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Enhanced efficiency of human resource management due to information technology

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Abstract:

At present times, information technology is commonly exploited in different areas of HRM, therefore, most of the public sector organizations have taken initiated to utilize the outstanding services of IT in their HR management functions to optimize and improve their HR departmental efficiency. Information technology has radically changed the way organizations are operated, particularly the HR department. The current study has been done to identify the key role played by information technology in all human resource departments of public sector organizations operating in Pakistan, and it was found that information technology has changed the operations and functions of the HR department. The current study has been done to identify the key role played by information technology in all human resource departments of public sector organizations operating in Pakistan, and it was found that information technology has changed the operations and functions of the HR department.

Keyword:

Information Technology, Human Resource Department, Public Sector, Regression Analysis.

1. Introduction:

Human capital is the valuable asset of organizations, thus to face modern challenges, technological advancements, gaining competitive advantage, and innovative business trends in global markets, effective and efficient personnel management is needed. The goal of organizations includes survival, expansion and growth, productivity, profitability, excellence, and innovation, whereas an individual goal encompasses job security, pay and perquisites, job satisfaction, recognition, appreciation, and challenging work, therefore, integration of both employees and employers interest is essential (Carroll & Wagar, 2010). HRM is the fundamental sub-system of organizations, thus playing a central role in the developmental process of contemporary economies (Carroll & Wagar, 2010)

Excellent human resource management activities assist in attracting, selecting, and retaining best employees throughout the journey of organizational survival, thus providing them with an attractive and healthy work environment for the effective exploitation of their competencies and capabilities (Beadles, Lowery, & Johns, 2015) As, the present business environment is exclusively dependent on innovation and technological advancements, hence the use of information technology has become a vital part of the business world. At present, almost every HR departmental functions and activities are being done through electronic media, thus making things more economical, faster, and time- saving. The use of technology in the human resource department encompasses the recruitment process, employee training, and developmental activities, data storage and retrieval, compensation procedure, performance appraisal system, benefits administrations, working times, and HR management information system (Panayotopoulou, Galanaki, & Papalexandris, 2010).

The human resource operations consist of tracking labor data which conventionally been contains personal records, activities, abilities, skills, and salary, therefore to lessen the physical workload related to these managerial activities, corporations instigate to computerize numerous practices by introducing specialized HR management systems (Suman Kathuria, 2014). The organizational administration needs to secure and make confidential all the business and employee information so that it cannot be misused by other competitive authorities, due to this reason HR information system software is an intelligent choice to reduce the paperwork as well as helps in streamlining the processes and data organization (Suman Kathuria, 2014).

such as enhanced productivity and improved employee performance (Caudron, 2003).

In the current scenario of extreme globalization, employing corporations and their work

climate has become progressively more complex, therefore managers have to face increasing difficulties to control human force, which comes from different cultures, countries, and political setups (Caudron, 2003). Considerable benefits of information technology and communication can impeccably transfer to human resource applications, and the professionals following the same path have introduced the HR information system (HRIS) (Mei, Lee, & Al-Hawamdeh, 2004). Human resource information system is an organized process for gathering, accumulating, upholding, validating, and retrieving data, needed by a firm for its human capital, employee activities, and organizational strategic planning (Beaumont, Kinnie, Arthurs, & Weatherall, 1992).

1.1. Role of IT in different areas of human resource management

HR information system is an integrated approach of obtaining and storing information used to make decisions and analysis in human resource field (Hendrickson, 2003). Functionally the HR information system is an online solution for data entry, data information requirements, and data tracking of employees, payroll, and accounting and management operations in a business (Mukherjee, Bhattacharyya, & Bera, 2014). IT has contributed a lot to diverse areas of HRM, including.

1.2. Recruitment:

One approach through which HR functions have been drastically impacted by information technology is employee recruitment. Before the inception of internet, human resource recruiters relied on print media like newspapers, to post different job ads for different positions, but print media does not have the potential to post job ads at once on diverse locations and have thousands of people notice it in a flash (Mukherjee et al., 2014). E-Recruitment is an approach that uses the internet to magnetize potential candidates to the firm, which can utilize the firm's corporate website along with commercial job-boards (Parry, 2006). E-recruitment comprises activities such as posting job ads on websites to attract and stimulate candidates, allows applicants to apply online, and simultaneously stores the applicant's records on the electronic database that let HR managers search, screen, and filter applicant's job applications. The technology based ATS shortlists the potential applicants and organizes for interviews and other recruitment allied activities (Sharma et al., 2012).

1.3. Training and development:

IT based training and developmental program tracks workers' profiles and schedule training events. Moreover, it manages the classifications of training, authorities, responsibilities, and

certification requirements for every employee in a user friendly environment (Shajera). The organizational learning management system, allow let HR department to track experiences, education, capabilities, and skills of employees along with outlining different sort of training courses, CDs, books, web-based learning necessary of up gradation of task related skills (Ashbaugh & Miranda, 2002).

1.4. Benefits and administration:

The administration of benefits entails the management and creation of labor benefits by providing strong grounds for understanding how employees can qualify for these benefits. The purpose of the IT based benefits administration program is to track and administer the participation of employees in different benefits programs (Hustad & Munkvold, 2005). Typically this program encompasses insurance, profit sharing, compensation, and retirement (Ankrah, Sokro, Sokro, & Sokro, 2012).

1.5. Payroll:

Organizational payroll sheet comprises all the monetary records of wages, salaries, perquisites, deductions offered to its employees, in other words, it is the number of financial benefits paid to workers against their services (Hustad & Munkvold, 2005). The payroll administrative body has the fundamental assignment to computerize the organizational compensation process, therefore the payroll MS has been used to produce pay- slips by taking into consideration all the financial aspects of payroll sheet (Rohilla, 2017). Besides, it offers several benefits including security management, custom based payroll processes, pay-slips generation, employee's work completion reports, and managing a vast array of employee compensation records (Carroll & Wagar, 2010).

1.6. Self-service approach:

The human resource department has also launched the employee self service approach which let them query HR allied information and execute some human resource transactions over and above the system. Labor can also locate their attendance records from the system without inquiring the required statistics from human resource personnel (Carroll & Wagar, 2010). This IT based system also allows supervisors to approve overtime requests received from subordinates with no overloading the work on human resource department. Some firms have gone away from the conventional functions, hence developed HR information systems, which support selection, employing, job placement, performance management, benefits analysis, health, security, and safety, whereas others assimilate an outsourced ATS .

1.7. Performance appraisal:

IT based performance management system helps HR managers to evaluate and compare the work performance of its employees against a predetermined set of objectives (Mukherjee et al., 2014). Some performance appraisal applications are meant for compensation based appraisal, performance improvement, termination, promotion, and test validation. There is a general agreement of opinion that performance appraisal system leads to positive organizational results, therefore this IT based module has also been incorporated in the contemporary human resource management system (Tohidi, 2011).

2. Methods:

The present study was systematic and exploratory, investigating the role of information technology in corporate human resource departments operating in public sector of Pakistan. A survey instrument was adopted for this research, and all the information was collected through a questionnaire prepared in Turkish. The survey questionnaire contains six questions measuring the role and impact of information technology in human resource operations. The instrument was structured and does not include open-ended questions. All the respondents were asked to rate each question against a predetermined set of options, question no. 2 and 3 were yes/no type questions, while from questions 3 to 6 different alternative options were given. The respondents were the managers and employees of the human resource department. Overall 300 questionnaires were distributed, out of which 235 returns back, with a 78% response rate. The sample of respondents was selected through non-probability sampling and those organizational HR departments were visited who were conveniently available.

3.1. Descriptive statistics of demographics:

Table. 1: Descriptive Statistics of Demographics

| | | Mean | Std. Deviation |
|---|-----------------|------|----------------|
| 1 | Age | 2.18 | .712 |
| 2 | Work Experience | 2.19 | .888 |
| 3 | Gender | 2.16 | .352 |

The age's descriptive statistics are showing the mean value of 2.18 along with the std. deviation of 0.712, which means that the data values are .712 are far away from their mean, similarly, the DS of work-experience is showing the mean value of 2.19 and the std. variation of 0.888, meaning that the values are .888 are away from the mean. On the other hand, the DS of gender explaining the mean value of 2.16 and the std. deviation of 0.352, that is, the data values are .352 is far away from mean values.

4. Result and discussion:

In this study role of information technology has been taken as the independent variable, while HR departmental functions as the dependent variable in public sector organizations of Pakistan. To check the role performed by IT in HRM, a simple regression analysis technique was adopted, and it was found that in Pakistan public sector organizations, information technology has a strong and positive role in the performance of HR operations with adjusted r^2 value of 70% given in Table. II. Consistent with Heiman (1998) proportional variations beyond 25% are regarded as significant. The r^2 demonstrates that 70% of the deviations are occurring in human resource management because of information technology. The ANOVA table III, demonstrating the significant p values of 0.001, on the other hand, the value of t (4.720) given in table IV means that there exists a strong bonding between information technology and human resource management of the public sector organizations. Similarly, the value of the unstandardized coefficient is 0.224 stating that if information technology is zero, then the human resource department value will increase by 3.325, in contrast, if information technology increases by 1 unit, then HRM is expected to boost up by 0.224, hence stating that information technology has a significant role in day to day operations of human resource management, thus null hypothesis has been rejected while accepting the alternative hypothesis.

Information technology has the potential to bring plentiful improvements to corporation's HR departments, together with lowering administrative expenses, increased productivity, and lower response time, improved decision making capability and enhanced customer services (Mukherjee et al., 2014). The effective and efficient management of IT role in HR departmental functions simultaneously improve the success factor and performance of organizations (Lau, T., Wong, Y., Chan, K., & Law, 2001).

5. Conclusion:

Information technology was hypothesized to play a significant role in the performance of human resource management operations. Above all, the current research has highlighted the significance of information technology in HRM, therefore supporting the alternative hypothesis (Mishra & Akman, 2010). Further, the study has examined the ways by which HR departments of public sector organizations are exploiting an IT- based human resource system to perform its various operations in an efficient manner (Mishra & Akman, 2010). HR information system is a combination of processes and systems at the interface of HRM and IT (SUMAN KATHURIA, 2014). At present, computer applications and programs are merely considered as a form of management, which when utilizing properly, facilitates corporations to upgrade the quality of services and products it offers to the markets (Ashbaugh & Miranda, 2002). Generally, the HR departmental functions are administrative and are common to all types of organizations; hence IT is the best solution to cope with all the contemporary challenges of human resource operations (Carroll & Wagar, 2010). The use of IT in HR operations offers an extensive amount of benefits such as a paperless environment, data security, cost-effectiveness, enhanced storage efficiency, and time-saving (Panayotopoulou et al., 2010).

Similarly, the use of information technology and HR information system is regarded as the most significant and imperative factors that positively influence the activities and functions of the HR department (Obeidat, 2012). Communication and information technology, an important expression for technologies pooled with the social media, internet, computers, mobile communication, allows the corporations to modernize their inside processes, core competencies, structures, and relevant potential markets on an international level. Communication and information technologies are operating through each part of the country thus have allegations for approximately every enterprise (Rohilla, 2017).

With the progression of technology and the evolvement of electronic-human resources, corporations have turned out to be more competitive by improving performance, profitability, quality, and reducing costs in different areas of human resource management (Tiwari, Chimanbhai, & Saxena, 2012). Modern industries and businesses are captivating appropriate steps for the execution of information technology in major areas of management of HR by facilitating the human capital to optimally contribute to gaining organizational competitive advantage (Mishra & Akman, 2010).

It is apparent from the above discussion that technologies provide immense benefits to the internal operations and processes of organizations to a great extent, as IT is a combination of

hardware and software for employees and organizations thus plays a significant and momentous role in HR management. The employment of computers, telephones, internet, printers, robots, and fax machines, etc. assist in the exchange and transformation of information and data very quickly in and outside of the organizations. By way of IT, human resource management plans can be made more promptly, hence job performances become effective (Rohilla, 2017).

This research was exploratory, offering ground for future research work in the same area. A detailed and in-depth study can be done with the contribution of human resource departmental heads, human resource executives, senior HR executives, vendors, and IT executives. Besides the study has highlighted the role of IT inhuman resource management as a whole, future

Empirical researches should scrutinize the in-depth role and impact of information technology in different areas of HRM separately, in different sectors to construct a comprehensive evaluation. Moreover, in Pakistan, the same study can also be performed with more depth and breadth of IT tools and human resource management functions.

Future research could also be conducted by choosing a sample from the same public sector industry suchas educational sector, meanwhile, the sample for this study was chosen using non-probability sampling, and those candidates were studied who were conveniently available, hence for more authentic future research work random sampling can be applied with increased sample size as well. Moreover, to enlarge the generalizability ofthe results over other areas of the same continent, human resource management of the public service sector and public manufacturing sector should be studied thoroughly and separately.

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