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Leveraging human assets for MNCs performance: the role of management development, human resource system and employee engagement

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ABSTRACT

This study aims to test the effect of each dimension of Management Development Index, human resource system (HRS) and employee engagement (EE) on firm performance. Additionally, the study attempts to establish if EE is a missing link in the HRS–firm performance relationship. Using disproportionate stratified random sampling, data were collected from a sample of managerial staff of 10 multinational corporations to test the hypotheses. A two-stage structural equation modeling technique was used to test the hypothesized relationships among the constructs. The findings indicate that management development and HRS are associated with firm performance. The study results further support EE as a mediator in the HRS–firm performance relationship, albeit partially.

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human assets; performance; management development; human resource system; employee engagement

Introduction

Leveraging human assets to enhance firm performance has attracted the attention of industry captains, particularly, those of MNCs. In the contemporary global business arena, the talents of human assets have been frequently leverage to gain competitive edge (Sheehan, 2012). Prior studies (e.g. Huselid, Beatty, & Becker, 2005; Messersmith & Guthrie, 2010; Sheehan, 2012) affirm the link between appropriate employee management, in which firms demonstrate "personalized" commitment to employees that is reciprocated through employees positive attitudes and behavior (Hannah & Iverson, 2004, p. 339) and improved performance. Thus, human asset is a differentiator of competitiveness (Berry, 2012; Saha & Gregar, 2012; Wright, Mcmahan, & McWilliams, 1994) and MNCs see it crucial to leverage employees, especially managerial staff (Hooi, 2010).

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Human assets, in particular the talented ones contribute significantly to the bottom line of an organization and is a main source of sustainable competitive advantage (Sheehan, 2012), as the knowledge, skills and attitudes of the employees influence organizational performance (Wright, Gardner, & Moynihan, 2003). Managerial capability (Mueller, 1996) and cutting-edge human capital policies (Patterson, West, Lawthom, & Nickell, 1997) can be rather influential on business performance. Firm performance can be demonstrated by achievement of goals within the organization as well as with other competitors. The common use of firm performance as an outcome construct represents its fundamental role in management field (Richard, Devinney, Yip, & Johnson, 2009). Succinctly, competent human assets are able to contribute more significantly to increase firm performance (Lepak & Snell, 2002). Hence, leveraging high performers for mission accomplishment has become increasingly important and an essential part of an organization's strategy to remain sustainably competitive (Juhdi, Pa'wan, & Hansaram, 2013).

Additionally, other scholars attempt to examine the effect of human resource (HR) system on financial indicators (Guthrie, 2001), financial performance (Barling, Weber, & Kelloway, 1996) and financial savings (Lee, Coaley, & Beard, 1993). Nonetheless, some researchers argue that measuring firm performance quantitatively is not appropriate (Guest, 2001; Machin & Stewart, 1996; Mayo, 2000). This is due to the technical challenges that have to be addressed when establishing any link between HR system and performance (Huselid & Becker, 1996). Huselid and Becker (1996, p. 400) contend that "because companies differ in factors such as management ability that may lead to both high performance work systems and enhanced firm performance, conventional estimates of the effects of human resource (HR) management practices on firm performance may be biased upward". Likewise, estimates may be biased downward if there are errors in measuring HR systems. For the purpose of this study, the emphasis is on human resource or employee development, particularly management development. Management development refers to "any form of training, formal or informal, accredited or non-accredited, which enhances the ability of managers to provide direction, facilitate change, use resources, work with people, achieve results, or manage self and personal skills" (Management Development Council, 2010, p. 17).

Lately, there is much inclination toward employee engagement (EE)—a buzzword among business executives (Albrecht, Bakker, Gruman, Macey, & Saks, 2015; Macey, Schneider, Barbera, & Young, 2009). Eldor and Vigoda-Gadot (2017) assert that EE, which represents feelings of vigor, fulfillment, enthusiasm, absorption and dedication, provides vital information in explaining the employee-organization relationship.

Nonetheless, despite substantial studies on EE (e.g. Bakker, Demerouti, & Sanz-Vergel, 2014; Crawford, LePine, & Rich, 2010; Christian, Garza, & Slaughter, 2011; Demerouti & Cropanzano, 2010; Halbesleben, 2010; Mauno, Kinnunen, Mäkikangas, & Feldt, 2010; Saks, 2006), EE as the missing link in the HR system–firm performance relationship is under-researched (Sparrow, 2014).

Based on the above arguments, this study aims to test the effect of each dimension of Management Development (MD) Index, human resource system (HRS) and EE on firm performance. In this study, management development is a multidimensional index including MD system, MD ethos, importance of MD and provision of MD. Additionally, the study attempts to establish if EE is a missing link in the HR system–firm performance relationship. This study's arguments are tested empirically using a sample of managerial staff from 10 multinational companies.

Management development and firm performance

Management development is crucial for employees that have been earmarked for managerial positions, as managers are expected to lead, formulate strategies, ensure performance and manage resources (Storey, 1989), which ultimately affects an organization's bottom line (Garavan & Heraty, 2001; Garavan, Barnicle, & O'Suilleabhain, 1999). Therefore, it is imperative to enhance managerial competence as failure in improving management capability has a detrimental effect on the recruitment and retention of managers (Sheehan, 2012). Organizations are likely less competitive in attracting and retaining managerial talents if management development is limited. Moreover, due to the linear association between managerial competence and firm performance (Hughes & Rog, 2008), investment in management development is desirable. Therefore, it is not surprising that management development consumes a substantial amount of HR budgets (Garavan, Shanahan, & Carbery, 2008). However, few studies, particularly in a multi-country context, show how organizations can profit from investment in management development (Payambarpour & Hooi, 2015). Preceding studies focused on how demographic factors influence formalized management development in organizations (McDonnell, 2008) and the efficiency of management development (D'Netto, Bakas, & Bordia, 2008). Sheehan (2012) in her study on UK-owned MNCs utilized management development and HR system to verify the association between talent management and firm performance.

For organizations to perform, certain systems have to be in place. In the case of enhancing managerial competence, an appropriate MD system would provide a considered and systematic approach to the way

managers are fostered (Mabey & Ramirez, 2005). A well-developed MD system is one that has an established management development policy to conduct appraisals focusing on the development needs of managers. Such policies typically include training needs analysis, career progression opportunities and the means for assessing the effectiveness of MD activities. Other things being equal, "best practice" MD system (Mabey & Ramirez, 2005; Sheehan, 2012) improves management capability, which will in turn, increase corporate capability (Mabey & Ramirez, 2005). Most organizations identify management development needs during the annual performance appraisal. Scholars, such as Holden (1991) have assert that this is a growing practice and believe that appraisals play a catalytic role in learning (Alimo-Metcalfe, 1998) as well as career planning (Mabey & Ramirez, 2005). This practice enables organizations to identify managers for fast-track development, and consequently, better performance (Jones & Whitmore, 1995). Thus, it is not surprising that more and more organizations are leveraging a well-developed MD system to enhance performance (Mabey & Ramirez, 2005).

Besides an appropriate MD system, an association between MD ethos and firm performance is anticipated. MD ethos refers to the extent to which managers are developed through internal promotion, retaining policies and long-term approach to development (Becker & Gerhart, 1996). MD ethos is essential to support the resource-based view of human asset management, which postulates that firms are capable of leveraging human assets that are distinct, valued, exceptional, incomparable, and non-interchangeable (Wernerfelt, 1984) to sustain competitive advantage over industry rivals. Therefore, more than any other resource, perhaps it is valuable to invest and develop the human resource that meets these criteria (Wright, Dunford, & Snell, 2001). As the theoretical logic underpinning the resource-based view is to create and develop human resources in a causally ambiguous manner (Barney, 1991), MD ethos potentially enhance firm performance. This is because affirmative policies that foster management development through recognition and continuous development are likely to attract as well as retain resourceful talents that potentially enhance the profitability and productivity of the organization.

To leverage human assets for sustainable competitive edge, organizations have to recognize the importance of skill formation and provide the necessary mechanisms to support management development. Learning from errors, tacit knowledge, learning-by-doing, action-centered learning and other activities serve as resource mobility barriers, since rivals cannot easily imitate them (Kamoche, 1996). MD ethos will promote management development, and hence, enhance management competencies as well as improve managerial authority. The effect on the

organization may be substantial to the extent of even altering organizational culture (du Gay, Salaman, & Rees, 1996).

However, the questionable point is whether more training inevitably results in better firm performance. The answer to this is an effective means of evaluation of training. Essentially, some information on the development methodologies and the effectiveness of these methods are needed (Mansfield & Poole, 1991). Typically, the number of training days in a year is computed to indicate the extent of commitment to managerial development for that particular year (Huselid, 1995). Disappointingly, this quantifiable index alone may not be a true reflection of what it intends to measure (Mabey & Ramirez, 2005). Nonetheless, it is irrefutable that provision of MD is likely to add value, (Mabey & Thomson, 2000; Thomson, Mabey, Storey, Gray, & Iles, 2001) as any form of developmental activities potentially provides exposure to innovative initiatives (Diaz-Fernandez, Bornay-Barrachina, & Lopez-Cabrales, 2017; Messersmith and Guthrie (2010). Provision of MD enhances the confidence of managers to proactively seek new opportunities to improve firm performance (Mabey & Ramirez, 2005). Ramirez (2007) asserts that development helps to establish stronger firm-level competencies. Incorporating internal and external knowledge by opening up to the external world would broaden firm competencies and transferable knowledge (Ramirez, 2007).

Therefore, it is imperative for organizations to acknowledge the importance of MD. The value of management development on organizational effectiveness has been demonstrated in many ways. For instance, Mabey and Thomson (2000) reveal that priority given to management development significantly affects organizational performance, while Thomson, Mabey, Storey, Gray, & Iles (2001) stress on the effects of successful management development activities. Successful management development activities enhance managerial competence, which subsequently, helps improve firm performance (Garavan and Heraty, 2001). In addition, it affects the recruitment and retention of managerial employees (Sheehan, 2012). In a similar vein, Messersmith and Guthrie (2010) assert that developing employees more completely results in higher levels of innovation. In essence, promoting the importance of MD is likely to elicit proactive behaviors, if managers could associate management development with career advancement. Hence, inadequate opportunities for advancement and an unresponsive culture following training, potentially hamper self-development and capability improvement (Antonacopoulou, 2000). Organizations, therefore, have to ensure congruence and consistency between promise and practice to support the initiatives.

Given these research findings and the theoretical logic underpinning the resource-based view, the following hypotheses will be tested:

Hypothesis 1: MD Index (MD system, MD ethos, provision of MD and importance of MD) significantly influences firm performance.

HRS and firm performance

A wealth of research has unfailingly found a significant correlation between HR system and firm performance regardless of size (Becker, Huselid, Pickus, & Spratt, 1997; Boselie, Dietz, & Boon, 2005; Guest, 1997, 2011). Cai, Hughes and Yin (2014) further confirm that resource internal development positively affects new venture performance. Most researchers argue that bundles of HR practices rather than standalone practices have a more significant impact on organizational outcomes (Becker & Huselid, 2006; Takeuchi, 2009), but findings are still inconclusive. For instance, Chow (2005) and Juhdi et al. (2013) assert that the consequence of the effect of each HR practice is different. This view is shared by other studies (e.g. Datta, Guthrie, & Wright, 2005; Som, 2008) indicating the association between firm performance and certain HR approaches. Kuipers and Giurge (2017) further assert that for the HR function to effectively affect performance, its alignment with the applied organizational strategy is important.

Axiomatically, it is difficult to dismiss the instrumental role of training and development despite the inconclusiveness of which HR practices are imperative for firm performance. Takeuchi, Wakabayashi and Chen (2003) emphasize that extensive long-term training and development enhances competence, and ultimately, firm performance. Consistent with the resource-based view and human capital theory, investment in employee development is pivotal for improved firm performance. Investing systematically in human assets provides opportunities (Thang, Quang, & Buyens, 2010) and motivates employees to expand and consolidate their expertise (Beugelsdijk, 2008), bringing forth growth and enhanced competitiveness. Nonetheless, in line with Kuipers and Giurge's (2017) assertion, training and development programs ought to support business strategy for HR system to be effective.

Thus, it has been long recognized that organizational commitment to training and development is the key to enhanced intellectual capital. Management development initiatives, for instance, help organizations ensure that their managers have the competence to effectively perform their jobs productively (Patel, Messersmith, & Lepak, 2013). Accordingly, training initiatives should move beyond fundamental skill development (Brinkerhoff & Apking, 2001) and incorporate advanced skills that are

aligned with business needs, particularly, those relating to learning, behavioral change and performance enhancement (Noe, Hollenbeck, Gerhart, & Wright, 2010). With the increasing pace of technological advancement, employees need both job-specific knowledge and basic skills to perform optimally (Noe et al., 2010).

Based on the AMO (ability, motivation and opportunity) principle, organizations need to ensure that their employees have the ability and are inspired to exploit the opportunities at hand. Training and development in concert with other HR practices helps foster interaction and exchange of specific knowledge among talented human assets in the pursuit of goals (Patel et al., 2013). This is because these practices are not inherently orthogonal to one another, but rather are mutually complementary in eliciting and motivating desired behaviors from human resources. Generally, firm performance improves through effective HR systems that enhance employee well-being (Huang, Ahlstrom, Lee, Chen, & Hsieh, 2016) and promote citizenship behaviors (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). In essence, an effective HR system provides a cohesive and distinct 'bundle' of mutually reinforcing HR practices (Boselie, Dietz, & Boon, 2005) aimed at influencing the ability and the motivation of employees (Takeuchi, Lepak, Wang, & Takeuchi, 2007), which ultimately reduces absenteeism and staff turnover, increases market share, mitigates conflict, enhances quality and boosts productivity (Noe et al., 2010; Salas & Cannon-Bowers, 2001; Thang, Quang, & Buyens, 2010). Accordingly,

Hypothesis 2: HR system positively influences firm performance.

HRS and EE

Previous scholars have noted a solid link between HR system and EE (Juhdi et al., 2013; Lockwood, 2007). Organizations that offer an effective HR system are likely deemed to be more trustworthy by their employees. As such, employees in these organizations may be more engaged in one's role performance. Based on the social exchange theory, numerous studies (e.g. Alfes, Truss, Soane, Rees, & Gatenby, 2013b; Rich, Lepine, & Crawford, 2010) have affirmed that HR systems signaled to employees that they are valued at the workplace. For instance, internal advancement opportunities, job security, information sharing and participation programs provide signals to employees that they are empowered to make critical decisions (Patel et al., 2013). Consequently, employees who sense that they are valued evoke a sense of obligation to engage in discretionary efforts (Kuvaas & Dysvik, 2010).

Moreover, intrinsic rewards are likely to increase the intensity of EE and so are empowerment, greater career mobility and promotion potential. Employees are probably more enthused to try new approaches and take risks, which may lead to more innovative outcomes for the organization (Patel et al., 2013). Likewise, employee development, a conducive work environment, task autonomy and flexible work will likely enhance EE. Albrecht et al. (2015) contend that selection, socialization, performance management and human resource development augment EE, and consequently, positive organizational outcomes. Additionally, May, Gilson and Harter (2004) assert that psychological conditions, for instance, person-job fit and breaching the psychological contract, have powerful implications for EE. Guest (2014) maintains that engagement requires clearly embedding within an integrated HR system, procedures and policies to offer its claimed benefits. Hence, all these factors can be instituted in the HR system to make employees engross and engage in their job role. Though earlier research have proven an association between HR system and an array of behavioral/attitudinal variables (Snape & Redman, 2010), the link between HR system and EE needs further investigation (Alfes, Shantz, Truss, & Soane, 2013a; Pati & Kumar, 2011). Hence,

Hypothesis 3: HR system positively influences EE.

Employee engagement and firm performance

Employee engagement has become more important than it used to be and is an essential part of company's strategy to attain sustainable competitive advantage. Arrowsmith and Parker (2013) maintain that it is a buzzword among the HR fraternity. Indeed, it has attracted the attention of governments, industry captains and researchers as it indubitably affects firm performance (Bakker & Schaufeli, 2008; Christian et al., 2011; Fleck, Inceoglu, & Albrecht, 2010; Hakanen & Schaufeli, 2012; Halbesleben, 2010; MacLeod, Clarke, & Britain, 2009; Soane, 2013; Yalabik, Popaitoon, Chowne, & Rayton, 2013). Saks (2006, p. 602) defined EE as "a distinct and unique construct consisting of cognitive, emotional, and behavioral components that are associated with individual role performance". Employee engagement measures the extent of employees' absorption in the job role and "the extent to which an employee is psychologically present in a particular organizational role" (Saks, 2006, p. 604). MacLeod and Clarke (2009, p. 9) contend that it is "a workplace approach designed to ensure that employees are committed to their organization's goals and values, motivated to contribute to organizational success, and able at the same time to enhance their own

sense of well-being". Harter, Schmidt and Hayes (2002, p. 269) define EE as "the individual's involvement and satisfaction with as well as enthusiasm for work".

Therefore, it is anticipated that an engaged employee is passionate in the job that is being performed (Shantz, Alfes, Truss, & Soane, 2013). Theoretically, engaged employees should exhibit proactive behaviors, demonstrate positive attitude toward the organization and its values (Robinson, Perryman, & Hayday, 2004) and perform better. Engaged employees are optimistic, highly energetic, highly focused on their work and enthusiastic about their jobs (May et al. 2004). These employees are prepared to put in more effort to ensure sustainable organizational performance (Jose & Mampilly, 2012) and are normally better performers than their disengaged peers (Schaufeli, 2013).

Nonetheless, what truly defines EE remains ambiguous. Practitioners, governments and researchers alike are intrigued into discovering the antecedents and outcomes of the concept. As it is typically applied to depict behaviors, traits and psychological states, it is likely that EE can be leveraged to enhance firm performance (Shantz et al., 2013). An engaged employee is certainly more involved and committed in the job, experiences higher job satisfaction and exhibits organizational citizenship behaviors (Shantz et al., 2013). Though its association with other well-known variables, such as extra-role behavior, personal initiative, positive affectivity, flow, and workaholism is still inconclusive (Attridge, 2009; Harter et al., 2002; Schaufeli & Bakker, 2010), EE unquestionably enhances an organization's profitability and productivity (Demerouti & Cropanzano, 2010; Little & Little, 2006; Macey & Schneider, 2008; Schaufeli & Bakker, 2010) and positively affects financial outcomes (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Moreover, organizations are driven to ensure EE to stay competitive and increase performance (Mukerjee (2014). Therefore,

Hypothesis 4: Employee engagement positively influences firm performance.

HRS, EE and firm performance

While extant strategic HR literature has soundly established the link between HR system and a host of performance metrics, including firm performance among others, the system itself does not ensure sustainable competitive advantage (Patel et al., 2013). It has been widely acknowledged that a black box exists that helps to link HR system to firm performance (Becker & Huselid, 2006; Takeuchi, Lepak, Wang, & Takeuchi, 2007). The search for a missing link is ongoing, as the myriad of mechanisms through which an organization's HR system affects firm

performance remains ambiguous. Prior studies on the mediating roles of individual's attitudinal and behavioral variables are still inconclusive (Kuvaas, 2008). These include affective and continuance commitment, morale, employee involvement, employee attitudes, motivation, task performance, job satisfaction and organizational citizenship behavior (Ahmad & Schroeder, 2003; Park, Mitsuhashi, Fey, & Bjorkman, 2003; Snape & Redman, 2010; Takeuchi, 2009; Van den Berg, Richardson, & Eastman, 1999).

However, HR system may influence firm performance through EE (Truss, Shantz, Soane, Alfes, & Delbridge, 2013). Previous evidence established EE as a link in a host of organizational studies, which may have an effect on firm performance. For instance, studies reveal that EE mediates the link between HR practices such as training and development, performance appraisal, compensation and career management, and turnover intention (Alfes et al., 2013a; Juhdi et al., 2013; Schaufeli & Bakker, 2004) as well as organizational citizenship behavior (Alfes et al., 2013a). It has also been widely reported that turnover affects firm performance (Ton & Huckman, 2008). This suggests that if organizations were able to build effective HR systems that help to engage employees, then this in turn may help to enhance firm performance. Nonetheless, not much research has examined how EE mediates the relationship between HR system and individual and organizational outcomes (Alfes et al., 2013b; Sparrow, 2014). A study by Ogbonnaya and Valizade (2016) indicated that high performance work system affects staff absenteeism through EE.

The current study hypothesized that organizations being able to leverage EE will experience better performance than those lacking this competency. Specifically, the ability of HR systems to produce an engaged workforce will likely see the fruits of this competency - engaged employees that help spur organizational performance and growth. Drawing on the social exchange theory, Rich et al. (2010) assert that employees will become more engaged if they perceived that the organization valued and trusted them. Therefore, antecedents that give such signals would foster EE, as employees willingly invest in intellectual effort, experience positive emotions and develop meaningful associations with others (Alfes et al., 2013b). One way for organizations to indicate their readiness to invest in their staff is through an HR system that would be favorably perceived by the employees. Since employees' perception of HR practices possibly affects employee attitudes (Guest 1997), employees that perceive HR systems positively are likely to exhibit positive attitudes such as EE (Alfes et al., 2013a). Consequently, it results in the enactment of positive behavioral outcomes, which in turn affects firm performance. As EE encompasses emotional,

cognitive and physical activation simultaneously, it offers a more complete assessment of an individual's self (Rich et al., 2010), and therefore, is better positioned as a mediator. Hence, to better explain the association between HR system and firm performance, EE can be considered as a mediator. Employees' positive appraisal of the HR system in their organization potentially enhances EE and motivational drive to boost firm performance. Accordingly,

Hypothesis 5: Employee engagement mediates the relationship between HR system and firm performance.

Methodology

Sample and procedure

Using disproportionate stratified random sampling (Sekaran & Bougie, 2010), data was collected online from a sample of managerial staff of 10 multinational corporations to test the hypotheses. Prior to mailing the online questionnaire, the face and content validity of the scales were verified. An active researcher in the field of management provided feedback on the scales and changes were made in the wording of the survey items and survey length. A final sample of 498 responses representing a response rate of 37.5% was used to test the hypotheses. The majority of the respondents are from MNCs with over 1000 employees and has been in the position for at least a year holding middle to senior management in the area of marketing and general management.

To control for the presence of common method variance, clear response guidelines were given and confidentiality guaranteed. Additionally, the scales were presented in a different order to different respondents using different response formats for the scales. In an attempt to create a psychological separation between the various measurement screens, different response formats were presented for various scales (Messersmith & Guthrie, 2010). Three different response formats were used, namely, ranging from 'strongly disagree' to 'strong agree'; 'poor' to 'excellent'; and 'a lot below average' to 'a lot better than average'. All the variables were loaded into an exploratory factor analysis and resulted in six factors accounting for 87.4 of total variance (eigenvalue > 1). As the first factor accounted for more than 30% of the variance, common method variance is not an issue. To control response consistencies (Harrison, McLaughlin, & Coalter, 1996), the dependent variable scales were placed before those of the independent variables in the questionnaire.

Measures

The survey questionnaire was adapted from Sheehan (2012). The instrument was deemed reliable as it has been extensively reviewed based on prior empirical studies (e.g. Mabey, 2008; Mabey & Gooderham, 2005; Mabey & Ramirez, 2005) and the Cronbach's α were above the threshold of 0.70 (Nunnally, 1978). Moreover, the instrument has been applied in a multi-country context which justified its suitability for the current study. Some items that relate to host country or expatriates were not relevant to the current study, and hence, were not adopted. Minor modifications were made to the other questions.

Cronbach's α for the current study ranges from 0.73 to 0.94 indicating that the items are reliable for further analysis. A 21-item MD Index scale was used to measure management development. A 5-point Likert scale (from 1, 'strongly disagree' to 5, 'strongly agree') was used for MD system, MD ethos and importance of MD while the response scale for provision of MD ranges from 1, 'poor' to 5, 'excellent'. Seven items measured MD system ($\alpha = 0.73$), five items MD ethos ($\alpha = 0.85$), three items importance of MD ($\alpha = 0.875$) and six items provision of MD ($\alpha = 0.810$). HR system was measured with a 5-item scale ($\alpha = 0.939$) and EE with an 8-item scale ($\alpha = 0.896$) using a 5-point Likert scale (from 1, 'strongly disagree' to 5, 'strongly agree'). Firm performance was measured with a 5-item scale from 1, 'a lot below average' to 5, 'a lot better than average' ($\alpha = 0.876$).

Analysis

Prior to the full model SEM analysis, the possibility of violation of SEM assumptions was verified using graphical and statistical analyses. The nonsignificant Kolmogorov–Smirnov statistic verified the existence of normality. In addition, the scatterplots confirmed the presence of multivariate normality, and therefore, the assumptions of linearity and homoscedasticity were not violated. Skewness and kurtosis were within the limited interval of ± 1. Hence, it was possible to proceed with the analysis and interpretation of the data. Moreover, no correlations were above 0.90 and tolerance was more than 0.10 while VIF was less than 10 for all the variables, suggesting no violation of multicollinearity assumption.

A two-stage structural equation modeling (SEM) technique was used to test the hypothesized relationships among the constructs as it can simultaneously test multiple separate hypothetical relationships at a time (Hair, Black, Babin, & Anderson, 2014). Consistent with Anderson and Gerbing (1988) two-stage SEM approach, the first stage involved the

Table 1. Goodness-of-fit statistics of alternative MD measurement models.

Model	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Benchmark	1 to 3	>.00	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
Null model	3.613	.000	.035	.946	.903	.954	.966	.948	.966	.073
One-factor model	9.733	.000	.057	.818	.751	.838	.852	.825	.852	.133
Two-factor model	9.415	.000	.057	.824	.757	.846	.860	.831	.859	.131
Three-factor model	9.191	.000	.053	.826	.754	.853	.867	.836	.867	.129

assessment of the measurement model, which shows the relationships between indicator variables and the theoretical constructs. The second stage assessed the structural model, which concerns the associations between the theoretical constructs (Anderson & Gerbing, 1988).

Results

Measurement model analysis

The goodness of fit of alternative MD measurement models was used to evaluate the psychometric properties of MD. The results shown in Table 1 showed that among the four models that were tested, the null model achieved the best fit.

A first-order confirmatory model was employed to validate the four theoretical dimensions of MD for their goodness of fit, using multiple adjunct fit indices. As the initial results indicated a moderate fit, items with standardized factor loading less than 0.50 were dropped. The model's goodness of fit improved significantly after the modification indices were referred to and the model specified. The final 14-item scale meets the benchmarked value for most of the adjunct fit indices. Construct validity was established as each variable achieved a standardized regression weight of at least 0.50 ($p < 0.05$) and a measurement error below 0.80 (Hair et al., 2014). Reliability values for all four dimensions of MD were higher than 0.70 (Nunnally (1978). Table 2 summarizes the standardized loadings, measurement errors and reliability values of the dimensions as well as the goodness-of-fit indices of MD.

To assess the adequacy of the scales measuring HR system, first-order confirmatory model was applied. As the measurement model indicated moderate fit, one item with standardized factor loading less than 0.50 was dropped to further improve the goodness of fit. After referring to the modification indices, the model was specified. The model's goodness of fit improved noticeably and most of the fit indices of the final 4-item scale meets the benchmarked value. A Cronbach's alpha of 0.939 established the internal consistency of the items in measuring HR system. Table 3 summarizes the standardized loadings, measurement errors and reliability values as well as the goodness-of-fit indices.

Table 2. Psychometric properties of a first-order confirmatory factor model of MD.

Dimension	Item	Standardized factor loadings	Measurement error	Reliability
Management development				
MD System	MDS3	0.715		0.730
	MDS4	0.617	0.075	
	MDS5	0.736	0.080	
MD Ethos	MDE1	0.909		0.850
	MDE2	0.865	0.033	
	MDE3	0.761	0.039	
	MDE5	0.595	0.050	
Importance of MD	MDI1	0.776		0.875
	MDI2	0.900	0.055	
	MDI3	0.851	0.068	
Provision of MD	MDP1	0.719		0.810
	MDP3	0.692	0.049	
	MDP5	0.755	0.061	
	MDP6	0.660	0.078	

Goodness-of-fit statistic indices for first-order model

Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Benchmark	1 to 3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	3.613	.000	.035	.946	.903	.954	.966	.948	.966	.073

Table 3. Psychometric properties of the first-order confirmatory factor model of HRS.

Dimension HRS	Item	Standardized factor loadings	Measurement error	Reliability
HR System	HRS2	0.877	0.038	0.939
	HRS3	0.867	0.032	
	HRS4	0.960	0.037	
	HRS5	0.864		

Goodness-of-fit statistic indices for first-order model

Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Benchmark	1–3	>.00	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	0.441	.643	.003	.999	.996	1.000	1.001	1.002	1.000	.000

Table 4. Psychometric properties of the first-order confirmatory factor model of EE.

Dimension Employee engagement	Item	Standardized factor loadings	Measurement error	Reliability
Employee engagement	EE3	0.774		
	EE4	0.826	0.057	
	EE5	0.820	0.061	0.896
	EE6	0.574	0.076	
	EE7	0.851	0.068	
	EE8	0.819	0.068	

Goodness-of-fit statistic indices for first-order model

Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Benchmark	1 to 3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	3.053	.003	.022	.986	.958	.988	.992	.982	.992	.065

As shown in Table 4, results of the first-order confirmatory model used to validate EE indicated an acceptable fit. The standardized loadings ranged from 0.574 to 0.851, suggesting convergent validity. A Cronbach's alpha of 0.896 indicated that the items were internally consistent in measuring EE.

Table 5. Psychometric properties of the first-order confirmatory model of firm performance.

Dimension Firm performance	Item	Standardized factor loadings	Measurement error	Reliability
Firm performance	FP1	0.795		0.876
	FP2	0.737	0.060	
	FP3	0.823	0.048	
	FP4	0.870	0.045	
	FP5	0.738	0.053	

Goodness-of-fit statistic indices for first-order model

Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Benchmark	1–3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	1.505	.211	.011	.996	.981	.997	.999	.996	.999	.032

Similarly, the adequacy of the scales measuring firm performance was assessed using a first-order confirmatory model. Results from SEM indicated reasonably good fit as the index values achieved the benchmarked goodness-of-fit values. The standardized loadings ranged from 0.737 to 0.870 and measurement errors of indicator variables were below 0.80; hence validity was established. Results of the reliability tests showed internal consistency as the Cronbach alpha was 0.876. Table 5 summarizes the standardized loadings, measurement errors and reliability values of the items as well as the goodness-of-fit indices of firm performance.

An analysis of a single overall measurement model with the individual measurement models correlated with one another indicated a well-fitting model. As shown in Table 6, the results of the goodness-of-fit indices confirmed the validity of the theoretical measurement model.

Structural model analysis

Management development, HR system, EE and firm performance

As evidenced in Table 7, management development significantly influenced firm performance. Comparatively, importance of management development had the strongest effect, followed by MD ethos, MD system and provision of MD. However, MD system negatively affects firm performance. Similarly, both HR system and EE significantly and positively affect firm performance. Likewise, HR system significantly and positively affects EE. However, as shown in Table 7, overall, EE significantly influences firm performance more than the other variables.

HR system–EE–firm performance relationship

A two-step process was adopted to measure the mediating effect of EE in the HR system–firm performance relationship. The first step was to establish the significant relationships between the constructs. Table 8 revealed a significant positive relationship between HR system and firm performance (0.551). The relationship between HR system and EE

Table 6. Psychometric properties of overall measurement model.

Dimension	Item	Standardized factor loadings	Measurement error	Reliability
Management development	MD System	0.581	0.022	0.872
	MD ethos	0.872	0.040	
	Importance of MD	0.922	0.044	
	Provision of MD	0.821		
HR system	HRS2	0.891	0.037	0.939
	HRS3	0.863	0.039	
	HRS4	0.955	0.033	
	HRS5	0.863		
Employee engagement	EE3	0.798	0.039	0.896
	EE4	0.849	0.039	
	EE5	0.782	0.042	
	EE6	0.578	0.049	
	EE7	0.801	0.046	
	EE8	0.818		
Firm performance	FP1	0.798	0.070	0.876
	FP2	0.754	0.092	
	FP3	0.827	0.068	
	FP4	0.855	0.070	
	FP5	0.732		

Goodness–of-fit statistic indices for first-order model

Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Benchmark	1–3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	4.058	.000	.047	.901	.854	.935	.950	.933	.950	.079

Table 7. Management development, HR System, EE and firm performance.

Factors / Items	Std. loading	S.E.	C.R.	*P*
Management development and firm performance				
Firm performance ← MD system	−0.236	0.128	−3.969	***
Firm performance ← MD ethos	0.402	0.093	5.002	***
Firm performance ← Importance of MD	0.431	0.060	5.216	***
Firm performance ← Provision of MD	0.181	0.060	2.507	.012
HRS and firm performance				
Firm performance ← HR system	0.585	0.044	12.409	***
HRS and EE				
Employee engagement ← HR system	0.623	0.040	12.989	***
Employee engagement and firm performance				
Firm performance ← Employee engagement	0.758	0.042	15.312	***

Table 8. Construct correlation matrix (standardized).

	MD	HRS	EE	OP
MD	1.000	0.588	0.575	0.449
HRS	0.767***	1.000	0.397	0.304
EE	0.758***	0.630***	1.000	0.570
FP	0.670***	0.551***	0.755***	1.000

Significance level: *= 0.05, **= 0.01, ***= 0.001.
Note: Values below the diagonal are correlation estimates among constructs, diagonal elements are construct variances, and values above the diagonal are squared correlations.

(0.630) was significant, suggesting a link with the potential mediator. Additionally, EE had a significant effect on firm performance (0.755), thus, establishing the link between the mediator and the outcome variable. The correlation between the variables is large, suggesting quite a strong relationship between the variables.

Table 9. Mediation in HRS-firm performance.

Model Element	Original Model	Revised Model
Model fit		
Chi square (χ^2)	594.723	579.611
Degrees of freedom probability	880.000	870.000
CMINDF	6.758	6.662
CFI	0.912	0.915
Standardized parameter estimates		
HRS→EE	0.640***	0.625***
EE→FP	0.770***	0.644***
HRS→FP	0.000	0.183***

The second step involved the estimation of the mediated model to assess the level of mediation. The original model, which did not estimate the direct effect from HR system to firm performance was first estimated, followed by the estimation of the revised model, which added the direct path between HR system and firm performance. The aim was to see if model fit would change substantially with the addition of the direct effect. As indicated in Table 9, the Chi square of the revised model decreased ($\Delta\chi^2 = 15.112$, df = 1, $p = 0.000$) and the path estimate for the HR system–firm performance relationship was significant. Though the paths in HRS→EE→FP were all significant, a decrease in the HRS→FP path estimate indicated partial mediation.

To demonstrate the magnitude of the mediating effects, the direct and indirect effects were analyzed. Table 10 provides the direct and indirect effects of HRS→ FP in both the original model (no direct effects from HRS→ FP) and the revised model (direct effect added for HRS→ FP). Substantial indirect effect was present in the original model (0.493), thus establishing the mediating effect of EE. A decrease in the indirect effect (0.403) and the significant reduced direct effect (0.183) in the revised model indicated partial mediation.

Discussion

The primary objective of this study was to explore the effect of management development and HR system on firm performance of a sample of MNCs. Data collected from the managerial staff of 10 MNCs indicates that management development and HR system are associated with firm performance. The study results further support EE as a mediator in the HR system–firm performance relationship, albeit partially. These findings are aligned with previous studies that affirmed a significant relationship between management development (Mabey & Ramirez, 2005; Sheehan, 2012) and firm performance. Specifically, as noted by Mabey and Ramirez (2005), MD ethos, importance of MD and provision of MD have a positive and significant influence on firm performance. However,

Table 10. Assessing direct and indirect effects in a mediated model.

Effects of HRS → FP	Original model (only indirect effects)	Revised model (indirect and direct effects)
Total effects	0.493	0.586
Direct effects	0.000	0.183
Indirect effects	0.493	0.403

our findings diverged from the view of Mabey and Ramirez (2005) that MD system positively influenced firm performance. One probable reason for this may be that with proper MD system in place, there may be a tendency for managers to be complacent and less proactive. Managerial creativity and innovativeness may be hindered, which in turn affects firm performance (Anderson, Potočnik, & Zhou, 2014). Moreover, managers probably give credence to the MD system and perceive that top management are honoring their promises with regard to the MD system. Such assurances may render it unnecessary to exhibit extraordinary efforts to make a difference. The findings of the current study further complement the existing literature by demonstrating that HR systems designed to manage the human resource base may play a salient role in firm performance. This reveals the importance of considering HR systems in organizational design (Patel et al., 2013). Specifically, these findings promote the logic of the resource-based view of leveraging human assets for organizational efficiency and growth. In essence, the findings suggest that organizations stand to benefit from simultaneously leveraging management development and effective HR system.

Considering EE as a mediator in the HR system–firm performance relationship provides evidence of the partial mediating role of EE, which concurs with the findings of Alfes et al. (2013b). These findings generally support conceptual research that establish an affirmative link between HR systems and EE (Albrecht et al., 2015; Guest, 2014; Lockwood, 2007; Pati & Kumar, 2011) as well as EE and firm performance (Demerouti & Cropanzano, 2010; Schaufeli, 2013; Schaufeli & Bakker, 2010; Soane, 2013). Essentially, effective HR systems can be utilized to simultaneously enhance EE and firm performance. Obviously, more research is necessary, but this result suggests that organizations are likely to achieve better firm performance, if greater emphasis was placed on EE.

Taken together, these findings offer several theoretical and managerial implications. First, this study builds closely upon existing work surrounding human capital theory and the resource-based view of firms. This study focused on the dimensions of MD Index and HR system as antecedents of firm performance to complement previous studies that primarily centered on the influence of demographic factors on

management development (Dastgeer & ur Rehman, 2012; McDonnell, 2008; Ruth, 2007). While a myriad of prior research have focused on the link between HR system and firm performance, the findings are inconclusive. The results of the current study indicate that firm performance can potentially improve if organizations take into consideration the needs of their employees when designing HR systems. The findings also strengthen the notion that effective HR systems significantly influence EE (Alfes et al., 2013a, 2013b; Truss et al., 2013; Pati & Kumar, 2011). This implies that HR system is central in generating an obligation to engage (Juhdi et al., 2013), which in turn drives firm performance. Hence, this study provided further support for the missing link, which may instigate a lively debate on how effective HR system can result in a higher firm performance. Additionally, there is limited research on these constructs in a multi-country context.

The results of the current study offer an insight for industry captains to better leverage human assets to enhance sustainable competitive advantage in today's fast changing world. Notably, organizations that invest in management development and effective HR systems are likely to see performance improvements. Well-designed management programs and HR systems potentially establish a conducive context for EE to develop. Employee engagement is important, as it is one of the three components of happiness at work. Unhappy employees will likely exhibit lower productivity (Galabova & McKie, 2013), lower citizenship behaviors (LePine, Erez, & Johnson, 2002; Podsakoff et al., 2003) and higher workplace deviance (Dalal, 2005). All these counterproductive work behaviors indisputably affect the bottom line of any organization. In essence, these findings caution practitioners to place greater emphasis on factors that significantly influence firm performance. Additionally, it encourages academic researchers to focus on areas where limited empirical work has been done such as studying how HRM practices affect outcomes at the individual and organizational level through EE (e.g. Sparrow, 2014; Truss et al., 2013). This adds knowledge to extant literature and further enlightens business experts and governments alike on the way forward.

Limitations and future directions

The findings of the current study should be interpreted considering its limitations and open the door for future research in the field. Theoretically, building on the logic of human capital theory and resource-based view, this study considers only three constructs that potentially affect firm performance. Future studies may consider other

constructs or theories to generate a profound understanding of what affects firm performance or EE. Moreover, the present study considers only the mediation of EE in linking HR system and firm performance in a sample of MNCs. Further analysis of the missing link is necessary to fully understand which 'black box' effectively enhances the HR system-firm performance linkage. Methodologically, considering the small sample size and the collection of data at a single point of time, generalization of the findings has to be made cautiously. Future research should undertake a longitudinal study with a bigger sample size covering MNCs across the globe to verify the generalizability of the results. Additionally, although common method variance was not an issue to the validity of the findings, it cannot be completely ruled out due to its reliance on a single respondent for all constructs. Therefore, future studies should include tests that are more stringent besides scale reordering and Harman's one-factor test. Moreover, different interpretation of the items used may also confound the results. Future work should endeavor to produce measures that can clearly capture the essence of the items. One way to rule out alternative interpretations is to improve the response rate. Finally, as this study only focuses on ten MNCs, replicating this study in other contexts may produce finer-ingrained understanding of similar issues.

Conclusion

Do people matter? The findings of the study echo the sentiments of previous scholars (Messersmith & Guthrie, 2010) that human assets remain at the heart of successful organizations (Patel et al., 2013). Corresponding with the central propositions of resource-based view and human capital theory, leveraging human assets is the key to sustainable competitive advantage. At a time of mounting rivalry and uncertainty, organizations that are able to leverage their human assets are likely to be more resilient. This is a particularly salient issue as all companies including MNCs are vulnerable to the revolving changes in today's business world. Specifically, this study reveals that management development, HR system and EE are essential to spur superior firm performance.

This study contributes to the growing research on leveraging human assets for firm performance in two aspects. First, the current findings reinforce the logic that investment in people has implications for firm performance. For instance, management development will enhance managerial capability, which can be a dynamic source of competitive advantage. This concurs with prior studies (e.g. Mabey, 2008; Mabey & Ramirez, 2005; Sheehan, 2012), which verify the significance of

management development on firm performance. A thought-provoking conclusion of the study is the negative association between MD system and firm performance. While on the one hand, it makes it difficult to draw conclusions about the specific contribution of MD system compared to the other dimensions of management development, on the other hand, it can trigger more empirical studies on effective management development. The negative association implies that the context (Wright & Boswell, 2002) probably may affect the results.

The findings further advance understanding of the contextual effect on management development, heeding the caution of Wright and Boswell (2002) to account for contextual factors. Sheehan's (2012) study on UK-owned MNCs in four countries confirms that the national context in which management development is undertaken affects the associated returns. Likewise, Mabey and Ramirez (2005) in their study on European-owned firms in six countries took care to account for the contextual factors. Few studies have demonstrated the benefits of investing in management development (Mabey and Ramirez, 2005) in a multi-country context. The current study researched on 10 MNCs that are not homogeneously owned, hence providing a different perspective of the impact of leveraging human assets for firm performance.

Second, the findings indicate that HR systems can significantly predict EE and firm performance with a stronger impact on the former. It further reveals the significance of EE on firm performance and the salient function of EE in the HR system–firm performance relationship. Taken together, the findings demonstrate the importance of leveraging human assets, in terms of EE, management development and HR system for firm performance. These findings complement extant literature as prior studies have different focus, albeit similar variables. For instance, Sheehan (2012) focused on the moderating role of strategic HR while Purcell, Kinnie, Hutchinson, Rayton, and Swart (2003) established the mediating role of employee commitment and motivation in the link between HR practices and firm performance. Other studies have mainly focused on commitment, morale, employee involvement, employee attitudes, motivation, task performance, job satisfaction and organizational citizenship behavior (Ahmad & Schroeder, 2003; Den Hartog, Boselie, & Paauwe, 2004; Kuvaas, 2008; Snape & Redman, 2010; Takeuchi, 2009; Van den Berg et al., 1999). The findings therefore contribute to a more in-depth understand of the role of HR and EE as a mediator in the HR system–firm performance relationship.

A key practical implication of this research is that continued investment in managerial employees is pivotal to sustain competitive advantage. Organizations should cautiously cut MD budgets during economic

downturn as it may have detrimental effects on sustainable competitiveness. Moreover, considering today's dynamic business world and the current global workplace, organizations may lose key managerial personnel, if organizational support in terms of development was limited. Indubitably, the war for competent managers is intense, and compromising on a strategic tool used to entice, nurture and retain managerial talent is likely to have an adverse effect on firm performance.

Moreover, according to the social exchange theory, organizations will probably perform better, if they were able to foster a climate of reciprocity through investment in their employees. Employees will likely exhibit positive attitudes and behaviors at the workplace, which ultimately will affect firm performance. In essence, an effective HR system will likely elicit affirmative attitudinal and behavioral outcomes that can boost firm performance. It is clear that employees, who trust their organizations and feel valued, are more engaged. It stimulates intellectual, affective and social engagement. Therefore, top management should focus on interventions that enhance attitudinal and behavioral outcomes as a way to increase firm performance. If employees believe that a new policy or system benefits them, they are likely to heighten their intensity of engagement. In essence, as Guest (2015, p. 61) suggests, it is crucial "to leverage the employment relationship to the benefit of the organization". Though the knowledge and skills of the employees are important, attitudes of employees do impact firm performance. As such, human resource professionals, senior and line managers have to collectively create a virtuous cycle focusing on management development and HR system to ensure a highly engaged workforce that contributes to firm performance.

Disclosure statement

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