



The impact of human resource management practices on performance

Evidence from a Public University

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Abstract

Purpose – The purpose of this paper is to examine the impact of human resource management (HRM) practices on organizational performance.

Design/methodology/approach – A total of 300 employees from a public university comprising of both academicians and support staff responded to the survey. The survey questionnaire had 46 items covering selected HRM practices and university performance.

Findings – The study has found that human resource practices: recruitment, training, performance appraisal, career planning, employee participation, job definition and compensation have a significant relationship with university performance.

Research limitations/implications – The results come from a cross-sectional study which was done at the convenience of the researcher. The results may not be generalized across the country. The application of the results to other universities must be done with maximum care.

Practical implications – If the university is to increase its performance to higher levels, it should emphasize more on job definition, training and employee participation. Some improvement needs to be done on the other HRM practices-recruitment, performance appraisal, career planning and compensation in order to increase their effectiveness on the university performance.

Originality/value – Most studies on impact of HRM practices on firm performance have focussed on private sectors in Malaysia. In other countries, the studies have focussed only on academicians as a sample. This study has attempted to add to the body of knowledge on the impact of HRM practices on university performance in Malaysia combining both the academicians and administration staff.

Keywords Public sector, Performance management, Malaysia, Human resource practices, University performance

Paper type Research paper

Introduction

Employees are one of the most important assets of an organization as they contribute to its growth and success (Danish and Usman, 2010). Malik *et al.* (2010) concluded that in the era characterized by rapid and continuous change, knowledge capital must be retained in order for organizations to be productive and responsive to the needs of their stakeholders. Likewise, universities as training and research institutions need to attract, retain and develop their employees. Universities need employees who are



well trained and motivated so that they are committed to their work of conducting research and training for the development of the nations (Lew, 2009). Research literature has shown that effective application of some human resources management (HRM) practices enables university employees to be committed to their work for good performance of the universities (Chen *et al.*, 2009; Shahzad *et al.*, 2008).

Implementation of appropriate HRM practices for university employees will promote university performance as Lew (2009) noted that employees play a strategic role in improving ratings in key areas like research quality, academic reputation of faculty, academic program quality, research contribution to society, preparation of tomorrow's leaders and quality of graduates. Realizing the importance of promoting university performance, many universities are embarking into strategizing its HRM practices and Malaysia universities have jumped on the bandwagon. Even its government aspires to turn Malaysia into an international hub for world class education through establishment of top and leading universities (Sirat, 2005). For this to materialize, it is significant that the country's universities improve their world class university ranking by attracting and retaining excellent and experience academicians and support staff.

In 2010, the Malaysian Government launched its economic transformation programme (ETP) which is the road map for fast tracking its economic development. One of the sectors which will play an important role is education especially the higher learning institutions. The nation needs more human resources capable of performing different activities both in public and private sectors. Subsequently, the higher learning institutions are expected to produce high-quality human resources. Training and development of well-qualified human resources will depend on the performance of the universities (Malik *et al.*, 2010) subjected to effective implementation of different bundles of HRM practices such as selection, compensation, information sharing, participative decision making, job definition, training, career planning and performance management among others (Delery and Doty, 1996; Smeenk *et al.*, 2006).

Studies on the impact of human resource practices on performance with particular reference to Malaysia have focussed on the private sector (Osman *et al.*, 2011a; Abdullah *et al.*, 2009; Lew, 2009). Literature indicates that past studies have also focussed on the impact of HRM practices on university performance with academicians as the center of focus (Chen *et al.*, 2009; Malik *et al.*, 2010; Lew, 2009; Rowley, 1996). Little empirical research has been conducted to examine the effects of HRM practices on public universities performance in Malaysia. Therefore, this study is to examine the impact of HRM practices on organizational performance in Malaysia with a particular focus on a public university. The next section reviews relevant literature followed by methodology and analyses of the results. Finally, the conclusions and implications for the study are discussed.

Literature review and hypotheses development

Previous studies have found that HRM practices have an effect on employee performance and competitive advantage of an organization (Guest, 2002; Wright *et al.*, 2003; Balochi *et al.*, 2010; Qureshi *et al.*, 2010; Khan, 2010). Pfeffer (1994) identified 16 practices which can enhance a firm's competitive advantage such as employment security, selectivity in recruiting, information sharing, participation and empowerment, training and skill development, incentives, high wages, promotion among others. Meanwhile, Guest (2002) argued that the impact of HRM practices on organizational performance depends on the response of workers

to HRM practices. If employees have a negative perception, organizational performance will be low and vice versa. Furthermore, Ekaterini (2010) reaffirmed the findings of Wright *et al.* (1994) that the nature of organization's human capital and the way it is managed can have an impact on employees and firm performance. Similarly, Huselid (1995) established that the effectiveness of employees largely depends on the impact of HRM practices on employees' behavior.

Meanwhile, Delaney and Huselid (1996) identified recruitment and selection, training and development, participation and reward as HR practices. Lee and Lee (2007) identified training and development, team work, performance appraisal, compensation/incentives, human resources planning and employment security help improve performance including increased employee productivity, product quality and firm's flexibility. On the other hand, Qureshi *et al.* (2010) categorize HRM practices into selection system, training, job definition, performance appraisal system, compensation system, career planning system and employee participation. Therefore, for the purpose of this study, the following HRM practices are considered: recruitment, training, performance appraisal, career planning, job definition, employee participation and compensation.

HR practices and university performance

Organizations are implementing HRM practices and systems to take advantage of the potential strength of the employees to sustain competitive advantage (Jackson and Schuler, 2000; McDuffie, 1995 cited in Khan, 2010). It has also been established that there is a positive and significant relationship between HRM practices and organizational performance (Becker and Huselid, 1998; Ahmed and Schroeder, 2003; Tessema and Soeter, 2006; Rizov and Croucher, 2009; Lee *et al.*, 2010; Khan, 2010). Meanwhile, Abdullah *et al.* (2009) highlighted that training and development, team work, performance appraisal and human resources planning have direct effect on business performance. Green *et al.* (2006) and Khan (2010) found that integrated approach to HRM practices will increase employee satisfaction and commitment which consequently lead to remarkable individual and team performance.

Previous studies on the relationship between HR practices and firm performance have used balanced score card (BSC) or key performance indicators (KPI) across industries (Chand and Katou, 2007; Rizov and Croucher, 2009; Abdullah *et al.*, 2009; Khan, 2010; Osman *et al.*, 2011b). However, there is lack of literature supporting application of BSC or KPI in education sector (Stavarakakis *et al.*, 2010; Nistor, 2009; Jonen and Simgen, 2006; Karathanos and Karathanos, 2005). Currently there is no consensus on BSC or KPIs for assessing university performance. This notwithstanding, the choice of the BSC elements tend to revolve around KPIs related to teaching, learning and growth, research, finance, customer service, student experience, management and governance among others. The following discussion will focus on hypotheses development.

Recruitment and selection and organizational performance

Recruitment is defined as the process by which organizations locate and attract individuals to fill job vacancies (Fisher *et al.*, 1999). It can also be defined as any practice or activity carried on by organization with the primary purpose of identifying and attracting potential employees (Noe *et al.*, 2008). According to Bohlander and Snell (2007) selection is the process of reducing the number and choosing from among those individuals who have the relevant qualifications. Unless suitable people are assessed

and selected, the organization will fail to achieve its objectives and will run into a variety of personnel problems: high turnover, low productivity, high rates of absenteeism and employee stress (Storey, 2007). Therefore, to maximize competitive advantage a company should choose the recruitment method that produces the best pool of candidates efficiently and effectively (Kleiman, 2000).

Recruitment is one of the major functions of HRM and it helps managers attract and select best candidates which in turn leads to improved organization performance (Rehman, 2012). Formal recruitment methods include newspaper classified advertisements, network bulletins, posters and human resource banks, while informal methods include personal connections and introductions through teachers and other staffs (Chen and Cheng, 2012). The effectiveness of different recruitment sources for new employees has been the topic of speculation and research for over 50 years and this effectiveness has primarily been assessed by examining job survival rates and job performance (Breaugh, 2008; Rehman, 2012; Zottoli and Wanous, 2000). In addition, Ferris *et al.* (2002) found that effectiveness of recruitment practices has an impact on organizational effectiveness. Similarly, many researchers agreed that effective recruitment and selection will lead to competitive advantage and high performance of organization (Pfeffer, 1994; Storey, 2007; Zheng *et al.*, 2006; Werther and Davis, 1996). Therefore, we suggest the following hypothesis:

H1. Recruitment and selection has significant relationship with organizational performance.

Training and organizational performance

Training refers to the methods used to give new or present employees the skills, knowledge behaviors and other abilities they need to perform their jobs (DeNisi and Griffin, 2001). Training is intended to modify individuals skills or attitudes (Herold and Fedor, 2003). Training also contributes to the development of positive dispositions toward growth and change as enacted by individuals as well as groups and teams (Paul, 2009a). Given the increasing complexity of the tasks and skills needed in modern society, developing effective training strategies is of tremendous practical importance, i.e., training that improves performance of both trained and untrained tasks would be highly efficient (Barzegar and Farjad, 2011; Lee *et al.*, 2012; Tung-Chun, 2001). Training enhances employees' capabilities which is instrumental in improving overall organizational performance (Mackelprang *et al.*, 2012; Millar and Stevens, 2012). Previous studies reveal that there is a positive relationship between training and organizational performance (Qureshi *et al.*, 2010; Khan, 2010; Abdullah *et al.*, 2009; Katou and Budhwar, 2006; Chang and Chen, 2002; Huselid, 1995; Singh, 2004). For example, Khan (2010), Katou (2008) and Qureshi *et al.* (2010) concluded that HRM practices have profound effect on organizational performance. HRM practices such as selection and training and development enhances employee performance by providing relevant skills. Similarly, Paul (2009b) revealed that employee training is also significant for organizational performance as it is a mean through which organizational culture and employee behavior can be aligned to outcomes. Thus, the following hypothesis is suggested:

H2. Training has significant relationship with organizational performance.

Performance appraisal and organizational performance

Performance appraisal can be defined as the process of determining and communicating to an employee how well he or she is performing on the job and ideally establishing a plan of improvement (Byars and Rue, 2004; Young *et al.*, 1995). Appraisal comprises an objective evaluation of an employee's performance combined with an outline of measures to be taken for improvement and counter-signed by both employee and manager (Osman *et al.*, 2011b). The term "performance appraisal" has generally meant the annual interview that takes place between the manager and the employee to discuss the individual's job performance during the previous 12 months and the compilation of action plans to encourage improved performance (John and Steven, 2000).

Literature indicates that there is a significant relationship between performance appraisal and organizational performance (Khan, 2010; Qureshi *et al.*, 2010; Abdullah *et al.*, 2009; Lee and Lee, 2007; Chang and Chen, 2002). For example, Brown and Heywood (2005) argued that complementary HRM practices, i.e., formal training and incentive pay enhance performance appraisal leading to a greater influence of productivity. Managing performance of employees forms an integral part of an organization and reflects how they manage their human capital (Meyer and Kirsten, 2005). Moreover, ineffective appraisal practices can lead to many undesirable problems including low morale, decreased employee productivity and low enthusiasm to support organizations, hence decrease organizational performance (Osman *et al.*, 2011b). In fact, an effective performance appraisal should encompass an overall framework or context that enables the entire process to operate at an optimal level of performance (Giles *et al.*, 1997). Therefore, the following hypothesis is suggested:

H3. Performance appraisal has significant relationship with organizational performance.

Career planning and organizational performance

Career planning is the deliberate process through which someone becomes aware of his or her personal skills, interests, knowledge, motivations and other characteristics; acquires information about opportunities and choices; identifies career-related goals; and establishes action plans to attain specific goals (Abdulkadir *et al.*, 2012). It aligns strategy with future human resources needs (Werther and Davis, 1996) and is integral to the career development process (Rogers and Creed, 2011).

Many researchers agree that career planning influences performance of both employees and organization (Osman *et al.*, 2011b; Qureshi *et al.*, 2010; Katou and Budhwar, 2006; DeNisi and Griffin, 2001). Planning for a career and exploring potential career options are actions designed to implement one's goals to progress vocational development (Rogers *et al.*, 2008). Its help in balancing the preferences and abilities of the employees and the requests of the organization. In other words, career planning and development as a process, aligns the interests and skills of the employees with the needs of the organization (Nwuche and Awa, 2011) which in turn leads to enhanced organizational performance. The discussion therefore, suggests the following hypothesis:

H4. Career planning has significant relationship with organizational performance.

Job definition and organizational performance

A job description can best be thought of as a blue print of the position. It outlines the essential duties and responsibilities that are expected of the employee and the basic purpose of the work the employee is expected to perform (Marie and Brian, 2005). Thus, the job description has life; it is a living, viable document that dictates success or, conversely in its absence, allows a climate of confusion, shoddy work practices, vague and subjective performance evaluations, and organizational disharmony (Manning *et al.*, 2012).

The majority of hiring mistakes made could be prevented if the people responsible for the hiring simply did a more effective job of determining exactly what they were looking for before they started to look for the candidate (Erica and Brian, 2002). Proper job description and specification which originate from job analysis clearly outline the duties, responsibilities, working conditions and expected skills of an individual in performing a job (Manning *et al.*, 2012). As Ruwan (2007) argued that conducting job analysis and subsequently providing employees with job description prevents the situation in which employees do not know what is expected of them.

There is a direct relationship between the strength and effectiveness of an organization and the quality of job descriptions (Manning *et al.*, 2012). With the information gathered during the job analysis step, a manager will be able to improve the job description as needed (Bob, 2008). A precise job description would lead to company effectiveness (Bozena, 2002; Chi Ming and Brian, 2002). Thus, the following hypothesis is proposed:

H5. Job description has significant relationship with organizational performance.

Employee participation and organizational performance

Participation is the mechanism of work dialog among workers, which gives them the opportunity to exchange information and ideas (Adel Mohammad, 2010). It is an arrangement that ensure that employees are given the opportunity to influence management decisions and to contribute to the improvement of organizational performance (Abdulkadir *et al.*, 2012). Participation is about employees playing a greater role in the decision-making process and would lead to company performance effectiveness (Antonio *et al.*, 2000; David *et al.*, 2006; Denton, 1994).

There is evidence to suggest that employee participation enhances the performance of firms (Osman *et al.*, 2011b; Khan, 2010; Qureshi *et al.*, 2010; Katou and Budhwar, 2006; Zheng *et al.*, 2006; Rizov and Croucher, 2009; George, 1999). For example, David *et al.* (2006) consider manufacturing excellence, competitiveness and a company's ability to continuous innovation to be dependent among others on the participation and involvement of employees at different levels. Further, TQM organizations, for example, use a participative approach in decision making because doing so offers a number of benefits (Jan Kees and Michiel, 2002). At the same time, indirect means of participation, such as works councils, can have a useful role to play this may be of much less significance to employees than the direct involvement that line managers can create (Rees and Christine, 1998).The following hypothesis is proposed:

H6. Participation has significant relationship with organizational performance.

Compensation and organizational performance

Compensation is a reward system that a company provide to individuals in turn for their willingness to perform various jobs and tasks within organizations (DeNisi and Griffin, 2001). Appropriate and equitable rewards need to be provided to the employees so that they feel valued and the reward matches with their skills, abilities and contribution to the firm (Fisher *et al.*, 1999).

It has been found that there is a significant relationship between compensation and employee and organizational performance (Giorgio and Arman, 2008; Shin-Rong and Chin-Wei, 2012; Danish and Usman, 2010; Khan, 2010; Qureshi *et al.*, 2010; Tessema and Soeter, 2006; Katou and Budhwar, 2006; Chang and Chen, 2002). For example, Mayson and Barret (2006) found that a firm's ability to attract, motivate and retain employees by offering competitive salaries and appropriate rewards is linked to firm performance and growth. On the other hand, Inés and Pedro (2011) found that the compensation system used for the salespeople has significant effects on individual salesperson performance and sales organization effectiveness. Therefore, in an ever competitive business environment, many companies today are attempting to identify innovative compensation strategies that are directly linked to improving organizational performance (Steven and Loring, 1996; Denis and Michel, 2011). The following hypothesis is proposed:

H7. Compensation has significant relationship with organizational performance.

Methodology

As has been mentioned earlier, education sector plays a vital role toward the success of a nation's economic plan and universities are expected to produce high-quality graduates. For this to be realized, it is significant that universities attract and retain excellent and experience academicians as well as support staff. Attracting and retaining excellent staff will require a sound HRM practices. In addition, an employee's belief about HRM practices may differ from one person to another (Chen *et al.*, 2009; Nasurdin *et al.*, 2008). For this reason, a study on the employees' evaluation of the impact of HRM practices on organizational performance with particular reference to Malaysia is justified.

Recently an effort was made by the Ministry of Higher Education to develop KPI for governance of public universities in Malaysia (Hazadiah and Faizah, 2006). The five main KPIs resulted from the study were research, publication, internationalization/networking and linkage, teaching, supervision and leadership which are also reflected in the KPIs of the selected university in this study. It was the first technical university to be granted a "research university" status in 2010. It has established its own KPI since 2009 consisting of reputable international ranking, globally marketable and outstanding graduates, large amount of funding in research and development, adequate infrastructure and facilities, good reputation to attract students, relevant curriculum for academic and professional development programs, high number of postgraduate students, accredited academic programs, scholarly publications and citations, good marketing and branding capabilities and good national and international linkages.

The selected university has approximately 2,300 academic and 2,400 supporting staff. A non-probability sampling with a convenience sampling techniques was used in this study. A total of 1,000 questionnaires were distributed equally to academic and support staff at all faculties and administration offices.

The questionnaire instruments were adapted from Singh (2004), Qureshi *et al.* (2010) and Shahzad *et al.* (2008). The instrument was divided into three parts: Human Resource Practices, University Performance and Demographics. The first part consists of 35 items measuring the degree to which HRM practices construct including recruitment and selection, training, performance appraisal, career planning, job definition, employee participation, compensation are being applied in the chosen university. The participants were asked to rate the 35 elements based on five-point Likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree.

The second part measures university performance through 11 items. The participants were asked to rate their perceived university performance against other universities based on five-point Likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. The third part covers demographic questions. It includes items such as age, gender, staff category, location, department/school/faculty, work experience and academic qualification.

Findings

Out of 1,000 questionnaires distributed to the university staff, 329 questionnaires were collected. In total, 29 incomplete questionnaires were excluded from the analysis. Table I shows profile of the respondents. Out of the 300 participants, 111 were below 30 years, 98 were within the range of 30-40 years, 53 were within the range of 41-50 years and 38 were above 50 years. Majority of the respondents were below 40 years. Out of 300 participants, 33.7 and 66.3 percent were male and females, respectively. Academic and support staff represent 30.3 and 69.7 percent of the respondents, respectively.

Table II shows the factor analysis results. The principal component factor analysis with varimax rotation approach were used, and resulted in eight factors with factor loading ranging from 0.766 to 0.3915 indicating that each item loaded significantly in the corresponding factor. In addition, Cronbach α for each factor ranging from 0.704 to 0.922 for selection and recruitment, job definition, employee participation, training, career planning, performance appraisal, compensation and UTM performance.

Table III indicates the results of correlation analysis where all variables have positive relationship and statistically significant at $p < 0.01$. The results are in line with the findings of Qureshi *et al.* (2010) where it was found that the variables are correlated. Career planning and performance appraisal have the highest correlation of 0.704 while job definition and training has the lowest correlation of 0.434.

Background information	Range	Frequency	%
Age	Below 30	111	37.0
	30-40	98	32.7
	41-50	53	17.7
	Above 50	38	12.6
Gender	Male	101	33.7
	Female	199	66.3
Staff category	Academics	91	30.3
	Support staff	209	69.7

Table I.
Profile of respondents

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
<i>Organizational performance (α = 0.922)</i>								
Strong national and international linkages	0.766							
Strong marketing and branding capabilities	0.736							
Produces scholarly publications and citations	0.725							
Invest a lot funds in research and development	0.703							
Adequate and best infrastructure and facilities compared to the competitors	0.699							
Good reputation to attract students	0.694							
Programs are accredited by professional bodies	0.693							
Introduces new executive and professional development programs	0.669							
Produces globally marketable and outstanding graduates compared to other universities	0.663							
Reputable international ranking among universities	0.628							
International Postgraduate students than its local competitors	0.488							
<i>Training (α = 0.844)</i>								
Training needs are identified through a formal performance appraisal mechanism		0.729						
New knowledge and skills are imparted to me to work in teams		0.677						
There are formal training programs to teach new employees the skills they need to perform their jobs		0.651						
Attending training programs every year		0.644						
Training needs identified are realistic, useful and based on business strategy		0.609						
Extensive training programs for its employees in all aspects of quality		0.598						
<i>Compensation (α = 0.877)</i>								

(continued)

Table II.
Exploratory factor analysis and reliability analysis

	Factor 1	Factor 2	Factor 3	Factor 4	Factor loading Factor 5	Factor 6	Factor 7	Factor 8
Compensation is decided on the basis of competence or ability of employee			0.794					
The compensation is directly linked to my performance			0.761					
Attractive compensation system			0.712					
Salary reflects the standard of living			0.694					
Salary comparable to the market			0.683					
Job performance is an important factor in determining the incentives and compensation of employees			0.451					
<i>Job definition ($\alpha = 0.819$)</i>								
The duties of my job are clearly defined				0.782				
My job has an up to date job description				0.757				
I know very well what is expected of me from my job				0.724				
The actual job duties are shaped more by myself than the formal job description				0.715				
The job description for my job contains all the duties performed by me				0.757				
<i>Employee participation ($\alpha = 0.829$)</i>								
Allowed to make decisions related to cost and quality matters					0.611			
Participation in operations related to decisions					0.703			
Opportunity to suggest improvements in way things are done here					0.692			
Information is shared					0.676			
<i>Selection and recruitment ($\alpha = 0.704$)</i>								
Head of departments and Assistant Registrars participate in selection process						0.623		
The selection system is highly scientific and rigorous						0.587		
Valid and standardized test are used when required in the selection process						0.559		

(continued)

	Factor 1	Factor 2	Factor 3	Factor loading			Factor 7	Factor 8
				Factor 4	Factor 5	Factor 6		
Selection employees having desired knowledge, skills and attitude					0.556			
<i>Performance appraisal ($\alpha = 0.868$)</i>								
Performance based feedback and counseling							0.518	
Performance appraisal system							0.438	
Appraisal system has a strong influence on my behavior and team behavior							0.471	
Has written and operational performance appraisal system							0.463	
Appraisal system is based on growth and development oriented							0.461	
Performance evaluation is considered important task by my supervisor							0.493	
My performance is measured on the basis of objective and quantifiable results							0.391	
<i>Career planning ($\alpha = 0.856$)</i>								0.432
Prefers an internal employee when vacancy occurs								0.593
Plans for career and development for me as an employee								0.581
I am aware of my career path								0.566
I have clear career paths								0.543
My personal and organizational growth needs are matched								0.535
Promotion is done based on merit								0.463
My career aspirations are known by my immediate supervisor								0.458
I have more than one potential position for promotion								1.185
<i>KMO = 0.947</i>								2.324
Total Eigenvalues	19.362	3.084	2.179	1.91	1.563	1.494	1.326	
% of variance explained	37.965	6.048	4.272	3.744	3.064	2.928	2.6	

Table II.

	R&S	T	PA	CP	EP	JD	EC	UP
(R&S)	1							
(T)	0.592** 0.000	1						
(PA)	0.612** 0.000	0.665**	1					
(CP)	0.544** 0.000	0.589**	0.704**	1				
(EP)	0.457** 0.000	0.453**	0.620**	0.628**	1			
(JD)	0.485** 0.000	0.434**	0.578**	0.558**	0.547**	1		
(EC)	0.482** 0.000	0.470**	0.549**	0.582**	0.548**	0.480**	1	
(UP)	0.507** 0.000	0.497**	0.529**	0.536*	0.491**	0.504**	0.532**	1

Notes: R&S, recruitment and selection; T, training; PA, performance appraisal; CP, career planning; EP, employee participation; JD, job definition; EC, employee compensation and UP, university performance. **Correlation is significant at the 0.00 level (one-tailed)

Table III.
Correlation matrix

Table IV shows that there are significant relationship between recruitment, training, performance appraisal, career planning, employee participation, job definition, compensation and university performance, thus, *H1-H7* were supported.

Discussion and conclusions

The objective of the study is to examine the impact of HRM practices on organizational performance. The study revealed that HRM practices have significant impact on organizational performance. It has been found that university performance can be attributed to HRM practices including recruitment, training, performance appraisal, career planning, employee participation, job definition and compensation. This study is consistent with Qureshi *et al.* (2010), Chen *et al.*, 2009, Khan (2010), Huselid (1995), Rizov and Croucher (2009), Chang and Chen (2002).

Universities need to have an effective recruitment policy to promote scientific selection of prospective employees. The heads of department and assistant registrars should participate in selection process as they have different preferences in the candidates.

Variables	Proposed effect	R^2	β -coefficient	F change	Significance level
Recruitment	+	0.257	0.507	103.286	0.000
Training	+	0.247	0.497	97.89	0.000
Performance appraisal	+	0.28	0.529	115.796	0.000
Career planning	+	0.288	0.536	120.269	0.000
Employee participation	+	0.241	0.491	94.554	0.000
Job definition	+	0.254	0.504	101.444	0.000
Compensation	+	0.283	0.532	117.53	0.000
Overall	+	0.437		32.439	0.000

Notes: $n = 300$. Significance level $p < 0.05$

Table IV.
Regression analysis
results

Candidates need to be selected based on requisite skills knowledge, attitude and qualification using appropriate selection techniques. Besides, appropriate training program for both academicians and support staff should be organized to continuously improve the skills of employees. Furthermore, performance appraisal should be guided by the performance management policy. Employee's performance should be assessed based on quantifiable standards and feedback be given to employees on their performance.

It was found that career planning contributes the most to university performance ($\beta = 0.536$). The managers should understand employees' career plans so that they match the career aspirations of employees and the needs of the university. Similarly, it implies that increasing employee involvement and participation in decision making regarding their career plans will greatly enhance university performance. In this sense, Chen *et al.* (2009) proposed an integrated performance measurement system for universities. Learning and growth is one of the dimensions which include progression of staff to move up the career ladder hence the importance of career planning for performance improvement. Since HRM practices have a significant impact on organizational performance, managers need to implement them in an integrated and coherent manner (Chen *et al.*, 2009; Wickramasinghe and Gamage, 2011).

Organization including universities need to attract and retain talents and leverage them for competitive advantage (Khan, 2010). Candidates need to be selected based on requisite skills knowledge, attitude and qualification using appropriate selection techniques. Furthermore, appropriate training program for academicians and support staff should be organized to continuously improve their skills in line with the developments needs of the university and employees. Consequently, management and the supervisors should allow the employees to participate on decision making on issues which affect the employees. Open communication or information sharing promote fast decision making. This will influence commitment and job satisfaction among employees (Katou, 2008).

One of the major limitations of this study is the small sample size thus the findings are not generalizable. Future research should include more universities both public and private. In addition, future researchers should also consider moderating variables such as university culture, organization climate, the labor market, legal and regulatory environment.

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