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Special Issue on HR Concerns in Egypt

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Ronald J Burke & Ghada A. El-Kot

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Contents

Human Resource Management Research in Egypt

Ronald J Burke & Ghada A. El-Kot 4-9

Job stressors, Supervisory Support and Work Outcomes among Egyptian Managers

Ghada A. El-Kot & Ronald J Burke 10-24

Sexual Harassment in the Egyptian Workplace: A Literature Review & Research Agenda

Ahmed Amin & Menatallah S. Darag 25-39

Organization and Job Attractiveness to Applicants in Egypt and its Relationship with Core Self-Evaluation

Mariam Hassan El-Zamly & Ahmed Amin 39-55

How Does Knowledge Management Drive Competitiveness in Egyptian Software Companies?

Ghada El-Kot & Dalia Gamal 56-76

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Guest Editorial

Human Resource Management Research in Egypt

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This Special Issue of Review of Management presents several human resources management (HRM) research projects being conducted in Egypt by Egyptian academics, in some cases with the participation of other collaborators. Although Egypt is a large country in terms of population with a huge number of organizations –both large and small – relatively little HRM research has been undertaken there. And although Egypt has several schools of business management, relatively little HRM research has been conducted by academics working in them.

There are several reasons for this lack of attention given to HRM research in Egypt. First, although the number is increasing, relatively few Egyptian academics have been trained to carry out such studies. Second, although there are some Egyptian management journals and magazines, Egyptian academics interested in reporting their HRM studies would rather do so in more prestigious journals published elsewhere. Third, managers in Egyptian organizations have been unwilling to participate in HRM research for fear this research would paint out their managerial shortcomings.

The Egyptian economy has not performed very well over the past decade. Unemployment is relatively high. And it has been believed that the Egyptian educational system does not do a good job preparing young women and men for the realities of work in the 21st century. In addition, educated women, similar to women in several other countries, face obstacles in pursuing professional and managerial work and career opportunities. But Egypt is developing several academic programmes to equip young women and men for work and careers in all types of organizations –large and small. Egypt has also seen a corresponding increase in studies carried out in this sector to better understand its nature and success factors.

The Egyptian Context

In a regional context Egypt is especially important; it has a leadership role among Arabic Middle Eastern nations and is of strategic importance as it borders Africa, Europe and Asia. Egypt is one of the attracting countries for investors in different fields. Oxford Business Group (2004) analyzed all aspects of the Egyptian economy via hundreds of interviews with leading political and economic figures to describe the comprehensive overviews of Egypt's political and economic situation. They provided a more light-hearted look at Egypt's regions and culture to any investor in Egypt. They reviewed trends in all the major economic sectors, including: banking, capital markets, insurance, IT and telecoms, industry, real estate and construction, tourism and agriculture.

In the Egyptian context, there are some changes in the labour demand and in the occupational distribution of employment. The findings from the Egypt survey of human resources development by the International Labour Office (I.L.O) in 2006 referred to some of the challenges to human resources development in Egypt such as employment challenge, external competition challenge, the challenge of the new technology, the challenge of privatization, the challenge of vulnerable groups (child labour and gender discrimination) and the training challenge. These challenges would have some effects on the kind of jobs that would be created in the Egyptian context and raises the issue of the importance of the human resource management policies that should be implemented. In the ILO report, authors identify human resource development as a critical factor in determining the ability of Egyptian firms to effectively confront external competition and make best use of these new technologies. At the time of the survey firms facing import and export competition were experiencing difficulties in recruiting qualified personnel but nevertheless expressed a preference for recruiting already skilled workers rather than train their own, this was the case even in the larger organizations.

Based on the report presented by the Institute of National Planning, Egypt to present Egypt Human Development Report 2010, and by the Labour Force Research by Central Agency for Public Mobilization and Statistics (CAPMAS) 2010; The Human Resource Profile of Egypt is described as follows: *With a population of over 80 million, Egypt has the largest single market in the region. It is rich in human resources; its businessmen are experienced in the markets of its neighbour countries, and it possesses a good mix of semi-skilled, skilled and highly qualified labour force.*

Egypt's workforce, close to 26 million, is an excellent source for productive inexpensive labour. The Egypt's labour force represents 33.3% of total population during the third quarter of 2010. The number of employees reached 23.515 million employees during 2010. According to work status; employees' wages reached 14.723 million employees with rate 61.8 from total employees. Egypt is classified in the world of work report 2010 as Lower-Middle income country, with a GNI per capita of USD 976 to USD 3,856. Foreign companies frequently pay higher wages and attract workers with higher than average skills; however, many foreign companies have expressed the need for skilled managers in Egypt. Unemployment remains a significant problem, as Egypt has a surplus of both skilled and unskilled labour.

Unemployment persons reach to 2.338 million unemployed, with unemployment rate of 8.94%. According to gender, contribution rate in labour force reach among males 75.3% and reach among females 22.8% in 2010. Effective human resource management has become of critical importance, appropriate staffs need to be recruited, they need to be trained and developed to implement new technologies, practices and ideas and enable Egyptian firms to compete internationally. Very little research on human resource management practices and their effects on individual and organizational performance have been undertaken in the Middle East (Budhwar & Mellahi, 2007).

Some implications for certain HRM practices in Egypt based on the examination of the Egyptian context; which enables us to draw a number of tentative conclusions about the nature of HRM practices to be expected or which might be appropriate in Egyptian organizations. Given the influence of culture and Islam we might reasonably expect an Egyptian model or system of HRM to emphasize on job descriptions which are implicit rather than explicit with long term employment and employee security and utilization of the internal labor market for filling vacancies. We might expect training to emphasize skills rather than general development, team working and a group or team focus to the organization of work and training and development according to I L O survey. We might also expect that compensation; pay and advancement being based on seniority and an emphasis upon behavior and relationships rather than task and individual performance, and perhaps skills acquisition rather than upon aspects of individual performance or outcome. It is also expected that the organizations with a human resource strategy would have effects on implementing HRM practices.

There is still relatively little knowledge about employee expectations, behavior and perceived outcomes of and from work in the Middle East. There is a similar dearth of research study evidence concerning management behavior and style and about HRM. Egypt was one of the Middle Eastern countries to pursue an open door policy to foreign investment and exhibits many of the characteristics of Middle Eastern countries. A number of recent studies, for example; Sadler-Smith, El-Kot and Leat (2003) and Leat and El-Kot (2007) have examined the socio cultural, religious, economic and institutional context in Egypt and some of the implications for expectations of and behavior at work along with work outcomes and preferences for certain HRM practices.

Budhwar and Mellahi (2007) identify a number of studies that have been undertaken in relation to HRM in particular countries. Some of these have sought to identify the extent to which HRM practices in particular countries can be perceived to be context specific and the implications that this may have for the approach to be adopted by incoming multinationals and the extent to which they may need to be sensitive to local values, expectations and ways of doing things. Others have sought to ascertain the influence of western management approaches and practices in Middle Eastern countries as they open themselves up to inward investment, as they become more involved in and subject to the pressures of international business and increased competition and as the indigenous population become more aware of alternative management theories and practices through going abroad to study and obtain management qualifications. Budhwar and Mellahi conclude from the relatively limited evidence available that Middle

Eastern countries appear to have management systems similar to most other developing countries and that these emphasize sensitivity to local cultural norms, which influence values, expectations, attitudes and behaviour, and restricted participation in decision making. They also identify the considerable influence of Islamic work ethics and principles. However, they caution against an over reliance upon culture and Islamic principles as a base for understanding and predicting expectations, attitudes and behaviour at work. They acknowledge also the multi-dimensional nature of national contexts to include government policies towards liberalization of the economy and privatizing the public sector and FDI, the implications of these policies for employment security and unemployment and other national institutions. They might also have added the educational and vocational training systems. They eloquently make the case for further research into these areas in Middle Eastern countries and it is in this context that this edition of the journal will present.

How quickly the world changes? Egypt was a relatively stable country as this Special Issue was initiated before the dramatic events on late January and early February. Egypt is a country of over 80 million people. It has been a military dictatorship for about 60 years. Egypt has about 40% of its' people living below the poverty level and up to 20% of the people illiterate. Egypt has very poor educational system. It is not doing a good job of preparing young women and men for the world work of the 21st century. Employment levels are particularly high among these young people. Egypt has a 20% unemployment rate, and as mentioned earlier, this rate is higher among the young and more educated. Fear is high because of the secret police, some citizens being arrested and tortured.

Egypt has high levels of corruption, cronyism, with bribery being rampant. Their economy has not performed well over the past 30 years, performing at levels lower than most of its regional neighbors. Elections have been held but these were fixed in advance. Tourism is a strong contributor to the Egyptian economy but has fallen off dramatically during the uprising. A revolution which over 18 days resulted in the resignation of the President and Vice President. The President, Hosni Mubarak, had been in power for almost 30 years (82 years old) and a lifetime military man. His first ever appointed Vice President (Omar Sulieman) was also a military man, aged 79. After Mubarak's resignation, country leaders (the military) asked some countries to freeze Mubarak and his family's assets (e.g., Switzerland)The country is currently being run by a military council headed by a life-long military man against change and reform. Mubarak and members of his family will soon be standing trial for both corruption and ordering the deaths of innocent protesters. Thus even though the President is gone, the country still faces incredible challenges in moving to democracy and economic success. There are no democratic institutions, no political parties, an absence of young skilled leaders. Egypt is likely 50 years behind the leading countries.

The country has lost millions of dollars per day during the uprising. In addition, many businesses were closed, some remaining closed, and some professional groups went on strike for better pay. Autocratic leadership from the military has created a culture encouraging yes men and limiting dissent. Telling the boss what the boss wants to hear. The Egyptian revolution was generally led by the most educated and economically knowledgeable forward looking citizens.

But for the revolution to have any positive lasting effects on the quality of life of the Egyptian people there must be economic growth. This economic growth is likely to come from younger Egyptians who are interested in entrepreneurial activity and business start-ups and the upcoming generation of managers and professionals working in larger organizations.

Egyptian success depends on the hearts and minds of its people, their human capital. Thus human resource management seems to be critical for success. And there are some promising developments. There are both academic business school conferences and business-related journals published in Egyptian universities. An increasing number of private universities in Egypt are offering business education with opportunities to study human resource management. Major international consulting organizations have offices in the larger Egyptian cities offering general management and human resource management advice. Students can specialize in human resource management both in MBA and PhD programs at many Egyptian universities. Funds are being made available to increase training in human resource management in small- and medium-sized enterprises as well. Managers in Egypt are increasingly showing interest in human resource management processes.

This special issue has several objectives. These include:

- showcasing some current HRM studies undertaken in a variety of Egyptian organizations;
- promoting these studies to a wider international audience;
- encouraging others to consider HRM issues in their own business and organizational research;
- supporting collaborative work by scholars, in concert with their Egyptian colleagues, either in Egypt or in their home countries.

The Contributions

El-Kot and Burke studied the relationship among role ambiguity and role conflict, supervisory support and both job satisfaction and company loyalty. They collected data from 493 respondents working in service organizations. Role ambiguity and role conflict were positively and significantly correlated. Both role conflict and role ambiguity predicted job satisfaction but not company loyalty or levels of supervisory support. Supervisory support however predicted company loyalty.

Amin and Darrag review the antecedents, process and consequences of sexual harassment at individual, job, organizational and societal levels. Prior to this effort, not a single study had been published on sexual harassment in Egypt. Sexual harassment is a major problem in Egyptian society. They identify several reasons for the absence of research on this topic in Egypt and lay out a future research agenda.

El Zamly and Amin examined the relationship of core self-evaluations and job attribute preferences among about to graduate students in business schools. Eleven job attributes were included. The most valued job attributes, in descending order, were the workplace social environment, challenging work, job security, organizational reputation and salary. Higher core

self-evaluations were associated with a higher preference for challenging work, developmental opportunities, organizational reputation and working for an international organization. Implications for research and practice are offered.

El-Kot and Gamal investigated, in a study of 94 Egyptian software companies, the role of both knowledge management and organizational innovativeness as predictors of self-reported sustained competitive advantage. Data were obtained using questionnaires for CEOs or members of senior management of these firms. Most were small or medium sized. Organizational innovativeness fully moderated the relationship of knowledge management on sustained competitive advantage replicating previous North American findings.

These research projects focused on research questions and employed methods similar to those used in earlier work in more developed regions such as North America, the UK and Western Europe. In addition, their findings were generally consistent with those reported previously. We encourage Egyptian human resource management researchers, however, to also identify issues and topics more directly relevant to the Egyptian context and culture

Notes

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Job Stressors, Supervisory Support and Work Outcomes among Egyptian Managers

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Abstract

Purpose - Job stressors are a common experience in all jobs and in all countries. The present study examines the relationships among two widely studied role stressors, role ambiguity and role conflict, supervisory support, and two work outcomes (job satisfaction, loyalty) among a large sample of Egyptian supervisors and managers working in service organizations in Alexandria, Egypt.

Design/methodology/approach - Data were collected from 493 respondents from service organizations using anonymously completed questionnaires with a 49 percent response rate.

Findings - Egyptian managers reporting higher levels of role ambiguity also reported higher levels of role conflict. Male managers, managers having less job tenure and managers at lower organizational levels reported higher levels of role ambiguity. Hierarchical regression analyses indicated that the two role stressors predicted job satisfaction but not levels of supervisory support or loyalty. Supervisory support did, however, predict loyalty. Suggestions for reducing the potentially negative effects of role stressors are provided. Promising future research directions are offered.

Research implications – Practical implications Role ambiguity can be reduced by providing more information to individuals on what their job responsibilities and priorities entail, and by having more frequent meetings between employees and their supervisors to spell these out. Role conflict can be reduced by having meetings with the individual and those that are sending potentially conflicting information and requests and having all parties come to a mutually agreeable resolution of these conflicting requests.

Originality/value -Relatively little human resource management and organizational studies research has been carried out in Egypt. Therefore this research would add to the body of knowledge in such area.

Keywords: Role stressors, supervisor support, work outcomes, Egyptian managers and professionals

Human Resource Management Research in Egypt

The economies of the Middle East tend to be under-performing (Ali, 2005, 1999) in recent times. In addition, relatively little organizational and management research has been carried out in the Middle East (Budhwar & Mellalhi, 2007). Middle Eastern countries also differ from each other in potentially significant ways.

Although Egypt has several schools of business management and many professors of human resource management (HRM) and organizational behavior (OB), relatively little HRM and OB research has been undertaken in Egypt. There are several reasons for this (Attayah, 1993, 1992). It is usually easier to undertake more quantitative research in finance, logistics and marketing. Many Egyptian academics are not trained to carry out and report research findings, and are not interested or motivated to do so. Managers and their employing organizations are not supportive of organizational research making it difficult to gain access to research sites and participants. In addition, managers are often fearful of having their subordinates describe their work experiences for fear that these data might reflect badly on the managers.

This picture seems to be slowly changing however. As the Egyptian economy remains stagnant, there is increasing interest in exploring new avenues to improve performance. In addition, more researchers in Egypt are obtaining the necessary research skills to carry out studies, and more schools of business management have been created, many having their own academic journals.

Studies of HRM and OB have been recently carried out in Egypt (Burke & El-Kot,2010,2009), El-Kot & Leat, 2008; El-Kot & Leat, 2007; Hamlin, Nassar & Wahba, 2010) using concepts and measures developed in North American and Europe producing findings generally consistent with conclusions reported in these previous studies. The present study is part of an ongoing research program intended to shed light on effective management practices in Egyptian private and public sector organizations.

Job Stressors Research

Job stress research has been ongoing for about 50 years in the US, and the effects of job stressors on both individuals and organizations has been considered in a large number of countries world-wide since then (e.g., Spector, Cooper, Sanchez, Siu, Salgado & Mau, 2004; Perrewe, Hochwater, Rossi, Wallace, Maignan & Castro,2002; Hobfoll, 1998; Narayanan, Menon & Spector, 1999). There is considerable evidence that the experience of job stressors has

negative consequences for both individuals and organizations. (Barling, Kelloway & Frone, 2005; Cooper, Quick & Schabracq, 2009; Schabracq, Winnubst & Cooper, 2003; Antoniou & Cooper, 2005). Individuals reporting higher levels of job stressors generally indicate lower levels of job satisfaction, more absenteeism, lower job performance, greater intent to quit, and lower levels of psychological and physical health (Shirom, 2003). And when individuals experience higher levels of job stressors, their organizations report higher turnover, more workplace errors and injuries, and poorer quality service and products. There has also been a growth of interest in workplace stress and well-being across cultures. A Special Issue of Cross Cultural Management (Burke 2010) contained five papers that examined workplace stressors in either single non-American or non-European countries or in several different countries. Spector and his colleagues (Spector, Cooper, Poelmans 2004) considered work-family stressors, working hours and well-being in a number of countries. And Bhagat and his colleagues (Bhagat, Krishnan Nelson 2010) examined the influence of coping styles and decision latitude on stressor, strain and would come in sic national contexts.

Job stressors have been classified into various categories by different investigators. For example, Cooper and Marshall (1976) proposed five categories of job stressors: stressors intrinsic to the job, from one's role in the organization, career development, relationships with others, and organizational structure and culture. Quick and Quick (1984) propose four categories of job stressors: from task demands, role demands, physical demands (from elements in one's physical setting or environment), and interpersonal demands. More recently; work-family demands have been added as a category.

Role stressors appear in several job stressor categorizations. Role stressors such as role conflict and role ambiguity are the most widely examined source variables in managerial stress research (Beehr, 1985; Beehr & Glazer, 2005; Burke, 1988) having been first introduced by Kahn and his colleagues (1964). The present study incorporated widely-used measures of both of these role stressors.

Role stressors such as role ambiguity and role conflict have been studied in various countries (see Peterson, Sanchez *et al.* 1995) and these studies number in the thousands. Peterson and his colleagues studied these two role stressors in 21 nations and found that the two role stressors were meaningful in all countries studied, that national-level variables contributed to scores on both role stressors beyond that accounted for by individual and organizational level measures.

The following variables have often found to be positively correlated with role conflict and ambiguity: tension and fatigue (Singh, Agarwalla & Malhan, 1981; Schuler, Aldag & Brief, 1977), absenteeism (Breaugh, 1980), leaving the job and anxiety (Hammer & Tosi, 1974), and both psychological and physical strain (Orpen, 1982). Jackson and Schuler (1985) also found the following variables to be positively correlated with role conflict: task/skill variety, locus of control, education, and propensity to leave the organization.

Variables found to be consistently negative correlated with role conflict and ambiguity include job satisfaction (Beehr & Glazer, 2005; Singh, Agarwala & Malhan, 1981; Breugh, 1980), physical withdrawal, supervisory satisfaction, performance, job involvement (Schuler, et al, 1977), decision making, job involvement, organizational commitment (Fisher & Gitelson, 1983), tolerance for conflict and group cohesion (Randolph & Posner, 1981), and reported influence (Hammer & Tosi, 1974). Submitting the literature to meta-analysis techniques, Jackson and Schuler (1985) found significant negative correlations between role conflict and/or ambiguity and the following variables: participation, task identity, feedback, job satisfaction across sub-levels, and commitment and involvement. It has also been found that role ambiguity and role conflict are consistently correlated with each other (Jackson & Schuler, 1985; Van Sell, et al. 1981).

Antecedents of role conflict and role ambiguity include working in organizational boundary roles, being a service employee, objective role requirements of the employee, limited participation in decision making, limited use of goal setting by supervisors, number of subordinates, and level of formalization in the organization (Beehr & Glazer, 2005).

Social Support

Given the consistent relationship between role stressors, or job stressors more broadly, and negative individual and organizational outcomes, the question of how to ameliorate the effects of role stressors on these outcomes became paramount (House, 1981). Two lines of research emerged to tackle this issue; one involving individual coping responses to the role stressors, the other incorporating the notion of social support or social resources in helping the individual “manage” the role stressors encountered (Cobb, 1976; Winnubst & Schabracq, 1996). It was suggested that social support might lessen the magnitude of the role stressors, directly increase one’s level on various work and well-being outcomes, or “buffer” the individual so that role stressors were less likely to culminate in negative outcomes. Research on social support has a long history being introduced in the early 1960s by a research program at the University of Michigan. (See House, 1981).

Unfortunately, the research findings on the usefulness of social support in the job stressors-negative outcomes relationship have produced inconsistent findings, and in many cases no support for a buffering effect. But social support, examined at both supervisor and organizational levels, has been consistently found to be associated with more favorable work outcomes so it was included in this investigation.

Organizational Support

Organizational support is an umbrella concept that includes supervisor support. Rhoades and Eisenberger (2002) reviewed more than 70 studies, undertaking a meta-analysis of these data. Perceived organizational support (POS) was affected by experienced fairness, supervisor support, and organizational rewards and positive job conditions. POS was related to positive employee outcomes such as job satisfaction and positive affect and favorable organizational outcomes such as affective commitment, job performance and low withdrawal behaviors.

Supervisor Support

Eisenberger, Stinglhamber, Vandenberghe, Sucharski and Rhoades (2002) reported results from three studies of perceived supervisor support (PSS), perceived organizational support (POS) and employee turnover. They found that PSS was associated with lower turnover rates, this relationship mediated by POS. PSS contributed to POS which in turn reduced turnover rates. Supervisor support has been examined in several countries. For example, Chen and Chiu (2005), in a study of Taiwanese companies, found that supervisor support influenced employee citizenship behaviors through employee job satisfaction, person-organizational fit, and lower levels of job tension.

The present study, to our knowledge, is the first investigation of role stressors, supervisor support, and work outcomes in the Egyptian context. The following hypotheses were proposed based on the available literature.

1. The two role stressors would be positively and significantly correlated.
2. Personal demographic variables would be weakly and inconsistently correlated with the role stressors.
3. Role stressors would be associated with less favorable work outcomes.
4. Supervisory support would be positively associated with favorable work outcomes.
5. Supervisory support would contribute to the prediction of work outcomes controlling for the effects of the two role stressors.

Method

Procedure: Members of the research team approached service organizations in Alexandria, Egypt soliciting their participation. From 1000 distributed questionnaires; only four hundred and ninety-three of their employees were participated with a response rate of 49%. Data were collected using anonymously completed questionnaires.

Respondents: Data were collected from 493 employees working in service organizations in Egypt. The sample contained 281 males (57%) and 212 females (43%). Most had college degrees (78%) with 22% having a post-graduate degree as well. Most were first level supervisors (293, 59%), with 172 (35%) being middle-level managers and 29 (6%) being top level managers. Most respondents had 5 years or less of work experience (323, 65%), with 105 (21%) having between 5 to 10 years of work experience, and 65 (14%) having more than 10 years of work experience.

Measures

Personal demographic information: Personal demographics were measured to single items (e.g., gender, level of education, job level, job/work experience).

Job stressors: Two job stressors were included. Individuals were presented with a five-point Likert scale of agreement or disagreement with each item on the five measures described below (1-strongly disagree, 3 = neither agree nor disagree, 5-strongly agree).

Role conflict: It was measured by an 8 items scale ($\alpha=.72$) developed by Rizzo, House and Lirtzman (1970). Respondents indicated how true each item was of their work situation on a

five-point Likert scale (1=very false, 5=very true). An item was "I receive incompatible requests from two or more people."

Role ambiguity: It was assessed by a six-item scale ($\alpha=.76$) also developed by Rizzo, House and Lirtzman (1970). The same five-point Likert response scale was used. An item was "I know what my responsibilities are." (reversed)

Supervisory support: Supervisory support was measured by a three item scale ($\alpha=.78$) developed by Taylor and Bowers (1972) An item was "My supervisor is willing to listen to my problems."

Work outcomes: Two work outcomes were included. These were:

Job satisfaction was measured by an 18 item scale ($\alpha=.60$) developed by Brayfield and Rothe (1951). Responses were made on a five-point Likert agreement scale (1-strongly disagree, 5=strongly agree). An item was "I find real enjoyment in my work."

Organizational loyalty was measured by an 11 item scale ($\alpha=.63$) developed by Buchanan (1974). One item was "I feel a strong sense of loyalty towards this organization."

Results

Descriptive statistics: Table 1 presents the means, standard deviations and inter-correlations among all measures used in the research. The following comments are offered in summary. First RA and RC were significantly and positively correlated ($r=.23$, $p<.001$). Second, Supervisory support had no relationship with either RA or RC. Third, job satisfaction had no relationship with loyalty. Fourth, RA was significantly and negatively correlated with job satisfaction ($r=-.17$, $p<.001$). Fifth, supervisory support was significantly and positively correlated with loyalty ($r=.30$, $p<.001$). Sixth, personal demographics were only weakly and inconsistently correlated with the other variables in the study. Male managers, managers having less job tenure, and managers at lower organizational levels reported higher levels of role ambiguity however ($r_s=.13$, $-.19$ and $-.18$, respectively, $p<.001$).

Group differences: Comparisons were made between male and female managers, managers with university and post-graduate university degrees, managers having less and more job tenure, and managers at lower and higher organizational levels. The following findings were obtained. First gender differences were found on only one study variable: males scored higher than females on role ambiguity. Second there were no differences on any of the study variables between managers having one university degree and managers having a post-graduate degree in addition. Third, with more experience at job; males scored higher than females on role ambiguity. Fourth, managers with higher organizational levels scored higher than females on role ambiguity.

Predictors of role stressors: The two role stressors were separately regressed on three personal demographic predictors. The three predictors accounted for a significant amount of explained variance on RA and all three predictors had significant and independent relations: job tenure ($B=-.13$, level of education ($B=.10$) and organizational level ($B=-.12$). Egyptian managers having less job tenure, more education, and at lower organizational levels indicated more RA. The three predictors failed to account for a significant amount of explained variance on RC.

Role stressors, supervisory support and work outcomes: Table 2 shows the results of hierarchical regression analyses in which measures of social support, job satisfaction and loyalty were separately regressed on two blocks of predictors: personal demographic characteristics ($N=3$) and role stressors ($N=2$). When a block of predictors accounted for a significant amount or increment in explained variance on a given outcome variable, items or measures having significant and independent relationships with such outcomes ($p<.05$) were identified. This approach to analysis controls for the effects of personal demographics before examining the relationship of the role stressors with various outcomes

Personal demographics failed to account for a significant amount of explained variance in any of these analyses; role stressors accounted for a significant increment in explained variance on only one dependent variable: job satisfaction. Egyptian managers reporting higher levels of RA and lower levels of RC indicated lower levels of job satisfaction ($Bs=-.17$ and $.09$, respectively).

Predictors of work outcomes: Table 3 presents the results of hierarchical regression analyses in which measures of job satisfaction and loyalty were separately regressed on three blocks of predictors: personal demographics ($N=3$), role stressors ($N=2$) and supervisory support ($N=1$). The following comments are offered in summary. First, as indicated in Table 2, the two role stressors accounted for a significant increment in explained variance on job satisfaction, with Egyptian managers reporting more RC and less RA indicating higher levels of job satisfaction ($Bs= .09$ and $-.17$, respectively). Second, Egyptian managers indicating higher levels of supervisory support also reported more loyalty ($B=.30$).

These findings are partially consistent with previous results. First, Egyptian managers reporting higher levels of RA reported lower levels of job satisfaction. Second, managers reporting higher levels of supervisory support, controlling for both personal demographics and role stressors, indicated higher levels of loyalty; but supervisor support had no relationship with self-reported job satisfaction.

Discussion

This research provided findings that provided substantial but not complete support for our hypotheses. First, both RA and RC were significantly and positively correlated. Second, personal demographics were only weakly and inconsistently correlated with the two role stress. RA was however associated with gender, length of job tenure and organizational level. In retrospect, RA is more likely to be affected by the latter two variables than would RC. Third, RA was associated with a less favorable work outcome (job dissatisfaction). Fourth, supervisory support was positively associated with one of the two work outcomes included in the study

(loyalty). These results extend previous North American and European findings to the Egyptian context.

Previous Egyptian research has also found that North American organization, management and leadership concepts were not only relevant to the Egyptian context, but also yielded results generally consistent with North American findings. There are several reasons why this is the case. First, commerce and business has become more global over the past decade (Bhagat, Sfteverson & Kuo, 2009). In addition, information on these concepts, and others, has been spread internationally as well. Second, some concepts are likely to be relevant to all cultures and countries, concepts such as leadership, job satisfaction, and support are likely present in all workplaces though their form may vary somewhat from culture to culture and country to country (Bhagat & Steers, 2009; House, Hanges, Javidan, Dorfman & Gupta, 2004; Hofstede, 2001).

Practical implications

The study of job stressors has generally indicated relationships between the experience of workplace job stressors and negative individual and organizational outcomes. Thus research on job stressors has obvious practical implications. Fortunately, there is a body of writing that suggests various initiative for reducing levels of experienced job stressors and for strengthening individual resources to assist employees to better manage experienced job stressors (Murphy, 2003; Fletcher, 2006; Schabracq, 2006; Tinline & Moss, 2009; Schabracq & Smit, 2009, Attridge, 2009; Cartwright & Cooper, 2005; Hurrell, 2005).

Role ambiguity can be reduced by providing more information to individuals on what their job responsibilities and priorities entail, and by having more frequent meetings between employees and their supervisors to spell these out. Role conflict can be reduced by having meetings with the individual and those that are sending potentially conflicting information and requests and having all parties come to a mutually agreeable resolution of these conflicting requests.

Limitations of the research

All research as limitations and the present study is no exception. First all data were collected using self-report questionnaires raising the small possibility of common method variance. Second, the two work outcomes had levels of internal consistency reliability that fell below the generally accepted level of .70. Third; while large, it was not possible to determine the representativeness of the sample. Fourth, it is not clear the extent to which these findings would generalize to employees of other types of organizations, or to employees working in other countries.

Future research directions

Job stressors exist in all occupations in all countries. Relatively little research has examined job stressors among workers in Egypt to a number of research directions would increase our understanding of this important phenomenon. First, future research should include a greater number of job stressors (e.g., work hours, work intensity, work-family conflict, physical hazards,

and abusive supervision). Second, additional personal, work and organizational outcomes need to be incorporated into job stressor research in Egypt. These might include psychological well-being, work engagement, family satisfaction, job performance and work unit performance. Third, it is important to better understand ways individual can manage their job stressors so studies of coping, social support and recovery from work while at home would be informative (Bhagat, O'Driscoll, Babakus *et al.*,1994). Fourth, individuals differ in their reporting of levels of job stressors. Is this the result of individual difference factors (e.g., locus of control), job characteristics (e. g, participation in decision making), or both? Fifth, the conduct of job stressor and well-being research across cultures requires the cooperation and collaboration of researchers in several countries and considerable resources. Fortunately there are encouraging signs that such efforts are now taking place more frequently.

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Table 1: Descriptive Statistics *

Measures	X	SD	1	2	3	4	5	6	7	8	9
1.Role ambiguity	3.9	.61	----	.23	.04	-.17	.03	.13	.06	-.19	-.18
2.Role conflict	2.9	.63		----	-.07	.05	-.01	.04	.00	-.02	.00
3.Supervisory Support	4.2	.70			----	.04	.30	.01	-.02	-.06	-.06
4. Job Satisfaction	3.0	.39				----	.07	-.06	.03	.09	.12
5. Loyalty	3.4	.53					----	-.00	.02	.02	.02
6. Gender	1.4	.50						----	-.03	-.16	-.11
7. Educational Level	1.2	.41							----	.12	.09
8. Job Tenure	1.3	.72								----	.62
9. Organizational Level	1.5	.61									----

a N=493
in all
cases.,
*Correlat
ions .09

and greater are statistically significant, p<.05

Table 2: Role Stressors and Work Outcomes

Work Outcomes

<u>Supervisory support</u>	<u>R</u>	<u>R²</u>	<u>Change R²</u>	<u>P</u>
Personal demographics	.07	.00	.00	NS
Role stressors	.11	.01	.01	NS

Job satisfaction

Personal demographics	.12	.02	.02	NS
Role stressors	.21	.04	.02	.001
Role Ambiguity (-.17)				
Role conflict (.09)				

Loyalty

Personal demographics	.03	.00	.00	NS
Role stressors	.05	.00	.00	NS

Table 3: Role stressors, Supervisory support and Work Outcomes

Work Outcomes

<u>Job satisfaction</u>	<u>R</u>	<u>R²</u>	<u>Change R²</u>	<u>P</u>
Personal demographics	.12	.02	.02	NS
Role stressors	.21	.04	.02	.001
Role ambiguity (-.17)				
Role conflict (09)				
Supervisory support	.21	.04	.00	NS

Loyalty

Personal demographics	.03	.00	.00	NS
Role stressors	.05	.00	.00	NS
Supervisory support (.30)	.30	.09	.09	.001

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Sexual Harassment in the Egyptian Workplace: A Literature Review and Research Agenda

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Abstract

Although research on sexual harassment (SH) has advanced in western countries, no academic studies have been published on this phenomenon in Egypt. This is problematic, since several media and non-governmental organizations have indicated that SH is a major societal concern. This article reviews the published literature on the process, antecedents and consequences of SH at the individual, job, organizational and environmental levels. The paper concludes with ideas for future research on SH in Egypt.

Keywords: Sexual harassment, Culture, Egypt

Introduction

Sexual harassment (SH) is defined as “behaviors that violates, derogates, demeans, or humiliates an individual based on sex or gender” (Lopez, Hodson, & Roscigno, 2009, p. 4). In the workplace, SH can take the form of tying employment benefits or conditions to sexual favors and/or creating an unfavorable working environment for individuals’ of a specific sex or gender. Examples of SH include unwelcomed sexual advances, touching, gestures and comments.

Research has shown that SH has significant negative work related, psychological and physical consequences for victims (Welsh, 1999). At the organizational level, SH has been shown to negatively affect employee turnover, absenteeism, increased medical claims and productivity. Additionally, U.S. organizations found liable for SH have been penalized with huge damage awards to the victims (Robinson & Frink, 2002). Because of these negative consequences, US organizations pay two billion dollars on efforts to combat SH in the workplace (Shalley & Parsons, 2002).

Although sexual harassment in the workplace has been studied extensively in the West, Egyptian scholars have not given much attention to the issue. A review of EBSCO and Emerald electronic database shows that not a single study has been published on SH in Egypt. This is unfortunate as there are several signs that SH is a major problem in the Egyptian society (Shafeek, 2009). For example, one report indicated that up to 83% of Egyptian women have

experienced SH (Stack, 2008). Several newspaper articles and movies have also highlighted the problem. SH has become such a problem in Egypt that one non-governmental organization has recently launched a website called Harassmap.org that showed the incidents of SH reported on a map of Cairo as a guide for women wishing to avoid hostel regions.

There are several reasons that may explain why SH has not received attention in Egypt. First, sexually oriented issues have been considered as a taboo subject and as such have been ignored by scholars. Second, the political regime has long claimed that it provides safe working environments for women and as such discouraged any research that would shed doubts on its claims. Denial and silence was the common formal response to allegations of SH (Shenker, 2010).

After many years of political and economic stagnation, Egypt is experiencing revolutionary changes. These changes reflect the society's yearning for reform and democracy. Concurrently, demographic and social changes show that the Egyptian workforce is becoming younger and that the participation of women is increasing. Within this context it is important to study SH for several reasons. First, there is evidence that SH does exist in Egyptian organizations. Continuing to deny the existence of SH or ignoring it may be considered a violation of human rights. This may be true because SH can be considered an obstacle to employment. Second, the competitiveness of Egyptian organizations in the global marketplace may depend on the extent to which they are able to manage employees' diversity and create a productive work environment. As such, preventing or minimizing SH may help Egyptian organizations improve their competitiveness. Third, the study of SH in the Egyptian context may allow for the construction of regional or country specific HRM theories.

The purpose of this paper is to review and integrate some of the literature on SH and suggest an agenda for future research on this topic in Egypt. Towards this purpose, the paper is organized in two parts. First, we will review the process, antecedents and consequences of SH. Second, we will discuss some of ideas that may direct future research on SH.

The Process of Sexual Harassment

Research has also examined the process or dynamics of SH in the workplace. Although SH is not always initiated by men, most studies have indicated that females are the usual target. Additionally, studies have shown that harassment usually is carried out with an element of force or coercion. In such cases, the harasser usually has some form of authority or power over the victim such that he can control her salary raises, promotion opportunities or working conditions. This implies that the harasser is typically in a hierarchical position higher than that of the victim. This coercion can be explicit or implicit. If the victim does not comply with the harasser's wishes, the harasser may execute his threats and punish his victim.

Research shows that victims of SH either take a passive stance or take a more assertive position and confront the harasser (Thacker, 2002). Passive behavior is explained by learned helplessness theory (Seligman, 1974). This theory suggests that people may feel that they have no control over the conditions that they are suffering from and as such only try to endure such

conditions without making any efforts to change it. When victims take a passive stance they tend to tolerate the SH and may even comply. Cultures that are high on power distance may tend to foster values that encourage compliance with the demands of those in higher authority.

Confrontation is based on reactance theory which suggests that people become aroused when they believe that their freedom is threatened (Brehm, 1966). Since SH may be perceived as a threat to the freedoms and interests of the victim, she may respond by confronting the harasser. Confrontation can take the form of verbally refusing the request of the harasser. The victim can also confront the harasser by reporting the incident to the organization. Reporting of SH cases is more likely if the organization has a formal complaint procedure which employees trust.

Antecedents and Consequences of Sexual Harassment

Antecedents of SH: This section provides an overview of the antecedents presented in the SH literature. By antecedents we mean that factors that cause or trigger SH. These factors are grouped according to the level at which they operate in. Four levels are identified; environmental, organizational, job-gender and individual. It is important to understand here that these antecedents do not operate in isolation of one another. In other words, some antecedents may affect other antecedents. For example, the individual's attitudes towards women are no doubt affected by societal values and stereotypes. Figure 1 shows a model of the antecedents.

Environmental level antecedents: The external environment encompasses all the antecedents that affect SH which exist outside of the boundaries of the organization. These antecedents include cultural factors and national institutions such as the labor and penal codes and the political system.

A key aspect of the cultural is its gender related value system. Patriarchal societies value male control and power over political, legal, economic and religious spheres of life. Traditional gender-role attitudes emphasizing the dominance of men and limiting the role of women to domestic issues abound (Mostafa, 2003). Patriarchal societies encourage women to avoid conflict, be passive, be sexually attractive, take responsibility for their own victimization, and to distrust their own judgment (Sigel, 2006; O'Leary-Kelly & Bowes-Sperry, 2001).

One aspect of patriarchal cultures is gender egalitarianism which reflects the degree to which a society minimizes gender inequality. Societies that score low on egalitarianism believe that men and women are not equal and that they should play different roles. According to the GLOBE study, Arabs in general and Egyptians in particular score very low on gender egalitarianism (Javidan, Dorfman, de Luque, & House, 2006).

One model that may explain the relationship between gender egalitarianism and SH is the gender-role spillover model (Gutek & Morach, 1982). According to this model SH results from carrying over gender related sexual roles to work (Popovitch & Licata, 1987; Terpstra & Baker; 1986). The model suggests that men who engage in SH extend the women's' domestic or sexual

roles to their work roles (Lopez, Hodson & Roscigno, 2009). Gutek (1985) suggested that traditional sex role expectations may be prevalent in the workplace (Popovich & Warren, 2010; Topa, Morales & Depolo, 2008; Sigel, 2006; O'Donohue, Downs & Yeater, 1998). In this case, women would be seen and treated as females in the first place and then as coworkers and accordingly treated differently from their male coworkers (Wilson & Thompson, 2001). Thus, SH results from the sex role expectations prevailing in societies (Pina, Gannon & Saunders, 2009).

At the institutional level, it is important to discuss how the international, regional and domestic legal regimes affect SH. Internationally, the United Nations (UN) Convention on the Elimination of All Forms of Discrimination against Women requires all UN member countries to issue laws protecting women from discrimination including SH (United Nations, 1981). The International Labor Organization (ILO), which is a body of the UN has also passed a convention forbidding any discrimination against women (International Labor Organization, 1960). At the regional level, the European Union has also approved a law fighting SH. In the US, SH is criminalized under multiple laws including the Civil Rights act of 1964 (Robinson & Frink, 2002). In both the EU and the US, victims of SH can seek compensation for damages from their employers.

In Egypt, SH is not explicitly covered by any law. However, article 306(A) of the Egyptian penal code states that any treatment of a female in a way that would violate her bashfulness in public is a violation (Serour, 1991). The article also states that punishment can be up to one month of imprisonment. If the same person repeats the violation, the punishment may increase to six months imprisonment. Serour (1991) explains that this article covers both verbal and physical interactions.

It is clear from the above that although this law may protect women from harassment in public areas such as streets, it may not protect them from harassment in a private workplace. For example, any harassment of a female employee in a private office would not be subject to article 306(A). The punishment identified in the article is also very weak and inconsistent with the physical or psychological damages that may affect the victim. Additionally, the article does not provide for any compensatory damages from the harasser or the employer.

If we move on to the political dimension, we find a regime that portrayed itself as a guardian of human rights and liberties yet censored and hushed news of sexual harassment. In a study of the state-controlled media's coverage of sexual harassment incidents, the Egyptian Center for Women Rights (ECWR, 2009) concluded that the media downplayed such incidents. She also concluded that the police also downplayed the incidents and on some occasions completely denied that they took place.

Although ECWR's (2009) report does not explain why the media and police tried to downplay the SH incidents, it is possible that the such moves were made so as not to tarnish the image of the regime or reinforce any public perceptions that regime was losing its security grip.

Organizational level antecedents: One of the main antecedents of SH at the organization level is the power structure. The power model argues that SH is the result of power differentials

between men and women in organizations (Welsh, 1999). Men may use their power to harass less powerful women. For example, a male superior could harass a female subordinate (Popovich & Warren, 2010; Welsh, 1999). Such power could be classified as either ascribed power or acquired power. Ascribed power is a sort of power or characteristic that a person has no control of and/or cannot change, that is attributed to gender and ethnicity (Sigal, 2006).

A second antecedent of SH at the organizational level is the degree of SH intolerance within the organization (Fitzgerald, Drasgow, Hulin, Gelfand & Magley, 1997). Intolerance is measured in terms of the perceived commitment of organizational officials to effectively handle harassment problems, along with the implementation of policies or procedures to combat such problems including the presence, accessibility, and effectiveness of harassment remedies (Fitzgerald, Swan & Fischer, 1995; Gruber, 1998; Munson, Miner & Hulin, 2001; Willness, Steel & Lee, 2007). Researchers highlighted that the organizational intolerance was composed of three basic aspects; perceived risk for victims in case of complaining, lack of sanctions against offenders, and perception that one's complaints will not be taken seriously.

The availability and amount of SH training and its effectiveness within organizations also affects SH (Gruber, 1988; Munson, Miner & Hulin, 2001). Further the extent to which the workplace is perceived as sexualized (i.e., sexual jokes and innuendo, sexual teasing, and sexual discussions are common) was identified to affect the occurrence of SH (Dekker & Barling, 1999). Gruber (1988) deduced that gender predominance within organizations was significantly related to the occurrence of SH. Women tend to prefer working in organizations that employ a large-scale female workforce as a form of protection against SH (Assad, 2005; Nye, 2008).

Job level antecedents: Fitzgerald et al. (1997) identified the job-gender context as an antecedent of SH and defined it as the factors that comprise the gendered nature of the work group. This definition reflects the gendered nature of the work group. Willness, Steel and Lee (2007) and Sigal (2006) defined the job-gender context as the extent to which an occupation is perceived as traditionally male (e.g., mechanic) or traditionally female (e.g., secretary). Women that work in jobs that are not traditionally female may be subjected to harassment. One possible explanation for this is that men may use SH to degrade women so as to weaken them and prevent them from competing with men.

Another important job-level aspect is the stereotype of women that work in specific jobs. Stereotypes are beliefs about the qualities associated with particular groups or categories of people (Schneider, 2004). Most research on stereotyping has focused on the beliefs of people regarding groups defined by race and gender (women). Stereotypes are a powerful predictor of prejudice (Schneider, 2004). Although no studies have been done, women who work in jobs that serve non-traditional populations such as tourists may be subject to being portrayed as sexually immoral. When hotels force female waiters to wear makeup and revealing clothes they may be contributing to this job-gender stereotype. This would lead to higher tolerance for men who engage in SH acts in such societies (Sigal, 2006).

Individual level antecedents: Dekker and Barling (1998) stated that personal-level factors do play a major role in the existence of SH within the workplaces. Such factors can be grouped as socio-demographic, personality, beliefs and tolerance towards SH. Gutek (1985) had indicated that demographic-level factors such as marital status, age, and educational level do affect the occurrence of SH. With regards to personality, Pina, Gannon and Saunders (2009) identified that agreeableness and openness to experience were the two most indicating dimensions of the Big-Five Model in relation to SH. Also, honesty-humility trait was found to be significantly related to SH. Finally, beliefs along with tolerance towards SH were classified as variables affecting SH incidence on an individual basis. This includes personal ethics, beliefs and values (i.e. adversarial sexual beliefs, sexual harassment beliefs, perspective taking, and self-esteem) along with experience/lack of SH experience, personal appraisal of threatening nature of SH in addition to the resources available to deal/cope with SH.

Stringer, Remick, Salisbury and Ginorio, (1990) and Terpstra and Baker (1986) also stated that sexual or biological attraction between men and women may also be a major cause of SH. In this case, SH could be perceived as a natural extension of mate selection processes; where it would be rationalized as an expression of interest about sexual attraction in a potential mate. Accordingly, men would be expected to have higher or more aggressive innate sexual drive to find a mate. This higher interest level expressed and exercised from some males to some female parties who are not interested, would lead to the development and interpretation of aggressive behaviors classified as SH acts. Thus, this dimension mainly addresses the innate sexual drives to set the pattern for SH acts. A noteworthy point is that this theory had been tailored to address men as harassers and women as victims, though different research and real life experiences shows that roles are sometimes reversed (Pina, Gannon & Saunders, 2009; Browne, 1997).

Consequences of Sexual Harassment

Consequences are the outcomes or results of SH. Similar to the antecedents, consequences can also be classified into four levels: environmental, organizational, job related and individual. During the last two decades, much research has documented the harmful implications of SH on individuals (victims and harassers alike) and organizations. Figure 2 highlights the proposed layout of the consequences.

Individual level consequences: On addressing the job related outcomes, Chan, Lam, Chow and Cheung (2008) and Fitzgerald et al. (1999) identified that SH was correlated with negative job attitudes as lower organizational commitment and lowered satisfaction with peers and supervisors. Fitzgerald et al. (1997) had highlighted the association between SH prevalence, lower job satisfaction, work withdrawal (reflecting both absenteeism and tardiness) and job withdrawal (indicating turnover and retirement intentions). Munson, Miner and Hulin (2001) had identified that SH had negative implications on both supervisor and co-worker job satisfaction, in addition to the organizational commitment and the work group cohesiveness. Also, Chan, Tang and Chan's (1999) results indicated that SH was significantly correlated with job satisfaction.

At the psychological level, several studies showed that SH results in stress, anxiety, depression and declining psychological well-being (Chan et al., 2008; Topa, Morales & Deopolo, 2008). Psychological well-being and emotional effects were also found to be related to the prevalence of SH (Munson et al., 2001).

At physical level, some studies have shown that SH can result in health complaints (Topa, Morales and Depolo, 2008). Chan et al. (2008) and Fitzgerald et al. (1997) concluded that SH can result in headaches, gastrointestinal disorders, and sleep disturbance. Munson, Miner and Hulin (2001) have also documented the poor level of health satisfaction among victims of SH. Merkin (2008) suggested that SH may elicit poor health conditions which in turn may lead to absenteeism, intentions to quit as well as turnover.

Organizational level consequences: In SH cases in the US, liable organization are often ordered by court to pay punitive and compensatory damages to the victims. Another explicit cost would be the increased medical claims filed by SH victims to overcome the implications or consequences of that they had been subjected to either physically or psychologically (O'Donohue, Downs & Yeater, 1998). Although these costs can be significant, they only represent the explicit costs of SH. Implicit costs are more threatening to the organizations (O'Donohue, Downs & Yeater, 1998; Terpstra & Baker, 1986). Implicit costs include increased job turnover, absenteeism, reduced performance and lowered employee morale.

Environmental level consequences: Although no studies have documented the consequences of SH at the macro level, it is logical that the combined negative costs at the individual and organizational level may accumulate leading to significant negative effects for the country. In Egypt, fathers or husbands of females may prevent them from joining the workforce fearing that they will be subjected to SH. It is possible that Egyptian males do not believe that their wives or daughters are safe at work. This might lead to a decrease in the supply of labor and as a result a reduction in the country's Gross Domestic Product (GDP).

Research Agenda

As pointed out earlier, most of the research that has been conducted on SH has been done in the United States. Very little cross-cultural research has been done on SH. As a result, a number of scholars have called on researchers to examine the effect of culture on SH. In spite of this call, very few studies have been done on SH in the Arab world in general and Egypt in particular. This is unfortunate, considering Egypt's important economic, cultural and political role in the Arab world. Egypt's most recent efforts to restore democracy, freedom and human rights to its citizens can only stress the need to study SH. As such, it is critical that scholars conduct more research on SH in Egypt. The purpose of this research should not only focus on replicating findings of studies done in the US and other parts of the world, but should also examine novel research questions that have never been addressed before.

One important area of study is estimating the prevalence of SH in the Egyptian workplace using valid measurement instruments and representative samples (Iles, Hauserman, Schwochau, & Stibal, 2003). Although Egyptian non-governmental organizations have published studies indicating that up to 83% of all women have experienced SH (Stack, 2008), it is not clear by

which methods and samples this data was collected. One related issue is the construction of an Arabic language instrument that could be culturally appropriate. This is important because some of the most important measurement instruments such as the Sexual Experience Questionnaire (SEQ) might not be culturally acceptable.

An area that has not been addressed in research before is the cognitions of the harasser. It is not clear how harassers make the decision to initiate the SH, chose their victims and harassment strategies. One model that may prove useful in such a study is the theory of planned behavior (Ajzen 1991). This theory stipulates that individual behavior is a function of intentions which in turn is a function of the individual's attitudes, norms and perceived behavioral control. This last construct reflects the perceived ease or difficulty of engaging in SH. The existence of a perceived opportunity to engage in SH may also play a role in this process. Additionally, it is important to understand that the harasser may be a member of the organization or an outsider such as a customer. This distinction between insiders and outsiders may be important because there could be a difference between them in how they think about SH.

Another area that also requires attention from scholars is how victims react to SH. This issue relates to how they will respond to the harasser and wither they will report the incident. Studies have shown that victims take either a passive or a confrontational response to the harassment (Thacker, 2002). Those that do confront their harassers may also report the incident to the organization or even to the police. It is not clear how victims make such a decision. One issue that is particularly relevant for Egypt is how female victims will think through the consequences of their actions. Many females may fear that reporting an incident may backfire and lead to their stigmatization which can damage their career prospects or their social relationships with significant others.

To study the above mentioned issues, we suggest the use of social constructivist research methodologies such as grounded theory. Constructivism believes that social phenomena must be studied from the perspective of those that are affected by it (Schwandt, 2003). As such, subjectivity is important. Additionally, constructivism suggests that social studies must be anchored in specific cultural and social contexts (Schwandt, 2003). These points are relevant because SH is primarily a socio-cultural phenomena. An advantage of the grounded theory methodology is that it may allow the construction of in-depth and rich theories of SH.

Conclusion

SH in the workplace is a problem that causes much damage to societies, organizations and individuals. Many countries have taken action to combat SH through various methods including legislation and awareness. Although sexual issues are considered a taboo in Egyptian society, the topic has received increasing attention from the media during the last few years. Several Egyptian non-governmental organizations have conducted surveys to measure the extent of SH and raise awareness of the problem. In spite of this increased attention to SH in Egypt, very little academic research has been conducted on workplace SH in Egypt. In this article we attempted to review some of the latest published research on SH. Based on this review we

constructed a model that identifies the antecedents and consequences of SH on several levels. We also tried to identify some of the future research directions that may prove fruitful. In conclusion, we hope that our efforts will spark the interest of scholars to this important topic in Egypt.

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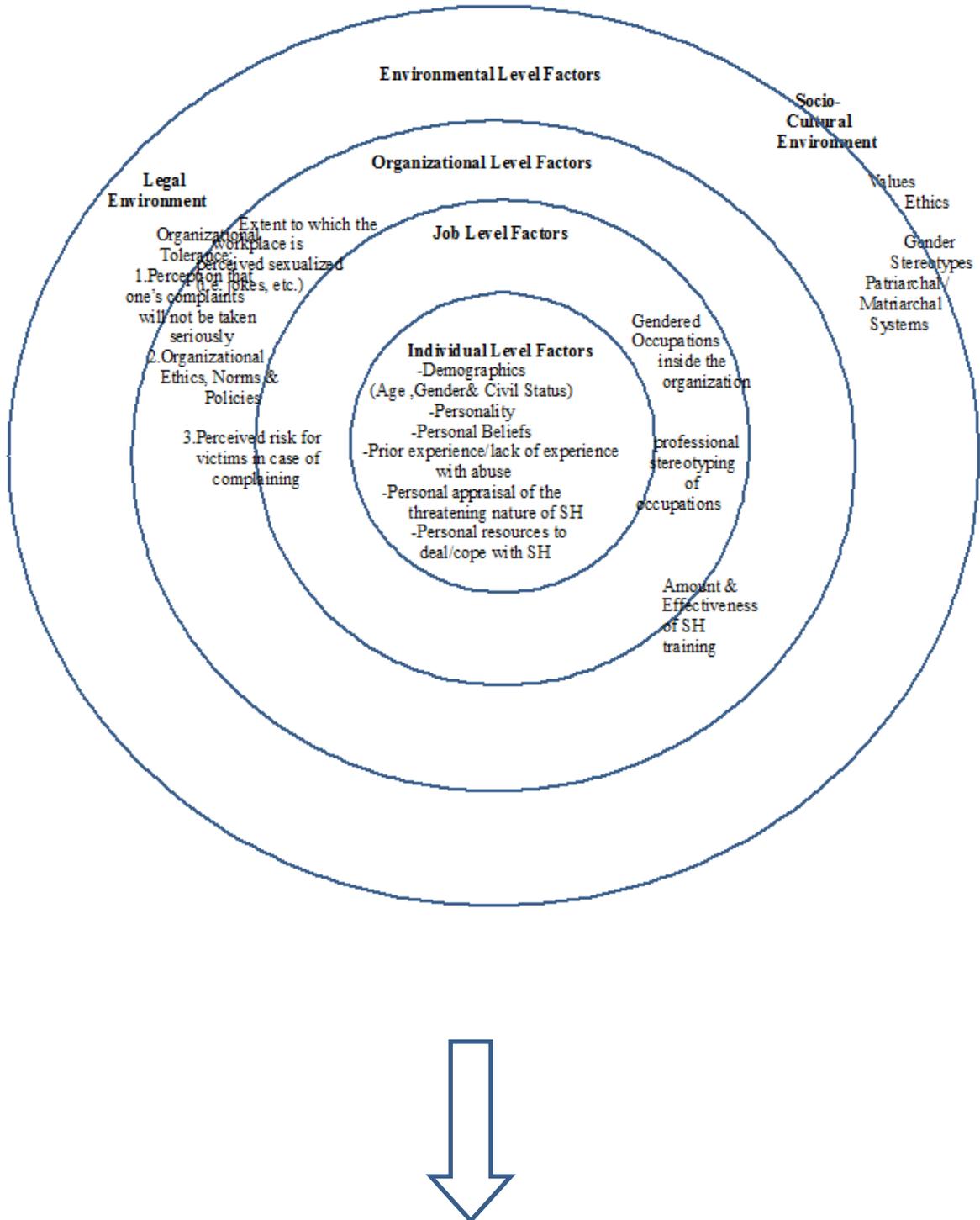
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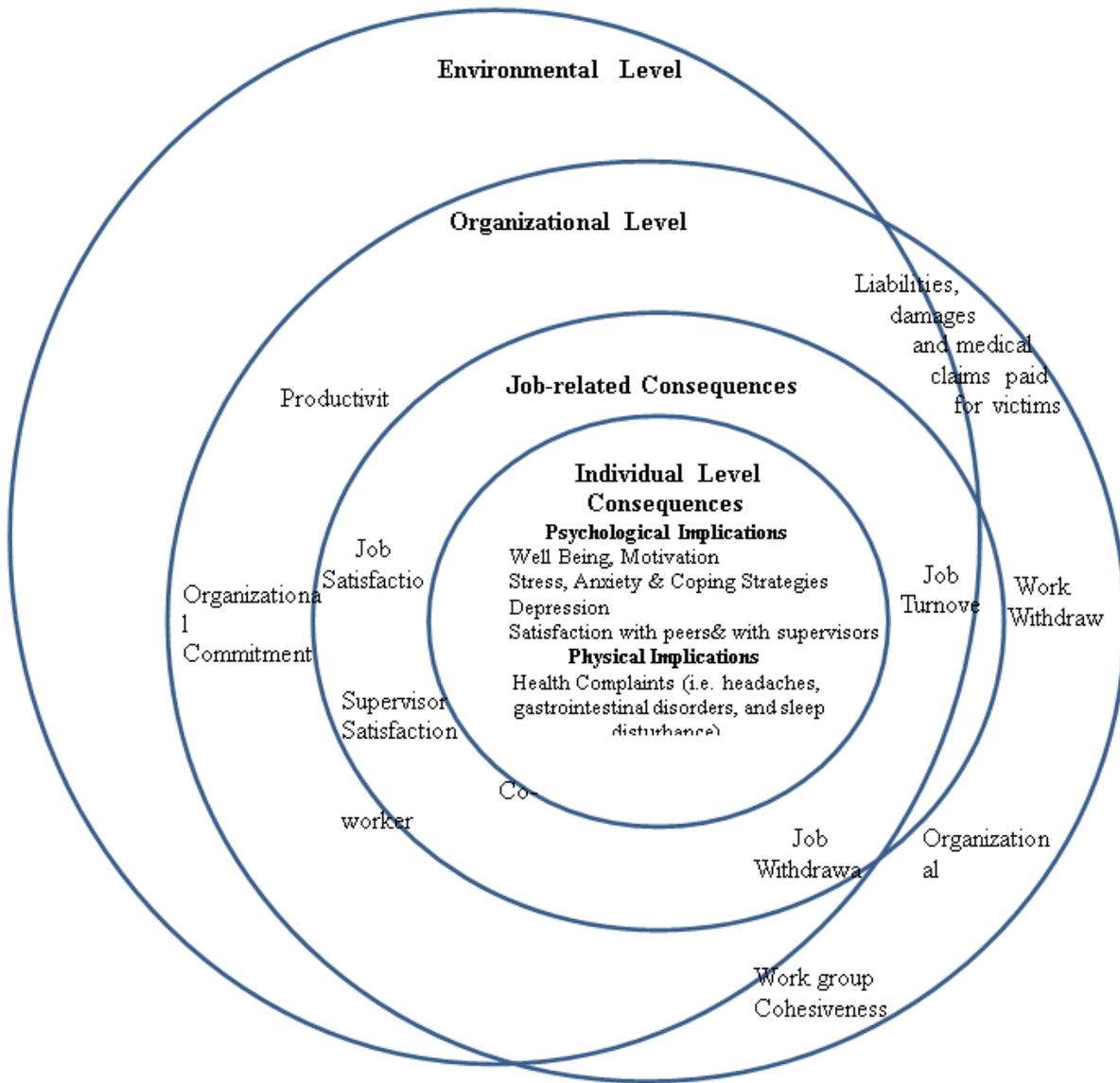
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Figure 1: Proposed Model of Antecedents & Consequences of SH





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Organization and Job Attractiveness to Applicants in Egypt and its Relationship with Core Self-Evaluation

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Abstract

Recruiters have acknowledged the importance of attracting qualified applicants to the organizational success. Therefore, organizations thrive for exploring the important attributes in the applicants' evaluations of organizational attractiveness. Person-organization fit is one of the main determinants of applicants' attractiveness to organizations. Core Self-Evaluation (CSE) attests the personality with regard to self-worthiness. However, no previous research has identified the role of CSE in the differences of attribute preferences. Therefore, this study examines the Egyptian graduates' attribute preferences and the role of Core Self-Evaluation (CSE) in the differences in their preferences. The results show the eleven preferred attributes ranked according to the applicants' preferences. More essentially, CSE plays a significant role in the applicants' preferences of being offered challenging jobs, development opportunities, working in innovative organizations, multinationals and reputable organizations. The implications of these differences for research and for practice are offered.

Keywords: Recruiters, Core Self-evaluation, Attribute preferences, Egypt

Introduction

Egypt's population of young people -between the ages of 15 to 30- comprise more than 50 percent of the total population (Holmes, 2008). Radwan (2002) states that almost 40 percent of the graduates will not find job vacancies; this is due to the surplus of demand for employment by the Egyptian graduates over the supply of jobs. Egypt's unemployment rate is 9.4% which is higher than previous years (CIA World Factbook, 2009).

In spite of the fact that there is a surplus of Egyptian graduates, qualified applicants are scarce in the market. This is due to an ineffective education system (Holmes, 2008). As a consequence, it is grueling for organizations to find qualified applicants within the vast supply of graduates through efficient recruitment process (Collins and Stevens, 2002). Backhaus and Tikoo (2004) state that employer branding helps the organizations to have a competitive advantage in the labor market. In line with this, Harold and Ployhart (2008, pp. 191) believe that "A key to identifying and attracting employees is an understanding of what factors are most/least attractive to one's applicant population". Therefore, organizations should understand potential applicants'

important attributes in their assessment as it is limited in the literature review (Terjesen et al., 2007).

Several researchers and managers have noticed the importance of the person-organization fit in the job seekers' attractiveness to organizations (Lievens et al., 2001; Kristof, 1996). Subsequently, this has led to an increase in the level of importance of organizations' understanding of the desired job seekers' personalities in order to be able to attract the required talents. A newly developed concept termed "Core Self-Evaluation" Judge et al., (2003) which is one of the measures of the applicants' personality. Core self-evaluation (CSE) is defined as "a basic, fundamental appraisal of one's worthiness, effectiveness, and capability as a person" (Judge et al., 2003, pp. 303; Johnson et al., 2008, pp. 391).

Research Gap and Research Questions

This study provides exploratory empirical evidence which contributes to a broader understanding of the impact of the applicants' preferences which supplements the literature. There has been no published research that identified the main applicants' job/organizational attribute preferences to organizational attractiveness in Egypt. Furthermore, no previous research has investigated the differences of the applicants' attribute preferences due to differences in the applicants' Core Self-Evaluation. Therefore, it will be a virgin area in research to be explored adding value to the literature. The present study aims to answer two main research questions.

RQ1: Which job/organizational attributes are attractive to the Egyptian applicants?

RQ2: To what extent do applicants' Core Self Evaluation influence their job/organizational attribute preferences?

Research Contribution

This study adds value to the society as it facilitate for organizations to reach qualified applicants more effectively and efficiently. While on the other hand, it helps job seekers to find more attractive organizations to apply for. This achieved match between the applicants' needs and the organizations' offerings will lead to higher performance of the organizations through having qualified calibers. Thus, this will lead to having a more flourished economy.

Paper Structure

The paper begins by exploring the literature through identifying the employer image definitions aroused by different researchers. Then it is followed by an overview of the historical research conducted in the area of organizational attractiveness to applicants. Then the paper addresses the personality differences among the job seekers. It highlights the importance of the person-organization fit in the organization attractiveness to organizations. The third section introduces a newly developed concept of Core Self-Evaluation (CSE); its definition and the importance of its relationship with the applicants' attribute preferences. Finally, the two phase, qualitative (focus group interviews) and quantitative (survey) methodology is laid out. Afterwards, the

results and the discussion of the results are presented. Finally, the limitations of the study, recommendations for further research are discussed.

Literature Review

Employer Image: Backhaus and Tikoo (2004) show that the application of branding principles to human resource management can be termed as “employer branding” and it can lead to competitive advantage. Reputable employer brand presents the organization as an attractive place to work. Employer branding is defined as the targeted, long-term strategy to manage the awareness of the potential employees regarding a particular firm (Backhaus and Tikoo 2004).

Employer brand in terms of benefits can be defined as “the package of functional, economic, and psychological benefits provided by employment, and identified with the employing company” (Backhaus and Tikoo 2004; Lievens, 2007; Lievens et al., 2007; Mosley, 2007). Mosley (2007) ensures that employer’s brand main role is to present a rational framework for management to focus priorities and improve recruitment and commitment driving positive employee engagement. Additionally, Lievens (2007) shows that strong employer brand influences positively the individual’s pride of belonging to the organization, the organization’s performance and the applicants’ quantity.

Brand Management: According to the brand management literature discussed by Lievens et al., (2007), a categorization of the brand concept is identified dividing the brand into three categories; instrumental, symbolic and experiential attributes. Current employer branding research depends on instrumental and symbolic attributes disregarding experiential attributes.

Instrumental attributes are product-related attributes defined as “describing the job or organization in terms of objective, physical, concrete, and factual attributes that job or organization either has or does not have” (Lievens, 2007; Lievens and Highhouse, 2003; Schreurs et al., 2009). Examples of instrumental attributes are pay, bonuses, and benefits, flexible working hours, or seeking a company close to where one lives (location).

On the other hand, symbolic attributes are defined as “subjective, abstract, and intangible attributes that convey symbolic company information in the form of imagery and trait inferences that applicants assign to organizations”. Schreurs et al. (2009) have proposed that applicants are attracted to organizations based not only on the tangible job/organization factors but also on the personality-trait inferences about the organization attributed by the applicants.

Collins and Stevens (2002) identify the perceived job attributes by the job seekers without categorizing the attributes. “These attributes are: salary/wage, location, advertising opportunities, and opportunity to learn new skills, availability of new skills, and availability of excellent training program, good corporate culture, company reputation, interesting work, benefits, and job security” (Collins and Stevens 2002, pp.19).

Thomas and Wise (1999) categorize the factors attracting organizations to job seekers into main four categories; job factors, organizational factors, diversity factors, and recruiter factors. Their research proves that job factors are the most essential to job seekers in their attraction to an organization. Job factors are such as “the salary, opportunity to use their abilities, and challenging and interesting work” (Thomas and Wise 1999). In addition to the organizational factors which are “the corporate image and reputation, location, training opportunities, selection procedures, opportunity for rapid advancement, work environment and job security” (Thomas and Wise 1999).

Historical Research

Reputation of the Organization: Turban and Cable (2003) have conducted two studies which confirm that the organization reputation attracts larger number and a higher quality of pool of applicants. Turban and Cable (2003) explain these results by the signaling theory which states that the applicants have incomplete information about the organization. Besides, applicants interpret the organization’s image based only on the available information as signals about the organization’s working conditions. This affects the applicants’ attraction to organizations. Accordingly, this research emphasizes the importance of maintaining an attractive reputation of the organization to attract qualified applicants.

Instrumental (job/organization) and Symbolic (trait inferences) Attributes: Lievens and his colleagues (Lievens and Highhouse (2003); Lievens (2007); Lievens et al., (2005)) have conducted three studies. They are interested in examining the relative importance of symbolic trait inferences and the instrumental job and organizational attributes across different groups that are relevant to the organizations through the recruitment process.

Lievens and Highhouse (2003) have investigated the main factors attracting applicants to organizations as a place to work. They are the symbolic (trait inferences about an organization) and instrumental attributes (job/organizational attributes). The results of the research show that all the study’s variables are significantly related to applicants’ attraction to organizations with the exception of the job security variable. The study’s job/organizational variables are: pay (salary received), advancement (opportunity for promotion), task demands (the rate of being busy at work), location (place of the work relative to the place where applicants live), and working with customers (giving the customers more than what they expect). The study’s trait (symbolic) attributes are sincerity, innovativeness, competence, prestige, and robustness.

Individual Differences: Harold and Polyhart (2008) aim at examining the individual differences among the applicants that might influence the attribute-attraction relationship. It focuses mainly on fit, pay, prestige, and location attributes (Harold and Polyhart, 2008, pp. 192). It has been found that the applicants' individual differences influence the attribute-attraction relationship; where those applicants with high abilities will be more confident in their abilities. Subsequently applicants place greater value on some attributes when applying for an organization.

Similarly, Schreurs et al., (2009) have conducted a research that is concerned with testing the relationship between trait-based inferences and the organizational attractiveness with the influence of the individuals' perception of similarity to the organizational characteristics. It can be elaborated that the individuals will be interpersonally attracted to organizations feeling similarity to them where the individuals' characteristics, personal values and goals match the perceived job/organizational characteristics.

Personality Differences among Job Seekers: Personality is defined as “that which tells a person what to do in a given situation; it’s stable across individuals’ lives and has a strong genetic component” (Judge and Cable, 1997, pp. 361). Different individuals will be attracted to different organizations based on their own personal preferences. Judge and Cable (1997) have shown that individuals’ choice of preferred environments is affected by the personality through the effect of choices on the individuals’ values and preferences.

According to the attraction-selection-attrition model described by Judge and Cable (1997) and Lievens et al. (2001), applicants create their fit perceptions with organizations based on their values and those of the organization. Since the employment plays a vital role in the individuals’ lives; applicants care about the organizational values (Judge and Cable, 1997). The presence of fit among the person and the environment of the organization are crucial in reaching a high level of employees’ satisfaction, mental and physical well-being at work (Carless, 2005) and an important determinant of job acceptance (Lievens et al., 2001). Employees are more satisfied when their jobs are parallel with their own career-relevant personality types, needs, interests, share their values, self-concept and provide opportunities for achieving their goals (Cable and Graham, 2000; Carless, 2005; Judge and Cable, 1997; Lievens et al., 2001; Turban et al., 2001). Thus, different personalities are attracted to different organizational types and working conditions. This confirms the person-organization (P-O) fit theory that individual characteristics moderate the relationship between the organizational attributes and the organizational attractiveness (Turban et al., 2001).

Core Self-Evaluations

Concept Definition: Core self-evaluation has been defined as “a basic, fundamental appraisal of one’s worthiness, effectiveness, and capability as a person” (Judge et al., 2003, pp. 303; Johnson et al., 2008, pp. 391; Dormann et al., 2006). Furthermore, Judge et al., (2004, pp. 326); Judge et al., (2000) have described Core self-evaluation as “a higher order concept representing the fundamental evaluation that people make about themselves and their functioning in their environment”.

Erez and Judge (2001, pp. 1270); Judge and Bono (2001, pp. 80) have described core self-evaluations as a personality concept which are “basic conclusions or bottom line evaluations that represents one’s appraisal of people, events, and things in relation to oneself”. People who have high core self-evaluation are characterized by evaluating themselves positively across various incidents, perceiving themselves as capable, being in control of their lives (Judge et al., 2004).

According to (Judge et al., 2003) core self-evaluations is “a broad, latent, higher order trait indicated by four well established traits in the personality literature”. The first trait is an evaluative component of self-concept that is the self-esteem which is the individual’s overall value placed to oneself; it has relations to cognitive, affective, behavioral processes (Judge et al., 2003; Johnson et al., 2008). The second trait is the generalized self-efficacy which is an evaluation of the individual’s ability to cope and perform within a variety of situations (Judge et al., 2003; Johnson et al., 2008). The third trait is the emotional stability (or conversely, neuroticism) which is the tendency to be less reactive to negative situations in everyday life, being more calm and secure (Judge et al., 2003; Johnson et al, 2008). The fourth trait is the locus of control which is the belief of an individual of his ability to control his environment and his behavior and is either attributing the causes of events in their life to themselves or to their surroundings (Judge et al., 2003; Johnson et al, 2008; Lin and Ding, 2003). Lin and Ding (2003) have classified the internals (controlists) as those who perceive environment as having less impact on their daily life events than the impact of themselves; where on the other hand, externals (confusionists) have the feeling of being helpless and under the control of their environment (Johnson et al, 2008).

Importance of the Relationship between the Applicants’ CSE and Attribute Preferences

The applicants’ core self-evaluation relationship with the applicants’ attribute preferences when applying for an organization is a highly critical relationship to be studied. Accordingly it requires understanding their needs as employees in organizations in order to be able to attract them. One of the main requirements of understanding the applicants is to identify their personalities which can be better investigated through evaluating the applicants’ Core self-evaluation.

Core self-evaluation reflects the applicants’ personality regarding the applicants’ perception towards their self-worthiness in the environment and how well they are functioning with different situations. Since organizations recognizes the difference between applicants based on their core self-evaluation, organizations will be able to identify the job positions requiring applicants either high or low in core self-evaluation. Subsequently, this will help the organizations to attract its targeted pool of applicants -either those high or low in core self-evaluation- based on the preferences they require. Consequently, organizations will identify for each job the main attribute preferences for the targeted pool of applicants and seek for satisfying the applicants’ preferences.

Methodology

This study is based on a two-phase; twofold qualitative and quantitative approach. The first phase is exploratory research where information is collected through three focus groups - composed of five participants each - asking the participants to identify the main attributes attracting them as applicants to organizations in Egypt. The second phase is a survey aiming at collecting data through distributing questionnaires. It asks the participants to provide their relative importance of each attribute -generated from the focus groups- and measuring the participants’ core self-evaluation.

Phase One

Pre-Study: Focus Group Interviews: A qualitative research needs to be conducted -through the use of focus group interviews- at the beginning of our study. The sample chosen was composed of fifteen graduating students (females and males) from a private university in Egypt studying different Management majors having fluctuating GPA's. The participants' characteristics of each focus group were homogeneous in terms of age, socioeconomic class, and educational background. This sample is relevant in the framework of the study as the students are confronting the real situation of applying to work in Egyptian organizations within the coming two months. Snowball sampling method was used in the beginning based on the recommendations of the participants' teaching assistants.

Phase Two: Survey

Pilot Study Survey: After developing the questionnaire, a pilot study survey has been conducted. The main objective of the pilot study is to assess the feasibility of developing a comprehensive questionnaire that could generate useful information. The pilot study exposes the questionnaire to criticism by the participants who are asked to present a constructive feedback. The results of the pilot study lead to adding one more attribute to the questionnaire which is the development opportunities -the eleventh attribute.

Sample

The sample of study includes Egyptian business graduate students -studying in private universities- who are either currently seeking jobs or will be seeking jobs shortly within few months after graduating. These students are chosen as they act as actual job seekers who are seriously searching for jobs and are in the process of selecting some organizations to apply for. The sampling procedure used is a non-probability sampling technique; convenience sampling method where the respondents are chosen as they are in the right place in the right time of the study (Malhotra, 2007).

Procedures

Data has been collected through contacting the targeted respondents in different Egyptian private universities. Their participation was voluntary and anonymous.

Questionnaire checking process has been conducted through reviewing the questionnaires to ensure accuracy and precision. Few questionnaires were screened and discarded as they contained inconsistent responses with very little variance. Data transcription took place through entering the data on SPSS -Statistical Package for Social Science Standard version 14.00- and was later analyzed. Through the process of entering the CSES data, there were some of the items reverse-scored; thus it was entered in a reverse score. Also, a new CSE variable has been created which is a composite of the sums of the twelve CSE items included in the scale.

Instrument

This structured questionnaire was distributed on the participants – Egyptian graduating students - to rate the level of importance of each of the attributes attracting them according to

their perception on a personal level. In addition to measuring the participants' core self-evaluation and identifying few of their demographic characteristics.

The questionnaire was designed based on the results of the focus group data transcription and on the questionnaires used in previous relevant studies such as Lievens et al., 2005; Cable and Graham, 2000; Thomas and Wise, 1999; Terjesen et al., 2007. The results of the focus groups have been analyzed through filtering the weak attributes (given by less than 1% of the participants), sorting out the rest of the reasons into distinct categories; job and organizational characteristics. Finally, a questionnaire has been developed and is organized as follows: The first part asks the respondents to rate the level of importance of each of the eleven attributes mentioned - according to their personal importance - on a scale from 1 to 7; where 1 represents least important and 7 represents most important. The second part is CSES which is derived from a previous research done by Judge et al., (2003) where they developed a measure for evaluating core self-evaluation concept which is called Core Self-Evaluation Scale (CSES). CSES asks the respondents to express their agreement or disagreement with twelve statements which are measuring the participants' CSE. The third part includes questions asking about background information and demographic characteristics of the respondents (age, gender, and Cumulative GPA (Grade Point Average)).

CSES validity

In Judge et al., (2003) research, the results confirmed that the CSES has shown significant convergence with the four core traits. Likewise, Judge et al. (2004) discovered that self-esteem, locus of control, and neuroticism were rated highly in the factor analysis showing that they load highly on a common factor. Consequently, it can be concluded that the four core traits can be considered as one measure of the core self-evaluations concept.

Results

Descriptive Statistics: Descriptive analysis has been performed in order to describe the main characteristics of a typical respondent. The sample size is 252 respondents where 50.4 percent of the respondents are males and 49.6 percent are females. Moreover, about 19 percent of the respondents have an age range of 19-20 years, 68 percent of the respondents have an age range of 21 to 22 years, about 10 percent of the respondents have an age range of 22-23 years, and only 3 percent of the respondents have an age range of 24-25 years.

Reliability of the Scale: The reliability of the Core Self-Evaluation (CSE) scale is investigated where "The Cronbach's alpha varies from 0 to 1, and a value of 0.6 or less indicates unsatisfactory internal consistency reliability and another important property is that its value tends to increase with an increase in the number of scale items" (Malhotra, 2007, pp. 285). The CSE scale includes 12 items and its Cronbach's alpha value calculated is 0.694, which means that the measure is considered to be reliable taking into consideration the small number of items in the scale.

Research Questions Analysis

RQ1: What are the significant job/organizational attributes in the Egyptian applicants' evaluations of organizational attractiveness?

The mean rates of each of the variables are compared among the total sample. Accordingly the attributes are ranked from 1 to 11 for each of the demographic variables. The results reveal that the attributes are ranked by the total sample according to their level of importance in the following order: social environment, challenging work nature, job security, reputation of the organization, salary, working in an innovative organization, individual-based reward, working in a multinational organization, location of the workplace, development opportunities offered by the organization, and the size of the organization.

RQ2: To what extent do applicants' Core Self Evaluation influence their job/organizational attribute preferences?

The CSE scores obtained from the respondents have been divided into three categories; high CSE, Medium CSE and low CSE. The study is concerned basically with the high and low CSE only. High CSE scores range from 43 to 60 the maximum score; whereas low CSE scores range from the minimum score of 12 to 38. In order to test for the statistical significance of the test, a closer look should be taken on the significance level. The results show that there is a significant difference in the relative importance of five attributes due to the difference in the CSE level. The first attribute is the challenging work nature; it is significant at a significance level of .05 ($P < 0.05$, sig. = .001) where the job seekers with high CSE prefer challenging work nature more than those with low CSE. The second attribute is working in a multinational organization has significant difference with CSE at significance level of .05 ($P < 0.05$, sig. = .034) where the job seekers with high CSE prefer working in a multinational organization more than those with low CSE. The third attribute is the reputation of the organization which has significant difference with CSE at significance level of .05 ($P < 0.05$, sig. = .038) where the job seekers with high CSE prefer working in a reputable organization more than those with low CSE. The fourth attribute is working in an innovative organization which has a significant difference with CSE at significance level of .05 ($P < 0.05$, sig. = .001) where the job seekers with high CSE prefer working in an innovative organization more than those with low CSE. The fifth attribute is the development opportunities offered by the organization which has significant difference with CSE at significance level of .05 ($P < 0.05$, sig. = .030) where the job seekers with high CSE prefer working in organizations offering development opportunities more than those with low CSE. These results indicate that there are significant differences in the attribute preferences for only five attributes with different CSE levels and these differences are not due to chance. While there are no significant differences between any of the other attributes due to CSE different scores which means that the difference in their results is not based on any other factors; it is just by coincidence.

Discussion

The results of the research in this study challenge many of the traditional assumptions about the preferences of job and organizational attributes for the Egyptian applicants.

Egyptian Graduates' Attribute Preferences: Inconsistent with the expectations, the findings reveal that the Egyptian applicants have preferred different attributes than expected. The social environment in the workplace is perceived to be the most important attribute for the total sample. This can be explained by Hofstede cultural dimension of Individualism (IDV) ranking at 38 -the lowest dimension- in the Arab World compared to the world's average of 64. Low individualism indicates a collectivist society characterized by a close commitment to groups and care for strong relationships (Geert Hofstede Cultural Dimensions Website, 2009).

Although Egyptians tend to be more collectivist; they prefer working with people from within their social class. Egypt's social structure is divided into different social classes based on more than one single factor (Kotler and Armstrong, 2006). "Social class is measured by a combination of factors: income, occupation, education, wealth, and other variables" (Kotler and Armstrong, 2006, pp. 141). Different social classes indicate different preferences, interests, and different lifestyles. Therefore, it is highly recommended for organizations to be selective when hiring applicants to maintain a pleasant social environment among the employees and to have a motivating culture. This will lead to making the organization more appealing for the applicants where there will be fewer problems.

The second most important attribute that the applicants care about is having challenging jobs with non-routine work nature where there will be opportunity for expanding their abilities and knowledge. Thomas and Wise, (1999) results support this finding as they show that applicants care most for being offered challenging jobs. Having such an opportunity will help the applicants show their capabilities, excel at their work, learn more and have better promotional opportunities as well as better work experience. This can be explained as applicants are aiming at learning and gaining work experience at their early stages of work. This is consistent with Trank et al., (2002) that applicant might attach a greater importance to challenging work due to their willingness to pursue higher levels of competence and have a broader career path. Besides, applicants want to differentiate themselves from others by outperforming and exceeding the expectations.

The third most important attribute for the applicants is the sense of job security at their workplace and not being exposed to the threat of being fired. This is not in compliance with Lievens and Highhouse (2003) where their results showed that job security is not significantly related to organizational attractiveness. This might be due to the economic state of Egypt, where high unemployment rates are 9.4% in 2009 (Central Intelligence Agency, 2009). Moreover, due to the impact of the financial crisis, there is an even higher rate of layoffs in Egyptian organizations. This must have led to the increase in the level of importance of having a secured job for Egyptian applicants.

In reference to Maslow's hierarchy of needs; safety need is the second level in the hierarchy, where it states that individuals satisfy this need through guaranteeing job security at their workplace (Schermerhorn, 2008). According to Hofstede cultural dimensions, Egypt scores high on the Uncertainty Avoidance Index (UAI) (Geert Hofstede Cultural Dimensions Website, 2009).

This reveals that Egypt's society has low tolerance of accepting change and ambiguity; they tend to be risk-averse. Thus, it can be justified that Egyptians tend to prefer more secured jobs due to their willingness to minimize the possibility of sudden and unexpected situations.

CSE and Attribute Preferences: We extend earlier research by analyzing whether CSE differences play a significant role in the applicants' preferred attributes when applying for an organization or not. The applicants with high CSE are willing to exert greater effort to master challenge and confront difficulties, are more confident of their abilities, and accordingly tend to set hard personal goals (Judge et al., 2000). Challenging work requires personalities which are self-assured, competent, have high success expectations and low failure expectations, and are confident in their capabilities; which all match high CSE personality type (Judge et al., 2000). This can explain the significant relationship between preferring a challenging work nature and CSE.

The applicants with high CSE prefer working in an innovative organization which is due to the fact that high CSE applicants are adaptable to changes, willing to take risks and face conflicts as they are confident in their abilities (Judge and Cable, 1997). Innovative organizations are characterized by encouraging their employees to update their processes, try new methods, take risks and accept any changes (Judge and Cable, 1997). Thus, there is a significant relationship between preferring working in an innovative organization and CSE.

Applicants with high CSE cite development opportunities as an important preference more than those low in CSE. The justification is that applicants with high CSE are characterized by being ambitious, confident in their abilities and willing to pursue their objectives regardless of the difficulties faced (Judge et al., 2000). Development opportunities are attractive for those individuals thriving for improving their knowledge, learning opportunities and developing their potential (Cable and Graham, 2000). Accordingly, it can be explicated that there is a significant relationship between the applicants high in CSE and development opportunities.

Working in a multinational organization has a significant relationship with applicants high in CSE. This can be due to the perception of multinationals in Egypt as being large organizations, requiring qualified, competent and confident applicants, having an organized system and offering better promotional opportunities (Turban et al., 2001). Turban et al., (2001) believe that applicants willing to work for multinationals need to be ready to accept risk associated with working there. Therefore, applicants high in CSE have confidence in their abilities which encourages them to apply for multinationals aiming at proving their capabilities and having better opportunities to work at different countries in the same organization. However, applicants with low CSE might not be encouraged to apply for a multinational organization as they are not confident in their abilities and they acknowledge the structured system controlling the organization which might load them with higher responsibilities that they cannot easily escape from. Therefore, applicants high in CSE perceive multinationals more attractive than applicants low in CSE.

Reputation of the organization is significantly related to applicants high in CSE which is inconsistent with Turban and Keon (1993) who suggest that the applicants with low self-esteem

(low CSE) are more vulnerable to environmental and social cues. Accordingly they will be more attracted to reputable organizations than those high in CSE. However, the justification for our findings can be explained by GLOBE cultural dimensions where Egyptians are characterized by having high in-group collectivism. Cultures high in in-group collectivism are described as those who are proud of belonging to a family and to the organization they are employed for (Javidan et al., 2006). This might help in explaining the reason behind attracting applicants to reputable organizations as Egyptians ascribe high importance to the status and image of the organization they belong to (Javidan et al., 2006). Thus high CSE applicants' confidence in their abilities is supplemented by the name, image and reputation of the organization they are working at and they can't sacrifice working in an anonymous organization. This is because it might affect their image and prestige among their friends and colleagues in a negative way and underestimate their capabilities.

Additionally, according to Turban and Cable (2003), reputation plays a major role in attracting applicants to apply for an organization. This can be explained by the signaling theory which claims that applicant lack complete information about the organization they are applying for. Thus they depend more on the available information as signals for building their image about the organizations. Consequently, it can be deduced that applicants low in CSE will find difficulty and less confidence to think of applying at such reputable organization as reputable organization are perceived as highly selective. Thus, applicants who are lows in CSE don't prioritize the reputation of the organization highly when applying for an organization as those high in CSE.

One of the main practical implications for this study is that organizations could benefit from finding significant differences in the applicants' preferences due to CSE differences. Therefore, recruiters might require making some changes in their selection process. This can be done through recruiters adding to the job specifications the CSE score as one of the basic evaluative criteria for selecting the applicants; whether it requires applicants high or low in CSE. Furthermore, at the early stage of recruitment; applicants could pass through CSE test in order to identify the applicants' CSE score.

Limitations

There are some limitations that should be acknowledged. First, the sample size of the study is not representative as it is very limited in scope and is relatively small compared to the population. The sample included only Egyptian business graduates from private universities in Cairo. This narrow scope of the sample limits the ability to generalize the results on job seekers at different career stages.

Second, data was gathered regarding the applicants' attraction to organizations rather than the applicants' actual job decisions. Subsequently, this would lead to that the applicants' actual attribute preferences might be different than the organizations' perceptions of those preferences. As a result, this might hinder the organizations' ability to attract the qualified applicants and the research done in this area will be negligible.

Third, the questionnaire used in the survey for gathering data is written in English instead of Arabic language; the mother tongue language of Egyptian respondents. Data is collected through conducting a single survey including responses from the applicants where there is great possibility of self-report and survey biases affecting the results (Cable and Graham, 2000).

Fourth, the timing of the study might influence the applicants' decisions regarding their preferred attributes. This might be due to the economic influences on the applicants' choice of attribute preferences due to the financial crisis. Since Egypt is experiencing financial crisis problems, applicants might sacrifice their preferred attributes in return of guaranteeing a job.

Recommendations for Further Research

Although a lot of research has been conducted emphasizing the importance of the employer image in attracting qualified applicants to organizations, further research is required to enrich this area. The following avenues hold promising future in research. First, a longitudinal study could be conducted in order to examine the applicants' differences in their attribute preferences over time. In order to identify whether there are changes after experiencing the real work life and family responsibilities (Terjesen, 2007). We urge researchers and practitioners to understand what makes applicants remain attracted over time.

Next, it would be interesting to identify the attribute preferences for employed workers in order to determine the generalizability of our results (Turban and Cable, 2003). Moreover, it would be interesting to investigate the attractive industries for the Egyptian applicants and why they are appealing for them (Cable and Graham, 2000).

Furthermore, it seems worthwhile to explore the differences between applicants' preferences for private and public university graduates. Future work in this area should then examine the differences in the attribute preferences among the Business and non-business graduates and identify the reasons for such differences.

The second avenue for future research deals with the applicants' CSE and organizational attractiveness. Future research should take a longitudinal approach to investigate whether the applicants' CSE score is an actual predictor of performance at their work.

The third avenue for future research tackles the comparison between the insider's view and the outsider's view of the organization. This is to investigate whether the potential applicants (externals) have a consistent image as the current employees (internals). Having a consistent image will lead to the organization's credibility in the labor market among the applicants and helps in providing them with more information about the organization.

Conclusion

Organizations need to understand their applicants' preferences to be able to attract more qualified applicants. There are numerous factors that should be recognized that were previously studied by researchers. Initially, employer image plays a major role in attracting job seekers where symbolic (trait-based) attributes are perceived more importantly than the instrumental (functional) attributes. Besides, the organization's reputation has a great influence

on the quality and quantity of applicants. Individual differences play a major role in the relationship between the applicants' preferences and attractiveness to organizations. Likewise, person-organization fit is perceived highly important in predicting applicants' attractiveness to organizations. A newly developed concept has been introduced termed Core Self-Evaluation (CSE) reflects the individuals' personality regarding his/her assessment of self-worthiness. CSE is composed of: Self-Esteem, Generalized Self-Efficacy, Locus of Control and Emotional Stability.

No previous research has been conducted relating the CSE with the attributes attracting applicants to organizations. Hence, this study aimed first at identifying the key attributes attracting Egyptian graduates to organizations. Second, it explored whether CSE differences among the applicants had a significant role in the differences among the applicants' attribute preferences.

The results of the study revealed that Egyptian graduates cared most for the social environment of the organization, then being offered a challenging job, and having job security at their workplace. This can be explained by the collectivist Egyptian culture nature and their preference to work with people from within the same social class. This is also because applicants have the willingness to learn and excel at their work through facing new challenges and difficulties at work. Besides, this was due to Egypt's high uncertainty avoidance score, and poor economic state which increased the level of job security importance.

Furthermore, Core Self-Evaluation (CSE) was found to have significant differences with five of the attributes. Applicants high in CSE prefer challenging jobs more than those low in CSE. This is because they are more self-confident in their abilities; thus they need to prove their capabilities through facing difficulties. Applicants high in CSE prefer working in innovative organizations as they are more adaptable to change and willing to take risks. Job seekers high in CSE care more for being offered development opportunities; due to their ambitiousness, thrive for knowledge and learning. Working in multinational firms is perceived more importantly for applicants high in CSE. This can be due to the multinational firms' perception of requiring competent, responsible and qualified applicants; thus encouraging applicants high in CSE to apply. Unexpectedly, reputation is perceived more importantly for those high in CSE than those low in CSE. This can be explained that reputable organizations are perceived as being highly selective in the market. Thus, those individuals low in CSE find difficulty and less confidence to think of applying at such reputable organizations.

In conclusion, Egyptian graduates' preferences have been identified in this study in order to help organizations attract more qualified applicants. Thus organizations will have a competitive advantage in the market leading to higher performance results.

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How Does Knowledge Management Drive Competitiveness in Egyptian Software Companies?

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Abstract

Purpose: To investigate the relationship between knowledge management, organizational innovativeness and organization competitiveness in an Egyptian context

Design/methodology: Data were collected from 94 Egyptian software companies. using anonymously completed questionnaires. Data were analyzed using correlation analysis and structure equation modeling

Findings: Organizational innovativeness was a perfect mediator between knowledge management and sustainable competitive advantage.

Research limitation: Using cross sectional data. The sample was relatively small and overrepresented by small and medium sized organizations. The study was conducted in specific context which is Egypt software industry.

Originality / value: Investigates the Resource Based View of knowledge management in the Egyptian software industry. It provided an empirical explanation of the mechanisms through which the knowledge management affects organization competitiveness.

Practical implication: The paper provides managers with evidence of the importance of knowledge management for organizational competitiveness. The paper gives also support for the role of organization innovativeness as a mediator to achieve KM performance outcome. The research viewed the concept of innovativeness as multidimensional, providing managers with insight about many sources of innovativeness other than the technical innovation that prevail the extant literature.

Keywords: knowledge Management; innovativeness; sustainable competitive advantage; process capability, Software, mediation, Egypt.

Introduction

The field of strategic management focuses on understanding sources of sustainable competitive advantages (SCA) in organizations (Barney, 2001; Priem & Butler, 2001). Based on Resource-Based Theory (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; and Peteraf, 1993), generating and sustaining competitive advantages (CAs) resides in the set of strategic resources and capabilities available to the firm. Knowledge and knowledge management (KM) resources are particularly significant and arguably the most important among these (Drucker, 1993; Spender, 1996; Grant, 1996b; Nahapiet and Ghoshal, 1998; and Liao, 2009) and considered a main source of CA (Connor and Prahalad, 1996; Grant, 1996a; Alavi and Leidner, 2001; Zhao *et al.*, 2003; Halawi *et al.*, 2005; Wong and Aspinwall (2006); and Ho, 2009). Although KM has been frequently cited as a prime source of organization competitiveness, analyses to date have been mostly conceptual (Choi and Lee, 2003; and Chuang, 2004), and only a limited number of studies have explored empirically the resource based view (RBV) of KM. Moreover, the mechanism through which this is achieved remains an area for investigation.

As we are living under a hyper competition environment; firms need to resort to continual innovation if they would like to obtain a CA (Liu *et al.*, 2001; Lemon and Sahota, 2004; and Cooper *et al.*, 2008), and an increasing attention should be given to innovation as a key success factor in a firm's SCA (Dampour (1989); Dampour (1991); Doyle (1998); Quinn (2000); Lee *et al.* (2005); Darroch (2005); Kleef, and Roome (2007); Plessis *et al.* (2007); Alegre and Chiva (2008); Liao (2008); and Rhee *et al.* (2009)). Effective KM was found to be an antecedent of innovation in some studies (Nonaka and Takeuchi, 1995; Dove, 1999; Carneiro, 2000; Darroch, 2005; and Liao and Wu, 2009). The KM competency is critical to successful innovation as innovation process is knowledge intensive (Gloet and Terziovski, 2004; and Gordon *et al.*, 2007; Maqsood and Finegan, 2009).

However, it is difficult to draw conclusions from the extant literature about the relationship between effective KM and innovation because there is a dearth of empirical research that investigated relationships between the two constructs (Gloet and Terziovski, 2004; Darroch, 2005; and Hall *et al.*, 2006). Besides; some of this literature takes a unidimensional view of innovation which is "technical innovation" (e.g. Gerwin and Barrowman 2002; Gonzalez, 2007; and Liao *et al.*, 2008) with relatively fewer studies conducted on organizational innovation based on the viewpoint of the organization as a whole (Weerawardena, 2003; and Dobni, 2008). Therefore, inconsistency in findings were found (Dobni, 2008). His study aims to (1) provide an empirical investigation for RBV of KM in Egyptian software companies, and (2) provide an explanation of how would this occur through organizational innovativeness (OI).

Previous studies

There is a general agreement that KM represents an important CA factor for organizations (Quinn, 1992; Drucker, 1993; Hall, 1993; Alavi and Leidner, 2001; Connor and Prahalad, 1996;

Grant, 1996b; Zhao *et al.*, 2003; Angelo *et al.*, 2003; Halawi *et al.*, 2005; and Ho, 2009), and that SCA in the 21st century will be accomplished through KM (Johannessen *et al.*, 1999; Grant 1996b; Nahapiet and Ghoshal, 1998; Johannessen and Olsen, 2003; and Halawi *et al.*, 2005). However, Halawi *et al.* (2005); and Chuang (2004) note that while the notion that KM might be able to create SCA for firms is provocative, working in this area is relatively underdeveloped, both empirically and theoretically. Chuang (2004) contended the research on KM and CA has emphasized 'description rather than empirical study' but that KM can lead to such an advantage. Choi and Lee (2003) in their attempt to provide an integrated view of KM that links KM enablers, process and organization performance, asserted that in spite of considerable discussion of KM processes and organizational performance, there is no clear link between them. They argued that to establish the relationship between them, an intermediate measure such as specific process, innovation, or organizational creativity must be considered. This was also observed by Davenport and Prusak (1998) who pointed out that although the relationship between KM and performance indicators has been discussed at length, few firms have been able to establish a causal relationship between KM activities and firm performance. They related KM activities with some intermediated activities that affect performance results such as capacity of employees to carry out tasks related to knowledge, the generation of ideas, and innovation. Gold *et al.* (2001) suggested OI is an intermediate outcome of effective KM. Similarly, Li *et al.* (2006), in their study of investigation the impact of organizational capability on firm performance, concluded that organizational capability do not necessarily have significant direct effect on firm performance, but they must be mediated by other actor constructs such as OI. Wiig (1997); Gold, *et al.* (2001); Choi and (2003); Kalling (2003); Darroch, (2005); and Jantunen (2005) asserted that there are a very few empirical studies on organizational performance in KM, because knowledge is intangible and difficult to measure.

On the other hand, an organization's ability to innovate is recognized as one of the determinaingfactors for it to survive and succeed and that being innovative leads to CA (e.g. Tushman *et al.*, 1986; Damnpour 1989; Porter, 1990; Doyle, 1998; Damnpour, 1991; Deshapande *et al.*, 1993; Smith *et al.*, 2000 ; Quinn, 2000; Lee *et al.*, 2005; Darroch, 2005; Alegre and Plessis *et al.*, 2007; Chiva, 2008; Liao, 2008; Cooper *et al.*, 2008; Armbruster, 2008; Liao, 2008; and Gupta, 2009 and Rhee *et al.*, 2009) (e.g. Deshapande *et al.*, 1993; and Smith *et al.*, 2000). Moreover OI is sometimes seen as synonymous with CA (Tushman *et al.*, 1997; Roberts, 1998; and Byrd and Turner, 2001).

Through innovation, organizations diversify and adapt, and even rejuvenate or "reinvent" to fit the changing conditions of the technology and the market (Nonaka and Yamanouchi, 1989). Additionally, scholars have stated that innovation is a mechanism by which organizations can draw upon core competencies and transition these into performance outcomes critical for success (Reed and DeFillippi 1991; Barney 1991; Damanpour, 1991; Hurley and Hult, 1998; 2004; Cooper, 2000; and Gonzalez *et al.*, 2007). Organizational innovation is emphasized in the literature as one of the possible consequences of effective KM. (e.g. Nonaka and Takeuchi (1995); Antonelli (1999); Dove (1999); and Carneiro, (2000). Chuang (2004) stated "viewed from the resource based perspective, the KM resource provides the resources that make innovation feasible and enable continuous improvement of products". Gupta (2009) indicated literature

provides a very strong link respecting the relationship between innovativeness and KM. Smith et al (2000) asserted that SCA results from innovation. Innovation in turn results from the creation of new knowledge. He also mentioned that the major goal of KM is to enhance innovation. In the same direction, the results found by Liao and Chuang (2006) confirmed the vital role which KM has for the knowledge processing capability and in turn, on speed and activity of innovation. Gordon *et al.* (2007) explained that firms with a KM competency can capture knowledge and related information and make them accessible to knowledge workers and innovators. Lee et al (2008) explicated by establishing excellent KM systems, it is possible for firms to make effective use of its own resources so that they can accumulate business management experience and reach their goals for organizational innovation. Ellonen *et al.* (2009) confirmed the firm's ability to combine and effectively use different types of knowledge is crucial to its success in innovation activities and performance.

However, while many studies have reported aspects of KM as antecedents of innovation and emphasized that effective KM has been presented in the literature as one method for improving innovation and performance, none has explicitly examined the relationship between the two constructs (Darroch *et al.* 2002; 2003; and Darroch, 2005). This is also asserted by Hall *et al.* (2006) who indicated that although importance of KM and its relationship to innovation is widely acknowledged, empirical work, is still in its infancy and characterized by heterogeneous measurement approaches. These empirical studies show mixed results as well (Cantener, *et al.*, 2009).

For example, empirical studies by Darroch *et al.* (2002; 2003) and Darroch (2005) have focused on investigating the relationship between KM processes and different types of product innovation. These studies revealed that some KM processes will positively affect product innovation. Whereas Darroch *et al.* (2005) confirmed the positive role of knowledge dissemination on innovation success, Darroch (2002) did not find any significant effects. Also Wang *et al.* (2006) in their study for enhancing the firm's innovation capability through KM applied for high technology firms; found that innovation capability of high technology firms is significantly related to knowledge acquisition. They concluded also that innovation capability has been shown to positively contribute to long term corporate growth i.e. sustainable competitive advantage. The acquisition of relevant knowledge is considered an effective efficient and necessary means of achieving successful innovation.

However, much of the literature to date evidences a uni-dimensional view of innovation (Subramanian *et al.*, 1996; Weerawardena, 2003; and Dobni, 2008). The word "innovation" is frequently found in the literature referred to "technical innovation" (e.g. Gerwin and Barrowman 2002; Gonzalez, 2007; and Liao *et al.*, 2008) with relatively fewer studies having been conducted on organizational innovation based on the viewpoint of the organization as a whole, although both technological and non-technological innovations can lead to CA (Weerawardena, 2003; and Dobni, 2008). This restricted view resulting from that bias has been criticized in studies of organizational innovation (Avlonitis, 2001), and this has lead to a lack of consensus on innovation and difficulties in both comparing findings across studies and drawing unbiased conclusions (Dobni, 2008).

From all of the above, the purpose of the present study is to expand the current body of research in this area by empirically investigating the relationships among knowledge management, OI and SCA for Egyptian software companies, by focusing upon multidimensional view of the QI.

Research Methodology

Research Variables

Knowledge Management: definition adopted from Darroch (2003: p. 41); is “The management function that creates or locates knowledge, manage the flow of knowledge within the organization and ensures that the knowledge is used effectively and efficiently for the long-term benefit of organizing”, KM processes comprises three components: Knowledge Acquisition, Knowledge Dissemination, and Responsiveness to Knowledge. Knowledge Acquisition (KA): refers to the location, creation or discovery of knowledge. Knowledge Dissemination (KD): refers to the dissemination of knowledge around the organization. Responsiveness to Knowledge (KR): refers to an organization’s ability to respond to various types of knowledge. *Organizational Innovativeness* is defined as the organization’s overall innovative capability of introducing new products to the market, or opening up new markets, through combining strategic orientation with innovative behavior and processes (Wang and Ahmed, 2004). Five main dimensions determine an organization’s innovative capability; Product Innovativeness refers to the novelty and meaningfulness of new products introduced to the market in a timely fashion.

Market Innovativeness: refers to the newness of approaches that companies adopt to enter and exploit their targeted market. Process Innovativeness refers to the introduction of new production methods, new management approaches, and new technology that can be used to improve production. Behavioral Innovativeness refers to sustained behavior change towards innovation, or the overall internal receptivity to new ideas and innovation by individual, teams or management. Strategic Innovativeness refers to organization’s ability to manage ambitious organizational objectives, and identify a mismatch of these ambitions and existing resources in order to or leverage limited resources creatively. *Sustainable competitive advantage*: is defined as the extent to which the firm’s innovations and distinctive capabilities resist erosion by competitors’ efforts (Weerawardena, 2003). SCA construct is conceptualized in terms of three criteria: (a) market advantages gained by the firm, (b) whether it is possible for competitors to duplicate innovations, and (c) whether it is possible for competitors to duplicate distinctive capabilities on which advantages have been founded. Table 1 summarizes the operational definitions of the above three research variables and the corresponding supporting literature.

All research variables are latent variables. KM is represented as a multidimensional construct comprising three KM processes. OI is represented by a multidimensional construct with five dimensions; product innovativeness, market innovativeness, process innovativeness, behavioral innovativeness, and strategic innovativeness (Wang and Ahmed, 2004). Finally, the SCA construct is represented as a multidimensional construct with three dimensions; the relative innovative performance, resistance of innovative capabilities erosion by other competitors and the resistance of internal distinctive capabilities erosion on which advantages have been found.

Research Model

Based on the literature review introduced earlier, innovation leads to the creation of SCA (Deshapande *et al.*, 1993; and Smith *et al.*, 2000; Armbruster, 2008; Liao, 2008; and Gupta, 2009). The major goal of KM is to enhance innovation (Galunic and Rodan, 1998; Liao and Chuang, 2006; and Ellonen *et al.*, 2009). The KM competency is critical to successful innovation because the innovation process is, by its nature, knowledge intensive (Gloet and Terziowski, 2004), therefore, KM can be viewed as a contributor of the creation of SCA through OI. The proposed model is depicted in Figure 1. KM represents an independent variable, SCA represents the dependent variable, and OI; represents an intervening variable (mediating variable).

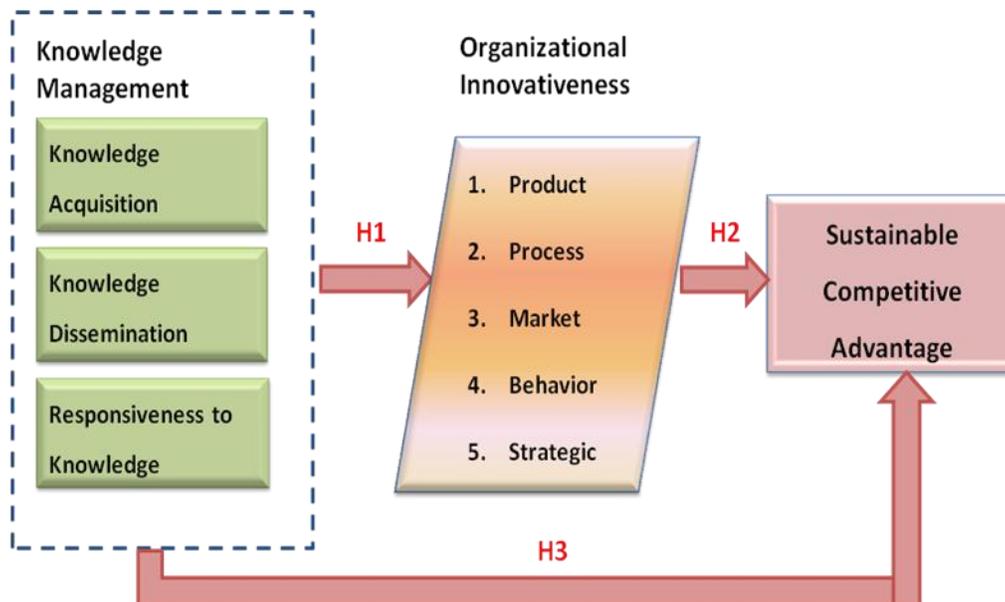


Figure 1 The research model

Research hypotheses

Based on the preceding literature and the above research model, the key argument of the paper is that: an organization SCA depends mostly on organizational innovation (Grant, 1996a; Smith *et al.*, 2000; Liu *et al.*, 2001; Lemon and Sahota, 2004; Lee *et al.*, 2005; Darroch, 2005; Alegre and Plessis *et al.*, 2007; Chiva, 2008; Liao, 2008; Cooper *et al.*, 2008; and Rhee *et al.*, 2009; and Liao *et al.*, 2008). KM is critical for organization innovation capability (Nonaka and Takeuchi, 1995; Dove, 1999; and Carneiro, 2000). Effective KM possible consequences might include: CA (Connor and Prahalad, 1996; and Hall, 1993); and/or innovation (Nonaka and Takeuchi, 1995; Antonelli, 1999; Dove, 1999; Leonard-Barton, 1995; Carneiro, 2000; Lee *et al.*, 2008 and Gupta, 2009). From the above, the following relationships could be hypothesized:

H1: There is a positive and significant relationship between KM and OI

H2: There is a positive and significant relationship between Organizational OI and SCA

The mediation effect of organizational innovativeness

Gupta (2009) asserted that the impact of KM systems on performance relates primarily to the organization's ability to innovate -either through improved processes or improved products. Gold (2001) proposed that organization innovation is an intermediate outcome of effective KM. This is also has been asserted by Darroch (2003) whose findings suggested that innovation might be the mediating factor between KM and organization performance based on Han *et al.* (1998) study. KM then could be viewed as creating SCA through OI, therefore, it's hypnotized that:

H3: OI is mediating the relationship between KM and SCA.

Sample and procedure

Software companies - as a knowledge-intensive sector- were selected for this study because knowledge intensive sectors have short product life cycles and high demand for knowledge input (Liao *et al.*, 2007). Also KM is crucial, for knowledge intensive firms that utilize and capitalize knowledge in all their transactions, and that consider KM to be a core capability for achieving CA (Hoo *et al.*, 2009). The study depended on the Official Business Directory of Information Technology Industry Development Agency (ITIDA) to get the required sample. A list of 319 software companies were identified. The sample include organizations with 40 or more employees. Organizations having less than 40 employees were not included because small organizations might not have the same need for KM practices as larger organizations, and that organizations of more than 40 employees would be large enough to presume the incidence of certain KM behaviors and practices (Darroch and McNaughton, 2003; 2005; and Manovas, 2004).

A list of 113 software companies was identified according to the above mentioned criteria. Questionnaires were distributed electronically and/or in person to the CEO or senior management level, assuming that he or she would be in a position to comment on the flow of knowledge around the entire organization rather than the flow of knowledge within one or a few departments. Follow up phone calls were given as reminders to complete the questionnaire. 102 responses were returned. Eight responses from 8 organizations were eliminated from analysis due to incomplete data and, thus 94 responses from 94 organizations were included in the study. The final response rate is 83%. The sample was overrepresented with small and medium size companies (95% of sample comprises company with less than 500 employees). The data were collected between May 2010 to August 2010 and were analyzed using SPSS 16.0 and Amos 16.0

Measures

All research constructs were measured using multi-item scales and based on pre-existing instruments after undertaking a comprehensive review of the literature.. Five measures were employed in this study: Three measures developed by Darroch (2003) for measuring *Knowledge Management capabilities* completed questionnaires.

Results

Table 2 displays the results of the correlation analysis among the summed scores for the research variables; knowledge management, OI, and SCA. The following relationships existed between the research variables: The relationship between KM and OI indicated that businesses with more KM showed higher capability in enhancing organizational innovation. The relationship between OI and SCA, indicated that businesses with higher innovation capability showed higher capability of producing SCA. Finally, the relationship between KM and SCA was positive and significant indicating that businesses with more KM orientation possess has higher capability of creating SCA.

However, correlations can only reveal the degree of relationship/association between research variables. To understand the direct and indirect effects (mediating effects) among the variables, further analysis by structural equation model (SEM) was employed.

Structure equation modeling

SEM of Amos 16.0 was implemented for testing the relationships hypothesized in the proposed research model.

The first step in model estimation was to examine the goodness of fit of the hypothesized model. The results of SEM analysis - displayed below the model in Figure 2- showed that the model satisfied an acceptable level of model fit ($\chi^2 = 99.52$, $\chi^2 / df = 2.4$ which was smaller than 3 recommended by Bogozzi and Yi (1988). The Goodness of fit index (GFI) is 0.85 just below the recommended cut off level of 0.9 suggested by Hair et al. (1995), root mean-square error of approximation (RMSEA) is 0.1 just above the cut off level of 0.08 suggested by Hair et al. (1995), the adjusted goodness-of-fit index (AGFI) is 0.76, almost at the recommended cut-off level of 0.8 (Chau and Hu, 2001). The combination of these results provided support to the overall validity of the structural model (i.e. good fit with the data collected), therefore the next step of path analysis could be meaningfully performed.

The second step in model estimation was to examine the significance of each hypothesized path in the research model to test our hypotheses. This would be achieved through examining the Beta coefficient of each path, P value, and squared multiple correlations (R^2). All paths were estimated using the Maximum Likelihood (ML) method which is the most widely used estimation procedure in structural equation modeling. A few assumptions need fulfilling in order to use the ML method: (1) Reasonable sample size (100:150) as suggested by Hair *et al.*, (2006) to achieve stable ML estimates results.(2) The hypothesized model is valid. (3)The distribution of the observed variables is multivariate normal

The data collected for this study met the first criteria. The hypothesized model was developed from theories and some empirical findings, and thus was assumed valid. Finally the normality of the observed variables was tested, following the rule of thumb suggested by West *et al.* (1995): “for a sample size of 200 or less, moderately non-normal data (univariate skewness < |2|, univariate kurtosis < |7|)” are acceptable. Recent research also shows that ML estimation

method can be used for data with minor deviations from normality (Raykov and Widaman, 1995 in Wang and Ahmed, 2004). The normality test was performed for the data collected; the skewness of each variable was less than $|1.1|$. The univariate kurtosis of each variable was less than $|1.8|$. Thus, the third assumption of ML method was also met.

The results of path analysis are presented in Figure 2 and summarized in Table 3 below.

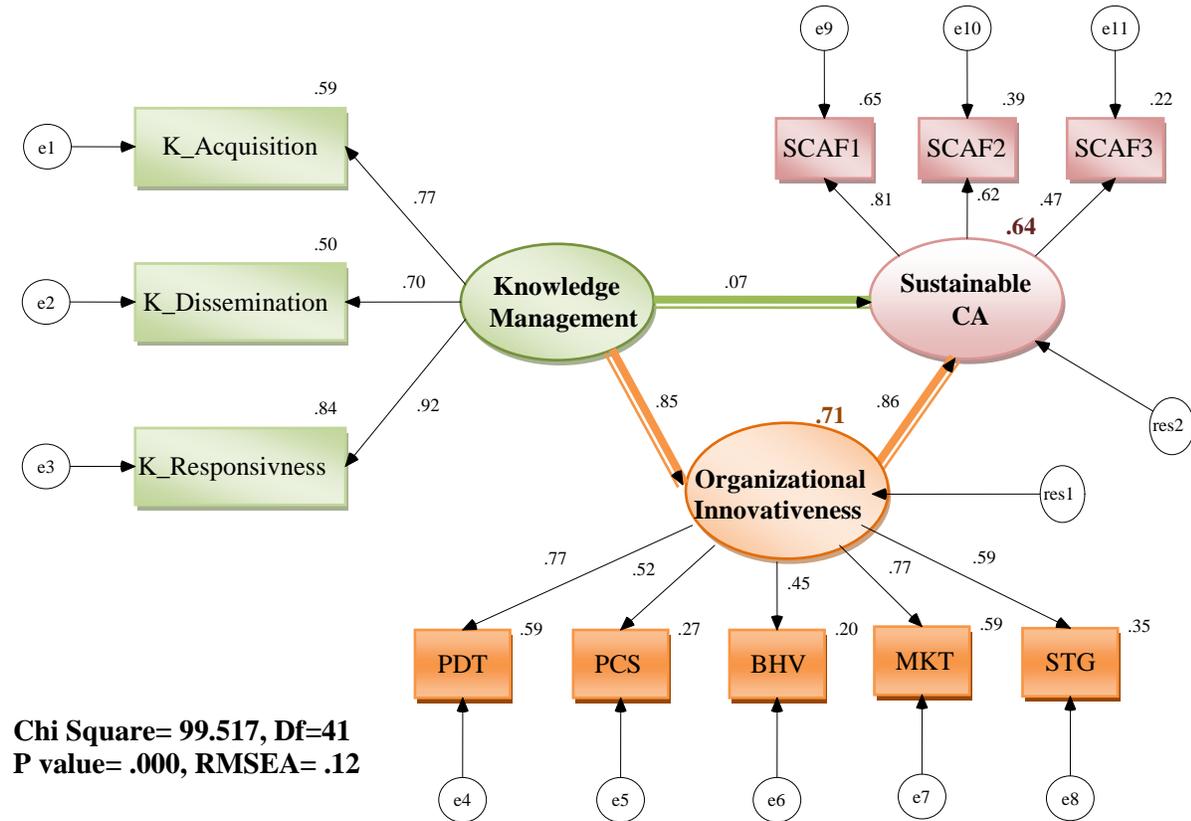


Figure 2 structure equation modeling

According to the reported results, the direct effect between KM and OI is positive and significant (Beta coefficient is 0.85), $p < 0.01$, therefore H1 is accepted. The direct effect between OI and SCA is positive and significant (Beta coefficient is 0.86), $p < 0.01$, therefore H2 is accepted as well.

The direct effect between KM and SCA tends to be zero (Beta coefficient is 0.07), however the indirect effect (the effect between KM and SCA through OI) is positive and significant (Beta coefficient is 0.66, p value < 0.01). A significant indirect effect indicates that a significant quantity of the independent variable's total effect on the dependent variable occurs via the mediator (Rhee *et al.*, 2009). This means that OI is a perfect mediator between KM and SCA. Hence therefore H3 is accepted.

Discussion

The paper proposed and empirically tested a model investigate the relationship between KM, OI and SCA. The results confirmed the following relationships:

First, the relationship between KM and OI was statistically significant and positive. This finding of the influential effect of KM to innovativeness was consistent with prior studies by Davenport and Prusak (1998); Galunic and Rodan (1998) and Gloet and Terziovski (2004) who indicated that KM competency is critical to successful innovation. This finding was asserted also observed by Darroch (2005) in her study for New Zealand firms, who reported that each of KM processes were positively related to influence innovation. Recent literature also supported this relationship as emphasized by Gupta (2009) and Rhee *et al.* (2009) who stated that by establishing excellent KM systems, it is possible for organizations to make effective use of its own resources so they can accumulate business management experience and reach their goals for organizational innovation. Ellonen *et al.* (2009) emphasized also that a firm's ability to combine and effectively use different types of knowledge was crucial to its success in innovation activities and performance.

Second, the relationship between OI and SCA was positive and statistically significant. This finding was also consistent with the previous literature (e.g. Damnpour 1989; Doyle, 1998; Damnpour, 1991; Quinn, 2000; Lemon and Sahota, 2004; Lee *et al.*, 2005; Darroch, 2005; Wang *et al.*, 2006; Alegre and Plessis *et al.*, 2007; Chiva, 2008; Liao, 2008; Cooper *et al.*, 2008; and Rhee *et al.*, 2009. From an RBV perspective, Galende (2006) pointed out that innovative capability does not come from skill in exploiting external technologies; which are easily accessible for competitors and therefore insufficient for sustaining a CA (Barney, 1991). Rather, it comes from the generation of internal innovation, which implies the possession of heterogeneous and specific technological resources, and the capability to generate other new resources. Hult *et al.*(2004) indicated also that in order to respond to the turbulent environment, it is important to fuel innovativeness, which is critical to achieving a competitive edge and performance.

Third, OI mediated the relationship between KM and SCA. Empirical evidence shows that the relationship between KM and SCA was significant with indirect effect of OI. In other words, in order to generate and maintain CA, KM must affect some or all dimensions of OI. If KM does not lead to any form of OI, the relationship between KM and SCA would be questionable. This finding goes is consistent with the views of with many scholars who argue that innovation is a mechanism by which organizations can draw upon core competencies and transform these into performance outcomes critical for success (Barney 1991; Reed and DeFillippi 1991; Han et al. 1998; Hu and Gonzalez *et al.*, 2007). For example, Hult *et al.* (2004) indicated that innovativeness is likely to be a strategic means by which firms deal with changes in the internal and external environments. This finding supports also the suggestion of Gold (2001) that organization innovation is an intermediate outcome of effective knowledge management. Han *et al.* (1998) suggested that innovation might be a mediating factor between KM and performance as well.

Conclusion

This study contributes to the growing body of literature linking KM and the RBV and provides empirical evidence of the RBV of KM as an organization capability. The study also demonstrated the importance of KM and its relationship with OI and SCA. Many studies confirmed the relationship between KM and SCA as have been discussed earlier, however more research in understanding the underlying mechanisms through which this is achieved was needed (e.g. Chuang, 2004). This study contributes to this area of research by providing one possible explanation for this mechanism; that is KM capabilities fostering the process of building innovation capabilities that in turn leads to sustaining the organization CA. This study has also added to empirical work of relating KM and OI constructs. As has been emphasized in the literature that although many studies have reported aspects of KM as antecedents of innovation and emphasized that effective KM has been represented in the literature as one method for improving innovation and performance, empirical work is still in its infancy and characterized by heterogeneous measurement approaches and mixed results .

Managerial implications

Many managers seek to identify likely benefits that might be incurred by implementing KM systems. This study has shown that organizations with well-developed KM practices and behaviors are more innovative and achieve SCA. The results reported in this study are important because they show that, in order to be innovative, having knowledge is as important as what is done with that knowledge. Since the empirical results of the study found that OI mediates the relationship between KM and SCA, managers should also pay more focus in building their organizations' innovation capabilities. By thoroughly building innovation capability, KM implementation will lead to organization SCA.

Study limitation

This study used single-informant reports to measure each of the theoretical constructs. Nonetheless, possible over-reporting or underreporting of certain phenomenon may occur as a result of the executive job's satisfaction or personal and role characteristics. The generalizability of results is another limitation of this study. The study is conducted in a specific national context; Egyptian software companies. Although the software companies sector being studied provided an appropriate setting, research in other industries is required. Further, the sample size is relatively small, requiring the increased sample size. Also, over representation of small and medium size organizations with 500 or less employees limits the generalizability of the results. However the effect of organization size on KM is unknown. Finally, using a cross-sectional data with questionnaires was another limitation. In the future this limitation should be overcome using longitudinal data

Future research

This research used static structure equation model to investigate the relationship among the research variables, in future studies dynamic structure equation modeling with feedback paths/loops such as positive feedback between SCA and knowledge acquisition would be of interest to study. Also, the inclusion of the moderator variables, such as industry characteristics, and culture dimension into the model could reveal more information therefore,

further confirmation of the results reported in this study in other contexts/ countries would be of importance.

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Table 1 Operational definitions of research variables

Variable	Operational Definition	Supporting authors
Knowledge Management	Degree of (i). Knowledge Acquisition (ii). Knowledge Dissemination (iii). Responsiveness to Knowledge	Darroch (2003; 2005); Darroch <i>et al.</i> (2002; 2003), Gold (2001), Gold <i>et al.</i> (2001); and Almeida (1996)
Organizational Innovativeness	Degree of (i). Product Innovativeness (ii). Market Innovativeness (iii). Process Innovativeness (iv). Behavioral Innovativeness (v). Strategic Innovativeness	Wang and Ahmed (2004)
Sustainable Competitive Advantage	Degree of (i). Relative innovative performance (ii). Resistance of innovative capabilities erosion by other competitors (iii). Resistance of internal distinctive capabilities erosion on which advantages have been founded	Weerawardena (2003)

Table 2: Results of correlations coefficients between research variable

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Knowledge Acquisition (KA)	3.86	0.46	0.81													
2. Knowledge Dissemination (KD)	3.53	0.54	0.68**	0.80												
3. Responsiveness to Knowledge (KR)	3.76	0.49	0.66**	0.66**	0.79											
4. Product Innovativeness	3.89	0.73	0.41**	0.45	0.58**	0.81										
5. Process Innovativeness	3.77	0.66	0.27*	0.47**	0.40**	0.22*	0.80									
6. Market Innovativeness	3.65	0.60	0.41**	0.49**	0.58**	0.67**	0.48**	0.67								
7. Behavior Innovativeness	4.07	0.67	0.33**	0.24*	0.29**	0.09	0.49**	0.20*	0.83							
8. Strategic Innovativeness	3.98	0.53	0.34**	0.22*	0.40**	0.35**	0.19*	0.33**	0.32*	0.61						
9. Relative Innovation performance (SCAF1)	3.95	0.714	0.41**	0.37**	0.42*	0.49**	0.23*	0.40**	0.06	0.29**	0.80					
10. Resistance of innovation capability erosion (SCAF2)	3.50	0.76	0.26**	0.31*	0.37**	0.46**	0.30**	0.40**	0.30**	0.41**	0.40**	0.70				
11. Resistance of internal capability erosion (SCAF3)	3.12	0.68	0.18	0.34**	0.19	0.26**	0.17*	0.25**	-0.04	0.22*	0.42**	0.25**	0.63			
12. Knowledge Management (KM)	3.52	0.55	0.88**	0.89**	0.85**	0.52**	0.43**	0.55**	0.30**	0.35**	0.46**	0.34**	0.29**	0.84		
13. Organizational Innovativeness (OI)	3.82	0.43	0.51**	0.55**	0.65**	0.69**	0.71**	0.77**	0.58**	0.58**	0.45**	0.53**	0.25**	0.63**	0.87	
14. Sustainable Competitive Advantage	3.87	0.46	0.37**	0.44**	0.45**	0.52**	0.32**	0.46**	0.18*	0.41**	0.76**	0.77**	0.69**	0.47**	0.56**	0.80

1.1.1.1.1.1.1.1.1 Note: α is located in Bold on the diagonal

1.1.1.1.1.1.1.1.2 *Significant at $p < 0.05$, **Significant at $p < 0.01$

Table 3 Results of structural model path analysis

Hypothesis	Hypothesized Path	Total effect	Direct effect	Indirect effect
H1	KM and Organizational Innovativeness	0.85**	0.85**	N/A
H2	Organizational Innovativeness and SCA	0.86**	0.86**	N/A
H3	KM and SCA	0.73**	0.07	0.66**

**Significant at $p < 0.01$

