



International Journal of Engineering, Business and Enterprise Applications (IJEBA)

www.iasir.net

Understanding Human Resource Information System (HRIS) in Retrospect: An Analysis

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Abstract: *In the 21st century contemporary world, Human Resource/ Human Capital (HR/Hc) has been recognized as one of the crucial factor which underlies success of any organization. Human resources have been playing significant role in realising competitive advantage in a demanding market economy by enhancing organizations' superior capabilities. Due to vulnerability of today's business environment in global competing economy and higher employee empowerment, organizations have been increasingly relying on information technology for achieving proficiency and efficiency in human resource management. Those who use HRIS in day today management activities may not be aware of its roots. Thus, perspectives amongst us realise that there is need for HR professionals to have knowledge of its historical development. It is also essential because of greater dependence on information technology in managing people at different levels in a given organization. The basic concern of this paper is to highlight about evolving and developing human resource information system (HRIS) as new innovation in the domain of Human Resource Management. To achieve this objective, the data was extracted from published and unpublished sources. Interestingly, it was observed that HRIS emerged during 1980-90 decade. The traditional functions of HR professionals transformed to complex strategic roles through administrative during the high-tech decade of 1990. This is now getting more consolidated and has come to stay as more accepted tool to manage human resources in intelligent way.*

Keywords: *Personnel Management, Human Resource Management (HRM), Computer Technology, Historical evolution, Human Resource Information System.*

I. Introduction

Technology in the recent years, has made possible a real-time information-based, self-service, and interactive work environment. Employee Information Systems have developed from the automated employee record keeping in the 1960s into more complex reporting and decision systems [1]. There is now considerable increase in the number of organizations acquiring, storing and analyzing and using human resources information using Human Resource Information Systems (HRIS) [2]. This has replaced traditional functions of corporate HR [3]. With increased accessibility and authority human resources (HR) now respond more quickly to changes than ever before [5]. The HR performs traditional activities with the help of Information Technology. Though, human resources constitute a key to competitive advantage in the 21st century business environment, yet, those who use HRIS in day today management activities may not be aware of its roots [4]. Thus, perspectives amongst us realise that there is need for HR professionals to have knowledge of its historical development. This may help them to have a clear idea about the emergence and contributory role of human resources and interception of Information Technology (IT) in it. This paper makes an humble attempt to dig into and provide a clear & comprehensive analysis of historical roots of today's HRIS and highlight its emergence in modern era. This, it is expected, would help human resource management practitioners to understand situations and circumstances which triggered development and adoption of HRIS in today's business world.

II. Methodology

To realise objective of this paper, secondary data was used. It was extracted from different documents-published and unpublished, such as, scientific journals, research studies, theses, books, company periodicals, websites, etc. The relevant contents contained in these documents were used for analytical understanding of origin and diffusion of Human Resource Information System.

III. Review of literature

"Institutions are made by men who run them".

Pt. Jawahar Lal Nehru

The perusal of phenomenon of personnel management clearly shows that it not only constitutes important domain of corporate and industrial management but goes far ahead of it. Man-machine system clearly spells that

machines are run by human beings. Machines without human being are redundant. Human resources take considered decisions to run them. Sheldon aptly pointed out that no industry can be efficient so long as the basic fact remains unrecognized that it was the principally human. All the activities of an enterprise are initiated and determined by persons who make up that institution. From all the tasks of management, managing human component is the central and most important task because all else depends on how well it works [6]. Management experts categorically held that it is not technology, but the excellence of human-and human resource management that forced the continuing challenge for executives in the 21st century [7]. It presupposes that the best and brightest human resources will remain with those organizations which value them the most and intend them to retain them to their advantage. A comprehensive analysis in retrospect and prospect may help to understand emergence of importance of employees as a key source of competitive advantage in the recent knowledge economy. Kavanagh and Tannenbaum have traced evolution of HRM through five historical periods of industrial development in the United States [8].

A. Pre-World War II

In prehistoric times tribal members were assigned for specific jobs of hunting or gathering. Chinese emperors had employment tests to identify servants with special talents for special jobs for their household chores. There was system of training in place for new recruits for household and artisan guilds. During this era human resources were considered as “Personnel”.

The personnel management remained segregated from core organizational functions. It was during the first world-war when in United Kingdom (UK), the factories like Cadburys recognised the importance of looking after its employees and their families that the term “Welfare Officer” was introduced in late 19th century.

The early 20th century and before World War II, marked the beginning of record keeping of employee information, like; name, age, address, phone, employment history etc. The record was maintained on paper as there were no computers as we have in today’s world. This system of personnel function one can see even today in smaller units. The government influences in employment relations was minimal which gave rise to child labor and unsafe working conditions.

B. Post world-war period (1945-60)

This period marked the widening of personnel functions and introduction of computer technology in maintain records. The importance of employee morale was recognised but was kept out of mainstream. However, in defense industry, research and development in employee selection, payroll automation, applications of mainframe computers for personnel also practiced [8]. The employee morale got boost after WW-II as managers realised that not only money is motivating factor but social and psychological factors such as recognition of ones achievements, working norms and conditions were also equally important. This led to developing the personnel functions.

By the middle of the last century, corporations in larger corporations in the United States and also in Europe adopted adopted new management techniques developed by the Armed Services to their various personnel functions. Such approaches got encouragement due to the need of more centralized management and services of specialists and generalists as used in Central Services Training. Application of new techniques became more frequent in the field of management. The concept of job description in terms of tasks, duties, responsibilities etc., became the bases for classification of large number of employees in military and civil services including industries. This helped to design appropriate compensation for individual worker and basis for performance appraisal.

The persistent abuse of labour in this period led to the emergence of Trade Unions which played an important role in bargaining for better employment terms and working conditions. This forced the state to enact employment and labour laws. Trade Unions were recognised. The personnel wings had to shoulder more responsibility in terms of maintaining record and keeping liaison with the state agencies for better redressal of labour grievances. The ever expanding role of personnel department and segregation of its functions due to diversities of employees found solace in computer technology which facilitated it in assuring maintaining of proper database of employees.

C. Legislative period (1960-1980)

This period is characterised by the emergence of Human Resource Management (HRM). During this time management started calling personnel departments a Human Resources Departments which led to the birth of human resource management. Emerging social issues played an important role in this phenomenon. Compulsions of managers to conform to labour legislations of the state increased the importance of HR fuctions. The effective HRM practices started affecting organizations from top to bottom. There was a significant growth of HR departments. The use of computer technology increased significantly. The unprecedented increase in labor legislations by the state and compliance to statutory authorities made HR departments vital and more significant. As a result of this demand for HR departments to adopt computer technology drastically increased. The evolution of computer technology and growth of vendors to provide cost effective solutions to manage Hr functions resulted in the development of a comprehensive Management Information System (MIS) for Human rsource management (HRM).

Despite the low cost of computer aided HRIS its adoption was slow due to reliance more on administrative functions of the HR.

D. Low Cost Period (1980-1990)

Early eighties marked increased competition of US with emerging and growing European and Asian economies on the globe. The multinational firms in US had to resort to cost reduction in production and management of complex HR functions. Automation and adoption of computer technology became imminent to keep pace with growing number of legislative requirements and to gain competitive advantage in competing economies. As a result of growing focus on employee development, effectiveness and efficiency in-service delivery, and value-added services put lot of pressure on HR departments. This increased the need to harness technology and cost-effective HR software like HRIS. The first automated employee data was used in early sixties [8]. The HRIS/HRMS became prevalent in the 1980's with the popularity of Enterprise Resource Planning (ERP) applications. The client server technology also came to the forefront in managing human resource.

During 1980-2000 HRIS got transformed from merely keeping records to complex analytical tool. By the end of 20th century, HRIS's horizon broadened to include recruitment, benefits management, time management, payroll, compensation management, learning management, expense reporting and reimbursements etc. This was possible due to development of softwares in information technology. This helped to create central repository of database by large corporations and business houses. Decrease in hardware prices and increased power of computers further encouraged and empowered both management practitioners and clients to interface with HR systems. HRIS is now available for Large and Small Business enterprises.

E. Tech Period (1990 to the present)

With increased dependence on technology and changed value focus of modern HRM, the HR department in dynamic organizations has acquired the status of a strategic partner. With the growing importance of managing people in contemporary organizations, the HRM thinking treats human capital as a strategic asset and a competitive advantage in improving organizational performance [9]. Strategic Human resource Management has evolved from Personnel Management over a period of fifty years is now recognized a key to knowledge base and sustainable competitive advantage.

IV. Analysis

In the past, a number of researchers made efforts to provide picture of emerging HRM (e-HRM). This paper made an attempt to put together development of HRIS in an coherent fashion, based on perusal of earlier documentary evidence. Evolution and development of HRIS through five historical periods gives a sequential progression from traditional management to more sophisticated computer technology based human resource management.

During the pre-world war-ii period, the personnel functions were primarily confined to record keeping of employee information on paper. The state had little or negligible control on HR policies, rules, regulations regarding labour/employees. The poor, uncongenial, unsafe working conditions and child labour were common. There was no computer technology and everything was done manually. After the WW-II, social and psychological factors, such as recognition of work achievements and work norms were recognized. The management development techniques, originally developed by the Armed Services working with the help of occupational psychologists from universities were applied. Job description became the key to personnel management. To protect themselves against exploitation, employees formed Trade Unions to leverage their relationship and interests with management. With the increased burden, personnel departments started relying on emerging computer technology as a possible way to store and retrieve employee information.

Two very significant changes occurred during Legislative period (1960-1980). One, term Human Resource and Human Resource Management replaced the terms personnel and personnel management; and, two, burdened with mandatory legislative requirement and increasing volume of work, the HR department felt the need to adopt computer technology to process employee information more effectively and efficiently. This led to increased vendor activity and development of a comprehensive management information system (MIS) for HRM. Two factors, that is, cost-effective computer technology and increasing costs of employee compensation and benefits, the HR departments had to go for computer-based HR systems (HRIS). The low cost period (1980-1990) encouraged to make HRIS prevalent in the 1980's with the popularity of Enterprise Resource Planning (ERP) applications and the move from mainframe systems to client server technology. Computer aided HR departments with penetration CT became complex analytical tool to facilitate management decision-making. In fact, HRIS applications became popular both for large and small enterprises during this period.

The advancements in the information technology transformed traditional personnel management to strategic partner during the last two decades. In 21st century HR professionals have become strategically more important and contribute in gaining competitive advantage and overall development of organizations. The HRIS today is seen as a predictor of Strategic Human Resource Management (SHRM) by the modern organizations.

Summarily, it can be said that HRIS plays a dynamic role in the world work which is marked by large, diverse and ever expanding organizations in global competing economies. The sequential evolution of HRIS is depicted in the table below:

V. Concluding observations

Organizations, enterprises, corporate and industries in this century, most particularly after recession period of 2009, have taken initiatives to reduce the cost of the production and to be more responsive to the customers. Most of us affirm that their success mostly converge on the efficient management of human resource, acquisition of talent and retain it. Besides administrative functions, HR professionals also play strategic roles, therefore, it is of vital significance for them to have background knowledge of the with the advent of IT-enabled HRM, HR managers should have clear idea about the HRIS. This study demonstrated sequential and comprehensive picture of HRIS evolution and development based on situational and theoretical analysis. Today's HRIS and SHRM has evolved through different historical periods: Pre-World War II, Post world-war period (1945-60), Legislative period (1960-1980), Low Cost Period (1980-1990), and Tech Period (1990 to the present). The outcomes of the study will help management practitioners and all those concerned with HRM to tune their policies to properly adopt and apply HRIS. As the HRIS is being adopted by many organizations and corporate, it is imperative that future research should focus on professional users of the HRIS to gather realistic point of view.

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