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C.M. Siddique

Abstract This study examined the impact of job analysis on organizational performance among 148 companies based in the United Arab Emirates (UAE), a Gulf-region country. Survey results indicated that a practice of **proactive job analysis was strongly related to organizational performance**. This relationship was strongest to the extent that companies maintained HR information systems, accorded HR greater involvement in strategic planning and emphasized competency-based characteristics of employees in the job analysis approaches they used. The findings suggest that a company-wide policy of job analysis is an important source of competitive advantage in its own right, and merits due attention of HR professionals, line managers and top management. The study extends the findings of the HR–performance research pursued in Western countries to a non-Western context.

Keywords Job analysis; strategic HRM; HRIS; competency focus; organizational performance; competitive advantage; United Arab Emirates (UAE).

Introduction

Much of the earlier research on job analysis focused on methodological aspects of the concept of job analysis. These research efforts made an important contribution to the field of HR management by developing techniques and procedures to generate accurate and practically useful job-related data (McCormick, 1979; Cornelius *et al.*, 1979; Ash and Levine, 1980; Bemis *et al.*, 1983; Gael, 1988). This laid the groundwork that allowed HR professionals to identify and examine several possible applications of job analysis information. In recent years, however, some writers have moved a step forward by stressing the importance of job analysis as a strategic HRM practice with potential contribution to organizational performance (Cascio, 1998; Bowin and Harvey, 2001). With increasing recognition of the HR–performance linkage, it has been suggested that organizations that actively pursue job analysis as an HR planning strategy are likely to gain competitive advantage (Anthony *et al.*, 2002; Dessler, 2003). Continuing this line of analysis, the present paper examines the impact of job analysis on organizational performance with survey data collected from the United Arab Emirates (UAE).

The UAE is a fast developing country in the Gulf region. Apart from being an oil-and-gas-rich country, UAE is widely known as an open and forward-thinking country, willing to experiment with innovative management practices and development models that will assist it in seeking an effective diversification of its economy. With influx of multinational companies over the past decade, UAE has achieved an impressive

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mix of domestic and foreign companies. The growing competition in a relatively small UAE market (with a little over 3 million population) has made both domestic and foreign companies intensely productivity conscious. This, in turn, has generated a strong interest and enthusiasm among companies to search actively for the best management practices in all fields, including HRM, to improve their efficiency and overall performance. Thus, UAE offers an appropriate setting to examine how a basic HR practice, such as job analysis, which has received considerable attention in Western countries as a useful HR planning tool, affects organizational performance in a developing country. The present study may be seen as an opportunity to validate and extend the findings of HR–performance studies conducted in Western countries to a non-Western context.

The importance of job analysis as a topic for cross-cultural examination should be evident from the fact that most writers view it as the ‘backbone’ or ‘cornerstone’ of nearly all HR resource activities (Schuler and Jackson, 1996: 180; Sherman *et al.*, 1998: 90; Dessler *et al.*, 1999: 127). It provides a rich source of information about jobs and jobholders that HR professionals use to develop such important documents as ‘job description’, ‘job specification’ and ‘performance standards’. These documents serve as a basis of HRM decisions in a number of interrelated areas. HR activities of recruitment and selection strategies, training and development, performance appraisal, compensation, and health and safety requirements are all increasingly designed around the demand and characteristics of jobs. The effectiveness of these HR practices requires that jobs must be clearly understood by both the jobholders and the organization. The practice of job analysis provides this understanding. Thus, intuitively, it makes sense to expect a close relationship between job analysis and company performance (Cascio, 1998: 161).

However, despite an increasing recognition of the central role of job analysis in all HR activities, there is little empirical research that *specifically* links job analysis to organizational performance. The present study was designed to elaborate this linkage theoretically and test it with empirical data obtained from a survey of 148 UAE-based companies.

Conceptual model

Over the past two decades, a growing number of management and HR professionals have argued that investment in sound HR practices and programmes pays off for an organization through improved productivity and superior financial performance. Peter Drucker (2002) and several other writers (e.g. Towers, 1992; Pfeffer, 1998; Greer, 2001) suggest that the success of companies in the present competitive environment largely depends upon the calibre of their human resources and innovative employee management programmes and practices. In a widely cited study, Mark Huselid (1994), for instance, has demonstrated that well-formulated HR programmes not only reduce employee turnover but also make a substantial contribution to financial performance and productivity (see also Huselid, 1995; Delaney and Huselid, 1996). Several case studies have reached similar conclusions. Anthony *et al.* (2002), for instance, attribute Southwest Airline’s continued success, remarkable level of efficiency and customer satisfaction to its HR strategy and the special bond it has established with its employees. Recent research on best HR practices has shown that the HR function is indeed an important success factor (Thompson and Strickland, 2001; Greer, 2001).

As noted above, while the potential contribution of the practice of job analysis to organizational performance has not been systematically investigated, there is enough anecdotal evidence in the current HR–performance literature to expect a positive impact of job analysis on performance. In addition to the emerging case study data describing

how certain companies have benefited from job analysis, one important reason for expecting a positive link between job analysis and performance is the central position that job analysis occupies in HR practices that contribute to organizational performance. Sherman *et al.* claim, for instance: 'The ultimate purpose of job analysis is to improve organizational performance and productivity' (1998: 90). The practice of job analysis has the potential to make this contribution to organizational performance both *directly* and *interactively* with other key HR practices. Some of the important HR practices that might augment the positive outcome of job analysis include the *type of job analysis* pursued, the sophistication of an organization's *HR information system* (HRIS) and the extent of *HR involvement* in strategic planning activities (Dessler *et al.*, 1999; Anthony *et al.*, 2002).

Taking a lead from the growing body of literature on HR-performance linkage (e.g. Guest, 1997; Wright *et al.*, 1998; Richardson and Thompson, 1999; Truss, 2001; Greer, 2001) we outline in Figure 1 a tentative conceptual model that we shall develop and test in this study. In the proposed model, we treat the practice of job analysis as an independent variable and HR involvement and HRIS as moderating variables. The *type of job analysis approach* used (conventional versus competency focused) is an important strategic consideration, and might influence organizational performance *both* as an independent force and as a moderator of the relationship between the general practice of job analysis and performance. As the current literature would suggest, HRIS and HR involvement in corporate planning are other equally important strategic factors and can influence organizational performance in their own right. However, from the point of view of the present study, their moderating role seems to promise a better explanation of the process by which job analysis relates to performance. With respect to organizational performance, the present study, in recognition of the multidimensional nature of the concept, defined performance in terms of achieving superior results in the following four key areas: *administrative efficiency*, *quality of organizational climate*, *financial performance* and *relative firm performance*. These performance dimensions are the primary dependent variables in the proposed model. Finally, the proposed model includes a set of control variables relating to company background and demography (i.e. size, age of the organization, ownership status and training and development opportunities), which are recognized for their influence on performance.

In the section that follows, we explain the process by which job analysis and other variables can be linked to organizational performance. Next, we shall briefly explain the possible impact of organizational background characteristics on performance.

Research hypotheses

Practice of job analysis and organizational performance

Companies that regularly conduct job analysis possess a much better knowledge of their employees' strengths and limitations, and can take timely corrective action to improve any deficiencies in their skills and job behaviour (Clifford, 1994). A regular or proactive job analysis practice can help a company in creating a proper infrastructure by defining the tasks to be performed as well as the timelines for performing them. A clear delineation of roles and responsibilities through job analysis and its availability to job incumbents ensures that every level of organizational hierarchy understands its contribution and adds value to the product/service development and delivery with minimum overlap or wastage of resources.

A proactive job analysis also contributes to organizational performance by promoting positive job attitudes and work commitment. Among other things, it offers a useful opportunity to assess the physical and social context of work and make necessary

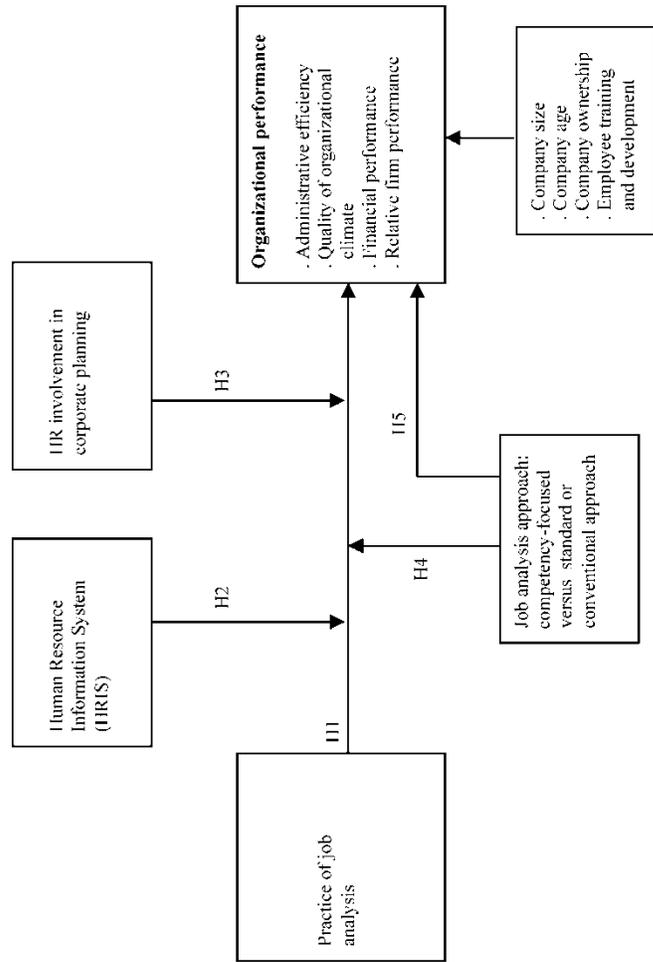


Figure 1 A conceptual model depicting the hypothesized relationships between job analysis, moderators (HRIS, HR involvement, competency focus), control variables and organizational performance

changes to enhance employees' interest in their jobs (Dessler *et al.*, 1999). In addition, job analysis can be used to identify factors that shape workers' motivation and job satisfaction. Timely and accurate information on job duties and responsibilities as well as level of performance required to achieve results provides workers with clear direction and definite targets to pace their performance efforts efficiently. Job descriptions and performance standards regularly updated with the most recent job analysis can immensely help the HR professionals to identify and eliminate unnecessary job requirements, areas of conflict or dissatisfaction (Gomez-Mejia *et al.*, 2000; Mondy *et al.*, 2002). As a result, workers develop a better understanding of company expectations relating to customer treatment, production and service delivery standards. This role clarity, in turn, improves workers' morale, job satisfaction and productivity.

Regular practice of job analysis thus serves as an invaluable source of feedback for employees and their supervisors. HR managers can use this feedback to develop such useful programmes as job rotation, job enlargement and job enrichment to achieve a better match between job demands and employee skills and abilities. These programmes allow more effective management of employees' job-related complaints and grievances, and can help forge a more favourable organizational climate (Ivancevich, 1998). Several companies, such as Lincoln Electric, Nabisco, Wal-Mart and Whirlpool, for instance, have made significant improvement in their performance by developing innovative job redesign programmes grounded in empirically verifiable job-related data (Santora, 1992; Wiley, 1993; Jones, 2001; Anthony *et al.*, 2002). In general, the experience of most companies indicates a positive impact of job analysis leading to greater administrative efficiency and cost savings, better organizational climate and improved productivity in the form of sales and profit growth. To test this line of explanation with first-hand data, we suggest the following hypothesis:

Hypothesis 1: Companies that pursue proactive job analysis as a company-wide practice are likely to show higher performance than companies conducting job analysis infrequently or in response to internal or external pressures.

Job analysis, HRIS and organizational performance

In order to make proactive human resource decisions, a company needs an effective HR information system (HRIS). A well-designed HRIS must provide current and accurate data on both the external challenges facing the organization and the internal organizational resources and needs. Job analysis, which offers useful insight into actual job characteristics found in each job, is an integral part of an effective HRIS. The key documents based on job analysis, which provide a foundation for all HR planning activities, namely, job descriptions, job specifications and job standards, are usually included in a company's HRIS. Many other relevant pieces of information contained in the HRIS pertaining to employees, such as job performance, compensation, government regulations, legal compliance, etc., make it a vital resource for HR specialists and line managers to stay abreast of company needs and new developments in the external environment. An HRIS with such valuable planning ingredients would certainly improve administrative efficiency, organizational climate and performance.

Several writers note that companies with effective HR information systems are apt to make informed and proactive decisions concerning jobs, human resources, as well as more broad administrative, ethical and legal issues (Kavanaugh *et al.*, 1990; Cascio, 1998). An HRIS is found particularly useful to monitor customer complaints, employee grievances, absenteeism and turnover. Since most computerized HR information systems contain

inventories of employee skills and programmes for tracking applicants, they can serve as a valuable source for recruitment, selection and a number of other HR functions. MCI Telecommunications, for instance, has developed an automated résumé-tracking system, which allows a quick and accurate identification of qualified applicants (Stevens, 1993). The HR information systems of companies like Shell Canada, Hewlett-Packard and Bell Helicopter are often lauded for allowing these companies to allocate their human resources effectively and achieve greater administrative efficiency and a productive work environment in a cost-effective manner (Fitz-Enz, 1990; Allan, 1997; Dessler *et al.*, 1999). Apple Computers has successfully used its HRIS to seek integration of its multiple HR needs into a single system. For instance, its HRIS allows employees to enrol in company's benefit programmes directly from their PCs, while line managers can use learning modules that instruct them in a variety of skill improvement programmes (Laabs, 1993).

These examples suggest that the use of HRIS is likely to enhance the impact of job analysis on organizational performance by way of improving the speed and quality of HR decisions. In the context of our conceptual model, this means that a proactive job analysis policy and the existence of a sophisticated HRIS would exercise an interactional impact on organizational performance. An HRIS equips HR managers with an ability to store and retrieve large job-related data sets and thus enables them to assist line managers in making value-added decisions more efficiently. To examine this HRIS-job analysis interaction further, we suggest the following hypothesis:

Hypothesis 2: The impact of a proactive job analysis practice on organizational performance is likely to be stronger in companies with sophisticated HR information systems than companies that do not have such information systems.

Job analysis, HR involvement and organizational performance

HR involvement in corporate planning and top management support is critical to materialize the outcome of HR policies and practices. Even a proactive job analysis policy is unlikely to achieve its intended purpose if it is not properly implemented or the information generated by job analysis is not effectively used for HR planning. Thus, it would appear that job analysis would play a more significant role in shaping human resource strategies in companies where HR management is viewed as an integral part of corporate planning and strategic decision making. This level of integration not only builds a more positive image of HR professionals but also empowers them actively to initiate programmes and policies to improve a firm's relation with its internal and external stakeholders, increase its efficiency and strengthen its overall performance and competitive position (Wright *et al.*, 1998). An effective partnership between HR and other corporate executives is certain to allow the best possible use of job analysis. It will ensure that a company's job analysis approach is both compatible with and supportive of its strategic business directions (Anthony *et al.*, 2002).

Aetna Life and Casualty Company, for instance, is one of a growing number of companies that has accorded its HR department a central planning role. Its corporate human resource department has been an active partner in Aetna's recovery process. In particular, HR involvement in Aetna's reorganization ensured that its new work environment was consistent with Aetna's vision and core values, which included investing in people, building trust and inspiring excellence. As Schuler and Jackson (1996: 175) note, job analysis was the strategic HR management tool that helped the company in mapping out career paths for its employees and redesigning jobs to

match company goals as well as employee expectations. The redesigned jobs allowed more latitude to both employees and managers in terms of rewarding people for better performance and commitment.

Like Aetna, many other companies with greater HR involvement in strategic planning, such as Saturn, FedEx and United Parcel Services (UPS), base their decisions on solid and verifiable data generated through different sources, including job analysis (Grossman, 1993; Powell, 1996; Sherman *et al.*, 1998). In these companies, HR and line managers work together in close partnership to obtain such data and use it to address employee and customer complaints and concerns, and enhance performance. UPS, for instance, which accords a strategic role to its HR function, insists on making HR decisions by using first-hand job analysis and performance data. The effectiveness of UPS's operational strategy is often attributed to its continuing reliance upon 'time and motion studies' and efficient job designs (Starke and Sexty, 1995: 35–6). These examples highlight how strategic involvement of HR in corporate planning can empower HR personnel to seek a strategic application of job analysis to enhance administrative efficiency, reduce absenteeism and turnover, and improve organizational climate and performance. To further examine this interaction of job analysis and strategic involvement of HR in corporate planning, we suggest the following hypothesis:

Hypothesis 3: The impact of a proactive job analysis practice on organizational performance is likely to be stronger in companies with greater HR involvement in strategic planning than companies where HR involvement is relatively low.

Job analysis approaches and organizational performance

While the regularity with which companies conduct job analysis is an important factor in organizational performance, the *approach* used in collecting the job-related information adds another important dimension to the impact of job analysis practice. A number of job analysis instruments are currently available and have been used to address different organizational needs. These instruments range from special-purpose, in-house-designed questionnaires or checklists to certain standardized quantitative methods, such as positional analysis questionnaires, functional job analysis, and semi-structured, qualitative methods such as the critical incident approach (Belcourt *et al.*, 1996; Anthony *et al.*, 2002). Job-related data on these instruments may be obtained via interviews, questionnaires, observations and employee logbooks. As shown by previous research, each data collection method has strengths and limitations, and the choice of a given method usually depends upon the nature and quality of information desired and the availability of time and financial resources (Levine *et al.*, 1980, 1983; Schwind *et al.*, 1995).

For the purpose of predicting the performance outcome of different job analysis approaches, one may identify from the current literature two broad job analysis approaches, which may be referred to as 'standard or conventional job analysis approach' and 'competency-focused job analysis approach'. In a *standard job analysis approach*, basic job-related data (task responsibilities, knowledge, skills and abilities or KSA needed to perform the job and working conditions, etc.) are usually recorded in an in-house form or checklist developed by the HR department. In most cases, the in-house forms are designed around the procedures outlined in the Dictionary of Occupational Titles or National Occupational Classification. The *competency-focused approach*, by contrast, places greater emphasis on motivation, adaptability, teamwork orientation and other similar characteristics of employees considered essential for

successful job performance. Most companies use some variant of the critical incident approach to collect such information. Unlike standard approaches, which usually attempt to obtain uniform information across different job families through a combination of interviews and mailed or self-administered checklists, the critical incident approach generates relevant data by observing the tasks and behaviours of jobholders in critical situations (Anthony *et al.*, 2002: 210–12).

As noted above, in a competency-focused approach special attention is given to such competencies as interpersonal skills, conflict resolution skills, innovative thinking, flexibility, decision-making ability and self-motivation (Sherman *et al.*, 1998; Dessler, 2003). Since each job is defined in terms of its specific contribution to organization, recruitment and selection, strategies can be refined to identify those candidates who can actively advance organizational goals. Recruitment and selections decisions in a conventional approach, on the other hand, are usually based on job applicant's formal education, training, experience and personality characteristics. In the present environment, where jobs and the skills needed to perform them successfully are changing so rapidly, the competency-focused approach is viewed as an essential improvement over the standard approach to achieve organizational goals (Cardy and Dobbins, 1992; Langdon and Whiteside, 1996; Siegel, 1997). A self-motivated and committed workforce is likely to foster an organizational environment of trust and stability that will allow the organization to improve its performance. It is argued that organizations that value competency factors and attempt to align them with their culture and placement strategies are likely to gain competitive advantage (Peters, 1992; Hammer and Champy, 1993).

The positive impact of a competency focus on firm performance is evident from the experience of IBM, Ford and several other companies that have gone through restructuring (Jones, 2001). Canadian Tire is one recent example of a company that has improved its efficiency and overall performance through careful application of competency-oriented job analysis. It had simplified its decision-making and communication channels by reducing the number of layers in its corporate hierarchy from ten to five. In this process, Canadian Tire was able to identify the key competencies needed for an effective performance of each job. Canadian Tire's sensible use of appropriate job analysis and job redesign strategies during its restructuring, according to Kapel, 'served as a major catalyst for the company's subsequent growth and success' (1993: 14). It allowed Canadian Tire to develop 'a meaningful link between overall corporate objectives and strategies for recruiting, training, performance management, and compensation'.

Some public-sector organizations are also gradually moving from standard job analysis approaches to some variants of skill-based job analysis to improve their administrative efficiency and productivity through innovation and flexibility. Ontario Registrar-General office, for instance, has simplified its operations, which used to involve fourteen layers of staff with forty-three job descriptions for twenty-three categories of employees. It eliminated two levels of management hierarchy and seven clerical levels. With job rotation and a recruiting strategy that opened up opportunities for employment equity groups, the department improved its productivity by 12 per cent, which 'sustained over a four-year period' (Gomez-Mejia *et al.*, 2000: 66). Several other writers feel that a skill-based job analysis is likely to reshape HR acquisition and maintenance strategies in the future, and may eventually replace the standard approaches or call for significant modifications (Belcourt *et al.*, 1996; Risher, 1997; Williams, 1999). Employees with better conflict resolution abilities, who are more likely to be recruited through this approach, would be more apt to build better and richer relations with both co-workers and clients, and will be keen on achieving higher performance results.

We may suggest the following hypotheses to investigate the performance outcomes of the competency-focused and standard job-analysis approaches *and* their interaction with a proactive job analysis practice:

- Hypothesis 4:* The impact of a proactive job analysis practice on organizational performance is likely to be stronger in companies with greater focus on a competency-based job analysis approach than companies using a standard job analysis approach.
- Hypothesis 5:* Companies using a competency-based approach to job analysis will show higher organizational performance than companies using a standard job analysis approach.

Company background characteristics and performance

As indicated in the conceptual model outlined in a previous section, there are several other factors that might influence organizational performance and, therefore, their possible impact on the expected job analysis–performance relationship must be controlled for. In the context of the present study, the following four variables were considered relevant: the size and age of the organization, the nature of business ownership, and its training and development resources.

With respect to company size, it has been shown that larger companies tend to be equipped with better HR expertise, and are more likely to place HR specialists in specific positions (Schwind *et al.*, 1995; Ivancevich, 1998). This elaborate infrastructure provides them the capability needed to design and implement more effective business strategies, monitor their outcomes and take appropriate corrective actions to ensure higher performance results. Older companies, likewise, have the advantage of longer business experience and technical know-how to achieve greater operating efficiency (Thompson and Strickland, 2001). Being well established in the industry, older companies are likely to have highly committed long-term employees as well as loyal customers and suppliers. In terms of ownership status, it is commonly held that companies where the ownership rests with private individuals tend to be more innovative and aggressive in setting and achieving higher performance targets. Regarding training and development, there is now a considerable consensus on the assertion that companies with better training and career development opportunities for their employees outperform companies where such opportunities are limited (Greer, 2001). Most successful companies commit substantial resources to employee training and development, considering it to be the most appropriate means to upgrade employee skills, to prepare them for more challenging assignments and to enhance their level of satisfaction and performance.

As suggested by this overview, organizational size, age, ownership status and training and development activity is each expected to have a positive relationship with organizational performance. Since each of these variables is expected to influence performance independent of the practice of job analysis and moderating variables (HRIS, HR involvement and job analysis approaches), their impact will be statistically controlled for to assess the unique contribution of job analysis to performance.

Methodology

Setting

The present study was conducted in the United Arab Emirates (UAE), a Gulf-region country situated in the eastern corner of the Arabian Peninsula. The United Arab Emirates (UAE)

was established in 1971 with the federation of the following seven emirates: Abu Dhabi, Dubai, Sharjah, Ras al Khaimah, Ajman, Umm al-Qaiwain and Fujairah. UAE is known for its vast oil and natural gas resources; it has 10 per cent of the world's total recoverable oil reserves and 4 per cent of natural gas reserves. UAE is also one of the most stable and fastest developing countries in the Gulf region (Ministry of Information and Culture, 1998, 2001). Its recent economic and social development programmes and growing interest in building its human resources make UAE an appropriate setting for this study.

Since the early 1990s, UAE has undertaken massive economic development projects to diversify its economy and reduce its dependence on oil and gas resources. As a result, the country is now emerging as a regional centre for light and heavy industry and a wide range of commercial activities. With its relatively easy entry requirements, UAE has attracted a large number of multinational companies in the fields of information technology, communication, banking and consulting services. The country has established a vast network of seaports and free trade zones to facilitate international trade. This increasing globalization of the UAE economy has, in turn, contributed to a marked expansion of economic infrastructure, education, health and social services. Along with a visible presence of foreign companies, UAE has experienced a significant growth in small and medium-sized local businesses, owned and operated by its citizens.

The growth of both multinational and domestic companies and the increasing competition have been instrumental in introducing several innovative management practices in nearly every functional area of management. There is growing recognition that the country must build progressive HR management practices and a corresponding technology to support its ambitious economic and social development programmes. At a recent Dubai Strategy Forum, an annual event in which eminent scholars and government officials from all over the world are invited to participate, HR issues were identified as one of the top priority areas for UAE and other Gulf countries. The government has already introduced several local and international awards for total quality management and for best practices in a number of areas to encourage companies to improve their current management systems, including HR programmes. The government has also established several career-planning and training institutes across the country to improve the work skills of its local citizens. In addition, many private companies offer numerous HR-related programmes for the general population of expatriate workers. The number of companies using integrated HR software packages to link human resources with financial data has also increased in recent years. On the whole, the personnel management practices in UAE have significantly improved over the past decade.

The present study was designed to look at the effect of certain basic HR practices such as job analysis, approaches commonly used in job analysis, HRIS and involvement of HR personnel in strategic planning on company performance in UAE. Its findings are expected to generate useful data for both HR and line managers, which will help them to direct their efforts to value-added HR practices. Research in the field of HR management in UAE or other Gulf-region countries is limited, and the present study might encourage further research in this area. In addition, the findings of this study should be of some interest to researchers in Western countries as well as to HR executives involved in global HR-related assignments. At a broad level, the present study may be seen as an initial effort to extend the findings of HR-performance research based in Western countries to a non-Western country.

Sample

The sample was drawn from the emirates of Dubai and Sharjah. Dubai is the largest commercial centre in UAE, and nearly all the major multinational companies have their

branch offices located in Dubai. Most of the local companies, owned and operated by UAE citizens, are also based in Dubai. The emirate of Sharjah is another major commercial centre, and especially known for its banking industry and a vast network of small to medium-sized retailing and wholesaling businesses.

Business activities in both emirates are located in large geographic clusters or commercial blocks. Three blocks from Dubai and two from Sharjah were randomly selected for the present study. Excluding small shops and stores with fewer than fifty employees, a list of 280 companies (200 from Dubai and eighty from Sharjah) was prepared. The general administration of these 280 companies was contacted for a personal interview. Using a semi-structured interview schedule, a total of 155 interviews (110 from Dubai and forty-five from Sharjah) were conducted with CEOs, general managers and heads of operations, finance, purchasing and marketing departments. The primary reason for limiting our target respondents to these departments was to find out how heads of these functional areas view the contribution of the HR function.

The analysis and results reported in the present study are based on data provided by 148 companies as seven interviews were excluded from the analysis because of incomplete information. Some of the salient characteristics of the study sample are summarized in Table 1.

Of the 148 sample companies, 86 per cent were in the service industry and the other 14 per cent in the manufacturing sector. This is consistent with the UAE economy where the service sector is by far the biggest sector of its economy (Ministry of Information and Culture, 2001).

Table 1 *Distribution of companies by size, age, ownership type and major line of business (N = 148)*

<i>Variable</i>	<i>Number</i>	<i>Percentage</i>
<i>Size (number of employees)</i>		
50–100	28	18.9
101–200	36	24.3
201–300	44	29.7
More than 300	40	27.0
<i>Age (years in present line of business)</i>		
4–10 years	56	37.8
11–20 years	64	43.2
> 20 years	28	18.9
<i>Ownership type</i>		
Government	35	23.6
Semi-government	27	18.2
Private	86	58.1
<i>Major line of business</i>		
Banking	20	13.5
Communication – TV, print media	10	6.7
Consulting – accounting, auditing, finance	18	12.2
Engineering – design, construction	17	11.5
Public services – power, water, others	10	6.7
Trading – wholesale, retail	19	12.8
Transportation – air, sea, land	18	12.2
Travel, tourism, hotel	15	10.1
Manufacturing – miscellaneous	21	14.2

Over half of the companies (58.1 per cent) were privately owned, and their ownership usually rested with local UAE citizens. The federal and local governments owned and operated a little less than one-quarter of the companies, while the remaining were jointly owned by the government and private investors.

Most of the companies were of medium size in terms of the number of employees they had at the time of the study. The average company size was 216 employees. The company age ranged from four to thirty-nine years with an average of around nineteen years.

Measures

Independent variables

Practice of job analysis Keeping in view the current literature, we defined job analysis as systematic collection of job-related information, including, in particular, specific tasks, duties and responsibilities relating to a job, and the knowledge, skills, abilities and other characteristics required to perform it (Bowin and Harvey, 2001). Since the present study was interested in the *frequency or regularity* with which companies perform job analysis, the survey participants were requested to report as to how often their companies conducted job analyses. The responses were recorded as 'every year', 'every two years', 'after every three years', 'after four-to-five years' and 'when it is felt essential'. The first two response categories were combined to denote a 'proactive job analysis practice', while the other three were aggregated to denote a 'reactive job analysis practice'.

Type of job analysis Based on the current literature, two broad job analysis *approaches or methods* were identified: a 'conventional or standard approach' and a 'competency-focused approach'. The conventional approach is a job- or task-oriented method of job analysis, while the competency-focused approach seeks data on special skills and competencies of employees (Anthony *et al.*, 2002). In the present study, a measure of *the degree of competency focus* (or conventional focus) was developed from a review of the following four documents: a) job analysis forms used by companies under investigation; b) sample job description statements; c) blank job application forms; and d) performance evaluation forms. The scores on this index ranged from 4 to 12, with high scores indicating greater competency focus. As indicated in Figure 1, this variable is seen *both* as an independent predictor of organizational performance and as a moderator of the job-analysis practice–performance relationship.

Moderating variables

Human resource information system (HRIS) A four-item measure of the sophistication of HRIS was developed, which comprised data on such aspects as: a) having an in-house HRIS; b) the extent to which HRIS was computerized; c) the scope or range of information stored; and d) its possible applications (Ivancevich, 1998). Higher scores on this four-item index indicated greater sophistication of the HRIS.

HR involvement This variable looked at the extent to which companies viewed HR planning as a strategic function and utilized the expertise of HR professionals in both short-term and long-term planning activities (Wright *et al.*, 1998; Gomez-Mejia *et al.*, 2000). A five-item index of HR involvement was developed. The items included in the index were as follows: ratio of HRM staff to total employees, position of HR manager/director in the company hierarchy (e.g. organizational chart) and proportion of corporate level meetings held in a year that involved HR personnel. The other two indices included in the index were a rating of HR input in strategic decisions and

the overall importance that top management accorded to the HR function *vis-à-vis* other functions. The index values ranged from 5 to 15, with higher scores indicating greater HR involvement in corporate planning.

Control variables

Company size Consistent with the literature (e.g. Jones, 2001), company size was measured in terms of the number of total employees the company had on its payroll at the time of the study.

Company ownership Two categories of company ownership were identified: public and private companies. The public companies consisted of both government-owned and semi-government companies, while private companies included those organizations that were exclusively owned and operated by private individuals and groups. (For data analysis purposes, public companies were assigned a code of 1 and private companies a code of 2.)

Company age This variable was measured in terms of the number of years the company had been in its present line of business.

Employee training and development Training resources and the number of training and development programmes the companies offered over the past year provided a measure of this variable. Specifically, the measure was based on the following four items: a) training and development budget of the company; b) number of in-house training workshops offered in a year; c) training and development programmes organized with the help of outside consulting firms; and d) career development opportunities provided in foreign countries. Higher scores on this measure indicated greater training and development resources and opportunities.

Dependent variables

Previous research has assessed organizational performance with a combination of subjective and objective measures (Walker and Bechet, 1991; Arthur, 1994; MacDuffie, 1995; Delaney and Huselid, 1996; Wright *et al.*, 1998). The objective measures commonly used revolve around such areas as rate of return on investment (ROI), sales and profit growth, and ratio of production cost to revenue. However, as Truss (2001) has recently argued, although financial measures are certainly more objective, they are too narrow to capture the multidimensional nature of organizational performance. Consequently, we adopted a broader set of four measures to assess organizational performance from different aspects: administrative efficiency, quality of organizational climate, financial performance and relative firm performance. Operational definitions and indicators of these measures are outlined below.

Administrative efficiency The concept of administrative efficiency as used in the present research primarily deals with the 'internal workings of the organization' (Daft, 2001: 64). Accordingly, the operational measure developed looked at the internal efficiency of the company administration in terms of its ability to function quickly and responsively (Jones, 2001). Specific areas considered were as follows:

- 1 Ratio of managers to non-management staff
- 2 Levels of management hierarchy
- 3 Delegation of decision-making authority
- 4 Inter-departmental co-ordination problems
- 5 Time taken to fill vacant positions or new job openings
- 6 Time taken to bring new products/services to market

- 7 On-time acquisition of materials/components
- 8 On-time delivery of products/services.

Each of these indicators was rated on a 3-point ordinal scale (high, medium, low) resulting in a score range of 8 to 24. Higher scores on this index indicate greater administrative efficiency. (Scores for some items were reversed.)

Quality of organizational climate Quality of an organization's internal environment and its relationship with its external stakeholders, especially the customers, is considered an important measure of company performance (Dessler *et al.*, 1999). The following indicators were used to measure this variable: a) rate of absenteeism; b) turnover; c) number of employee complaints/grievances; d) number of customer complaints; and e) the number of customer/employee-initiated legal suits. Since the rating of each individual item was reversed, higher scores on this index, like other indices described above, indicate a more positive organizational environment.

Financial performance Financial performance was measured in terms of the percentage increase in yearly profits. Data were collected on annual profits for two years preceding the survey, which provided a measure of annual increase/decrease in profits. Since most companies were reluctant to provide financial data in the survey, a variety of sources, including, in particular, Internet sites of companies, published financial reports and company data maintained by chambers of commerce and industry, were used to compile the needed financial information. In addition, self-reported financial data, initially provided by 59 per cent of the companies, was collected from all companies through ongoing follow-up attempts to check the validity of the published financial data.

Relative firm performance The respondents were asked to assess the overall performance of their companies in comparison to their major competitors in the industry. On a five-point Likert-type scale, the respondents rated the following aspects: a) overall sales growth; b) market share growth; c) expansion in product/service offerings; and d) long-term profit potential. The index values ranged from 4 to 20; higher index scores indicate better performance results.

Reliability and validity of measures

Since all measures described above were specifically designed for the present study, several statistical analyses were undertaken to ensure their reliability and validity. Reliability of all multi-item composite measures was determined with Cronbach's alpha coefficient (Nunnally, 1978). The validity checks were implemented by means of a correlation analysis whereby the correlations were calculated between index values and equivalent items *not* included in the composite indices (McDaniel and Gates, 1996). The validity and reliability results are summarized in Table 2.

The items used for external validity checks were as follows: with respect to the practice of job analysis, information on the number of job analyses the company conducted over the past five years was collected to check the reported frequency of job analysis. For the measure of HRIS, HR-related software packages used by companies were examined to determine the validity of the HRIS index. HR departments' own assessment of their involvement in strategic decisions was used as an external validity check on the HR involvement index. The validity of job analysis approaches was checked with data on the typical questions companies asked in their most recent selection and performance evaluation interviews. Employee training and development was validated with data on the scope of orientation programmes and activities the companies

Table 2 Reliability and validity analysis of measures ($N = 148$)

	Number of scale items	Inter-item correlations (r)		Cronbach alpha coefficient	Construct validity correlations (r)
		Lowest	Highest		
1 Practice of job analysis	1	–*	–	–	.89
2 HRIS	4	.78	.89	.82	.91
3 HR involvement	5	.71	.80	.87	.86
4 Job analysis approach	4	.70	.83	.79	.84
5 Company size	1	–	–	–	–
6 Company age	1	–	–	–	–
7 Company ownership	1	–	–	–	–
8 Training and development	4	.73	.77	.80	.88
9 Administrative efficiency	8	.75	.86	.84	.90
10 Quality of organizational climate	5	.69	.74	.82	.85
11 Financial performance	1	–	–	–	.93
12 Relative firm performance	4	.76	.84	.81	.87

Note

*Single item measures.

offered their new employees. The extent to which companies engaged in contingency planning was used to validate the variable of administrative efficiency. The quality of organizational climate index was validated with data on the overall ‘community image’ of the company. The validity of financial data derived from different published sources was assessed with self-reported data on profit growth. A global rating of company performance on a ten-point scale was employed to validate the multi-item measure of relative firm performance used in the present study.

The alpha coefficients for all composite measures were higher than .70, the minimum alpha coefficient required for a measure to be considered reliable. The zero-order correlations between measures involving multiple items and equivalent non-index items were also fairly high and documented the external validity of composite scales.

Table 3 presents the descriptive statistics and correlations for all variables included in the conceptual model. As may be seen, all correlations were in the predicted direction. The practice of job analysis and the moderating variables revealed significant inter-correlations. The four dependent variables measuring organizational performance also showed similarly strong inter-correlations. These inter-correlations support the findings of previous studies, showing a strong association between subjective and objective measures of performance (Dess and Robinson, 1984; Perry-Smith and Blum, 2000). These inter-correlations also provide further validation of measures of performance as relevant measures that may be used to assess a common organizational property.

Analysis and results

Test for main effects of job analysis and other variables

Table 4 presents the results of multiple regression analysis. Four regression equations, one for each dependent variable, of the following form were developed and tested with multiple regression analysis

$$Y = B_1X_1 + B_2X_2 + \dots + B_8X_8 + e_1$$

Table 3 Means, standard deviations and intercorrelations (*r*) for all variables (*N* = 148)

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1 Practice of job analysis	1.63	.48	1											
2 HRIS	7.49	2.06	.39	1										
3 HR involvement	9.34	2.41	.47	.43	1									
4 Job analysis approach	6.75	1.31	.62	.35	.29	1								
5 Company size	216.41	45	.19	.10*	.23	.16*	1							
6 Company age	19.49	2.78	.21	.12*	.18	.13*	.41	1						
7 Company ownership status	1.24	1.09	.12*	.15	.09*	.14*	.11*	.08*	1					
8 Training and development	8.42	3.11	.25	.28	.17	.20	.18	.16*	.19	1				
9 Administrative efficiency	16.37	2.71	.48	.35	.44	.49	.10*	.08*	.06	.20	1			
10 Quality of organizational climate	10.58	2.49	.41	.38	.46	.44	.12*	.10*	.08	.17	.61	1		
11 Financial performance	6.73	2.06	.38	.42	.61	.38	.15*	.13*	.16	.20	.59	.67	1	
12 Relative firm performance	14.88	3.34	.59	.38	.36	.34	.13*	.11*	.16*	.18	.63	.65	.70	1

Note

* Correlations not significant. All other correlations are significant at .05 or higher levels of significance. (Correlations ranging between .17 and .21 are significant at .05 and between .22 and .30 are significant at .01 level. Correlations > .30 are significant at .001 level.)

Table 4 Results of main effects regression analysis: standardized regression coefficients^a (N = 148)

	<i>Administrative efficiency</i>	<i>Quality of organizational climate</i>	<i>Financial performance</i>	<i>Relative firm performance</i>
Practice of job analysis	.44	.36	.39	.48
HRIS	.38	.30	.34	.31
HR involvement	.36	.34	.37	.27
Job analysis approach	.29	.32	.31	.25
Company size	.07*	.10*	.13*	.09*
Company age	.04*	.09*	.11*	.06*
Ownership status	.06*	.04*	.12*	.10*
Training and development	.17	.19	.15	.11*
<i>F</i>	56.13***	48.32**	33.67**	44.17**
<i>Adjusted R</i> ²	.37	.34	.42	.39

Notes

^a In order to keep the table simple, standard errors are not shown.

*Regression coefficients not significant. All other regression coefficients are significant at .05 or higher levels of significance.

** $p < 0.01$.

*** $p < .001$.

where Y denotes a given dependent variable, and X₁ to X₈ correspond to eight predictor variables, including the practice of job analysis, three moderators (HRIS, HR involvement, job analysis approach) and four control variables (company size, age, ownership status and training and development). The *e* represents error terms. Each equation included the entire set of predictors (independent variables, moderators and controls), which were all entered into the regression equation simultaneously. The results presented in Table 4 indicate that the overall model is significant and can explain over 30 per cent of the variance in each of the four performance measures.

As predicted in hypothesis 1, the variable of job analysis practice produced significant regression coefficients with each dimension of performance. Companies that conducted job analysis on a regular basis (once every year or every two years), and which we labelled as having a 'proactive job analysis practice', showed better results on all four measures of performance. Sixty-two per cent of the companies in the study sample pursued a proactive job analysis practice. In a separate chi-square analysis (not reported here), a cross-tabulation of companies with 'proactive' and 'reactive' job analysis practices with measures of performance revealed similar results, further documenting the positive outcomes of a proactive job analysis practice.

While the interaction effects of moderators (e.g. HRIS, HR involvement, job analysis approach) will be examined in the next section, it may be noted that both HRIS and HR involvement produced significant regression coefficients with measures of performance, indicating their substantial independent impact on organizational performance. Results relating to the type of job analysis approach used also support hypothesis 5, suggesting an independent influence of the approach used in obtaining job-related information on organizational performance. Here too, a sub-classification of companies with competency-focused and conventional job analysis approaches was conducted. The results generated by the chi-square analysis were found similar to those based on the regression results presented in Table 4, indicating that companies with a greater

competency focus in their job analysis approach tend to achieve better performance outcomes than companies using a standard job analysis approach.

Among the control variables, only the variable of training and development revealed a significant relationship with three out of four performance measures, including, specifically, administrative efficiency, quality of organizational climate and financial performance.

Before looking at the interaction effects, a test for multicollinearity across the predictor variables was implemented by calculating the tolerance and variance inflation factor (VIF). The analysis revealed a tolerance level over .65 and VIF close to 1, suggesting that multicollinearity was not a serious problem.

Test for moderating effects

In order to explore the extent to which HRIS, HR involvement and job analysis approaches moderated the job analysis–performance relationship, further regression analysis was conducted. A series of regression equations of the following form were developed and tested

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_1X_2 + e$$

where Y is the performance measure, X₁ is the predictor variable (practice of job analysis), X₂ is a moderator variable (HRIS) and X₁X₂ is the multiplicative interaction term (e.g. job analysis × HRIS). A moderating effect is present if the multiplicative interaction term is statistically significant. Using hierarchical regression analysis (SPSS, 1997), the practice of job analysis and moderating variables were entered in step one, and the interaction of job analysis and moderators in step two. Table 5 presents R² change and standardized beta coefficients.

As may be seen from Table 5, all interaction effects were fairly strong and in the predicted direction. For example, with respect to the interaction of the practice of job analysis and HRIS, the regression results show interaction effects ranging from .44 with quality of organizational climate to .65 with administrative efficiency. These results support hypothesis 2, suggesting that the impact of job analysis is stronger in companies with a sophisticated HRIS than those lacking such an HRIS. Similarly, hypothesis 3, which predicted a stronger job analysis–performance relationship in companies where HR involvement is high, derives strong support from the regression results presented in Table 5. Finally, the results are consistent with hypothesis 4, predicting a stronger impact of job analysis in companies that make greater use of a competency-based job analysis approach than in companies using standard job analysis approaches.

It may be noted here that, since the coefficients of both the multiplicative interaction terms and the moderator variables are equally strong and statistically significant, the moderators should be seen as quasi-moderators rather than pure moderators. It is also noteworthy from R² change, that job analysis and the moderating variables together explained a much larger proportion of the total variance in each dependent variable than the interaction of job analysis and moderators. However, the relatively stable standardized beta coefficients generated by job analysis with each performance measure, indicating its unique impact, independent of moderators, support the central argument of this study that a proactive job analysis practice is an important HR strategy to achieve superior performance results.

Table 5 Results of stepwise regression analysis: regressing performance measures on practice of job analysis, moderators, and interaction of job analysis and moderators ($N = 148$)

	Administrative efficiency		Quality of organizational climate		Financial performance		Relative firm performance	
	R ² change	Beta*	R ² change	Beta	R ² change	Beta	R ² change	Beta
<i>Step 1</i>	.33		.31		.37		.35	
Practice of job analysis		.62		.55		.64		.67
HRIS		.59		.46		.38		.53
HR involvement		.56		.43		.45		.62
Job analysis approach		.37		.49		.25		.46
<i>Step 2</i>	.18		.15		.17		.20	
HRIS x practice of job analysis		.65		.44		.63		.59
HR involvement x practice of job analysis		.61		.42		.67		.55
Job analysis approach x practice of job analysis		.46		.38		.29		.43

Note

* All beta values significant at .05 or higher levels of significance.

Discussion

The discussion is organized as follows: first, a brief summary of the key results is presented with some tentative interpretations. Following this, the managerial implications of the results are explored. Finally, the limitations of the study are noted and directions for future research are suggested.

Summary of findings and interpretations

This study was designed to achieve two objectives. The first objective was to explore the impact of job analysis on organizational performance. The second objective was to determine the extent to which certain important HR practices such as HRIS, HR involvement and the competency-based job analysis approach moderate the job analysis–performance relationship as hypothesized in the study. The following four variables were included as controls in the model because of their possible influence on organizational performance: company size, company age, ownership status and training and development resources. A multiple regression analysis was conducted to test research hypotheses.

The main effect results revealed a **strong, positive association of a proactive job analysis practice with organizational performance**. The variables treated as moderators also showed strong main effects on each performance measure. Of the four control variables, only training and development showed a statistically significant relationship with three measures of performance, namely, administrative efficiency, quality of organizational climate and financial performance.

With regard to moderating effects, the results were basically consistent with hypotheses 2, 3 and 4. However, as indicated in the data analysis section, the moderating variables did not occur as pure moderators since the unique coefficients of moderators were nearly as strong as their interaction effects. Consequently, the moderators are viewed as quasi-moderators. Clearly, more research is needed to assess the nature of contribution of the competency-focused job analysis approach, HRIS and HR involvement to organizational performance. In the meanwhile, the inclusion of these variables as moderators in our conceptual model would seem appropriate in view of the fact that in most cases they improved or maintained the impact of job analysis on performance.

Given the modest role of moderators, it would seem that a proactive job analysis practice is indeed an effective HR strategy to achieve desirable organizational outcomes, such as greater administrative efficiency, healthy organizational climate, better financial performance and stronger relative performance in the industry. A proactive job analysis approach may thus be seen as a source of competitive advantage in its own right.

As noted above, in terms of company background and demographic characteristics, only employee training and development showed a modest relationship with performance. It seems that an increasing exposure of companies, regardless of their size, age or ownership status, to innovative HR practices and other strategic factors in the current global business environment has somewhat mitigated the weight of such background characteristics in shaping organizational performance. In fact, relatively smaller and younger companies seem to be more in tune with recent developments in HR and strategic management, and actively seek and implement result-oriented strategies already tested by larger and older companies (Thompson and Strickland, 2001; Dessler, 2003). The public–private dichotomy of company ownership also does not seem to capture performance differences as a growing number of publicly owned companies have

come under increasing pressure to improve their competitiveness in the current business environment.

The occurrence of HRIS as an independent predictor and moderator of job analysis–performance relationship is hardly surprising in the present IT environment. As indicated by our results and growing research evidence (e.g. Kavanaugh *et al.*, 1990; Schuler and Jackson, 1996), firms armed with an HRIS are apt to address a range of HR issues and concerns in a cost-effective and timely manner. And when firms with well-developed, computerized HR information systems pursue job analysis as a company policy, they gain a level of sophistication in HR management and application of HR practices that their competitors lacking such resources can hardly match.

The significance of HR involvement both as an independent predictor and as a moderator is consistent with the emerging view that regards strategic HR planning as a prerequisite for successful performance in the present highly competitive business climate (Towers, 1992; Greer, 2001). The interaction of HR involvement and job analysis suggests that, if HR planning is guided by more concrete information on employees' strengths and limitations and active participation of HR managers in strategic decisions, it is more likely to produce measurable outcomes. These results clearly illustrate the value of according a strategic role to HR professionals, as advocated in much of the current HR literature.

Finally, with respect to job analysis approaches, the present study provides some initial evidence on the value of the competency-focused approach. As shown by our results, when a competency-based approach is converted into a company-wide regular job analysis practice, it can certainly provide some additional benefits in the form of better performance results. This interaction of job analysis practice *and* the approach used to obtain pertinent data indicates the need to recognize the potential value of modifying the conventional or standard job analysis approaches to incorporate competency factors. New technological breakthroughs and increasing competitive pressures are making several jobs obsolete, while calling for entirely new skills and competencies for several others. Thus, companies must constantly review the skills of their workforce and recruitment strategies to achieve an effective match between job requirements and employee skills (Clifford, 1994; Mondy *et al.*, 2002). This should not, however, undermine the importance of conventional job analysis methods, such as functional job analysis (FJA) or special purpose methods like Management Position Description Questionnaire (MPDQ) as efficient and cost-effective techniques to generate uniform data on larger numbers of jobs. Nevertheless, firms operating in the present competitive environment would need to supplement these approaches with qualitative data by using the critical incident or other similar approaches sensitive to the nature and complexity of changes taking place in the traditional concept of job (Anthony *et al.*, 2002).

Implications for HR managers

The results of this study document the importance of job analysis as a strategic HR management practice with a significant impact on company performance. With this evidence of a substantial contribution by job analysis to organizational performance, HR resource managers should be in a stronger position to convince line managers and employees of the strategic and value-added role of job analysis. This should enable the HR managers to dispel several misconceptions about job analysis and its contribution to company performance.

The practice of job analysis has been viewed as little more than a clerical activity (Schwind *et al.*, 1995: 112). Line managers often consider job analysis to be unnecessary

paperwork, while employees resent it as a discreet performance evaluation mechanism that management might use as a justification to get rid of certain employees. These views are clearly detrimental to developing a close partnership between line managers, HR professionals and employees. As several writers note, this partnership is a powerful force on which the survival and growth of many companies operating in the modern competitive environment hinges (Schuler and Jackson, 1996; Dessler, 2003). The initial evidence of job analysis–performance linkage produced by this study is expected to pave the way for this partnership.

As HR resource managers introduce essential HR practices, such as job analysis, with tangible results, top management is likely to seek their input more actively. This, in turn, will elevate HR managers' status in the management hierarchy and increase their involvement in strategic planning. However, this also makes it imperative for HR managers to enhance their credentials to meet the expectations of line managers. Existing evidence from studies of Western organizations suggests that most HR professionals still fall short of line managers' expectations in terms of their skills and sophistication to guide corporate strategy (Wright *et al.*, 1998). In UAE and perhaps in other Middle Eastern countries where the field of HRM is still in its early phase of development, HR managers would have to go a long way to assert themselves as professional advisors and change agents. Thus, HR managers must continue to tap opportunities to gain visibility in their organizations by upgrading their skills and professional image, and, more importantly, by making an effective contribution to organizational performance.

HR managers must also adopt a proactive outlook, develop and experiment with new and innovative HR practices. The emerging competency focus in job analysis approaches is one area with a potential contribution to company performance that merits attention. Increasing global competition and environmental uncertainty suggest that competency-based models of job analysis are likely to be seen as possible alternatives to more conventional or standardized job analysis approaches. More and more companies facing environmental turbulence will seek employees with innovative and entrepreneurial skills. HR managers will be called upon to develop more effective job analysis approaches to capture changes in jobs and work environment, constantly update their information systems, and to help place employees in jobs for which they possess special competencies. This will allow companies to refine their competitive strategies to make optimal use of the unique strengths of their workforce. At the same time, this will increase opportunities for HR managers to demonstrate the contribution of HR function to company performance.

Limitations

The present study may be seen as a preliminary attempt to establish the importance of job analysis as a strategic HR management practice. Its findings must be assessed with at least three limitations in mind. First, the study has made an extensive use of self-reported measures of key variables, which are often seen as less desirable than objective measures. While most of the measures developed in the study involved clear and fairly direct indicators, we were constrained in our efforts to obtain more objective information on all variables. The strong relationship between objective and subjective measures as revealed by this study and the previous research, however, should not make us complacent in our search for best possible measures.

Second, the present study examined only a selected number of control and moderating variables. This means that our theoretical formulation of the process by which job analysis influences organizational performance is far from being exhaustive. Finally, the present

study used a relatively small sample, which did not allow us to pursue sub-group comparisons of companies in terms of differences in line of business or other similar classifications. Thus, the findings of the present study may be seen as preliminary in nature, and are intended to stimulate further research interest in the job analysis–performance relationship as conceptualized here.

Future research directions

The strengths and limitations of the present study can serve as a useful guide for future research efforts. One avenue for future research would be to expand the current model with other relevant moderating variables such as a firm's business strategy, management's leadership style and strategic orientation. The possible contribution of flexible work environment, empowerment of employees and other best HR practices to organizational performance also needs to be considered in future research. Empirical investigations of the interaction effects of such HR practices, in particular, will help further elaborate the process by which job analysis contributes to organizational performance. A challenging opportunity for future research is to document, with appropriate measures and research designs, that job analysis is indeed a key practice in 'systems of high-performance HR practices' identified in the current HR literature (Greer, 2001).

The second avenue for future research would be to examine the research hypotheses developed in this study with case-study and longitudinal designs. It would be worthwhile to see how the performance of a company changes over time as it implements a proactive job analysis practice. Research in this direction might begin with small-scale pre-post types of study to compare the performance of companies at different points, before and after they implement a certain job analysis practice. However, since nearly all companies have some form of job analysis system in place (though not equally active), pre-post studies could make a valuable contribution by assessing the relative impact of competency-focused and conventional job analysis approaches among companies considering experimenting with the competency-focused approach. The present study may serve as an impetus for HR professionals and practitioners alike to undertake such studies.

Conclusion

Despite some of the limitations noted above, the results of this study advance the field of HRM by empirically showing a link between job analysis and organizational performance. The strong impact of job analysis on several measures of performance suggests that job analysis is indeed a cornerstone of HR activities and a vital strategic management practice to gain competitive advantage. The significance of the unique effect of job analysis on multiple performance measures, as revealed by different statistical models used in the study, is particularly noteworthy. On the whole, this research endeavour suggests a substantial positive contribution by job analysis to organizational performance.

The study also highlights the possible contribution of HRIS, HR involvement and competency-focused job analysis approaches to organizational performance. These HR practices certainly merit special attention in the present business environment both as independent forces and as moderating conditions that can shape performance outcomes. Companies that view job analysis as a serious policy matter might achieve more concrete results by improving HR involvement in strategic decisions and corporate planning activities. Development of effective computerized HR information systems should also be an important consideration in order properly to organize and use job-analysis data.

Companies might find a transition from conventional job analysis approaches to competency-focused ones worthwhile in view of the rapidly changing nature of jobs and job requirements in the present environment. In general, the findings of this study are consistent with studies conducted in Western countries on the contribution of HR function to organizational performance. Thus, the value of present study lies in the fact that it offers a much-needed cross-cultural validation of theoretical models built on the basis of studies of Western organizations. The present study supports the current efforts seeking to establish HR–performance linkage by way of developing a specific conceptual model to illustrate the process by which the practice of job analysis and performance might be related, and by testing it with empirical data from a non-Western setting. It must be emphasized that the possibility of job analysis–performance linkage has not been extensively explored in the Middle Eastern or the Western context. HR professionals and practitioners with a special interest in global HR practices and issues will find the findings of this study useful, as these findings clearly demonstrate that good HR practices transcend national and cultural boundaries. It is, thus, important to extend our search for strategic HR practices around the globe.

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