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**Abstract**

**Purpose:**

This paper explores the impact of High-Performance Human Resource Practices (HPHRPs) on the research performance and career success of academics.

**Method/Design:**

Survey data was collected from 586 faculty members in the five largest public universities in Saudi Arabia.

**Findings:**

The findings suggest that the HPHRPs of internal mobility and recognition had a strong impact on faculty members’ career success, and that these relationships were mediated by research performance. In addition, the study also found that the HPHRPs of training and recognition positively influenced research performance. While, surprisingly, the HPHRPs of participation in decision-making was found to have a negative effect on faculty members’ research performance.

**Originality/value:**

Our study is original in combining research in Human Resource Management (HRM) and Career Studies to develop a model that explains academic research performance and career success from the lens of HR practices. The results also provide leaders in Saudi Arabia’s public higher education sector with empirical data on the impact of HPHRPs on academic research performance and career success.

Keywords: Academic research performance, high-performance HR practices, career success

# Introduction

A growing body of research has examined a range of factors that influence academic research performance (Zacher, Rudolph, Todorovic, and Ammann, 2018) which is a primary criteria of success in academic careers (Laudel and Gläser, 2008; Sutherland, 2017). For example, some studies addressed the role of individual-level factors, such as self-efficacy (Hemmings and Kay, 2016; Pasupathy and Siwatu, 2014), gender, family size and age of children (Jappelli, Nappi, and Torrini, 2017; Syed, Ali, and Hennekam, 2018) and the choice of the research topic (Fisher, 2005) on research performance. Other studies focused on the role of institutional factors, such as organizational size, type and climate (Dever and Morrison, 2009; Edgar and Geare, 2013; Smeby and Try, 2005), availability of resources (Bland and Ruffin, 1992; McGill and Settle, 2012), and communication and workload (Lee and Bozeman, 2005). Yet, the influence of managerial practices, i.e. High-Performance HR Practices (HPHRPs), on research performance remains under-explored. As most existing work has been conducted in the private sector researchers do currently question whether HPHRPs can also lead to positive outcomes in the public sector (Veld, Paauwe, and Boselie, 2010). Hence, there are calls for research to examine the role of HRM practices outside the private sector, such as in academic institutions (Van den Brink, Fruytier, and Thunnissen, 2013). Management practices may play an important role in the performance of university-based academics. Specifically, HPHRPs could contribute to the development of academic performance by enhancing knowledge, skills and motivation that empower job performance; and, in turn, could benefit the achievement of organizational goals and academic career success. However, empirical research on the impact of HPHRPs on academic performance has not attracted much attention to date. Hence this research can offer new insights into the relationship between management practices and academic performance in higher education.

We aim at understanding the effectiveness of Human Resource Management (HRM) in the public academic sector and examine whether, how, and when HPHRPs influence academic research performance and career success. We bridge the gap in the literature by addressing the following questions: Which HPHRPs are significantly associated with academic research performance?; Which HPHRPs are significantly associated with academic career success?; Does academic research performance mediate the relationship between HPHRPs and career success?

We contribute to the literature by extending HPHRPs research to the public sector, in particular, to universities in the public sector. We therefore provide evidence of how HRM practices can enhance research output in universities and, in turn, further both institutional and societal objectives in higher education. In most countries the majority of universities are public institutions. However, we expect the study results to be generalizable to private sector universities as well, because both public and private universities tend to focus on knowledge creation and education provision. Similarly, research quality is a significant focus of performance evaluation for academics in both public and private institutions.

# Theoretical background

For their part, public universities can maximize the impact of government investment on academic performance through the proper application of HRM practices (e.g. Amin et al., 2014). One of the most important issues in HRM studies has been the relationship between HRM and organizational performance (Huselid, 1995; Jiang, Takeuchi, and Lepak, 2013). The extensive literature in this area has evolved around two key theoretical questions: (1) Which HRM practices (and in what combination) promote performance, for both individuals and organizations? And, (2) How do HRM practices influence performance?

In terms of the first question, HRM practices have been clustered in different ways by different researchers. For example, Lepak, Liao, Chung and Harden (2006) identified three main clusters of HRM practices, as follows: (1) knowledge, skills and abilities (recruitment, selection, and training practices), (2) motivation and effort (performance management, job security, compensation, and incentive practices), and (3) opportunities to contribute (job design, employee involvement, and team working practices). This approach is linked to theorists who argue that performance requires three elements: ability, motivation and opportunity (Boxall and Purcell, 2016). There is still much debate about which practices should be considered as HPHRPs (see Arthur, 1994; Tzabbar , Tzafrir, and Baruch, 2017), and there is no agreement about which HPHRPs actually enhance individual and organizational performance (Gould‐Williams et al., 2014; Jiang et al., 2012; Posthuma et al., 2013; Subramony, 2009).

Moreover, there is disagreement about the applicability of HRM practices across different contexts. The universalistic theory suggests that HPHRPs are effective across organizations and sectors (Arthur, 1992; Delery and Doty, 1996; Lepak and Shaw, 2008; Pfeffer, 1998). However, this assumption of universality has been seriously questioned (e.g. see, Boxall and Purcell, 2000; Purcell, 1999). Indeed, many researchers have identified the lack of evidence regarding which practices, if any, represent a universal set of HPHRPs (Tzabbar et al., 2017) and therefore support a contingency-based approach. Despite this debate, researchers generally agree that HR practices do contribute to high performance amongst employees.

With regard to the second question, a range of outcomes mediate the relationship between HRM practices and indivdual and organizational performance (Huselid, 1995; Jiang et al., 2013) and this can be explained through the Ability-Motivation-Opportunity (AMO) theory (Boxall and Purcell, 2016). According to this theory, HRM practices enhance employees performance by affecting their abilities and motivation, through improved work design and other activities; and, in turn, by providing them with opportunities to make good use of their skills (Jiang et al., 2013; Pak, Kooij, De Lange, and Van Veldhoven, 2019). In academia, training is an important HRM practice for developing ‘Ability’ and enabling performance, starting with the PhD education, but continuing throughout the career with the learning of new research methods, writing retreats, and even attending conferences (although the latter is often defined as a developmental activity, rather than ‘training’)(Baruch et al., 2019). However, there is a real lack of research on other HRM practices covering ‘Motivation’ and ‘Opportunities’ in academia and their potential impact on academic performance.

# Model Development and Hypotheses

## The Impact of High-Performance HR Practices on Employee Outcomes

The results from seminal studies generally suggest a strong positive impact for HRM on organizational effectiveness and/or performance ( Huselid, 1995; Jiang et al., 2012; Tzabbar et al., 2017). However, there are some exceptions (Wood and De Menezes, 1998) and thus it is premature to argue conclusively about the HPHRP-performance link (Guest, 2011). Within academia, the extent to which HPHRPs actually contribute to faculty member research performance and their career success has not yet been empirically examined. To address this gap, we developed and tested a model that posits faculty members’ research performance in the central position in the relationship between HPHRPs and academic career success. Further, the general efficacy of HPHRPs on performance has not conclusively been established in non-western contexts (Zhang and Morris, 2014), specifically in the academic sector. We therefore contribute to the literature by examining the impact of selected HPHRPs on faculty members’ research performance and their career success in Middle-Eastern society.

## High-Performance HR Practices and Research Performance

Most studies of the relationship between HPHRPs and both organizational and individual outcomes were conducted in industrial settings, and not in the public sector (Gould‐Williams et al., 2014; Knies, Boselie, Gould-Williams, and Vandenabeele, 2015). Also, no empirical work that we are aware of has investigated the impact of HPHRPs on the research performance and career success of academics, although there are strong theoretical explanations to predict such a relationship. Other empirical evidence suggests a strong positive relationship between HPHRPs and job performance (Chang and Chen, 2011), organizational commitment (Van De Voorde and Beijer, 2015),(Macky and Boxall, 2007; Butts *et al.*, 2009) organizational citizenship behavior (Gong, Chang, and Cheung, 2010), extra-role behavior (Julian Gould-Williams (2003), and job satisfaction (Ma, Silva, Callan, and Trigo, 2016; Takeuchi, Chen, and Lepak, 2009; Wu and Chaturvedi, 2009).

To understand how high performance HRM practices lead to positive individual outcomes we can refer to AMO (Ability, Motivation, Opportunity) theory (Boxall and Purcell, 2016), as this has strong empirical support as an explanation for the instrumentality of HRM practice on performance enhancement (Pak et al., 2019). According to AMO theory, the ability, knowledge and skill levels of employees is increased through skill-enhancing practices, such as training (Subramony, 2009). In turn, motivation-enhancing practices (e.g. recognition of employee achievements, and internal mobility and opportunities for employee advancement) help direct employees’ efforts toward the achievement of work objectives and provide them with the encouragements necessary to reach high levels of performance. Lastly, empowerment-enhancing practices provide employees with the opportunity to make use their skills and feel valued (e.g. participating in decision-making and influencing organizational decisions, Delery and Doty, 1996). Similarly to other sectors, we expect HPHRPs to have a positive effect on academic performance, given that it is a highly-skilled profession which requires high levels of motivation to create and disseminate new knowledge (i.e. research output in international journals) (Baruch and Hall, 2004) and also involves a significant amount of institutional decision-making. As a result, we present the following hypotheses:

*Hypothesis 1a: There is a positive relationship between training and faculty members’ research performance.*

*Hypothesis 1b: There is a positive relationship between internal mobility and faculty members’ research performance.*

*Hypothesis 1c: There is a positive relationship between recognition and faculty members’ research performance.*

*Hypothesis 1d: There is a positive relationship between participation in decision-making and faculty members’ research performance.*

## High-Performance HR Practices and Career Success

We know that HPHRPs lead to higher individual performance (Jiang et al., 2012; Tzabbar et al., 2017). High performing employees tend to have better opportunities for promotion and career progression than low performing employees (Van Scotter, Motowidlo and Cross, 2000). Moreover, higher performing individuals expect to be rewarded by their organization in return for their commitment (Aguinis and O'Boyle, 2014). Objective career success has generally been measured by salary data (see Ng et al., 2005, 2014; Spurk et al., 2019), and career progression, and we include both these variables in our study. In terms of subjective career success, there is also a positive relationship between high performance and individual career satisfaction (Ng and Feldman, 2014). According to Sonnentag (2003), career satisfaction can be reached through high performance and task accomplishment, while dissatisfaction and personal failure might be caused by low performance and failing to achieve career goals and responsibility. Therefore, we should expect HPHRPs to relate not only to objective career success, but also to subjective career success. We therefore propose the following hypotheses:

*Hypothesis 2a,b,c,d: There is a positive relationship between training,* *internal mobility,* *recognition, participation and faculty members’ salary.*

*Hypothesis 3a,b,c,d: There is a positive relationship between training, internal mobility, recognition, participation and faculty members’ promotion.*

*Hypothesis 4a,b,c,d: There is a positive relationship between training, internal mobility, recognition, participation and faculty members’ subjective career success.*

## The Mediating Effect of Research Performance

## We also expect that the relationships between HPHRPs and career success are mediated by research performance, since scientific outcomes are a critical factor in determining salary progression and promotion in academia (Baruch, 2013). We can therefore establish a relationship between HPHRPs and both objective and subjective career success, which is mediated by high individual performance (Currie, Boyett, and Suhomlinova, 2005). Internal development of staff thorugh appropriate HR practices (e.g. research training and recognition) can positively impact on research performance, which is parallel with conventional labour markets (Lepak and Snell, 1999). Therefore, HPHRPs that increase individual performance will ultimately lead to higher objective career success, so we hypothethize that:

*Hypothesis 5a,b,c,d: The relationship between training, internal mobility, recognition, participation and salary, is mediated by academic research performance.*

*Hypothesis 6a,b,c,d: The relationship between training, internal mobility, recognition, participation and faculty promotion is mediated by academic research performance.*

Similarly, we expect that the research performance of academics will be positively related to their subjective career success, since the contribution to knowledge that occurs through academic publications has a great influence on professional reputation and career progression (Middaugh, 2001; Sutherland, 2017). We therefore propose that a higher research output will lead to increased career satisfaction among academics, based on a more positive internal perception of career success (Ng et al., 2005, 2014; Spurk et al., 2019), and hypothesize that:

*Hypothesis 7a,b,c,d: The relationship between training, internal mobility, recognition, participation and subjective career success is mediated by academic research performance.*

Integrating the above set of hypotheses, we develop a model depicting the anticipated relationships across the constructs. See Figure 1.

***Insert Figure 1 About Here***

# Methods

**Sample and Procedure**

We employed a questionnaire to survey academics, defined as faculty members with a Ph.D. working at the five largest public universities in Saudi Arabia, either with permanent (tenured) or fixed-term (untenured) contracts. Faculty members without a Ph.D. degree (e.g. teaching assistants and instructors) were excluded from this study, as they are not normally expected to undertake research, which is a focus of this study, and their participation could have biased the results. The reasons for selecting these five public universities are that: (1) They are the oldest, most prestigious and highest ranked universities in Saudi Arabia. (2) They are geographically well dispersed, covering the three main areas in Saudi Arabia, including the western, central and eastern regions. (3) They are large universities and teach most major disciplines for both male and female students, apart from KFUPM, a major university which specialises in petroleum and minerals that are the basic resources of the country. (4) Older Saudi public universities frequently have higher standing and resources, a better skilled and more stable workforce, and often are the most preferred universities for academics to work in (Onsman, 2011).

The questionnaire included items assessing HPHRPs, research performance and career outcomes. While part of the survey aimed to evaluate attitudes, there was also a hard data measure of research performance, which reduces the potential for common method bias. The questionnaire was back-translated from English to Arabic (Brislin, 1970). A total of 1000 questionnaires were distributed randomly to 200 faculty members in each of the five universities. All questionnaires were collected online. In total, 594 questionnaires were returned and eight questionnaires were excluded due to missing data. Overall, 586 usable questionnaires remained, representing a strong response rate of 58.6%. In terms of non-response bias, we followed Armstrong and Overton (1977) by comparing early vs. late participants. No significant difference (p>0.05) was found, suggesting non-response bias is not a problem in the current study.

**Measures**

The study investigated the role of four HPHRPs that enhance motivation (i.e. internal mobility and recognition), skills (i.e. training) and empowerment (participation) amongst employees. Only measurement items applied in previous HRM studies, including studies in the Middle East, were used. The items were adapted for the current study context (e.g. replacing the word ‘company’ by the word ‘university’) and also reviewed by Arabic and English speaking HRM specialists to ensure their content validity. To measure internal mobility, five items were adopted from Sun et al. (2007). An example item is “I have clear career paths in my university”. The five items were averaged to form a single scale score (alpha = .85). With regard to measuring recognition, five items were adapted from Paré and Tremblay (2007). An example item is “In this university, the dean or head of department uses different ways to recognize my efforts (oral praise, tickets for cultural events, free dinners etc.)”. The five items were averaged to form a single scale score (alpha = .87). To measure the training construct, four items were adopted from Delery and Doty (1996). A sample item is “Extensive training programs are provided to me in my job”. The four items were averaged to form a single scale score (alpha = .79). To measure the participation in decision making construct, four items were adapted from Delery and Doty (1996). An example item is “In my job I am often asked by my dean or head of department to participate in decisions.” The four items were averaged to form a single scale score (alpha = .88). For all HPHRP items, respondents were asked to indicate the extent of their personal agreement with each item using a seven-point Likert scale (1=strongly disagree; 7=strongly agree).

Objective career success was measured by two elements: salary and promotion. For salary, respondents were asked to self-report their monthly salaries (including bonuses and other direct income) both at the current time and when they obtained their Ph.D. degree, so a standardized salary increase was calculated using Z scores. Promotion was measured by asking respondents to self-report the number of promotions since they had obtained their Ph.D. degree. Promotion referred to “any increases in level and/or any significant increases in job responsibilities or job scope” (Seibert, Kraimer, and Crant, 2001a). This includes promotion to administrative positions (e.g. department head).

Subjective career success was assessed by measuring faculty members’ career satisfaction. To measure the career satisfaction, Greenhaus, Parasuraman, and Wormley's (1990) five-item career satisfaction scale was adopted. Respondents were asked to indicate the extent of their personal agreement with each item using a seven-point Likert scale (1=strongly disagree; 7=strongly agree). An example item is “I am satisfied with the success I have achieved in my career.” The five items were averaged to form a single scale score (alpha = .90).

The research performance of the faculty members was measured by the quantity of publication (Creswell, 1986), following other recent studies on academic research performance (see Baruch et al., 2019). The following types of publication were included: (1) publication in peer-reviewed journals, (2) publication in professional journals, (3) published book chapter, (4) published books, (5) edited and translated books, (6) papers presented at conferences, and, (7) obtained patents. The respondents were asked to report the number of their works for each of these elements and the final variable was calculated as a simple sum of these seven categories.

The control variables for this study consisted of demographic and academic factors. The demographic factors consisted of self-report information about gender, age, marital status, and region of citizenship. The academic factors consisted of self-report questions on academic rank (assistant professor etc.), work experiences, the origin of their Ph.D degree, and the nature of their current university contract.

**Analytical procedure**

The study performed descriptive analyses of the data using IBM SPSS version 24 and SEM using Mplus version 8 (Muthén and Muthén, 2017). SEM is appropriate for examining structural relationships simultaneously in a complex research model with a large sample (n=586). SEM was chosen as the main method of analysis, in preference to the other analysis methods, as it allowed simultaneous testing of interrelationships among multiple variables in the research model and the hypotheses. SEM was performed in two steps: testing of the measurement model followed by testing of the hypothesized relationships in the structural models.

**Results**

*Demographic and acacemic data*

The average age of the respondents was between the age of 41 and 50 years. The majority of them were male faculty members (n=405), representing 69.5% of the study sample, and 30.9 % (n=181) were female. Most of the participants 89.9% (n=527) were married, with only 2.9% (n=17) being divorced and 6.3% (n=37) being single. More than half of the participants, 63.5% (n=372), were Saudi, with 30.9% (n=181) being from other Arab countries.

Half of the participants 51.2% (n=300) were assistant professors, 24.2% (n=142) were associate professors, and 24.6% (n=144) were professors. The work experience of the participants varied widely. The largest group of the participants 27.5% (n=161) had between 11-20 years in academia, while 23.4% (n=137) of participants had 6-10 years of work experience. Almost another quarter of the sample (23.2 %, n=136) had 1-5 years work experience, with another 22.2% (n=130) enjoying over 20 years of work experience. Finally, the smallest group were participants with less than a year of work experience (3.8%, n=22). The majority of the participants (68.4%, n=401) had obtained their Ph.D. degree from Saudi Arabia, UK or USA. The remaining (31.6%, n=185) mostly obtained their Ph.D. degree from other Middle Eastern and European countries. Regarding contract type, more than half of the participants (62.6%, n=367) had a permanent contract, while 37.4% (n=219) had fixed-term contracts. Table 1 and Table 2 summarize the demographic and academic data.

*Statistical Data*

Table 3 reports Cronbach α's (all higher than 0.70) along with the correlations among study variables and the square root of the AVE for each construct measured in Likert scale (bold formatted numbers). All the correlations among constructs were below the recommended value of 0.85, which supports discriminant validity for the study constructs.

***Insert Table 1 About Here***

Using self-report data means a possible existence of common method bias (CMB). Following the suggestion of Podsakoff, MacKenzie, Lee, and Podsakoff (2003), two statistical tests were employed to identify any CMB in the study. First, Harman’s single-factor test was performed (Podsakoff and Organ, 1986) which showed that only 22% of variance was explained by a single factor. The results suggest that CMB is unlikely to be a major concern in the study. In addition, a further CMB test known as unmeasured latent method factor was performed (see Widaman,1985, and Williams, Cote, and Buckley, 1989; and, Podsakoff et al., 2003; Podsakoff, MacKenzie, and Podsakoff, 2012). This test showed that the addition of a common methods factor accounted for only 26% of variance, which is less than the cut-off value 50% that has been recommended as indicating the existence of common method bias (Fornell and Larcker, 1981; Hair, Black, Babin, and Anderson, 2010). The findings confirmed that CMB is unlikely to be an issue for this study.

In the first step of the SEM process, the constructs were tested with each latent variable loading onto its respective items. All constructs were allowed to intercorrelate. The results of the overall measurement model indices are: χ2= 1177.559, p<0.001, df =706, χ2 /df = 1.66, CFI = 0.96, TLI = 0.96, SRMR= 0.03, RMSEA = 0.03. Overall, the CFA results indicate a good fit of the model. These indices are satisfactory. For example, CFI and TLI values are above the recommended cut-off value 0.90, while SRMR and RMSEA are far below the acceptable cut-off value 0.08 and 0.05 respectively. Similarly, the score of χ2 /df is below the suggested value range of between 2 and 5. In terms of χ2, this value is usually expected to be significant with a large sample size (Hair et al., 2010). Therefore, Hair, Black, Babin, and Anderson (2010) support using three to four different fit indices as sufficient to prove overall model fit. Hence, based on the CFA results the overall measurement model fitness is viewed as reasonable.

In the second step of the SEM process, the overall fit of the structural model is assessed to confirm that the model satisfactorily represented the data for all proposed structural relationships. The results of the structural model indices are: χ2= 1934.767, p<0.001, df =1066, χ2 /df = 1.81, CFI = 0.942, TLI = 0.93, SRMR= 0.05, RMSEA = 0.03. Overall, the results of the structural model indicate a good fit of the sample data. Table 5 summarizes the results of direct relationships.

The findings of the hypothesized relationships showed that among the four investigated HPHRPs only two practices, training and recognition, were positively linked to research performance (β= 0.106, p < 0.05, β= 0.302, p < 0.05). Unexpectedly, the results revealed that the relationship between the participation in decision making and research performance is negative and significant (β= -0.210, p < 0.05), while the relationship between internal mobility and research performance was not significant. Thus, hypotheses H1a, H1b, were supported, whereas hypotheses H1c, H1d, were rejected.

In term of the relationship between HPHRPs and objective career success, the results showed that only internal mobility had a positive and significant path to salary (β= 0.106, p < 0.05). However, the relationship between training, recognition, and participation in decision making and salary were not significant. In addition, the results demonstrated positive and significant relationships between motivation-enhancing HR practices (internal mobility and recognition) and faculty member promotion (β= 0.089, p < 0.05, β= 0.296, p < 0.05) respectively. Surprisingly, the relationships between training and participation in decision making and faculty member promotion were not significant. Consequently, hypotheses H2b, H3b, and H3c were supported, whereas hypotheses H2, H2c, H2d, H3, and H3d were rejected.

Regarding the relationship between HPHRPs and subjective career success, the results illustrated positive and significant relationship between internal mobility and recognition and subjective career success (β= 0.193, p < 0.001, β= 0.549, p < 0.01) respectively. However, the HPHRPs of training and participation in decision making did not have a significant impact on subjective career success. Accordingly, hypotheses H4b and H4c were supported, whereas hypotheses H4a and H4d were rejected.

Mplus uses the Sobel (1982) approach for testing the indirect effects, as summarized in Table 4. The results indicated that research performance fully mediated the relationships between training and recognition and objective career success (salary progression) (β= 0.044, p < 0.05, β= 0.124, p < 0.05, respectively). These findings support H5a and H5c. Unexpectedly, the results demonstrated that research performance mediated negatively the relationship between participation in decision making and objective career success (salary progression) (β= -0.086, p < 0.05), while research performance did not mediate the relationship between internal mobility and objective career success (salary progression). Accordingly, H5b and H5d were rejected.

As for the relationships between HPHRPs and objective career success (promotion), the results revealed that research performance fully mediated the relationship between training and objective career success (promotion) (β= 0.039, p < 0.05) and partially mediated the relationship between recognition and objective career success (promotion) (β= 0.111, p < 0.05, respectively). Accordingly, H6a and H6c were supported, while H6b and H6d were rejected.

In terms of subjective career success, the results showed that research performance only partially mediated the relationships between recognition and subjective career success (β= 0.049, p < 0.05), consequently giving support to H7c, whereas H7a, H7b, and H7d were rejected.

# Discussion

This research contributes to the understanding of the effects of HPHRPs on academic research performance, which has been neglected in prior literature (Amin et al., 2014; Decramer, Smolders, and Vanderstraeten, 2013; Van den Brink et al., 2013). Existing research on the antecedents of research performance mainly focuses on environmental and demographic factors, but does not fully examine the role of HR practices. Thus, the present study contributes to the academic career literature by exploring the effects of such practices on academic research performance and career success. The study findings suggest that some HRM practices, including training and recognition, are important predictors of academic research performance, while internal mobility and recognition predict career success. Therefore, this study enriches our knowledge of the mechanism through which HPHRPs can encourage higher academic performance, and lead to greater career outcomes (Santos, 2016). This study also responds to the call for more understanding of the factors facilitating superior academic research performance (Hardré and Cox, 2009).

The study reveals that only training and recognition have a positive and significant effect on academic research performance. These results are consistent with other previous studies in research performance (McGill and Settle, 2012; Pasupathy and Siwatu, 2014) which found that developing the faculty members research skills and self-efficacy (which can be developed through training) are positively related to research performance. Moreover, the study further supports previous research in field of HRM which suggests that training as skill-enhancing practices (Boxall et al., 2011; Chang and Chen, 2011), and recognition as motivation-enhancing practices (see for example Jiang et al., 2012; Snape and Redman, 2010; Subramony, 2009) lead to improved job performance.

Contrary to expectations, this study did not find a significant relationship between internal mobility and faculty member research performance. This finding differs from the results of the studies observed by Jiang et al. (2012) that supported the fundamental role that internal mobility has on employee job performance. A possible explanation for these results may relate to the Islamic cultural perspective of academics in this study. For example, in Islamic law, knowledge creation and dissemination is work that should be done for the sake of God (Siddiqui, 1976). Thereby, Saudi scholars are unlikely to expect reward for their scientific research activities. Another possible explanation for these results is the vocational nature of the academic profession, which indicates that faculty members may be motivated by a ‘calling’ or higher purpose related to the advancement of knowledge, rather than the reward of promotion (Hall and Chandler, 2005). In addition, career mobility for academics may be unattractive as it can lead to increases in non-research based activities, such as administration and leadership duties; and, therefore, faculty members might be content to maintain the same salary and job level in order to focus on research production. The above findings expand career theory by identifying the influence of culture on the relationship between HR practices and performance.

Surprisingly, participation in decision-making was found to have a negative effect on faculty members’ research performance. This finding is contrary to previous studies in HPHRPs which suggest that participation in decision-making and involvement in influencing work process are positively associated with individual outcomes (Gong, Law, Chang, and Xin, 2009; Tzafrir, 2005). Again, it is likely that participation in decision-making requires academics to spend more time away from research activity and therefore reduces their research performance. This result may also be explained by the critical role played by the cultural dimension. In Saudi Arabia it is common to have high power distance between those in authority (e.g., superiors) and subordinates (Hofstede, 2003). This is likely to negatively affect employees’ motivation to participate in decision-making and influence the work process, as these behaviours would involve more interactions with superiors which could be quite formal and burdensome, as well as requiring extra time and effort to be completed. These results reflect those of Alghanim and Alhamali (2011) who also found that involvement in administrative activities was associated negatively with academic research productivity. Furthermore, several reports have shown that the allocation of more time to research work versus administrative or teaching work has a positive relation to research performance (e.g. see McGill and Settle, 2012).

With regards to objective career success, only internal mobility had a positive effect on salary progression. In addition, internal mobility and recognition were positively associated with academic promotion. Surprisingly there was a lack of evidence for the relationship between the remaining HPHRPs, namely training and participation in decision-making and objective career success. A possible explanation for this outcome may be due to the nature of public sector work compared to the private sector, and the different management culture in the Middle East (Iles, Almhedie, and Baruch, 2013). Another possible explanation may be the role of Wasta (Middle-Eastern type of “piston”) in the promotion process, as identified by Weir et al. (2016), which reduces the incidence of merit-based career advancement that would be more likely to account for training and participation in decision-making in promotional decisions.

In terms of subjective career success, only internal mobility and recognition were associated with career satisfaction. Our findings support the view that career progression is positively correlated with career satisfaction (Van Scotter, Motowidlo and Cross, 2000). Individuals look for future career options as part of their career exploration (Jiang, Newman, Le, Presbitero, and Zheng, 2019), but as we manifest, context is critical to understand why and how individual pursue their careers.

Academic research performance partially mediated the relationships between training and salary progression and promotion. This result is interesting, as the direct relationship between training and salary progression was not supported. This study confirms that training is associated with the level of research performance, which in turn impacts on career progression; and reiterates similar findings from other sectors (Bartel, 1995).

In addition, academic research performance fully mediated the relationships between recognition and salary progression, and partially mediated the relationship between recognition and academic promotion. Previous studies show that job performance mediates the relationship between HPHRPs and institutional success (Boxall et al., 2011). We therefore extend previous findings on the relationship between HPHRPs and desired individual and organizational outcomes into the academic sector.

It is surprising that research performance negatively mediated the relationship between academic participation in decision making and salary. This finding might be due to lack of direct effect of participation in decision making on research performance. This is contrary to previous studies in HPHRPs which have suggested that participation in decision making is positively associated with individual outcomes (Gong et al., 2009; Tzafrir, 2005). There may also be a critical role played by the cultural dimension, namely the tendency for Arab countries to have high power distance (Hofstede, 2003). Individuals may, therefore, react adversely to involvement in decision-making, which could negatively affect their job satisfaction and performance. Another possible explanation may be that performance is both task-focused and contextual (Motowidlo and Van Scotter, 1994), thus the ability and willingness to be involved in decision making may indeed increase contextual performance, while decreasing task performance in the academic setting. Another possible explanation is the stress afforded by the existence of multiple tasks in academia (Baruch, 2013; Baruch and Hall, 2004). Participation in decision making can be an additional burden for academics, and therefore impacts negatively on research performance. The process of participation in decision making most likely requires many administrative meetings which may be tedious and time-consuming. Furthermore, several reports have shown that the allocation of more time to research work versus administrative work has a positive relationship with research performance (McGill and Settle, 2012).

In term of subjective career success, academic research performance only partially mediates the relationships between recognition and career satisfaction. These results further support the idea that job performance and task achievement play a crucial and important role in reaching career satisfaction (Sonnentag, 2003). However, there was no effect of research performance in mediating the relationship between the remaining HPHRPs and subjective career success. This result may not be surprising if we consider that the academic function consists of three main tasks, only one of which is research performance. Thus, it is possible that the measurement of research performance alone is insufficient to determine whether work performance mediates the relationship between HPHRPs and career satisfaction of faculty members.

Our study increases understanding of the generalizability of HPHRPs and AMO theory to the unique sector of academia (Gould-Williams, 2007) and strongly suggests that HRM practices may not have universal application across different sectors. Thus, we contribute to HRM and Careers literatures by developing and testing our model of high performance HRM practices and academic performance and career success. The study has also advanced our knowledge of the application of HPHRPs in universities in a non-western context, namely Saudi Arabia and its unique cultural, religious and social attributes, especially the role of “wasta” (i.e. “piston” or connections)(Iles et al., 2013, p.465).

This research also advances our understanding of HPHRPs and AMO theory by showing that some opportunities may negatively affect performance in light of different cultural and occupational aspects. Specifically, the findings show that participation has a negative impact on academic research performance. This negative impact could be attributed to the cultural dimension or the nature of the academic context. This result contributes to the understanding of AMO theory by showing that each of the theory’s three components may be impacted by contextual dimensions, such as culture and occupation.

# Practical Implications

The findings of the present research have several important implications for people management in public sector universities, especially in developing countries. If public sector universities want to improve research outcomes, then the focus on the implementation of some HPHRPs is important. In particular, the study sheds light on how certain HR managerial practices can improve faculty members’ research performance and career success.

Specifically, universities should ensure that their faculty members are provided with adequate on-going training opportunities to reinforce their knowledge, skills, and abilities. Training programs should also be designed to help enhance academics’ research-related skills and promote their career success. Moreover, universities need to look at the management of academics’ research careers as an institutional responsibility, for example, they could conduct research training workshops focused on the management of research projects or publication strategy (Nguyen, 2016). They should also encourage a more cooperative culture where senior researchers provide mentoring support to early career researchers. In order to maximize the benefit through sharing previous experiences and expanding the circle of relationships with the various related parties regarding knowledge exchange and research production.

Recognition also has a significant impact on academic research performance, which in turn is a strong driver of academic career success. Therefore, universities should ensure that there are formal and informal practices to recognize the achievements of faculty members. These practices are cost-effective and easy to develop. In addition, the study suggests that universities can limit the process of participation in decision-making for academics, due to its negative impact on their research performance and career success.

# Limitations

Conceptually, this study adopted a focused research model to examine the relationship between HRM practices, research performance and career success, which means we cannot account for all other factors that could impact on these relationships (i.e. personality, career stage, self-efficacy, organisational culture etc). Also, we cannot compare across organizations how the strength of an HR system influences employees. Empirically, we applied a cross-sectional strategy, and consequently conclusions regarding causality or reversed causality cannot be absolutely confirmed (Hair et al., 2010), although we based our directional hypotheses on well-established theory in HRM. While CFA results suggest there is no common method bias, the possibility remains that dependence on a single data source can affect the findings. Nevertheless, several variables were based on the reporting of hard data, not attitudes, values or perception. As for some of the non-significant results, HRM practices may have both positive and negative impacts, and we cannot rule out the possibility that the positive and negative effects offset each other and result in non-significant relationships between a bundle of practices and the various outcomes. Another limitation is the single country context, though Saudi Arabia may represent the region in terms of culture and approach to management.

# Conclusion and Future Research

This paper bridges the gap between HRM practices and research performance, and career success, in the academic sector. We hope that HRM researchers will be encouraged to do further research in this area. For example, future research could investigate the impact of HPHRPs on other types of academic performance, such as teaching, and the relationship with career success as well as other general individual outcomes. Moreover, this study indicates that universities can help academics to produce high quality research by offering more training and also ensuring that there are suitable levels of recognition and internal mobility in the organizational environment.

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Figure 1: The Conceptual Framework

**Organizational HR practice**

**Empowerment-Enhancing practices**

**Skill- Enhancing Practices**

**Motivation-Enhancing Practices**

Internal Mobility (MEPIM)

Recognition

Participation

Training

**Subjective Career Success**

**Objective Career Success**

Career Satisfaction

Promotions

Salary Progression

Research Performance

**Organizational HR practice**

**Empowerment-Enhancing practices**

**Skill- Enhancing Practices**

**Motivation-Enhancing Practices**

Internal Mobility (MEPIM)

Recognition

Participation

Training

**Subjective Career Success**

**Objective Career Success**

Career Satisfaction

Promotions

Salary Progression

Research Performance

H1a,b,c,d

H4a.b.c.d

H3a.b.c.d

H2a.b.c.d

H7a.b.c.d

H6a.b.c.d

H5a.b.c.d

Figure 2: The Hypotheses

Table1: Demographic Profile of the Participants

|  |  |  |  |
| --- | --- | --- | --- |
| Demographic Variable | Category | Research Sample (n = 586) | |
| Frequency | Percentage (%) |
| Gender | Male  Female | 405  181 | 69.1%  30.9% |
| Total | | 586 | 100% |
| Age | 29 to 40  41 to 50  51 to 60  More than 60 | 143  254  145  44 | 24.4%  43.3%  24.7%  7.5% |
| Total | | 586 | 100% |
| Marital status | Single  Married  Widowed  Divorced | 37  527  5  17 | 6.3%  89.9%  0.9%  2.9% |
| Total | | 586 | 100% |
| Citizenship | Saudi  Arab  Asian  Westerner | 372  181  15  18 | 63.5%  30.9%  2.6%  3.1% |
| Total | | 586 | 100% |

Table 2: Academic Profile of the Participants

|  |  |  |  |
| --- | --- | --- | --- |
| Demographic Variable | Category | Research Sample (n = 583) | |
| Frequency | Percentage (%) |
| Place of work | KSU  KAU  UQU  KFU  KFUPM | 120  115  122  117  112 | 20.5%  19.6%  20.8 %  20%  19.1% |
| Total | | 586 | 100% |
| Academic rank | Assistant Professor  Associate Professor  Professor | 300  142  144 | 51.2%  24.2%  24.6% |
| Total | | 586 | 100% |
| Working experience | Less than a year  1-5 years  6-10 years  11-20 years  Over 20 years | 22  136  137  161  130 | 3.8%  23.2%  23.4%  27.5%  22.2% |
| Total | | 586 | 100% |
| Origin of PhD degree | Saudi  USA  United Kingdom  Other | 151  108  142  185 | 25.8%  18.4%  24.2%  31.6% |
| Total | | 586 | 100% |
| Contract type | Permanent contract  Fixed-term contract | 367  219 | 62.6%  37.4% |
| Total | | 586 | 100% |

Table 3: Correlations, Cronbach α's and Square Root of the AVE

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **(N = 586)** | α | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Training | 0.79 | **0.714** |  |  |  |  |  |  |
| 2.Internal Mobility | 0.85 | 0.432\*\*\* | **0.761** |  |  |  |  |  |
| 3.Recognition | 0.87 | 0.560\*\*\* | 0.495\*\*\* | **0.754** |  |  |  |  |
| 4.Participation | 0.88 | 0.470\*\*\* | 0.400\*\*\* | 0.845\*\*\* | **0.818** |  |  |  |
| 5.Career satisfaction | 0.90 | 0.339\*\*\* | 0.371\*\*\* | 0.427\*\*\* | 0.335\*\*\* | **0.748** |  |  |
| 6.Research performance | - | 0.093\* | 0.007 | 0.060 | 0.001 | 0.179\*\* |  |  |
| 7.Salary progression | - | 0.010 | 0.084\* | 0.051 | 0.066 | 0.134\*\*\* | 0.400\*\*\* |  |
| 8.Promotion | - | 0.067 | 0.096\* | 0.120\*\* | 0.077 | 0.243\*\*\* | 0.459\*\*\* | 0.302\*\*\* |

Note; the AVE for each construct measured in Likert scale in bold formatted numbers

\* p<0.05 \*\* p< 0.01 \*\*\* p<0.001

Table 4: Direct Relationships Results

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Hypothesis | Independent variables | Dependent variables | Standardised Coefficient | t-values | Results |
| H1a | Training | Research performance | 0.106 | 2.076\* | Supported |
| H1b | Internal mobility | Research performance | -0.045 | -1.027 | rejected |
| H1c | Recognition | Research performance | 0.302 | 2.138\* | Supported |
| H1d | Participation | Research performance | -0.210 | -2.051\* | Rejected |
| H2a | Training | Salary | -0.047 | -0.862 | Rejected |
| H2b | Internal mobility | Salary | 0.130 | 2.762\*\* | Supported |
| H2c | Recognition | Salary | -0.094 | -0.647 | Rejected |
| H2d | Participation | Salary | 0.155 | 0.142 | Rejected |
| H3a | Training | Promotion | -0.027 | -0.520 | Rejected |
| H3b | Internal mobility | Promotion | 0.089 | 1.995\* | Supported |
| H3c | Recognition | Promotion | 0.296 | 2.114\* | Supported |
| H3d | Participation | Promotion | -0.060 | -0.593 | Rejected |
| H4a | Training | Subjective Success | 0.028 | 0.407 | rejected |
| H4b | Internal mobility | Subjective Success | 0.193 | 3.617\*\*\* | Supported |
| H4c | Recognition | Subjective Success | 0.549 | 2.592\*\* | Supported |
| H4d | Participation | Subjective Success | -0.175 | -1.158 | rejected |

\* p<0.05 \*\* p< 0.01 \*\*\* p<0.001

*Table 4:* Mediating Relationships Results

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Hypothesis | Independent variables | Mediators | Dependent variables | Standardized Coefficient | t-values | Results |
| H5a | Training | Research performance | Salary | 0.044 | 2.031\* | Supported  Full mediation |
| H5b | Internal mobility | Research performance | Salary | -0.019 | -1.017 | Rejected |
| H5c | Recognition | Research performance | Salary | 0.124 | 2.057\* | Supported  Full mediation |
| H5d | Participation | Research performance | Salary | -0.086 | -1.976\* | Rejected |
| H6a | Training | Research performance | Promotion | 0.039 | 1.996\* | Supported  Full mediation |
| H6b | Internal mobility | Research performance | Promotion | -0.017 | -1.020 | Rejected |
| H6c | Recognition | Research performance | Promotion | 0.111 | 2.136\* | Supported  partial mediation |
| H6d | Participation | Research performance | Promotion | -0.077 | -2.039 | Rejected |
| H7a | Training | Research performance | Subjective Success | 0.017 | 1.760 | Rejected |
| H7b | Internal mobility | Research performance | Subjective Success | -0.007 | -0.995 | Rejected |
| H7c | Recognition | Research performance | Subjective Success | 0.049 | 2.016\* | Supported  partial mediation |
| H7d | Participation | Research performance | Subjective Success | -0.034 | -1.928 | Rejected |

\* p<0.05 \*\* p< 0.01 \*\*\* p<0.001