Analysis of human resource management in an electronic financial system

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Abstract

In recent decades, studies conducted by researchers suggest that information and communication technologies have had a profound impact on human resource management. Experts believe that electronic Human resource management can potentially reduce administrative costs, increase productivity, shorten response times, improve customer service and develop decision-making process and therefore helps human resources management to be more strategic, flexible, and also more affordable in terms of cost. Today, the necessity of using Automated financial system, due to its potentiality of quick timely and accurate access to information, is clearly evident in most companies and organizations. So that, considering information needs and presence of the computer requires the use of Automated Systems. This study examines the impact of e-HR management systems of accounting, auditing and financial systems as well as other related issues in this context. In the present study the concept of Electronic Human Resource Management, analysis of the impacts of this technology on financial systems, the process of tax systems improvement, update information and financial statements is analysed and solutions and suggestions provided to improve these relationships.

Keywords: E-Management, E-HR (Electronic Human Resource Management), E-Government, Financial System

Introduction

Today, information technology has penetrated into all parts of organizations and, even the most important resource, namely, human resources, is not deprived of its effects. Information technology has caused organizations to have a comprehensive view of their resources especially human resources. Using this system, the employee’s discretion can be increased; also, they can be provided with all required information that enables them to perform their job or organizational duty as perfect as they can. On the other hand, the expansion of the activities and tasks of managers in the human resource management area, and ongoing interaction between these activities, and considering the necessity of coordinated planning in the capture, amendment, maintenance and effective use of human resources as the most important strategic resource in any organization, Human resources managers, consider the information provided by them as a facilitating tool that assists them in management decision making, which in turn leads to success for the whole organization (Tasdighi et al, 2011). Human resources management can be more flexible, economical, customer-oriented, and strategic at the same time. Information technology is potentially capable of reduce management costs, increase productivity, shorten response time, improve decision-making and extend customer services (Sedar Creston, 2008). All these optimizations can, also, not to take place at the same time by IT. Three main factors that encourage companies to move toward human resources strategies based on IT are cost reduction, higher quality of services, and cultural changes.

The term E-management of human resources, which was first used in 1990, refers to doing human resource management activities through web technologies and intends to provide information to managers, counsellors, and staff any time and wherever required. The rapid pace of internet expansion within the last decade gave an increase in its implementation and application (Senjers et al, 2007).

Moreover, researches conducted by human resources counsellors indicate that not only number of
organizations that have accepted human resources E-management but also number of its related software is constantly increasing. Modern organizations consider human resources as a competitive solution in business that is capable of online perfect support in the management of all procedures, activities, data, and information required for human resource management in an organization. Hence, this effective management, is a simple, reliable and accessible tool and for different groups and users (shashak, 2010).

Considering the worldwide trend of expansion and using information technology and specially web-technology and the internet and their benefits in administrative activities, in Iran and also considering determining role of the governmental organization in the country and owing 25% portion at employment, ICT has been on the agenda of government and communications and professional institutions (specially government’s special programs and activities from 2003 onwards, titled as TAKFA project).

Have been affected by these strategies and its related activities, electronic and Telecommunication, computerized, and information transferring networks technologies are considerably developed. It is for around one decade that studies, plantings, and initiatives are tracking to give an increase to ICT applications in the areas such as education, researchers, business, healthcare, management, and planning, and base of international findings and experiences and national capacities, government, private section, and scientific institution’s cooperation. Currently we have more than 32 million internet users, but unfortunately, there is no effective and efficient use of these technologies in our executive system and governmental organizations in order to improve human resources management. Having all that, the question remains is that, under what circumstances Iranian governmental organizations are able to use IDT in order to improve their HR management procedures and operations.

This research aims to explain the role of HR E-management in creating innovation in an organization and its necessity in financial systems.

**HR Management**

Human resources management is, strategic and stable management and administration of the company’s most valuable asset, that is their staff working there individually and together in order to accomplish their common goal in achieving the company’s aims.

The HR management aim is to ensure that the company can be successful with the help of its staff. HR management can be a resource of organizational capacities and abilities that enables companies to detect new opportunities and make an investment in them. HR management is a scope of management, the history of which is equal to management itself, but has undergone changes and evolution over the time. The turning point of this evolution is where its name changes from staff management to human resources management. HR management is a strategic approach to recruit, develop, management, encourage, and achieve the key resources of an organization; that is, people who work in or for it (Armestrang, 1993). HR management is a procedure consisting of four main duties, including recruitment, development, encouragement and retention of human resources (Senzo and Rubins, 1988)

Human resources management means, the policies and actions required for implementation of some parts of management duties that concerns with some aspects of staff activities, especially in the areas of recruitment, training, appraisal, rewarding, and creating a safe and fair environment for staff in the organization. For example, this policy and actions include appraisal, job analysis (to determine the nature of each employee’s job), selection of qualified candidates, planning, recruitment, motivation and benefits, to explain and train new staff, development of HR and training, wages and salary management (how to appreciate staff jobs), make staff committed towards the company, communicate with staff (interview, counselling and disciplinary rule’s implementation).

**Essential requirements of HR management**

- To support organizational aims and strategies;
- Make surplus;
- To support cultural change projects;
- To detect and develop staff talents;
- To design procedures in order to maximize profits;
- Make job opportunities for talented staffs;
- To design, implement, manage a system to access to related experiences and ensure their accessibility;
- To manage variegated HR using employment patterns and staff loyalty;
- To design, implement and manage operation management and rewarding systems;

**HR management and its relationship with IT**

Many theorists believe that change of organization approaches towards HR management and its alignment with organization’s aim is under the influences of IT in HR management. HR development depends on the existence of new and applicable information, but information can lead to the creation and development of new capabilities in HR section just under the influence of a logical procedure of Information Technology (Soltani, 2004). IT, to increase the influence to the technology and the level of its acceptance by organizations and
achieve innovation, uses information systems to help human resource and tries to adjust those technologies with their organizational strategies. With presence of IT, organizations don’t consider HR as a minor, separated part inside the organization any more, but they believe that it is aligned with their aims and can be achieved through systems derived from IT. One of the very new and young informational systems that is under focus due to the significant influence of IT, is HR E-management.

**HR E-management**

Human resources management is, strategic and stable management and administration of the companies' most valuable asset, that is, their staff working there and helps the organization to achieve its aims (Armestrang, 2003). In recent decades, swift expansion of the internet resulted in the development, implementation and applying HR E-management (E-HRM) (Roota, 2005). E-HRM, is the most recent evolution in the HR management area, that can provide HR services according to organizations' requirements (ling Nik Haal and Mauritius, 2003).

Human resources E-management is a method for implementing strategies and policies and employing human resources in organizations through conscious and constant support of the use of web-based networks. In other words, HR E-management is a new method to implement human resource management (Soltan, 2004). Through HR E-management, organization can achieve a comprehensive database of its human resources. Also, can have access to their resume and document and even can use or update them.

Advantages of the system include:
- Have comprehensive and useable information of all staff, provided by themselves;
- Staff awareness of information that the company has about them;
- Possibility of job promotion and availability of replacement chart for staff and facilitation of HR planning;
- HR efficiency and, help manager in decision-making procedure;
- Reduction in costs and paperwork;

Generally, as a result of the rapid pace of development, in both areas of HR management and IT nowadays most companies and organizations, including governmental and non-governmental, tend to utilize IT in their HR section, and this has led to the development and implementation of E-HRM (Mid et al, 2007).

The reason of having a such event, is that, today's demand for more flexibility and having the most possible efficiency in providing HR services, makes it necessary to change HR management methods, and E-HRM is proving these changes.

**HR E-management Model**

By providing following model, Roel, explained goals, policies, strategies, types, and consequences of E-HRM (Reol, 2004).

**Compare HR Management and HR-E-management**

In the following table provided a comparison between Traditional HR management and Electronic HR management:

![Figure 1. E-HRM model, presented by Roel (2004)](image)
Requirements for E-management

All good managers can be good E-managers too. Of course to be a successful E-manager some conditions and characteristics are required, we have provided 10 out of the best ones:

1- Swiftness: today being swift is much more important than being large. Shorter life of products and services, swift development of markets, increasing changes in technologies, ongoing changes in customers’ taste and expectations, etc., has resulted in shortening of expiration of managers’ decisions.

2- Good Staff: human resources are the most important inputs of an organization. Today, the organization needs less but better staff. Companies need to revise their methods in the staffing. Evaluation methods need to be revised too.

3- Honesty: Honesty is the base of success, and a key strategy to attract customers.

4- Cooperation skills: an E-manager needs to be familiar with all advantages of cooperation and partnership and increase the added value for their product and services through outsourcing.

5- Discipline: E-manager needs to be organized and follow all procedures in the right order in their relationship with the customers to achieve the most productivity.

6- Strong relationships: an E-manager needs to be as attentive and careful as possible in making a strong and stable relationship with customers, other suppliers and companies.

7- Content management skills: base of all e-companies’ website is information. Unfortunately most managers are not aware of how to manage a commercial website or cannot design or manage it.

8- Focus of customer: in nowadays competitive world there are new opportunities for companies to make stronger relationship with customers. An E-manager must mainly focus on customers rather than products or management procedures, and to achieve that the only way is to make stronger connection bonds and improve informational strategies.

9- Knowledge management: communication revolution increased the importance of knowledge management. Development of databases and internet enabled the companies to have worldwide activities. But the worldwide activities demand informed staff and more sensitivity of management and leadership.

10- Leadership: most of managers especially Asian & European has not learnt to use the internet while in E-management most their time should be spent to communicate through E-mail, online communications, and keeping websites updated.

<table>
<thead>
<tr>
<th>Electronic HR Management</th>
<th>HR Management</th>
<th>Main Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract of E-resume and E-mail</td>
<td>Abstract of paper resume</td>
<td>Employment</td>
</tr>
<tr>
<td>Electronic review of abstracted resume</td>
<td>Manual review of abstracted resume</td>
<td>Selection</td>
</tr>
<tr>
<td>Reviewing software</td>
<td>Supervisor face to face review</td>
<td>Operational review</td>
</tr>
<tr>
<td>Emphasis on ownership and life quality</td>
<td>Emphasis on wages and advances</td>
<td>Salaries and wages</td>
</tr>
<tr>
<td>Online flexible training Staff-oriented development procedure</td>
<td>Manager</td>
<td>Training and development</td>
</tr>
<tr>
<td>Staff determines their job promotion direction with the help of managers</td>
<td>HR managers determine job promotion direction for staff</td>
<td>Job promotion direction</td>
</tr>
<tr>
<td>Work research consideration: Mental fatigue and personal and job tensioning stimulus</td>
<td>Building and equipment security: Body exhaustion, limited to job tensioning stimulus</td>
<td>Health and security</td>
</tr>
<tr>
<td>Focus on manager-staff relationship</td>
<td>Focus on manager-staff relationship</td>
<td>Staff problems-job relationship</td>
</tr>
<tr>
<td>Now the key role of HR management and routine jobs are carried out by IT to provide opportunities for more attractive jobs</td>
<td>Is not so important</td>
<td>Retaining strategies</td>
</tr>
<tr>
<td>Providing attendance services for kids and elders to fade the boundaries of home and workplace</td>
<td>Is not so important</td>
<td>Balance between job and personal life</td>
</tr>
</tbody>
</table>

Table 1. The comparison of HR Management and HR- E-management
etc.. Having revolutionist leadership attitudes helps managers to overcome their fears in facing web environments and swiftly adopt with competitive changes (Valkra, 2000).

**The most important opportunities in implementing HR E-management**

1- Electronic systems of E-HRM can make significant improvements in especial procedure efficiencies of HR, hence improves minimums of knowledge and skills in organization, and makes them more ready for this competitive atmosphere.

2- HR E-management can create a new atmosphere in a company in which the variety and number of reports related to HR are significant.

3- E-HRM provides managers of this area with appropriate opportunities to draw their attention, from daily transaction procedures, to HR strategic procedures. As these changes are made through E-HRM result in automated systems with the minimum involvement of human resources, the need for analysts focus on company activities and its adjustment with company’s projects and aims, become more significant.

4- Many E-HRM and HR information resources provide the possibility of using staff kiosk, and being a part of HR section, by keeping their own profile updated or amended.

5- As different parts of an E-HRM system are consistent and synchronous, a real HR system will enable companies to redesign their HR activities easily and to assign many activities, which were previously carried out by the staff, in this system.

**The most important challenges for HR E-management**

1- Investments costs of human resources and subsequent cost of its development is a major problem.

2- Some systems may face managers’ resistance in doing some group activities.

3- Some E-HRM systems may result in staff resistance due to existence of some unusual medium users.

4- Lack of thinking regarding adaptation of new E-HRM system with the existing system in organization.

5- Documentation and low and improper training may reduce system utilization and increase the resistance of the staff and managers who were supposed to support that.

6- As can be observed the resistance is a major challenge that may occur due to different reasons.

**Recommended Model**

Until 2012 Iran Islamic republic government consisted of 21 ministries, but then, after merging of some of them and foundation of Youth & Sports Ministry, the number of ministries decreased to 18. And among them the ministry of economy and finance due to its influences of financial systems, is of a significant importance. As a suggested structure of this system is presented based on an electronic attitude.

**E-Government**

Electronic government is service providing and information transferring. Inside or outside the organization through technology based tools with the aim of providing a “Digital World” to create and present information and services.

The other aims of E-government include presenting better services, positive effect on price and efficiency of services, more contribution of people in govern-
mental issues, and presentation and implementation of more appropriate methods in social government.

**Economic and financial ministry**

The aim of this ministry is formulating country’s financial and economic policies, and to make coordination in financial issues and implementation of tax policies and formulation and implementation of economic partnership plans and joint investment with foreign countries.

Preparation of annual country budget bill.

Supervising financial and economic activities of private section in order to implement economic development plans.

Monitoring identification and collection of direct taxes and collection of indirect taxes, and the rights and duties and customs fees.

Submission of monthly bills, receipts, and payments related to the state general fund revenue accounts and deposits, government ministries and agencies to Supreme Audit Court. Giving notice, or assignment of debts of individuals, to ministries and government agencies. Obtaining the balance sheet, profit and loss accounts and annual public companies review their summaries included in the country annual budget bill.

**State Tax Organization**

According to the third paragraph of Article 59 of the Economic, social and cultural development Law of Islamic Republic of Iran, the government is allowed to fund “State Tax Organization”, in the form of an organizational institute to increase efficiency and eliminate organizational barriers and focusing on all matters related to taxation.

**Auditing Institutes**: Auditing institutes start their activities with the approval of Iran Official Accounting Organization, and under supervision of the Country Tax Affairs, and their main task is to train efficient and expert staff or auditing their affiliated private and governmental companies, and their other task is close supervision of internal auditors.

**Accounting Institute**: Accounting institutes try to have expert and efficient staff in the financial systems of institutions through doing accounting tasks and activities on companies’ financial statements by training staff to do that.

**E-Companies**: E-companies system aim is to implement a united plan for their financial and tax activities. These institutes try to present financial E-reports in a modern system in the form of software approved by a state tax organization, through their accounting and auditing staff.

**Necessity of E-government existence**

One of the most important issues in informational society is the issue of E-government. Today, utilizing IT in order to improve efficiency and effectiveness, clarity and comparability of information and transfer inside the government, between government and its affiliated organizations, between government and citizens, and between government and private section, is called E-government. E-government offices in different states provide different registration and disciplinary services which is a big step in providing electronic services to citizens of Iran.

**Relationship between E-HRM and innovation**

Few studies have reviewed the effects of systems or a group of HR activities on innovation. Sotaris, 2002, has said considering social assets and awards given to contributions are very important in innovation in organizations. His study was considerable because indicated the importance of payments and staff services compensation as the most important factor affecting innovation. (Sotaris, 2002)

Larson, 2002, indicates that modern HR management activities such as teamwork, delegation, and payment according to the operation, have the most effect on innovation when are used in combination; this relationship changes according to knowledge-orientation level in each industry.

This is expected because this action increases decentralization, causes better accordance and combination of knowledge and skills. Hence, these studies have implicitly assumed a kind of organizational learning approach. Teamwork is positively connected to innovation in organizations with medium level of knowledge-orientation industries (Larsen, 2002).

Payments in accordance with operation, has a significant role in industries with high level of knowledge-orientation. In a systematic level, a combination of HR management activities is related to innovation in industries with high and medium level of knowledge-orientation. Larson and Foos, 2003, in another study in Sweden, have found duty coherence and internal training, predict and implement innovation. Hence, these studies support a behavioral approach of HR management and innovation in which HR activities conduct desire behaviours. Studying HR management systems, adopt approaches that have been increasingly common in HR management reviews and consequences in the organization. It is generally stated that, when E-HRM activities are internally consistent will reinforce each other. And they will have a synergistic effect on staff desirable behav-


1- Manufacturing technology promotion, such as automated design and manufacturing, and timely manufacturing, has an especial and direct effect on industrial accounting systems, as a subsystem of accounting information system. (Dastan and Soorman, 2004)

2- Computerization and development of communications tools such as the internet, had a direct effect on accounting information system in the form of collection, processing, registration, classification, and transferring data; so that, integrated financial system, is directly connected to the internet. Accounting information users can access company website all around the world and any time observe financial statements and their recent changes and analyze them. They even can make amendments in their reports, using intelligent software, organizational resource planning, XBRL (extensible business reporting language), extended marked language (XML). This way, there is no need to print and distribute financial statements, just at the end and middle of the financial year. This kind of financial reporting, in which information is accessible all the time through internet is called timely financial reporting.

3- Technology promotion provided the possibility of data registration in newspaper registry and ledger and to be transferred and in result financial statement and other reports gets ready upon entrance of the data. In addition to more rapid and effective, extensive, and special report preparedness, it is possible to compare them with the manual ones.

4- Employing IT has resolved limitation of time and data amount and variety in accounting system and provides the possibility of presenting the sorted data to managers.

5- IT promotion resulted in saving in the number of staff and dealing time, due to swift and easy data processing.

6- Follow-up branch trades ROM main office, and interference if necessary. In this area accounting activity is centralized therefore a kind of uniformity is occurring in accounting trades.

7- Increasing in use of IT in businesses has affected the quality of information presented in the financial reports and statements. Users of financial statements need to associate and reliable information and IT increase data association and comparability (Etemadi, 1383)

8- the 11th guidance of international accounting federation, has evaluated IT promotions and opportunities provided for the accounting profession in this regard:

8-1- accounting as a user of IT: members of accounting profession need to be aware of the areas such as data registration, computer software, and internet that are all related to IT.

8-2- accountant as an IT system manager: members of accounting profession need to be aware
of staff increasing, operation evaluation, monitoring project management procedures, etc. That is accomplished through IT.

8-3- accountant as an IT system designer: members of accounting profession need to have enough knowledge of the techniques of their selected system and their proportion with each section.

8-4- accountant as an evaluator: that members of the accounting profession who don’t have enough knowledge and awareness of IT can learn using tools and techniques of IT and their evaluation (Dastan and Soorman, 2004)

**Mechanized accounting system and taxes**

1- Today, in most companies and organizations the necessity for the mechanized financial system is obvious because of its possibility for swift access to related, timely, accurate information. So that this issue is a necessity in any organization with any extend and any amount of information and the presence of PCs implements the use of mechanized systems. Moreover, training expert human resources are effective in this regard.

Using computer resulted in improvement of the country tax system structure and tax laws and regulations, mutual trust between diagnostic agents and taxpayers (Fadaei, et al. 2007)

2- Despite the fact that administrators unawareness is detected as one of the barriers in mechanizing companies accounting systems, due to not having barrier and limitation in tax laws and regulations it can be said that there is not enough evidence indicating these rules are barriers in mechanizing companies and organizations accounting systems.

That mechanized systems are not able to provide such reports also are not able to respond to clients.

3- Mechanized accounting systems in companies result in tax system structure improvement. By detecting revenues, taxpayers, and direct tax regulations as components of a tax system structure, the effect of mechanized systems through information providing with desirable quality by shortening settle time results in decrease in HR and by increase in trust between revenues and taxpayers results in improvement in tax system structure. On the other hand mechanized accounting systems provide the opportunity to amend tax regulations by providing clear information and through detection of insufficiencies in laws and regulations.

4- As the effects of mechanized systems on the tax system structure is approved and on the other hand government constantly has emphasized on the importance of the organizational system structures such as tax system structure and because administrator shows resistance to mechanization because of their inability in using these systems, then revenuers train to be more familiar and have more control of these systems is being more important. Revenues are expected to be understood of the importance of the issue and try to be equipped with this tool and by proper use of it, be able to represent desirable responding and increasing quality and justice in the tax system.

5- Considering ongoing utilization of modern technologies in all areas, and a systematic relationship between all economic, taxation, and financial components now utilizing mechanized systems is not an option but a necessity. So, in order to facilitate the procedure it is expected to omit some procedure such as getting permission, or at least some assistance must be made in this regard.

**Recommendations**

- A state tax organization may try to design and approve a united software to mechanize legal document registrations.
- E-HR to be replaced by the traditional financial system.
- E-government provides wide facilities to implement governance ideals, and if governments wish to move towards good governance, they need to be equipped with a powerful tool such as E-government.
- Utilizing new communications and informational technologies, a good contribution is made in improvement of providing public services, acceleration of service providing for citizens, more responsibility of officials, information clarity, reducing the gap between people and statesman, effective contribution of citizens and members of the civil community in public decision-making procedure, Promotion of social justice through equal opportunities for access to information, etc.
- Organizations and companies need to move step by step. That is, they need to pass operational and communication steps which are a part of E-HRM and considering their own culture attitude and approach make it localized, and to achieve that they may need to make use of an accurate and right planning procedure.

**Conclusion**

Ongoing growth and development of human knowledge, the influence of IT and emergence of issues such as virtualization, timely communication and expansion of the word Electronic in some key words such as Government and Business caused organizations to find themselves changing
and evaluating more than ever before. As HR is also considered as a competitive advantage of today’s world, requires an especial attention and increasing support. E-HRM, as a method based on ICT is a proper option for managing such a valuable resource. There are many claims in advantages of E-HRM in organizations. One of the detected advantages of E-HRM is, cost reduction and improvement of service providing for HR management section customers.

Today HR is the only distinction in the competitive market. Nevertheless, the old HRM systems can not be trusted anymore in providing dynamic and intelligent human resources.

Therefore, its development in enterprises and organizations is considered as a kind of mutual commitment and duty between individuals and organizations.

One of the most important advantages of E-HRM is cost reduction.

By utilizing this technology many of costs of execution of HR tasks and paperwork are minimized.

Because of the staff direct access to information there is no need for face to face meeting to exchange such information and subsequently peripheral costs and time-waste of such meetings will be decreased.

Today the influence of IT in procedures and systems of HR has created a new approach titled E-HRM. On the other hand organizations need to provide conditions to fertilize creativity and can easily and constantly implement their innovative activities individually or in groups.

Here E-HRM plays a key role. When an organization is moving toward E-HRM, their staff and managers should play a dynamic role in executing HR activities.

E-HRM as a set of emerging thoughts is provided for individuals and organizations through hardware mechanism and plays a major role in development.

Today creation and development of knowledge, change and innovation in HR, has been made easy, through E-HRM, and has resulted in expansion of human resources. IT and E-HRM, plays an effective role in development of institutionalization of change and innovation, increasing commitment, increasing qualities and capacities, cost effectiveness and increasing consensus and cohesion and can lead to the expansion of human resources.

Of course, until the time HR department keep on their traditional methods, it is hardly possible to expect fundamental changes.

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