to make the effective use of talent management practices to enhance the performance of their employees.

3 Research questions and objectives

The research questions are created on the basis of the problem statement. The researcher will answer the following listed research questions in order to achieve the research objectives.

- What talent management practices exist in selected banks in India?
- How are the identified talent management practices enhancing the employee performance?

The main objectives of the study are as follows:

- To identify the talent management practices prevalent in selected Indian banks.
- To examine the role of identified talent management practices to enhance the employee performance in banks.

4 Literature review

Based on published research, Researcher has found Talent Management practices that were common in many industries were Recruitment and selection, succession planning, training and development, performance management, compensation, employee engagement, retention and organisational culture. The current literature review shows different linkages between these talent management practices and their relation with employee performance.

Iqbal et al. (2013) recently studied the relationship between talent management practices and employees emotional stability in Pakistan. Wurim (2012) conducted research on talent management and organisational productivity. the outcome of the study is the implementation of proper talent management policies, processes and programs significantly impact on employees productivity. Talent Management also helps people to handle challenges as, when, and wherever they arise, rather than groom 'high fliers' for the unknown future. Applications examined under this criteria demonstrate more

practical and cost-effective approaches that may boost performance, cut costs, speed up responses, it may also reduce stress and ensure compliance (Coulson-Thomas, 2012a, 2012b). Both people and organisations may benefit and exceptional individuals may have a global impact. They may be helped to become even better and to secure recognition they deserve.

According to the study of Bethke et al. (2011), the focus should be more on HRD system before improving the talent skills of an employee in public sector. To achieve the business goal and generate maximum revenue for the organisation, it is important to work more on HRD first then HRM. Talent Management is however, a deliberate process taken by HR to attract employees, retain existing workforce, motivate them to work for better results and develop their skills with right attitude so as to accomplish current and future needs. Within this climate, talent management has emerged as a key strategic issue. Recently, substantial analysis has focused on the association between talent management and enhanced performance (Boudreau and Ramstad, 2007; Cappelli, 2008; Collings and Mellahi, 2009; Huselid et al., 2005; Ready et al., 2010).

Caliskan (2010) acknowledged HR practices as a source of competitive advantage. Many researchers proved that HR practices generally have a significant and positive relationship with performance of employees (Delery and Doty, 1996; Guest, 2002; Harley, 2002; Huselid, 1995; Qureshi et al., 2006; Tessema and Soeters, 2006).

4.1 Recruitment, Selection and Employee's Performance

Jovanovic (2004) found that through recruitment process you may identify the best candidate among all candidates. Recruitment plays an important role in the development of any organisation. When an organisation does an analysis of its future need they actually make a plan for hiring and firing employees and give rewards to productive employees to retain them (Costello, 2006). Organisational performance is highly motivated by the rewarding process of its employees (Bowen, 2000). To increase the employee performance in the organisation the HR department should intervene and improve the R&S section, modifications on the performance appraisal and potential appraisal to keep employees motivated.

Performance criteria are standards for employee behaviour at work. Such criteria consist of much more than how an employee works. It highlights work performance of an employee. Employees are rated on how well they do their jobs compared with a group of standards determined by the employer.

A related study by Lynch and Smith (2009) showed that recruitment and selection is the first step in employee evaluation process. This is linked with identification, attraction and selection of an appropriate applicant to meet requirements of jobs in the organisation. This plays an important role in the upliftment of any organisation. Alnaqbi (2011) showed positive impact of recruitment and selection toward performance of an employee. This process is important to make sure about outcomes of recruitment and selection process in organisation.

Qureshi et al. (2006) stated that HRM practices are positively and significantly linked with the performance of employee and training and selection is a most important factor affecting employee performance between all others practices.

Armstrong (2008) indicates that if recruitment and selection process is not compromised then the organisation is capable of procuring employees who are

committed to ideals of the organisation. He argues that employees who are recruited and selected objectively tend to be more productive.

4.2 Training and Employee Performance

Sultana et al. (2012) conducted a study in telecom sector of Pakistan, states R^2 as 0.501 that means that 50.1% of the variation in employee performance has been brought by training programs. The above study argues and provides evidence that training can be an effective tool for talent management and enhance the employee performance.

Training plays an important role in the development of an organisation. The market potential get upraised if a company has trained employees. It improves performance as well as increase productivity, and eventually putting companies in the best position to face competition and stay at the top. This means that there is a significant difference between organisations that train their employees and those organisations that do not (Becker et al., 2007).

According to Farooq and Khan (2011), managers are trying their level best to develop employee's capabilities, ultimately making good working environment within organisation. In fact healthy environment increases the efficiency of working employees in a company. For sake of capacity building managers are involved in developing the effective training programs for their employees to equip them with desired knowledge, skills and abilities to achieve organisational goals and all these training programs results high productivity. This struggle by top management not only improves employee performance but also creates a positive image of firm worldwide (Hallinger et al., 2010).

Worker and organisation both get benefited by training programs. Training generates benefits for the employee it enhances knowledge, skills, abilities, competencies and behaviour (Benedicta, 2010). Dabale et al. (2014) says effects of training on employee's performance may often encourage growth within worker and organisation itself. He further says that effects of training on employee performance include meeting and exceeding expectations, cross-training of staff, preparing employees for promotion, maintaining a safe environment.

Cooke quoted that while we assess performance we take into consideration efficiency and effectiveness along with competitiveness and productivity. To facilitate individual there are specific training programs that enhances knowledge and skills of individual. Training not only mentally develops employee but also prepare them to make better their health in order to be with active mind and more productive thought for the organisation (David et al., 2006).

Along with ability of mental and physical development of employees, healthy training not only prepares old age employees to push up their performance, but it also adds effective attributes to working abilities of young workers (Becci, 2006).

Those who want to generate value in an organisation will understand need of training because they require proper utilisation of all resources. An organisation who want continuous progress or development of their employees must run these kinds of programs. This will help in polishing skills of employees at their workplace (Jie and Roger, 2006).

4.3 Compensation and employee performance

Compensation is a major element to influence teachers. Ahmad and Shehzad (2011) conducted a study on the impact of compensation, promotion and performance evaluation practices on performance of university teachers of Jammu and Kashmir. Authors concluded that compensation has a strong and positive impact on the performance of university teachers of J&K. The more teachers are compensated fairly more they will perform better. It automatically enhances working ability.

Compensation is one major factor that motivates employees to work or perform. Baloch et al. (2010) conducted his research on HRM practices to examine their relationship with the perceived performance of employees in private and public sector banks of NWFP. Compensation, promotion and performance evaluation practices were significantly found to be correlated with employee performance and suggested that banks are encouraged to pay proper attention to these three practices.

Compensation is one factor that motivates employees to work or perform. Every individual work to earn for his life. Compensation would force him to work better so as to achieve rewards and bonus. Expectancy theory states that if the pay is linked with the performance of employee, employee will work hard to get a hike. Performance-based compensation is a technique used by firms to increase productivity. It enhance overall productivity of organisation.

Tessema and Soeters (2006) says that there is a positive correlation between compensation practices on employee performance. A Study by Shahazad et al. (2008) showed that there is a direct clear relationship between compensation and performance. Hence productivity of employees will increase if compensation programs are fair. Frye (2004) mentioned that compensation has very vital importance in the organisation. In the organisation that is human capital, intensive compensation plays a vital role because skilled employees will stay with the organisation only if they are been fairly paid. Else competent labour will leave the organisation.

4.4 Engagement, retention and employee performance

Several studies observe that employee engagement initially results in greater employee performance, which further leads to enhanced organisational performance, in terms of Towers Perrin-ISR (2006) and Gallup (2006). A study by Robertson-Smith and Markwick (2009a) points out that engagement provides employees with an opportunity to invest themselves in their work and also creates a sense of self-efficacy. Research on consequences of employee engagement indicates that engagement may result in positive health and positive feelings towards work and organisation. Gallup (2006) reported improved health and well-being in engaged employees. Engagement may lead to mindfulness, intrinsic motivation, creativity, authenticity, non-defensive communication, ethical behaviour. Increased effort and overall a more productive and happy employee (Kahn, 1990, as cited in Robertson-Smith and Markwick, 2009b). Organisational outcomes of engagement could be customer loyalty, employee retention, employee productivity, advocacy of organisation, business success (Robertson-Smith and Markwick, 2009b). Training, employee empowerment and rewards leads to high-performance work practices at workplace and help retain employees (Karatepe, 2013). Employee rewards, employee autonomy and image of company play a major role in employee retention and commitment in organisation (Gberevbie, 2010).

Employee engagement and retention lead to higher customer satisfaction and loyalty especially in the services (Rama Devi, 2009). Organisation's talent management strategy should contribute to employee engagement, effective recruitment and retention of employees. This will create positive employer brand, employees will want to stay with an organisation that will minimise turnover (Hughes and Rog, 2008).

4.5 Organisational culture and employee performance

Highly collective organisations emphasise group harmony, cooperation and reward for enhancing employee performance (Javidan and Dastmalchian, 2009). Organisations Culture may play an important role in creating such an environment that enables learning and innovative response to challenges, competitive threats, or new opportunities. Thus, creating and influencing an adaptive culture is one of a manager's most important jobs (Daft and Weick, 1984).

A strong organisational culture supports adaptation and develops organisation's employee performance by motivating employees toward a shared goal and objective; and finally shaping and channelling employees' behaviour to that specific direction should be at top of operational and functional strategies (Daft and Weick, 1984).

According to Hellriegel and Slocum (2007), organisational culture may enhance performance on a large scale if it may be understood that what sustains a culture. According to these authors culture of an organisation allows employees to be acquainted with both firm's history as well as current methods of operation and this specific detection endows employees with guidance about expected and acceptable future organisational behaviours and norms.

The employee performance would be considered as backbone organisation as it leads to its development effectively. The loyalty of employee relies upon knowledge and awareness of culture that improves behaviour of organisation (Brooks, 2006)

4.6 Workforce planning and employee performance

When we have to relate human resource planning with employee performance, than we consider some of other variables like efficiency and effectiveness, employee motivation, job satisfaction, trust on employees (Woods and Mayer, 2005) Human resource planning is surrounded by three basic level practices that may increase organisational performance:

- to increase knowledge, skills and abilities among employees
- to enhance their empowerment by giving them employment security and organise some participation programs for employees
- to give them motivation through both incentive means like giving them compensation and benefits, and also Information and Knowledge Management through internal promotion like promoting them with their job status (Liu et al., 2007).

Gichuhi et al. (2014), examined the role of talent management on the competitiveness of public universities in Kenya. Survey research design was employed. Stratified sampling was adopted to obtain a representative sample of the study which was made up of both the teaching and non-teaching staff of the Public Universities in Kenya. A questionnaire that employed Likert scale was used to collect data. Factor analysis revealed that all the

16 items used had a loading value above 0.4 as recommended hence they were all included in the analysis. Data analysis revealed a positive relationship $R = 0.498$ (p -value < 0.05) indicating a significant linear relationship between talent management and competitiveness.

Oladapo (2014) carried out a study on the impact of talent management on retention in Strayer University. This study sought to understand the challenges and successes of talent management programs and the reasons why some companies choose not to have a program. This study also tested the predictive power of job security, compensation, and opportunity on retention rates. Findings revealed that for the organisations sampled with a talent management program (69% of those studied), participants overwhelmingly recognised the strategic value of an effective talent management program despite significant challenges to implementation. Participants cited opportunity for job advancement as the most significant factor affecting retention rate. For the organisations sampled without a talent management program (the remaining 31% of those studied), indicated the absence of executive management support. The study further revealed that job security, compensation, and opportunity for advancement were not found to have predictive value for employee retention rates. Though data confirmed Lockwood's findings that although pay and benefits initially attract employees, it is not the primary reason given for retaining them.

Wuim-Pam (2014) investigated the impact of effective talent management on employee core competencies at Plateau State University, Bokkos. Using a non-empirical approach, the result revealed that the skills, knowledge, and abilities of employees impact job descriptions and performance management. The study concluded that tying core competencies with talent management is a win-win proposition as it provides organisations with a means of upgrading and retaining their valuable workforce. Wuim-Pam (2014) therefore recommends the creation of a unique competency models where this skill is lacking within the organisation itself and identification and possession of high-performing behaviours.

Wandia (2013) carried out a study on talent management in Kenya Nairobi at Symphony Ltd. and articulated that managing talents is a source of competitive advantage. The study adopted a case study research design to fulfil the objective of the study and the results were expected to provide an insight in understanding how the organisation uses its dynamic capabilities as a strategic tool. The researcher interviewed seven senior managers at Symphony who were involved in the strategic process of managing organisational talent. The data were collected through the use of the interview guide and content analysis was used to analyse the data. The study revealed that choice of talent management strategy massively affects firms' financial performance as can be reflected on increased sales revenue, increased productivity and increased market share. The study recommended that firms consider business models that invest in talent management and appropriately harness and leverage on intangible assets in the firm to attain competitive advantage.

Haghparast et al. (2012) equally executed a similar study on talent management. The study sought to determine the relationship between element of talent management and organisational success in the Department of Youth and Sport in West Azerbaijan Province. Results showed that between the elements of talent management ($r = 0.430$) and talent management practices ($r = 0.287$), and organisational assessment ($r = 0.346$) and motivational factors ($r = 0.576$), and organisational success is a significant relationship, but the organisational talent identification ($r = 0.115$) and organisational

performance ($r = 0.095$) and organisational planning ($r = 0.162$) was not significantly associated with organisational success.

Pam (2012) critically evaluated the impact of talent management on employee productivity in the Nigerian public sector. A hypothesis in line with the objective was drawn and tested based on data generated through a questionnaire. The survey investigation method was used in collecting data for the study from a sample of 349 top, middle and lower level management staff of five public sector organisations in Nigeria. The Kruskal-Wallis test statistic was used to analyse the data. The findings indicated that the implementation of proper talent management processes significantly impacts employee productivity. It was thus concluded that talent management practices in Nigeria public organisations (where they exist), significantly impact on employee productivity. The study recommended that all actors in talent management should be educated and trained in scientific methods of managing organisational talents.

An exploratory study by Doherty (2010) assessed employee engagement and how to attract and retain the best talents. In the study, Rabo bank International was assessed covering over 340 offices in over 40 countries worldwide because Rabo bank was finding it difficult to consistently manage the performance of its employees to the same standards globally. The study recommended that organisations should be focused on people rather than on processes to save the organisations unnecessary spending of money on recruitment and training. The study revealed that job security, compensation, and opportunity for advancement were not found to have predictive value for employee retention rates. Though data confirmed Lockwood's findings that although pay and benefits initially attract employees, it is not the primary reason given for retaining them.

Based on previously mentioned studies it may be safely assumed that published theoretical aspects of research generally report a positive relationship between greater adoption of Talent management practices and employee performance.

This brings us to the main research hypothesis of this paper.

H1: *Talent Management practices significantly enhance the Employee Performance.*

H2: *There is a significant correlation between identified Talent Management practices on Employee Performance for selected Indian public and private sector banks.*

5 Methodology

The quantitative type of research is applied by using the self administered questionnaire, testing on a population of bank employees to find out the performance of their employees as a result of talent management practices used by the banks. Information was collected from a sample size of 600 respondents as per the requirement of the research out of which 550 samples were taken into study. Sampling frame of six banks was prepared comprising of three public sector banks and three private sector banks from the Haryana state, listed as State Bank of India, Punjab National Bank, OBC Bank among public sector banks and HDFC Bank, ICICI Bank, and AXIS Bank among private sector banks. The survey was personally administered to know the relation among Talent management practices and employee performance.

After gathering the data, returned questionnaires are coded and data entered into SPSS, for the purpose of analysing and tabularising the data descriptively.

The present work is exploratory and descriptive in nature. The study is done in such a way that the data collected only once over a period of months, in order to get the answer to the research question. Therefore, this study is one shot or cross-sectional. An outline of the operational design is presented in Table 1.

Table 2 represents the division of the entire population into subgroups or strata. In this kind of probability sampling, the researcher divides the population, and the final subjects are randomly selected from the different strata. This kind of sampling technique ensures the presence of all groups within the sample, thus considered to be very useful for such studies. Here, the area of sampling comprises of all four divisions of Haryana state: Ambala, Gurgaon, Hisar and Rohtak and the two stratum i.e. private sector banks and public sector have been taken with 275 population size in each stratum. The different banks, i.e., HDFC, ICICI, Axis (private banks) and SBI, PNB, OBC (public banks) are considered as substratum.

Table 1 Research design: the survey design was used to achieve the research

<i>I</i>	<i>Type of investigation</i>	<i>Descriptive study</i>
2	Study method	Survey through self-administered questionnaire and open-end questions
3	Unit of analysis	Public and private banks of Haryana State of India
4	Research design	Cross-sectional
5	Sampling frame	SBI, PNB, OBC and HDFC, ICICI and Axis Bank
6	Target population	Junior/Middle-level employees
7	Sample size	550
8	Sampling technique	Stage 1 – Convenience sampling Stage 2 – Stratified random sampling

Table 2 Stratified random sampling

<i>Stratum</i>	<i>Private sector banks</i>			<i>Public sector banks</i>		
	Population size	HDFC	Axis	ICICI	SBI	PNB
Banks						OBC
Sample size	102	79	94	118	88	69

6 Data analysis and results

The statistical analysis was carried out with the help of the SPSS (SPSS version 20). The analysis of data involved mainly following stages:

- i Descriptive analysis was done. Measures such as mean, maximum-minimum value, weighted mean and standard deviation were calculated.
- ii Cronbach alpha coefficients and inter-item correlations were used to assess the internal consistency of the measuring instruments (Clark and Watson, 1995). The Cronbach's Alpha value of the used scale was found 0.834 on 34 items. As per contemporary researcher in the researches, Cronbach's Alpha value 0.6 or more than

0.6 is acceptable and the research tool is reliable. In our research, the reliability is found 0.834 which is more than 0.6, so, it may be said that the research tool is reliable and valid.

- iii Multiple linear regression was conducted to determine the separate and collective contributions of each of the specified independent variables (talent management practices) to the variations of a dependent variable (employee performance). This is one of the most commonly used multivariate procedures in the social sciences, and is used to build models for explaining and predicting scores on the dependent variable from scores on a number of other independent variables (Terre Blanche and Durrheim, 1999). A cut-off point of $p < 0.05$ was set for the interpretation of the statistical significance of the results.

Descriptive statistics were computed to examine demographic and professional characteristics of the 550 respondents. The statistical software SPSS 21.0 was used for the descriptive statistics. Demographic characteristics of the respondents are presented in Table 3.

Table 3 Descriptive statistics

<i>Descriptive statistics</i>					
	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. deviation</i>
PM1	550	1	5	4.36	0.676
PM2	550	1	5	4.31	0.692
PM3	550	1	5	3.56	0.719
PM4	550	1	5	3.33	0.939
PM5	550	1	5	4.26	0.617
RS1	550	1	5	3.92	0.737
RS2	550	1	5	3.94	0.879
RS3	550	1	5	4.10	0.730
RS4	550	1	5	3.53	0.848
CM1	550	1	5	4.05	0.693
CM2	550	1	5	3.46	0.856
CM3	550	1	5	4.04	0.738
CM4	550	1	5	3.47	0.948
TD1	550	1	5	3.89	0.749
TD2	550	1	5	3.76	0.767
TD3	550	1	5	3.58	0.921
ER1	550	1	5	3.46	0.792
ER2	550	1	5	3.52	0.811
ER3	550	1	5	3.61	0.700
ER4	550	1	5	3.60	0.889

Table 3 Descriptive statistics (continued)

<i>Descriptive statistics</i>	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. deviation</i>
ER5	550	1	5	4.01	0.623
ER6	550	1	5	3.93	0.731
EP1	550	1	5	4.08	0.687
EP2	550	1	5	3.55	0.860
EP3	550	1	5	3.97	0.592
EP4	550	1	5	3.54	0.699
EP5	550	1	5	3.95	0.716
EP6	550	1	5	3.52	0.932
EP7	550	1	5	4.01	0.793
EP8	550	1	5	3.46	0.804
EP9	550	1	5	4.27	0.664
EP10	550	1	5	3.55	0.891
EP11	550	1	5	3.80	0.800
EP12	549	1	5	3.53	0.868
Valid <i>N</i> (listwise)	549				

Table 4 represents the composite mean and standard deviation of all independent and dependent variables.

Table 4 Descriptive statistics

	<i>Mean</i>	<i>Std. deviation</i>	<i>N</i>
EP	3.83	0.432	550
PM	3.94	0.490	550
RS	3.99	0.533	550
CM	3.91	0.477	550
TD	3.77	0.576	550
ER	3.80	0.438	550

Table 5 represents the reliability statistics which is considered high, with the Cronbach alpha value of 0.834, which is greater than the acceptable value of 0.6 recommended by Hair et al. (2010).

Table 6 provides the summary of all the inter-construct correlations.

Table 5 Reliability statistics

<i>Cronbach's alpha</i>	<i>No. of items</i>
0.834	34

Table 6 Correlations

<i>Correlations</i>		<i>EP</i>	<i>PM</i>	<i>RS</i>	<i>CM</i>	<i>TD</i>	<i>ER</i>
Pearson correlation	EP	1.000	0.508	0.450	0.397	0.363	0.627
	PM	0.508	1.000	0.472	0.385	0.276	0.392
	RS	0.450	0.472	1.000	0.189	0.229	0.350
	CM	0.397	0.385	0.189	1.000	0.368	0.284
	TD	0.363	0.276	0.229	0.368	1.000	0.378
	ER	0.627	0.392	0.350	0.284	0.378	1.000
Sig. (1-tailed)	EP	—	0.000	0.000	0.011	0.000	0.000
	PM	0.000	—	0.000	0.000	0.000	0.000
	RS	0.000	0.000	—	0.000	0.000	0.000
	CM	0.011	0.000	0.000	—	0.000	0.024
	TD	0.000	0.000	0.000	0.000	—	0.000
	ER	0.000	0.000	0.000	0.024	0.000	—
<i>N</i>	EP	550	550	550	550	550	550
	PM	550	550	550	550	550	550
	RS	550	550	550	550	550	550
	CM	550	550	550	550	550	550
	TD	550	550	550	550	550	550
	ER	550	550	550	550	550	550

Table 7 represents the results of multiple regression analysis and ANOVA respectively.

Table 8 represents the summary of regression model showing the value of R square and adjusted Rsquare as 0.641.

This section contains the results of the study.

Hypothesis 1: Talent management practices significantly enhance the employee performance.

The results of the analysis of variance signifies that the *F*-statistic value is 226.311 and is significant at the $p < 0.001$. The coefficient of determination (R-Squared) is found to be 0.676, i.e., 67.6%, which is above the minimum criteria of 30% (Hair et al., 2010). The standardised regression coefficients of each of the respective independent variable are compared with the each other, due to their standardised nature. The latent construct compensation management ($B = 0.423437$, $SE = 0.0251$, t -value = 16.80972, $p < 0.001$) tend to have more impact towards employee performance followed by training and development ($B = 0.23$, $SE = 0.024$, t -value = 9.609, $p < 0.001$) and performance management ($B = 0.22$, $SE = 0.035$, t -value = 6.35, $p < 0.001$).

Hypothesis 2: There is a significant correlation between identified Talent management practices on employee performance for selected Indian public and private sector banks.

Table 7 Multiple regression analysis

<i>Summary output</i>				
<i>Regression statistics</i>				
Multiple <i>R</i>				0.803249
<i>R</i> square				0.645209
Adjusted <i>R</i> square				0.641948
Standard error				0.249132
Observations				550
<i>ANOVA</i>				
	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>
Regression	5	61.40271458	12.28054	197.8597336
Residual	544	33.76440079	0.062067	
Total	549	95.16711537		
	<i>Coefficients</i>	<i>Standard error</i>	<i>t-stat.</i>	<i>P-value</i>
Intercept	0.250493	0.136166293	1.839608	0.066370538
PM	0.226516	0.035660774	6.351976	4.49315E-10
RS	0.171368	0.032726422	5.236379	2.3438E-07
CM	0.003437	0.025197273	0.136408	0.891549061
TD	0.032168	0.024160267	1.33146	0.183595208
ER	0.49389	0.033346641	14.81077	6.0734E-42

Table 9 shows that the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is 0.000, which is below 0.05 and, therefore, there is a statistically significant difference public and private sector banks with respect to the talent management practices. Since, there are only two groups are involved as part of the analysis, there is no need to undergo any post hoc analysis such as Tukey Krammer test.

Table 8 Model summary^b

Model	<i>R</i>	<i>R</i> square	<i>Adjusted R</i> square	<i>Std. error of the estimate</i>	<i>Change statistics</i>					
					<i>R</i> square change	<i>F</i> change	<i>df1</i>	<i>df2</i>	<i>Sig. F</i>	Durbin-Watson
1	0.803 ^a	0.645	0.641	0.249	0.649	113.071	5	544	0.000	1.629

^aPredictors: (Constant), ER, CM, RS, TD, PM.

^bDependent variable: EP.

Table 9 ANOVA table

<i>Model</i>		<i>Sum of squares</i>	<i>Df</i>	<i>Mean square</i>	<i>F</i>	<i>Sig.</i>
1	Regression	52.283	5	10.457	113.071	0.000 ^a
	Residual	50.308	544	0.092		
	Total	102.591	549			

^aPredictors: (Constant), ER, CM, RS, TD, PM.

Performance management activities performed by both the public sector and private sector have a significant influence on employee performance ($B = 0.22$, $SE = 0.035$, t -value = 6.35 , $p < 0.001$).

Recruitment and selection activities performed by both the public sector and private sector have a significant influence on employee performance ($B = 0.171$, $SE = 0.0327$, t -value = 5.236379 , $p < 0.001$).

Compensation management activities performed by both the public sector and private sector have a significant influence on employee performance ($B = 0.423437$, $SE = 0.0251$, t -value = 16.80972 , $p < 0.001$).

Training and Development activities performed by both the public sector and private sector have a significant influence on employee performance ($B = 0.23$, $SE = 0.024$, t -value = 9.609 , $p < 0.001$).

Employee Engagement and Retention activities performed by both the public sector and private sector have a significant influence on employee performance ($B = 0.149389$, $SE = 0.033346641$, t -value = 4.5151 , $p < 0.001$).

Based on the statistics developed from the result of the survey, it has been observed that the Talent management practices enhance the employee performance in both the public and private sector banks in India. Getting talent management right means think less about talent problems and more about employment opportunities. Specific areas of talent management have been identified in existing research that could add the most value to employees and organisation as well.

7 Findings and discussion

The proposed research model shows the empirical effect of talent management practices on employee performance significantly. The model also represents the standardised beta coefficients along with the coefficient of determination (R -squared). This model is applicable to both public and private sector banks.

8 Conclusion

This study found that there is an existence of a strong relationship between talent management practices and employee performance at bank.

From the findings of the study it can be concluded that the explanatory factor compensation management tend to have more impact towards employee performance followed by performance management and training and development. The study established that attractive compensation packages motivated the employees of both public and private sector banks in India. Therefore, bank needs to develop the talent by providing high salary, motivating them through various performance management and development programs which directly influence the employee performance.

To conclude, examination of literature and statistics developed from the result of survey on this topic offers guidance in how these talent management practices affects employees and business and benefits of talent management practices will drive true

employee success. Also, it is concluded that talent management is a key determinant of business success and a competitive resource forcing organisations to reexamine how they manage the great potentials of top performers.

9 Recommendation

Sequel to the conclusion, this study recommends the following:

In private sector banking organisations: Young Talent is dynamic; but they need good opportunities to explore themselves. Organisations should focus more on potential of the employees, for practising effective Talent Management. There should be fast track route available for talented candidates so that they can pursue their carrier goal. There should be an unbiased, reliable way to identify talented employees and also programs should be conducted for retaining those employees. Strength of the employee should be identified so that it can be used efficiently. There should be a clear-cut talent strategy in an organisation, which is to identify high potentials to develop. Also a congenial work environment should be maintained to constantly motivate talent holders to retain them.

In public sector banking organisations: Care should be taken for candidates skills during recruitment, it should not be based only on entrance exams. Competition should be created between employees and rewards should be given for extra talent. Job rotation and promotion should be given on the basis of performance. The equal platform should be provided for all candidates to perform and encourage career growth for the potential. Talent management initiatives should be more.

The competitive model for talent management remains prevalent for much of the public sector. It is questionable whether this model will be robust enough in the face of the ever-intensifying struggle for talent. Organisations wishing to develop their talent management approaches might do well to consider adopting other perspectives that are based on a more structured approach to spotting and developing talent.

Talent management approaches need to be built around a clear, coherent model of leadership. The research reveals that talent management will work only when managers have a shared understanding about what it means to be effective from employee and employer perspective.

References

- Ahmad, S. and Shehzad, K. (2011) 'HRM and employee performance', *African Journal of Business Management*, Vol. 5, No. 13, pp.5249–5253.
- Alnaqbi, W. (2011) *The Relationship between Human Resource Practices & Employee Retention in Public Organizations: An Exploratory Study Conducted in the UAE*, Edith Cowan University.
- Armstrong, M. (2008) *A Handbook of Human Resource Management Practice*, 10th ed., London.
- Baloch, Q.B., Ali, N., Kiani, T.S., Ahsan, A. and Mufty, A. (2010) 'Relationship between HR practices and perceived employees' performance of bankers in NWFP, Pakistan (An Empirical Evidence)', *European Journal of Social Sciences*, Vol. 18, No. 2, pp.210–214.
- Becci, N. (2006) 'Training an age-diverse workforce', *Industrial and Commercial Training*, Vol. 38, No. 2, pp.93–97.

- Becker, D.V., Kenrick, D.T., Neuberg, S.L., Blackwell, K.C. and Smith, D.M. (2007) 'The confounded nature of angry men and happy women', *Journal of Personality and Social Psychology*, Vol. 92, pp.179–190.
- Benedicta, A. (2010) *The Impact of Training on Employee Performance: A Case Study of HFC Bank (GHANA) Ltd*, April, pp.15–17.
- Bethke, L., Mahler, P. and Staffel, B. (2011) 'Effectiveness of talent management strategies', *European Journals of International Management*, Vol. 5, p.524.
- Boudreau, J.W. and Ramstad, P.M. (2007) *The New Science of Human Capital*, 1st ed., Harvard Business School Press, Boston, p.272.
- Bowen, F.E. (2000) *Business Strategy and the Environment*, Vol. 9, No. 2, pp 92–107, March/April 2000.
- Brooks, I. (2006) *Organizational Behaviour: Individuals, Groups and Organization*, Pearson Education Limited, Essex.
- Caliskan, N.E. (2010) 'The impact of strategic human resource management on organizational performance', *Naval Engineers Journal*, Vol. 6, No. 2, pp.100–116.
- Cappelli, P. (2008) *Talent on Demand: Managing Talent in an Age of Uncertainty*, Harvard Business School Press, Boston, p.304.
- Chakrabarty, K.C. (2011) *Keynote address by Deputy Governor of the Reserve Bank of India, at Seminar on Talent Acquisition and Management organized by the IBPS*, Mumbai, 31 May, 2011.
- Chartered Institute of Personnel and Development (CIPD Factsheet) (2012) August, Retrieved 20 November, 2012 from <http://www.cipd.co.uk/hrresources/factsheets/talent-managementoverview.aspx>
- Clark and Watson (1995) 'Constructing validity: basic issues in objective scale development', *Psychological Assessment*, Vol. 7, No. 3, pp.309–319.
- Collings, D.G. and Mellahi, K. (2009) 'Strategic talent management: a review and research agenda', *Human Resource Management Review*, Vol. 19, No. 4, pp.304–313.
- Costello, D. (2006) 'Leveraging the employee life cycle', *CRM Magazine*, Vol. 10, No. 12, pp.48–48.
- Coulson-Thomas, C. (2012a) *Talent Management 2 a Quicker & More Cost-effective Route to High Performance Organisation*, 1st ed., Policy Publications, Peterborough.
- Coulson-Thomas, C. (2012b) *Transforming Public Services: A Quicker & Affordable Route to High Performance Public Organisations*, 2nd ed., Policy Publications, Peterborough.
- Dabale, W.P., Jagero, N. and Nyauchi, M. (2014) 'The relationship between training and employee performance: the case of Mutare City Council, Zimbabwe', *International Journal of Human Resource Studies*, Vol. 4, No. 4, pp.2162–6058.
- Daft, R.L. and Weick, K.E. (1984) 'Toward a model of organizations as interpretation systems', *Academy of Management Review*, Vol. 9, No. 2, pp.284–295.
- David, L., Huber, W., Granovoskaia, M., Toedling, J., Palm, C.J., Bofkin, L., Jones, T., Davis, R.W., Steinmetz L.M. (2006) 'A high-resolution map of transcription in the yeast genome', *Proc. Natl. Acad. Sci. USA*, Vol. 103, No. 14, pp.5320–5325.
- Delery, J.E. and Doty, D.H. (1996) 'Modes of theorizing in strategic human resource management: Tests of universalistic, contingency & configurational performance predictions', *Academy of Management Journal*, Vol. 39, No. 4, pp.802–835.
- Doherty, N.F. (2010) 'Internet retailing: the past, the present and the future', *International Journal of Retail & Distribution Management*, Vol. 38, Nos. 11–12, pp.943–965.
- Farooq, M. and Khan, M.A. (2011) 'Impact of training and feedback on employee performance', *Far East Journal of Psychology and Business*, Vol. 5, No. 2, pp.23–33.
- Frye, M.B. (2004) 'Equity based compensation for employees: firm performance and determinants', *The Journal of Financial Research*, Vol. 27, No. 1, pp.31–54.

- Gallup, S. (2006) 'Engaged employees inspire company innovation', *Gallup Management Journal*, <http://gmj.gallup.com/content/default.aspx?ci=24880&pg=1>
- Gberevbie, D.E. (2010) 'Organizational retention strategies and employee performance of Zenith Bank in Nigeria', *African Journal of Economic and Management Studies*, Vol. 1, No. 1, pp.61–74.
- Gichuhi, D.M., Gakure, R.W. and Waititu, A.G. (2014) 'Talent Management; Its role on competitiveness of public universities in Kenya', *IOSR Journal of Humanities and Social Sciences (IOSR-JHSS)*, Vol. 19, No. 1, Ver. III (January 2014), pp.100–105.
- Guest, D.E. (2002) 'Perspectives on the study of work-life balance', *Sage Journals*, Vol. 41, No. 2, pp.255–279.
- Haghparast, S., Moharamzadeh, M. and Mohamadzadeh, H. (2012) 'Relationship between talent management and organizational success', *International Research Journal of Applied and Basic Sciences*, Vol. 3, No. 12, pp.2424–2430.
- Hair *et al.* (2010) *Multivariate Data Analysis*, 7th ed., Prentice Hall, Upper Saddle River, New Jersey.
- Hallinger, P., Lu, J. and Showanasai, P. (2010) 'Learning to lead organizational change: assessment of a problem-based simulation in Thailand', *Educational Review*, Vol. 62, No. 4, pp.467–486.
- Harley, B. (2002) 'Employee responses to high performance work system practices: an analysis of the Awirs data', *The Journal of Industrial Relations*, Vol. 44, No. 3, pp.418–434.
- Hellriegel, D. and Slocum, J.M. (2007) *Organizational Behavior*, South-Western, USA.
- Hughes, J.C. and Rog, E. (2008) 'Talent management: a strategy for improving employee recruitment, retention and engagement within hospitality organizations', *International Journal of Contemporary Hospitality Management*, Vol. 20, No. 7, pp.743–757.
- Huselid, M.A., (1995) 'The impact of human resource management practices on turnover, productivity and corporate financial performance', *Academy of Management Journal*, Vol. 38, No. 3, pp.635–672.
- Huselid, M.A., Beatty, R.W. and Becker, B.E. (2005) "A players" or "A positions?" The strategic logic of workforce management', *Harvard Business Review*, Vol. 83, No. 12, December, pp.110–117.
- Iqbal, S., Rehman, N., Kortz, U. and Iqbal, J. (2013) 'Development of a fast and efficient CE enzyme assay for the characterization and inhibition studies of alpha-glucosidase inhibitors', *J. Sep. Sci.*, Vol. 36, Nos. 21–22, pp.3623–3628.
- Javidan, M. and Dastmalchian, A. (2009) 'Managerial implications of the GLOBE project: a study of 62 societies', *Asia Pacific Journal of Human Resources*, Vol. 47, No. 1, pp.41–58.
- Jie, S. and Roger, D. (2006) 'Training and management development in Chinese multinational enterprises', *Employee Relations*, Vol. 28, No. 4, pp.342–362.
- Jovanovic, B. (2004) 'Selection and the evolution of industry', *Econometrica*, Vol. 50, No. 3, pp.649–670.
- Kahn, W.A. (1990) 'To be fully there: psychological presence at work', *Human Relations*, Vol. 45, No. 4, pp.321–349.
- Karatepe, O.M. (2013) 'High-performance work practices, work social support and their effects on job embeddedness and turnover intentions', *International Journal of Contemporary Hospitality Management*, Vol. 25, No. 6, pp.903–921.
- Liu, Y., Combs, J.G., Ketchen Jr., D.J. and Ireland, R.D. (2007) 'The value of human resource management for organizational performance', *Business Horizons*, Vol. 50, pp.503–511.
- Lynch, S. and Smith, K. (2009) 'The dilemma of judging unpaid workers', *Personnel Review*, Vol. 39, No. 1, 80–95.
- Makela, K., Bjorkman, I. and Ehrnrooth, M. (2010) 'How do MNCs establish their talent pools? Influences on individuals' likelihood of being labeled as talent', *Journal of World Business*, Vol. 45, pp.134–142.

- Oladapo, V. (2014) 'Impact of talent management on retention', *Journal of Business Studies, Quarterly*, Vol. 5, No. 3, pp.1–18, ISSN 2152-1034.
- Pam, W.B. (2012) 'Talent management and employee productivity in public sector organizations of Nigeria', *Journal of Management and Corporate Governance*, Vol. 4, pp.1–13.
- Qureshi, M.T., Ramay, I.M. and Marwat, Z.A. (2006) *Impact of Human Resource Management Practices on Organizational Performance in Pakistan*, Muhammad Ali Jinnah University Islamabad.
- Rama Devi, V. (2009) 'Employee engagement is a two-way street', *Human Resource Management International Digest*, Vol. 17, No. 2, pp.3, 4.
- Ready, D.A., Conger, J.A. and Hill, L.A. (2010) 'Are you a high potential?', *Harvard Business Review*, Vol. 88, No. 6, pp.78–84.
- Robertson-Smith, G. and Markwick, C. (2009a) *Employee Engagement: A Review of Current Thinking*, Institute for Employment Studies.
- Robertson-Smith, G. and Markwick, C. (2009b) *A Study on the Drivers of Employee Engagement Impacting Employee Performance*.
- Scullion, H. and Collings, D.G. (2010) 'Global talent management', *Journal of World Business*, Vol. 45, No. 2, pp.105–196.
- Shahzad, K., Bashir, S. and Ramay, M. (2008) 'Impact of HR practices on perceived performance of University Teachers in Pakistan', *International Review of Business Research*, Vol. 4. No. 1, pp.302–315.
- Sultana, A., Irum, S., Ahmed, K. and Mahmood, N. (2012) 'Impact of training on employee performance: a study of telecommunication sector in Pakistan', *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 4, No. 6, pp.646–661.
- Terre Blanche, M. and Durrheim, K. (Eds.) (1999) 'Social constructionist methods', *Research in Practice: Applied Methods for the Social Sciences*, University of Cape Town Press, Cape Town, SA, pp.147–177.
- Tessema, M.T. and Soeters, J.L. (2006) 'Challenges & practices of HRM in developing countries: testing HRM-performance link in Eritrean civil service', *International Journal of Human Resource*, Vol. 17, No. 1 pp.86–105.
- Towers Perrin-ISR (2006) 'Engaged employees help boost the bottom line', *Journal of Service Science and Management*, Towers Perrin-ISR, US, Vol. 8, No. 2, 1 pp.1–15.
- Wandia, S.M. (2013) *Talent Management as a Source of Competitive Advantage: A Case Study of Symphony (K) Ltd.*, The University of Nairobi, Kenya.
- Woods, R.H. and Mayer, K.J. (2005) 'Examining the impact of human resources management on organizational performance', *Academy of Management Proceedings*, Vol. 1, No. 1, pp.1–6.
- Wuim-Pam, B. (2014) *Employee Core Competencies for Effective Talent Management*, Vol. 4, No. 3, pp.49–55, <http://doi.org/10.5923/j.hrmr.20140403.01>
- Wurim, B.P. (2012) 'Talent management and employee productivity in public sector organizations in Nigeria', *Journal of Management and Corporate Governance*, Vol. 4, No. 1, pp.42–55.

Bibliography

- Blessing, W. (2006) *Beyond the Numbers: A Practical Approach for Individuals, Managers and Executives*, Available from <http://blessingwhite.com/research>
- Costello, E.K., Stagaman, K., Dethlefson, L., Bohannan, B.J. and Relman, D.A. (2012) *The Application of Ecological Theory Toward an Understanding of the Human Microbiome*, Science (New York, N.Y.), Vol. 336, pp.1255–1262, DOI:10.1126/science.1224203.
- Coulson, T. (2007) *Winning Companies; Winning People: Making it Easy for Average Performers to Adopt Winning Behaviour*, 1st ed., Policy Publications, Peterborough.

- Coulson, T. (2011) *Talent Management & High Performing Organizations*, Retrieved 15 September, 2012 from http://www.thomas.com/coulson_thomas_webinar_intro_talent.php (August 2011).
- Ostroff, C. and Bowen, D.E. (2000) 'Moving HR to a higher level: HR practices and organizational effectiveness', in Klein, K.K. and Kozlowski, S.W.J. (Eds.): *Multilevel Theory, Research, and Methods in Organizations: Foundations, Extensions and New Directions*, Jossey-Bass, San Francisco, CA, pp.1-19.
- Ready, A. and Conger, J.A. (2007) 'Make your company a talent factory', *Harvard Business Review*, Vol. 85, No. 14, pp.68-77.
- Soharab, A. and Khurram, S. (2011) HRM and employee performance: a case of university teachers of Azad Jammu and Kashmir (AJK) in Pakistan', *African Journal of Business Management*, Vol. 5, No. 13, pp.5249-52553, 4 July, 2011, Available at www.academicejournals.org/AJBM, ISSN 1993-8233 ©2011 Academic Journals.

Annexure

Questionnaire

Role of talent management practices in enhancing employee performance - A comparative study of public and private sector banks in Haryana

Dear All,

This questionnaire is designed to collect information about how the banking industry is identifying and managing talent for enhancing employee performance.

I would request for your sincere and honest support to achieve the objective of this study. The information provided here would be used for academic purpose only.

Name

Age (in years)

Total work experience

Designation

Highest educational qualification

Name and address of the bank

Definition: Talent management is the systematic attraction, identification, development, engagement, retention and deployment of those individuals with high potential and who are of particular value to an organisation.

Talent management practices helps in developing, retaining and utilising people with the required skills and aptitude to meet current and future needs, i.e., workforce planning, recruitment and selection, engagement and retention, employee development, leadership development, performance management, succession management and organisation culture.

(A) The following statements focus on common Talent Management practices prevalent in Indian banks. Please mark your level of agreement for each of the statement:

5 – Strongly agree

4 – Agree

3 – Neither agree nor disagree

2 – Disagree

1 – Strongly disagree

<i>Strongly agree</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Strongly disagree</i>
5	4	3	2	1

I. Performance management

1. The bank has an effective appraisal system in place.
2. Employees receive transparent feedback on their performance.
3. Employees have autonomy over the way they perform work.
4. The bank has a system to identify employees training and development needs.
5. The performance management system of the bank has helped employees to achieve their goals.

II. Recruitment and selection

6. The bank has an effective recruitment and selection process in place.
7. The bank fills vacant positions from internal and external sources.
8. The job roles and responsibilities are clearly defined to employees.
9. Employees feel that bank has a transparent selection process to identify talent.

III. Compensation management

10. Employees feel that compensation packages are competitive in bank
11. Employees receive adequate salary comparable to the efforts required to fulfil their job responsibilities
12. The Bank offers annual performance bonus (APB) and performance linked incentives (PLI) to employees
13. Salary package is based on employee's competency and experience.

(A) The following statements focus on common Talent Management practices prevalent in Indian banks. Please mark your level of agreement for each of the statement:

5 – Strongly agree

4 – Agree

3 – Neither agree nor disagree

2 – Disagree

1 – Strongly disagree

<i>Strongly agree</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Strongly disagree</i>
5	4	3	2	1

IV. Training and development

14. The bank conducts effective training and development programs on a regular basis.
15. The bank provides ample career growth and development opportunities.
16. Supervisor gets into one-to-one discussion with employees in order to improve their knowledge, skills and performance.

V. Employee engagement and retention

17. The bank has effective policies and programs to retain employees and keep them motivated.
 18. The bank provides a good, comfortable and safe working environment.
 19. Employees are able to maintain work-life balance in their job.
 20. Employees are encouraged to get involved in all functional areas of bank.
 21. Employees have job security at bank.
 22. Employees work is often recognised and praised by their superiors.
-

(B). Please indicate the extent to which you perceive your performance in the bank.

5 – Strongly agree

4 – Agree

3 – Neither agree nor disagree

2 – Disagree

1 – Strongly disagree

	<i>Strongly agree</i> 5	<i>Agree</i> 4	<i>Undecided</i> 3	<i>Disagree</i> 2	<i>Strongly disagree</i> 1
1. Employees are regular to their job.					
2. Employees arrive for work on time.					
3. Employees are able to meet deadlines while accomplishing the tasks.					
4. Employees are able to handle bank resources very efficiently.					
5. Employees take initiatives in their job as required.					
6. Employees consult with their supervisors and colleagues when required.					
7. Employees are able to work without supervision when required.					
8. Employees are able to work in teams					
9. Employees are able to provide effective customer service.					
10. Employees are able to plan their work to give desired results.					
11. Employees are responsible for their performance.					
12. The supervisor is satisfied with the employees performance.					

Interview Questions

Ques.1. What difficulties do you face while implementing Talent Management practices in Organization?

.....
.....
.....

Ques.2. Do these Talent management practices actually helps employees to perform during the Job?

.....
.....
.....
.....

Ques.3 In your own perspective, how do you think TM practices can be best design to effectively motivate employees for effective performance.

.....
.....
.....

Ques.4. Mention any other dimension of Talent management, which is not described here but helps employees in performing better?

.....
.....
.....

..... Thanks

Title/Author	Exploring millennial psychological contract expectations across talent segments / Pant, J.J., Venkateswaran, V.
Source	<i>Employee Relations</i> Volume 41 Issue 4 (June 2019) Pages 773-792 https://doi.org/10.1108/ER-04-2018-0096 (Database: Emerald Insight)

Exploring millennial psychological contract expectations across talent segments

Talent segments

773

Jyoti Joshi Pant

Department of Human Resources,

*Prin. L.N. Welingkar Institute of Management Development and Research,
Bengaluru, India, and*

Vijaya Venkateswaran

*Department of OBHR, Indian Institute of Management Tiruchirappalli,
Tiruchirappalli, India*

Received 4 April 2018

Revised 7 December 2018

29 January 2019

Accepted 30 January 2019

Abstract

Purpose – The purpose of this paper is to identify talent segments within the millennial generation based on performance and intention to stay and differentiate them in terms of their expectations. Based on results, the paper proposes a customized approach to talent management.

Design/methodology/approach – The paper uses a mixed methodology, including 11 exploratory focus group discussions, followed by a survey involving 1,065 employees from nine information technology and business process management companies.

Findings – The paper creates a framework of talent segments (performing loyalists, performing movers, developing loyalists and developing movers) that have different values for the organization. Significant differences are observed in their PC expectations from the manager, PC expectations related to career growth and development and PC expectations related to job and work environment.

Research limitations/implications – Researchers faced constraints in obtaining actual performance data from the organizations; therefore, a self-perception report of performance was used.

Practical implications – Organizations' talent-management strategy must acknowledge and understand the differences in PC expectations of talent segments and offer tailored TM programs for maximum impact.

Social implications – The paper challenges the old assumption of a uniform psychological contract (PC) that has guided the talent management strategy. Every talent segment has value and must be viewed on continuum rather than a binary construct of "Talent or no talent."

Originality/value – This is one of the few studies which explores how the perception of PC expectations differs between talent segments. It contributes to literature on talent segments, PC and the millennial generation.

Keywords Expectations, Psychological contract, Millennial generation, Talent segments

Paper type Research paper

Introduction

Globally, competition has intensified for talent, and organizations face unprecedented challenges in managing employee performance and retention. High performing and high engaging employees with an aspiration to succeed in important positions constitute talent (Naim and Lenka, 2017b). Given the limited resources, it is important that organizations segment their workforce and deploy resources to develop their most critical employees (Seopa *et al.*, 2015). Such strategy to attract, develop and retain talent will enable organizations gain competitive advantage (Philips, 2008).

With a worldwide demand for its services, the technology (IT) and business process management (BPM) industry is fast growing. In 2017, with an 8 percent growth rate, its revenues stood at US \$154 billion. It is the largest private employer in India generating indirect employment for 10 million employees. Challenging jobs make this industry attractive to youngsters. With an average age of 27 years, it is their largest employer (NASSCOM, 2015, 2016, 2017). To deliver performance and sustain its growth, this industry needs a continuous supply of high performing and loyal employees. The average voluntary employee attrition for



Employee Relations: The
International Journal
Vol. 41 No. 4, 2019
pp. 773-792

© Emerald Publishing Limited
0142-5455
DOI 10.1108/ER-04-2018-0096

2017–2018 ranged between 14.6 and 15.1 percent (KPMG, 2018). Development and retention of talent is a major challenge in the IT industry. Understanding needs of talent in this sector to make it sustainable is important.

Millennials makes up 25 percent of the global population and 50 percent of the Indian population (Amaria, 2015; Catalyst, 2017; Worldometers, n.d.). Although there is no general agreement on the name of the generations and their years of birth, this study defines them as born between 1980 and 2000 using framework espoused by Erickson (2008). Gen Y is global, virtual, very diverse and has different expectations (Chen and Choi, 2008; Hess and Jespen, 2009; Smola and Sutton, 2002; Tulgan, 2004; Zeeshan and Iram, 2012). Their psychological contract (PC) reveals significant interest in training, development, and career advancement. Senior leadership face challenges in meeting their expectations and retaining them (Nathwani and Alves, 2007) and more engaging TM programs are needed (Festing and Schafer, 2014). Millennials have been mostly studied at college level and their professional life needs to be well understood to forge a strong employment relationship (Eisner, 2005; Martin, 2005; Dries *et al.*, 2008; Josiam *et al.*, 2009). Their increasing representation in the workforce has led to an immediate need to design talent management strategies keeping their needs, preferences (Naim and Lenka, 2018) and PC. Generations vary across countries. There are inadequate studies on Gen Y in India, and there is a need to study them in their cultural context (Deal *et al.*, 2010; Rajput *et al.*, 2013; Saxena and Jain, 2012; Mamtha and Nandini, 2013). Based on this rationale, the study focuses on millennials and their talent segments in India.

PC is the implicit contract between the individual and their organization, which specifies what each expects to give and receive (Kotter, 1973). PC is important in understanding the employment relationship. When organizations are unable to fulfill employees' expectations, it impacts their performance, attendance, productivity, in-role duties, loyalty and intention to stay (Bal *et al.*, 2010; Bunderson, 2001; Chrobot-Mason, 2003; Johnson and O'Leary-Kelly, 2003; Lester *et al.*, 2002; Robinson, 1996; Robinson and Rousseau, 1994; Rousseau, 1995; Zhao *et al.*, 2007). Fulfilling PC promotes innovative behavior, loyalty, obedience and greater participation among IT professionals (Newton *et al.*, 2008). Better talent management and retention strategies must focus on strengthening the PC expectations of employees (Bhatnagar, 2007) and HR must regularly assess changes in it (Aggarwal and Bhargava, 2009).

The current study is grounded on the tenets of PC. Overall there is limited research done on PC (Shore and Tetrck, 1994) PC across different cultures (Roehling *et al.*, 2000; Kelley-Patterson and George, 2002) and PC of the millennial generation after their college (Lester and Kickul, 2001). The study answers the call of researchers to examine the differences in the PC obligations of employees identified as talent and non-talent pools (Al Ariss *et al.*, 2014). This study is highly pertinent in addressing issues of talent crunch and high employee turnover in the IT-BPM industry. An important contribution of this paper is the creation of a talent segment framework using high-low performance and high-low intention to stay dimensions. It is the first of its kind to assess differences in PC expectations between talent segments. The literature is presented on talent segments, millennials, PC, which form an integral part of the current research.

Talent segments

Workforce differentiation helps leverage human capital. Talent reviews can be used to fill strategic jobs with high performing talent and develop high-potential employees. Organizations must understand the value of various talent segments, recognize their diverse contributions and offer differentiated HRM (Becker *et al.*, 2009; Boudreau and Ramstad, 2005; Collings and Mellahi, 2009; Huselid and Becker, 2011; Kumar *et al.*, 2015; Ruse and Jansen, 2008; Yarnall, 2011). The underlying assumption of a talent management strategy is that talent is not equal. Companies disproportionately invest their resources on

the “A” players (Eyring, 2014). While there is enough literature on talent management, there is not enough research on talent segmentation (Kumar *et al.*, 2015). There is debate whether talent is inclusive or exclusive (Tansley, 2011). When talent management includes all employees (Silzer and Dowell, 2010), it guarantees egalitarian distribution of resources and avoids a drop in the morale of loyal employees who are not considered “superstars” (Groysberg *et al.*, 2004). Talent management has to move beyond the “either a star or not important” binary viewpoint.

Employees are segmented based on their leadership, technical expertise, strategic role, past performance and potential (Festing and Schafer, 2014; Huselid and Becker, 2011; Swailes and Blackburn, 2016). Segments of young workers, women and old workers can be created based on demographics (Linkow, 2006). Roles can create strategic, core, requisite and non-core talent segments. The talent gaps are prioritized and closed for strategic roles and core roles to gain strategic advantage and consistently deliver quality products and services. Alternative staffing strategies and technology reduces costs in requisite roles to maintain quality and consistency. Talent is shed in non-core roles which are no longer strategically aligned to the company. Core segments can also be created on the business value and competitive advantage. While executives are critical to delivering the business strategy, the future leaders are high-potential business innovators. Global leaders are found in critical local talent markets like China, India, Brazil and the Middle East. The thought leaders are key technology influencers and domain experts are critical in the business segments. This talent segmentation allows for tailoring the learning and development programs to harness the strength of each segment (Manis, 2010).

The construct of talent is like an “object,” with reference to features like capacity, capability, performance, commitment and contribution among many others (Gallardo-Gallardo *et al.*, 2013). On similar lines, this study takes performance and commitment (connote here as the intention to stay) feature to understand talent value. It creates a framework and classifies four talent segments with differential value. This talent segmentation is more relevant for countries like India, where turnover rates are high, and the IT industry, where talent development and retention is a challenge (Naim and Lenka, 2017b).

Indian millennials

Given India’s unique socio-cultural and economic context, there is a need to define and understand the generations in the Indian context (Srinivasan, 2012). Rajesh and Ekambaran (2014) classified Indian generations as Veterans (1920–1945); Free-Gens (1945–1960), Gen Xs (1961–1970), E-Gens (1971–1980) and Gen Y (1981–1990). Every generation in India has diverse work values, which poses a challenge. Veterans are very loyal and baby boomers respect authority and hierarchy at work. Gen X has global orientation, multi-tasking skills and prefers opportunities at workplace. Millennials are quick learners, question every rule, are not interested in corporate hierarchy and desire valuable work and recognition. Managers need to understand expectations of each generation to prevent conflicts, improve work efficiency (Rajput *et al.*, 2013) and to motivate and retain them (Zeeshan and Iram, 2012).

The Indian millennials constitute 26 percent of the total workforce. Kargil war, Pokhran tests, liberalization, high-speed internet connectivity, social networks and smart phones have influenced them. They exhibit collective action, optimism, tenacity, techno-brilliance, resilience, need for supervision and structure (Rajesh and Ekambaram, 2014). This young generation is flexible, mobile, collaborative and socially networked. They prefer work in urban location with good commercial facilities. They expect opportunities to learn and develop new skills, technology and individualized long-term career development plans. They prefer high salary and perks, meaningful work, job responsibility, flexibility, work-life balance, friendly work environment, open communication, regular feedback and opportunities to volunteer for social causes. Health check facilities, nutritionist services

and employee well-being are important to them. Company name and reputation, job security and international exposure are the most important expectations in the IT industry. These high and volatile expectations pose a challenge in their retention (Chincholikar, 2012; Mamtha and Nandini, 2013; Saxena and Jain, 2012; Zeeshan and Iram, 2012).

PC expectations

The PC is the implicit contract between the individual and his/her organization that specifies what each expects to give and receive (Kotter, 1973). It is the individual's beliefs of what one owes to the employer, in the form of hard work, loyalty, and sacrifices, in return for high pay and job security (Rousseau, 1990). Over the years, there is an emergence of a new PC characterized by continuous change, no job guarantees and rewards based on the employee's contribution (Naim and Lenka, 2017a; Sparrow, 1996). The PC expectations of employees differ based on their hierarchy. While managers prefer promotions, good pay is important to supervisors (Atkinson and Cuthbert 2006). The public sector employees value fair supervision, enough resources to do the job and higher job security. Private sector employees prefer flexible work schedules and involvement with decision related to self (Bellou, 2007). Gender, age, hierarchy, union membership and length of employment create differences in the PC (Krivokapic-Skoko *et al.*, 2009). The ambitious employees expect promotions and growth, the stagnated employees look outside for a job change and the passive ones seek a job change within. While the guidance seekers expect career planning support, others employees expect more salary to compensate for the future uncertainty. Millennial generation is one of the most diverse generation and one cannot assume they will have similar expectations. Diverse expectations create diverse PCs. Organization need to be sensitive to these variations and uniform HR practices could fail in the new times (Atkinson and Cuthbert, 2006; Bellou, 2007; Freese and Schalk, 1996; Krivokapic-Skoko *et al.*, 2009; Sparrow, 1996). Very few studies have tried to study diversity in PC expectations. The current study answers these calls and assesses them across different talent segments.

Hypotheses formulation. PC expectations when put through factor analysis converge into supervision, overall job content and pay (Sutton and Griffin, 2004). An academic study revealed eight factors fair treatment in promotion, staff development and support, good management and leadership, academic life, fairness and equity, appropriate remuneration, rewarding performance and good workplace relations (Krivokapic-Skoko *et al.*, 2009). An Indian research classified PC expectations into growth and developmental opportunities, supportive work culture, salary and benefits and resource availability (Aggarwal and Bhargava, 2009). It is important to understand how the PC expectations of the millennial generation can be summarized. Based on the above support from literature, we propose that:

H1. PC expectations of millennials have significant dimensions.

A transactional contract is based on the belief that people will change employers many times during their lifetime. There is limited involvement in the job with a close-ended time-frame of two to three years. There is little flexibility in the contract and changes lead to renegotiation. This contract is characterized by high pay, career advancement and merit pay in exchange for hard work (Rousseau, 1990, 1995). It is more likely that high performing employees may expect these things from their employers more than low performers. We thus propose that:

H2. PC expectations differ significantly between high and low performing millennials.

The focus of the relational contract is emotional involvement along with economic exchange. There is commitment to personal support for family and development of the person.

There is job security for loyalty and a minimum length of stay (Rousseau, 1990, 1995). Interesting work, caring HR policies, job rotation and involvement of the family reduce employee turnover in the IT industry (Lacity *et al.*, 2008). Organizational commitment among Gen Y is mainly created by good management, good physical and social environment, developmental opportunity and enriched job (Sathyakumar and Ramakrishnan, 2013). Clarity of organizational goals, autonomy, compensation, rewards, opportunities for development, and adaptation to organizational culture all predict an employee's intention to stay. Such expectations would form the PC of an employee with a high intention to stay (Ghosh *et al.*, 2013). Thus, it is proposed that:

H3. PC expectations differ significantly between high- and low-intention-to-stay millennials.

There are significant differences between those who are perceived they have been identified as talent and those who have not. Those who have been identified as talent have more commitment to increasing performance demands and building competencies that are valuable to the employer. They actively support the strategic priorities, identify with the unit and have low turnover intent than the non-talent segment (Björkman *et al.*, 2013). When employees become a part of the valued talent segment, their PC expectations change and their attitude becomes more positive. Employees outside the pool find low support, feel their voices are unheard and report unfairness. More research is needed to explore how PC expectations differ between different talent segments (Hoglund, 2012; King, 2016; Swailes and Blackburn, 2016).

We thus propose that:

H4. PC expectations between millennials differ significantly across various employee talent segments.

Top management, HR managers, immediate boss, colleagues are primary contract makers. Handbooks, mission statements, job titles, documents, office memos, etc., are secondary contract makers. Both shape the PC of the employee (Rousseau, 1995). There is a growing importance in the role played by the immediate supervisor in the workplace today (Tulgan, 2004). Perceived managerial competence is strongly related to the work satisfaction experienced by millennials (Broadbridge *et al.*, 2007; Eisner, 2005). Leadership is an important influencer for them (Meier *et al.*, 2010) and their experience at work is dependent upon the quality of their manager. Millennials are a heterogeneous group with high intra-group differences in their expectations from their employer (Guillot-Soulez and Soulez, 2014).

It is thus proposed that:

H5. PC expectations from managers differ significantly across the employee talent segments.

The PC of employee differs from one another based on the expectations/obligations that form its contents, the proportion of transactional and relational expectations and the areas of the employee's personal life that it touches and impacts (Guzzo and Noonan, 1994). Diverse HR practices in recruitment, performance management, compensation and training all contribute to the different beliefs and expectations resulting in many versions of the contract (Rousseau and Greller, 1994). Career management is an important expectation employees have from their employer. Some employees want to further their career within the organization while others outside the organization (Sturges *et al.*, 2008). When various talent segments are given differential treatment, it has a positive effect on their employee motivation and their obligation to develop skills (Hoglund, 2012).

We thus propose:

H6. PC expectations related to career growth and development differ significantly across the employee talent segments.

While some millennials prefer a positive work environment, relaxed work environment (Guillot-Soulez and Soulez, 2014), others are career minded and desire to work for prestigious company and climb the corporate ladder. Some want an informal work environment (Chincholikar, 2012) and a good social environment (Sathyakumar and Ramakrishnan, 2013).

It is therefore proposed that:

H7. PC expectations related to job and work environment differ significantly across employee talent segments.

Methodology

Measures

The questionnaires developed for this study are discussed below in detail.

PC expectations. To explore PC expectations of the millennial generation, 11 focus group discussions (FGDs) were conducted with 99 employees working at mid- and entry level in an IT-BPM company (born 1980–2000, male/female representation, with/without physical disability, metropolitan/non-metropolitan areas). Each group of 8–15 millennials discussed, for 45 min–1 h, the important expectations they have for their employer and which are critical to their intention to stay. Researchers made notes and recorded conversations (audio and video) wherever permissible which were transcribed within 24 h to avoid loss of data. The names of the participants were kept anonymous and confidential. The researchers did not assume agreement based on silence and encouraged all participants to share their most important expectation from their employer. These discussions revealed 157 expectations in the areas of compensation, career growth, opportunity at work, job satisfaction, work-life balance, recognition, challenging work and work environment.

Review of PC literature revealed 169 expectations related to salary and benefits, growth and development, work environment, culture, the job itself, management and the boss, flexibility at work and work-life balance. The above expectations from the FGD and the literature review were correlated (see Table I).

The researchers checked for repetition and ambiguity and reduced 157 expectations to 75 items. These 75 items were converted into a tool measured on a four-point level of importance scale for the purpose of assessing the level of expectations in the millennials.

This 75-item tool was subject to face validation from ten industry experts and eight academicians. Based on a 50–70 percent agreement level by the experts, 31 commonly agreed

Key dimensions in literature	Employee expectation from FGD	
Management and the boss	Aggarwal and Bhargava (2009), Chrobot-Mason (2003), Herriot <i>et al.</i> (1997), Kelley-Patterson and George (2002), Krivokapic-Skoko <i>et al.</i> (2009), Lester and Kickul (2001), Rousseau (1990)	Recognition, flexibility
Growth and development	Aggarwal and Bhargava (2009), Atkinson and Cuthbert (2006), Chrobot-Mason (2003), Herriot <i>et al.</i> (1997), Herriot and Pemberton (1997), Kelley-Patterson and George (2002), Krivokapic-Skoko <i>et al.</i> (2009), Lester and Kickul (2001), Lester <i>et al.</i> (2002), Mamtha and Nandini (2013), Robinson and Rousseau (1994), Roehling <i>et al.</i> (2000), Rousseau (1990)	Career growth, opportunities at work
Job, work, environment and culture	Aggarwal and Bhargava (2009), Atkinson and Cuthbert (2006), Herriot <i>et al.</i> (1997), Herriot and Pemberton (1997), Kelley-Patterson and George (2002), Krivokapic-Skoko <i>et al.</i> (2009), Lester and Kickul (2001), Lester <i>et al.</i> (2002), Robinson and Rousseau (1994), Roehling <i>et al.</i> (2000)	Challenging work, preferred domain of work, job satisfaction, work environment, open culture

Table I.
Dimensions from the literature and FGD

upon expectations were retained. A second-level contextual validation by three industry managers from IT and ITES companies reduced the items to 26. The 26 pertinent PC expectations included regular communication from the manager, flexibility during personal emergency, co-operation from co-workers, a culture of trust and respect, manager taking responsibility for failures, challenging and difficult work, work in area of one's choice, healthcare benefits, counseling and grievance mechanism. There were expectations related to periodic town-hall meetings, approachable and impartial managers, job rotation, promotion, forums to discuss new ideas, open feedback between the manager and the team, managers being mentors, empowering employees in decision making, employee recognition, soft-skill and technical-skill training and clear job responsibility. A pilot study was conducted involving 222 respondents in which the α coefficient of reliability of the PC scale was found to be 0.853.

Job performance. This study uses job behavior framework rather than the appraisal rating to measure job performance (Williams and Anderson, 1991). This method enabled researchers to overcome the constraint of getting real-time performance data and get a standard measure of performance for respondents across companies using diverse appraisals (Ashford and Black, 1996). Behaviors like helping co-workers with heavy loads, giving notice when unable to come and displaying high performance at work were derived from the literature and subjected to validation by three practitioners. The final job performance measure had five items based on the ability to reach goals and targets, fulfilling responsibilities, quality of work, knowledge and skills required for the job, active participation in meetings and the proactive hand-over of responsibilities when not available. To reduce the bias, the researchers created a time-based/frequency-based scale ranging from "only sometimes to always." The α coefficient was 0.726. On the job performance scale, a score of ($> 3 =$ high performance; $\leq 3 =$ low performance). Based on the employees' responses, 355 employees scored low on performance while 710 scored high on performance

Intention to stay. A tool was developed based on Hirschman's (1970) exit-voice-loyalty-neglect framework for this study. In the past, respondents were directly asked how many years they expect to remain with their organization (Rousseau, 1990; Robinson and Rousseau, 1994) which is unlikely to capture honest answers. This new tool developed subtly ascertains employees' responses and behaviors to work situations. It is based on five items (each mentioning two behaviors: one associated with intention to stay, and the other with the intention to leave): quitting the job or staying to learn better skills; changing employer or transferring into a different project; starting to look for other opportunities or applying for an internal transfer; discussing other avenues with friends or escalating the problem with the manager; and looking for avenues outside or waiting patiently and solving problems. The α coefficient was 0.662. Using this scale, a score of ($> 3 =$ high intention to stay, $\leq 3 =$ low intention to stay). Based on their score, 319 respondents were categorized as low intention to stay and 746 as high intention to stay.

Sample

Gen Y (born 1980–2000) currently living in India and employed at IT/BPM companies was the sampling unit. IT/BPM industry is chosen because it is clubbed together by the government and jointly represented by NASSCOM (The National Association of Software and Service Companies). Since uniform HRM policies apply to all employees in an organization irrespective of their job title, the study included all employees from software, hardware, infrastructure and support domain.

A multi-stage sampling was used. In the first stage, using simple random sampling, research proposals were sent out to all sixty companies mentioned on the NASSCOM website as top player in the IT and BPM industry. Seven companies responded positively. In the second stage to increase the representation of minority employees like people with

disability, purposive sampling was used and proposals were sent out to five IT/BPM companies employing only people with disability. Two companies agreed. In the third stage, using simple random sampling, the questionnaire was administered to all millennials working in these nine companies through survey monkey and company intranet. A total of 1,298 responses were received and 1,065 valid responses were considered for the analysis including representation from males/females, married/unmarried, living in metropolitan/non-metropolitan areas, with/without physical disability, entry level/team leaders/senior management.

Results

H1 proposed significant dimensions of PC expectations for millennials. The principal component method was used for factor extraction, and eigenvalues were kept close to or greater than 1 to extract factors (see Table II).

All 26 items loaded on to three factors and the total variance explained was 65.33 percent. Three significant factors which emerged were: PC expectations from the manager, PC expectations related to career growth and development, and PC expectations related to job and work environment.

PC expectations	Component/factor loadings (FL)			
	1	2	3	FL
1. Manager to be open to feedback from the team	0.780			0.77
2. Manager to be a mentor and coach	0.767			0.76
3. Constructive guidance/feedback from the manager	0.753			0.72
4. Manager to share responsibility for team failures	0.750			0.73
5. Manager to be friendly and approachable	0.749			0.72
6. Manager to involve employees in decision making	0.728			0.73
7. Regular communication from manager on business developments	0.706			0.66
8. Impartial behavior by manager toward team members in daily transactions and performance appraisals	0.692			0.59
9. Getting visibility and recognition for good work	0.663			0.64
10. Manager to grant flexibility during personal difficulties	0.619			0.55
11. Availability of clear roles and responsibilities at work	0.532			0.64
12. Periodic town-hall meetings and forums with managers to discuss on company matters	0.757			0.70
13. Availability of company training on latest tools and technology	0.755			0.70
14. Provision of soft skills and personal development	0.741			0.72
15. Counseling for employees	0.738			0.69
16. Mechanism to hear employee grievances	0.733			0.72
17. Forums/technical seminars to discuss work-related new ideas/concepts	0.684			0.65
18. Getting job rotation and an opportunity to work in different areas	0.612			0.61
19. Promotions at work	0.580			0.57
20. Freedom to experiment with new ideas at work	0.544			0.63
21. Healthcare benefits for self and family		0.694	0.57	
22. Co-operation to and from co-workers		0.586	0.56	
23. A culture of trust and respect at work		0.583	0.69	
24. Security arrangements and safety training at work		0.569	0.59	
25. Availability of work in domain of your choice		0.542	0.56	
26. Challenging and difficult work		0.481	0.52	
Eigenvalue (defined as > 1)	14.28	1.65	1.05	
Total variance explained	29.30	23.01	13.02	

Table II.
Factor analysis of PC expectations

Notes: Extraction method: principal component analysis; rotation method: varimax with Kaiser normalization (rotation converged in nine iterations)

The factor on the PC expectations from the manager is in line with past literature where supervision emerged as an important factor in the study by Sutton and Griffin (2004). Broadbridge *et al.* (2007) found that millennials prefer to work for employers who invest in their career progression and long-term development. PC expectations related to career growth and development and PC expectations related to job and work Environment are similar to factors of growth and development and supportive work culture which emerged in the study by Aggarwal and Bhargava (2009). Dimensions of professional growth, personal growth and work environment emerged in the study by Chen and Choi (2008). The study by Baldonado and Spangenburg (2009) revealed that the growth in career and comfortable working environment are important motivators for Gen Y workers. The study by Krivokapic-Skoko *et al.* (2009) revealed eight factors related to good management and leadership, staff development and support, and good workplace relations. These match with the three factors which emerge in this study.

H₂ proposed significant differences in PC expectations between high- and low-performing millennials (see Table III).

The results provide statistical evidence to support significant differences in the way high and low job performers perceive all the three PC expectations: from the managers, related to career growth and development and related to job and work environment. It is interesting to note that based on mean scores, high performers seem to have higher expectations than the low performers in all dimensions. The results corroborate the findings of Ng *et al.* (2010), where there are variations in expectations of millennials based on their academic competence, which connotes that expectations can vary with level of talent and performance.

H₃ proposed significant differences in PC expectations between millennials with high and low intention to stay (see Table IV).

The results support significant differences in PC expectations related to the manager and PC expectations related to job and work environment. There was no significant difference in the PC expectations related to career growth and development. The intent to stay with an organization of this young generation may be largely dependent upon their managers and job and work environment. It corroborates with the famous saying that employee join

PC expectations	Job performance	n	Mean	SD	t-value	p-value
PC expectations from the manager	Low	355	3.34	0.45	-4.30	0.00
	High	710	3.48	0.50		
PC expectations related to career growth and development	Low	355	3.33	0.47	-4.67	0.00
	High	710	3.48	0.52		
PC expectations related to job and work environment	Low	355	3.33	0.49	-3.42	0.00
	High	710	3.44	0.53		

Table III.
Differences in PC expectations based on job performance

PC expectations	Intention to stay	n	Mean	SD	t-value	p-value
PC expectations from the manager	Low	319	3.38	0.50	-2.46	0.01
	High	746	3.46	0.48		
PC expectations related to career growth and development	Low	319	3.40	0.49	-1.48	0.14
	High	746	3.45	0.52		
PC expectations related to job and work environment.	Low	319	3.33	0.55	-2.89	0.00
	High	746	3.43	0.50		

Table IV.
Differences in PC expectations based on intention to stay

companies but leave their managers. They may leave their job if they find no co-operation among co-workers and no culture of trust and respect in the work environment. Therefore, managers and work environment may play a crucial role in retaining them.

Based on the scores of the respondents on job performance and intention to stay scale, a talent segment framework was created. Four talent segments emerged: 530 employees who had high score on performance and intention to stay were categorized as “performing loyals”; 180 employees who had high score on performance and low on intention to stay, were categorized as “performing movers”; 216 employees who had low score on performance and high score on intention to stay, were categorized as “developing loyals”; and 139 employees who had low score on both performance and intention to stay were categorized as “developing movers.” While high performers are crucial to the current success and performance of the organization, employees with high intention to stay are important to maintain stability. Using the concept of healthy attrition and performance value, we propose that performing loyals are most valuable, performing movers are next valuable, followed by developing loyals and, finally, developing movers (see Figure 1).

H4 proposed significant differences in PC expectations of millennials across the four talent segments for which an ANOVA test was conducted (see Table V).

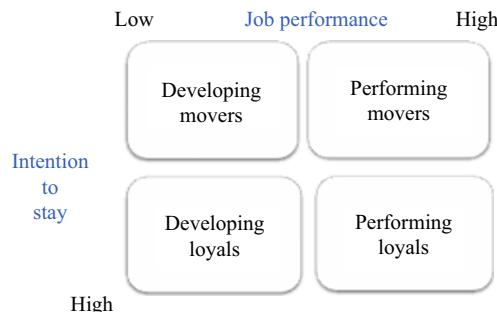


Figure 1.
Employee talent segments

	Sum of squares	df	Mean square	F	p-value
<i>PC expectations from the manager</i>					
Between groups	5.158	3	1.719	7.374	0.000
Within groups	247.350	1,061	0.233		
Total	252.507	1,064			
<i>PC expectations related to career growth and development</i>					
Between groups	5.767	3	1.922	7.517	0.000
Within groups	271.348	1,061	0.256		
Total	277.115	1,064			
<i>PC expectations related to job and work environment</i>					
Between groups	4.832	3	1.611	6.004	0.000
Within groups	284.604	1,061	0.268		
Total	289.435	1,064			

Table V.
Comparing PC expectations across the four talent segments

Based on the results, there is enough statistical evidence to conclude significant differences in the way all three PC expectations are perceived by performing loyals, performing movers, developing loyals and developing movers.

To understand specific nuances, further to the significant differences found through ANOVA, a comparative analysis of mean scores of the four employee talent segments for the three expectations was performed (see Table VI).

A consistent pattern of decreasing value of means can be observed across the employee talent segments. For all the three expectations, the performing loyals have the highest level of expectation, followed by performing movers, developing loyals and, finally, developing movers.

These results are similar to the findings of the people portfolio model of Chella *et al.* (2018), where four employee segments namely contingent workforce, full time permanent workforce, managerial/leadership employees and expert pool of specialists have a very different set of expectations. While the contingent workforce looks for employability, flexibility and skill development, the full time employees look more for security, career aspirations and brand. The leadership prefers brand, career, pay and reward and long-term prospects with the employer. The specialist expects autonomy, creativity, usage of their skills and flexibility. The authors recommend a different employer value proposition for each segment based on its distinct expectations. The above results not only confirm differences in expectations based on the talent segments, but also reinforce like Deal *et al.* (2010), that millennials are not homogenous. Though generation is a meaningful and useful way of categorizing people, the variability in the expectations of millennials cautions in assuming everyone in a generation to be similar.

*H*5 proposed significant differences in PC expectations from the manager across the employee talent segments, which was tested with ANOVA (see Table VII).

The results support significant differences in PC expectations from managers between performing loyals and developing movers. It is important that managers attempt to

	PC expectations from manager	PC expectations related to career growth and development	PC expectations related to job and work environment
Performing loyals	3.4937 (highest)	3.4901 (highest)	3.4673 (highest)
Performance: high, intention to stay: high			
Performing movers	3.4328 (second highest)	3.4664 (second highest)	3.3653 (second highest)
Performance: high, intention to stay: low			
Developing loyals	3.3680 (lower)	3.3447 (lower)	3.3493 (lower)
Performance: low, intention to stay: high			
Developing movers	3.3047 (lowest)	3.3084 (lowest)	3.2904 (lowest)
Performance: low, intention to stay: low			

Table VI.
Mean differences of
PC expectations
across talent segments

Dependent variable	Talent segment (<i>I</i>)	Talent segment (<i>J</i>)	Mean difference (<i>I</i> – <i>J</i>)	SE	<i>p</i> -value
PC expectations from manager	Performing loyals	Performing movers	0.06096	0.04165	0.862
	Performing loyals	Developing loyals	0.12577	0.03898	0.008
	Performing loyals	Developing movers	0.18906	0.04601	0.000
	Performing movers	Developing loyals	0.06481	0.04873	1.000
	Performing movers	Developing movers	0.12810	0.05452	0.114
	Developing loyals	Developing movers	0.06329	0.05250	1.000

Table VII.
Multiple-group
comparison of PC
expectations
from manager

understand the finer difference in expectations each talent segments group has from them so that performing loyals can be retained with the organization and developing loyals can be developed. Managers must spend quality time with the high performing loyal employees, give them regular feedback and mentor them. Recognizing their good work and appreciating their loyalty, providing them with clear job roles and responsibilities and conducting objective appraisals will be helpful.

H6 was used to test *H6*, which proposed significant differences in expectations related to career growth and development across the talent segments (see Table VIII).

The results support significant differences in PC expectations related to career growth and development between performing loyals and developing loyals as well as between performing loyals and developing movers. Each group may have different notions about career, growth and development. It could imply faster promotions, or opportunity to work on a wide range of roles, or experiment with new ideas or being trained on the latest technology. For some, personality development and development of soft skills may be crucial as they move high up in the organization. Organizations need to decode what each of them means to the various talent segments and make an attempt to provide it to the employees.

H7 proposed significant differences in PC expectations related to job and work environment across talent segments (ANOVA results are shown in Table IX).

The results support significant differences in PC expectations related to job and work environment between performing loyals and developing movers. While some employees may want an environment of trust and respect, others may seek co-operation from colleagues, still others may look for challenging work and may want to work in an area of their choice. Thus, it is important for organizations to understand what kind of job and work environment these talent segments want and work towards fulfilling it.

Discussion of findings

At a preliminary level of analysis, PC expectations of millennials have three dimensions-those from the manager, related to career development and related to the job and work environment. In the Indian context, Saxena and Jain (2012) found through their study

Table VIII.
Multiple group comparison of PC expectations related to career growth and development

Dependent variable	Talent segment (<i>I</i>)	Talent segment (<i>J</i>)	Mean difference (<i>I-J</i>)	SE	<i>p</i> -value
PC expectations related to career growth and development	Performing loyals	Performing movers	0.02361	0.04363	1.000
	Performing loyals	Developing loyals	0.14533	0.04082	0.002
	Performing loyals	Developing movers	0.18164	0.04819	0.001
	Performing movers	Developing loyals	0.12172	0.05104	0.104
	Performing movers	Developing movers	0.15803	0.05710	0.034
	Developing loyals	Developing movers	0.03630	0.05499	1.000

Table IX.
Multiple group comparison of PC Expectations related to job and work environment

Dependent variable	Talent segment (<i>I</i>)	Talent segment (<i>J</i>)	Mean difference (<i>I-J</i>)	SE	<i>p</i> -value
PC expectations related to job and work environment	Performing loyals	Performing movers	0.10193	0.04468	0.136
	Performing loyals	Developing loyals	0.11800	0.04181	0.029
	Performing loyals	Developing movers	0.17690	0.04935	0.002
	Performing movers	Developing loyals	0.01607	0.05227	1.000
	Performing movers	Developing movers	0.07497	0.05848	1.000
	Developing loyals	Developing movers	0.05890	0.05632	1.000

that Gen Y expects challenging work assignments, accelerated career growth, socially responsible workplaces, flexible work environments, freedom and collaboration and innovation from their jobs and employers. These findings seem to substantiate other findings in the Indian context that a good management, organizational condition, work environment, opportunities at work and the job itself explain a high level of variance to explain organizational commitment among millennials (Sathyakumar and Ramakrishnan, 2013). Learning opportunities, career growth and job responsibilities form a significant component of expectations within the Indian millennials and employee loyalty to the company is higher when the job fulfills intrinsic needs and personal goals of the employees (Mamtha and Nandini, 2013). Job and resource support, growth opportunities as well as developmental opportunities have been identified as important expectations of employees in the Indian context (Aggarwal and Bhargava, 2009).

Performing loyals, performing movers, developing loyals and developing movers are four talent segments based on their value to the organization derived on job performance and intention to stay. There are significant differences in the way performing loyals and developing movers perceive expectations from managers, expectations related to career growth and development and expectations related to job and work environment. Expectations seem to be higher in higher talent value employee segments. Employee expectations are one side of a coin to check and understand the probability of an effective PC. One of the important insights of this study is that there are varying degrees in the strength of expectations related to the manager, career growth and development and job and work environment amongst the various talent segments. This is observed to follow a linear pattern. The higher talent value segment employee seems to have higher degree of expectations on all the three areas. The findings reiterate the results of NASSCOM iPrimed (2013) study, which concluded that there is a high diversity in the aspirations of millennials and a one-size-fit-all approach to managing them will be ineffective.

Research implications

The overall results reinforce the importance of PC in talent management (Garrow and Hirsh, 2008). The study adds to the millennial research particularly in developing countries offering insights for their effective management. It contributes to the literature on the content of the PCs and is the first to study significant differences in PC expectations at sub-dimension level: PC expectations from the managers, PC expectations related to career growth and development and PC expectations related to job and work environment. The results confirm significant differences in expectations of millennials based on their performance and intention to stay, which are in line with the previous study hinting at high intra-generational differences (Deal *et al.*, 2010).

The framework of differential value of talent segments is more realistic and pragmatic and is a significant contribution to the sparse literature on talent segmentation. This study balances the traditional view of talent management as exclusively for high potentials with an inclusive talent management to develop all employees (according to their strengths). The value of employees is not only based on high performance alone, but also from how comfortable employees are in staying with the organization. These results are in line with previous studies where talent is viewed as a product of competence, commitment and contribution. These elements of talent are multiplicative where high level of one strength cannot compensate for the others (Ulrich and Smallwood, 2012). Talent is always a function of experience and effort. If employees do not stay, there is no possibility of improving performance through experience and sustained effort Pfeffer and Sutton (2006). Therefore, organizational success stems from the ability to capture the value of the entire workforce, not just a few superstars (O'Reilly and Pfeffer, 2000, p. 52).

The level of the three expectations significantly varies for performing loyals and developing movers. The results partially support the previous talent segmentation study by Seopa *et al.* (2015), which found significant differences between the relational PC expectations of the high-value talent pool and other categories. Being affirmative to developing talent, the researchers are hopeful that it is possible to convert developing loyals to performing loyals. If a better PC can be worked out by understanding the underlying expectations of Performing Movers, the company could make them stay as well. These support findings of Tsui *et al.* (1997), which proposes that investment in employees leads to improved performance, more citizenship behaviors, and high commitment. There are two contributions of this study. One is the framework of segmenting talent based on performance and employee sustainability. The second is the exploration and detection of a linear pattern of expectations. The higher the talent value, the higher is the level of expectation.

Industry implications

Organizations wanting to attract and retain millennials cannot ignore their high expectations from their managers, career growth and development and job and work environment. The significant differences in PC expectations related to career growth and development between performing loyals and developing loyals implies that a keen expectation of growth if cultivated and motivated among employees, could serve as catalyst for higher performance. Significant differences in all three expectations between performing loyals and developing movers imply that they believe they have good managers, perceive good career growth and a conducive work environment. This has strong implications as people can be expected to perform above/below their normal level depending on their leadership, team and immediate environment (Iles, 2008). Organizations can train first time managers on giving feedback, mentoring and coaching. Career growth and development can be enriched through regular interaction with senior management, technical and soft skills training and job rotations. A positive work environment can be boosted by extending healthcare benefits and building a culture of co-operation and trust.

From a talent sustainability perspective, organizations can optimize performance for developing loyals. There are instances when the employee is not able to perform to the highest level, but is highly aligned to the organization. These finding corroborate with past studies, where employees with no hope of promotion, working in a dysfunctional department or doing a different job in the foreseeable future, develop disaffection and withdrawal cognitions (Swailies *et al.*, 2014). Job anxiety, limited loyalty to the organization, insufficient opportunities for employees and job dissatisfaction drive employee exits (Johennesse and Chou, 2017). Allocating a large proportion of the organization's resources to a small number of "superstars" damages organizational morale, embittering loyal employees and causing resentment among peers (DeLong and Vijayaraghavan, 2003). Positive effects of a few receiving a reward do not outweigh the negative effects of many not receiving a reward, and runs the risk of creating an atmosphere of destructive internal competition that retards learning and the spread of best practices across the organization (Walker and LaRocco, 2002).

Each talent segment can be nurtured by understanding their expectations better to assure talent continuity. Organizations must fine-tune their HR and talent management policies to the different needs of each talent segment. This strategic segmentation, development and retention of employees can strengthen help organizations meet current and future talent requirements in the emerging markets (Tarique and Schuler, 2010).

Conclusion and suggestions for future research

The results lend support to diversity in the perception of PC expectations across talent segments which can be a strategic input while devising TM programs. Future research can attempt a comparative study on PC expectations of employees in the manufacturing

industry, heavy engineering, and the banking and financial institutions, which may reveal interesting results. A longitudinal research design tracking millennials' PC expectations through different life and career stages would also be of immense value to organizations. Finally, this study used perceived performance for the creation of the talent segments. Using the potential performance of an employee may be of great relevance for organizations to improve employee retention.

References

- Aggarwal, U. and Bhargava, S. (2009), "Exploring psychological contract contents in India: the employee and employer perspective", *Journal of Indian Business Research*, Vol. 1 No. 4, pp. 238-251.
- Al Ariss, A., Cascio, W.F. and Paauwe, J. (2014), "Talent management: current theories and future research directions", *Journal of World Business*, Vol. 49 No. 2, pp. 173-179.
- Amaria, O. (2015), "Understanding Y: global millennials", available at: www.uydmedia.com/who-are-global-millennials/ (accessed November 4, 2016).
- Ashford, S.J. and Black, S.J. (1996), "Proactivity during organizational entry: the role of desire for control", *Journal of Applied Psychology*, Vol. 81 No. 2, pp. 199-214.
- Atkinson, C. and Cuthbert, P. (2006), "Does one size fit all? A study of the psychological contract in the UK working population", *International Journal of Manpower*, Vol. 27 No. 7, pp. 647-665.
- Bal, P.M., Chiaburu, D.S. and Jansen, P. (2010), "Psychological contract breach and work performance: is social exchange a buffer or an intensifier?", *Journal of Managerial Psychology*, Vol. 25 No. 3, pp. 252-273.
- Baldonado, A.M. and Spangenburg, J. (2009), "Leadership and the future: gen Y workers and two-factor theory", *The Journal of American Academy of Business*, Vol. 15 No. 1, pp. 99-103.
- Becker, B., Beatty, D. and Huselid, M. (2009), *The Differentiated Workforce: Transforming Talent into Strategic Impact*, Harvard Business Press, Boston, MA.
- Bellou, V. (2007), "Identifying employees' perceptions on organizational obligations: a comparison between the Greek public and private sector", *International Journal of Public Sector*, Vol. 20 No. 7, pp. 608-621, doi: 10.1108/09513550710823515.
- Bhatnagar, J. (2007), "Talent management strategy of employee engagement in Indian ITES employees: key to retention", *Employee Relations*, Vol. 29 No. 6, pp. 640-663.
- Björkman, I., Ehrnrooth, M., Mäkelä, K., Smale, A. and Sumelius, J. (2013), "Talent or not? Employee reactions to talent identification", *Human Resource Management*, Vol. 52 No. 2, pp. 195-214.
- Boudreau, J.W. and Ramstad, P.M. (2005), "Talentship, talent segmentation, and sustainability: a new HR decision science paradigm for a new strategy definition", *Human Resource Management*, Vol. 44 No. 2, pp. 129-136.
- Broadbridge, A.M., Maxwell, G.A. and Ogden, S.M. (2007), "Experiences, perceptions and expectations of retail employment for generation Y", *Career Development International*, Vol. 12 No. 6, pp. 523-544, doi: 10.1108/13620430710822001.
- Bunderson, J.S. (2001), "How work ideologies shape the psychological contracts of professional employees: doctors responses to perceived breach", *Journal of Organizational Behaviour*, Vol. 22 No. 7, pp. 717-741.
- Catalyst (2017), "Generations: demographic trends in population and workforce", available at: www.catalyst.org/knowledge/generations-demographic-trends-population-and-workforce (accessed February 2, 2017).
- Chella, G., Devarajan, H. and Rao, V.J. (2018), *HR Here and Now*, Sage, New Delhi.
- Chen, P. and Choi, Y. (2008), "Generational differences in work values: a study of hospitality management", *International Journal of Contemporary Hospitality Management*, Vol. 20 No. 6, pp. 595-615.

- Chincholikar, A. (2012), "Being an employer of choice with the millennials", *Tata Journal of Management*, October, pp. 11-17, available at: www.tmtctata.com/administrator/components/com_publications/publication_files/9636f7588acda9ea37f3a4e219644de6-TMTC-october2012.pdf (accessed November 20, 2016).
- Chrobot-Mason, D.L. (2003), "Keeping the promise: psychological contract violations for minority employees", *Journal of Managerial Psychology*, Vol. 18 No. 1, pp. 22-45.
- Collings, D.G. and Mellahi, K. (2009), "Strategic talent management: a review and research agenda", *Human Resource Management Review*, Vol. 19 No. 4, pp. 304-313.
- Deal, J.J., Altman, D.G. and Rogelberg, S.G. (2010), "Millennials at work: what we know and what we need to do (if anything)", *Journal of Business Psychology*, Vol. 25, pp. 191-199, doi: 10.1007/s10869-010-9177-2.
- DeLong, T.J. and Vijayaraghavan, V. (2003), "Let's hear it for B players", *Harvard Business Review*, Vol. 81 No. 6, pp. 96-102.
- Dries, N., Pepermans, R. and Kerpel, E.D. (2008), "Exploring four generations' beliefs about career is satisfied the new 'successful?' ", *Journal of Managerial Psychology*, Vol. 23 No. 8, pp. 907-928, doi: 10.1108/02683940810904394.
- Eisner, S.P. (2005), "Managing generation Y", *SAM Advanced Management Journal*, Vol. 70 No. 4, pp. 4-15.
- Erickson, T. (2008), *Plugged In: The Generation Y Guide to Thriving at Work*, Harvard Business Press, Boston, MA.
- Eyring, J. (2014), "Talent management strategies for multi-speed growth: getting your practices in the right gear", *People and Strategy*, Vol. 37 No. 3, pp. 30-34.
- Festing, M. and Schafer, L. (2014), "Generational challenges to talent management: a framework for talent retention based on the psychological-contract perspective", *Journal of World Business*, Vol. 49 No. 2, pp. 262-271.
- Freese, C. and Schalk, R. (1996), "Implications of differences in psychological contracts for human resource management", *European Journal of Work and Organizational Psychology*, Vol. 5 No. 4, pp. 501-509.
- Gallardo-Gallardo, E., Dries, N. and Gonzalez-Cruz, T.F. (2013), "What is the meaning of 'talent' in the world of work?", *Human Resource Management Review*, Vol. 23 No. 4, pp. 290-300.
- Garrow, V. and Hirsh, W. (2008), "Talent management: issues of focus and fit", *Public Personnel Management*, Vol. 37 No. 4, pp. 389-402.
- Ghosh, P., Satyawadi, R., Joshi, J.P. and Shadman, M. (2013), "Who stays with you? Factors predicting employees' intention to stay", *International Journal of Organizational Analysis*, Vol. 21 No. 3, pp. 288-312.
- Groysberg, B., Nanda, A. and Nohria, N. (2004), "The risky business of hiring stars", *Harvard Business Review*, Vol. 82 No. 5, pp. 93-101.
- Guillot-Soulez, C. and Soulez, S. (2014), "On the heterogeneity of generation Y job preferences", *Employee Relations*, Vol. 36 No. 4, pp. 319-332, doi: 10.1108/ER-07-2013-0073.
- Guzzo, R.A. and Noonan, K.A. (1994), "Human resource practices as communications and the psychological contract", *Human Resource Management*, Vol. 33 No. 3, pp. 447-462.
- Herriot, P. and Pemberton, C. (1997), "Facilitating new deals", *Human Resource Management Journal*, Vol. 7 No. 1, pp. 45-56.
- Herriot, P., Manning, W.E.G. and Kidd, J. (1997), "The content of the psychological contract", *British Journal of Management*, Vol. 8 No. 2, pp. 151-162.
- Hess, N. and Jespen, D.M. (2009), "Career stage and generational differences in psychological contracts", *Career Development International*, Vol. 14 No. 3, pp. 261-283.
- Hirschman, A.O. (1970), *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States*, Harvard Business Press, Boston, MA.

- Hoglund, M. (2012), "Quid pro quo? Examining talent management through the lens of psychological contracts", *Personnel Review*, Vol. 41 No. 2, pp. 126-142.
- Huselid, M.A. and Becker, B.E. (2011), "Bridging micro and macro domains: workforce differentiation and strategic human resource management", *Journal of Management*, Vol. 37 No. 2, pp. 421-428.
- Iles, P. (2008), "Talent balancing: staffing your company for long-term success", *Human Resource Development International*, Vol. 11 No. 2, pp. 215-218.
- Johennesse, L.A.C. and Chou, T.K. (2017), "Employee perceptions of talent management: effectiveness on retention", *Global Business and Management Research: An International Journal*, Vol. 9 No. 3, pp. 46-58.
- Johnson, J.L. and O'Leary-Kelly, A.M. (2003), "The effects of psychological contract breach and organizational cynicism: not all social exchange violations are created equal", *Journal of Organizational Behavior*, Vol. 24 No. 5, pp. 627-647.
- Josiam, B.M., Crustinger, C., Reynolds, J.S., Dotter, T.V., Thozur, S., Baum, T. and Devine, F.G. (2009), "An empirical study of the work attitudes of generation Y college students in the USA: the case study of hospitality and merchandising undergraduate majors", *Journal of Services Research*, Vol. 9 No. 1, pp. 5-30.
- Kelley-Patterson, D. and George, C. (2002), "Mapping the contract: an exploration of the comparative expectations of graduate employees and human resource managers within the hospitality, leisure and tourism industries in the United Kingdom", *Journal of Services Research*, Vol. 2 No. 1, pp. 55-74.
- King, K.A. (2016), "The talent deal and journey: understanding how employees respond to talent identification over time", *Employee Relations*, Vol. 38 No. 1, pp. 94-111.
- Kotter, J.P. (1973), "The psychological contract: managing the joining up process", *California Management Review*, Vol. 15 No. 3, pp. 91-99.
- KPMG (2018), "KPMG in India's annual compensation trends survey 2018-19", available at: <https://assets.kpmg/content/dam/kpmg/in/pdf/2018/04/KPMG-India-Annual-Compensation-Trends-Survey.pdf> (accessed January 25, 2019).
- Krivokapic-Skoko, B., O'Neill, G. and Dowell, D. (2009), "Assessing the contents of the psychological contracts: a cross sectional survey of the academics at an Australian university", *New Zealand Journal of Employment Relations*, Vol. 34 No. 2, pp. 4-28.
- Kumar, K.P., Chebolu, R.M. and Babu, S.S. (2015), "Know your talent at risk – a tripolaire envisaging archetype", *IEP Journal of Management*, Vol. 6 No. 1, pp. 151-180.
- Lacity, M.C., Iyer, V.V. and Rudramuniyaiah, P.S. (2008), "Turnover intentions of Indian IS professionals", *Information Systems Frontiers on Outsourcing*, Vol. 10 No. 2, pp. 225-241.
- Lester, S.W. and Kickul, J. (2001), "Psychological contracts in the 21st century: what employees value most and how well organizations are responding to these expectations", *Human Resource Planning*, Vol. 24 No. 1, pp. 10-21.
- Lester, S.W., Turnley, W.H., Bloodgood, J.M. and Bolino, M.C. (2002), "Not seeing eye to eye: differences in supervisor and subordinate perceptions of and attributions for psychological contract breach", *Journal of Organizational Behavior*, Vol. 23 No. 1, pp. 39-56.
- Linkow, P. (2006), "Winning the competition for talent: the role of the new career paradigm in total rewards", *Workspan*, October, pp. 29-32, available at: www.wfd.com/services/talent%20article.pdf (accessed December 16, 2016).
- Mamtha, J. and Nandini, A.S. (2013), "Career expectations of Gen Y IT employees with special reference to Bangalore", *Global Research Analysis*, Vol. 2 No. 6, pp. 139-140.
- Manis, D. (2010), "Segment-aligned development", November, pp. 33-36, available at: www.trainingjournal.com; www.emeraldinsight.com/doi/full/10.1108/hrmid.2011.04419cad.001 (accessed December 20, 2016).
- Martin, C. (2005), "From high maintenance to high productivity", *Industrial and Commercial Training*, Vol. 37 No. 1, pp. 39-44.

- Meier, J., Austin, S.F. and Crocker, M. (2010), "Generation Y in the workforce: managerial challenges", *The Journal of Human Resource and Adult Learning*, Vol. 6 No. 1, pp. 68-78.
- Naim, M.F. and Lenka, U. (2017a), "Linking knowledge sharing, competency development, and affective commitment: evidence from Indian gen Y employees", *Journal of Knowledge Management*, Vol. 21 No. 4, pp. 885-906.
- Naim, M.F. and Lenka, U. (2017b), "Talent management: a burgeoning strategic focus in Indian IT industry", *Industrial and Commercial Training*, Vol. 49 No. 4, pp. 183-188, doi: 10.1108/ICT-12-2016-0084.
- Naim, M.F. and Lenka, U. (2018), "Development and retention of generation Y employees: a conceptual framework", *Employee Relations*, Vol. 40 No. 2, pp. 433-455, doi: 10.1108/ER-09-2016-0172.
- NASSCOM (2015), "The IT-BPM sector in India: strategic review 2015", available at: old.nasscom.in/download/summary_file/fid/110170 (accessed December 12, 2016).
- NASSCOM (2016), "The IT-BPM sector in India: strategic review 2016", available at: www.nasscom.in/knowledge-center/publications/strategic-review-2016-it-bpm-sector-india (accessed December 12, 2016).
- NASSCOM (2017), "Inclusively India", available at: www.nasscom.in/sites/default/files/inclusively-india.pdf (accessed November 28, 2018).
- Nasscom iPrimed (2013), "Managing in a multigenerational workplace", available at: www.slideshare.net/nasscom/nes-managing-multigenerationalworkforcepujakohliiprimed (accessed January 28, 2018).
- Nathwani, A. and Alves, F. (2007), "Diversity and inclusion: a lever for solving talent pool dilemmas in India and China", available at: www.schneider-ross.com/wp-content/uploads/2012/07/2007-Research-Report-FINAL.pdf (accessed March 7, 2015).
- Newton, S.K., Blanton, J.E. and Will, R. (2008), "Innovative work and citizenship behaviors from information technology professionals: effects of their psychological contract", *Information Resources Management Journal*, Vol. 21 No. 4, pp. 27-48.
- Ng, E.S., Schweitzer, L. and Lyons, S.T. (2010), "New generation, great expectations: a field study of the millennial generation", *Journal of Business and Psychology*, Vol. 25 No. 2, pp. 281-292, doi: 10.1007/s10869-010-9159-4.
- O'Reilly, C.A. and Pfeffer, J. (2000), "Cisco systems: acquiring and retaining talent in hypercompetitive markets", *Human Resource Planning*, Vol. 23 No. 3, pp. 38-52.
- Pfeffer, J. and Sutton, R.I. (2006), *Hard Facts, Dangerous Half-Truths, and Total Nonsense: Profiting from Evidence-Based Management*, Harvard Business School Press, Boston, MA.
- Philips, C. (2008), "Tapping into the next talent generation", *Strategic HR Review*, Vol. 7 No. 3, pp. 26-31.
- Rajesh, S. and Ekambaram, K. (2014), "Generational diversity in the Indian workforce: an exploratory study", *International Journal of Management Studies and Research*, Vol. 2 No. 7, pp. 54-64.
- Rajput, N., Marwah, P., Balli, R. and Gupta, M. (2013), "Managing multi generational workforce: challenge for millennium managers", *International Journal of Marketing and Technology*, Vol. 3 No. 2, pp. 132-149.
- Robinson, S.L. (1996), "Trust and breach of the psychological contract", *Administrative Science Quarterly*, Vol. 41 No. 4, pp. 574-599.
- Robinson, S.L. and Rousseau, D.M. (1994), "Violating the psychological contract: not the exception but the norm", *Journal of Organizational Behavior*, Vol. 15 No. 3, pp. 245-259.
- Roehling, M.V., Cavanaugh, M.A., Moynihan, L.M. and Boswell, W.R. (2000), "The nature of the new employment relationship: a content analysis of the practitioner and academic literatures", *Human Resource Management*, Vol. 39 No. 4, pp. 305-320.
- Rousseau, D.M. (1990), "New hire perceptions of their own and their employer's obligations: a study of psychological contracts", *Journal of Organizational Behavior*, Vol. 11 No. 5, pp. 389-400.
- Rousseau, D.M. (1995), *Psychological Contracts in Organizations: Understanding Written and Unwritten Agreements*, Sage, New Delhi.

- Rousseau, D.M. and Greller, M.M. (1994), "Human resource practices: administrative contract makers", *Human Resource Management*, Vol. 33 No. 3, pp. 385-401.
- Ruse, D.H. and Jansen, K.E. (2008), "Stay in front of the talent curve", *Research Technology Management*, Vol. 51 No. 6, pp. 38-43.
- Sathyakumar, J. and Ramakrishnan, M. (2013), "Workplace expectations and organizational commitment of generation 'Y': a case study at selective business school", *TSM Business Review*, Vol. 1 No. 1, pp. 1-13.
- Saxena, P. and Jain, R. (2012), "Managing career aspirations of gen Y at workplace", *International Journal of Advanced Research in Computer Science and Software Engineering*, Vol. 2 No. 7, pp. 114-118.
- Seopa, N., Wocke, A. and Leeds, C. (2015), "The impact on the psychological contract of differentiating employees into talent pools", *Career Development International*, Vol. 20 No. 7, pp. 717-732.
- Shore, L.M. and Tetrick, L.E. (1994), "The psychological contract as an explanatory framework in the employment relationship", *Journal of Organizational Behavior*, Vol. 1, pp. 91-110.
- Silzer, R. and Dowell, B.E. (2010), *Strategy-Driven Talent Management: A Leadership Imperative*, John Wiley & Sons, San Francisco, CA.
- Smola, K. and Sutton, C.D. (2002), "Generational differences: revisiting generational work values for the new millennium", *Journal of Organizational Behavior*, Vol. 23 No. 4, pp. 363-382.
- Sparrow, P.R. (1996), "Transitions in the psychological contract: some evidence from the banking sector", *Human Resource Management Journal*, Vol. 6 No. 4, pp. 75-92.
- Srinivasan, V. (2012), "Multi generations in the workforce: building collaboration", *IIMB Management Review*, Vol. 24 No. 1, pp. 48-66.
- Sturges, J., Conway, N. and Liefooghe, A. (2008), "What's the deal? An exploration of career management behaviour in Iceland", *The International Journal of Human Resource Management*, Vol. 19 No. 4, pp. 752-768.
- Sutton, G. and Griffin, M.A. (2004), "Integrating expectations, experiences, and psychological contract violations: a longitudinal study of new professionals", *Journal of Occupational and Organizational Psychology*, Vol. 77 No. 4, pp. 493-514.
- Swailies, S. and Blackburn, M. (2016), "Employee reactions to talent pool membership", *Employee Relations*, Vol. 38 No. 1, pp. 112-128.
- Swailies, S., Downs, Y. and Orr, K. (2014), "Conceptualising inclusive talent management: potential, possibilities and practicalities", *Human Resource Development International*, Vol. 17 No. 5, pp. 529-544.
- Tansley, C. (2011), "What do we mean by the term 'talent' in talent management?", *Industrial and Commercial Training*, Vol. 43 No. 5, pp. 266-274.
- Tarique, I. and Schuler, R.S. (2010), "Global talent management: literature review, integrative framework, and suggestions for further research", *Journal of World Business*, Vol. 45 No. 2, pp. 122-133.
- Tsui, A.S., Pearce, J.L., Porter, L. and Tripoli, A.M. (1997), "Alternative approaches to the employee-organization relationship: does investment in employees pay off?", *Academy of Management Journal*, Vol. 40 No. 5, pp. 1089-1121.
- Tulgan, B. (2004), "Trends point to a dramatic generational shift in the future workforce", *Employment Relations Today*, Vol. 30 No. 4, pp. 23-31.
- Ulrich, D. and Smallwood, N. (2012), "What is talent?", *Leader to Leader*, Vol. 63, pp. 55-61.
- Walker, J.W. and La Rocco, J.M. (2002), "Talent pools: the best and the rest", *Human Resource Planning*, Vol. 25 No. 3, pp. 12-14.
- Williams, L.J. and Anderson, S.E. (1991), "Job satisfaction and Organizational commitment as predictors of organizational citizenship and in-role behaviors", *Journal of Management*, Vol. 17 No. 3, pp. 601-617.

- Worldometers (n.d), "World population clock", available at: www.worldometers.info/world-population/ (accessed February 2, 2017).
- Yarnall, J. (2011), "Maximizing the effectiveness of talent pools: a review of case study literature", *Leadership & Organization Development Journal*, Vol. 32 No. 5, pp. 510-526.
- Zeeshan, A. and Iram, A. (2012), "Generational diversity: strategies to bridge the diversity gap", *International Journal of Engineering and Management Sciences*, Vol. 3 No. 3, pp. 315-318.
- Zhao, H., Wayne, S.J., Glibkowski, B.C. and Bravo, J. (2007), "The impact of psychological contract breach on work related outcomes: a meta-analysis", *Personnel Psychology*, Vol. 60 No. 3, pp. 3647-3680.

Corresponding author

Jyoti Joshi Pant can be contacted at: jyoti.j.pant@gmail.com

SELECTIVE DISSEMINATION OF INFORMATION (SDI)

Title/Author	Investigate the effects of behavioral factors on job performance: a conceptual paper / Magableh, A. N., Omar, K., & Al-Tarawneh, J. T.
Source	<i>Studies in Computational Intelligence</i> Volume 974 (May 2021) Pages 345-358 https://doi.org/10.1007/978-3-030-73057-4_27 (Database: ResearchGate)

Investigate the Effects of Behavioral Factors on Job Performance: A Conceptual Paper



Aya Naser Magableh , Khatijah Omar, and Jasem Taleb Al-Tarawneh

Abstract This is a conceptual paper on the effect of behavioral factors on job performance, and to investigate the mediating effect of employee engagement between behavioral factors and job performance in Jordanian commercial banks. This paper aims to present literature reviews related to investigating behavioral factors. Also, this paper proposed a model that enables the organization to achieve job performance by includes some factors which are talent management, quality of work-life, and organizational climate. However, employee performance refers to behaviors that are relevant to organizational goals and that are under the control of individual employees. Job performance is the feeling of the employee about his job. Likewise, all factors need to harmonize and align together to reach the desired progress, success, and sustainability. This paper suggests statistical techniques such as normality tests, multicollinearity test, and EFA using the SPSS. For the measurement model and hypothesis testing using smart PLS. Likewise, the conclusion that was drawn is that the effect of investigating Behavioral factors including talent management, quality of work-life, and organizational climate maybe help increase job performance. For future research, this paper recommends that all variables affecting the individual factors of employees should be included and applied to a service sector to confirm the results.

Keywords Behavioral factors · Talent management · Quality of work-life · Organizational climate · Job performance

A. N. Magableh · J. T. Al-Tarawneh

Faculty of Business, Universiti Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia

K. Omar

Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu,
21030 Kuala Nerus, Terengganu, Malaysia
e-mail: Khatijah@umt.edu.my

1 Introduction

Job performance refers to the degree of achievement and completion of the tasks that make up the job of an individual, and it reflects how the individual is achieved or satisfied with the job requirements. Besides, the issue of job performance has gained great importance to the person in charge of the institution as it represents one of the factors or determinants that are used in evaluating the organization that he heads or manages. Therefore, most officials attach great importance to the performance of workers in institutions. However, performance is a reflection of each individual's capabilities, as well as a reflection of the performance of these institutions and their degree of effectiveness and efficiency.

Increased job performance is an essential goal for businesses to sustain their market growth. As a result, the corporate initiative is geared towards optimizing performance outcomes, taking into account the organizational sense in which performance is generated [19]. Formulated in this sense, social considerations, such as societal expectations or the effects of emerging innovations, typical of all organizations, are part of success improvement processes and must be taken into account as a major research concern [22, 29]. However, enterprises all over the globe in both developed and developing markets are running in exceedingly dynamic circumstances [3]. Accordingly, the growth and surviving within such a mutable set of surroundings are vastly necessitating high concentrating efforts to realize the organizational goals [81].

Each organization has its own system in management and evaluation of performance, and whether it relates to the performance of individuals, or the performance of departments or teams, or the performance of the organization as a whole, it is through performance measurement, an organization can control the programs, systems, and thus on the achievement of its objectives. Performance evaluation is a means that drive managerial units to work vitality and activity, where make presidents follow the duties and responsibilities of their subordinates on an ongoing basis, and paid subordinates to work effectively [8], and the importance of this medium appeared when looking at the areas in which they have used the results of the performance evaluation, and most important: improving and developing employee performance, and the adoption of this evaluation as a means for determining bonuses and increments, a tool for the detection of training needs, and a means to judge the safety of selection, recruitment and training policies, and objective basis for drawing these policies [75].

In the last few decades, the banking industry in Jordan has gained much importance as it directly affects the economy of the country. There has been a change in quantity and quality service provision to the customers. Due to a large number of banks in Jordan, competition has started growing, and each bank needed to follow the strategic approach to get a broad market share and to earn the right profit margin. In Jordan, the banking sector has gained much importance as they help contribute 80% of services and 20% of goods in GDP. Today, Jordanian banks are facing several challenges. To deal with challenges and for sustainable banking operations, Jordanian banks have

started developing a proactive approach. For this, they need to retain professional employees and to develop their skills. More importantly, most of the banks realized that employees of the bank are the best assets of the firm that they can compete with external as well as internal banks in their sectors [7].

Previous studies confirm that the involvement of the employee in their work is the key factor in improving job performance. Furthermore, the role of human resources in the financial sector is big for moving banks forward and in making the bank to perform its best [66]. Many factors are affecting the management of human resources; one of these factors is Quality of Work Life (QWL) [38, 44]. QWL can be defined as the favorable circumstances of a workplace that endorse employee satisfaction by assuring proper rewards, job security, and growth opportunity [18]. In explaining QWL earlier literature identifies different dimensions such as job security, better reward, and opportunity for growth participation, higher pay, and increased organizational productivity highly discussed. Besides, very prominent research such as [71] proposed eight major dimensions for measuring QWL. For example, adequate and fair reward, safe and healthy working conditions, opportunity to use, develop human capital, the opportunity for continued growth and security, social integration in the workplace, constitutionalism in the work organization, work, and total living space, and social relevance of work life.

The concept of quality of work-life (QWL) indicates that a bank must encourage the process of enhancing the environment of its work through several factors to be provided to the employees such as the feeling of job security, motivations, and opportunities for professional development and career growth [55]. Also, the quality of work-life in a bank is essential for the smooth running and success of its employees. Quality of work-life helps the employees to feel secure and like they are being thought of and cared for by the bank in which they work. For effective development of both individual objectives and the bank's objective, the bank should provide a good overall working environment considering factors like career opportunities participative management working environment. In this process, it can generate a sense of satisfaction for which on his capability to achieve simultaneously both individual and bank's objectives.

Finally, the work environment or climate perception of employees has significant consequences for both individuals and organizations. Climate or atmosphere in the workplace has an impact on employee's motivation, behavior, attitudes, and potential, which, in turn, is predicted to influence organizational productivity [23, 24]. The importance of this study highlights the great competition among commercial banks in Jordan to maintain operating efficiencies. Hence the importance of this study is to try to link the talent management, quality of work-life, work climate, work engagement, and job performance for being influential topics in the Jordanian financial sector.

Because of the importance of job performance and its role in improving the quality of banking service and ultimately improving the quality of services, this paper came to investigate the effects of behavioral factors on job performance, which are engagement, talent management, quality of work-life, and work climate. By reviewing the relevant literature and coming up with a clear model that can contribute to banks'

focus on individual employee factors that would improve service quality, which is mainly the focus of bank managers.

1.1 Objectives

- 1) To examine the effect of Behavioral factors (talent management, quality of work-life, organizational climate) on job performance in Jordanian commercial banks.
- 2) To examine the effect of employee engagement on job performance in Jordanian commercial banks.
- 3) To examine the mediating effect of employee engagement between behavioral factors and job performance in Jordanian commercial banks.

Literature Review

A literature review is a body of text that aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to the effect of behavioral factors on job performance, and the mediate effect of employee engagement. Commonly, any enterprise relies on a diverse set of factors to maintain the success and the consistency in accomplishments level, also to attain remains improvements [67]. The list of factors compresses but is not limited to the operational factors, the technological factors, the strategic directions, and most vitally the human capital [41]. In any human activity such as industry, agriculture, trade commerce, politics, or government, the source of action and the target of action is the man. The job of man is the mainspring of his life [47]. In this concept, some important factors must be focused on to achieve the highest job performance, especially in light of employee Engagement.

1. Behavioral Factors

[33], referred that Job performance consists of behaviors that can be observed on individuals in their jobs, and are relevant in achieving the objectives of the organization.

A. Talent Management

[10] noted that the characteristics of talented people are related to the manifestations of excellence. [11], states that the most important characteristics of talented people are cognitive characteristics and emotional characteristics, studies agree that characteristics of talented people are characterized by cognitive characteristics and the emotional characteristics that distinguish them from others. Also, [13], deduced that the primary role of talent planning is to enhance easy identification of future talents which are needed at all organizational levels.

According to [32] reports on the Society for HRM indicates that the talent management model involves an integrated strategy or system that is

designed to improve the processes of recruiting, developing, and retaining people with the required skills and aptitude to meet current and future employee needs, which is essential to employee performance. Talent management is fundamental to any HR department to boost employee performance [20]. As deeply explained in the literature, properly handling talent is considered one of the best options organizations can adopt to enhance performance and beat off competition [79]. According to [59], the concept of talent management has a major impact on the workforce and if properly administered, it can make a difference in how employees perform.

B. Quality of Work-Life

Quality of work-life (QWL) is fundamentally a multidimensional concept that represents the mechanism, which regulates the relationship between the individual and their work [43, 56]. [51], defines QWL as a “process by which an organization responds to the employee’s needs by developing mechanisms to allow them to share fully in making the decisions that design their lives at work”. Likewise, [73] refer to QWL as “employee satisfaction with a variety of needs through resources, activities, and outcomes stemming from participation in the workplace”. Furthermore, “QWL encompasses the physical, technological, psychological, and social dimension of work corresponding to the ideals of a more humane and healthy organization” [27].

The quality of the work-life framework shows a difference between results and chances while proving its worth to public policy [62]. Chances have a place with the space for open strategy prompt activity, while it comes about to constitute the last inspiration of open arrangement. Governments, as well as countless organizations, usually would contemplate the quality of work-life and observe their improvement, but the concluding assessment of open approaches must be considered [68].

Most studies focus on the relationship of QWL with some of the variables such as job satisfaction, organizational commitment, job performance, labor relations, etc. which play a crucial role in determining the overall wellbeing of any industrial organization. However, there is a lack of empirical evidence on the relationship between QWL and employee work engagement. Work engagement is fundamentally a motivational concept that represents the active allocation of personal resources toward the tasks associated with a work role [25].

C. Organizational Climate

Employees who are satisfied with the working environment are both loyal to the organization and capable of providing a better quality of care. The above discussion provides ample evidence to establish the relationship between QWL and performance. But when we put the spotlight on financial organizations, this relationship is of critical importance. [28], investigated the relationship between the QWL and productivity among employees and

suggested managers design appropriate strategies for promoting QWL to enhance productivity in the organization.

Organizational climates can be operationalized at any level within the organization (from company-wide to team units), depending on the referent used in the climate measure [30]. The departmental climate is the most common level to operationalize climate [68]; climate at the department level (defined as all employees directly under the same supervisor) has generally been found to have the strongest influence on employee behavior compared to other levels of climate [12, 42, 49].

[64] pointed out organizational climate as the unique styles of an organization, the characteristics composed of leader-subordinate interaction. [46], regarded the organizational climate as a member's direct or indirect perception of the characters of a specific environment. Such perception results would affect the member's attitudes, beliefs, values, and motivation.

2. Job Performance

Job performance is considered as an important parameter in the hotels' profession, in such a way that in the last decade, new innovative ways of calculation and consideration have been invented [17] even for newly registered professionals [63]. After a careful detection of international literature, what can be seen is that job performance is directly and strongly related to stress and burnout [34]. Equally, the crucial role in shaping the professional performance playing both the employee leadership [71] and the procedure of rational decision making [60].

[26] describes performance as the individual's ability to achieve the objectives of the organization through the optimal use of available resources efficiently and effectively. The definition of Job performance is "a coordinated effort to do tasks include converting inputs to outputs with quality consistent with the skills, abilities, and experience of working, with the help of the supporting factors and the environment, the appropriate action to make this effort precisely, the shortest time and less expensive" [9].

In the concept of staff Performance, [39] suggested two aspects of employee performance which are task efficiency and contextual success. Task efficiency (or professional job performance) is the actions associated with the management and management of the professional heart of the company. Contextual success (or interpersonal work efficiency) is a feature of one's interpersonal skills awareness that reflects the wider social context in which the technological core would operate.

3. Employee Engagement

Work engagement is a positive, fulfilling work-related state of mind, and characterized by vigor, dedication, and absorption'. Vigour refers to the willingness to invest effort in one's work, dedication is related to involvement, and absorption is related to concentration and being engrossed in one's work [69].

Employee Engagement and employee-organizational responsibilities are important organizational criteria as companies face globalization and rebound from the

global recession. Employee engagement, employee participation, and corporate dedication have become areas of concern amongst many researchers and have gained significant attention from analysts and educators. Therefore, based on the Job demands resource model, the authors surveyed the relationship between work engagement and job resources for employees working in banks [40].

The literature shows that both labor and personal resources are important predictors of engagement; working environments with adequate labor resources foster engagement, especially when the work is highly demanding, and personal resources such as self-esteem, optimism, and self-efficacy are also useful for coping with the everyday demands of working life [16, 36, 81]. Also, [53] conducted a systematic review to synthesize the research about engagement in organizational psychology, business literature.[72], wanted to review engagement in an organization, but given the limited number of publications, she extended it to any working environment. We are now able to overcome this limitation because research on work engagement in employees has greatly increased.

I. Conceptual Framework and Hypotheses Development

Based on the literature, talent management is expected to affect job performance. Quality of work-life is expected to affect job performance. Organizational climate is expected to affect job performance. Besides, employee engagement is expected to mediate the effect of behavioral factors and job performance.

2 Behavioral Factors and Job Performance

The previous studies confirmed the positive effect between behavioral Factors (Talent Management, Quality of Work-Life, and Organizational Climate) and Job Performance. The previous literature found that talent management has a significant positive effect on job performance, quality of work-life has a significant positive effect on job performance, and organizational climate has a significant positive effect on job performance.

In a review of studies investigating organizational climate and employees' performance, the study of [2] found that organizational climates exhibit the clear role clarity dimensions that result in higher satisfaction and performance of employees. [40] explained the characteristics of organizational climate, for instances having a high level of self-governance, giving opportunities for employees, sustaining connections among employees, concerning and demonstrating enthusiasm for employees, perceiving workers' achievements also, holding them in high respect result in more fulfilled employees.

[15], agreed that the organizational climate in the career development of the employees is important for the employee to perform better in work as providing necessary and related training are required. Good communication among the employees and upper management form a good organizational climate to boost up the satisfaction of employees in work [6]. Moreover, organizations with a positive organizational

climate are more productive as employees have higher job satisfaction and are more committed to the organization [1]. Organizational climate serves as an antecedent of knowledge management and therefore results in increased performance measures and outcomes [53]. However, since there are not many studies of job performance in Jordan, thus, the following is hypothesized:

H1: Behavioral Factors have a significant positive effect on job performance in Jordanian commercial banks.

3 Employee Engagement and Job Performance

There are indications that the level of engagement is positively associated with job performance in terms of financial benefits, greater client loyalty, and better adaptation to the working environment [14]. Empirical studies are also available that indicate that engagement is positively related to finance. For example, engaged employees have been shown to suffer less from depression and stress and to have fewer psychosomatic symptoms [78].

The research literature suggests that engagement and performance are related in direct and indirect ways. In terms of its direct relationships, engagement at the individual and group levels is associated with both organizational and employee performance [21, 54]. [21], found that employee engagement was a significant predictor of desirable organizational outcomes such as customer satisfaction, retention, productivity, and profitability. In [54] study of 65 firms in different industries, the top 25% on an engagement index had a greater return on assets, profitability, and more than double the shareholder value compared to the bottom 25%. These studies indicate a direct relationship between engagement and performance.

[61], further asserted that designing performance management processes that foster employee engagement will lead to higher levels of performance, and argued that employee engagement behavior is an antecedent of job performance. [52], explained that the energy and focus inherent in work engagement allow employees to bring their full potential to the job. This energetic focus in turn enhances the quality of their core work responsibilities. This gives them the capacity and the motivation to concentrate exclusively on the task at hand. Other authors and practitioners have similarly discussed how corporate strategies and imperatives that develop employee engagement may be utilized as mechanisms for enhancing organizational productivity and competitive edge [58, 77]. However, since there are not many studies of job performance in Jordan, thus, the following is hypothesized:

H2: Employee Engagement has a significant positive effect on job performance in Jordanian commercial banks.

4 Mediation of Employee Engagement

Researches in the past have examined several elements that can affect job performance. [45] and [5] showed that a crucial element is employees' commitment to their job. There is also a strong connection between being satisfied with their job and their performance [37]. QWL initiatives can greatly help to improve employees' self-esteem and job satisfaction [48], lead workers to provide better services and increase customer satisfaction [35]. Moreover, QWL programs can improve work performance and the quality of life among employees [80]. In a related 47 context, [73] found that QWL was associated with both organizational and individual efficiency. Conversely, a weak level of QWL causes job dissatisfaction, increased absenteeism, demotivation, low morale, rising accident rates, and poor productivity, which therefore causes poor organizational performance [74]. [31], found that QWL is crucial for organizational success and competitive advantage.

[57] identified six elements of working life that lead either to burnout or engagement: "workload", "rewards and recognition", "community and social support", "perceived justice", "choice and control", and "meaningfulness and value of work". These issues are the core constituent variables of QWL; hence, the present study assumes that the improvement of employees' engagement is mediating between talent management, QWL, organizational climate, and job performance. However, since there are not many studies of job performance in Jordan, thus, the following is hypothesized:

H3: employee engagement mediates the effect of behavioral factors and job performance in Jordanian commercial banks

Research Methodology

This paper aims to investigate the mediating effect of employee engagement between behavioral factors and job performance in Jordanian commercial banks, while the quantitative method is the most appropriate to be taken. The reason lies in the fact that the current 56 study focuses on research problems in an objective way rather than subjectively. As stated by [65]; and [76] the quantitative strategy works on objective and measure it through the actions and opinions which helps the researcher to describe the data rather than interpret the data. Additionally, the nature of this study is empirical where researchers emphasize fresh data collection by the research problem. Thus, this study is quantitative using a survey design.

By reviewing the reports of the central bank of Jordan (CBJ), there are 25 operating banks, 15 listed in the Amman Stock Exchange (ASE), led by Arab Bank. Also, the number includes regional institutions (e.g., Kuwait National Bank, National Bank of Abu Dhabi, and Egyptian Arab Land Bank), and Western multinationals banks (e.g., Citibank and Standard Chartered). The banking sector history is dating back to the 1940s when Arab Bank moved to Amman. Banking accounted for 18.82% of the GDP as of mid-2018, this justified according to it the most significant economic sectors in Jordan too.

The managers argue that they would do better if they were empowered to make certain business decisions directly [50]. Therefore, this study focused on all employees.

The size of the sample was calculated with the help of the table proposed by [70]; and [48]. From the table, population with sample sizes are matched with a 95% level of confidence concerning normally distributed data. Therefore, for a population of 17,569 employees, the calculated required size of the sample is 377.

For the methodology section, this paper suggests statistical techniques such as normality tests, multicollinearity test, and EFA using the SPSS. For the measurement model and hypothesis testing using smart PLS.

Even though PLS-SEM is methodologically well-established and frequently applied, editors and reviewers often require researchers to justify their choice of the method [23]. The present study used PLS-SEM for several reasons; In real world scenario and application of complex models, modeling of PLS has better advantage hence its suitable and appropriate compared to other models in the literature [4]. The basic assumption guiding the modelling of PLS including the ability to dynamically develop and measure complicated models, make the model to possessed the superior qualities of evaluating complex and large models [4]. Hence, this study applied a complex model with several variables. This serves as justification for the adoption of PLS technique in this study.

5 Conclusion

This paper covered several phases of research methodologies, for instance; research design, population, and sampling, instrumentation, pre-testing survey instrument, reliability, and validity of survey instrument, data collection procedure and analysis, and technique of data analysis. Samples were identified using a proportionate stratified sampling method. Previously established measurement items were adapted in this study. The hypotheses were developing based on the previous study. For the methodology section, this paper suggests statistical techniques such as normality tests, multicollinearity test, and EFA using the SPSS. For the measurement model and hypothesis testing using smart PLS.

The findings indicate that there are indications that the level of engagement is positively associated with job performance in terms of financial benefits, greater client loyalty, and better adaptation to the working environment. Moreover, organizational climate serves as an antecedent of knowledge management and therefore results in increased performance measures and outcomes, there is also a strong connection between being satisfied at their job and their performance, education was a positive influence on job performance, and a person's self-motivation and efficiency have a positive effect on job performance.

The current study recommends the need to focus on participation among all employees of any sector, and the matter becomes more and more important in the

service sectors. To provide the best service and work as one team. Also, the management must focus on showing creative talents in the organizations they belong to. For future research, this paper recommends that all variables affecting the individual factors of employees should be included and applied to a service sector to confirm the results received. Also, to Find a stronger approach to measure the selected variables separately and then testing the model completely and finding differences for future research.

References

1. Agarwal P (2015) The moderating effect of strength of organisational climate on the organisational outcomes. *J Indian Acad Appl Psychol* 41(1):71
2. Akbaba Ö, Altindag E (2016) The effects of reengineering, organizational climate and psychological capital on the firm performance. *Procedia-Soc Behav Sci* 235:320–331
3. Akbarpour M, Li S, Gharan SO (2020) Thickness and information in dynamic matching markets. *J Polit Econ* 128(3):783–815
4. Akter S, Fosso Wamba S, Dewan S (2017) Why PLS-SEM is suitable for complex modelling? An empirical illustration in big data analytics quality. *Prod Plan Control* 28(11–12):1011–1021
5. Al-Ahmadi H (2009) Factors affecting performance of hospital nurses in Riyadh Region, Saudi Arabia. *Int J Health Care Qual Assur* 22(1):40–54
6. Alajmi SA (2016) Organizational climate and its relationship to job satisfaction in Kuwaiti industrial companies. *Asian J Manag Sci Econ* 3(2):38–47
7. Al-dalahmeh M, Khalaf R, Obeidat B (2018) The effect of employee engagement on organizational performance via the mediating role of job satisfaction: the case of IT employees in the Jordanian banking sector. *Mod Appl Sci* 12(6):17–43
8. Al-Hawary SIS, Al-Kuwait ZH (2017) Training programs and their effect on the employee's performance at King Hussain Bin Talal development area at AlMafraq Governorate in Jordan
9. Al-Hawary S, Banat N (2017) Impact of motivation on job performance of nursing staff in private hospitals in Jordan. *Int J Acad Res Account Financ. Manag Sci* 7(2):54–63
10. Al-Lozi MS, Almomani RZQ, Al-Hawary SIS (2018) Talent management strategies as a critical success factor for effectiveness of human resources information systems in commercial banks working in Jordan. *Glob J Manag Bus Res*
11. Al-Zoubi SM, Rahman MSBA (2015) Talented students' satisfaction with the performance of the gifted centers. *J Educ Gift Young Sci* 4(1):1–20
12. Andreoli N, Lefkowitz J (2009) Individual and organizational antecedents of misconduct in organizations. *J Bus Ethics* 85(3):309
13. Anlesinya A, Amponsah-Tawiah K (2020) Towards a responsible talent management model. *Eur J Train Dev*
14. Bailey C, Madden A, Alfes K, Fletcher L, Robinson D, Holmes J, Currie G (2015) Evaluating the evidence on employee engagement and its potential benefits to NHS staff: a narrative synthesis of the literature. *Health Serv Deliv Res* 3(26):1–424
15. Balkar B (2015) The relationships between organizational climate, innovative behavior and job performance of teachers. *Int Online J Educ Sci* 7(2)
16. Barbier M, Hansez I, Chmiel N, Demerouti E (2013) Performance expectations, personal resources, and job resources: how do they predict work engagement? *Eur J Work Organ Psychol* 22(6):750–762
17. Becton JB, Matthews MC, Hartley DL, Whitaker LD (2012) Using biodata as a predictor of errors, tardiness, policy violations, overall job performance, and turnover among nurses. *J Manag Organ* 18(5):714

18. Bibi S, Khan A, Qian H, Garavelli AC, Natalicchio A, Capolupo P (2020) Innovative climate, a determinant of competitiveness and business performance in Chinese law firms: the role of firm size and age. *Sustainability* 12(12):4948
19. Blackman D, Buick F, O'Donnell M (2018) Developing high performance: performance management in the Australian public service
20. Boxall P, Purcell J, Wright P (2008) Scope, analysis, and significance. *The Oxford Handbook of Human Resource Management*
21. Buckingham M, Coffman C (2014) First, break all the rules: what the world's greatest managers do differently: Simon and Schuster
22. Cascio WF, Montealegre R (2016) How technology is changing work and organizations. *Ann Rev Organ Psychol Organ Behav* 3:349–375
23. Chin WW (2010) How to write up and report PLS analyses. *Handbook of partial least squares*, pp 655–690. Springer
24. Chowdhury S (2020) Talent management and its implications on the firm's productivity
25. Christian MS, Garza AS, Slaughter JE (2011) Work engagement: a quantitative review and test of its relations with task and contextual performance. *Pers Psychol* 64(1):89–136
26. Daft RL (2015) Organization theory and design: cengage learning
27. Daubermann DC, Tonete VLP (2012) Quality of work-life of nurses in primary health care. *Acta Paul Enferm* 25(2):277–283
28. Dehghan Nayeri N, Salehi T, Ali Asadi Noghabi A (2011) Quality of work life and productivity among Iranian nurses. *Contemp Nurse* 39(1):106–118
29. Dorsey D, Mueller-Hanson R (2017) Performance management that makes a difference: an evidence-based approach. *SHRM science to practice series*
30. Ehrhart MG, Raver JL (2014) The effects of organizational climate and culture on productive and counterproductive behavior. *The Oxford handbook of organizational climate and culture*, pp 153–176
31. Fajemisin T (2002) Quality of work life: a study of employees in West Africa. *Afr Bus Rev* 13(4):501–517
32. Fegley S (2006) Talent management survey report, society for human resource management (SHRM): Society for human resource management
33. Furnham A (2005) The psychology of behaviour at work: the individual in the organization. Psychology Press, UK
34. Gandi JC, Wai PS, Karick H, Dagona ZK (2011) The role of stress and level of burnout in job performance among nurses. *Ment Health Fam Med* 8(3):181
35. Griffith J (2001) Do satisfied employees satisfy customers? Support-services staff morale and satisfaction among public school administrators, students, and parents. *J Appl Soc Psychol* 31(8):1627–1658
36. Grover SL, Teo ST, Pick D, Roche M, Newton CJ (2018) Psychological capital as a personal resource in the JD-R model. *Pers Rev* 47(4):968–984
37. GuZ, Siu RCS (2009) Drivers of job satisfaction as related to work performance in Macao casino hotels: an investigation based on employee survey. *Int J Contemp Hosp Manag* 21(5):561–578
38. Gupta B (2016) Factors affecting the quality of work-life among private bank employees. *Pac Bus Rev Int* 8(9):1–10
39. Hartini H, Fakhroza A, Islam R (2019) The effects of cultural intelligence on task performance and contextual performance: an empirical study on public sector employees in Malaysia. *Human Soc Sci Rev* 7(1):215–227
40. Harunavamwe M, Nel P, Van Zyl E (2020) The influence of self-leadership strategies, psychological resources, and job embeddedness on work engagement in the banking industry. *South Afr J Psychol* 50:507–519. <https://doi.org/10.1177/0081246320922465>
41. Hassan S, Mei TS, Johari HB (2018) Relationship between human capital, it resources and organizational performance: an operational capabilities mediated model. *Orient Res J Soc Sci (ORJSS)* 3(1)
42. Hsieh H-H, Wang Y-D (2016) Linking perceived ethical climate to organizational deviance: the cognitive, affective, and attitudinal mechanisms. *J Bus Res* 69(9):3600–3608

43. Hsu MY, Kernohan G (2006) Dimensions of hospital nurses' quality of working life. *J Adv Nurs* 54(1):120–131
44. Hyde AM, Gupta B (2018) Factors affecting quality of work life among nationalized bank employees. *Int J Manag IT Eng* 8(9):285–305
45. Jaramillo F, Mulki JP, Marshall GW (2005) A meta-analysis of the relationship between organizational commitment and salesperson job performance: 25 years of research. *J Bus Res* 58(6):705–714
46. Kim S, Vandenberghe C (2017) The moderating roles of perceived task interdependence and team size in transformational leadership's relation to team identification: a dimensional analysis. *J Bus Psychol* 33:1–19
47. Kluckhohn C (2017) Mirror for man: the relation of anthropology to modern life. Routledge, London
48. Krejcie R, Morgan D (1970) Determining sample size for research activities. *Educ Psychol Meas* 30(3):607–610
49. Kuenzi M, Schminke M (2009) Assembling fragments into a lens: a review, critique, and proposed research agenda for the organizational work climate literature. *J Manag* 35(3):634–717
50. Kulpa W, Magdon A (2012) Operational risk management in a bank. *Intern Audit Risk Manag* 28(4)
51. Lau RS (2000) Quality of work life and performance—an ad hoc investigation of two key elements in the service profit chain model. *Int J Serv Ind Manag* 11:422–437
52. Leiter MP, Bakker AB (2010) Work engagement: a handbook of essential theory and research. Psychology Press, UK
53. Ling Tan C, Yan Ho M (2015) Organizational creative climate in determining the work innovativeness among the knowledge workers. *Glob J Bus Soc Sci Rev* 3(2):14–26
54. Macey WH, Schneider B, Barbera KM, Young SA (2011) Employee engagement: tools for analysis, practice, and competitive advantage, vol 31. Wiley
55. Mackay M (2017) Professional development is seen as employment capital. *Prof Dev Educ* 43(1):140–155
56. Martel J-P, Dupuis G (2006) Quality of work life: theoretical and methodological problems, and presentation of a new model and measuring instrument. *Soc Indic Res* 77(2):333–368
57. Maslach C, Schaufeli WB, Leiter MP (2001) Job burnout. *Annu Rev Psychol* 52(1):397–422
58. Masson RC, Royal MA, Agnew TG, Fine S (2008) Leveraging employee engagement: the practical implications. *Ind Organ Psychol* 1(1):56–59
59. Mellahi K, Collings DG (2010) The barriers to effective global talent management: the example of corporate elites in MNEs. *J World Bus* 45(2):143–149
60. Mohammed AS, Nassar ME, Ghallab SA, Morsy SM (2013) Nurses managers' decision making styles and its effect on staff nurses' job performance. *J Am Sci* 9(12):171–179
61. Mone EM, London M (2018) Employee engagement through effective performance management: a practical guide for managers. Routledge, London
62. Pawirosumarto S, Sarjana PK, Gunawan R (2017) The effect of the work environment, leadership style, and organizational culture on job satisfaction and its implication towards employee performance in Parador Hotels and Resorts, Indonesia. *Int J Law Manag*
63. Platis C, Reklitis P, Zimeras S (2015) Relation between job satisfaction and job performance in healthcare services. *Procedia-Soc Behav Sci* 175(1):480–487
64. Qiu H, Haobin Ye B, Hung K, York QY (2015) Exploring antecedents of employee turnover Intention—evidence of China's hotel industry. *J China Tour Res* 11(1):53–66
65. Rahi S (2017) Research design and methods: a systematic review of research paradigms, sampling issues and instruments development. *Int J Econ Manag Sci* 6(2):1–5
66. Rahman MA, Qi X, Jinnah MS (2016) Factors affecting the adoption of HRIS by the Bangladeshi banking and financial sector. *Cogent Bus Manag* 3(1):1262107
67. Reid RD, Sanders NR (2019) Operations management: an integrated approach. Wiley, Hoboken
68. Sari NPR, Bendesa IKG, Antara M (2019) The influence of quality of work life on employees' performance with job satisfaction and work motivation as intervening variables in star-rated hotels in Ubud tourism area of Bali. *J Tour Hosp Manag* 7(1):74–83

69. Schaufeli WB, Salanova M, González-Romá V, Bakker AB (2002) The measurement of engagement and burnout: a two sample confirmatory factor analytic approach. *J Happiness Stud* 3(1):71–92
70. Sekaran U, Bougie R (2016) Research methods for business: a skill building approach. Wiley, Hoboken
71. Salanova M, Llorens S, Cifre E, Martínez IM (2012) We need a hero! Toward a validation of the healthy and resilient organization (HERO) model. *Group Organ Manag* 37(6):785–822
72. Simpson MR (2009) Engagement at work: a review of the literature. *Int J Nurs Stud* 46(7):1012–1024
73. Singh T, Srivastav SK (2012) QWL and organization efficiency: a proposed framework. *J Strateg Hum Resour Manag* 1(1):1
74. Stephen A, Dhanapal D (2012) Quality of work life in small scale industrial units: employers and employees perspectives. *Eur J Soc Sci. ISSN* 1450–2267
75. Supramaniam M, Muniandi T, Ramayah T, Mohamed RKMH, Subramaniam V, Begum M (2020) The relationship between human resource management practices, psychological contract, and innovative behaviours of academicians. *Int J Psychosoc Rehabil* 24(2):2477–2489
76. Tashakkori A, Creswell JW (2007) Exploring the nature of research questions in mixed methods research. Sage Publications, Los Angeles
77. Wellins RS, Bernthal P, Phelps M (2005) Employee engagement: the key to realizing competitive advantage. *Dev Dimens Int* 5:1–31
78. Welthagen C, Els C (2012) Depressed, not depressed or unsure: prevalence and the relation to well-being across sectors in South Africa. *SA J Ind Psychol* 38(1):57–69
79. Wickramaaratchi D, Perera G (2020) The impact of talent management on employee performance: the mediating role of job satisfaction of generation Y management trainees in the selected public banks in Sri Lanka.
80. Xanthopoulou D, Bakker AB, Fischbach A (2013) Work engagement among employees facing emotional demands. *J Pers Psychol*
81. Zhang L, Zhang X, Xu Y (2017) The sociality of resources: understanding organizational competitive advantage from a social perspective. *Asia Pac J Manag* 34(3):619–648

Title/Author	Self-determination theory in human resource development: new directions and practical considerations / Rigby, C. S., & Ryan, R. M.
Source	<i>Advances in Developing Human Resources</i> Volume 20 Issue 2 (May 2018) Pages 133–147 https://doi.org/10.1177/1523422318756954 (Database: https://institute.welcoa.org/)

Article

Self-Determination Theory in Human Resource Development: New Directions and Practical Considerations

Advances in Developing Human Resources

2018, Vol. 20(2) 133–147

© The Author(s) 2018

Reprints and permissions:

sagepub.com/journalsPermissions.navDOI: [10.1177/1523422318756954](https://doi.org/10.1177/1523422318756954)journals.sagepub.com/home/adhr

C. Scott Rigby¹ and Richard M. Ryan²

Abstract

The Problem.

There has been a “Copernican turn” in approaches to motivation and management: The focus in human resource development (HRD) and management circles today is no longer on how companies can motivate or incentivize employees from the outside, but instead on how they can effectively foster and support the high-quality motivation that comes from within employees. Developing affective commitment and intrinsic motivation is highlighted as a key to organizational success and employee satisfaction.

The Solution.

In this article, we review our applications of self-determination theory (SDT; Ryan & Deci, 2017) concerning how organizations can both assess and build a culture of high-quality motivation. We review a continuum of types of motivation in the workplace that range from passive or controlled compliance to personal valuing of and intrinsic interest in one’s work. We then discuss how support for employees’ basic psychological needs for autonomy, competence, and relatedness leads to these higher quality types of motivation. Evidence shows that enhanced need satisfaction can come from managerial climate, job design, and well-crafted compensation strategies, as well as being influenced by the perceived mission of the company. A focus on basic needs provides a practical basis for leveraging positive change and achieving goals from talent retention to workplace wellness.

The Stakeholders.

This article was written to help both researchers and practitioners in HRD (i.e., organizational leaders, human resource professionals, managers) learn the basic

¹Immersyve Inc., Celebration, FL, USA

²Institute for Positive Psychology and Education, Australian Catholic University, North Sydney, Australia

Corresponding Author:

C. Scott Rigby, Immersyve Inc., 215 Celebration Place, Suite 510, Celebration, FL 34747, USA.

Email: scott@immersyve.com

principles and applications of SDT as a means of unlocking a more practical and actionable model for engagement and motivation. This review not only translates SDT into practice, opening opportunity for collaboration between researchers and practitioners, but also provides meaningful insight into sustained employee motivation and engagement, job satisfaction, and productivity.

Keywords

human resource development, employee engagement, motivation, employee experience, performance management, productivity, retention, self-determination theory

Over the last 15 years, there has been an unprecedented shift of power from institutions to individuals, both inside and outside the workplace. In media, we now decide when and where we will watch, read, and listen to content, unbounded by the scheduling decisions of television networks or radio stations. In retail, we no longer drive to big box stores but, instead, select purchases from our phones that arrive on our doorstep within hours. And in the workplace, people at all levels move more frequently and fluidly between jobs not simply based on compensation but with a focus on finding work that is fulfilling and fitting with their values and lifestyle. Many trends in employment reflect this new relationship between institutions and workers: Job mobility statistics show that the average worker entering the workforce today will change positions nearly twice as frequently in the first 5 years of working than new employees did 30 years ago (Berger, 2017).

We have come to call this phenomenon a “Copernican Turn”: Whereas, once institutions set the rules for engagement, individuals are now more empowered as the center of their personal and professional lives, pulling experiences to them dynamically based on their individual needs and desires. For institutions—and notably for modern human resource development (HRD)—this has created a new set of dynamics, one that necessitates a deeper understanding of how to build engaging and motivating cultures that benefit both empowered workers and the organizations in which they work. Simply put, within organizations in which employees increasingly set the rules of their engagement with their work, new approaches to motivation and engagement are needed in HRD to attract and retain talent, and maximize productivity and wellness.

Certainly, not all organizations are adapting well. Gallup’s well-known measurements of employee engagement and satisfaction suggest that only one third of employees feel engaged in their work (Harter, 2016), despite hundreds of millions of dollars being invested in employee engagement annually. Nor are issues of motivation in the workplace new. Benefits of empowering workers through more meaningful and satisfying work have been discussed for more than half a century (Argyris, 1957; McGregor, 1960). Back then, management guru Peter Drucker (1969) wrote, “We know nothing about motivation. All we can do is write books about it.”

Happily, at least that has changed. Rigorous research over several decades has taught us much (Deci, Olafsen, & Ryan, 2017; Ryan & Deci, 2017). Now the challenges lie in carrying that knowledge forward into best practices within modern HRD. We contend that the failure of most employee engagement programs is that this knowledge has not been valued or applied.

The next generation of engagement programs can be improved by leveraging this knowledge in two critical areas. First, we need to have clear, evidence-based approaches to assess engagement and motivation that allow us to accurately understand and effectively “diagnose” what is happening within organizations. Evidence-based approaches, therefore, are those that deploy well-validated metrics of the motivational and emotional components that are proven to *drive* engagement, versus simply measuring the positive *outcomes* of engagement. Employee engagement has been variously defined as loyalty, work passion, organizational commitment, job involvement, and willingness to invest discretionary effort (Markos & Sridevi, 2010). But these positive descriptors primarily capture the finish line and not the journey: Existing measurement systems are too often a “lagging indicator” of good cultures that succeed in spotting engagement when they see it, proudly showing how these measurements predict positive outcomes. Yet this is not where the work of management and HRD lies: Having a measurement of engagement is a far cry from accurately measuring the core experiences that *build* or *detract* from engagement and optimal performance, and then using an effective framework to act.

This leads us to the second problem area in current engagement programs: Postdiagnosis, they attempt to solve motivational problems through “Pre-Copernican” approaches. Such strategies rely on institutional levers such as external incentives and “command and control” systems that management can activate to drive desired behavior. Yet motivational strategies that rely on such models are not responsive to the greater individual empowerment within modern organizations.

Rather than assume that the organization is the empowered actor that “creates” motivation in the individual, it is the other way around: For HRD to succeed, tools are needed that tap into the worker’s *internal* frame of reference. Specifically, how do workers interpret experiences in the workplace using their own internal compass of what is meaningful and valuable? It is that compass that most directly addresses engagement and motivation. How can we be helping that needle point to its true north?

Self-determination theory (SDT; Ryan & Deci, 2017) is a broad model of motivation, personal goals, and wellness, apt for addressing engagement and motivation in today’s workplace (Gagné, Deci, & Ryan, 2017). SDT’s fundamental frame of reference is the individual, and how circumstances such as management style and work context support or thwart the individual’s motivation and well-being. In this regard, SDT is well aligned with the societal shift to individual empowerment, representing an evidence-based approach to motivation and engagement with the potential to disrupt traditional transactional thinking about motivation in the workplace.

SDT also carries with it a substantial evidence base in behavioral science, a knowledge base often lacking in the ad hoc quality of most modern employee engagement programs. Whereas the vast majority of employee engagement programs have no

evidence to support their approaches, hundreds of empirical studies over the last 40 years have demonstrated the validity of SDT principles. In fact, SDT has shown how its motivational “laws” predict important organizational outcomes such as financial performance (Deci et al., 2017), talent retention (Bock, 2015; Fowler, 2014), affective commitment (Becker, Kernan, Clark, & Klein, 2015; Olafsen, Niemiec, Halvari, Deci, & Williams, 2017), and well-being (Gagné & Deci, 2005; Vansteenkiste et al., 2007) among other critical performance indicators. Finally, SDT not only describes a clear framework for measurement, but it also prescribes a well-validated model for taking action to improve and sustain motivation and engagement (e.g., Deci, Connell, & Ryan, 1989; Hardré & Reeve, 2009).

Understanding High-Quality Motivation: An SDT Perspective

In shifting from a focus on external contingencies to internal experiences, SDT shifts the traditional paradigm of how motivation itself should be understood. Most approaches to measuring motivation simply assume someone has “more” or “less” of it, essentially treating motivation as a unidimensional resource. Instead, SDT describes multiple kinds of motivation based on the various “drivers” or motivational forces underlying a person’s behaviors.

Some types of motivation are dependent on external or internal pressure—and largely disconnected from personal needs and interests. The person is thus not fully engaged, finding satisfactions not in the activity but rather in consequences, resulting in lower quality motivation. Other types of motivation are energized directly by the employees’ needs, values, and interest, resulting in volitional, high-quality motivation. Here, employees are committed to doing work-related tasks well and, from this investment and effort, derive greater satisfaction, vitality, and wellness. This spectrum of *motivational quality* predicts important outcomes from employee engagement, to its byproducts of enhanced wellness, performance, and organizational citizenship.

Figure 1 displays the major categories of SDT’s taxonomy of employee motivations, with terms used in organizational discussions. On the left-hand side is the category of *amotivation*. Motivational quality is lowest when the individual is *amotivated*, which is the result of finding either no value or interest in work (i.e., simply “going through the motions”), or of not feeling effective or capable at one’s job. Not surprisingly, amotivational states are associated with poor well-being and performance on a variety of outcome variables (Vallerand, 1992).

A further low-quality form of motivation is that characterized by *external pressure*. External pressure in both negative (such as punishment) and positive (such as rewards) forms may be quite effective in motivating short-term behavior. However, such pressure inevitably backfires: Individuals who feel externally pressured perform more poorly, often taking the shortest route to any goal assigned to them. They also have lower well-being and are at greater risk of disengaging when rewards or punishments are not salient.



Figure 1. Motivational quality continuum.

Note. From Immersyve, Inc. © 2017 by Immersyve, Inc. Reprinted with permission. MQ = motivational quality.

These negative impacts to motivational quality attach even if the external pressure has a positive shape. Indeed, if you wearily climb on to the treadmill each morning to lose weight primarily because your company is incentivizing you to do so, it does not matter if that incentive takes the form of a punishment (e.g., increased health insurance premium) or a reward (e.g., health insurance rebate)—It still will not lead to persistence over time (e.g., Moller, Buscemi, McFadden, Hedeker, & Spring, 2014). The key characteristic of *external pressure* is that the perceived reason for acting is the external contingency—not one's own investment in the activity.

Another form of low-quality motivation involves *internal pressure* that employees can put on themselves. Internal pressures are characterized by concerns with approval, image management, and self-esteem maintenance: The person “must” do well to feel okay and secure. You get on the treadmill each morning with a sigh, driven by concern that you are looking unfit rather than really appreciating the positive health benefits or improved vitality that might come with exercise. At work, you put in long hours out of fear that you will be passed over for promotion or undertake a task to improve your political capital (rather than for the work itself). Such forms of defensive self-regulation represent low-quality forms of motivation; like external pressure, these internal pressures lead one to focus on appearance and credit, rather than valuing one's work for its own sake or embracing company goals.

In contrast, high-quality motivation is evident when one pursues goals and values that are *personally meaningful*. Here, the goals of the organization and of the individual converge: One has identified with and willingly embraces one's work. You put in your morning run on the treadmill knowing firsthand how it increases your energy throughout the day and supports your overall health. Regardless of whether it is enjoyable, when an activity is understood as important and authentically valued, one is more fully aligned and “on board” with what must be done.

A final yet important type of high-quality motivation is represented by *intrinsic motivation*: When the activity itself is its own reward (Ryan & Deci, 2017). You enjoy your morning treadmill run simply because of the positive experience you have while running. At work, tasks are intrinsically motivating when interesting and engaging. When work affords opportunities for learning and growth, intrinsic motivation is especially salient.

In most jobs, people have all of these various motives in play but to different degrees in different situations. Sometimes, low quality pressures dominate, other times interest or value in a job well done rise to the top, and often a mix of motivational forces is at play. Thus, to assess motivational quality, we identify the *motivational profile* of what is generally driving motivation, and specific areas where it can be enhanced.

This spectrum of motivational quality provides a different lens for assessing employee engagement. Higher motivational quality has been associated with greater learning (Vansteenkiste, Soenens, Verstuyf, & Lens, 2009), persistence (Vallerand, 1992), creativity (Amabile, Hennessey, & Grossman, 1986), and performance (Baard, Deci, & Ryan, 2004), among other positive outcomes. In fact, our treadmill examples above are not merely motivational metaphors: When motivated by high-quality motivation of value and interest, people are much more likely to persist in exercise routines and physical activity (Standage, Sebire, & Loney, 2008). Such evidence demonstrates that motivational quality is predictive of a broad range of positive performance outcomes.

Yet just having a strong predictive measure of quality engagement is not sufficient to effect meaningful change within organizational culture. Equally important is a framework for action—one that outlines the drivers of motivational quality alongside proven best practices to optimize those drivers.

Building High-Quality Motivation Through Basic Need Fulfillment

SDT provides a strong framework for building motivational quality. The theory specifically argues that there are three basic psychological needs that underlie high-quality motivation, needs that apply across all cultures and all types of workplaces. When these needs are satisfied, employees show both their highest quality efforts and their highest well-being (Ryan, Bernstein, & Brown, 2010). In fact, it is precisely when employees are most empowered and engaged that they experience the most wellness and satisfaction with work.

SDT's Basic Psychological Needs: Autonomy, Relatedness, and Competence

Autonomy is the basic need to be the author of one's life—to have a sense of choice and self-endorsement of one's actions. People want to feel “ownership” and volition in

their work. Far from being alienated or “burned out,” autonomous workers greatly value doing work well. Supervisors and job design support this need for autonomy when they help everyday work tasks feel meaningful and important.

Of course, work life often does not always provide us with options and choices: Often there are specific tasks and goals that must be accomplished, and mandates given to us by managers (who themselves may be following the mandates of *their* managers). Yet one can have autonomy even for tasks that are required or in circumstances that are constrained, when the reasons for acting are made clear and accepted. If we have a rationale and sense of purpose in what we are doing, autonomy needs can be fulfilled, even when tasks are not enjoyable. Autonomy is, in this way, not the same as “freedom” or “independence”—we can feel volitional if we understand and endorse the value of our work, even if that work is mandatory or prescribed by others.

Relatedness is our basic need to feel we belong and “matter” to others. Each of us needs to feel connected in meaningful ways—to feel supported while experiencing that others need and value our support as well. Conversely, when we feel isolated and irrelevant to those around us, relatedness needs are left unmet. In the workplace, relatedness needs are fulfilled when employees feel respected, valued, and included at all levels of the company, including among direct managers, coworkers, and leadership.

Competence (or *Mastery*) is our basic need to feel effective, to be successful, and to grow. Within organizations, mastery needs express themselves constantly. People want to feel they have what they need to succeed at their daily tasks, including the resources, skills, and expertise. Alongside this, people want to continually stretch their abilities in manageable ways that give them a feeling of growth toward career goals. To deeply engage employees, it is not enough to ensure they can master their current workflow—They would like to envision a path that includes new challenges and responsibilities, and allows them to anticipate growth in their work.

The fulfillment of each of these needs directly relates to positive outcomes valued by organizations and individuals alike. Strong basic need satisfaction directly predicts trust in the corporation, perceived quality of manager feedback, the belief that there are opportunities to contribute your perspective, the recognition of advancement opportunities, feelings of security, satisfaction with pay and benefits, overall job satisfaction (Deci et al., 1989; Ryan et al., 2010), and a positive passion for work (Spehar, Forest, & Stenseng, 2016; Vallerand, 2015).

Not surprisingly, when employees perceive that their managers and the organizational culture support their need fulfillment, there is a similar pattern of benefits. In a culture of need support, workers are more satisfied in their work and compensation, have greater trust and loyalty for the organization, and show greater creativity and performance (Guntert, 2015). In addition to these direct positive benefits, such need supports also inoculate against physical illness and absenteeism (Williams et al., 2014), and increase organizational commitment (Collie, Shapka, Perry, & Martin, 2016) and customer loyalty (Doshi & McGregor, 2015), bringing further direct benefits to organizations.

The Importance of Managerial Supports for Basic Needs

Perhaps the most influential factor in engagement and motivation is how one experiences one's direct manager. Indeed, each year, organizations invest US\$14 billion in managerial and leadership training to improve this critical input to motivation (Loew & O'Leonard, 2012). The SDT framework of motivational quality, fueled by basic need fulfillment, provides specific guidance on best practices to support these needs to optimize motivation. In addition, it serves as an evidence-based model for training, coaching, and education: Research shows that managerial training focusing on basic need support improves motivational quality and contributes to stronger employee engagement (see Ryan & Deci, 2017). In addition, this research has illuminated many common managerial pitfalls—such as the use of external incentives and rewards—that while appearing to be a positive motivator can paradoxically thwart or frustrate basic needs, leading to low motivational quality and disengagement.

Managerial Support for Basic Needs

Managers play a crucial role in supporting and facilitating basic need satisfaction, and subsequently, higher quality motivation and performance. When employees experience their managers as supportive of basic needs (autonomy, relatedness, and mastery), they report higher motivational quality, organizational loyalty, and engagement. In one study, researchers trained managers at a major U.S. corporation to be more autonomy supportive. This included an emphasis on acknowledging the perspectives of subordinates, offering informational versus controlling feedback, and encouraging “self-initiation” rather than pressuring employees toward goals. Results, collected by the company’s HRD division, showed this training was associated with greater loyalty, job satisfaction, and more positive work attitudes among employees (Deci et al., 1989). In another *Fortune 500* company, employees of managers trained in need support developed significantly higher levels of engagement and motivational quality than those of managers in the control group (Hardré & Reeve, 2009). Even in the financial industry, where one might assume that financial rewards would trump need support in predicting employee motivation, manager need support was strongly predictive of performance and well-being (i.e., less depression, anxiety, somatic symptoms, and social dysfunction; Baard et al., 2004). Research further demonstrates that high levels of managerial support, need fulfillment, and motivational quality also have significantly higher levels of customer satisfaction and profitability (Fleming, Coffman, & Harter, 2005; Preenen, Oeij, Dhondt, Kraan, & Jansen, 2016). Given that most organizations rally around the goal of “putting the customer first,” these findings put a spotlight on the importance of motivation and culture.

A focus on need support gives organizations a pathway to improving engagement and building stronger performance by making high-quality motivation a specific training target. Furthermore, the evidence challenges traditional command and control approaches to driving motivation and performance, showing instead that autonomy-supportive management styles are more beneficial to engagement, well-being, and performance.

Why, then, do more controlling approaches to management continue to persist in organizational culture? For the simple reason that they work—quite powerfully in fact, particularly when one focuses on only short-term behavior. If we wished to get everyone reading this to jump out of their chairs right now, the most effective means to do so would likely be to throw a hundred-dollar bill on the ground, or put some electricity through the chair seat. Both the reward and the punishment approach would do the trick. But at what cost? And with what longer-term motivational impact?

The hyperbole is warranted given that organizations are constantly under siege by competitive pressures and market forces focused on short-term results. Deadlines get advanced by clients or VIPs, sending a ripple of fire drills through the organization to accomplish tasks with unreasonable pressure. Across U.S. markets, every publicly traded company is primarily evaluated, judged, and economically valued by what they have done in the 90 days since their last quarterly report. Is it any wonder that, so often, managers and leaders resort to pressure to meet these realities of organizational life?

The difficult motivational truth is that long-term goals, strong cultures, and even financial performance are sacrificed when short-term tactics are used. Such tactics destroyed *Enron*, at one time the sixth largest company in America. More recently, the pressure *Wells Fargo* put on thousands of its employees to hit performance goals resulted in scandal and billions of dollars in lost value and reputation.

In contrast, need-supportive approaches not only benefit employees' motivational quality and well-being, but they can also bring tangible financial benefits to the organization. When managers work to support needs, they are making an investment in the organization and its culture that can yield higher customer satisfaction (Fleming et al., 2005), better talent retention (Vansteenkiste et al., 2007), enhanced organizational citizenship (Roche & Haar, 2013), and reduced risk for noncompliant and unethical behaviors (Yam, Klotz, He, & Reynolds, 2017). In other words, SDT-based models for motivation and engagement are predictive of key performance indicators not only for HRD functions but also for the financial performance indicators prized by executive leadership.

Compensation Systems: An SDT Perspective

Compensation systems remain a central motivational tool within organizations. Yet at the most fundamental level, the transactional nature of giving money in exchange for work does not address employee's basic psychological needs or necessarily relate to motivational quality. In fact, on its face, it describes exactly the kinds of external reward systems that are associated with low quality motivation. Indeed, when pay is used as a primary mechanism for motivating and controlling workers, it brings exactly the detriments to engagement SDT would predict. When the most salient motivator for work is the amount of compensation one receives, motivational quality tends to be lower, along with loyalty, performance, and well-being in the workplace (Kuvaas, Dysvik, & Buch, 2014). Research consistently affirms that pay—and specifically the amount one is paid—is simply not as strong a predictor of the quality of one's work life compared with the need satisfaction we have described (Mottaz, 1985).

Yet the key concept to be drawn from SDT with respect to compensation is not that it is invariably bad: Compensation is an important part of work and can contribute to motivational quality. Instead, SDT highlights that compensation carries with it a message for the recipient—a *functional significance*—and it is this message that tends to determine the motivational consequences (Olafsen, Halvari, Forest, & Deci, 2015; Ryan & Deci, 2017). For example, in a study of workers at a laundromat company, management tried to encourage stronger work motivation in tardy employees by financially “rewarding” on-time behavior. While this incentive had a short-term impact on those being rewarded, the effect was short-lived, and the program backfired: Not only did it decrease the motivational quality of those who were compensated, but it also lowered motivational quality across the company, creating negative motivational “spillover” (Gubler, Larkin, & Pierce, 2016). Similar effects can be seen in systems that emphasize pay for performance as a primary driver of motivation: In such systems, the overall quality of motivation—as well as the work performed—suffers (Kuvaas, Buch, Gagné, Dysvik, & Forest, 2016).

However, compensation can also have a functional significance that facilitates and supports basic psychological need satisfaction and higher motivational quality. For instance, compensation can be delivered so as to signal mastery and efficacy when given in recognition of a job well done. In addition, compensation systems that feel fair and equitable communicate respect for all employees, supporting autonomy and relatedness needs. A recent study by *Harvard Business Review* supports this point: Researchers tracked Major League Baseball player salaries and team win percentages over a decade. They found that higher team win percentages were associated with whether player salaries matched their individual performance, rather than the equal dispersion of pay among players or higher absolute salaries (Hill, 2017).

The key finding is that it is not the dollar amount of compensation that is ultimately the most important motivator. It is what compensation signals regarding supports for or frustrations of basic psychological needs that ultimately determines its motivational impact (Houlfort, Koestner, Joussemet, & Lekes, 2002; Murayama, Matsumoto, Izuma, & Matsumoto, 2010). With this critical concept in mind, it is possible to construct compensation programs to meet an organization’s specific goals while supporting employees’ psychological needs.

Summary and Future Directions

Enhancing employee engagement is consistently ranked as a top priority by company executives, yet it is a goal that remains elusive and largely underserved by current programs and approaches. Recent advances in technology and tools have allowed HR practitioners to collect more and more data on employees to track and influence engagement, with many recent programs attempting to coax engagement through digital enticements such as “gamification” and social networking features. But in the absence of an evidence-based framework that informs engagement efforts, these digital tools are largely rudderless and ineffective. In fact, while this digital activity and data tracking have the appearance of progress, its lack of a foundational grounding in

basic psychological needs and motivational quality has arguably contributed to a continued failure to meaningfully raise employee engagement levels.

Evidence-based frameworks such as SDT can breathe new energy into the hunt for employee engagement programs that work. Through collaboration between behavioral scientists, technologists, and practitioners, programs can be built on a fundamental understanding of what matters to truly effect change and build highly engaged and motivated cultures. This evidence base ensures such approaches are informed by valid measurement and proven intervention strategies.

Engagement metrics and measurement illustrate the value of this guidance. Many current approaches simply cast a hopeful net on the water, collecting data on everything that *might* affect engagement via ponderous annual employee surveys. Instead, SDT outlines a clear map of the variables that matter, including motivational quality, basic needs satisfactions, and the cultural conditions that support or thwart engagement experiences. Measurement of such components affords a clear and actionable picture of the specific issues within the culture that require intervention. An SDT approach also enables the organization to track aspects of motivation that sometimes behave paradoxically, particularly with respect to rewards and compensation (Deci, Koestner, & Ryan, 1999). This helps ensure compensation programs hit their intended motivational goals.

Similarly, the strong evidence base of SDT empowers more effective training and intervention through core principles that managers and supervisors can understand, learn, and put to work. While most existing employee engagement approaches compensate for a lack of a guiding theory by describing dozens of “needs” and employee “types,” SDT’s focus on the three fundamental needs of autonomy, competence, and relatedness is accessible, digestible, and intuitive. This focus facilitates the adoption of a common motivational language in the organization, empowering managers to support each other in their efforts to build a strong, motivated culture.

SDT brings additional value to cultural development as well. In this age of the Copernican turn, employees seek out companies where they can experience their work as meaningful. They not only want to do well, but they also want to feel they are doing good. This means they are more likely to show higher quality motivation when they are working for a firm whose values they can endorse, values such as diversity, inclusion, the environment, and human rights. As argued by Grant (2008) and evidenced in our own measures of company pride within worker profiles, we see great autonomy and engagement when workers feel the company cares about the broader community, and all stakeholders—not just company owners.

Finally, it is worth noting that SDT also informs how to build more effective tools and technology in the service of motivation and engagement. Regardless of the specific approach, most employee engagement processes involve technology platforms to conduct surveys and collect data, and dashboards and online training tools and seminars to bring about successful change. Each of these elements involves an interaction employees will experience as either need frustrating (“Here’s that survey I have to do”) or need supportive (“my chance to have an impact”), as a function of how they are constructed and introduced. By applying principles of SDT-based motivational

design (Rigby, 2014), the next generation of tools for motivational assessment and training will, themselves, be built in a way that recognizes the Copernican Turn. Specifically, these tools will invite each employee to be part of the process of assessing.

Author(s) Note

The author, Richard M. Ryan is also affiliated to Clinical & Social Sciences in Psychology, University of Rochester, Rochester, NY, USA.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

- Amabile, T. M., Hennessey, B. A., & Grossman, B. S. (1986). Social influences on creativity: The effects of contracted-for reward. *Journal of Personality and Social Psychology*, 50, 14-23.
- Argyris, C. (1957). *Personality and organization*. New York, NY: Harper.
- Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, 34, 2045-2068.
- Becker, T. E., Kernan, M. C., Clark, K. D., & Klein, H. J. (2015). Dual commitments to organizations and professions: Different motivational pathways to productivity. *Journal of Management*, 7, 137-178.
- Berger, G. (2017, April 12). Evaluation of corporate compliance programs. *LinkedIn*. Retrieved from https://blog.linkedin.com/2016/04/12/will-this-year_s-college-grads-job-hop-more-than-previous-grads
- Bock, L. (2015). *Work rules! Insights from inside Google that will transform how you live and lead*. New York, NY: Grand Central.
- Collie, R. J., Shapka, J. D., Perry, N. E., & Martin, A. J. (2016). Teachers' psychological functioning in the workplace: Exploring the roles of contextual beliefs, need satisfaction, and personal characteristics. *Journal of Educational Psychology*, 108, 788-799.
- Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, 74, 580-590.
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). The undermining effect is a reality after all: Extrinsic rewards, task interest, and self-determination. *Psychological Bulletin*, 125, 692-700.
- Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 19-43.
- Doshi, N., & McGregor, L. (2015). *Primed to perform*. New York, NY: Harper Collins.

- Drucker, P. F. (1969). *The age of discontinuity: Guidelines to our changing society*. New York, NY: Harper and Row.
- Fleming, J. H., Coffman, C., & Harter, J. (2005, July-August). *Manage your human Sigma*. Harvard Business Review, 106-114.
- Fowler, S. (2014). *Why motivating people doesn't work . . . and what does: The new science of leading, energizing, and engaging*. Oakland, CA: Berrett-Koehler.
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26, 331-362.
- Gagné, M., Deci, E. L., & Ryan, R. M. (2017). Self-determination theory applied to work motivation and organizational behavior. In D. S. Ones, H. K. Sinangil, C. Viswesvaran, & N. Anderson (Eds.), *Handbook of industrial, work, & organizational psychology* Vol 2 (2nd ed.) (pp. 97-121). Thousand Oaks, CA: Sage.
- Grant, A. M. (2008). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology*, 93, 48-58.
- Gubler, T., Larkin, I., & Pierce, L. (2016). *Doing well by making well: The Impact of corporate wellness programs on employee productivity*. Retrieved from <http://dx.doi.org/10.2139/ssrn.2811785>
- Guntert, S. T. (2015). The impact of work design, autonomy support, and strategy on employee outcomes: A differentiated perspective on self-determination at work. *Motivation and Emotion*, 39, 74-87.
- Hardré, P. L., & Reeve, J. (2009). Training corporate managers to adopt a more autonomy-supportive motivating style toward employees: An intervention study. *International Journal of Training and Development*, 13, 165-184.
- Harter, A. M. (2016, January 7). The worldwide employee engagement crisis. *Gallup*. Retrieved from <http://www.gallup.com/businessjournal/188033/worldwide-employee-engagement-crisis.aspx>
- Hill, A. D. (2017, May 9). 10 years of data on baseball teams shows when pay transparency backfires. *Harvard Business Review*. Retrieved from <https://hbr.org/2017/05/10-years-of-data-on-baseball-teams-shows-when-pay-transparency-backfires>
- Houlfort, N., Koestner, R., Joussemet, M., & Lekes, N. (2002). The impact of performance-contingent rewards on perceived autonomy and competence. *Motivation and Emotion*, 26, 279-295.
- Kuvaas, B., Buch, R., Gagné, M., Dysvik, A., & Forest, J. (2016). Do you get what you pay for? Sales incentives and implications for motivation and changes in turnover intention and work effort. *Motivation and Emotion*, 40, 667-680.
- Kuvaas, B., Dysvik, A., & Buch, R. (2014). Antecedents and employee outcomes of line managers' perceptions of enabling HR practices. *Journal of Management Studies*, 51, 845-868.
- Loew, L., & O'Leonard, K. (2012). *Leadership development factbook 2012: Benchmarks and trends in U.S. leadership development*. Bersin by Deloitte. Available from www.bersin.com
- Markos, S., & Sridevi, M. S. (2010). Employee engagement: The key to improving performance. *International Journal of Business and Management*, 5(12), 89-96.
- McGregor, D. (1960). *The human side of enterprise*. New York, NY: McGraw-Hill.
- Moller, A. C., Buscemi, J., McFadden, H. G., Hedeker, D., & Spring, B. (2014). Financial motivation undermines potential enjoyment in an intensive diet & activity intervention. *Journal of Behavioral Medicine*, 37, 819-827.

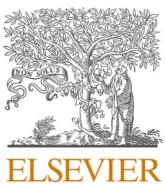
- Mottaz, C. J. (1985). The relative importance of intrinsic and extrinsic rewards as determinants of work satisfaction. *The Sociological Quarterly*, 26, 365-385.
- Murayama, K., Matsumoto, M., Izuma, K., & Matsumoto, K. (2010). Neural basis of the undermining effect of monetary reward on intrinsic motivation. *Proceedings of the National Academy of Sciences*, 107, 20911-20916.
- Olafsen, A. H., Halvari, H., Forest, J., & Deci, E. L. (2015). Show them the money? The role of pay, autonomy support, and justice in a self-determination theory model of intrinsic work motivation. *Scandinavian Journal of Psychology*, 56, 447-457.
- Olafsen, A. H., Niemiec, C. P., Halvari, H., Deci, E. L., & Williams, G. C. (2017). On the dark side of work: A longitudinal analysis using self-determination theory. *European Journal of Work and Organizational Psychology*, 26, 275-285.
- Preenen, P. T. Y., Oeij, P. R. A., Dhondt, S., Kraan, K. O., & Jansen, E. (2016). Why job autonomy matters for young companies' performance: Company maturity as a moderator between job autonomy and company performance. *World Review of Entrepreneurship, Management and Sustainable Development*, 12, 74-100.
- Rigby, C. S. (2014). Gamification and motivation. In S. P. Walz & S. Deterding (Eds.), *The gameful world: Approaches, issues, applications* (pp. 113-138). Cambridge, MA: MIT Press.
- Roche, M., & Haar, J. M. (2013). A metamodel approach towards self-determination theory: A study of New Zealand managers' organizational citizenship behaviors. *International Journal of Human Resources Management*, 24, 3397-3417.
- Ryan, R. M., Bernstein, J. H., & Brown, K. W. (2010). Weekends, work, and well-being: Psychological need satisfactions and day of the week effects on mood, vitality, and physical symptoms. *Journal of Social and Clinical Psychology*, 29, 95-122.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York, NY: The Guilford Press.
- Spehar, I., Forest, J., & Stenseng, F. (2016). Passion for work, job satisfaction, and the mediating role of belongingness. *Scandinavian Journal of Organizational Psychology*, 8, 17-26.
- Standage, M., Sebire, S. J., & Loney, T. (2008). Does exercise motivation predict engagement in objectively assessed bouts of moderate-intensity exercise? A self-determination theory perspective. *Journal of Sport & Exercise Psychology*, 30, 337-352.
- Vallerand, R. J. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality*, 60, 599-620.
- Vallerand, R. J. (2015). *The psychology of passion: A dualistic model*. Oxford, UK: Oxford University Press.
- Vansteenkiste, M., Neyrinck, B., Niemiec, C. P., Soenens, B., De Witte, H., & den Broeck, A. V. (2007). On the relations among work value orientations, psychological need satisfaction and job outcomes: A self-determination theory approach. *Journal of Occupational and Organizational Psychology*, 80, 251-277.
- Vansteenkiste, M., Soenens, B., Verstuyf, J., & Lens, W. (2009). "What is the usefulness of your schoolwork?" The differential effects of intrinsic and extrinsic goal framing on optimal learning. *Theory and Research in Education*, 7, 155-163.
- Williams, G. C., Halvari, H., Niemiec, C. P., Sorebo, O., Olafsen, A. H., & Westbye, C. (2014). Managerial support for basic psychological needs, somatic symptom burden and work-related correlates: A self-determination theory perspective. *Work & Stress*, 28, 404-419.
- Yam, K. C., Klotz, A. C., He, W., & Reynolds, S. J. (2017). From good soldiers to psychologically entitled: Examining when and why citizenship behavior leads to deviance. *Academy of Management*, 60, 373-396.

Author Biographies

C. Scott Rigby, is an author, behavioral scientist, and founder/CEO of Immersyve Inc., a company applying behavioral science to organizations, products, and services. Scott regularly works with *Fortune 500* companies to improve culture and develop motivational best practices. He is a leading authority on predictive measurement of motivation and engagement, and the co-creator of motivationWorks©—an employee engagement and culture platform based on self-determination theory. In addition to his commercial work, he has served as the principal investigator on multiple grants awarded by the National Institutes of Health exploring the role of behavioral science in understanding, and hopefully enhancing, a truly motivating and engaging culture.

Richard M. Ryan, is a clinical psychologist and professor at the Institute for Positive Psychology and Education at the Australian Catholic University and in the Department of Psychology at the University of Rochester. He is codeveloper of self-determination theory, an internationally recognized framework for the study of human motivation. He has received several distinguished career awards and fellowships, and authored more than 350 papers and books in the areas of motivation, mindfulness, personality development, and well-being.

Title/Author	Talent management practices and job performance of librarians in university libraries in Nigeria / Omotunde, O. I., & Alegbeleye, G. O.
Source	<i>The Journal of Academic Librarianship</i> Volume 47 Issue 2 (March 2021) 102319 https://doi.org/10.1016/J.ACALIB.2021.102319 (Database: ScienceDirect)



Talent management practices and job performance of librarians in university libraries in Nigeria



Oluwatobi I. Omotunde^{a,*}, Gabriel O. Alegbeleye^b

^a Department of Library and Information Science, Federal University Oye-Ekiti, Ekiti state, Nigeria

^b Department of Information Resources Management, Babcock University, Ilisan-Remo, Ogun State, Nigeria

ARTICLE INFO

Keywords:

Job performance

Talent management

Librarians' and university libraries

ABSTRACT

Job performance of librarians in university libraries has been a major concern to the university community and stakeholders within the profession. This is evidenced by librarian's inability to apply professional and technical knowledge to practical issues and low productivity in research output. Studies have investigated some factors which influence librarian's job performance. However, there is a dearth of studies on talent management as it relate to job performance of librarians. This study therefore, investigated the job performance of librarians and its relationship with talent management practices of librarians in university libraries in South-West, Nigeria.

The survey research design of the correlational type was adopted for the study. Total enumeration method was used to cover all the 364 librarians in university libraries in South-West, Nigeria. The instrument used for data collection was the questionnaire titled: Talent Management and Job Performance of Librarians' Scale (TMJPLS). The instruments were validated using construct and face validity. Cronbach's alpha test was used to determine the reliability of the main constructs: Assessment of talent management practices $\alpha = 0.867$ and level of job performance $\alpha = 0.973$ respectively. A total of 277 copies of the questionnaire (76.1%) were returned and found usable. Data collected were analyzed with the use of descriptive statistics and Pearson Product Moment Correlation.

The findings showed that librarians' level of job performance was moderate (63.1%). Succession planning was the least of talent management practices employed in university libraries (46.6%). The major problems affecting talent management in university libraries were poor funding (65.3%), constant loss of best brains (60.3%) and poor communication (51.3%). The findings revealed that there was a positive significant relationship between talent management practices and job performance of librarians ($r = 0.58$, $p < 0.05$).

The study therefore, concluded that talent management practices had an effect on job performance of librarians. It is therefore recommended that library management should focus more on developing and managing the potentials of librarians in university libraries so as to increase their performance on the job and reduce brain drain in the library.

Academic library has traditionally been seen as the 'heart of the institution' with serves render to the academic community of its parent institution. Aina, 2004 asserted that the quality of teaching and research in a university is reflected in the services provided by an academic library. Presently, the roles of universities all over the world are changing in order to respond to the needs of the society. Likewise, the role of university libraries is changing to provide a competitive advantage for the university. The activators of this change in libraries are library personnel. In other words, its workforce, they contribute immensely to the overall development of the university community by advancing

learning and research. Hence, focus on performance of library personnel cannot be underestimated.

Employee performance could be regarded as one of the major determining factors in the success or failure of an organization. Every organization is established with the aim of achieving certain objectives. However, the quality of personnel employed and how the organization is able to manage them determine the overall success of such organization. Literature affirms that employers of labour have realized that for their organization to compete and be successful, the performance of their employees is very important (Dobre, 2013; Salah, 2016). Hence, several

* Corresponding author.

E-mail address: omotundetobi@yahoo.com (O.I. Omotunde).

mechanisms to ensure that optimum job performance is achieved should be put in place. Librarians working in university libraries need to display exceptional skills through their job performance because it has a bearing on the way they carry out their professional duties.

Job performance, according to Friendlander (1991) cited in [Bamigboye and Aderibigbe \(2004\)](#), is that behavior which a certain organization condones and probably rewards. Likewise, [Villanova et al. \(2005\)](#), stated that job performance is "that aspect of work behavior domain that is of relevance to job and organizational objective". Job performance can be described as the discharge of statutory duties or functions based on a worker's field of expertise. The performance of these statutory duties is geared towards the accomplishment of the objectives of an organization. Hence, the extent to which the university achieves its basic objectives depends largely on the job performance of library staffs.

Jobs performed in the library are too extensive to fully document. However the essential job functions carried out include: acquisition, cataloguing and classification of information resource materials, provision of reference services, charging and discharging of materials to users etc. The various jobs performed in the library come with their different responsibilities which are solely the duty of librarians. These include: selection, ordering and acquisition, circulation of information resources, classification and cataloguing of information resources, providing reference services and digitization of information resources, engaging in outreach through liaison initiatives, designing of web pages among others. Considering these important roles carried out by librarians in academic libraries, the quality of services provided to a large extent is dependent on the level of job performance of the library personnel. [Ubom and Joshua \(2004\)](#) pointed out that when an individual performs his job effectively, better result is yielded for the organization. They note that mere job performance is quite distinct from effective performance. What is actually required of the employee is effective job performance. Hence, job performance of librarians should be a major concern to the management of academic libraries and other stakeholders within the profession.

Studies over the years have pointed towards the fact that the job performance of academic librarians in Nigeria has not been in an enviable position when compared to their counterparts in developed and developing countries of the world. [Utor \(2003\)](#) and [Popoola \(2005\)](#) both confirmed that employers of labour have over time complained of low quality performance of librarians in Nigeria which has been a major concern to employers and stakeholders within the profession. [Amusa et al. \(2013\)](#) and [Babalola and Nwalo \(2013\)](#) both reported of a low performance in terms of publication output among librarians. Likewise, [Akor \(2009, 2014\)](#) found that job performance of librarian's is at its low level which has subjected librarians to be tactless; making them to grapple with problem after it arises. However, other studies have observed a moderate level of job performance among library personnel in academic libraries in Nigeria in terms of their quality of publications, skills in the use of information technology, ability to anticipate problems and develop solution in advance and ability to work with minimum supervision ([Oyewole & Popoola, 2013](#); [Nwosu et al., 2013](#)). All these suggest a varying job performance among librarians to be either low or average.

The need therefore of highly competent library staff that will effectively satisfy the information needs of the university community in this digital era and information explosion cannot be over emphasized. Administrators of university libraries need to find a realistic mechanism of enhancing the behaviors that promote effective job performance among its library personnel. It is these behaviors that translate into the actual performance needed to actualize the goals and objectives of the library. Such behavior can be achieved through advocating and embracing the whole idea of talent management among library personnel.

Human capital is a key driver of any organization's success story. [Jaw et al. \(2006\)](#) affirmed that human capital is the combination of knowledge, skills, life experiences, motivation and capability of any

employee. Academic libraries in Nigeria need to leverage on the knowledge of their human capital (library personnel). This can be achieved by attracting talented employees who are skilled, qualified, effective and highly motivated, confident to work and have the ability to help users explore and exploit library resources effectively. Talents from the perspective of an organization are human capital and all their potential abilities and skills. They can also be described as giftedness for certain and specific tasks. Talent as defined by The [Chartered Institute of Personnel and Development \(2007\)](#) consisted of those individuals who can influence and make a distinction to organizational performance, which could be through their immediate contribution or in the longer term by demonstrating the highest level of potential. [Stahl et al. \(2007\)](#) stated that talent refers to a particular selected group of employees, who are ranked at the top when it comes to performance and capabilities. [Kehinde \(2012\)](#) also attested to the reality that organizations are increasingly aware that rather than being inhibited by capital, they are normally most constrained by talent. Hence, talent is a key driver of any successful organization. Conclusively, talent can be used to describe the human resources the library will like to attract, acquire, develop and retain in order to achieve its objectives and goals. The act or process of managing potential employees is called talent management.

Talent management is concerned with knowledge management, employee relationship management and workforce management. [Garraway and Hirsch \(2008\)](#) opined that talent management is about doing things for your finest people, investing in developing them, building their potential and assisting identified people within the organization to make the best use of their strength. Likewise, [Van Dijk \(2008\)](#), [Thunissen et al. \(2013\)](#) and [Moza et al. \(2020\)](#) all argued that talent management is a logical process that describes dynamic interaction between many functions and process. In other words, some practices must be in place for managing talents sequentially. This includes, creating talent by planning the future talent supply, calibrating talent by measuring it according to specifications, cultivating talent through mentor development, leveraging talent through motivation and caring for talent through personal wellness. In a nutshell, talent management within the scope of the library must entails a systematical approach meant to formalize the mechanism of sourcing (finding talent), screening (sorting of qualified and unqualified candidates), selection (evaluation/testing, interviewing), on-boarding (offer/acceptance), deploying (assigning role and responsibility) and retaining (keeping the talent that contributes to the success of the library), through motivation (increase the level of enthusiasm) career progression (series of career success) and succession planning (developing alternate).

[Davis et al. \(2007\)](#) stated that talent management is considered necessary when the organization likes to build winning teams which will be formed by talented people. In other words, such organization will use this individual or teams of employee to tackle issues that seem difficult and complex to handle within the organization. For instance, if there is a technical problem within any department in the library, there is a team or individuals to solve such problem just because they are competent and experienced or familiar with that field. In that way, the goal of talent management is achieved.

Considering the above key issues in this study; job performance and talent management, it could be envisaged that a properly planned talent management strategy could result into an effective job performance. In other words, when an employee is given an opportunity to be mentored, trained, rewarded, recognized, motivated and empowered to carry out some leadership role it could help enhance and improve the pattern in which librarians believe in their ability to attain and achieve a specific result or goal. Based on this assumption, the researcher intends to examine the existing relationship between talent management and job performance of librarians in university libraries in South-West, Nigeria. The outcome of this undertaking could among other things result in the development of programmes that could inspire talent management practices in academic libraries with the aim of enhancing job performance among librarians.

Theoretical framework

This study focuses on talent management and job performance among a defined set of workforce which are professional librarians in university libraries in Nigeria. A number of frameworks have been developed with regard to the issue of translating talent into improved performance among employees and workplaces. Emerging theories in talent management with focuses on performance of employee within a workforce was considered in this study. Three theories formed a pathway to the key variables (talent management and job performance) in this study. Namely, resource based theory, talent based theory and talent DNA. In pursuance of the literature on talent management and job performance of librarians in university libraries in Nigeria, this study identified the following gaps: the first areas of concern are that most available literature focused on talent management in organizations while little or no detailed study has been done to address the talent management and job performance of librarians in university libraries in Nigeria and sub Sahara Africa. Another area of complaint in the literature is that there exists a replete of studies on talent management in relation to other variables; however, there is a research gap with regards to job performance in the librarianship profession and geographical scopes.

Resource-based view theory

The concept of resource-based was introduced by [Barney \(1991\)](#). His view was to address the limitations of environmental models of competitive advantage and also to provide a link between diverse resources controlled by an organization, interaction of the resources within an organization. Barney classifies these resources into three categories; physical capital resources, human capital resources and organization capital resources.

The resource-based view theory is related to organization through strengthening the often-repeated statement from the field of strategic human resource management that people are highly important assets to the success of the organization. In order words, this school of thought believes that talent is a vital resource that any organization should invest to achieve its competitive advantage. The implication of this is that talent must be identified, attracted, developed and managed in university libraries and at the same time considered critical in achieving a competitive advantage. [Collins and Porras \(1994\)](#) urge the development and nurture of employees within a supportive strong culture. Effective job performance of librarians' remains germane to the goals and objectives of libraries in this era of information explosion. There is the need for university libraries to invest in talent development to continuously increase value in librarians' performance. The scope of competitive advantage has taken a shift whereby, literature has acknowledged that the internal resources have a crucial role to play in the performance of the organization ([Rabii, 2015](#)).

The resources based view theory sustains organization resources in the form of knowledge and skills that people bring to the organization. According [Peteraf and Bergen \(2003\)](#) the resource-based view entails rival, competitors or related organizations competing on the basis of the heterogeneity and immobility of their resources and capabilities. In other words, there is a continuous competition among university libraries across the globe and environment to remain relevant and at the same time able to meet the information seeking pattern of it diverse users. Resources can be physical, human and organizational in nature, and they can be used to implement value-creating strategies. However, the human resources remain topmost in the success of an organization. The resource based view theory has a distinctive way of integrating resources to attain success for an organization. This is obtainable through building a unique, hard to imitate and valuable resources. Competitive advantage depends on the valuable, uncommon and scarce resources that are inherent in the organization and talent is one of those rare resources. It's essential therefore, that university libraries in Nigeria

should give importance to developing and enhancing the competency of librarians through a systematic process of talent acquisition, talent transfer and talent sharing to gain competitive advantage and improve their job performance.

Barney is of the thought that sustainable competitive advantage is within reach when organizations have a human resource pool which cannot be imitated or substituted by rivals. In other words, in the context of this study, the management of university libraries in Nigeria should persistently appraise their workforce to guarantee that they have the right people with the right skills, attitudes, competitiveness and competencies in the right places to ensure sustained competitive advantage. Anything short of this should propel the managers and stakeholders in university libraries to make-up for the shortfall by acquiring talent needed from the competitiveness and success in the library. The caliber of people employed and attracted determines the library's strength or weakness.

Talent based theory

Talent-based theory postulates that talent is the only resources that provides and enable sustainable competitive advantage in an organization and therefore, its attention and decision making should focus primarily on talent and the competitive capabilities derived from it ([Roberts, 2008](#)). Talent resides in and with individual persons; an organization merely integrates the individually owned talent by providing structural arrangements of co-ordination and co-operation of specialized talent workers. That is, the organization focuses on the organizational processes flowing through these structural arrangements, through which individuals engage in talent creation, storage, and deployment ([Roberts, 2008](#)). Base on this simple premise, the talent based theory is considered a useful explanatory tool for investigating the talent management practices and job performance of librarians in university libraries. Mechanism put in place to facilitate effective talent sorting of librarians will be under study within this study. To attain an efficient job performance among librarians, university libraries must support the processes of branding, attracting, recruiting, engaging, developing and rewarding identified individuals who possess the needed talent and job skills to achieve the goals and objective of the library. According to [Mulului and Muathe \(2017\)](#) the talent based view theory, gives importance to developing and enhancing the competency of the employees of an organization through a systematic talent management process. In other words, university libraries must adopt a systematic functional talent management system within the library, which has the ability to capture, sort and identify essential and potential librarians who are talent and have rare ability that can influence positively the overall performance of other librarians in the library.

Talent DNA

[Shravanthi and Sumanth \(2008\)](#) proposed a talent management model that seeks to create a roadmap to realize the organizational objectives. The model is based on the concept of "DNA" that has three components: identification of key roles, identification of competencies required for key roles and talent. This cycle can be achieved through the creation of a database of competencies. It provides a mechanism to make accurate decision on talent need. Talent DNA is the building block that serves as a link among various talent management processes such as career planning, training, retention, development and performance management, etc. the implication of this for university libraries in Nigeria is that managers/stakeholders of libraries must consider adopting a comprehensive knowledge based system that has the ability to identify and sort for talents within and out of its workforce and the position and roles where those identified talent will be needed are captured in this system. Talent management is a continuous process that plans talents needs, attracts the very best talent, speeds time to productivity, retains the highest performers, and enables talents mobility

across the organization. In order to successfully balance the notion of talent supply with its demand, there must be notion of talent supply with demand; there must be a match between capabilities and needs (Shrawanthi & Sumanth, 2008). Talent management focuses on enhancing the potential of people by developing capacities. Capacities are the basic DNA of an organization and also of individual potential. Consequently, this study seeks to determine the various capacity programmes or mechanisms that university libraries in Nigeria have been able to put in place over the years to promote talent management, among them human capital (librarians). The point of departure for the DNA model is to translate the organization's vision into goals and mapping the competencies to achieve goals. University libraries in the context of Nigeria have to assess talent so as to profile the level of capabilities. They must invest on librarians' growth to meet and accept varied incremental and transformational roles in an overall scenario of acknowledged need for change which translate to high job performance. Hence, talent DNA theory is suitable for this study because of its focus on how talents are identified, competencies needed for different roles within the libraries are identified and a compact talent based system with an enhance database that captures the totally of identified talent and roles is established for the common purpose of achieving the goals and objectives of libraries. Consequently, talent DNA consists of three component which is the lifecycle of this model (capability, role and talent). Thus, University libraries in Nigeria require a skillful and capable talent pool which is essential for its organizational development. The library has different roles and it's the responsibility of managers of library to search for talent who are fit to take up such position. Finally, the identified talents must fulfill and possess all educational, skill, experience and competences need as related to their work responsibilities.

Literature review

Training and development

One of the distinctions of a successful talent management programme is the creation of "talent pools" within an organization, which provides a reliable and consistent internal source of talent. The development of talent pools make it easier to train and develop desirable skills and traits in a broader group of employees which results in improvement of performance across functions and levels (McGarry, 2007). Training can be treated as an investment in organizational human assets. But development activities can be agreed and targeted; participants must have a firm grasp of the areas in which they have strengths and those they need to develop (Atkins et al., 2004). However, the biggest concern with development seems to be attrition and the way this organization deals with the attrition problem is getting employees to share development cost (Cappelli, 2009).

Employees invest in human capital after the start of employment, and normally this investment is called training, provided either by the firm itself on the job, or acquired by the worker (and the firm) through vocational training (Garibaldi, 2006). It can be expected that the investments of libraries in both technical and non technical training will have a positive impact on the extent to which it actually succeeds in developing the skills/knowledge of its employees. Successful organization around the world are aware that the provisions they make for training and development activities is in the ability to attract and retain the best employees for their organization (Bassi & Buren, 1999). It is therefore imperative that libraries as an employer provide opportunities for their workforce to learn. A proactive development schemes will not only improve the capabilities of a team but will also motivate staff and subsequently engender a more loyal employee set (Kyndt et al., 2009). Uwem (2003) opined that the primary objective of any professional training is not just head knowledge of management skills, but rather how this theoretical concept can be translated to meet users' needs in a practical way. Simmons-Welburn and William (2003) investigated the organizational entry and sense-making of new librarians in academic

libraries. Result revealed that nearly all libraries surveyed had a formal orientation for newcomers. Edoka (2000) in a similar study submitted that orientation enables new employees to start work smoothly in the library. Furthermore, Olorunsola (2000) conducted a study of staff opinion on job rotation at the University of Ilorin library. The reaction to job rotation was generally positive. The study recommended that managers should consider the introduction of job rotation in the library which is an effective means of staff development. Further, Jain (1999) reported the findings of the study of on the job training in Botswana National Library Service. The study found out that information technology was one of the main needs identified. Agaja, 1999 revealed that continuing education for librarians in Nigerian university libraries often takes place through conferences, workshops, seminars, or in-service training. He further reported that seminars provide opportunities to a group of academic libraries who meet to discuss problems or contemporary issues on recent developments in the Nigerian library.

Aguolu and Aguolu, 2002 articulated the issue of professional education and training required of practitioners is contentious in every profession. They stated that Libraries are embedded in the cultural process and are part of the foundation of a civilized life. Providing access to the records of civilization and culture requires well-educated librarians with appropriate knowledge. They emphasize the idea that modern technology has improved information handling, facilitated learning and research, and brought new perspectives on the librarian's role. Smith (2002) investigated the pattern of staff development activity within Australian libraries, findings revealed a commitment to staff development that is strategic. Many of the libraries studied have formal policies and organized staff development programmes. Conclusively, a finding from a study on assessment of personnel training needs in the Ibrahim Babangida Library, federal University of Technology (IBL, FUT), Yola, Nigeria by Abba and Dawha (2009) revealed that on-job-training programmes are needed by a large majority (81.2%) of library personnel in the study. Majority (80%) of the respondents needed informal training programmes. Finally, funding (100%) was found to be a major factor inhibiting training.

Recruitment and selection

Any process for which the library seeks applicants and attracts potential employees is called recruitment; and the process of selection in the library should entail identifying those applicants with the knowledge, skills, abilities, and other characteristics that will help it achieve its goals. The overall aim of the recruitment and selection process is to obtain at minimum cost of the number and quality of employees required to satisfy the human resource needs of the organization (Armstrong, 2003). Hiring capable people is an attractive point of departure in the process, but building and sustaining a committed workforce is more likely to be facilitated by the employment of a range of sophisticated human resource management infrastructures (Chew, 2005). Often, talent management processes assume that most, if not all of an organization's talent needs will be recruited from the outside. Critical talent needs can be met by utilizing or redeploying current staff or by using part time staff, contractors, consultants and other contingent workers (Bechet, 2008). The choice of recruitment method depends on the vacancy to be filled, but the elements of studying the job and the applicants, comparing what each has to offer against the demands of the job and subsequently following up the selection, are common to all methods (Ungerson, 1983 cited in Arthur, 2006).

Coaching/mentoring

Michaels et al. (2002) attributed great importance to coaching as a part of the new paradigms of development and they are supported by Thach (2002) who found coaching to be a great improver of effectiveness. Employees need knowledge of their strengths and consequently the areas where they can improve to be able to develop in the best possible

manner. Further, there is also a chance of derailment of highly talented people if no feedback is given, and then the lack of these practices becomes directly harmful to a business. Michaels et al. (2002) noted that, a manager builds self esteem in the high-potential employee by offering praise, encouragement and support and by believing in the employee's ability to achieve above everyone's expectations. However, the mentor's role also requires the communication of painful feedback, but from the mentor position a bigger picture should be visible so that further encouragement and advise on how to develop from the source of the feedback can be initiated.

Mentoring should be viewed as an important supplement to on-the-job training. It provides new librarians with a nurturing, ongoing relationship which helps overcome the anxiety that nowadays accompanies the tenure and promotion process. A new librarian should be informed of the availability of mentoring when he/she is hired, and is paired with a mentor soon thereafter. Mentoring is a developmental training process on the job that enables sharing of knowledge, skill and experience. Different mentoring programmes exist. Some organizations adopt the formal while others adopt the informal mentoring systems. On whether Nigerian university libraries practice mentoring among librarians (i.e. the state of mentoring in Nigerian universities libraries). The findings of a study conducted by Bello and Mansor (2013) showed that mentoring practices (programmes) exist in all libraries and mentoring practices in the libraries have existed for six years or more. The study revealed that majority of the libraries used one model of mentoring while a few preferred the combination of two or three models. It further revealed that the use of mentoring in the libraries may be attributed to the demographic profile of the respondents. 35% of the respondents were in lower cadre, which means that perhaps they have less professional experience. Besides, 50% of the respondents were of middle-age (less than 46 years of age) compared to the 24% at 46 years of age or more. On the types of mentoring programme practices obtained in Nigerian university libraries (i.e. what mentoring programmes are practiced by the librarians of Nigerian university libraries), the findings of the study of Bello and Mansor (2013) cited above showed that five main models of mentoring programmes were in use and mentoring activities span an average of two years. The supervisory model of mentoring was the most popular even though some of the respondents indicated that their libraries combined two or three models. The supervisory mentoring provides unlimited frequency of contact and interaction between mentors that tend to augment continuous communication. Learners could easily overcome doubts and gain faster mastery of process as well as demystify cataloguing entirely. Effective mentoring is observed to assist librarians with diverse backgrounds growing in the profession (Zhang et al., 2007).

Talent management and job performance in libraries

Employees are well thought-out as the most valuable capital for every organization and the performance of each one of them is efficient for the organization's performance as a whole (Kazemi & Hojatolah, 2010). There is no hesitation that different organizations aim to achieve high level of job performance, where efficiency and effectiveness of the organization's performance depends on the human element effectiveness. This requires the development, maintaining, achieving the integration and balance with the organization where they work to achieve satisfaction and commitment on permanent basis, and growing their ingenious energies are some of the factors that help workers to achieve the organization's objectives in an integrated manner (Al-Sherif, 1995).

High employees' performance depends on number of factors but once no value is placed on the factor, it will not affect employees' performance. Each organization will constantly strive to have the right number and kinds of people at the right place and right time who are capable of effectively and efficiently completing the work required so that the organization can achieve its overall objectives. However the employees are to be trained from time to time, for competent employees

will not remain competent forever. The training will empower the employees with up to date skills and knowledge. The high performance depends on both ability and motivation and retains the employees who are performing at high levels within an organization.

Furthermore, retaining top talent remains a primary concern for many organizations today. Critical analysis of workforce trends, points to an imminent shortage of highly-skilled employees who possess the requisite knowledge and ability to perform at high levels. In consequence, those organizations failing to retain high performers will be left with an understaffed, less qualified workforce that ultimately hinders their ability to remain competitive (Rappaport et al., 2003). Employers seek to retain high performers and replace low performers with workers who bring greater skills and abilities to the organization.

In addition, staff development is a significant factor for achieving a high level of job performance among librarians. It can be regarded as series of activities an organization put in place in order to assist its staff members acquire the skills and knowledge necessary for efficient and effective performance of jobs and responsibilities in the organization (Banta, 2008). Therefore, staff development is the provision of skills to enable staff members effectively performs their jobs. The types of staff development programme include; simple orientation programme, organized visit, seminars and conferences, participatory management, internal training programmes, formal professional library education and short courses (Ifidon and Ifidon, 2007). Mohammed (2010) posited that all these training programmes can help both professional and para-professional staff to be current with new knowledge and development in the field. It then follows that, the more staff undergoes staff development programmes, the more committed they are to job performance. To collaborate this, Okozor (2007) reported that poor implementation of the in-service training programme affected workers' productivity in Anambra, Ebonyi and Enugu states public libraries in Nigeria.

Saka (2008) studied staff development in relation to job performance in selected academic libraries, University of Maiduguri, using 30 staff as sample size and found a significant relationship between educational qualification and job performance as well as a high correlation between training programme and job performance. There was no significant relation between job satisfaction and job performance in selected academic libraries. In another study, Mbagwu and Nwachukwu (2010) examined the training, development programmes and its effects on professional and Para-professional staff in FUTO library using descriptive statistics. It found that induction and orientation, on-the-job training, workshop, seminars and conferences; simulation and extension training are the kinds of training and development available in FUTO library. The study revealed that training and development enhance job performance as majority of the respondents affirmed that job performance is above average after they had undergone training. Adomi and Famola, 2012 investigated training and development of 50 cataloguers in National Library of Nigeria, Abuja. Questionnaire was used to collects data. The study found that staff development and training improve quality of library staff service delivery and it enhances job satisfaction and staff competence.

In a study conducted by Saka and Huruna (2013) on the relationship between staff development and job performance of staff in branch libraries, University of Maiduguri out of four null hypotheses of no significant relationship between formal education; Seminars/Conferences, workshop and job performance of library staff; only formal education tends not to have significant relationship with job performance of staff in branch libraries. The fourth hypothesis shows that the four variables of staff development were highly correlated with job performance.

Research methodology

Research design

The survey research design of a correlational type was adopted for this study. Correlational survey design involves collecting data to

determine whether a significant relationship exists between two or more variables. The exploration of relationship between Talent management and job performance of librarians in university libraries in South-West, Nigeria will provide insight into the nature of the variables themselves as well as an understanding of their relationships. The main aim of using a correlational research design for this study was that it determined the nature, degree and direction of relationship between Talent Management and job performance of librarians. Academic librarians in university libraries in South-West, Nigeria constitute the population for this study. During the commencement of this study, the number of accredited universities is forty-four as last approved by Nigeria University Commission. This was obtained on its official website ([NUC, 2018](#)). However, only 36 out of the actual 44 universities in South-west, Nigeria are fully operating on their mandate to provide teaching, conduct research and provide services to the society at large.

The total population of academic librarians in university libraries in South-West Nigeria is 364. This figure was retrieved from the human resources department of all the listed university in this study and reconfirmed when the questionnaires were administrated. The totality of librarians in South-West, Nigeria formed the population of this study. Hence, the total enumeration technique was used to cover all the 364 librarians basically because of the homogeneity of the population and sufficient resources are available to carry out this study. This means the totality of the identified librarians in the universities was included in the study.

Instrument of data collection

The instrument that was used in collecting data for this study was a structured questionnaire titled "Talent Management and Job Performance of Librarians" (TMJPL). The questionnaire was constructed in a simplified way with questions targeted towards obtaining facts on Talent Management practices in the library and the level of job performance among librarians. The questionnaire was used in order to have common and structured questions in achieving the set objectives and to afford the respondents convenient time to respond to the question. The questionnaire was divided into five sections; A, B, C and D. These sections of the questionnaire as well as the measurement scales are outlined below:

Section A: Demographic information of the librarians such as age, gender, working experience, highest academic qualification, name of institution, Department. This section was developed by the researcher

Section B: 32 items Talent Management Scale was self developed by the researcher which was based on reviewed literature consulted in the field of knowledge management, people's management and Human resources management. The option of choices followed a 4-point Likert like Scale of Strongly Agree = 4, Agree = 3, Disagree = 2, strongly Disagree = 1. Typical examples of the items are: "Available training match with my job", "My salary package is adequate for my level", etc. The reliability coefficient of the scale was 0.830

Section C contains 20 items on Job Performance rating scale developed by [Oyewole and Popoola \(2013\)](#). It is a 5-point scale instrument designed to measure the level of job performance of library personnel. This instrument was administered among two groups namely; all professional librarians working in library and librarians who occupy managerial positions in the library such as the university librarians and heads of section/department. The first group which was made up of all professional librarians was required to personally assess their job performance individually based on the items in this section. Also, the second group was librarians in the managerial cadres (University Librarian and heads of sections/departments and others) who occupy managerial position in the library. They appraised the actual level of job performance among librarians

working under their leadership and supervision. The questionnaire measured the job performance of librarians in university libraries in South-West Nigeria. Examples of the items include "skills in the use of information technology", "ability to provide leadership", punctuality and regularity to work etc. the respondents are to assess library personnel on a 5 scale levels of assessment viz.: Excellent = 5, Very good = 4, Good = 3, Fair = 2 and Poor = 1. The reliability coefficient of the job performance was 0.973

Section D: Contains 11 items on factors affecting talent management practices in libraries. It was self developed by the researcher and was generated by detail observation and review from literature. Respondents are to tick as appropriate.

Validity and reliability of the instrument

The validity of an instrument is tested to ensure that it accurately measures the constructs it is designed to measure. Reliability test on its part was conducted to ensure consistency in the instruments developed for this study. Standardized questionnaire was adapted for items on job performance. Job performance rating scale by [Oyewole and Popoola \(2013\)](#) was the choice of the researcher. Also, a self-developed questionnaire by the researcher was used for other constructs of this study while the content of the self-designed instrument was scrutinized to ensure that it measures and achieves the stated objectives.

The questionnaires were vetted for construct and face validity using expert review and. Thereafter, a pre-test of the questionnaire was conducted among thirty library personnel from Kogi State University, Anyigba, Nigeria which were not included in the study. The research instrument was validated using the Cronbach Alpha test to determine the reliability of the two main constructs (talent management practice and job performance) in the correlation instrument. The reliability result for the constructs was accepted if its reliability coefficient is greater than or equal 0.60 by the rule of thumb but if otherwise, it will be rejected for further improvement of the items of the main construct. The results of the Cronbach Alpha test for the two constructs are talent management (0.83) and job performance (0.97).

Data collection procedure

The researcher and five (5) well trained research assistants were used to administer the questionnaire for a period of two and half months. The questionnaire was distributed individually to each respondent physically. A period of two weeks was given to the respondents for the retrieve of the questionnaire obtained. The researcher trained the research assistants to ensure proper administration of the questionnaire. The purpose of the study was duly explained to the respondents and participants were assured of the confidentiality of the information they provide.

In total three hundred and sixty four copies of the questionnaire were administered on all university librarians from seven federal universities, eight state universities and twenty-one private universities. Two hundred and seventy seven of the three hundred and sixty four copies of the questionnaires administered were retrieved. They were correctly filled and found useful, thereby giving a response rate of 76.1%. Also, a total of one hundred and thirty copies of the questionnaire were administered to librarians who hold managerial position in the library such as the university librarians and head of department/sections. A total of one hundred and five copies of the questionnaires (representing 80.8% response rate) were returned and found usable for data analysis.

Methods of data analysis

The data collected was analyzed using percentages mean and standard deviation and Pearson Product Moment Correlation. Responses from the questionnaire were coded and analyzed using the Statistical packages for the Social Science Software (SPSS. V21).

Data analysis, results and discussion of findings

Results in Table 1 shows that 51% of respondents were male, while 48% were female. All these indicated that both gender were fairly represented in the study except that in each case, majority of the respondents were male.

Analysis of the respondents by age indicated that majority of the respondents were between the age range of 40–49 (43.5%). This was closely followed by those within the age range of 30–39 (29.5%). The other respondents fall within the age range of 50–59 (20.7%), 20–29 (5.2%) and 60 years and above (1.1%). Further, analysis of the respondents by years of working experience indicated that majority of the respondents (25.7%) fall within 6–10 years of experience while 22.6% of the respondents said they had worked for between 11 and 15 years. This was followed by 20.6% of the respondents who have been on the job for 1–5 years, 13.6% of them have worked for between 16 and 20 years, 10.1% of the respondents had worked for between 21 and 25 years, 5.8% of the respondents had worked for between 26 and 30 years and 1.6% of the respondents had worked for 31–35 years. This result implies that majority of the respondents had moderate working experience.

In addition, Table 1 also shows that 25.5% of the respondents that participated in this study are within the status of Librarian II; 20.4% are within the status of Librarian I, 15.3% are Assistant Librarians, 14.5% are Senior Librarians, 7.3% are Deputy Librarians and 6.5% are University Librarians. This result revealed that the staff structure of the universities is bottom heavy as majority of their personnel falls between Librarian II and I, cadres meant for new entrants into the profession. The qualification for cadres of librarian I, II require a minimum of a bachelor degree in Library and information science or related study while a minimum of Masters Degree in Library and information science with years of experiences qualifies for the position of senior, deputy and university librarian.

Analysis of the academic qualification of the respondents revealed that 46.9% of them possessed either a MLIS/MLS/MIRM and this was followed by those who possessed an MPhil (22.5%). The percentage of respondents with PhD amounted to 12.4% while those who possessed BLIS/BLS and others were 10.5% and 7.6% respectively. This result implies that majority of librarians working in the university libraries in

Table 1
Demographic information on the distribution of respondents.

Demographics	Classification (n = 277)	(%)
Gender	Male	142 (51.3)
	Female	135 (48.7)
Age	20–29	14 (5.2)
	30–39	80 (29.5)
	40–49	118 (43.5)
	50–59	56 (20.7)
	60+	3 (1.1)
Work experience	1–5	53 (20.6)
	6–10	66 (25.7)
	11–15	58 (22.6)
	16–20	35 (13.6)
	21–25	26 (10.1)
	26–30	15 (5.8)
	31–35	4 (1.6)
Job status	University Librarian	18 (6.5)
	Deputy Librarian	20 (7.3)
	Principal Librarian	29 (10.5)
	Senior Librarian	40 (14.5)
	Librarian I	56 (20.4)
	Librarian II	70 (25.5)
Qualification	Assistant Librarian	42 (15.3)
	BIRM/BLS	29 (10.5)
	MLIS, MLS, MIRM	129 (46.9)
	MPhil	62 (22.5)
	PhD	34 (12.4)
	Others	21 (7.6)

Bold data represent the frequency of the respondents.

South-West, Nigeria are well educated with at least, an additional higher degree. This can suggest that librarians working in university libraries are competent and skillful on their job based on their educational background and wealth of experience in library and information management.

Research Question One: What is the level of job performance of librarians in university libraries in South-West, Nigeria?

Table 2 shows the level of job performance of librarians in university libraries in South-West, Nigeria. Considering the result obtained, the rating of the level of job performance of librarians based on individual self assessment is as follows; almost all the librarians believe they have the ability to perform library routines (mean = 3.6); majority of them feel they contribute to the overall development of the library (mean = 3.5); a good number of the respondents believe they meet the approved goals of the section where they work in the library (mean = 3.4). again, majority of them feel they have the ability to work with Co-workers (mean = 3.3); attend promptly to requests from clients (mean = 3.3); contribute to the overall development of the university (mean = 3.3); rated their assessment of the quality of work they perform high (mean = 3.3); performing work schedule on time (mean = 3.3); ability to work with minimum supervisor (mean = 3.3). Furthermore, a good number of the respondents believe they have good communication skills (mean = 3.2); coordinating ability (mean = 3.2); creativity and diligence at work (mean = 3.2), ability to provide leadership (mean = 3.2) and able to assess the quantity of work performed (mean = 3.2). Also, a large number of the respondents belief they are punctual and regular at work (mean = 3.1), perform administrative duties (mean = 3.1) and are able to perform competently under pressure (mean = 3.1). A slightly above average number of respondents admitted to meeting minimum requirement for promotion (mean = 3.0). However majority of the respondents feel they have a fair skill in the use of information technology (mean = 2.7).

In order to further ascertain the level of job performance of librarians based on their individual rating an indepth analysis was conducted. The total or maximum scoring of the scale obtainable is 5×20 (number of items) = 100. Therefore, the score of 1–30 indicates low job performance, 31–60 is moderate job performance and 61–100 indicates high job performance. Hence, the result reveals that about 36.9% of the respondents rated their job performance high, 63.1% rated moderate while none of them rated low their job performance. This implies that most of the librarians believe they have a moderate level of job performance.

Managerial librarian rating of librarians' job performance

Librarians at the managerial cadre in the library consisting of the university librarians, heads of department/section and other supervising librarians were asked to rate the general job performance of librarians. The rating of the managerial cadre librarians on the level of job performance among librarians working in their respective university libraries is as follows: majority of the respondents believe that librarians have a good ability to perform library routine (mean = 3.6); contribute to the overall development of the library (mean = 3.6); meet approved goals in their sections/department (mean = 3.3); contribute to the overall development of the university (mean = 3.2); performing of work schedule on time (mean = 3.1); assessment of quality of work performed (mean = 3.1); ability to provide leadership (mean = 2.9); coordinating ability (mean = 2.8); ability to attend promptly to requests from clients (mean = 2.8). Ability to work with minimum supervisor (mean = 2.8); ability to work with Co-workers (mean = 2.7) and lastly, ability to work with minimum supervision (mean = 2.7). However, majority of the managerial cadre librarians feels that most librarians in university libraries have a fair level of job performance on their ability to perform competently under pressure (mean = 2.6); creativity and diligence at

Table 2

Job performance of librarians based on individual librarian rating.

Statement on job performance	Excellent F (%)	Very Good F (%)	Good F (%)	Fair F (%)	Poor F (%)	Mean	Std dev
Ability to perform library routine.	48 (17.8)	80 (29.6)	118 (43.7)	24 (8.9)	0	3.6	0.9
Contribution to the overall development of the library	43 (15.9)	94 (34.7)	100 (36.9)	32 (11.8)	2 (0.7)	3.5	0.9
Meeting of approved goals of his/her section (e.g. cataloguing, reference, circulation, etc.)	41 (15.0)	84 (30.8)	106 (38.8)	38 (13.9)	4 (1.5)	3.4	1.0
Ability to work with co-workers.	40 (14.8)	62 (23.0)	105 (38.9)	61 (22.6)	20 (0.7)	3.3	1.0
Ability to attend promptly to requests from clients.	38 (14.0)	55 (20.3)	12.5 (46.1)	46 (17.0)	7 (2.6)	3.3	1.0
Contribution to the overall development of the university.	42 (15.4)	46 (16.9)	142 (52.2)	41 (15.1)	1 (0.4)	3.3	0.9
Assessment of quality of work performed.	39 (13.2)	47 (20.6)	129 (48.9)	50 (15.8)	5 (1.5)	3.3	0.9
Performing work schedule on time.	36 (13.1)	61 (22.3)	124 (45.3)	46 (16.8)	7 (2.6)	3.3	1.0
Ability to work with minimum supervision.	40 (14.6)	60 (21.9)	112 (40.9)	59 (21.5)	3 (1.1)	3.3	1.0
Communication skills.	40 (14.7)	48 (17.6)	106 (38.8)	76 (27.8)	3 (1.1)	3.2	1.0
Coordinating ability.	31 (11.4)	58 (21.2)	109 (39.9)	73 (26.7)	2 (0.7)	3.2	1.0
Creativity and diligence of work	33 (12.1)	63 (23.1)	108 (39.6)	64 (23.4)	5 (1.8)	3.2	1.0
Ability to provide leadership.	29 (10.6)	69 (25.3)	104 (38.1)	67 (24.5)	4 (1.5)	3.2	1.0
Assessment of quantity of work performed.	36 (14.4)	56 (17.4)	133 (47.8)	43 (18.5)	4 (1.9)	3.2	1.0
Punctuality and regularity to work.	40 (14.7)	45 (16.5)	97 (35.5)	89 (32.6)	2 (0.7)	3.1	1.0
Ability to perform administrative duties.	38 (14.0)	45 (16.6)	95 (35.1)	89 (32.8)	4 (1.5)	3.1	1.1
Ability to perform competently under pressure.	28 (10.3)	55 (20.1)	120 (44.0)	63 (23.1)	7 (2.6)	3.1	1.0
Ability to anticipate problems and develop solution	28 (10.2)	51 (18.6)	107 (39.1)	84 (30.7)	4 (1.5)	3.1	1.0
Meeting minimum requirement for promotion.	36 (13.1)	41 (15.0)	93 (33.9)	102 (37.2)	2 (0.7)	3.0	1.0
Skills in the use of information technology	26 (9.5)	37 (13.6)	67 (24.5)	127 (46.5)	16 (5.9)	2.7	1.1

F = frequency, % = percentage, std. dev = standard deviation.

work (mean = 2.5); communication skills (mean = 2.4); punctuality and regularity to work (mean = 2.4); meeting minimum requirement for promotion (mean = 2.3); ability to anticipate problems and develop solution (mean = 2.3); skill in the use of information technology (mean = 2.2) and ability to perform administrative duties (mean = 2.2).

In order to further ascertain the level of job performance of librarians based on managerial librarians rating an indepth analysis was conducted. The total or maximum scoring of the scale obtainable is 5×20 (number of items) = 100. Therefore, the score of 1–30 indicates low job performance, 31–60 is moderate job performance and 61–100 indicates high job performance; about 46.7% of the respondents believe librarians' job performance was high, 53.3% were rated moderate while none was rated low. This means that majority of the managerial librarians believe that librarians in university libraries have a moderate level of job performance. This result further supports the earlier findings on level of job performance of librarian based on individual rating. Hence, it can be concluded that librarians job performance in university libraries in south west, Nigeria is a moderate level ([Table 3](#)).

Research Question Two: What is the talent management practices employed in university libraries and its level of involvement in South-West, Nigeria?

Librarians were asked to indicate the talent management practices employed in the library where they work. Results in [Table 4](#) show that all the listed talent management practices were employed in university libraries in South-West, Nigeria. However, training/retraining (96.8%) was the highest talent management practice employed in university libraries in South-West, Nigeria. This was closely followed by mentoring programmes (96.06%), then recognition/promotion (94.6%), coaching (91.3%), Deploying/Redeploying (89.5%), assessment of work duties (83.4%), staff engagement (76.5%), feedback on performance (76.2%), leadership development (69.3%), workforce planning (67.1%), compensation (62.5%), library linkage (61.0%), branding of library job (60.3%), career planning (53.1%) and succession planning (46.6%). This result implies that to a large extent, talent management practices are employed in managing librarians in university libraries in South-West, Nigeria. However, the least talent management practice employed was succession planning.

Table 3

Managerial librarian rating of librarians' job performance.

Statement of job performance	Excellent F (%)	Very good F (%)	Good F (%)	Fair F (%)	Poor F (%)	Mean	Std. deviation
Ability to perform library routine	8 (7.6)	47 (44.8)	47 (44.8)	3 (2.9)	0	3.6	0.7
Contribution to the overall development of the library	5 (4.8)	57 (54.3)	42 (40.0)	1 (1.0)	0	3.6	0.6
Meeting of approved goals of his/her section	1 (1.0)	38 (36.2)	56 (53.3)	10 (9.5)	0	3.3	0.7
Ability to work with co-workers	1 (1.0)	11 (10.5)	47 (44.8)	46 (43.8)	0	2.7	0.7
Punctuality and regularity to work	0	6 (5.7)	29 (27.6)	69 (65.7)	0	2.4	0.6
Ability to attend promptly to requests from clients	1 (1.0)	17 (16.2)	49 (46.7)	38 (36.2)	0	2.8	0.7
Meeting minimum requirement for promotion	0	3 (2.9)	28 (26.7)	73 (69.5)	0	2.3	0.5
Communication skills	0	6 (5.7)	31 (29.5)	67 (63.8)	0	2.4	0.6
Contribution to the overall development of the university	1 (1.0)	28 (26.7)	64 (61.0)	11 (10.5)	0	3.2	0.6
Coordinating ability	0	18 (17.1)	53 (50.5)	34 (32.4)	0	2.8	0.7
Creativity and diligence of work	0	10 (9.5)	37 (35.2)	56 (53.3)	0	2.6	0.7
Ability to provide leadership	0	20 (19.0)	54 (51.4)	31 (29.5)	0	2.9	0.7
Assessment of quality of work performed	1 (1.0)	26 (24.8)	59 (56.2)	19 (18.1)	0	3.1	0.7
Performing work schedule on time	0	24 (22.9)	70 (66.7)	11 (10.5)	0	3.1	0.6
Ability to work with minimum supervision	1 (1.0)	17 (16.2)	43 (41.0)	44 (41.9)	0	2.8	0.8
Ability to perform administrative duties	0	1 (1.0)	20 (19.0)	82 (78.1)	0	2.2	0.4
Assessment of quantity of work performed	0	27 (25.7)	61 (58.1)	16 (15.2)	0	3.1	0.6
Ability to perform competently under pressure	0	12 (11.4)	39 (37.1)	53 (50.5)	1 (1.0)	2.6	0.7
Ability to anticipate problems and develop solution	0	4 (3.8)	28 (26.7)	69 (65.7)	4 (3.8)	2.3	0.6
Skill in the use of information technology	0	3 (2.9)	24 (22.9)	73 (69.5)	5 (4.8)	2.2	0.6

Table 4

Talent management practices employed and level of involvement in university libraries in South-West, Nigeria.

Practices	Used (%)	Level of involvement				
		High (%)	Moderate (%)	Low (%)	Mean	Std dev
Staff engagement	211 (76.5)	52 (24.9)	140 (67.0)	17 (8.1)	2.2	0.6
training/retraining	268 (96.8)	66 (24.5)	174 (64.7)	29 (10.8)	2.1	0.6
Deploying/ redeploying	248 (89.5)	37 (15.0)	164 (66.4)	46 (18.6)	2.0	0.6
Workforce planning	186 (67.1)	49 (26.3)	72 (38.7)	65 (34.9)	1.9	0.8
Recruitment/ selection of talent	246 (88.8)	43 (17.5)	146 (59.3)	57 (23.2)	1.9	0.6
Recognition/ promotion	262 (94.6)	45 (17.2)	145 (55.6)	71 (27.2)	1.9	0.7
Assessment of work duties	231 (83.4)	36 (15.6)	132 (57.1)	63 (27.3)	1.9	0.6
Coaching of identified talented librarians	253 (91.3)	37 (14.6)	133 (52.6)	83 (32.8)	1.8	0.7
Mentoring of librarians	266 (96.0)	26 (9.8)	149 (56.0)	91 (34.2)	1.8	0.6
Career planning for librarians	147 (53.1)	33 (23.1)	54 (37.8)	56 (39.2)	1.8	0.8
Feedback on performance	211 (76.2)	30 (14.2)	109 (51.7)	72 (34.1)	1.8	0.7
Branding of library job	167 (60.3)	27 (15.9)	59 (34.7)	84 (49.4)	1.7	0.7
Leadership development	192 (69.3)	29 (15.0)	77 (39.9)	87 (45.1)	1.7	0.7
Succession planning for staff	129 (46.6)	21 (16.3)	50 (38.8)	58 (45.0)	1.7	0.7
Library linkage	169 (61.0)	20 (11.7)	55 (32.2)	96 (56.1)	1.6	0.7
Compensation	173 (62.5)	16 (9.2)	67 (38.5)	91 (52.3)	1.6	0.7

F = frequency, % = percentage, std. dev = standard deviation.

Similarly, analysis of the level of involvement of the talent management practices employed in university libraries reveal that the level of involvement in the following talent management practices were at a moderate level in university libraries, staff engagement (67.0%) followed by training/retraining (64.7%), deploying/redeploying (66.4%), recruitment/selection of talent (59.3%), assessment of work duties (57.1%), mentoring of librarians (56.0%), recognition/promotion (55.6%) and feedback on performance (51.7%). However, Library linkage (56.1%) was rated at a low level of involvement in university libraries, followed by branding of library job (49.4%) and succession planning (45.1%).

This result implies that none of the listed talent management practices was ranked high in the level of involvement among librarians in South-West, Nigeria. However, staff engagement, training/retraining, deploying/redeploying, recruitment/selection of talent, assessment of work duties, mentoring, recognition/promotion and feedback on performance were all at a moderate level of involvement while library linkage, succession planning, leadership development and branding of library job were at a low level of involvement among other talent management practices employed in university libraries in South-West, Nigeria.

Research Question Three: What factors affect talent management practices in university libraries in South-West, Nigeria?

Table 5 shows the major factor affecting talent management practices in university libraries in South-West, Nigeria. These are: poor funding of the library to enable proper management of library personnel

Table 5

Factors affecting talent management practices in university libraries.

Factors affecting talent management practices	F	Percentage
Library management in my place of work doesn't have enough high quality time in analyzing the talent needs of the library.	93	33.6
The library where I work does not encourage constructive collaboration, sharing resources with other libraries.	143	52.2
Library management is not sufficiently committed to development of staff capabilities& careers.	86	31.0
The headship in the library is unwilling to differentiate his staff as top, average and under performers.	27	9.7
Senior librarians in the library are not sufficiently involved in mentoring of junior colleagues.	42	15.2
The management team of my library does not address underperformance of employee effectively even when chronic.	72	26.0
Recruiting of employee in my university library is solely controlled by the university management without the involvement of the library administrators.	30	10.8
Library is poorly funded to enable proper management of library personnel.	181	65.3
There is a constant loss of the best brains in my university library.	167	60.3
Talent management practice in my university library is not well communicated to librarian.	142	51.3
The best hand/brain in the library where I work have either retired or left the job.	39	14.1

F = frequency, % = percentage.

(65.3%), this is closely followed by the constant loss of the best brains in the library (60.3%); libraries not encouraging constructive collaboration, sharing resources with other libraries (52.2%) and poor communication (51.3%). However, the least factors affecting talent management practices in university libraries include, library headship not willing to differentiate his staff as top, average and under performers (9.7%). This is closely followed by the fact that recruitment of employees in university library is solely controlled by the university library without the involvement of the library administrators (10.8%). Others are; best brain in the library have either retired or left the job (14.1%); senior librarians are not sufficiently involved in mentoring of junior colleagues (15.2%); library management does not address underperformance of employee effectively even when chronic (26.0%); library management is not sufficiently committed to development of staff capabilities and careers (31.0%) and lastly, library management not having enough quality time to analyzing the talent needs of the library (33.6%).

The findings revealed that poor funding, constant loss of the best brains, not encouraging constructive collaboration and sharing of resources with other libraries and lastly, poor communication were the major factors affecting talent management in university libraries in South-West, Nigeria. All the above listed factors would definitely have negative effects on the management of librarians in university libraries.

Testing of hypotheses

Hypothesis 1. There is no significant relationship between each talent management practices and librarians' job performance in university libraries in South-West, Nigeria.

This hypothesis stated that there is no significant relationship between talent management practices and job performance of librarians in university libraries in South-West, Nigeria. To test this hypothesis, the data collected on talent management and job performance of librarians were subjected to Pearson Product Moment Correlation analysis. Table 6 a shows the summary of test of significant relationship between talent management practices and job performance. The table revealed that job performance had significant relationship with attraction of talent ($r = 0.390$, $p < 0.05$); training and development of talent ($r = 0.396$, $p < 0.05$); retention ($r = 0.403$, $p < 0.05$); career management ($r = 0.524$, $p < 0.05$).

Table 6

Summary of correlations matrix of analysis relationship between talent management practices and job performance of librarians.

Talent management practices (n = 277)	Mean	Std. deviation	R	Sig	Remark
Attraction of talent training and development of talent	14.8 14.4	2.9 2.4	0.390 0.396	0.000* 0.000	Sig Sig
Retention career management organizational culture	20.6 19.0 15.5	3.5 2.7 3.1	0.403 0.524 0.551	0.000 0.000 0.000	Sig Sig Sig
Job performance	63.2	17.2			

* Significance at 0.05.

< 0.05) and organizational culture ($r = 0.551$, $p < 0.05$). This implies that attraction, training and development, retention, career management and organizational culture are significantly associated with job performance of librarians. Furthermore, there exists a positive moderate correlation between attraction of talent ($r = 0.390$); training and development of talent ($r = 0.396$); retention ($r = 0.403$); career management ($r = 0.524$) and organizational culture ($r = 0.551$) and job performance. It can therefore be inferred that talent management practices has a moderate positive relationship with job performance of librarians in South-West, Nigeria.

Hypothesis 2. There is no significant relationship between combined talent management practices and librarians' job performance in university libraries in South-West, Nigeria.

Relationship between combined talent management practices and job performance of librarians' in university libraries in South-West, Nigeria

Results in Table 7 shows that there was a positive significant relationship between talent management practices ($r = 0.582$) and job performance of librarians in university librarians in South-West, Nigeria. This shows that the combination of all the talent management practices (attraction, training and development, retention, career management and organization culture) considered in this study influenced the job performance of librarians. The implication of this finding is that the more university libraries in South-West, Nigeria manage the potentials talents of their employees, the higher the job performance of librarians. Thus, the act of talent management affects the job performance of librarians in university libraries. This was so because the Pearson Correlation Coefficient (r) tabulated was less than the (r) calculated. Therefore, the null hypothesis which states that there is no significant relationship between talent management practices and job performance of librarians was rejected while the alternate hypothesis that states that significant relationship existed between the two variables was accepted.

Discussion of findings

The result of the findings showed that based on both individual librarians rating and managerial cadre rating of job performance of librarians in university libraries in South-West, Nigeria, the job

Table 7

Results showing the relationship between combined talent management practices and job performance of librarians' in university libraries in South-West, Nigeria.

	Mean	Std. deviation	R	Sig p.	Remark
Job performance and talent management practices	63.2491 84.3357	17.17090 11.38932	0.582	0.000*	Sig

n = 277.

* Significance at 0.05.

performance of librarians is at a moderate level. In other words, the job performance of librarians in university libraries in South-West, Nigeria is neither high nor low but at a moderate level. This result is in line with those of Amusa et al. (2013), Oyewole and Popoola (2013) and Nwosu et al. (2013) who all asserted that the level of job performance among librarians is at a moderate level. In describing further the result of the findings of the level of job performance of librarians, result shows that librarians are not at their best when it comes to creativity and diligence at work, ability to perform competently under pressure, punctuality at work, ability to anticipate problems and develop solution using ICT and lastly in meeting up the minimum requirement for promotion. This finding perhaps is not strange because some studies have reported a similar result. Babalola and Nwalo (2013) conducted a study on the productivity of librarians in Nigeria and found that a good number of librarians are not productive in terms of publication output which has also affected their promotion. Also, Akor (2009, 2014) reported that librarians are tactless; making them to grapple with problems after they arise.

The result of the finding further revealed that all the identified talent management practices considered in this study were all employed in managing librarians in university libraries. This finding was in accordance with the submission of Kehinde (2012) who reported that 95% of organizations considered in his study were either fully applying talent management or partially applying talent management. This is a strong indication that the level of application of talent management is recent time has increased tremendously among organization including university libraries in South-West, Nigeria. In the same study, Kehinde, also found out that most organizations realize the importance of talent management on the effective and efficient performance of their employees and senior staff. In a similar study also conducted by Chartered Institute of Personnel and Development (2007) the survey shows that at least 75% of chief executive officers acknowledge that talent management is on top of their agendas. This result confirms the vital role and importance of talent management practices in organization today and affirms a high presence of talent management practices in organization including university libraries in South-West, Nigeria.

Furthermore, result on the talent management practices used in libraries in South-West, Nigeria revealed that training/retraining, mentoring, recognition/promotion, coaching and deploying/redeploying were the commonly used talent management practices in university libraries while succession planning in university libraries was the least talent management practices employed in university libraries in South-West, Nigeria. Hence, the important role of succession planning among librarians is down played and given limited attention in university libraries in South-West, Nigeria. This contradicts the assertion of Stone (2002) that an organization needs to have an effective succession management programme in place including a particular focus on the continuity of key specialists and leaders. Also, Bernthal and Wellins (2006) reported that employing the use of succession management planning helps to improve organizational performance. It is necessary therefore, that university libraries in South-West, Nigeria give more value and attention to succession planning for leadership position in the library because this will guaranty a high level of performance among librarians. The lack of succession planning for librarians deduced from these results need urgent attention by the management of university libraries otherwise it will impact negatively on retention of employees working in the university libraries in Nigeria.

The result of the finding in this study further revealed the level of involvement in the use of talent management practices in university libraries. It was revealed that none of the talent management practices identified in this study was rated high based on the level of involvement while majority of the talent management practices was at a moderate level of involvement. Library linkage, compensation, branding of library job, leadership development and succession planning was ranked low in the level of involvement of talent management practices in university libraries. Based on this result, it is considered necessary for university

libraries to give more attention to branding/rebranding the face of library profession, implementing talent management practices in the daily activities of the library and in managing its human capital. *Kehinde (2012)* carried out a study on talent management implementation and found out that all the respondents from the organization surveyed agreed that talent management implementation positively influence work performance in their organization. Similarly, *Mecer (2010)* reported that respondents were asked to identify their organizations top two talent management priorities over the next three to five years. The top response, from among fourteen choices, was succession planning followed by leadership development. Also *Ana (2009)* in his view asserted that in order to attract the best, organizational branding is a useful strategy. The organization that manages its corporate brands effectively, gains advantage in the highly competitive global market place. Hence, without a good brand image, it will be difficult from the library to attract the right talents. Also, a study conducted by *Yaqub and Khan (2011)* reported the role of employer branding and talent management for organizational attractiveness, the research outcomes showed a positive relationship between employer branding and organizational attractiveness. Similarly in the views of *Wilden et al. (2006)*, employer branding actually tells the attitude of potential and current employees towards job and organizational attributes which builds the employer brand image.

The result of the finding shows that there are four major factors affecting talent management practices in university libraries in South-West, Nigeria. These include; poor funding of the library to enable proper management of librarians, constant loss of best brains, not encouraging constructive collaboration, sharing resources with other libraries and poor communication. This finding is in line with the assertion of *Rothwell (2011)* that increasing turnover in recent years due to burnout and retirements along with salaries and bonuses are requiring institutions to find solution to remain competitive with other counterparts for key talents.

Results of correlation analysis on the relationship between talent management practices and job performance of librarians in university librarians in South-West, Nigeria reveal that all the talent management practices (attraction, training and development, retention, career management and organizational culture) had significant relationship with job performance of librarians. This result corroborates that of *Saka (2008)* who studied staff development in relation to job performance in selected academic libraries, university of Maiduguri using 30 staff as sample size and found a high correlation between training programmes and job performance. Similarly, *Adomi and Famola, 2012* investigated training and development of 50 cataloguers in national library of Nigeria, Abuja and found that staff development and training improve quality of library staff service delivery and it enhances job performance. Also, *Sturges et al. (2002)* found that organizational career management enhances employee job performance. *Onwuka and Ugwu (2015)* in their study found that there is an existence of strong relationship between talent management and employees performances in selected public sector organization in Nigeria. Similarly, *Osman et al. (2011)* and *Popescu et al. (2012)* reported that talent practices such as skills training, competence development, career development plans and sound performance appraisal systems are key to the enhancement of service quality. The implication of this findings is that talent management practices is critical and importance to the overall job performance of librarians in university libraries in Nigeria.

Conclusion

University libraries are established to support learning, teaching, research and services by providing high quality information service delivery for academic staff members as well as acquisition of knowledge by the student. Thus, strategy on how well to attract, train, develop and retain librarians with the right skills, knowledge, life experience, motivation and capability should be considered necessary in managing

librarians' performance in university libraries in Nigeria. A structured model for talent management practices with a high level of implementation and involvement should be integrated in university libraries in Nigeria so as to effectively manage potential librarians.

Talent management is vital in achieving high job performance among librarians in university libraries as revealed in this study. It is of value that libraries take cognizance of the importance of talent management and the fact that for the library to build winning team, it must invest in its human capital because it will determine the quality and efficiency of librarians' job performance. Finally, understanding the factors that impinge on improving job performance of library personnel in university libraries in Nigeria will enable university administrators and library managers to formulate and execute good human effort planning strategy that centers on attraction potential librarians who have the skills, experience, capability and knowledge in achieving the desired goals and objective of the library. Hence, considering the key issues in this study, job performance and talent management the result reveals that a properly planned talent management strategy will help promote an effective job performance among librarians.

Recommendations

Based on the results of the study, the following recommendations were offered:

1. Librarian effective job performance is a function of competence, skills and experiences. The headship in university libraries should provide a stable environment which promotes attracting the best hand in the library, training and development, job security, regular feedback of performance, proper promotion and compensations, incentives and perks on regular basis so as to increase librarians' level of job performance.
2. The level of involvement in the use of talent management practices should be intensified in order to improve the job performance of librarians in university libraries. Hence, a well planned and structured strategy on how well to attract, rebrand, develop, compensate, engage, recognize and prepare for succession in the leadership position should be considered important among managers of library and university administrators.
3. University libraries in Nigeria must start to channel more energy than ever before into building a brand for the library profession because the strength of the employer brand is the most important factor in attracting talents.
4. Library administrators must focus on creating a positive culture that promotes quality workplace and a good employee experience among the different cadres of workers in the library because it has a great influence on librarian's intention to stay and work better.
5. Proper funding of the library is considered imperative in managing library personnel. Hence, the university community should invest and allocate more funds to developing the human capital in the library in order to support the library objective which is to promote learning, teaching, research and service to the society. Likewise, properly planned succession management strategy, must be in place in the library so as to guide against the increasing turnover and constant loss of best brains in the library.
6. Managers of university library and heads of department & sections should imbibe a culture of engaging and conducting regular conversation with younger librarians, especially around their career aspirations and developmental needs so as to ensure the right allocation of work assignments are assigned to high potential employees to increase their retention within the library.

CRediT authorship contribution statement

Oluwatobi I Omotunde: Conceptualization, Methodology, Data curation, Writing - Original draft, Visualization, Writing – Review &

editing, Project administration. Gabriel O. Alegbeleye: Supervision.

Declaration of competing interest

None.

References

- Abba, T., & Dawha, E. M. K. (2009). Assessment of personnel training needs in the Ibrahim Babangida Library, Federal University of Technology, Yola, Nigeria. *Library Philosophy and Practice (e-journal)* (Paper 293) <http://digitalcommons.uni.edu/li/bphilprac/293>.
- Adomi, E. E., & Famola, M. O. (2012). Training and development of catalogues in National Library of Nigeria. *Nigerian Libraries*, 45(1), 68–77.
- Agaja, J. A. (1999). Professional continuing education for libraries in Nigerian university libraries: Opportunities; problems and prospects. *Annals of Library Science and Documentation*, 46(1), 19–24.
- Aguolu, C. C., & Aguolu, I. E. (2002). *Libraries and information management in Nigeria* (pp. 133–147). EDLinform Services: Maiduguri.
- Aina, L. O. (2004). *Library and information science text for Africa*. Ibadan: Third world services.
- Akor, P. U. (2009). *Influence of university librarians' leadership styles on the job performance of professional librarians in the North-central zone of Nigeria*. Nsukka, Nigeria: University of Nigeria (Doctoral dissertation).
- Akor, P. U. (2014). Influence of autocratic leadership style on the job performance of academic libraries in Benue State. 4(7), 148–152.
- Al-Sherif, B. N. A. (1995). Psychological attitudes and positive and negative behaviours in the administrative work environment. *Journal of Public Administration*, 35, 129.
- Amusa, O. I., Iyoro, A. O., & Olabisi, A. F. (2013). Working environment and job performance of librarians in public universities in south-west Nigeria. *International Journal of Library and Information Science*, 5(11), 457–461.
- Ana, H. (2009). *War of talent*. Faculty of Social sciences and Behavioral Sciences, Tilburg University.
- Armstrong, M. (2003). *A handbook of human resource management practice*. London: Kogan.
- Arthur, D. (2006). *Recruiting, interviewing, selecting & orienting new employees* (4th ed.). New York: Amacom.
- Atkins, R., McCutcheon, M., & Penna, G. (2004). The talent management imperative: A best practice approach. Available: <http://www.compassess.biz>. (Accessed 21 March 2014) (online).
- Babalola, G. A., & Nwalo, K. I. N. (2013). Influence of motivation on productivity of librarians in colleges of education in Nigeria. *Journal of Information and Knowledge Management*, 3(5), 70–75.
- Bamigboye, O. B., & Aderibigbe, N. A. (2004). Personnel motivation and job performance in some selected publishing houses in Ibadan. *Journal of Library and Information Science (JOLIS)*, 11(2), 73–83.
- Banta, R. C. (2008). Staff development and continuing education in a technological university library in Nigeria: The ATBU example. *Gateway Library Journal*, 11(1), 25–32.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1).
- Bassi, L., & Buren, M. V. (1999). Valuing investments in intellectual capital. *International Journal of Technology Management*, 18(5), 414–432.
- Bechet, T. P. (2008). *Strategic staffing: A comprehensive system for effective workforce planning* (2nd ed.). New York: American Management Association.
- Bello, M. A., & Mansor, Y. (2013). Mentoring in libraries and information organisation, the catalogue librarian perspectives. *Library Philosophy and Practice (e-journal)* (Paper 1007) <http://digitalcommons.uni.edu/li/bphilprac/1007/>.
- Bernthal, P., & Wellins, R. (2006). Trends in leader development and succession. *Human Resource Planning*, 29(2), 31–40.
- Cappelli, P. (2009). A supply chain model for talent management people and strategy. 32 (3), 4–7.
- Chew, Y. (2005). Achieving organisational prosperity through employee motivation and retention: A comparative study of HRM practices in Malaysian institutions. *Research and Practice in Human Resource Management*, 13(2), 87–104.
- CIPD. (2007). *Talent management: Research insight*. London: Chartered Institute of Personnel and Development. www.cipd.co.uk/talent.
- Collins, J. C., & Porras, J. I. (1994). *Built to Last: Successful Habits of visionary companies*. New York: Harper Business.
- Davis, T., Cutt, M., Flynn, N., Mowl, P., & Orme, S. (2007). *Talent assessment. A new strategy for talent management*. Aldershot: Gower.
- Dobre, O. I. (2013). Employee motivation and organizational performance. *Review of Applied Socio-Economic Research*, 5(1), 53–60.
- Edoka, B. E. (2000). *Introduction to library science* (p. 177). Onitsha, Nigeria: Palma Publishing.
- Garibaldi, P. (2006). *Personnel economics in imperfect labour markets*. Oxford University Press.
- Garrow, V., & Hirsch, W. (2008). Talent management: Issues of focus and fit public. *Pers. Manage*, 37(4), 389–402.
- Ifidon, S. E., & Ifidon, E. I. (2007). *New Direction in African Library Management*. Ibadan: Spectrum Books Limited Industrial Service Select. Knowledge Delivery: available online @ <http://www.ventycom.pdf/knowledge-delivery.PDF>.
- Jain, P. (1999). On the job training: A key to human resources development. *Library Management*, 20(5), 283–294.
- Jaw, B. S., Wang, Y. P., & Chen, Y. H. (2006). Knowledge flows and performance of multinational subsidiaries: The perspectives of human capital. *International Journal Human Resources Management*, 17, 225–244.
- Kazemi, S., & Hojatolah, J. M. (2010). Pacific effective communication skills on job stress experts. *Journal New Approach of Educational Management*, 4, 63–80.
- Kehinde, J. S. (2012). Talent management: Effect on organizational performance. *Journal of Management Research*, 4(2), 178–186.
- Kyndt, E., Dochy, F., Michielsen, M., & Moeyaert, B. (2009). Employee retention: Organisational and personal perspectives. *Vocations and Learning*, 2(3), 195–215.
- Mbagwu, F., & Nwachukwu, C. (2010). Staff training and development enhancement of job performance: Case of Federal University of Technology Library Owerri. *The Information Technologist*, 7(2). <https://doi.org/10.4314/ictv712.65644>
- McGarity, G. (2007). Strategic talent management. Available online: <http://www.amanet.org/training/articles/strategic-Talent-Management.aspx>. (Accessed 4 January 2018).
- Mecer. (2010). Employers reshaping talent management programs as economy shift toward growth. www.mercer.com.
- Michaels, E., Handfield-Jones, H., & Axelrod, B. (2002). *The war for talent*. Boston: Harvard Business School Publishing.
- Mohammed, A. (2010). Manpower Development in Libraries: A challenge Facing Law Librarians in Nigeria. *Borno Library, Archival and Information Science Journal. A publication of the Nigeria Library Association, Borno State Chapter* 9(1), 105, 110–111.
- Moza, A. S., Ogolla, D. A., & Mureithis. (2020). Relationship between talent management practices and organizational performance in Islamic banks in Kenya. *International Journal of Research granthaalayah*, 8(3), 98–114. <https://doi.org/10.29121/granthaalayah> (v8 13.2020.133).
- Mulului, P. S., & Muathe, S. M. A. (2017). A critical literature review on talent management, competitive advantage and organizational performance: A research agenda. *Journal of Human Resource*, 5, 1–8.
- NUC. (2018). Home. available at <http://nuc.edu.ng/> (online, accessed 19 2018).
- Nwosu, O. C., Ugwoegbu, U., & Okeke, I. (2013). Level of motivation as correlates of librarians' task performance in university libraries in South-East, Nigeria. 8(4), 81–83.
- Okozor, E. U. (2007). *Factors affecting workers' productivity in public libraries: A case study of Anambra, Ebonyi and Enugu states public libraries*. Nsukka: University of Nigeria (Unpublished MLS, 102 pp.).
- Olorunsola, R. (2000). Job rotation in academic libraries: The situation a Nigerian university library. *Library Management*, 21(2), 94–98.
- Onwuka, E. M., & Ugwu, K. E. (2015). The relationship between talent management and employee performance in nigeria public sector: A study of selected firms in Delta State. *International Journal of Economics, Commerce and Management*, 3(5), 1581–1592.
- Osman, I., Berbary, L., Sidani, Y., Al-Ayoubi, B., & Emrouznejad, A. (2011). Data envelopment analyses model for the appraisal and relative performance evaluation of nurses at an intensive care unit. *Journal of Medical Systems*, 35(5), 1039–1062.
- Oyewole, G. O., & Popoola, S. O. (2013). Effects of psycho-social factors on job performance of library personnel in federal colleges of education in Nigeria. *Library Philosophy and Practice (e-journal)*. <http://digitalcommonsunl.edu/libphilprac/872> (paper 872).
- Peteraf, M., & Bergen, M. (2003). Scanning dynamic competitive landscapes: A market based and resource-based framework. *Strategic Management Journal*, 24, 1027–1041.
- Popescu, C., Avram, R., & Dana, M. (2012). New trends in human resource management in the hospitality industry. In *Proceedings of the Scientific Conference AFASES* (pp. 185–190).
- Popoola, S. O. (2005). *Library and information science profession: The new direction in the 21st century in Nigeria. Being a paper presented at 8th Annual General Meeting (AGM) of the Nigerian Librarian Library Association (NLA), Osun State*.
- Rabii, F. (2015). Talent Mangement as Source of Competitive Advantage. In *Asian Economic and Social Society. ISSM (P) 2309-8895* (Vol. 5).
- Rappaport, A., Bancroft, E., & Okum, L. (2003). The aging workforce raises new talent management issues for employers. *Journal of Organizational Excellence*, 23, 55–66.
- Roberts, P. (2008). Globalization of HR at function level: Four UK-based case studies of the international recruitment and selection process. *International Journal of Human Resource Management*, 18, 845–867.
- Rothwell, W. J. (2011). Replacement planning: A starting point for succession planning and talent management. *International Journal of Training and Development Vol*, 15(1), 87–99.
- Saka, A. (2008). Internal change agents' view of the management of change problem. *Journal of Organizational Change Management*, 21(6), 480–496.
- Saka, K. A., & Huruna, I. (2013). Relationship between staff development and job performance among personnel in branch libraries, University of Maiduguri, Nigeria. *Mediterranean Journal of Social Sciences*, 4(5), 9–17.
- Salah, M. R. A. (2016). The impact of training and development on employees performance and productivity. 'A case study of Jordanian private sector transportation companies located in Southern region of Jordan. A particular reference in made to the Governorate of Maan'. *International Journal of Management Sciences and Business Research*, 5(7), 36–70.
- Shravanthi, & Sumanth. (2008). Talent DNA model. *Journal of Human Resource Management*, 22.
- Simmons-Welburn, J., & William, C. W. (2003). Organizational entry, sense making, and new professional employees in academic libraries. Paper presented in ACRL Eleventh National Conference. Available: <http://www.ala.org/content/navigationmenu/ACRL/events and conferences/1001 index 7/16/2003>.
- Smith, I. W. (2002). Staff development and continuing education: Policy and practice in Australia academic and research libraries. In P. Layzell Ward (Ed.), *Library*

- Management: Vol. 16(1). Continuing professional education for the information society, the 5th World Conference on Continuing Professional Education for Library and Information Professionals* (pp. 5–10).
- Stahl, G. K., Björkman, I., Farndale, E., Morris, S. S., Paauwe, J., Stiles, P., Trevor, J., & Wright, P. M. (2007). *Global talent management: How leading multinationals build and sustain their talent pipeline*. INSEAD: Faculty and research working paper.
- Stone, R. (2002). *Human resource management* (4th ed.). Milton, QLD: John Wiley & Sons.
- Sturges, J., Guest, D., Conway, N., & Mackenzie D. K. (2002). 'A longitudinal study of the relationship between career management and organizational commitment among graduates in the first years of work; *Journal of Organizational Behavior*, 23,731–74.
- Thach, E. C. (2002). The impact of executive coaching and 360 degree feedback on leadership effectiveness. *Leadership & Organization Development Journal*, 23(4), 205–214.
- Thunnissen, M., Boselie, P., & Fruytier, B. (2013). Talent management and the relevance of context towards a pluralistic approach. *Human Resource Management Review*, 23 (4), 326–336.
- Ubom, U. I., & Joshua, M. T. (2004). Needs satisfaction variables as predictors of job satisfaction of employees: Implication for guidance and counseling. *Educational Journal*, 4(3), 56–69.
- Utor, J. K. (2003). Funding of colleges of education libraries: Alternative strategies. *Nigeria Journal of Library Archives and Information Science*, 2, 21–27.
- Uwem, E. (2003). Readers services at the crossroads: Meeting user's needs in the information age. *Lagos Journal of Library and Information Science*, 1(2), 113.
- Van Djik, H. G. (2008). The talent management approach to human resources management: Attracting and retaining the right people. *Journal of Public Administration*, 43(3.1), 385–395. <https://repository.up.ac.za/upspace/handle/2263/8823>. www.up.ac.za.
- Villamova, P., Austin, J. T., & Borman, W. (2005). Job performance. In 2nd edition, & C. Cartwright (Eds.), *Blackwell encyclopedia of management* (Vol. 5, pp. 208–209). United Kingdom: Blackwell Publishing (In Austin, J.T. et al (1991)).
- Wilden, R., Gudergan, S., & Lings, I. N. (2006). Employee based brand equity. In *Proceedings of the Australia, New Zealand Marketing Academy Conference Brisbane, Australia*.
- Yaquab, B., & Khan, M. A. (2011). The role of employer branding and talent management for organizational attractiveness. *Far East Journal of Psychology and Business*, 5(1), 57–65.
- Zhang, S., Deyoe, N., & Matveyeva, S. J. (2007). From scratch: Developing an effective mentoring programme. Available online at. Chinese Librarianship: An International Electronic Journal. <http://www.iclc.us/clej/cl24ZDM.htm>.

Title/Author	The impact on employees' job performance of exercising self-directed learning within personal development plan practice / Lejeune, C., Beausaert, S., & Raemdonck, I.
Source	<i>International Journal of Human Resource Management</i> Volume 32, No.5 (Nov 2018) Pages 1086-1112 https://doi.org/10.1080/09585192.2018.1510848 (Database: Taylor & Francis Online)



The International Journal of Human Resource Management

ISSN: 0958-5192 (Print) 1466-4399 (Online) Journal homepage: <http://www.tandfonline.com/loi/rijh20>

The impact on employees' job performance of exercising self-directed learning within personal development plan practice

Christophe Lejeune, Simon Beausaert & Isabel Raemdonck

To cite this article: Christophe Lejeune, Simon Beausaert & Isabel Raemdonck (2018): The impact on employees' job performance of exercising self-directed learning within personal development plan practice, *The International Journal of Human Resource Management*, DOI: [10.1080/09585192.2018.1510848](https://doi.org/10.1080/09585192.2018.1510848)

To link to this article: <https://doi.org/10.1080/09585192.2018.1510848>



Published online: 11 Nov 2018.



Submit your article to this journal 



Article views: 91



CrossMark

View Crossmark data 



The impact on employees' job performance of exercising self-directed learning within personal development plan practice

Christophe Lejeune^a , Simon Beausaert^b  and Isabel Raemdonck^a 

^aFaculty of Psychology and Educational Sciences, Université Catholique de Louvain, Louvain-la-Neuve, Belgium; ^bDepartment of Educational Research and Development, Maastricht University, Maastricht, The Netherlands

ABSTRACT

Today's world of work is forcing companies to change their approach to learning. Their talent strategy needs to foster self-directed learning (SDL) as a process. SDL is an instructional process in which people take the primary responsibility in learning situations. To enhance job performance, their talent strategy must also include tools that support effective competence development, such as personal development plans (PDPs). In this study, we consider the effectiveness of talent strategy of this nature, by analysing longitudinal data on 3,661 employees working in 16 countries, extracted from an electronic talent management system. Two path analyses were conducted to study the relationships between SDL exercised within a PDP practice and job performance, and to test the research hypotheses. Results validate the hypotheses, confirming that SDL as a process within PDP practice positively impacts job performance. However, while the results confirm the importance of setting learning goals and including informal learning activities when exercising SDL process within the PDP practice, they do not confirm the need to integrate other components of SDL as a process. It can be concluded that learning strategy is key to job performance, and that informal learning is of particular importance. Value-added recommendations for practice are discussed.

KEYWORDS

Personal development plan;
self-directed learning;
informal learning; job
performance

Introduction

To thrive in today's rapidly changing economy, companies need talented employees who can cope easily with change. They are the most valuable assets companies have. Companies therefore seek to create a supportive environment for these talented employees (Cross, 2007) by developing

CONTACT Christophe Lejeune  christophelejeune@yahoo.fr  Faculty of Psychology and Educational Sciences, Université catholique de Louvain, Place Cardinal Mercier 10, bte L3.05.01, 1348 Louvain-la-Neuve, Belgium

© 2018 Informa UK Limited, trading as Taylor & Francis Group

talent management strategies (Armstrong, 2006) and by investing heavily in electronic human resources systems that support talent management, including personal development plans (PDPs) (Bersin, 2014). Within this environment, employees are accountable for maintaining their employability throughout their working lives (Billett & Choy, 2013) and are expected to make the most of any opportunity to learn, whether it be formal or informal (Cristol & Muller, 2013; Marsick, 2009). Promoting self-directedness in learning (SDL) appears to be a relevant answer to companies' talent management challenges, since it fosters a culture of accountability for one's own learning and performance.

A personal development plan (PDP) is a unique assessment tool that fosters self-directedness as a process (Daunert & Price, 2014; Lam, 2014; Kicken, Brand-Gruwel, Merriënboer, & van Slot, 2009). In a literature review, Beausaert, Segers, Van der Rijt, and Gijselaers (2011) found only a limited number of empirical studies that deliver evidence for the effectiveness of PDPs (N studies = 54), effectiveness being defined as impact of PDP practice on competence development and performance. Research results appear to be mixed. Beausaert et al. conducted research on PDP effectiveness, and recommend further research on the effectiveness of PDPs using longitudinal studies and validating findings across different types of organizations. This is because most studies to date have been conducted in health care or education and comprise small samples. They also suggest using multi-rater methods for performance assessment, instead of using self-reported measures only (Beausaert, Segers, Fouarge, & Gijselaers, 2013). This current study incorporates all these recommendations.

In the past, the roles of PDP practice and SDL as a process have been studied independently, each in relation either to competence development or to task performance. Take, for example, PDPs and SDL as a process (Daunert & Price, 2014); SDL and competences development (Aho et al., 2015); SDL as a personal characteristic and job performance (Boyer, Edmondson, Artis, & Fleming, 2014). However, these relations have never been studied in one and the same path model. This study addresses the gap by combining these variables in a single analysis.

It is also the case that to date, the relationship between self-directedness within a PDP practice and outcome variables such as competence development and job performance has only been studied from an SDL learner characteristic perspective (Alonderiene & Suchotina, 2017; Boyer et al., 2014; Findley, 2010; Jude-York, 1993; Lejeune, Mercuri, Beausaert, & Raemdonck, 2016; Mead, 2012). The impact of SDL as an instructional methodology on academic performance has been confirmed in many studies conducted in a higher education context (Nathaniel et al., 2017;

Peine, Kabino, & Spreckelsen, 2016; Williams, Santelices, Ávila, Soto, & Dougnac, 2017). It is clear that in the business world, employees' job performance is crucial, as it has the greatest impact on an organization's overall mission and goal (Aguinis, 2009). It follows that it is also important to examine how company strategies and practices can influence job performance.

This present study will therefore extend the research on PDP practices by further clarifying how using SDL as a process (i.e. an instructional process in which people take the primary responsibility in learning situations) within PDP practice can bridge the gap between development planning, learning and job performance. More precisely, this study extends research on the relation between PDP practice and self-directedness in learning in the workplace, by specifically focusing on the following research question: To what extent does exercising self-directed learning as a process within PDP practice positively influence employees' job performance?

This study is innovative in multiple ways. Firstly, it includes a very large sample of participants who are employed in the financial sector ($N = 3,661$), working with PDPs in 16 countries around the globe. Secondly, data is directly extracted from the company's talent management system, which provides a unique perspective on PDP and portfolio research, as it taps into raw materials showing how PDP practice is implemented in a workplace context. Thirdly, it is based on longitudinal data, with a baseline measurement at time 0 and a repeated measure at time 1, including five measurements for job performance. Fourthly, it includes three measurements for job performance (task performance, contextual performance and overall job performance), with multi-rater ratings (ratings from the supervisor and self-ratings from the employee). Fifthly, it is the first study to consider the impact of SDL as a process (rather than SDL as a personal characteristic) on job performance. Finally, this is the first study to include SDL as a process, PDP, competency development and task performance in the same research process.

Job performance

Traditionally, when defining the construct of job performance, two main components are put forward, since they represent its underlying structure: task performance (defined as the proficiency with which workers complete core technical tasks related to their job) and contextual performance (defined as positive behaviour that indirectly contributes to the goals of the organization) (Koopmans, Bernaards, Hildebrandt, de Vet, & van der Beek, 2014).

Competence appraisal within the context of performance appraisal counterbalances the focus on task outcomes (i.e. what results need to be achieved in the role) by focussing on how the job is carried out (i.e. how results are achieved, in alignment with company strategy and values). It also informs personal improvement and development plans, and identifies relevant development gaps (Armstrong & Taylor, 2014). So in the workplace, performance is often assessed in two ways: directly, as task performance, measured in terms of the attainment of performance goals (Locke & Latham, 1990); and indirectly, as contextual performance, measured in terms of competence development that will help to increase the job performance of employees through relevant processes, including performance appraisal (Armstrong, 2006). Whilst in day-to-day workplace settings performance management and PDP practice are closely intertwined, as they are often both part of a larger performance management system, we describe them separately here for the sake of clarity.

Performance management

Both task performance and contextual performance are managed within the performance management process. Performance management is defined as ‘a continuous process of identifying, measuring and developing performance in organizations by linking each individual’s performance and objectives to the organization’s overall mission and goals’ (Aguinis, 2009, p. 2).

The process of performance management is structured in different steps, as a cyclic process, corresponding to Deming’s plan-do-check-act model (Armstrong & Taylor, 2014).

It starts with performance planning, which is based on performance agreement, aligned with the employee’s role and the strategic goals of the organization. Performance agreement refers to the definition of key results areas or outcomes, in the form of goals related to task performance. According to the goal-setting theory, goals need to be specific and balanced, eliciting enough challenge while remaining achievable (Locke & Latham, 1990). Performance agreement also refers to competences, often specific to the organization – fitting its culture and purpose – described in an *ad hoc* competence framework (Armstrong & Taylor, 2014). While there are different models and types of competences, the behavioural model initiated by McClelland (1973) and Boyatzis (1982) is still prevalent in human resource management practices and management consultancy, specifically in the context of competence assessment (Gilbert, 2006). In order to be explicit and to ensure that competences can be assessed, they are described through behaviourally anchored

rating scales or behavioural observation scales (Latham, Sulsky, & MacDonald, 2008). Both the goals and the competences provide guidance and motivation (i.e. individual effort and persistence) in the context of job performance (Locke & Latham, 1990). They should therefore be discussed, and employee and supervisor need to agree on what they are and how they are to be assessed.

The second step of the performance management process is to act on performance and development goals.

The third step is to continuously monitor and evaluate performance and development. This includes acting on evaluation to improve performance and continue development, within PDP practice. Continuous feedback and coaching are key elements of this third step, and are central to the performance management process (Armstrong & Taylor, 2014). Feedback helps employees to gauge progress towards goals and to engage in performance improvement, i.e. reducing gap between current performance and the specified goal (Erez, 1977). The more the correct behaviour/response and the improvements made since previous assessments are highlighted, the greater the impact on performance (Kluger & DeNisi, 1996). Coaching can help to address negative feedback that may otherwise be ignored by the employee, by helping them to 'formulate a workable strategy for performance improvement' (DeNisi & Kluger, 2000, p. 137). Finally, goal-directed feedback reduces uncertainty related to progress and the achievement of goals, by forcing employees to focus on tasks to be completed. At the same time, it supports their motivation by focussing on their learning orientation (Shute, 2008).

The fourth and final step in the performance management process is performance appraisal. Performance is usually measured through performance appraisal interviews conducted at different moments in the performance management cycle. Graphic rating scales are probably the most widely used methods of performance appraisal (Cascio & Aguinis, 2010). Competence rating follows the same logic. It is supported by behaviourally anchored rating scales, i.e. behavioural descriptors (anchors) describing competence development according to the rating scale (Latham et al., 2008). While performance rating has questionable psychometric qualities, it is still broadly used in companies (e.g. Spence & Baratta, 2014). To increase the accuracy of performance rating by reducing biases that may impact rating, rater training is provided. Rater training focuses on observational skills, judgmental biases and communication around performance (Cascio & Aguinis, 2010). Multi-source performance ratings are also used to increase rating quality. This entails asking raters who occupy different roles to provide their input (Spence & Baratta, 2014). It remains the case that ratings from different raters

vary in terms of reliability. Based on a meta-analysis, Conway and Huffcutt (1997) found that ratings by peers and supervisors were more reliable (and therefore more valid) than ratings by subordinates. Also, Harris and Schaubroeck (1988) suggest that self-rating might be tainted by egocentric bias that would lessen the validity of employees' own perspective on their performance. Both meta-analyses show the existing effects of job type on ratings from different sources. Conway and Huffcut (1997) observe that supervisor and peer reliabilities are lower for managerial jobs than for non-managerial jobs. They also observe that reliability decreases as job complexity increases. Harris and Schaubroeck (1988) report a moderator effect of job type for peer-supervisor correlations: "self-supervisor and self-peer correlations were lower for managerial/professional employees than for blue-collar/service employees, and no true variance existed for the former category" (p. 55). Other factors, such as measured dimensions and organizational culture, can explain the variability between raters, and support the relevance of multi-source performance ratings, as they bring unique perspective on performance (Hoffman & Woehr, 2009; Lievens, Conway, & De Corte, 2008). Finally, the effectiveness of multi-source performance ratings depends on the evaluation being based on mutually agreed goals, since this increases measurement equivalence by providing direction and guiding effort and persistence towards attaining goals (DeNisi & Kluger, 2000).

PDP practice

A personal development plan (PDP) is described as 'an assessment tool embedded in a larger assessment cycle of development and appraisal interviews, used to gather and document information about the competences the employee worked on and is planning to further develop' (Eisele, Grohnert, Beausaert, & Segers, 2013, p. 528). As such, PDPs are embedded in the larger performance management process.

PDP is a tool that:

- 'gives an overview of the competences an employee has been working on (looking back) and is planning to further develop (looking forward);
- is composed by the employee himself or herself (self-direction), although the format is provided by the organization;
- forms the basis for – or is used to structure – development conversations with the supervisor or the coach, who provides the employee with feedback and stimulates employee reflection; and

- serves different decision-making processes, ranging from planning an individual training programme to giving or not giving a promotion' (Beausaert et al., 2011, p. 236).

PDP aims to facilitate competence development by articulating the performance management process and the development dialogue, forcing employees to focus on their development activities. At the heart of PDP practice, reflection and learning are supported by instruction and feedback, while the motivating role of the supervisor is key for engaging the employee in the development process (Beausaert et al., 2011).

Self-directed learning (SDL)

Over the last 40 years, the idea that learners should take ownership of their own learning has gained traction, both in the field of adult education (under the concept of SDL) and in the field of educational psychology (under the concept of self-regulated learning [SRL]) (Carré, 2010; Cosnefroy, 2011a; Saks & Leijen, 2014). While occasional attempts have been made to draw links between SDL and SRL, e.g. by applying SRL to adult learning and workplace learning fields, these research streams remain largely separate (Cosnefroy, 2011b; Fontana, Milligan, Littlejohn, & Margaryan, 2015). They reference different theoretical frameworks and use different approaches to research. Within this research, we have therefore chosen the SDL research perspective, as our field of reference is adult learning in the workplace.

Self-directedness in learning can be understood in two ways (Candy, 1991): as a learning process, defined by Knowles (1975, p. 18) as 'a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes' or as a learner characteristic, referring to a general personal characteristic or a characteristic specifically relevant to learning (Raemdonck, Meurant, Balasse, & Frenay, 2013). In process-oriented conceptualizations of self-directedness, self-directedness refers to the instructional processes in which people take the primary responsibility in learning situations. The individual controls and shapes the learning process by taking the initiative when setting goals, choosing strategies and planning, implementing and evaluating the learning process (Raemdonck, Thijssen, & Greef, 2017). These four main components of SDL as a process, as defined by Knowles (1975), are described below. For each component of

the SDL process, a link is drawn to the use of a PDP as part of the performance management process, as described above.

The first component entails diagnosing learning needs and formulating learning goals. According to Knowles, this component involves a two-step process. The first step is to diagnose learning needs, based on a self-assessment of current performance compared to desired behaviours or competences, in order to identify areas that require self-development at a specific moment in time. Within an organization, this step is usually carried out within the performance management process. The second step is to state learning objectives, based on learning needs assessment. Knowles describes some guidelines for stating objectives, refers to a typology of objectives and provides examples. This second step is very much left to the learner, in the sense that employees are asked to describe objectives in their own words. Also, in the learning contract, Knowles suggests a socio-constructivist approach to setting objectives, described as a negotiation process between institutional expectations and individual needs. This process is very similar to a personal development plan approach in a professional organization setting, where learning goals are negotiated between the employee and the supervisor.

The second component involves identifying human and material resources for learning, learning strategies and planning. Possible learning opportunities are examined in the work environment or in the training market. Information is collected on possible strategies that can be undertaken, and the most suitable strategies are scanned to guide the learning process. The individual develops a learning plan which specifies the steps that need to be taken to reach a goal (Raemdonck et al., 2017). Knowles differentiates the learning strategies according to the type of objective (Knowles, 1975, p. 104). He urges learners to make proactive use of learning strategies and to be purposeful in their selection of a variety of resources – from lectures to problem-solving projects – to make sure they are aligned with their learning goals. The same logic can be found in contemporary organizations. The personal development plan is about selecting the right formal or informal learning activities that are well aligned with the learning goals. As highlighted by Marsick and Volpe (1999), ‘organizations are regarding formal training programmes as only one learning tool, and are acknowledging that informal learning has always been the most pervasive type of learning in the workplace’ (p. 3), and are therefore promoting both types of learning within their talent management strategy.

The third component is the implementation of appropriate learning strategies. This entails ‘carrying out the strategies, collecting the evidence and having the evidence validated as specified in your contract’

(Knowles, 1975, p. 135). As highlighted above, documenting future learning (looking forward) as well as tracking the completion of learning activities specified in the learning strategy (looking back) is included in PDPs.

The fourth and last component is the evaluation of learning outcomes. This component is perhaps the most documented by Knowles, as it is 'the most difficult part of the whole process' (Knowles, 1975, p. 27). He explains the importance of specifying from the start the evidence of the accomplishment of objectives and the criteria and means used for validating evidence. He provides numerous examples of rating scales that can be used to collect evidence of the accomplishment of objectives. As highlighted above, PDPs provide potential learning activities, but they also provide much more. They serve as a basis for structured development conversations with the supervisor. They facilitate feedback and reflection, and hence learning outcome evaluation, as well as facilitating the regulation and adjustment of the learning process based on this evaluation.

Previous research on the relation between SDL (within a PDP practice), competence development and performance

Most of the existing research on the relation between SDL exercised within a PDP practice, competence development and performance has been carried out separately. So the effects between these variables have been considered in sub-groups, but no interactions or mediations between all variables have been tested in the same research project.

The first research area addresses the relation between PDPs and SDL. As we just explained, we can confirm strong connections between the different components of SDL as a process and PDP practice. It is therefore not surprising that prior research highlights that the use of PDPs fosters SDL skills, specifically assessing learning needs, setting learning goals, selecting learning tasks and evaluating learning outcomes (Chau & Cheng, 2010; Daunert & Price, 2014).

Secondly, several research projects have shown that SDL exercised within a PDP practice promotes learning (Abrami, Venkatesh, Meyer, & Wade, 2013; Kicken et al., 2009) and that there is a correlation between SDL as a personal characteristic and competence development (Aho et al., 2015; Yang & Jiang, 2014).

Finally, it has been shown that there is a correlation between SDL as a personal characteristic and job performance (Bodkyn & Stevens, 2015; Boyer et al., 2014; Chou, 2013; Findley, 2010; Jude-York, 1993; Mead, 2012) or that it can moderate the link between other predicting variables and performance (Boyer et al., 2014; Lejeune et al., 2016; Moshtaghi &

Boyer, 2015). The study conducted by Lejeune et al. (2016) was the only one to consider the moderating role of SDL as a personal characteristic in perceived performance and the undertaking of learning activities within a PDP practice. It was found that SDL as a personal characteristic has a positive direct influence on the undertaking of learning activities and perceived performance; and that it also has a moderating effect on the interaction between learning and reflection (one condition of effective PDP practice) and perceived performance. Performance can also be a predictor of SDL: Monroe (2016) showed that clerkship evaluations could predict three of the subscales of the Self-Directed Learning Readiness Scale, namely critical self-evaluation, learning self-efficacy and effective organization for learning. At the same time, to our knowledge, there is no evidence in the literature that SDL as a process is correlated with job performance.

This study extends research on the relation between PDP practice and self-directedness in learning in the workplace, by specifically focusing on the following research question: To what extent does using self-directed learning as a process within PDP practice positively influence job performance? (see Figure 1).

More specifically, in alignment with previous research, our hypotheses are as follows:

Hypothesis 1: self-directedness in learning as a process when using a PDP positively impacts task performance;

Hypothesis 2: self-directedness in learning as a process when using a PDP positively impacts competence development.

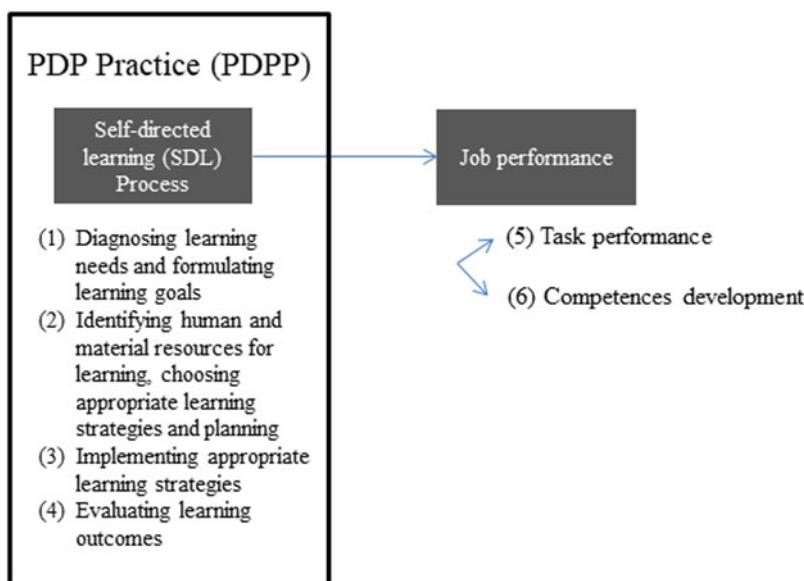


Figure 1. Research model.



Table 1. Distribution of employees participating in the study by country ($N=3,661$).

Country	Percentage of employees in the sample
Australia	2.7%
Belgium	0.8%
Canada	38.6%
China	0.1%
France	3.4%
Hong Kong	1.3%
Ireland	2.4%
Italy	2.2%
Japan	0.1%
Luxembourg	22.8%
Malaysia	15.8%
Singapore	0.5%
Spain	2.1%
Switzerland	0.8%
United Kingdom	6.4%
USA	0.1%
Total	100.0%

Method

Sample, context and procedure

Participants

The employees participating in this study ($N=3,661$), of whom 1,903 are women (52.0%) and 1,758 are men (48.0%), come from one organization in the financial services industry, based in 16 countries across the globe (see Table 1 for a distribution by country). Employees are knowledge workers: they hold a university bachelor degree as a minimum qualification and work in a knowledge-intensive industry, dealing with complex financial products, heavy regulations, highly automated tasks and exposure to tasks which require high-level verifications and the handling of exceptions. 18.6% of the participants were between 20 and 29 years old, 33.5% were between 30 and 39, 27.6% were between 40 and 49, 11% were between 50 and 55 and 9.4% were above the age of 55. 48.6% of the participants had a job tenure of two to five years, and 38.1% had a company tenure of more than 10 years. All participants were using an electronic talent management system that included a personal development plan (PDP) within the performance management process. Their PDP steps included defining performance goals and updating them, assessing task performance and competence and setting learning goals and learning activities). Within the sample, 42.9% already had at least one formulated development goal in their development plan (1,590 of 3,661 employees) and 57.1% had no development goal in their development plan (2,091 of 3,661 employees).

Context

The performance management process within the organization in question is designed around a series of structured interviews over the course of a fiscal year (1 November–1 October), addressing issues including the assessment of job performance goals, the assessment of job-related competences and development planning activities. Job performance is assessed on the basis of performance goals that have been mutually agreed between the employee and the supervisor. Performance goals are set at the beginning of the fiscal year (November–December), in alignment with the company strategy and strategic business goals (top-down process). Attainment of performance goals is assessed twice every year, during the mid-year review (May–June) and during the end-of-year review (September–October). Both employee and manager rate performance goal attainment, on a scale from 1 (low performance, i.e. performance does not meet expectations relative to peers) to 5 (exceptional, i.e. a high level of achievement that clearly sets the employee apart from peers and sets the standard for others to attain in terms of both results and capabilities). On average, employees had four to five goals set for the year 2015 ($M = 4.76$, $SD = 1.68$). The organization has also developed a competence framework, including ten competences, organised at three levels (depending on the level of the job position they apply to) and aligned with company values and strategy. Every 2–3 years, every business line within the organization selects a subset of four to five competences from the framework ($M = 4.57$; $SD = 2.73$), based on their current business strategy, to be the key focus of the period ahead. As is the case with the attainment of performance goals, these competences are assessed twice every year, during the mid-year review (May–June) and the end-of-year review (September–October). Both the employee and the manager rate the competence, on a scale ranging from 1 (low performance, i.e. additional skill, knowledge and capability needed to achieve job expectations) to 5 (exceptional, i.e. exceptional demonstration of capabilities). To support competence assessment, the organization provides employees and managers with behaviourally anchored rating scales, i.e. specific behaviours describing each level of competence and each level of rating. Finally, learning goals are defined at the beginning of the fiscal year (November–December) within the PDP, based on the previous year's performance assessment. The different learning goals serve as a framework for discussion during the formal assessment interviews conducted during the year, but most importantly as a benchmark for continuous feedback and coaching throughout the year.

Procedure

To carry out this study, we extracted data from the organization's talent management system, which includes a PDP. Data were collected after the 2015 mid-year review (July 2015 – time 0) and after the end-of-year review (November 2015 – time 1) during the 2015 performance management cycle. Approval to carry out the study was obtained from the company executives. The data extraction process included anonymization of data to safeguard participants' privacy. The research design had been approved beforehand by the ethics committee of the research organization, based on the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2017).

Measurements

Please refer to [Table 2](#) for an overview of measurements.

Self-directedness as a process within a personal development plan context

Diagnosing learning needs and formulating learning goals (DLN)

First, the diagnosis of learning needs and the formulation of learning goals was measured by counting the number of learning goals (NG Number goals) in the PDP. We then calculated the percentage of development areas in relation to organizational competences (percentage of development areas %DA). This is a good proxy for assessing the quality of the needs assessment and competences assessment: if there is no connection between development areas and organizational competences, we can assume that the behaviourally anchored rating scales were not used.

Identifying human and material resources for learning, choosing appropriate learning strategies and planning (CLS)

To measure the second component of SDL, namely identifying human and material resources for learning, choosing appropriate learning strategies and planning, we worked with four items. The first item was the mean of the number of development activities per learning goal. This measures the extent to which human and material resources needed for learning were identified (Mean number activities- MNA). For example, if an employee had 3 learning goals with 4, 5 and 6 development activities for each learning goal respectively, the mean score for MNA was 5.

We worked with three additional items to measure the extent to which appropriate learning strategies and plans were chosen. These items are based on the use of formal and informal learning activities. The

organization has developed a talent management strategy that actively promotes formal and informal learning within the development planning process. As a corollary, process and system requirements include documentation of the type of learning activity. Choosing the type of learning is therefore linked to the learning strategy, both at company level and at employee level. Specific guidelines and training for managers and employees support this strategy. In view of the above strategy, the three additional items we decided to work with are as follows: the first is the number of activities in which formal learning is used (number formal NF) and the second is the number of activities in which informal learning is used (number informal NI). These result in absolute numbers, reflect how many of these types of activities are included in the learning strategy. The third item is the ratio (%) of informal learning activities to total learning activities (% informal overall total %IOT). This generates information about the balance between the two types of learning activities in the learning strategy.

Implementing appropriate learning strategies

To measure the third component of SDL, namely implementing appropriate learning strategies, we calculated the percentage of development activities marked as completed (% activities completed %AC), as basic evidence of implementation of the learning strategy.

Evaluating learning outcomes

To measure the fourth component of SDL, namely evaluating learning outcomes, we calculated the percentage of development areas completed in respect of which the final result was discussed (% activities evaluated %AE).

Job performance

Job performance is measured based on three appraisal elements: task performance assessment, competence development assessment and overall job performance.

Task performance

Task performance is measured using two items. The first is mean self-performance (MSP), i.e. the arithmetic mean of goal ratings given by the

employee. The second is mean manager performance (MMP), i.e. the arithmetic mean of goal ratings given by the employee's direct manager.

Competence development

Competence development is measured using two items. The first is mean self-development (MSD), i.e. the arithmetic mean of competence ratings given by the employee. The second is mean manager development (MMD), i.e. the arithmetic mean of competence ratings given by the employee's direct manager.

Overall job performance

Finally, manager job performance (MJP) is the overall performance rating for the appraisal period. This is given by the direct manager, based on an overall judgment of performance. No distinction is made between individual goal ratings. In that sense, it may differ from MMP. This is a discretionary decision by the manager. At the end of the year, this overall rating is used as a basis for the reward and recognition of employees, linking performance to compensation.

Analytical method

Firstly, an analysis of the descriptive statistics was carried out, followed by a correlation analysis of the variables under study, using SPSS 23. Secondly, path analysis was conducted as a means of studying the relationships between the variables and testing the research hypothesis, using AMOS 23. It includes a measurement model for SDL variables, to reduce

Table 2. Measurement items for the different variables.

Variables	Measurement
<i>Independent variables – self-directed learning (SDL)</i>	
1. Diagnosing learning needs and formulating learning goals (DLN)	Number goals (NG) Percentage of development areas (%DA)
2. Identifying human and material resources for learning, choosing appropriate learning strategies and planning (CLS)	Mean number activities (MNA) Number formal (NF) Number informal (NI) % informal overall total (%IOT)
3. Implementing appropriate learning strategies	% activities completed (%AC)
4. Evaluating learning outcomes	% activities evaluated (%AE)
<i>Dependent variables – job performance</i>	
5. Job performance	Manager job performance (MJP)
6. Task performance	Mean self-performance (MSP)
7. Competence development	Mean manager performance (MMP) Mean self-development (MSD) Mean manager development (MMD)

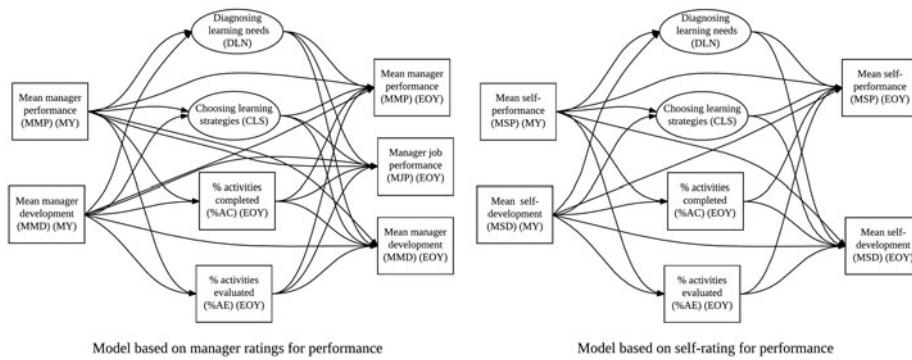


Figure 2. Two alternative models.

the complexity of the model. More specifically, NG (Number goals) and %DA (percentage of development areas) were combined into one latent variable DLN (diagnosing learning needs). In addition, MNA (mean number activities), NF (number formal), NI (number informal) and %IOT (% informal overall total) were combined into one latent variable CLS (choosing learning strategies). Maximum likelihood estimation was used to estimate the parameters of the model, including missing data (full information maximum likelihood). To test the model fit of the path model, Lei and Wu (2007) recommend using two classes of alternative fit indices in addition to the chi-squared statistic which is sensitive to sample size: incremental fit indices (e.g. CFI – comparative fit index) and absolute fit indices (e.g. RMSEA – root mean square error of approximation). Hu and Bentler (1999) recommend using a cutoff value of >0.96 for CFI. Steiger (2007) recommends using a cut-off value of <0.07 for RMSEA.

Multi-source performance ratings are available for this research. As highlighted above, literature points out the benefits and limitations of multi-source performance ratings (Conway & Huffcutt, 1997; Harris & Schaubroeck, 1988; Hoffman & Woehr, 2009; Lievens et al., 2008). We therefore decided to consider two alternative models (see Figure 2): one model based on self-ratings (MSP, MSD) and one based on manager ratings (MMP, MMD, MJP). These equivalent models will ensure that we avoid confirmation bias, “whereby researchers test a single model, give an overly positive evaluation of that model, and fail to consider other explanations of the data” (Kline, 2010, p. 14).

Results

Preliminary analyses

Descriptive statistics and correlation analysis

Descriptive statistics and correlations between variables are shown in Table 3.

**Table 3.** Descriptive statistics and correlation between variables.

Predictor variables – self-directed learning (SDL)	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Diagnosing learning needs and formulating learning goals	1. NG	0.960	1.301															
2. Identifying human and material resources for learning, choosing appropriate learning strategies and planning	2. %DA	0.401	0.475	0.579**														
	3. MNA	1.082	0.305	0.631**	0.319													
3. Implementing appropriate learning strategies	4. NF	1.970	1.485	0.344*	0.583**	0.549**												
	5. NI	2.229	1.388	-0.048	-0.016	0.112	-0.034											
	6. %TOT	0.696	0.274	0.088	0.146	-0.108	-0.0207	-0.185										
	7. %AC	2.830	2.081	-0.108	-0.247	-0.210	-0.179	-0.468**	0.131									
4. Evaluating learning outcomes	8. %AE	1.070	1.026	-0.141	-0.116	-0.153	-0.032	0.069	-0.177	0.416*								

Note: * $p < 0.05$; ** $p < 0.01$.

Outcome variables – performance	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
5. Job performance (time 0 – mid-year)	9. MSP	3.084	0.587	-0.025	-0.134	0.000	-0.187	0.254	0.018	0.474**	* -0.006							
6. Competence development (time 0 – mid-year)	10. MMP	3.008	0.477	0.171	0.102	0.124	-0.015	0.139	-0.083	0.032	-0.485**	0.738***						
5. Job performance (time 1 – end-of-year)	11. MSD	3.153	0.587	-0.121	0.000	-0.098	-0.001	0.166	0.033	0.325	0.183	0.651**	0.428*					
6. Task performance (time 1 – end-of-year)	12. MMD	3.074	0.496	0.149	-0.037	0.158	0.139	0.070	-0.160	0.014	-0.240	0.161	0.334	-0.247				
7. Competence development (time 1 – end-of-year)	13. MJP	3.260	0.675	-0.092	0.264	0.157	0.419*	-0.021	-0.260	-0.209	-0.201	-0.113	0.057	-0.114	-0.131			
14. MSP	3.269	0.594	0.385*	0.320	0.211	0.201	0.198	0.109	-0.196	-0.172	0.018	0.080	0.038	-0.185	0.428*			
15. MMP	3.210	0.555	0.077	0.333	0.091	0.411*	0.084	-0.256	-0.090	0.016	-0.017	0.056	-0.044	-0.088	0.790***	0.598***		
16. MSD	3.304	0.583	0.148	0.207	0.360*	0.397*	0.251	0.003	-0.103	-0.112	0.064	0.043	0.088	0.000	0.575**	0.545***	0.584**	
17. MMD	3.228	0.544	-0.001	0.235	0.268	0.540**	0.133	-0.275	-0.096	-0.046	0.015	0.056	0.117	-0.091	0.263	0.672**	0.709**	

Note: * $p < 0.05$; ** $p < 0.01$.

Table 4. Fit indices for the hypothesized and final model.

Model	χ^2	df	CFI	RMSEA
Model based on manager ratings for performance	725.835	45	0.957	0.064
Model based on self-rating for performance	707.301	39	0.943	0.068

Notes: χ^2 : Chi square; df: degrees of freedom; CFI: comparative fit index; RMSEA: root mean square error of approximation.

Examination of the structural model

The purpose of the present study was to explore the impact of self-directedness as a learning process on job performance and competence development at time 1, controlling for the baseline level of job performance and competences development at time 0. Hypothesized relationships were tested through path analysis. Two alternative models were tested: one based on self-rating for performance and one based on manager ratings for performance (Figure 2).

While both models show a good fit (see Table 4), the model based on manager ratings for performance denotes a better fit ($CFI = 0.957$; $RMSEA = 0.064$). The manager rating for performance model was therefore selected as the final structural model (Figure 3).

A closer analysis of the standardized estimates of paths confirms our hypotheses (see Table 5). While controlling for measurement of job performance at time 0 (most paths between job performance variables at time 0 and time 1 are significant), we still observe significant paths between predictor variables and outcome variables, which confirms both hypotheses. Most interestingly, paths from DLN to job performance variables at time 1 and paths from CLS to job performance variables at time 1 are significant ($p < 0.001$). Standardized paths estimates show highest estimates for path from CLS to job performance variables at time 1 (standardized path estimates >0.5), compared to estimates for path from DLN to job performance variables at time 1 (standardized path estimates <0.12). At the same time, paths from %AC and %AE to job performance variables at time 1 are significant but negative (standardized path estimates $< [-]0.17$), meaning that the more learning activities are completed and evaluated, the lower job performance is.

Discussion and conclusions

The aim of this study was to examine the relationship between SDL as a process exercised within a PDP practice and job performance. The hypothesized model was developed on the basis of Knowles (1975) model of SDL as a process. To date, the relationship between SDL exercised within a PDP practice and outcome variables such as job performance has only been considered from the perspective of SDL as a personal

Note: Bold lines indicate that the path estimates is statistically significant. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

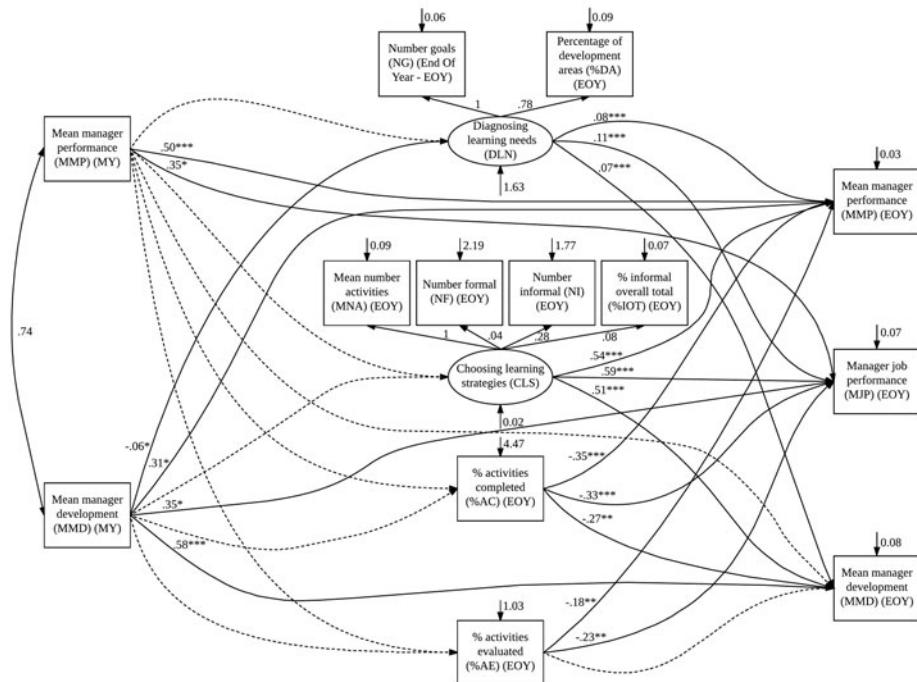


Figure 3. Final structural model and standardized path estimates of the significant paths.
Note: Bold lines indicate that the path estimates is statistically significant. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

characteristic, not SDL as a process. This research therefore extends research on SDL and job performance.

Knowledge contribution

This study adds to theory by investigating SDL as exercised within a PDP practice and its relationship with both competence development and performance. It makes three new contributions to knowledge in this field. Firstly, it confirms the impact of SDL as exercised within a PDP practice on competence development and performance. Secondly, it reinforces the relevance of considering SDL when studying PDP practices, especially in businesses. Thirdly, it highlights the importance of learning strategies as a central subcomponent of SDL, and recommends future research on the role of this subcomponent in learning and development in the workplace.

Results validate both hypotheses, since the model including all predicting variables and outcome variables as rated by the managers shows a good model fit. This means that employees exercising a self-directed learning process within PDP practice will demonstrate higher task

Table 5. Unstandardized and standardized path estimates, standard errors and critical ratio in the structural model (model based on manager ratings for performance).

			Unstandardized path estimates	Standardized path estimates	SE	CR
DLN (EOY)	<—	MMP (MY)	0.063	0.024	0.072	0.866
CLS (EOY)	<—	MMP (MY)	0.010	0.114	0.019	0.526
%AC (EOY)	<—	MMP (MY)	-0.015	-0.004	0.711	-0.022
%AE (EOY)	<—	MMP (MY)	0.219	0.105	0.375	0.583
DLN (EOY)	<—	MMD (MY)	-0.152	-0.060	0.071	-2.145*
CLS (EOY)	<—	MMD (MY)	-0.021	-0.252	0.019	-1.138
%AC (EOY)	<—	MMD (MY)	0.314	0.075	0.692	0.453
%AE (EOY)	<—	MMD (MY)	-0.243	-0.121	0.365	-0.665
MMP (EOY)	<—	MMP (MY)	0.564	0.498	0.149	3.796***
MMD (EOY)	<—	MMP (MY)	0.220	0.197	0.133	1.654
MJP (EOY)	<—	MMP (MY)	0.488	0.348	0.197	2.472*
MMP (EOY)	<—	MMD (MY)	0.343	0.314	0.147	2.336*
MMD (EOY)	<—	MMD (MY)	0.628	0.581	0.132	4.764***
MJP (EOY)	<—	MMD (MY)	0.480	0.354	0.195	2.457*
NG (EOY)	<—	DLN (EOY)	1	0.983		
%DA (EOY)	<—	DLN (EOY)	0.285	0.032	0.779	9.029***
MNA (EOY)	<—	CLS (EOY)	1	0.139		
NF (EOY)	<—	CLS (EOY)	1.364	3.218	0.039	0.424
NI (EOY)	<—	CLS (EOY)	8.975	3.281	0.276	2.736**
%IOT (EOY)	<—	CLS (EOY)	0.481	0.517	0.075	0.93
MMP (EOY)	<—	DLN (EOY)	0.033	0.075	0.007	4.972***
MMD (EOY)	<—	DLN (EOY)	0.029	0.069	0.007	4.481***
MJP (EOY)	<—	DLN (EOY)	0.057	0.106	0.010	5.814***
MMP (EOY)	<—	CLS (EOY)	7.089	0.543	1.940	3.655***
MMD (EOY)	<—	CLS (EOY)	6.513	0.505	1.806	3.606***
MJP (EOY)	<—	CLS (EOY)	9.530	0.590	2.614	3.646***
MMP (EOY)	<—	%AC (EOY)	-0.093	-0.354	0.016	-5.833***
MMD (EOY)	<—	%AC (EOY)	-0.070	-0.272	0.018	-3.829***
MJP (EOY)	<—	%AC (EOY)	-0.108	-0.333	0.024	-4.557***
MMP (EOY)	<—	%AE (EOY)	-0.101	-0.184	0.039	-2.584**
MMD (EOY)	<—	%AE (EOY)	-0.079	-0.147	0.044	-1.811
MJP (EOY)	<—	%AE (EOY)	-0.153	-0.226	0.055	-2.765**

Note: *p < 0.05; **p < 0.01; ***p < 0.001.

performance (Hypothesis 1) and competences development (Hypothesis 2). More specifically, further analysis of the path model reveals that employees exercising an SDL process in PDP practice show higher job performance if they: (1) define learning goals and link them to the competences targeted for improvement; and (2) choose an appropriate learning strategy for their learning goals, i.e. the one that includes the highest number of learning activities. Tracking completion of learning activities and evaluating learning outcomes appears to have a negative impact on competences development and task performance, as path estimates between variables are negative. However, some limitations relating to the data collection need to be taken into account: a significant number of observations are missing for these variables. As PDP elaboration is time consuming, it tends not to be used or only partially used by employees. This is a roadblock to successful implementation of PDP practices that is often reported in literature (Daunert & Price, 2014; Gadbury-Amyot,

McCracken, Woldt, & Brennan, 2014; Hoekstra & Crocker, 2015; Lyons, 2010).

These results generally align with and reinforce previous studies by bringing together research showing a correlation between SDL as a personal characteristic and performance (Boyer et al., 2014; Findley, 2010; Jude-York, 1993; Mead, 2012) and research on PDP effectiveness that found a positive relation between using a PDP and learning and job performance (Lejeune et al., 2016). Finally, they support research on the relation between PDPs and SDL which indicated that PDP practice increases SDL skills (Abrami et al., 2013; Lam, 2014; Daunert & Price, 2014; Kicken et al., 2009). For the first time, these results show that SDL as a process, embedded within a PDP practice, is an effective strategy for improving performance. As highlighted in the practical implication section, this is a promising avenue of exploration for companies who are implementing development planning practices in the workplace: SDL is not just a personal characteristic that supports performance; it can be developed. At the same time, our results do not align with studies by Monroe (2016) indicating that performance is a predictor of SDL: paths going from performance at time 0 are not significantly related to SDL variables at time 1, except for competences development at time 0 and DLN.

The results also showed that choosing the appropriate learning strategy is key in exercising SDL. Increasing the number of learning activities, especially informal learning activities, will lead to better job performance, suggesting that learning in general and informal learning in particular should be fostered to maximize workplace learning effectiveness. This is a first step towards a refined understanding of how learning can maximize impact of SDL as a process, when using a PDP, on job performance. This conclusion should, however, be treated with a degree of caution, as the analysis of the measurement and structural model were carried out simultaneously, which is not recommended (Mueller & Hancock, 2008). Therefore, future research should examine more closely the effect of L&D strategies on performance. Indeed, some authors question the superiority of informal learning over formal learning or vice versa (Manuti, Pastore, Scardigno, Giancaspro, & Morciano, 2015). Cristol and Muller (2013) advocate their complementarity and synergies instead. Within PDP practice, Beausaert et al. (2013) also point out that PDP effectiveness is related to the articulation of both formal and informal learning, in a self-directed and reflexive approach. Further studies should explore the parameters for optimizing the effectiveness of the balances between formal and informal learning, based on both quantitative and qualitative research, to gain insight into learner experiences and to

find the best balance between formal and informal learning for an optimal impact on job performance.

It is also interesting to report the high correlations between performance ratings in this research. Correlations between manager ratings and self-ratings from employees are highly significant and vary from 0.43 to 0.74. Similarly, correlations between task performance ratings and competence development ratings are also highly significant and vary from 0.34 to 0.71. This is not in line with previous research (Conway & Huffcutt, 1997; Harris & Schaubroeck, 1988) and brings into question the use of multi-source performance ratings (Hoffman & Woehr, 2009; Lievens et al., 2008). The results suggest that using one rater score might be sufficient. However, the need for multi-rater feedback might depend on contextual factors. For example, multi-rater assessments might be less necessary in an organization in which both managers and employees are trained in working with PDPs and evaluating competences.

Limitations and directions for future research

Certain limitations should be mentioned. Firstly, we noticed a very high data attrition across the predictor variables, leaving a limited amount of data for % activities completed (%AC) and % activities evaluated (%AE). While 3,661 employees had learning goals in their PDP, 1,570 had learning activities, 249 had entered types of learning activities and only 65 had marked development activities as completed and entered comments in the result field. Conclusions regarding these variables therefore need to be interpreted with caution. Further research could focus on the collection of more data, especially in relation to these variables, to validate the results found. Also, motivational variables such as those included in the self-determination model were not included in the SDL model, despite that fact that these are an important component of SDL (Carré, 2010). A more integrated model, showing the links between SDL as a process and SDL as a personal characteristic, and including motivational variables, could have added value (Stockdale & Brockett, 2011). Finally, while this study included a baseline control level, which can be considered as a first step towards a stronger longitudinal study design, we recommend including other times of measurement. This is because sustained use increases the quality of a PDP (Smith & Tillema, 1998) and the appropriate adoption and development of SDL and reflective skills increases over time (Lyons, 1998). This may also address the data attrition issue highlighted in the limitations, as we can assume that the better SDL is exercised and the better the reflective skills, the better they will be documented in the PDP.

Practical implications

As highlighted above, what matters most for companies is having employees who deliver high-quality job performance, as this has the greatest impact on the organization's overall mission and goals (Aguinis, 2009). This study informs HR professionals on the importance of SDL and fostering employees' SDL in supporting their performance through talent management practices. Results reinforce the need for promoting usage of PDP practice in the workplace, given its impact on job performance. But what is needed goes further than simply promoting PDP: it is also important to develop SDL skills through PDP design (Kicken et al., 2009). This could be also achieved via promotion of SDL in the learning culture of the company, e.g. by promoting accountability for learning and by proposing SDL education to employees. Finally, results show that endorsing informal learning practices within a PDP practice is the most effective way of supporting employees' continuous development and achieving high-quality performance.

Acknowledgment

The authors wish to thank the executives of the company involved for authorizing research in their company.

ORCID

Christophe Lejeune  <http://orcid.org/0000-0001-6444-3191>
Simon Beausaert  <http://orcid.org/0000-0002-3036-8143>
Isabel Raemdonck  <http://orcid.org/0000-0003-0148-0977>

References

- Abrami, P. C., Venkatesh, V., Meyer, E. J., & Wade, C. A. (2013). Using electronic portfolios to foster literacy and self-regulated learning skills in elementary students. *Journal of Educational Psychology*, 105(4), 1188–1209. <https://doi.org/10.1037/a0032448>
- Aguinis, H. (2009). *Performance management*. Edinburgh: Edinburgh Business School.
- Aho, J. M., Ruparel, R. K., Graham, E., Zendejas-Mummert, B., Heller, S. F., Farley, D. R., & Bingener, J. (2015). Mentor-guided self-directed learning affects resident practice. *Journal of Surgical Education*, 72(4), 674–679. <https://doi.org/10.1016/j.jsurg.2015.01.008>
- Alonderiene, R., & Suchotina, N. (2017). The impact of self-directed learning on work performance of lawyers. *Organizations & Markets in Emerging Economies*, 8(2), 165–176.

- American Psychological Association. (2017, January 1). *Ethical principles of psychologists and code of conduct*. Retrieved March 13, 2017, <http://www.apa.org/ethics/code/index.aspx>
- Armstrong, M. (2006). *A handbook of human resource management practice* (10th ed.). London: Kogan Page Business Books.
- Armstrong, M., & Taylor, S. (2014). *Armstrong's handbook of human resource management practice* (13th ed.). London: Kogan Page.
- Beausaert, S., Segers, M., Fouarge, D., & Gijselaers, W. (2013). Effect of using a personal development plan on learning and development. *Journal of Workplace Learning*, 25(3), 145–158. <https://doi.org/10.1108/13665621311306538>
- Beausaert, S., Segers, M., & Gijselaers, W. (2011). The Personal Development Plan Practice Questionnaire: The development and validation of an instrument to assess the employee's perception of personal development plan practice: PDP Practice Questionnaire. *International Journal of Training & Development*, 15(4), 249–270. <https://doi.org/10.1111/j.1468-2419.2011.00375.x>
- Beausaert, S., Segers, M., Van der Rijt, J., & Gijselaers, W. (2011). The use of personal development plans (PDPs) in the workplace: A literature review. In P. Van den Bossche, W. Gijselaers, & R. Miltner (Eds.), *Building learning experiences in a changing world* (pp. 235–265). Houten, The Netherlands: Springer.
- Bersin, J. (2014). *HR technology for 2015: Ten big disruptions ahead*. Oakland, CA: Bersin by Deloitte. <http://www.bersin.com/>
- Billett, S., & Choy, S. (2013). Learning through work: Emerging perspectives and new challenges. *Journal of Workplace Learning*, 25(4), 264–276.
- Bodkyn, C., & Stevens, F. (2015). Self-directed learning, intrinsic motivation and student performance. *Caribbean Teaching Scholar*, 5(2), 79–93.
- Boyatzis, R. E. (1982). *The competent manager: A model for effective performance*. New York: Wiley.
- Boyer, S. L., Edmondson, D. R., Artis, A. B., & Fleming, D. (2014). Self-directed learning a tool for lifelong learning. *Journal of Marketing Education*, 36(1), 20–32. <https://doi.org/10.1177/0273475313494010>
- Carré, P. (2010). L'autodirection des apprentissages. In P. Carré, A. Moisan, & D. Poisson (Eds.), *L'autoformation: Perspectives de recherche* (pp. 117–169). Paris: Presses universitaires de France.
- Candy, P. C. (1991). Self-direction for lifelong learning. *A comprehensive guide to theory and practice*. San Francisco, CA: Jossey-Bass.
- Cascio, W. F., & Aguinis, H. (2010). *Applied psychology in human resource management* (7th ed.). Upper Saddle River, NJ: Pearson.
- Chau, J., & Cheng, G. (2010). Towards understanding the potential of e-portfolios for independent learning: A qualitative study. *Australasian Journal of Educational Technology*, 26(7), 932–950.
- Chou, P.-N. (2013). Effect of instructor-provided concept maps and self-directed learning ability on students online hypermedia learning performance. *Journal of College Teaching & Learning (TLC)*, 10(4), 223. <https://doi.org/10.19030/tlc.v10i4.8119>
- Conway, J. M., & Huffcutt, A. I. (1997). Psychometric properties of multisource performance ratings: A meta-analysis of subordinate, supervisor, peer, and self-ratings. *Human Performance*, 10(4), 331.
- Cosnefroy, L. (2011a). *L'apprentissage autorégulé: Entre cognition et motivation; Déontologie et identité*. Grenoble: Presses Universitaires de Grenoble.

- Cosnefroy, L. (2011b). L'apprentissage autorégulé: Perspectives en formation d'adultes. *Savoirs*, (23), 9–50.
- Cristol, D., & Muller, A. (2013). Les apprentissages informels dans la formation pour adultes. *Savoirs*, 32(2), 11–59. <https://doi.org/10.3917/savo.032.0011>
- Cross, J. (2007). *Informal learning rediscovering the natural pathways that inspire innovation and performance*. San Francisco: Wiley.
- Daunert, A. L., & Price, L. (2014). E-Portfolio: A practical tool for self-directed, reflective, and collaborative professional learning. In C. Harteis, A. Rausch, & J. Seifried (Eds.), *Discourses on professional learning* (pp. 231–251). Houten, The Netherlands: Springer.
- DeNisi, A. S., & Kluger, A. N. (2000). Feedback effectiveness: Can 360-degree appraisals be improved? *The Academy of Management Executive*, 14(1), 129–139.
- Eisele, L., Grohnert, T., Beausaert, S., & Segers, M. (2013). Employee motivation for personal development plan effectiveness. *European Journal of Training & Development*, 37(6), 527–543. <https://doi.org/10.1108/EJTD-02-2013-0015>
- Erez, M. (1977). Feedback: A necessary condition for the goal setting-performance relationship. *Journal of Applied Psychology*, 62(5), 624.
- Findley, B. W. (2010). *The relationship of self-directed learning readiness to knowledge-based and performance-based measures of success in third-year medical students* (Doctoral dissertation). Boca Raton, FL: Florida Atlantic University. Retrieved from <http://fau.digital.flvc.org/islandora/object/fau%3A3454>
- Fontana, R. P., Milligan, C., Littlejohn, A., & Margaryan, A. (2015). Measuring self-regulated learning in the workplace. *International Journal of Training and Development*, 19(1), 32–52. <https://doi.org/10.1111/ijtd.12046>
- Gadbury-Amyot, C. C., McCracken, M. S., Woldt, J. L., & Brennan, R. L. (2014). Validity and reliability of portfolio assessment of student competence in two dental school populations: A four-year study. *Journal of Dental Education*, 78(5), 657–667.
- Gilbert, P. (2006). La compétence: Concept nomade, significations fixes. *Psychologie Du Travail et Des Organisations*, 12(2), 67–77. <https://doi.org/10.1016/j.pto.2006.01.004>
- Harris, M. M., & Schaubroeck, J. (1988). A meta-analysis of self-supervisor, self-peer, and peer-supervisor ratings. *Personnel Psychology*, 41(1), 43–62.
- Hoekstra, A., & Crocker, J. R. (2015). ePortfolios: Enhancing professional learning of vocational educators. *Vocations & Learning*, 8(3), 353–372. <https://doi.org/10.1007/s12186-015-9133-4>
- Hoffman, B. J., & Woehr, D. J. (2009). Disentangling the meaning of multisource performance rating source and dimension factors. *Personnel Psychology*, 62(4), 735–765.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Jude-York, D. A. (1993). *Organizational learning climate, self-directed learners, and performance at work* (Doctoral dissertation). Santa Barbara, CA: The Fielding Institute.
- Kicken, W., Brand-Gruwel, S., Merriënboer, J. J. G., & van Slot, W. (2009). The effects of portfolio-based advice on the development of self-directed learning skills in secondary vocational education. *Educational Technology Research & Development*, 57(4), 439–460. <https://doi.org/10.1007/s11423-009-9111-3>
- Kline, R. B. (2010). *Principles and practice of structural equation modeling* (3rd ed.). New York: The Guilford Press.
- Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119(2), 254–284. <https://doi.org/10.1037/0033-2909.119.2.254>

- Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. New York, NY: Association Press.
- Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., de Vet, H. C., & van der Beek, A. J. (2014). *Measuring individual work performance* (Doctoral dissertation). Amsterdam: Vrije Universiteit Amsterdam. Retrieved from <http://publications.tno.nl/publication/34609635/BTWAre/koopmans-2014-measuring.pdf>
- Lam, R. (2014). Promoting self-regulated learning through portfolio assessment: Testimony and recommendations. *Assessment & Evaluation in Higher Education*, 39(6), 699–714. <https://doi.org/10.1080/02602938.2013.862211>
- Latham, G. P., Sulsky, L. M., & MacDonald, H. (2008). Performance management. In P. Boxall, J. Purcell, & P. M. Wright (Eds.), *The Oxford handbook of human resource management* (1st ed., pp. 364–381). Oxford, UK: Oxford University Press.
- Lei, P.-W., & Wu, Q. (2007). Introduction to structural equation modeling: Issues and practical considerations. *Educational Measurement: Issues & Practice*, 26(3), 33–43. <https://doi.org/10.1111/j.1745-3992.2007.00099.x>
- Lejeune, C., Mercuri, D., Beausaert, S., & Raemdonck, I. (2016). Personal development plans supporting employee learning and perceived performance: The moderating role of self-directedness. *Human Resource Development International*, 19(4), 307–328. <https://doi.org/10.1080/13678868.2016.1203639>
- Lievens, F., Conway, J. M., & De Corte, W. (2008). The relative importance of task, citizenship and counterproductive performance to job performance ratings: Do rater source and team-based culture matter? *Journal of Occupational & Organizational Psychology*, 81(1), 11–27. <https://doi.org/10.1348/096317907X182971>
- Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.
- Lyons, N. (1998). Reflection in teaching: Can it be developmental? A portfolio perspective. *Teacher Education Quarterly*, 25(1), 115–127.
- Lyons, N. (2010). Approaches to portfolio assessment of complex evidence of reflection and reflective practice. In N. Lyons (Ed.), *Handbook of reflection and reflective inquiry* (pp. 473–488). New York: Springer. Retrieved from http://link.springer.com/chapter/10.1007/978-0-387-85744-2_24
- Manuti, A., Pastore, S., Scardigno, A. F., Giancaspro, M. L., & Morciano, D. (2015). Formal and informal learning in the workplace: A research review. *International Journal of Training & Development*, 19(1), 1–17. <https://doi.org/10.1111/ijtd.12044>
- Marsick, V. J. (2009). Toward a unifying framework to support informal learning theory, research and practice. *Journal of Workplace Learning*, 21(4), 265–275. <https://doi.org/10.1108/13665620910954184>
- Marsick, V. J., & Volpe, M. (1999). The nature and need for informal learning. *Advances in Developing Human Resources*, 1(3), 1–9. <https://doi.org/10.1177/152342239900100302>
- McClelland, D. C. (1973). Testing for competence rather than for ‘intelligence’. *American Psychology*, 28(1), 1.
- Mead, M. S. (2012). *The effect of self-directed learning readiness and online course quality ratings on student satisfaction and academic performance in undergraduate E-learning* (Doctoral dissertation). Kansas City, MO: University of Missouri.
- Monroe, K. S. (2016). The relationship between assessment methods and self-directed learning readiness in medical education. *International Journal of Medical Education*, 7, 75–80. <https://doi.org/10.5116/ijme.56bd.b282>

- Moshtaghi, N., & Boyer, S. L. (2015). *The moderating effect of self directed learning (SDL) environment on the relationship between boredom proneness and performance*. Proceedings of the 2009 Academy of Marketing Science (AMS) Annual Conference, 241–241. Springer Link. https://doi.org/10.1007/978-3-319-10864-3_136
- Mueller, R. O., & Hancock, G. R. (2008). Best practices in structural equation modeling. In J. Osborne (Ed.), *Best practices in quantitative methods* (pp. 488–508). Thousand Oaks, CA: SAGE. <https://doi.org/10.4135/9781412995627.d38>
- Nathaniel, T. I., Gainey, J. C., Williams, J. A., Stewart, B. L., Hood, M. C., Brechtel, L. E., ... Black, A. C. (2017). Impact and educational outcomes of a small group self-directed teaching strategy in a clinical neuroscience curriculum. *Anatomical Sciences Education* 11(5):478–487. <https://doi.org/10.1002/ase.1759>
- Peine, A., Kabino, K., & Spreckelsen, C. (2016). Self-directed learning can outperform direct instruction in the course of a modern German medical curriculum – Results of a mixed methods trial. *BMC Medical Education*, 16(1), 158. <https://doi.org/10.1186/s12909-016-0679-0>
- Raemdonck, I., Meurant, C., Balasse, J., & Frenay, M. (2013). Exploring the concept of “self-directedness in learning”. Theoretical approaches and measurement in adult education literature. In D. Gijbels, V. Donche, J. T. E. Richardson, & J. D. Vermunt (Eds.), *Learning patterns in higher education: Dimensions and research perspectives* (pp. 235–264). Abingdon, UK: Routledge.
- Raemdonck, I., Thijssen, J., & Greef, M. de. (2017). Self-directedness in work-related learning processes. Theoretical perspectives and development of a measurement instrument. In M. Goller & S. Paloniemi (Eds.), *Agency at work* (pp. 401–423). Cham, Switzerland: Springer. https://doi.org/10.1007/978-3-319-60943-0_20
- Saks, K., & Leijen, Ä. (2014). Distinguishing self-directed and self-regulated learning and measuring them in the E-learning context. *Procedia: Social & Behavioral Sciences*, 112, 190–198. <https://doi.org/10.1016/j.sbspro.2014.01.1155>
- Shute, V. J. (2008). Focus on formative feedback. *Review of Educational Research*, 78(1), 153–189. <https://doi.org/10.3102/0034654307313795>
- Smith, K., & Tillema, H. (1998). Evaluating portfolio use as a learning tool for professionals. *Scandinavian Journal of Educational Research*, 42(2), 193–205. <https://doi.org/10.1080/0031383980420206>
- Spence, J. R., & Baratta, P. L. (2014). Performance appraisal and development. In K. Kraiger, J. Passmore, N. R. dos Santos, & Sigmar Malvezzi (Eds.), *The Wiley Blackwell handbook of the psychology of training, development, and performance improvement* (pp. 437–461). Chichester, UK: Wiley.
- Steiger, J. H. (2007). Understanding the limitations of global fit assessment in structural equation modeling. *Personality & Individual Differences*, 42(5), 893–898. <https://doi.org/10.1016/j.paid.2006.09.017>
- Stockdale, S. L., & Brockett, R. G. (2011). Development of the PRO-SDLS: A measure of self-direction in learning based on the personal responsibility orientation model. *Adult Education Quarterly*, 61(2), 161–180. <https://doi.org/10.1177/0741713610380447>
- Williams, C., Santelices, L., Ávila, M., Soto, M., & Dougnac, A. (2017). [The impact of a self-directed teaching approach on academic performance of medical students]. *Revista Medica De Chile*, 145(5), 595–602. <https://doi.org/10.4067/S0034-98872017000500006>
- Yang, G.-F., & Jiang, X.-Y. (2014). Self-directed learning readiness and nursing competency among undergraduate nursing students in Fujian province of China. *International Journal of Nursing Sciences*, 1(3), 255–259. <https://doi.org/10.1016/j.ijnss.2014.05.021>

Title/Author	The relationship between talent management, job satisfaction and voluntary turnover intentions of employees in a selected government institution / Barkhuizen, N. E., & Gumedé, B.
Source	<i>SA Journal of Human Resource Management</i> Volume 19 (Feb 2021) a1396 Pages 1-12 https://doi.org/10.4102/SAJHRM.V19I0.1396 (Database: AOSIS publishing https://sajhrm.co.za/)

The relationship between talent management, job satisfaction and voluntary turnover intentions of employees in a selected government institution

**Authors:**

Nicolene E. Barkhuizen¹  Bongekile Gumede² 

Affiliations:

¹Department of Industrial Psychology and People Management, College of Business and Economics, University of Johannesburg, Johannesburg, South Africa

²Southern Business School, Krugersdorp, South Africa

Corresponding author:

Nicolene Barkhuizen,
nbarkhuizen@uj.ac.za

Dates:

Received: 11 May 2020

Accepted: 08 Dec. 2020

Published: 25 Feb. 2021

How to cite this article:
 Barkhuizen, N.E., & Gumede, B. (2021). The relationship between talent management, job satisfaction and voluntary turnover intentions of employees in a selected government institution. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 19(0), a1396. <https://doi.org/10.4102/sajhrm.v19i0.1396>

Copyright:

© 2021. The Authors.
 Licensee: AOSIS. This work
 is licensed under the
 Creative Commons
 Attribution License.

Read online:

Scan this QR
 code with your
 smart phone or
 mobile device
 to read online.

Introduction: Talent management plays an essential role in the retention of competent employees in the workplace.

Research purpose: The main objective of this research was to determine the relationship between talent management, job satisfaction and voluntary turnover intentions of employees in a selected South African government institution.

Motivation for the study: Talent management research within the context of South African government institutions has yet to reach its full potential.

Research design, approach, and method: This study followed a quantitative research design. Data was collected from employees at the head office of the selected government institution ($N = 208$). A Talent management measure, job satisfaction questionnaire and a voluntary turnover intention questionnaire were distributed.

Findings: The results showed a weak leadership talent mindset. Talent management practices such as talent development, performance management, talent retention strategies and compensation practices were poorly applied. Almost half of the sample was dissatisfied with their jobs, whilst 68% considered quitting their jobs. Talent management practices were significantly related to job satisfaction and voluntary turnover intentions. Job satisfaction moderated the relationship between talent management and voluntary turnover intentions.

Management implications: Government leaders are encouraged to adopt a talent mindset that will instil a talent culture where talented individuals are allowed to add value and contribute to the success of the institution.

Value add: This research adds to the limited body of research done on talent management in the public sector context.

Conclusions: This research highlights the importance of talent management in contributing to critical individual outcomes required for sustainable government institutions.

Keywords: government institutions; job satisfaction; leadership talent mindset; talent management; voluntary turnover intentions.

Introduction

The field of talent management (TM) has gained a lot of interest amongst researchers and practitioners over the past two decades. Studies show that TM has predictive potential for various individual and organisational outcomes in the Southern African context (Barkhuizen, Lesenyeho, & Schutte, 2020; Masale, 2020; Mokgojwa, 2019). Yet, the conceptualisation of talent and TM remains a pressure point in academic literature, which in turn undermines the practical application thereof in the workplace (Gallardo-Gallardo, Thunissen, & Scullion, 2020). According to Gallardo-Gallardo et al. (2020), questions remain as to how TM is defined and implemented within organisations. This can be a consequence of scholars who have differing opinions on whether talent is inborn or acquired (Meyers, Van Woerkom, & Dries, 2013). Others debate the contextual meanings and jargon that organisations globally use to coin workplace talent (Wiblen & McDonnell, 2020). The authors believe that individuals are born with a unique gift(s). These gifts need to be uncovered and cultivated for individuals to be recognised as a talent in the workplace, and enable them to make a valuable and distinctive contribution towards achieving organisational goals. Talent, therefore, is a combination of talent intelligence competencies (Visser, Barkhuizen,

& Schutte, 2018), complemented by the willingness and ability to acquire and maintain core employability skills (Barkhuizen, 2015).

As for a basic approach to TM, the majority of definitions appear to include the concepts of 'attraction', 'development' and 'retention' of core skills (Davies & Davies, 2010, Fitzgerald, 2014, Lockwood, 2006). Other authors follow a more 'strategic' approach to TM by defining it as 'integrated systems and processes', 'corporate strategy', 'achievement of business goals', 'competitive advantage' and 'sustainability' (see Bethke, Mahler, & Staffelbach, 2011; Collings & Mellahi, 2009; Sparrow, Hird, & Cooper, 2015).

For this study, TM is defined as a strategic process that should be integrated with the business and balanced scorecard of organisations. Talent management should be value-driven and encapsulate a compelling talent value proposition (Saurombe, Barkhuizen, & Schutte, 2017) that will enable talented employees to be a return on investment for any company (Yapp, 2009). Talented individuals can, therefore, be the critical role players for the competitive advantage and survival of any organisation in an ever-changing business world (Rabbi, Ahad, Kousar, & Ali, 2015).

The main objective of this research was to determine the relationship between TM, job satisfaction and voluntary turnover intentions of employees in a selected South African government institution.

More specifically, the following research questions are addressed:

- What is the relationship between TM and job satisfaction?
- What is the relationship between TM and voluntary turnover intentions?
- What is the role of job satisfaction in the TM-voluntary turnover intention relationship?
- To what extent do participants differ in their perceptions of TM practices based on their demographic characteristics?

This research is motivated by the fact that context is often ignored when doing TM research (see Gallardo-Gallardo et al., 2020). King and Vaiman (2019) posit that organisational TM operates within a broader macro-level context with micro-level TM (i.e. talent management practices) embedded in the macro-TM system. As such, we argue that the validity and contribution of TM in the South African context and especially the government sector has yet to reach its full potential. For the same reason, we also chose voluntary turnover intentions as a possible outcome of TM for local government employees in this study. A study by Hom, Lee, Shaw and Hausknecht (2017, p. 539) focused on 100 years of research on employee turnover. They concluded that researchers need to 'dive into context-specific investigations of turnover' instead of following a 'one size fits all' approach. Previous research showed that TM predicts voluntary turnover intentions in other contexts (Kwaeng, Barkhuizen,

& Du Plessis, 2018; Theron, Barkhuizen, & Du Plessis, 2014). Lastly, we chose job satisfaction as a possible moderator in the TM-turnover relationship. According to Aziri (2011), job satisfaction is one of the most complicated aspects for managers in managing their employees. Moreover, job satisfaction is consistently related to the productivity and performance of businesses via employee motivation, which is pivotal for the survival of any institution (Pang & Lu, 2018). Talent management appears to have a significant impact on the job performance of government employees via job satisfaction (Magolego, Barkhuizen, & Lesenyeho, 2013).

We believe that this research can make a useful contribution to the TM practice and outcomes thereof for South African government institutions. Khilji, Tariq and Schuler (2015) challenge governments' involvement in attracting and developing national talent and the effective mobilisation of expertise across government institutions. In South Africa, public institutions are struggling to attract and retain talent because of high competition levels, as the private sector can entice potential staff with packages and other benefits that exceed what the government can offer (Khan, 2018). Moreover, budget constraints in public institutions negatively affect the running of the institution, and have a detrimental effect on personnel (Ganyaupfu, 2019). The staff turnover and vacancy rate have been high over the recent financial years, and the institution continually loses talented employees (Ogony & Majola, 2018). A report by Mzezewa (2019) shows that the voluntary turnover rate for public sector employees ranges between 4% and 7%. Therefore, a study on TM, job satisfaction and voluntary turnover intentions is imperative from a research point of view.

Literature review

Managing talent through a talent-career life cycle

This study adopts the talent career life cycle framework of Schutte and Barkhuizen (2016) to determine the practices that should ideally form part of the TM processes of talented individuals in the workplace. This framework includes the following TM practices: talent mindset, talent branding, talent onboarding and deployment, talent engagement, talent development, talent performance management and recognition, talent compensation and talent retention practices.

Talent mindset

The leadership talent mindset is critical to ensure that TM strategies are supported throughout the organisation (Tladi, 2016). A talent mindset can be defined as the conviction that talented employees add value to the bottom-line of any organisation (Luna-Arcas & Morley, 2015). A study by Sadeli (2012) shows that leaders need to initiate and implement talent practices to understand what fundamental factors would attract high-potential individuals. Leaders can further develop learning and development programmes to build organisational competence through talent pools and smooth succession pathways. Talent stakeholders should create a talent culture whereby individual talents are aligned with

organisational goals (Saurombe et al., 2017), and enabled to perform optimally (Mokgojwa, 2019). A recent study by Masale (2020) showed that leadership drive and foresight is a significant predictor of organisational values and norms, strategic direction, success orientation and organisational dynamics and innovation. Studies show that leadership is an essential factor in the attraction of Generation Y employees (Bussin, Mohamed-Padayachee, & Serumaga-Zake, 2019). Zaharee, Lipkie, Mehlman and Neylon (2018) found that all age groups view quality talent leadership as necessary. Other research shows that talent leadership is a consistent predictor of the voluntary turnover intentions of employees in government institutions (Matobako & Barkhuizen, 2017). Moreover, significant discrepancies prevail between management levels and their perceptions of the application of TM practices. The trend to emerge is that top and senior managers experience a more positive implementation of TM practices compared to middle- and lower-level management, as well as supervisory and operation staff (see Barkhuizen & Veldtman, 2012; Masale, 2020).

Talent branding

According to Wilska (2014), employer branding is an important short- and long-term strategy to acquire top talent. Saurombe et al. (2017) found that fringe benefits/incentives and remuneration, leadership and managerial support, work-life balance, performance management and development, occupational health and safety, and job security are essential components of the talent employment brand of public sector institutions. Rudhumbu, Chikari, Sotwa and Lukusa (2014) found those additional factors such as an open, friendly and honest workplace environment; the recognition and rewarding of employee competencies; employee-friendly recruitment processes and a dynamic, high-performance culture is vital to attract and retain talent. A study by Maurya and Agarwal (2018) showed that TM practices such as fair rewards and remuneration and work-life balance were the most effective predictors of a compelling organisational brand.

Talent onboarding and deployment

According to Pike (2014), the primary goal of employee onboarding programmes is to ensure an optimal fit between a new employee and the job/organisation, which in turn should translate into higher levels of job performance. A great deal of research shows that a job-person match is not only essential to reduce stress but also prevent turnover intentions (Kumar & Jain, 2012). Mokgojwa (2019) found that talented employees value jobs that are in line with their qualifications, experience, skills acquired and life purpose. Moreover, the talent onboarding processes and induction are essential to building a culture of trust between the employer and newly hired talent employee (Caldwell & Peters, 2018). Molefi (2015) found that poorly applied TM practices could result in a breach of the psychological contract in the employer-employee relationship.

According to Campbell and Hirsch (2013), talent deployment can be achieved by implementing career movement opportunities for talented individuals and prioritise high potential individuals for the pivotal jobs in the organisation. The early identification of talent pools is supported by succession planning methods to nurture and maintain talent pools for business continuity. Muslim, Haron and Hashim (2012) advise that succession planning and the identification of talent pools should be a formalised and long-term strategy for any organisation. Muslim et al. (2012) further advocate that organisations reduce conflict by filling the right candidate with the right qualification in the correct position. Moreover, in a more home-grown approach from within, when employees see institutions giving promotions, it motivates and allows individuals to take responsibility and stretch themselves further (McCaffry & Sexton, 2018).

Talent engagement

A great deal of research is devoted to understanding the concept of 'engagement' in the workplace. Researchers use the terminologies such as 'job engagement', 'employee engagement' and 'work engagement' interchangeably. For this research, we coin the concept of talent engagement as those employees who display a high level of energy, who are willing to invest a lot of effort in their jobs and who are fully devoted to achieving work tasks and to perform (Bakker & Albrecht, 2018). In essence, talent engagement implies that the individual employee is satisfied with the job, and they are keen on doing their duties (Mathafena, 2015). Talent engagement is dependent on the availability of resources such as management and collegial support, clear job and performance expectations, compensation and work values (Kotze, 2018).

Talent development

Studies by Lesenyeho (2017) and Saurombe et al. (2017) show that opportunities for training and development, and career advancement are critical considerations for employees to join a preferred employer of choice in the government sector. Organisations are positively perceived if they display the desire to improve talent (Saurombe et al., 2017). Van Dyk (2009) maintains that employees who consider a career path in the public sector should be exposed to developmental opportunities and widening of their skills to benefit the organisation, themselves and the community at large. According to Roman (2011), career growth, learning and development are the most critical motivational aspects for retention. As such, employers should focus on implementing career development programmes not merely aimed at supporting individual development, but to engage and retain their employees (Alias, Noor, & Hassan, 2014). According to Diseko (2015), the development of public servants can improve their efficiency in service delivery. Bussin and Thabethe (2018) found that employees aged between 19 and 29 years had a higher preference for learning and development of career paths compared to other groups. Barkhuizen (2013) found that those employees with a lower level of education, such as a Bachelor's degree experienced fewer talent development opportunities compared to those with post-graduate qualifications in government institutions.

Talent performance and recognition

According to Masri and Suliman (2019), TM and performance management are strategic tools that can assist in the implementation of strategic objectives that can in turn, enhance employee and organisational performance. Organisations are responsible for creating a talent culture that will enable employees to contribute to their strategic objectives (Masale, 2020) and to keep talent performance sustainable (Vural, Vardarlier, & Aykir, 2012). Vural et al. (2012) further found that talent performance systems are pivotal to keep talent committed towards their jobs. Talented employees therefore need role clarity, opportunities to apply skills, and participate in career decisions to achieve career success (Lesenyeho, 2017). Altındağ, Çirak and Acar (2018) found that fair and trustworthy performance appraisal systems, as well as the management of performance appraisals, are essential to instil feelings of trust, a sense of belongingness and job satisfaction for talented individuals. A study by Marcus and Gopinath (2017) showed that Generation Y and Z employees perceive that institutions do not set achievable targets to earn performance rewards and are impartial in its rewards and recognition.

Talent compensation

Talent compensation and rewards are rapidly growing research fields. The latest prominent definition of total rewards refers to the components of compensation, well-being, benefits, development and recognition (WorldatWork, 2020). Compensation plays an essential role in the attraction and retention of talented employees. Slechther, Hung and Bussin (2014) found that talent attraction depends on a reward package that includes high levels of remuneration as well as benefits and variable pay. According to Bryant and Allen (2013), factors such as compensation structure, compensation procedures, types of compensation, perceived fairness and equity in salary, and linking compensation and benefits are essential solutions to retain talent in the workplace.

In the public sector, pay and employee benefits policies are subject to a collective bargaining process by all stakeholders, mostly unions and politicians (Knies, Boselie, Gould-Williams, & Vandenebeele, 2018). There are monetary and non-monetary incentives that act as motivators for employees to remain in the organisation. The higher the incentives an employee receives, greater is the loss if the employee exits the organisation (Van Dyk, Coetzee, & Takawira, 2013). Organisations predominantly use competitive pay packages as an effective retention strategy (Roman, 2011). Bussin and Toerien (2015) advocate a holistic approach to total rewards in companies is required to prevent increased turnover and job-hopping. According to Pagnolato, Bussin and Schlechter (2017), Generation Y considers a comprehensive rewards package such as benefits, performance, recognition, remuneration and career advancement as essential components in their decision to remain in an organisation.

Talent retention practices

Research to date shows that talent retention practices remain one of the most neglected methods in the TM process (Barkhuizen et al., 2020). Most of the time, government institutions do not have retention practices in place or managements neglect to have frequent talent retention conversations with employees. Lewis and Sequeira (2012) believe that the design and implementation of employee retention strategies is a skill that management should prioritise. Mandhanya (2015) found that additional factors such as recruitment and selection, training and development, compensation packages, working environment, recognition, and rewards and leadership are significantly related to employee retention policies practised by the institution. Shipena (2019) revealed that government employees who had fewer chances for promotion experienced a weaker application of talent retention practices. Molefi (2015) found that public sector nurses working overtime perceived that their institution is less inclined to retain their services compared to those working fewer hours in a work week.

Outcomes of talent management: Job satisfaction and voluntary turnover intentions

Talent management and job satisfaction

Job satisfaction is an essential attitudinal variable to research because of its strategic importance for organisational functioning (Sila & Širok, 2018), and as a critical talent indicator (Paadi, Barkhuizen, & Swanepoel, 2019). Job satisfaction has been defined in various ways that involves the individual's attitude to aspects of the work and the work context. According to Roman (2011) job satisfaction is a consequence of the degree of pleasure that one derives from compensation, management support, promotion opportunities, work environment, organisational culture, colleagues and the duties executed. Job satisfaction can also include employees' feelings towards their organisations' performance, policies and general human resource (HR) practices (Dixit & Arrawatia, 2018; Theron et al., 2014).

There is some research evidence to link TM with job satisfaction in the public sector. Magolego et al. (2013) found that talent is a positive predictor of job satisfaction in a sample of local government employees. Similar results were obtained by Dixit and Arrawatia (2018), who found that TM in general and TM practices had a direct impact on the job satisfaction of employees. A study by Hafez, AbouelNeel and Elsaied (2017) showed that TM components, such as motivating outstanding performance, training and development, and job enrichment had a positive effect on job satisfaction. Senona (2017) found that TM practices such as talent strategy, staffing (deployment), talent acquisition, talent retention and financial rewards were significant predictors of the job satisfaction of public school teachers. Paadi et al. (2019) found that the availability of talent internship programmes for public

sector, early-career employees significantly enhanced their job satisfaction:

H1: Talent management would be a significant positive predictor of the job satisfaction of government employees

Talent management and voluntary turnover intentions

Arshad and Puteh (2015) regards turnover as an individual's behaviour of leaving the organisation. According to Uğural, Giritli and Urbański (2020), employees are the custodians of a voluntary movement of turnover, whilst involuntary turnover involves processes initiated by organisations to terminate the service of employees. Voluntary employee turnover is an area of concern because of the costs associated with it (Surji, 2013). Moreover, talent turnover has a direct negative impact on organisational effectiveness (Ahmed, Sabir, Khosa, Ahmad, & Bilal, 2016). Managers should therefore have regular talent retention conversations with employees to mitigate risk factors that can result in voluntary turnover intentions (Mokgojwa, 2019).

Research studies to date consistently relate TM to talent retention. The talent mindset of managers appears to be one of the main predictors of the turnover intentions of talented employees (Matobako & Barkhuizen, 2017). Other talent factors contributing to voluntary turnover intentions in the workplace include inadequate compensation (Theron et al., 2014), a lack of meaningful work (Saurombe, 2015), poor workforce planning, talent retention strategies and talent development opportunities (Masale, 2020) and inferior talent branding, talent deployment and talent engagement (Shipena, 2019). Lee and Jimenez (2010) found that a performance-based supporting supervision combined with a performance-based reward system reduced the likelihood of voluntary labour turnover. A study by Bussin and Thabethe (2018) showed that a monthly salary is mostly related to attracting, retaining and motivating employees:

H2: Talent management would be significantly negatively related to the voluntary turnover intentions of government employees

Job satisfaction as a moderating variable between talent management and voluntary turnover intentions

Although job satisfaction is a consistent, intervening variable in many studies, research on the effect of job satisfaction in the TM-voluntary retention relation has yet to emerge. Masale (2020) found that a combination of positive, work-related outcomes (i.e. job satisfaction, hope, locus of control, meaning, productive organisational energy and organisational commitment) partially moderated the relationship between talent culture and the intention to quit. There is some evidence that job satisfaction can play a moderating role between TM dimensions and turnover intentions. A study by Turgut, Bekmezci and Ateş (2017) showed that job satisfaction partially moderated the relationship between servant leadership and employee turnover intentions. Kwaeng

et al. (2018) found that job and organisational satisfaction moderate the relationship between recognition and voluntary turnover intentions, as well as managing talent and voluntary turnover intentions.

In light of the above discussion, we predict that:

H3: Job Satisfaction moderates the relationship between talent management and voluntary turnover intentions of government employees

Research design

Research approach

A quantitative research approach was followed using surveys to collect data. A cross-sectional research design was adopted whereby data was collected at one point in time. Cross-sectional research is ideally suited to test the relationship between the variables in this study, which is TM, job satisfaction and voluntary turnover intentions (Field, 2019). This research falls within the positivist research paradigm. Positivism implies that the research methodology applied to collect data is objective or detached to measure variables and test hypotheses to derive causal explanations (Antwi & Kasim, 2015).

Sampling

The head office of the respective institution was identified as the unit of analyses for this study. The researchers approached chief directors, directors, assistant directors, middle managers and the lower levels of staff to obtain a comprehensive overview of TM practices and their outcomes in the institution. The stratified random sampling technique used in the study resulted in a diverse group of respondents. Five hundred questionnaires were distributed to managers and employees at the head office. The total number of respondents was $N = 208$, which represents a 42% response rate. According to Nulty (2008), internal surveys generally receive a 30% – 40% response rate.

Most of the respondents in this study were female (56.3%), aged between 40 and 49 (42.3%), from the African ethnic group (82.7%), and Sepedi-speaking (16.3%). The respondents had a Bachelor's degree as their highest level of educational qualification (31.8%) and employed in operational positions (38%). The majority of the participants were employed in the institution for 6 and 10 years (38.5%), and employed in their current job for 6 and 10 years (45.7%), never been promoted (58.2%), and working between 31 h and 40 h per week (53.8%).

Research method

Measuring instruments

A TM measure (Barkhuizen, 2018a) was used to measure the participants' perceptions of the current application of TM practices. The TM measure consists of 48 items and measure eight TM practices. The TM practices include talent mindset, talent branding, talent onboarding and deployment, talent

engagement, talent development, talent performance management and recognition, talent compensation, and talent retention practices. Respondents were requested to indicate their responses on a six-point Likert scale ranging from 'strongly Disagree (1)' to 'strongly agree (6)'. The questionnaire obtained acceptable reliabilities of α ranging from 0.793 to 0.920 (Shipena, 2019).

A job satisfaction questionnaire (self-developed) was used to determine the level of job satisfaction with several aspects of the work itself, and the working environment. The questionnaire consisted of 10 items. Each item referred to a feature or factor that enforces or reinforces job satisfaction in the working environment. The questionnaire was distributed to subject matter experts to verify the face and content validity. The response choices offered for each item or statement is 'strongly disagree (1)' to 'strongly agree (6)'. The reliability of the questionnaire was established in the present study.

The final questionnaire used in the study was the employee retention questionnaire (Barkhuizen, 2018b). This consisted of up to six items and determined the employees' intentions to quit the institution. The respondents in the study were requested to rate the items on a six-point scale from 'strongly disagree (1)' to 'strongly agree (6)'. This questionnaire obtained an acceptable internal consistency of 0.921 (Shipena, 2019).

Biographical information such as gender, age, ethnicity, home language, highest educational qualification, job level, years of employment in current organisation and job, promotion opportunities and working hours were gathered from the respondents.

Research procedure

The researchers obtained ethical clearance before the commencement of the study. The top management of the government institution granted permission to do the research. The researchers distributed the questionnaires both, as hard copies and electronically. The confidentiality of the respondents was maintained at all times.

Statistical analyses

Statistical analysis was carried out using the SPSS software (SPSS Inc., 2019). The reliability and validity of the TM measure, job satisfaction questionnaire, and the voluntary turnover intention measures were determined using exploratory factor analysis and Cronbach's alpha coefficients. Pearson correlation analyses and hierarchical regression analyses were applied to determine the relationships between the variables in this study. The following guidelines (see Cohen, 1988) were used to determine the magnitude of the relationships where significance was obtained: $r \leq 0.29, p \leq 0.05$ (statistically significant relationship), $0.30 \leq r \leq 0.49, p \leq 0.05$ (practically significant, medium effect) and $r \geq 0.50, p \leq 0.05$ (practically significant, large effect). Multivariate analyses of variance were used to determine whether there

were any significant differences amongst demographic groups based on TM.

Hierarchical regression analyses were used to determine the moderating effect of job satisfaction between TM and voluntary turnover intentions. The guidelines of Baron and Kenny (1986) were followed. Four steps are involved. First, the predictor variable (i.e. TM) of voluntary turnover intentions is added; second the moderator variable (i.e. job satisfaction). Third, both the predictor and moderator variable are added. The final step involves adding the interaction variable (i.e. multiplying the predictor value with the moderation variable) together with the predictor and moderator variable. The result of the interaction variable must be significant for moderation to occur. In line with the recommendation of Cohen (2008), both the independent (predictor) and moderator variables were centred on reducing multi-collinearity.

Ethical considerations

The research was subjected to ethical clearance at Southern Business School. At the time of the research, SBS did not have a system whereby ethics numbers were provided to students. Student numbers were used; refer to the attached letter. Ethical clearance number: 21510675

Results

Factor and reliability analyses

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity was performed on the three measures to determine its suitability for factor analyses. The measures obtained the following KMOs: TM, 0.930; job satisfaction, 0.860, and voluntary turnover, 0.902. The measures all complied with the guidelines of $KMO \geq 0.60$ (Hair, Black, & Babin, 2010) and were subsequently subjected to an exploratory factor analyses.

Talent management

The principal component factor analyses for the TM measure initially resulted in an eight-factor solution. The TM measure was subsequently subjected to a principal component factor analysis using varimax rotation. The results showed eight underlying factors for the TM measure: talent onboarding and deployment (factor 1), talent performance management and recognition (factor 2), talent mindset (factor 3), talent engagement (factor 4), talent development (factor 5), talent compensation (factor 6), talent branding (factor 7) and talent retention practices (factor 8). The factors explained 73.233% of the total variance. Eight items were deleted because of problematic loadings. The remaining items showed acceptable loadings of above 0.50.

Job satisfaction

Principal components factor analyses resulted in one underlying factor for the job satisfaction measure. The factor

was labelled job satisfaction and explained 49.665% of the total variance. All items showed acceptable loadings.

Voluntary turnover intentions

Principal components factor analyses resulted in one underlying factor for the voluntary turnover intention measure. The factor was labelled job satisfaction and explained 71.982% of the total variance. All items showed acceptable loadings.

The descriptive statistics and reliabilities of the measurements are reported in Table 1.

The results in Table 1 show acceptable to excellent Cronbach's alphas of $\alpha \geq 0.70$ (Field, 2019) for the different factors. As regards the results on TM, about half of the participants experienced a lack of talent mindset in the institution. Also, the institution seems to lack opportunities for talent development, poor performance management practices and limited talent retention strategies. Almost 40% of the sample perceived inadequate talent compensation practices. The results further showed that more than 60% of the sample experienced a positive talent brand and felt that they are employed in a job that is in line with their skills, competencies, and experience. About 75% of the sample appeared to be engaged in their careers. The results further showed that about 45% of the sample was not satisfied with their jobs, whilst 68% of the sample considered quitting their jobs.

The next section reports on the testing of the hypotheses developed for this study.

Testing of hypotheses

Pearson correlation analyses were used to test the first two hypotheses set for this study:

H1: Talent management would be a significant positive predictor of the job satisfaction of government employees

H2: Talent management would be significantly negatively related to the voluntary turnover intentions of government employees

The results of the hypotheses testing are reported in Table 2.

TABLE 1: Descriptive statistics and reliabilities of the measurements.

Measurement dimensions	Mean	SD	Skewness	Kurtosis	α
Talent management practices					
Talent mindset	3.1760	1.26430	-0.021	-1.042	0.912
Talent branding	4.1490	1.15157	-0.752	-0.053	0.871
Talent deployment and onboarding	4.1484	1.34165	-0.624	-0.449	0.939
Talent engagement	4.5500	1.13708	-1.066	0.716	0.875
Talent development	3.4238	1.27485	-0.269	-0.919	0.915
Talent performance management and recognition	3.0192	1.18878	0.071	-0.692	0.896
Talent compensation	3.8017	1.26574	-0.371	-0.552	0.853
Talent retention practices	3.5938	1.42853	-0.333	-0.841	0.732
Job satisfaction					
Voluntary turnover intentions	3.4793	1.05354	-0.322	-0.483	0.882
Voluntary turnover intentions					
SD, standard deviation.					

The results in Table 2 show that all TM practices (i.e. talent mindset, talent branding, talent onboarding and deployment, talent engagement, talent development, talent performance and recognition, talent compensation and talent retention) are practically, significantly and positively related to the job satisfaction. The effects were large.

The results support Hypotheses 1 that TM practices would be significantly positively related to job satisfaction.

The results further revealed that all TM practices (i.e. talent mindset, talent branding, talent onboarding and deployment, talent engagement, talent development, talent performance and recognition, talent compensation and talent retention) are practically, significantly and negatively related to the voluntary turnover intentions of staff. The effect of talent development was large and for the remainder of the TM practices were medium.

The results support Hypothesis 2 that that TM practices would be significantly negatively related to voluntary turnover intentions.

Hierarchical regression analyses were used to test the moderating effect of job satisfaction TM and voluntary turnover intention. A second-order factor analysis was performed on the TM measure (total variance explained, 65.298%). All variables were centred for the analyses. The results are reported in Figure 1.

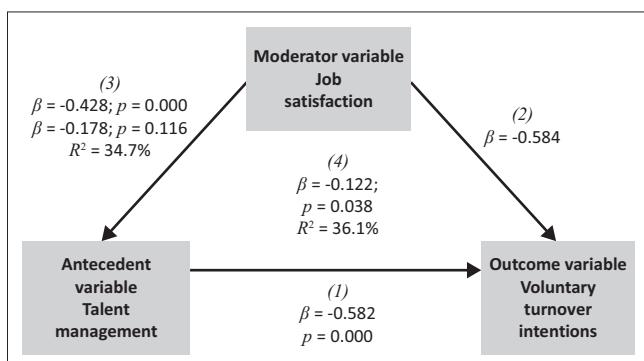


FIGURE 1: Regression analyses: Talent management, job satisfaction and voluntary turnover intentions.

TABLE 2: Pearson correlation analyses between talent management, job satisfaction and voluntary turnover intentions.

Variables	Talent mindset	Talent brand	Talent deployment	Talent engagement	Talent development	Talent performance management	Talent compensation	Talent retention	Job satisfaction	Voluntary turnover
Talent mindset	1	-	-	-	-	-	-	-	-	-
Talent brand	0.597** 0.000	-	-	-	-	-	-	-	-	-
Talent deployment	0.520** 0.000	0.515** 0.000	-	-	-	-	-	-	-	-
Talent engagement	0.460** 0.000	0.593** 0.000	0.593** 0.000	-	-	-	-	-	-	-
Talent development	0.591** 0.000	0.470** 0.000	0.720** 0.000	0.575** 0.000	-	-	-	-	-	-
Talent performance management	0.546** 0.000	0.495** 0.000	0.519** 0.000	0.462** 0.000	0.685** 0.000	-	-	-	-	-
Talent compensation	0.434** 0.000	0.416** 0.000	0.467** 0.000	0.339** 0.000	0.447** 0.000	0.532** 0.000	-	-	-	-
Talent retention practices	0.301** 0.000	0.403** 0.000	0.318** 0.000	0.341** 0.000	0.377** 0.000	0.541** 0.000	0.472** 0.000	-	-	-
Job satisfaction	0.619** 0.000	0.623** 0.000	0.685** 0.000	0.575** 0.000	0.702** 0.000	0.724** 0.000	0.634** 0.000	0.580** 0.000	-	-
Voluntary turnover	-0.403** 0.000	-0.432** 0.000	-0.383** 0.000	-0.369** 0.000	-0.506** 0.000	-0.481** 0.000	-0.437** 0.000	-0.447** 0.000	-0.548** 0.000	1

**, Denotes significant relationships between the variables. Below are the cut-off points for statistical significance:

$r \leq 0.29, p \leq 0.05$ (statistically significant relationship), $0.30 \leq r \leq 0.49, p \leq 0.05$ (practically significant, medium effect) and $r \geq 0.50, p \leq 0.05$ (practically significant, large effect).

The first step reveals a significant negative relationship between TM and voluntary turnover intentions ($\beta = -0.582; p = 0.000$), an indication that weak TM practices are associated with higher voluntary turnover intentions. Talent management explained 33.9% of the variance in voluntary turnover intentions ($R^2 = 0.339; p < 0.001$). The second step reveals a significant negative relationship between job satisfaction and voluntary turnover intentions ($\beta = -0.584; p = 0.000$), an indication that employees with lower levels of job satisfaction would experience higher levels of voluntary turnover intentions. Job satisfaction explains 30.1% of the variance in organisational commitment ($R^2 = 0.301; p < 0.001$). The third step in the moderation analyses yielded a significant prediction result for TM and voluntary turnover intentions ($\beta = -0.428; p = 0.000$) but a non-significant prediction result for job satisfaction and voluntary turnover intentions ($\beta = -0.178; p = 0.116$). Talent management and job satisfaction (and its covariates) explained 34.7% of the variance in voluntary turnover intentions ($R^2 = 0.347; p = 0.000$). The final step with the adding of the interaction variable (talent management \times job satisfaction) yielded a significant result ($\beta = -0.122; p = 0.038$), with a slight increase in the total variance explained ($R^2 = 0.361; p = 0.000$). Job Satisfaction, therefore, moderates the relationship between TM and voluntary turnover intentions.

Based on the above results, we accept Hypothesis 3 that job satisfaction moderates the relationship between TM and voluntary turnover intentions.

In this study, we were also interested to determine how the participants perceived TM practices based on their demographic characteristics. The results of the Manova analyses between TM and demographic variables are reported next.

The results in Table 3 show that significant differences exist between demographic groups and TM practices based on their job level. Regarding job level, post-hoc analyses revealed that middle management perceived a higher level of talent deployment than those employed on operational level ($F_{[3,205]} = 4.127$, partial eta, 0.058). The effect was small. The results further showed that senior management experienced a higher level of compensation compared to lower-level management and operational-level employees ($F_{[3,205]} = 4.196$, partial eta, 0.059). The effect was small.

Discussion

The main objective of this research was to determine the relationship between TM, job satisfaction and voluntary turnover intentions of employees in a selected South African government institution. We also explored the possible moderating effect of job satisfaction in the TM-voluntary turnover intentions relationship. Lastly, we investigated whether significant differences exist between the participants in their perceptions of TM practices based on their demographic characteristics (i.e. gender, age, ethnicity, home language, highest educational qualification, job level, years of employment in current organisation and job, promotion opportunities and working hours). This research was motivated by the fact that little knowledge currently exists on the application of TM practices in the context of the South African government itself and the outcomes thereof (i.e. job satisfaction and voluntary turnover intentions) on individual employees.

Concerning TM practices, the results showed that the government institution lacks the leadership talent mindset to recognise the value that talented people can add to the institution. According to Masale (2020) a lack of leadership talent mindset and drive undermine the creation of a talent culture and the strategic direction required to ensure the success

TABLE 3: Manova analyses between talent management and demographic variables.

Demographic variables	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	0.956	1.141	8.000	199.000	0.337	0.044
Home language	0.602	1.255	80.000	1207.287	0.069	0.061
Age	0.845	1.424	24.000	571.961	0.088	0.055
Highest educational qualification	0.796	1.445	32.000	724.407	0.055	0.055
Years of work in organisation	0.842	1.081	32.000	724.407	0.350	0.042
Years of work in current job	0.862	1.251	24.000	571.961	0.190	0.048
Promotion changes	0.888	1.308 ^b	16.000	342.000	0.189	0.058
Hours work	0.925	0.648	24.000	571.961	0.901	0.026
Job level	0.801	1.875	24.000	566.161	0.007**	0.071

**. Indicate significant difference.

of the institution. Consequently, talented employees will not be able to function optimally in the workplace (Mokgojwa, 2019) and may seek employment opportunities elsewhere (Motabako & Barkhuizen, 2017). The critical effect of a leadership talent mindset in individual behaviours can, therefore, not be underestimated (Turgut et al., 2017; Zaharee et al., 2018).

In this study, a lack of career development opportunities also emerged as a problematic TM practice. This is an area of concern as career development is a critical factor in employees' decision to seek employment with a prospective employer (Lesenyeho, 2017; Saurombe et al., 2017). Moreover, as mentioned by Roman (2011), opportunities for career growth and development are some of the critical factors that drive the turnover intentions of employees. As with previous research, talent development was significantly related to voluntary turnover intentions, implying that employees are likely to leave the organisation because of a lack of career development and growth opportunities (Masale, 2020). Furthermore, poor talent development practices also significantly reduced the job satisfaction of employees (Hafez et al., 2017).

The management of talent performance emerged as an area of great concern in this study. About half of the participants experienced a mediocre application of performance management practices. Effective talent performance management practices are essential strategic tools to ensure that the strategic objectives of the organisations are met through the optimal performance of talent (Masri & Suliman, 2019). Moreover, the fair and trustworthy application of performance management systems and appraisal contributes to feelings of trust, belongingness and job satisfaction of talented employees (Altindag et al., 2018). Our results showed that poor talent performance management had a direct impact on the job dissatisfaction of employees (see Hafez et al., 2017). Moreover, poor performance management also enhanced the voluntary turnover intentions of employees (see Lee & Jimenez, 2010). The recognition and rewarding of talent and a high-performance culture is, therefore, essential to retain talent (Rudhumbu et al., 2014).

The results showed that about 40% of the sample perceived inadequate talent compensation practices. Consequently, public sector institutions are at risk of talented employees being poached by the private sector because of higher salary offerings (Khan, 2018). Public sector compensation is already

a complicated bargaining process that involves a vast majority of stakeholders (Knies, et al., 2018). Institutions should, at a minimum, possess a properly assembled compensation structure, compensation procedures, and differentiation in types of rewards to retain key talent (Bryant & Allen, 2013). The results of this study support Senona (2017) in that inadequate compensation can reduce the job satisfaction of employees and enhance voluntary turnover intentions (Kwaeng et al., 2018; Theron et al., 2014). The results of this study also showed that senior management experienced better-structured compensation compared to lower-level management and operational-level employees. A possible explanation for this finding is that management earn higher salaries and incentives as they move up the ranks. Another reason can be found in the popular press that continues to highlight discrepancies in the remuneration of higher-level management. Schlechter et al. (2014) advise that institutions can benefit from introducing more compelling reward practices as a method to motivate employees at all job levels.

The participants furthermore highlighted a lack of retention strategies in the institution. These results are concerning as about 68% of the sample voluntarily considered quitting their jobs. As mentioned by Mokgojwa (2019), managers should have frequent talent retention conversations with talented individuals to ensure they are continually committed to the institution. In this study, a lack of talent retention strategies had a significant impact on the job satisfaction and voluntary turnover intentions of employees. In line with Lewis and Sequeira (2012), we argue that the design and implementation of employee retention strategies should be a skill and priority by management.

In this study, about 60% of the sample perceived a somewhat adequate talent brand and talent onboarding and deployment processes. The talent employer brand is essential to attract and retain key people and support the short- and long-term strategies of organisation (Wilska, 2014). The results of this study further showed that the perceived talent brand has a significant impact on the job satisfaction and voluntary turnover intentions of employees. Government institutions should therefore develop compelling talent value propositions to support the employment brand of the institution (Saurombe et al., 2017) that can foster positive work-related behaviours and prevent turnover.

Although most of the participants displayed a positive attitude towards talent onboarding and deployment, more attention should be devoted to expanding the effectiveness of these practices for the entire talent workforce. The induction of new talent as well as matching talent with the right positions and institutional culture is of considerable significance if institutions are to build a trust relationship with individuals and ensure optimal performance (see Caldwell & Peters, 2018; Kumar & Jain, 2012; Pike, 2014). The breach of the employer-employee trust relationship and subsequent psychological contract (see Molefi, 2015) at the start of a new incumbent's employment can translate into higher voluntary turnover intentions (Shipena, 2019) and undermine business continuity (Campbell & Hirsch, 2013; Muslim et al., 2012). In line with Senona (2017), we also found that a mismatch between employee-employer expectations as far as TM practices in the institution is concerned. Poor deployment significantly reduced the job satisfaction of talented employees. The regression analyses in this study revealed that onboarding and talent deployment practices have a spillover effect on the job satisfaction and subsequent voluntary turnover intentions of employees. These findings again emphasise the importance of a well-established onboarding process right at the start of the TM process to ensure the continued employment of talented employees. Middle management in this study reported a higher job-person match compared to lower-level employees. One can argue that management is more established in their positions whilst operational level employees still have to craft their career paths in the organisation. This assumption is open for speculation, and follow-up research is required to explain these findings.

A surprising result of this study is that employees seemed to be highly engaged in their jobs and willing to walk the extra mile for the institution. In line with Kotze (2018) the authors argue that institutional resources such as the relatively well implemented talented brand and talent onboarding practices could enhance talent engagement. The present study showed significant relationships between talent branding, talent onboarding and talent engagement.

Lastly, we found support that job satisfaction moderates the relationship between TM and voluntary turnover intentions (see Kwaeng et al., 2018). These results provide evidence that individual attitudes, in this case job satisfaction, can diminish the adverse consequences of weak TM for the individual and broader organisation by reducing voluntary labour turnover. The prevention of voluntary turnover is essential for the effectiveness and survival of government institutions (Ahmed et al., 2016; Pang & Lu, 2018).

Implications for human resource managers and practitioners

The results of this research have important implications for HR managers and practitioners. The weak application of TM practices in this study highlights the call for HR

managers and practitioners to play a more active business partner role and ensure that TM becomes a strategic imperative for government institutions. As evidenced in the present study, the absence of adequately assembled TM practices contributed significantly to the voluntary turnover intentions of government employees. High labour turnover can diminish institutional effectiveness and sustainability and prevent government institutions from delivering essential services to the broader public. The lack of leadership mindset and support for TM requires from HR practitioners to educate government leaders on the strategic institutional importance of TM. Leadership talent mindset and commitment is pivotal to ensure institutional and broader societal efficiency through talented employees. A TM strategy that is aligned with the goals of the institution can also assist in eradicating the disconnect between the perceived effectiveness of TM practices between the different job levels in the government institution. A more integrated and strategic TM approach can foster an institutional culture of inclusivity that is essential for the enhancement of positive, work-related outcomes such as job satisfaction and talent retention.

Limitations and recommendations

As with any research, this study also had some limitations. First, a cross-sectional research design was used, which limited the researchers to make cause and effect inferences over a more extended period. Longitudinal studies could be beneficial to determine the interrelationships between TM, job satisfaction, and voluntary turnover intentions over multiple periods to allow for the prediction of staff turnover in any give situation. This study yielded some exciting results that could not be explored because of its quantitative and objective nature. A mixed-method research approach using semi-structured interviews can determine, for example, the reasons behind the high work engagement levels of employees, whilst experiencing poor TM and leadership practices.

Conclusion

The study emphasised the importance of TM in the productivity and sustainability of government institutions. The research and practice of TM has still to gain its full contextual potential. In this study, our focus was on the government in a developing context such as South Africa. Based on our findings, more research is required to understand TM in multiple, global, contextual domains. This will also allow for cross-cultural comparisons, and prepare government institutions more adequately to manage global talent effectively. Finally, government leaders are also encouraged to adopt a talent mindset that will instil a talent culture where talented individuals are allowed to add value and contribute to the success of the institutions.

Acknowledgements

Competing interests

The authors have declared that no competing interests exist.

Authors' contribution

N.B. constructed the article and did the statistical analyses
B.G. collected the data and provided editorial inputs.

Funding information

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Data availability

Data is available on request.

Disclaimer

The views and opinions expressed in the article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

References

- Ahmed, Z., Sabir, S., Khosa, M., Ahmad, I., & Bilal, M. (2016). Impact of employee turnover on organisational effectiveness in the telecommunication sector of Pakistan. *IOSR Journal of Business and Management (IOSR-JBM)*, 11, 88–96.
- Alias, N.E., Noor, N.M., & Hassan, R. (2014). Examining the Mediating Effect of Employee Engagement on the Relationship between Talent Management Practices and Employee Retention in the Information and Technology (IT) Organizations in Malaysia. *Journal of Human Resources Management and Labor Studies*, 2(2), 227–242.
- Altindağ, E., Çırak, N., & Acar, A. (2018). Effects of talent management components on the employee satisfaction. *Journal of Human Resources Management Research*, 2018(2018), 1–20. <https://doi.org/10.5171/2018.895618>
- Antwi, S.K., & Hamza, K. (2015). Qualitative and Quantitative Research Paradigms in Business Research: A Philosophical Reflection. *European Journal of Business and Management*, 7(3), 217–225.
- Arshad, H., & Puteh, F. (2015). Determinants of Turnover Intention among Employees. *Journal of Administrative Science*, 12(2), 1–15.
- Azizi, B. (2011). Job satisfaction: A literature review. *Management Research and Practice*, 3(4), 77–86.
- Bakker, A., & Albrecht, S. (2018). Work engagement: Current trends. *Career Development International*, 23(1), 4–11. <https://doi.org/10.1108/CDI-11-2017-0207>
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Barkhuizen, E. (2018a). *Talent management measure*. Unpublished research paper.
- Barkhuizen, E. (2018b). *Talent retention scale*. Unpublished research paper.
- Barkhuizen, E., & Veldtman, G. (2012). *The impact of talent management practices on the retention of employees in an electricity supply company*. Poster presented at the 30th International Congress of Psychology. July 2012, Cape Town.
- Barkhuizen, E.N. (2015). *Talent management: The catalyst for the 21st century business world*. Inaugural Lecture. North West University. Retrieved from <http://www.nwu.ac.za/sites/www.nwu.ac.za/files/files/mc/documents/2015%20-%20INAUGURAL%20LECTURE%20PROF%20BARKHUIZEN.pdf>
- Barkhuizen, N.E., Lesenyeho, D.L., & Schutte, N.E. (2020). Talent retention of academic staff in South African higher educational institutions. *International Journal of Business and Management*, 12(1), 177–190.
- Bethke, P., & Mahler, P., & Staffelbach, B. (2011). Effectiveness of talent management strategies. *European Journal of International Management*, 1(5), 524–539. <https://doi.org/10.1504/EJIM.2011.042177>
- Bryant, P., & Allen, D. (2013). Compensation, benefits and employee turnover: HR strategies for retaining top talent. *Compensation & Benefits Review*, 45(3), 171–175. <https://doi.org/10.1177/0886368713494342>
- Bussin, M., Mohamed-Padayachee, K., & Serumaga-Zake, P. (2019). A total rewards framework for the attraction of Generation Y employees born 1981–2000 in South Africa. *SA Journal of Human Resource Management*, 17(1), 1–14. <https://doi.org/10.4102/sajhrm.v17i0.1066>
- Bussin, M., & Toerien, W. (2015). Influence of reward preferences in attracting, retaining, and motivating knowledge workers in South African information technology companies. *Acta Commerci*, 15(1), 1–13. <https://doi.org/10.4102/ac.v15i1.290>
- Bussin, M.H., & Thabete, N.N. (2018). Reward preferences in South Africa's media industry. *SA Journal of Human Resource Management*, 16(1), 1–12. <https://doi.org/10.4102/sajhrm.v16i0.1010>
- Caldwell, C., & Peters, R. (2018). New employee onboarding—psychological contracts and ethical perspectives. *Journal of Management Development*, 37(1), 1–21. <https://doi.org/10.1108/JMD-10-2016-0202>
- Campbell, V., & Hirsh, W. (2013). *Talent management: A four-step approach*. Brighton: Institute for Employment Studies.
- Cohen, M. (1988). Wellness in the workplace: Beyond the point of no return. *Health Values: Achieving High Level Wellness*, 12, 16–22.
- Cohen, B.H. (2008). *Explaining psychological statistics*. John Wiley & Sons.
- Collings, D.G., & Mellahi, K. (2009). Strategic Talent Management: A review and research agenda. *Human Resource Management Review*, 19(4), 304–313.
- Davies, B., & Davies, J.B. (2010). Talent management in Academics, *International journal of Educational Management*, 24(5), 418–426.
- Diseko, M.E. (2015). The relationship between Talent Management and retention of Teachers in Botswana [Unpublished Masters Dissertation]. North-West University.
- Dixit, S., & Arrawatia, M. (2018). The impact of talent management on job satisfaction and employee performance in public sector banks of Rajasthan. *International Journal of Creative Research Thoughts*, 6(1), 425–435.
- Du Plooy, J., & Roodt, G. (2013). Biographical and demographical variables as moderators in the prediction of turnover intentions. *SA Journal of Industrial Psychology*, 39(1), 1–12. <https://doi.org/10.4102/sajip.v39i1.1070>
- Field, A. (2019). *Discovering statistics using SPSS*. (4th ed.). London: Sage Publications.
- Fitzgerald, M. (2014). Talent and talent management insights. NHS Leadership Academy.
- Gallardo-Gallardo, E., Thunissen, M., & Scullion, H. (2020). Talent management: Context matters. *The International Journal of Human Resource Management*, 31(4), 457–473. <https://doi.org/10.1080/09585192.2019.1642645>
- Ganyaupfu, E. (2019). Fiscal sustainability in South Africa: Recent evidence. *Journal of Social Economics*, 1(4), 159–167.
- Hafez, E., Reem AbouelNeel, R., & Elsaied, E. (2017). An Exploratory Study on How Talent Management Affects Employee Retention and Job Satisfaction for Personnel Administration in Ain Shams University Egypt. *Journal of Management and Strategy*, 8(4), 1–17.
- Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate data analysis: A global perspective*. (7th edn.). New Jersey: Pearson Education.
- Hom, P., Lee, T., Shaw, J., & Hausknecht, J. (2017). One hundred years of employee turnover theory and research. *Journal of Applied Psychology*, 102(3), 530–545. <https://doi.org/10.1037/apl0000103>
- Kamal, M., & Lukman, Z. (2017). The effects of talent management on performance management. *International Journal of Academic Research in Business and Social Sciences*, 7(9), 372–385. <https://doi.org/10.6007/IJARBSS/v7-i9/3333>
- Khan, S. (2018). Factors attracting and retaining professionals: A comparative study between the private and public sector [Unpublished Masters Dissertation]. North-West University.
- Kheswa, P. (2015). *The role of employer branding in talent attraction and talent retention in South Africa*. Johannesburg: University of Witwatersrand. Unpublished paper. Retrieved from <http://hdl.handle.net/10539>
- Khilji, S. E., Tarique, I., & Schuler, R. S. (2015). Incorporating the macro view in global talent management. *Human Resource Management Review*, 25, 236–248.
- King, K. A., & Vaiman, V. (2019). Enabling effective talent management through a macro contingent approach: A framework for research and practice. *BRQ Business Research Quarterly*, 22(3), 194–206.
- Knies, E., Boselie, P., Gould-Williams, J., & Vandenebelle, W. (2018). Strategic human resource management and public sector performance: Context matters. *The International Journal of Human Resource Management*, 1–13. <https://doi.org/10.1080/09585192.2017.1407088>
- Kotze, M. (2018). How job resources and personal resources influence work engagement and burnout. *African Journal of Economic and Management Studies*, 9(2), 148–164. <https://doi.org/10.1108/AJEMS-05-2017-0096>
- Kumar, S., & Jain, A. (2012). Essence and consequences of stress in the workplace. *Journal of Organisation & Human Behaviour*, 1(3), 1–11.
- Kwaeng, N., Barkhuizen, E.N., & Du Plessis, Y. (2018). Exploring factors affecting talent retention in a selected state owned enterprise in the North West Province. Paper presented at the 12th International Business Conference, Mauritius.
- Lee, G., & Jimenez, B. (2010). Does performance management affect job turnover intention in the federal government. *The American Review of Public Administration*, 41(2), 168–184. <https://doi.org/10.1177/0275074010368991>
- Lesenyeho, D.L. (2017). Talent management of early career academics in South African higher education institution [Unpublished Doctoral Thesis]. North-West University.
- Lewis, A., & Sequeira, A. (2012). Effectiveness of employee retention strategies in industry. *SSRN Electronic Journal*, 1–19. <https://doi.org/10.2139/ssrn.2167719>
- Lockwood, N.R. (2006). Talent management: Driver for organizational success HR content program. *SHRM Research Quarterly*, 51(6), 1–11.
- Luna-Arcas, R., & Morley, M. (2015). Talent management, talent mindset competency and job performance: The mediating role of job satisfaction. *European Journal of International Management*, 9(1), 28–51. <https://doi.org/10.1504/EJIM.2015.066670>

- Magolego, H., Barkhuizen, E., & Lesenyeho, D. (2013). Talent management and job performance: The mediating role of job satisfaction. *30th Pan Pacific Conference* (pp. 132–235). 3–6 June. Johannesburg: PPBA.
- Mandhanya, Y. (2015). A study on talent retention practices: Fostering employee retention. *Pacific Business Review International*, 7(9), 40–49.
- Marcus, A., & Gopinath, N. (2017). Impact of the demographic variables on the employee engagement – An analysis. *ICTACT Journal on Management Studies*, 3(2), 502–510. <https://doi.org/10.21917/ijms.2017.0068>
- Masale, R. (2020). *Exploring the antecedents and consequences of a talent culture for government institutions in Botswana*. Vol. Unpublished doctoral thesis. Mmabatho: Department of Industrial Psychology.
- Masri, N., & Suliman, A. (2019). Talent management, employee recognition and performance in research institution. *Studies in Business and Economics*, 14(1), 127–140. <https://doi.org/10.2478/sbe-2019-0010>
- Maurya, K., & Agarwal, M. (2018). Organisational talent management and perceived employer branding. *International Journal of Organizational Analysis*, 26, 2, 312–330.
- Mathafena, V. (2015). *A talent management framework for the private sector*. Bloemfontein: University of Free State, Unpublished thesis.
- Matobako, M., & Barkhuizen, E.N. (2017). Leadership Talent Mindset as a predictor of the motivation and retention of junior correctional officials. Proceedings of the 34th International Academic Conference, Florence, Italy. (pp. 17–33). ISBN 978-80-87927-43-4.
- McCaffry, R., & Sexton, L. (2018). Improving government performance through effective talent management. Unpublished research report, Vol. 4, Association of International Certified Professional Accountants, Durham, NC, US.
- Meyers, M., Van Woerkom, M., & Dries, N. (2013). Talent – Innate or acquired? Theoretical considerations and their implications for talent management. *Human Resource Management Review*, 23(4), 305–321. <https://doi.org/10.1016/j.hrmr.2013.05.003>
- Mokgobjwa, D.M. (2019). The development of a talent risk management tool for academic staff in South African higher education institutions [Unpublished Doctoral Thesis]. North West University.
- Molefi, M. (2015). *A structured model for talent management for professional nurses in the North-West Province*. PhD Industrial Psychology, North-West University. Mmabatho: Department of Industrial Psychology, North-West University.
- Muslim, S., Haron, S., & Hashim, G. (2012). Talent pool management, succession planning or replacement planning? Finding a fit for public universities: The initial finding. *Proceedings of international conference on public policy and social science, UTM Melaka Malaysia*. November 2012, pp. 1–9, Singapore: Springer, ISBN 978-981-287-076-6.
- Mzezewa, T. (2019). *State of staff turnover & retention in municipalities of South Africa*. Unpublished research report. Johannesburg: LGSETA.
- Nulty, D.D. (2008). The adequacy of response rates to online and paper surveys: What can be done? *Assessment & Evaluation in Higher Education*, 33(3), 301–314. <https://doi.org/10.1080/02602930701293231>
- Ogony, S., & Majola, B. (2018). Factors causing employee turnover in the public service, South Africa. *Journal of Management & Administration*, 1(1), 77–100.
- Paadi, K., Barkhuizen, E., & Swanepoel, S. (2018). *Exploring the antecedents and outcomes of a graduate internship programme*. Mmabatho: SAAPAM.
- Pang, K., & Lu, C. (2018). Organizational motivation, employee job satisfaction and organizational performance: An empirical study of container shipping companies in Taiwan. *Maritime Business Review*, 3(1), 36–52. <https://doi.org/10.1108/MABR-03-2018-0007>
- Pike, K. (2014). *New employee onboarding programs and person-organization fit: An examination of socialization tactics*. Rhode Island: Schmidt Labor Research Center. Retrieved from http://digitalcommons.uri.edu/lrc_paper_series/24
- Pregnolato, M., Bussin, M., & Schlechter, A. (2017). Total rewards that retain: A study of demographic preferences. *SA Journal of Human Resource Management*, 15(1), 1–10. <https://doi.org/10.4102/sajhrm.v15.804>
- Rabbi, F., Ahad, N., Kousar, T., & Ali, T. (2015). Talent management as a source of competitive advantage. *Journal of Asian Business Strategy*, 5(9), 208–214.
- Ramogale, M. (2016). *The relationship between organisational commitment, job satisfaction and turnover intention in the department of rural development and land reform, Limpopo Province* (pp. 1–165). Unpublished dissertation. Polokwane: University of Limpopo.
- Roman, K. (2011). *Assessing talent management within the Western Cape Provincial Treasury (WCPT)*. Master of Public Administration dissertation. Stellenbosch: University of Stellenbosch.
- Rudhumbu, N., Chikari, G., Svtwa, D., & Lukusa, J. (2014). Use of employer branding as a tool for attracting and retaining talent: Evidence from Private Higher Education Institutions (PHEIs) in Botswana. *Journal of Education and Practice*, 5(28), 61–71.
- Sadeli, J. (2012). The influence of leadership, talent management, organizational culture and organizational support on employee engagement. *International Research Journal of Business Studies*, 5(3), 1–21. <https://doi.org/10.21632/irjbs.5.3.30-50>
- Saurombe, M.D. (2015). Talent Management as a predictor of positive work-related outcomes for academic staff in a Higher Education Institution [Unpublished Masters Dissertation]. North-West University.
- Saurombe, M., Barkhuizen, N., & Schutte, N. (2017). Exploring the determinants of a talent value proposition for sustainable higher education institutions: A conceptual paper. *Winter London Business Research Conference*. London: Proceedings of 2017 Winter London Business Research Conference.
- Saurombe, M., Barkhuizen, N., & Schutte, N. (2017). Exploring the determinants of a talent value proposition for sustainable higher education institutions: A conceptual paper. Paper presented at the *Winter London Business Research Conference* 11–12 November, London UK.
- Schlechter, A., Hung, A., & Bussin, M. (2014). Understanding talent attraction: The influence of financial rewards elements on perceived job attractiveness. *SA Journal of Human Resource Management*, 12(1), 1–13. <https://doi.org/10.4102/sajhrm.v12i1.647>
- Schutte, N.E. & Barkhuizen, E.N. (2016). The development of a talent life cycle for government institutions. Paper presented at 34th International Business Research Conference, London, UK.
- Senona, M.E. (2017). The relationship between talent management and job satisfaction among teachers in Limpopo Province: A case of Maleboho East Circuit [Unpublished Masters Dissertation]. Southern Business School.
- Shipena, D. (2019). *A study of talent management practices in the Namibian Police Force*. Unpublished Masters dissertation. Krugersdorp: Southern Business School.
- Sila, E., & Širok, K. (2018). The importance of employee satisfaction: A case study of a transportation and logistics service company. *Management*, 13(2), 111–136. <https://doi.org/10.26493/1854-4231.13.111-136>
- Sparrow, P., Hird, M., & Cooper, C. (2015). Strategic talent management (chapter 2). In C. Cooper (Ed.), *Do we need HR? Repositioning people management for success*. London: Palgrave Macmillan.
- SPSS Inc. (2019). *SPSS for Windows*. Chicago, IL: SPSS Inc.
- Surji, K. (2013). The negative effect and consequences of employee turnover and retention on the organization and its staff. *European Journal of Business and Management*, 5(25), 52–65.
- Theron, M., Barkhuizen, N., & Du Plessis, Y. (2014). Managing the academic talent void: Investigating factors in academic turnover and retention in South Africa. *SA Journal of Industrial Psychology*, 40(1), 14. <https://doi.org/10.4102/sajip.v40i1.1117>
- Tladi, K. (2016). *Leadership mindset: The existence or absence of leadership styles that encourages talent management and its practices and how this affects both career orientation and burnout*. Mmabatho: Department of Industrial Psychology, North-West University.
- Turgut, H., Bekmezci, M., & Ateş, M. (2017). The moderating role of job satisfaction on the relationship between servant leadership and turnover intention. *Journal of Business Research*, 9(2), 300–314. <https://doi.org/10.20491/isarder.2017.273>
- Uğural, M.N., Giritli, H., & Urbański, M. (2020). Determinants of the turnover intention of construction professionals: A mediation analysis. *Sustainability*, 12(1), 1–12. <https://doi.org/10.3390/su12030954>
- Van Dyk, H. (2009). Administration vs. talent: The administrative context for talent management. *Journal of Public Administration*, 44(3.1), 520–530.
- Van Dyk, J., Coetzee, M., & Takawira, N. (2013). Satisfaction with retention factors as predictors of the job embeddedness of medical and information technology services staff. *Southern African Business Review*, 17(1), 57–74. <https://doi.org/10.4102/sajhrm.v10i2.433>
- Visser, K., Barkhuizen, N., & Schutte, N. (2018). Exploring the role of a work integrated learning programme in facilitating sustainable graduate employment in the transport industry: A conceptual paper. *Organisational Studies and Innovation Review*, 3(3), 65–75.
- Vural, Y., Vardarlier, P., & Aykir, A. (2012). The effects of using talent management with performance evaluation system over employee commitment. *Procedia – Social and Behavioral Sciences*, 58(1), 340–349. <https://doi.org/10.1016/j.sbspro.2012.09.1009>
- Wiblen, S., & McDonnell, A. (2020). Connecting ‘talent’ meanings and multi-level context: A discursive approach. *The International Journal of Human Resource Management*, 31(4), 474–510. <https://doi.org/10.1080/09585192.2019.1629988>
- Wilska, E. (2014). Employer branding as an effective tool in acquiring talents. *Journal of Positive Management*, 5(3), 46–54. <https://doi.org/10.12775/JPM.2014.019>
- WorldatWork. (2020, March 25). *World at work*. Retrieved from https://www.worldatwork.org/docs/marketing/2020_BRO_TRModel_J16197_FNL.pdf
- Yapp, M. (2009). Measuring the ROI of talent management. *Strategic HR Review*, 8(4), 5–10. <https://doi.org/10.1108/14754390910963856>
- Zaharee, M., Lipkie, T., Mehlman, S.K., & Neylon, S.K. (2018). Recruitment and Retention of Early-Career Technical Talent. *Research-Technology Management*, 61(5), 51–61.

Title/Author	The role of high-performance work system and human capital in enhancing job performance / Imran, R., Atiya, T.M.S.
Source	<i>World Journal of Entrepreneurship, Management and Sustainable Development</i> Volume 16 Issue 3 (June 2020) Pages 195-206 https://doi.org/10.1108/WJEMSD-09-2019-0074 (Database: Emerald Insight)

The role of high-performance work system and human capital in enhancing job performance

High-performance work system and job performance

Rabia Imran and Tariq Mohammed Salih Atiya

195

*Department of Management, College of Commerce and Business Administration,
Dhofar University, Salalah, Oman*

Received 26 September 2019
Revised 12 February 2020
Accepted 23 February 2020

Abstract

Purpose – The aim of the current research is to examine how job performance is affected by high-performance work system (HPWS) and human capital. Furthermore, the research focuses on exploring the mediating role played by human capital in HPWS and job performance relationship.

Design/methodology/approach – Data was collected from service sector employees. A sample of 400 respondents was selected from the chosen population using purposive sampling.

Findings – The results reveal that HPWS and human capital positively and significantly affect job performance. The impact of HPWS in creating human capital was also supported. The research also hypothesized mediating role played by human capital in HPWS and job performance relationship, and it was partially supported.

Originality/value – Recent literature is evident of the relationship between performance and HPWS; however, the mechanism between these variables is still unclear (Demirbag *et al.*, 2014). There is a need of identifying the factors that strengthen this relationship. The current research is an attempt to fill this gap by examining the effect of HPWS on job performance. Furthermore, it explores the role played by human capital in strengthening the connection of HPWS and job performance.

Keywords Human capital, Job performance, High-performance work system (HPWS)

Paper type Research paper

Introduction

High-performance work system (HPWS) is considered as an essential factor influencing the performance-related outcomes. Organizations invest heavily in developing such systems in order to boost performance (Combs *et al.*, 2006). It is defined as a system that is integrated and bundles different HR practices (Evans and Davis, 2005). These HR practices should be separate but interconnected and should act as a system (Appelbaum *et al.*, 2000; Boxall and Macky, 2009). The system developed by bundling of HR practices has an important effect on performance (Raineri, 2017). A lot of researchers recently are focusing on the performance outcomes and HPWS relationship (Imran *et al.*, 2015; Imran and Shahab, 2018).

Recent literature is evident of the relationship between HPWS and performance; however, the mechanism between these variables is still unclear (Demirbag *et al.*, 2014). There is a need of identifying the factors that strengthen this relationship. The bundle of HR practices cannot do wonders alone. In order to attain performance outcomes, the contributions made by people selected, trained and developed through such practices are very important. Improved performance is of extreme importance for the organizations; thus, they are redesigning their strategies to develop human resources (Harpan and Draghici, 2014). Human capital approach assumes that organizations adopt HPWS, which helps in human capital creation, thus resulting in increased performance (Wright *et al.*, 2001). The research in this area is still scarce, and a lot of exploration needs to be done to identify this relationship (Hsu *et al.*, 2007; Jiang *et al.*, 2012; Raineri, 2017). Majority of research in this area is in Western context ignoring the Middle Eastern context that has a lot of potential for growth. Researchers have started focusing on the gulf area that is composed of six member states including Saudi Arabia, UAE, Oman, Bahrain, Kuwait and Qatar. However, only few empirical research



studies are available in the area of HPWS and human capital, thus creating a gap to be researched (Fadhil, 2019; Imran and Al-Ansi, 2019; Imran and Shahab, 2018; Qureshi, 2019). The current research is an attempt to fill this gap by examining the effect of HPWS on job performance. Furthermore, it explores the role played by human capital in strengthening the connection of HPWS and job performance. The research aims at finding the answers to following research questions;

- (1) To what extent high-performance work system affect job performance in service sector of Oman?
- (2) What is the role played by human capital in the relationship between high-performance work system and job performance?

Literature review

High-performance work systems (HPWS)

The idea of having HPWSs originated from and had its roots in the last century during US industrial revolution (Barnes, 2001 as cited in Al Anzi and Al Abbadi, 2011). During this period, it was realized that the level of global competition was intense and there is need to rethink about reliable processes. On the other hand, it is argued that HPWS has its roots in HR practices with the Japanese systems (Chaudhuri, 2009). Despite these different perspectives, the main idea of HPWS is to have an effective organization that has involved, committed and empowered employees (Tomer, 2001).

The concept of high performance of organizations is a relatively subjective concept that largely depends upon the mission and circumstances of the organization. It is described as a system comprised of different managerial practices combined together to build an environment where employees develop feelings of commitment and responsibility (Brown, 2006). HPWS is also defined as HR practices bundled together to be able to attract employees, retain and motivate them (Messer *et al.*, 2010). The practices may include staffing practices, training and development efforts, performance appraisal, job rotation and employee empowerment (Jiang *et al.*, 2012; Lepak *et al.*, 2006).

HPWS has been conceptualized differently by different researchers. Kirkman and Rosen (1999) conceptualized such system as a bundle of five practices such as self-managing work teams, employee involvement practices, organizational learning procedures, integrated production technologies and total quality management. Another study by Yazid *et al.* (2017) only combined employee involvement practices and organizational learning practices to form high-performance systems. Paracha *et al.* (2014) on the other hand identified practices including selecting employees, training and development, appraising performance, planning their careers and an appropriate compensation for them to be bundled together to conceptualize HPWS. Hsu *et al.* (2007) have measured HPWS in a comprehensive way. They identified the bundle to be composed of selective recruitment, training and development, empowerment, performance-based pay, competitive pay and job rotation. This conceptualization of HPWS would be used in the current research.

Job performance

One of the most researched topics in the area of management is performance. It is the central concept for academicians and practitioners and is interpreted differently (Lee *et al.*, 2019). It is the goal or an underlying objective of any business activity. Market competition is one of the reasons that enhanced the importance of performance. Any activity in the organization makes sense only when it contributes to organizational performance (DuBois *et al.*, 2019; Richard *et al.*, 2009). This is the only factor that is widely believed as a tool of success and comparison among rival firms (Richard *et al.*, 2009). It is described as a combination of tasks

and behaviors deemed important to accomplish a job (Ingold *et al.*, 2015). In order to gain high-performance outcomes, organizations depend on the behaviors exhibited by their employees (Huselid, 1995).

Employees are the source of competitive advantage as they have distinctive behaviors and skills. The resource-based view links company resources including human resources as a determinant of competitive advantage. Nowadays employees are the only resource that can differentiate one company from another. If organizations are able to develop specific capabilities of their employees, which are not easily imitated, then they gain competitive advantage over other organizations (Fenech *et al.*, 2019; Wright *et al.*, 1994). Past literature is evident of a number of factors affecting performance; however, HR practices are claimed to be one of the most powerful factors in this regard (Guest, 2011; Marescaux *et al.*, 2013).

Past literature reveals a positive direction of performance and HPWS relationship. However, the relationship is not that simple. A lot of processes translate the impact of HPWS on performance outcomes, and there is still a need to explore them in detail (Guest, 2011; Jiang *et al.*, 2012; Boxall *et al.*, 2016). There are a number of factors that play their role in translating HPWS in performance, and development of human capital is one of them (Messersmith and Guthrie, 2010; Takeuchi *et al.*, 2007).

Human capital

The current state of competition is forcing organizations to maintain their competitive advantage in order to sustain. Organizations are focusing on human capital development in order to cope with this situation. The resource-based view suggests human capital as a way to maximize performance by utilizing existing resources to develop competitive advantage over other organizations (Grant, 1996; Teece *et al.*, 1997; Welch and Nayak, 1992). It has become as a most important tool in the hand of organizations. The main reason behind that is digitalization and evolving toward knowledge-based economies (Faggian *et al.*, 2019; Fenech *et al.*, 2019; Gennaioli *et al.*, 2013). The importance of developing human capital then becomes inevitable (Faggian *et al.*, 2019). Human capital is described as the capability, proficiency and comprehension possessed by individuals within an organization that can lead to create a competitive edge (Hsu *et al.*, 2007).

The concept of human capital is built on a belief that people's contribution is essential for value addition resulting in organizational performance. Moreover, there is a possibility of managing their contribution for better outcomes (Baron, 2011). The concept of human capital has many conceptualizations, and it is categorized differently in different academic fields. First perspective conceptualizes human capital on individual aspects. It means that human capital is linked with knowledge, education, competencies, behavior and skills (Beach, 2009; Youndt *et al.*, 2004). The second perspective stresses on educational activities such as formal education, professional and vocational certificates and so on to enhance knowledge and skills (De la Fuente and Ciccone, 2002). The third perspective links human capital to production. It can be described as an investment in people to increase their productivity. The investment can be in the form of education and training that enhance skills and competencies to increase productivity (Frank and Bemanke, 2007; Sheffin, 2003). However, a recent measurement of human capital by Hsu *et al.* (2007) is consistent with the first perspective and has competence and commitment aspects of individuals as important ingredients.

Development of human capital requires favorable organizational conditions. A lot of contextual factors play their role in development of required human capital for the organizations. In order to build human capital, organizations need to align their practices with their competitive strategy (Pahuja and Dalal, 2012). Having the right talent in the organization is now becoming very important. The only way to survive in the current world is to build competitive advantage, and it comes through developing the human resources

(Normile, 2018; Saddozai, *et al.*, 2017). Strategic attention is required to bring into line human capabilities with work requirements. Specific HR practices should be adopted to develop relevant human capital that is not easily replicated (Li *et al.*, 2019). Organizations need to develop HR systems that contribute in developing a pool of high-potential and high-performing incumbents.

Organizations need to scan their competitive environment and then customize their system accordingly (Becker *et al.*, 2001). Human resource policies are considered very important in this regard. The right mix of HR policies and procedure can aid human capital development, thus leading to performance. The challenge is to develop a bond between motivated and talented employees and particular policies to achieve organizational objectives (Buller and McEvoy, 2012). A customized bundle of these practices can create a HPWS, and development and implementation of an effective HPWS can lead to human capital development (Hsu *et al.*, 2007; Schiemann, 2006). The HPWS plays an important role in enhancing competitive performance through developing and training organization's human resources (Messersmith and Guthrie, 2010; Takeuchi *et al.*, 2007).

On the basis of earlier discussion, following framework can be developed (see Figure 1).

Following hypotheses are formulated for current research:

- H1. HPWS positively and significantly affects human capital.
- H2. HPWS positively and significantly affects job performance.
- H3. Human capital positively and significantly affects job performance.
- H4. Human capital plays a mediating role in HPWS and job performance relationship.

Methods

The current research selected organizations in service sector of Sultanate of Oman as their population. Purposive sampling was used to select 400 respondents working in these organizations. The service sector is among the fast-growing sectors in Sultanate of Oman. The vision 2040 of Oman focuses on routing the country toward a diversified economy due to the decreasing oil prices. The focus of the government is on nonoil activities, thus development of service sector takes priority. The majority of country's workforce is composed of expatriates, and the local human resource is present but still needs development. Many programs and activities are focused on developing the human capital in the service sector. For this purpose, the need to identify an appropriate set of HR practices to develop a HPWS is essential. The sample consisted of respondents from service sector of Oman. The service sector for this research was composed of organizations from six subsectors such as tourism and hospitality, banking, sales, health, education and telecommunication. The data was collected through personally administered questionnaires, and Google drive was used to collect data from different parts of Oman.

The questionnaire was designed adapting items from existing scales. The instrument that was in English language was translated into Arabic language. In order to meet the conditions

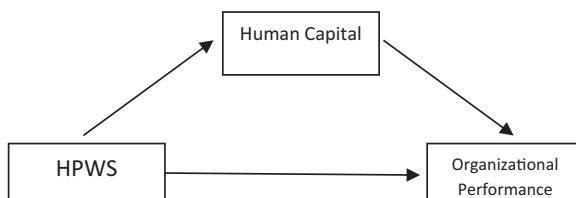


Figure 1.
Conceptual framework

of face and content validity, five academicians and practitioners were consulted. The process of data collection was initiated by distributing 700 questionnaires. To obtain the data the respondents were approached at their workplaces and were briefed about the purpose of the study and ensured confidentiality of provided information. They were asked to participate on voluntary basis. 500 questionnaires out of 700 distributed were received. However, only 400 were found complete in all aspect and useable for analysis.

Measures

A 25-item scale developed by Hsu *et al.* (2007) was adopted to measure the concept of HPWS. HPWS includes empowerment, recruitment, performance-based pay, job rotation, training and development and competition-based pay. The concept of job performance was measured by two dimensions: in-role behavior and task performance. A five-item scale developed by Williams and Anderson (1991) was adopted to measure in-role behavior and five-item scale by Bott *et al.* (2003) to measure task performance. A six-item scale developed by Hsu *et al.* (2007) was adopted to measure the concept of human capital. The response scale was Likert-type having a range from 1 as strongly disagree to 5 as strongly agree.

Results

The analysis was conducted on a sample of 400 respondents from service sector of Oman. The sample consisted of 22% respondents from tourism and hospitality, 20% from banking sector, 16% from education, 15% from telecom, 14% from health and 13% from sales subsector of Omani service sector. Moreover, it consisted of 60% expatriates and 40% Omanis out of which 69% were males and 31% females. 49% of the respondents were between 31 and 40 years of age, 20% less than 30 years and 23% above 40 years. The majority of them had diploma (36%) and bachelor's degree (31%). 47% of the respondents were from middle level of management, 35% from line and 18% from top management level. 45% of them had experience between six and ten years, 35 % had less than five years and 20% above ten years of experience.

This section is composed of the preliminary analysis including descriptive statistics and correlation matrix along with confirmatory factor analysis (CFA) displayed in Table 1. The table reveals the mean values ranges from 3.62 to 3.29 where standard deviation lies between 0.730 and 0.610. All the variables were positively and significantly correlated to each other. Figure 2 reveals the results of CFA. The figure suggests that the measurement model explained good fit indices as all the values are above the acceptable range (Hu and Bentler, 1999).

Common method bias

The problem of common method bias is usually with the self-reported data. Harman's one-factor test is used as a remedial measure to inspect the occurrence of this bias (Bish *et al.*, 2015). The current research was conducted on the scale having 41 items. When it was limited to a single factor, then it contained total variance of 43.085% as shown in Table 2. This

	Scales	Mean	SD	1	2	3
1	Job performance	3.29	0.610	—		
2	HPWS	3.30	0.730	0.599*	—	
3	Human capital	3.62	0.627	0.672*	0.622*	—

Note(s): * $p < 0.001$

Table 1.
Descriptive statistics
and correlation
matrix ($N = 400$)

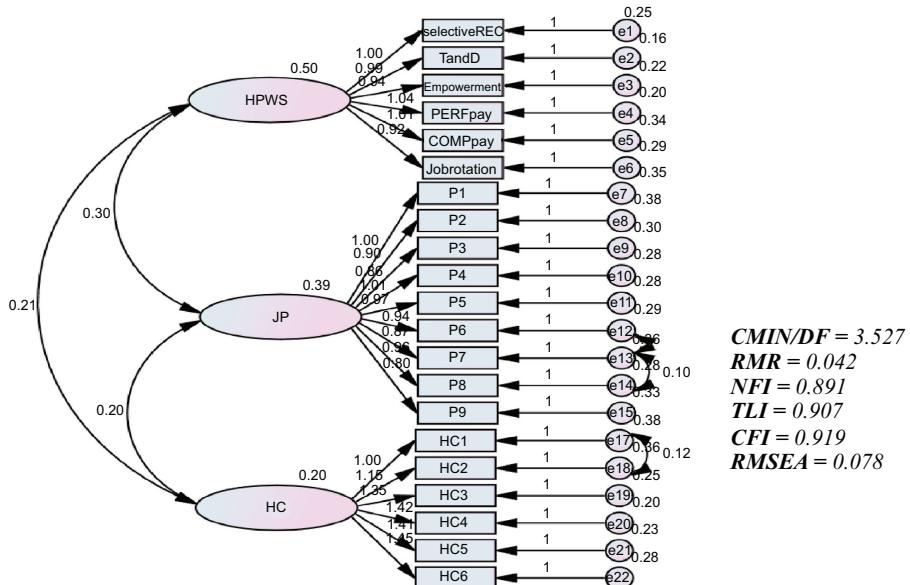


Figure 2.
CFA
measurement model

Component	Total	Initial eigen values		Extraction sums of squared loadings		
		% of variance	Cumulative %	Total	% of variance	Cumulative %
1	17.665	43.085	43.085	17.665	43.085	43.085
2	3.309	8.071	51.155			
3	1.733	4.228	55.384			

39	0.167	0.407	99.317
40	0.149	0.364	99.680
41	0.131	0.320	100.000

Note(s): Extraction Method: Principal Component Analysis

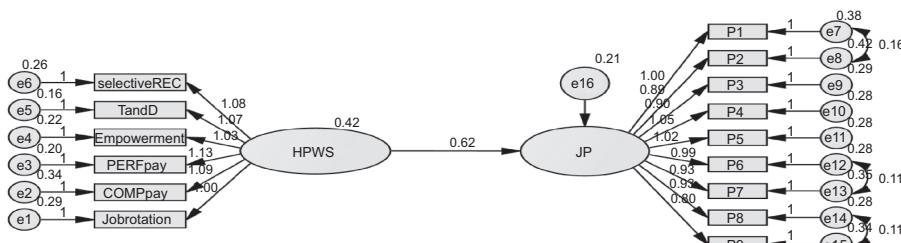
Table 2.
One-factor
model (CMV)

variance is less than the assumed threshold point (<50%). Hence, in the current study, there was no evidence of common method bias.

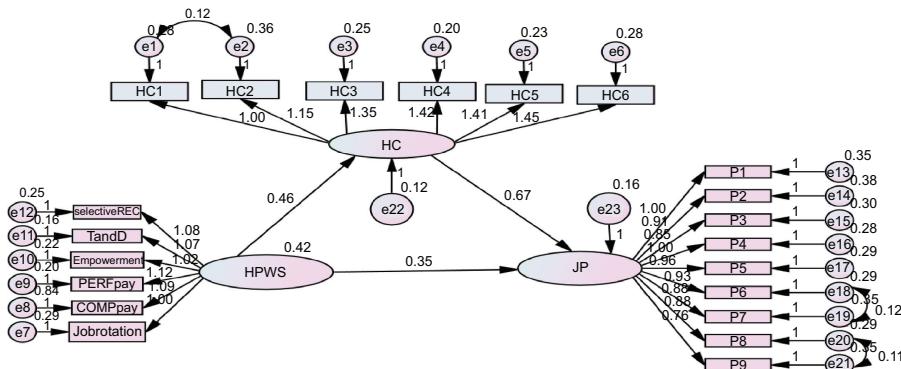
Evaluation of the model

In order to test structural equation modeling, Preacher and Hayes (2008) suggested to use path analysis. Two models are tested in the present study for examining mediation. Direct link between HPWS and job performance is examined in Model 1 shown in Figure 3, and the indirect effect through human capital is examined in Model 2 shown in Figure 4. Table 3 describes fit indices for both the models. As per the results almost all the indices are above fit threshold level (Hair *et al.*, 2006).

Table 4 shows the summary of direct and indirect effects tested in the study. It summarizes all the analysis done earlier. Analysis of the direct path job performance

Figure 3.
Model 1

Note(s): JP = Job performance, HPWS = High Performance Work System *** $p < 0.001$



Note(s): HC = Human Capital, JP = Job performance, HPWS = High Performance Work System, *** $p < 0.001$

Figure 4.
Model 2

Model	CMIN/DF	GFI	AGFI	NFI	CFI	RMR	RMSEA
Model 1	3.326	0.917	0.884	0.931	0.950	0.040	0.074
Model 2	3.488	0.868	0.834	0.892	0.920	0.042	0.077

Table 3.
Fit indices of the model

Hypothesis	Direct effects	Indirect effect	Total effect	Ratio of indirect effect to total effect (%)	Results
HPWS → JP	0.62***				Supported
HPWS → HC	0.46***				Supported
HC → JP	0.67***				Supported
HPWS → HC → JP	0.35**	0.27***	0.62**	43.54	Partial mediation

Note(s): HC = Human capital, JP = Job performance, HPWS = High-performance work system, *** $p < 0.001$

Table 4.
Direct and indirect effects

affects human capital (path coefficient = 0.46, $p < 0.001$) and human capital has a positive effect on job performance (path coefficient = 0.67, $p < 0.001$), supporting second and third hypotheses. The effect of HPWS on performance through human capital had path coefficient of 0.35, $p < 0.001$ with a ratio of indirect effect to total effect as 43.54%. The fourth hypothesis was partially supported.

Discussion

The aim of the current research was to identify the impact of HPWS on job performance through human capital. HPWS is considered a bundle of tools that can create a brand value for the organization in the eyes of employees. Findings present considerable evidence to prove that HPWS has a significant effect on job performance. HPWS also helps in development and retention of human capital that in turn has an effect on job performance. The results of this research are aligned with past researches. HPWS is considered as one of the most important factors affecting the performance outcomes. Recently this link is getting considerable attention (Boxall, 2013; Guest, 2011; Marescaux *et al.*, 2013; Monks *et al.*, 2013). Researches exploring HPWS show that such practices mold employee behaviors in a manner that required performance outcomes to be achieved (Lepak *et al.*, 2006; Jiang *et al.*, 2012). Individual dimensions of HPWS also positively affect the job performance (Imran *et al.*, 2015; Imran and Shahab, 2018).

The bundle of HR practices facilitates the development of competitive advantage. The bundle itself is not a direct tool rather the advantages of this tool reveal in the form of satisfied and developed human resource. HPWS creates human capital (Hsu *et al.*, 2007; Becker *et al.*, 2001; Schiemann, 2006). HPWS is considered as a strategy that is helpful in human capital development (Danford *et al.*, 2004; Drummond and Stone, 2007; Jiang *et al.*, 2012). The organizations adopt human capital approach to achieve higher levels of performance (Wright *et al.*, 2001). The organizations focusing on the development of human capital result in higher performance of their employees (Chadwick, 2017). The organizations adopt appropriate HPWS to develop human capital that results in higher level of performance (Subramony *et al.*, 2018; Zeb *et al.*, 2018).

Conclusion

The current research has a special contribution to the existing literature of HPWS by sampling service sector firms in Oman. The research raised a number of interesting issues including the role of HPWS in creating human capital and introducing human capital as a mediator between HPWS and performance relationship. The findings provide evidence that HPWS and human capital have positive and significant effect on job performance. The impact of HPWS in creating human capital was also supported. However, the hypothesized role of human capital as a mediator in HPWS and job performance relationship was partially supported.

Limitations and future research

Despite its novelty the research is subject to certain limitations that need to be highlighted. First, the research had a cross-sectional study design; however, this kind of relationship requires longitudinal study. The research contributes through detecting a mediation path of human capital in HPWS–performance relationship; however, its strength and exact causal direction require more in-depth research. Future studies should conduct this research in a longitudinal design. Second limitation of this research is that the data is collected from single source that might not give the exact picture of the said relationship. Future researches should have a dyadic approach for similar kind of study. Finally, the research did not study the effect of different subsectors in the service sector on HPWS–performance relationship. The organizations need to adapt the HPWS according to the local as well as their industrial context and market environment for development of human capital.

The culture difference, industry norms, legal system and prevailing policies can affect the said relationship. Future research should not only focus on these factors but also do a sector-wise comparison in order to reach on a consensus as to which HR practices can form a bundle that is suitable for creating HPWS in service sector specifically in Omani context.

High-performance work system and job performance

203

Practical implications

The findings of this research have certain implications for the researchers and managers working in service sector organizations in Oman. From the theoretical perspective it gives an understanding of HPWS and performance relationship. Moreover, it also highlights the importance of human capital in HPWS and performance relationship. This research is one of the pioneering researches in this area opening new avenues of further exploration.

From practical perspective the organizations are advised to invest in customized set of HR activities appropriate to their organizational setup. Furthermore, the organizations should develop human capital for gaining competitive advantage and higher performance. The organizations should develop relevant bundle of HR practices for better employee development. The HR managers should invest in procedures for human capital development and increased performance.

References

- Al Anzi, S.A. and Al Abbadi, H.F. (2011), "High performance work systems and the performance of public industrial enterprise", *Journal of Economic and Administrative Sciences*, Vol. 15 No. 54, Faculty of Management and Economics–University of Baghdad.
- Appelbaum, E., Bailey, T., Berg, P. and Kalleberg, A. (2000), *Manufacturing Advantage: Why High Performance Work Systems Pay off*, ILR Press, Ithaca, NY.
- Barnes, W.F. (2001), "The challenge of implementing and sustaining high performance work systems in the United States: an evolutionary analysis of IN Tek and Kote".
- Baron, A. (2011), "Measuring human capital", *Strategic HR Review*, Vol. 10 No. 2, pp. 30-35.
- Beach, J.M. (2009), "A critique of human capital formation in the US and the economic returns to sub-baccalaureate credentials", *Educational Studies*, Vol. 45 No. 1, pp. 24-38.
- Becker, B.E., Huselid, M.A., Huselid, M.A. and Ulrich, D. (2001), *The HR Scorecard: Linking People, Strategy, and Performance*. Harvard Business Press.
- Bish, A., Newton, C. and Johnston, K. (2015), "Leader vision and diffusion of HR policy during change", *Journal of Organizational Change Management*, Vol. 28 No. 4, pp. 529-545.
- Bott, J.P., Svyantek, D.J., Goodman, S.A. and Bernal, D.S. (2003), "Expanding the performance domain: who says nice guys finish last?", *International Journal of Organizational Analysis*, Vol. 11, pp. 137-152. doi:10.1108/ej028967.
- Boxall, P. (2013), "Mutuality in the management of human resources: assessing the quality of alignment in employment relationships", *Human Resource Management Journal*, Vol. 23 No. 1, pp. 3-17.
- Boxall, P. and Macky, K. (2009), "Research and theory on high-performance work systems: progressing the high-involvement stream", *Human Resource Management Journal*, Vol. 19 No. 1, pp. 3-23.
- Boxall, P., Guthrie, J.P. and Paauwe, J. (2016), "Editorial introduction: progressing our understanding of the mediating variables linking HRM, employee well-being and organizational performance", *Human Resource Management Journal*, Vol. 26 No. 2, pp. 103-111.
- Brown, E.D. (2006), "Implementing a high performance work system' Aligning Technology, Strategy", People & Projects, available at: <http://ericbrown.com> Copyright, 2006-2007-Eric.D. Brown.
- Buller, P.F. and McEvoy, G.M. (2012), "Strategy, human resource management and performance: sharpening line of sight", *Human Resource Management Review*, Vol. 22 No. 1, pp. 43-56.

- Chadwick, C. (2017), "Toward a more comprehensive model of firms' human capital rents", *Academy of Management Review*, Vol. 42 No. 3, pp. 499-519.
- Chaudhuri, K. (2009), "A discussion on HPWS perception and employee behavior", *Global Business and Management Research*, Vol. 1 No. 2, pp. 27-42.
- Combs, J., Liu, Y., Hall, A. and Ketchen, D. (2006), "How much do high-performance work systems matter? A meta-analysis of their effects on organizational performance", *Personnel Psychology*, Vol. 59 No. 3, pp. 501-28.
- Danford, A., Richardson, M., Stewart, P., Tailby, S. and Upchurch, M. (2004), "High performance work systems and workplace partnership: a case study of aerospace workers", *New Technology, Work and Employment*, Vol. 19 No. 1, pp. 14-29.
- De la Fuente, A. and Ciccone, A. (2002), *Le capital humain dans une economie mondiale sur la connaissance*, Rapport pour la Commission Europe enne, Brussels.
- Demirbag, M., Collings, D.G., Tatoglu, E., Mellahi, K. and Wood, G. (2014), "High-performance work systems and organizational performance in emerging economies: evidence from MNEs in Turkey", *Management International Review*, Vol. 54 No. 3, pp. 325-359.
- Drummond, I. and Stone, I. (2007), "Exploring the potential of high performance work systems in SMEs", *Employee Relations*, Vol. 29 No. 2, pp. 192-207.
- DuBois, R., Bruce, K., Reeves, M., Vandelanotte, J. and Yakimakho, O. (2019), "The organizational performance index: a new method for measuring international civil society capacity development outcomes", *Performance Improvement Quarterly*, Vol. 31 No. 4, pp. 381-396.
- Evans, W.R. and Davis, W.D. (2005), "High-performance work systems and organizational performance: the mediating role of internal social structure", *Journal of Management*, Vol. 31 No. 5, pp. 758-775.
- Fadhil, A.S.H. (2019), *Strategic Human Resource Management and Organisational Performance: An Empirical Examination of the Relationship between High-Performance Work Systems and Customer Satisfaction in the Sultanate of Oman*, Doctoral dissertation, Brunel University, London.
- Faggian, A., Modrego, F. and McCann, P. (2019), "Human capital and regional development", in *Handbook of Regional Growth and Development Theories*, Edward Elgar Publishing, UK.
- Fenech, R., Baguant, P. and Ivanov, D. (2019), "The changing role of human resource management in an era of digital transformation", *Journal of Management Information and Decision Sciences*, Vol. 22 No. 2, pp. 166-175.
- Frank, R.H. and Bernanke, B.S. (2007), *Principles of Microeconomics*, 3rd ed., McGrawHill/Irwin, New York.
- Gennaioli, N., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2013), "Human capital and regional development", *Quarterly Journal of Economics*, Vol. 128 No. 1, pp. 105-164.
- Grant, R.M. (1996), "Towards a knowledge-based theory of the firm", *Strategic Management Journal*, Vol. 17, (Winter special issue), pp. 109-122.
- Guest, D.E. (2011), "Human resource management and performance: still searching for some answers", *Human Resource Management Journal*, Vol. 21 No. 1, pp. 3-13.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006), *Multivariate Data Analysis*, Pearson Prentice Hall, Upper Saddle River, NJ.
- Harpan, I. and Draghici, A. (2014), "Debate on the multilevel model of the human capital measurement", *Procedia-Social and Behavioral Sciences*, Vol. 124, pp. 170-177.
- Hsu, I.C., Yeh-Yun Lin, C., Lawler, J.J. and Wu, S.H. (2007), "Toward a model of organizational human capital development: preliminary evidence from Taiwan", *Asia Pacific Business Review*, Vol. 13 No. 2, pp. 251-275.
- Hu, L.T. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives", *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 6 No. 1, pp. 1-55.

- Huselid, M.A. (1995), "The impact of human resource management practices on turnover, productivity, and corporate financial performance", *Academy of Management Journal*, Vol. 38 No. 3, pp. 635-672.
- Imran, R. and Al-Ansi, K.S.H. (2019), "High performance work system, job engagement and innovative work behavior: an exploration in Omani context", *Proceedings of the 2019 2nd International Conference on Computers in Management and Business*, pp. 24-28.
- Imran, R. and Shahab, H. (2018), "High-performance work systems and performance outcomes: an in-depth analysis in an Omani context", *Journal of International Business Research and Practice*, Vol. 12, pp. 71-79, (ISSN) 2379-3740.
- Imran, R., Majeed, M. and Ayub, A. (2015), "Enhancing performance: examining the role played by high performance work system", *International Journal of Economics and Financial Issues*, Vol. 5 No. S1, pp. 379-384.
- Ingold, P.V., Kleimann, M., König, C.J., Melchers, K.G. and Van Iddekinge, C.H. (2015), "Why do situational interviews predict job performance? The role of interviewees' ability to identify criteria", *Journal of Business and Psychology*, Vol. 30 No. 2, pp. 387-398.
- Jiang, K., Lepak, D.P., Hu, J. and Baer, J.C. (2012), "How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms", *Academy of Management Journal*, Vol. 55 No. 6, pp. 1264-1294.
- Kirkman, B. and Rosen, B. (1999), "Beyond self-management. Antecedents and consequences of team empowerment", *Academy of Management Journal*, Vol. 42 No. 1, pp. 58-74.
- Lee, G.R., Lee, S., Malatesta, D. and Fernandez, S. (2019), "Outsourcing and organizational performance: the employee perspective", *The American Review of Public Administration*, Vol. 49 No. 8, pp. 973-986.
- Lepak, D.P., Liao, H., Chung, Y. and Harden, E.E. (2006), "A conceptual review of human resource management systems in strategic human resource management research", *Research in Personnel and Human Resources Management*, Vol. 25 No. 1, pp. 217-271.
- Li, L., Xin, K., Picik, V. and Wei, W. (2019), "MNCs' R&D talent management in China: aligning practices with strategies", *Chinese Management Studies*, Vol. 13 No. 4, pp. 1086-1106.
- Marescaux, E., De Winne, S. and Sels, L. (2013), "HR practices and affective organisational commitment(when) does HR differentiation pay off?", *Human Resource Management Journal*, Vol. 23 No. 4, pp. 329-345.
- Messersmith, J.G. and Guthrie, J.P. (2010), "High performance work systems in emergent organizations: implications for firm performance", *Human Resource Management*, Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management, Vol. 49 No. 2, pp. 241-264.
- Monks, K., Kelly, G., Conway, E., Flood, P., Truss, K. and Hannon, E. (2013), "Understanding how HR systems work: the role of HR philosophy and HR processes", *Human Resource Management Journal*, Vol. 23 No. 4, pp. 379-395.
- Normile, D. (2018), "China takes new steps to lure science talent from abroad", *Science*, Vol. 360 No. 6393, pp. 1053-1054.
- Pahuja, S. and Dalal, R.C. (2012), "Achieving competitive advantage through HR practices: a case study", *Journal of Strategic Human Resource Management*, Vol. 1 No. 2, p. 35.
- Paracha, O.S., Wan Ismail, W.K. and Amin, S.M. (2014), "The concept of HPWS-performance relationship: framework for education industry", *Intangible Capital*, Vol. 10 No. 3, doi: [10.3926/ic.369](https://doi.org/10.3926/ic.369).
- Preacher, K.J. and Hayes, A.F. (2008), "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models", *Behavior Research Methods*, Vol. 40 No. 3, pp. 879-891.
- Qureshi, T.M. (2019), "Talent retention using high performance work systems", *International Journal of Organizational Innovation*, Vol. 12 No. 2, pp. 10-19.

- Raineri, A. (2017), "Linking human resources practices with performance: the simultaneous mediation of collective affective commitment and human capital", *International Journal of Human Resource Management*, Vol. 28 No. 22, pp. 3149-3178.
- Richard, P.J., Devinney, T.M., Yip, G.S. and Johnson, G. (2009), "Measuring organizational performance: towards methodological best practice", *Journal of Management*, Vol. 35 No. 3, pp. 718-804.
- Saddozai, S.K., Hui, P., Akram, U., Khan, M.S. and Memon, S. (2017), "Investigation of talent, talent management, its policies and its impact on working environment", *Chinese Management Studies*, Vol. 11 No. 3, pp. 538-554.
- Schiemann, W.A. (2006), "People equity: a new paradigm for measuring and managing human capital", *People and Strategy*, Vol. 29 No. 1, p. 34.
- Sheffrin, M.S. (2003), *Economics: Principles in Action*, Pearson Prentice Hall, New Jersey.
- Subramony, M., Segers, J., Chadwick, C. and Shyamsunder, A. (2018), "Leadership development practice bundles and organizational performance: the mediating role of human capital and social capital", *Journal of Business Research*, Vol. 83, pp. 120-129.
- Takeuchi, R., Lepak, D.P., Wang, H. and Takeuchi, K. (2007), "An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations", *Journal of Applied Psychology*, Vol. 92 No. 4, p. 1069.
- Teece, D.J., Pisano, G. and Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18, pp. 509-533.
- Tomer, J.F. (2001), "Understanding high-performance work systems: the joint contribution of economics and human resource management", *Journal of Socio-Economics*, Vol. 1 No. 30, pp. 63-73.
- Welch, J.A. and Nayak, P.R. (1992), "Strategic sourcing: a progressive approach to the make-or-buy decision", *The Academy of Management Executive*, Vol. 6 No. 1, pp. 23-31.
- Williams, L.J. and Anderson, S.E. (1991), "Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors", *Journal of Management*, Vol. 17, pp. 601-617. doi:[10.1177/014920639101700305](https://doi.org/10.1177/014920639101700305).
- Wright, P.M., McMahan, G.C. and McWilliams, A. (1994), "Human resources and sustained competitive advantage: a resource-based perspective", *International Journal of Human Resource Management*, Vol. 5 No. 2, pp. 301-326.
- Wright, P.M., Dunford, B.B. and Snell, S.A. (2001), "Human resources and the resource-based view of the firm", *Journal of Management*, Vol. 27 No. 6, pp. 701-721.
- Yazid, Z.N., Yahya, W.K. and Achim, N.A. (2017), "High performance work system (HPWS) and organizational performance: the mediating role of employee attitude", paper presented at, *Intervarsities Multidisciplinary International Conference 2017, Kuantan*.
- Youndt, M.A., Subramiam, M. and Snell, S.A. (2004), "Intellectual capital profiles: an examination of investments and returns", *Journal of Management Studies*, Vol. 41 No. 2, pp. 335-361.
- Zeb, A., Abdullah, N.H. and Javaid, M. (2018), "Impact of human capital management practices on employees' job performance", *Journal of Physics: Conference Series*, Vol. 1049 No. 1, p. 012020, IOP Publishing, UK.

Corresponding author

Rabia Imran can be contacted at: rabiaimran@yahoo.com

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com

About UMT Faculty SDI

Selective Dissemination of Information (SDI) service is a current-awareness service offered by the PSNZ for UMT Faculty Members. The contents selection criteria include current publications (last 5 years), highly cited and most viewed/downloaded documents. The contents with pdf full text from subscribed databases are organized and compiled according to a monthly theme which is determined based on the topics of specified interest.

For more information or further assistance, kindly contact us at 09-6684185/4298 or email to psnz@umt.edu.my/sh_akmal@umt.edu.my

Thank you.

**Perpustakaan Sultanah Nur Zahirah
Universiti Malaysia Terengganu
21030 Kuala Nerus, Terengganu.
Tel. : 09-6684185 (Main Counter)
Fax : 09-6684179
Email : psnz@umt.edu.my**