

The Role of e-HR in the Modernization of Human Resources: A Case of Bahrain

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Abstract:

This study examines the effects and problems of implementing Information and Communication Technologies (ICT) on the Human Resources (HR) function in the government sector in Bahrain. This research aims to discuss the organizational changes and the role of e-HR in the modernization of HR procedures in Bahrain's public sectors. As a result, the influence of ICT on the HRF (Human Resource Function) may be divided into two areas. The influence of ICT is, first and foremost, operational, as evidenced by building a Human Resources Information System (HRIS): computerization of administrative tasks, creation of HR databases, and so on. Secondly, the impact is relational or transactional, giving birth to the most complex and interactive HR activities like e-HR reporting, e-HR recruitment, and so on. Finally, the transformative impact involves reorganizing the HRF into a virtual and interactive team work with new modes of collaboration by entrusting it with a more strategic function and activities.

Keywords: Human Resources, Human Resource Function, Public Administration, Organizational Change, Human Resources Information System (HRIS).

1. Introduction

The development of Intranet and Internet-type technologies in the field of HRM initiated a debate from HRIS to e-HR. E-commerce, e-learning, e-marketing, e-justice, e-administration, e-government, e-human resource management. Since the emergence of the Internet, these phrases in e-... and many more have been evolving and spreading among media professionals, and public and private organizations. Information and communication technologies (ICT) have been widely used in businesses and different government sectors, resulting in significant changes in organization, vocations, skills, and individual and collective efficiency. Because of the fast growth of these technologies, every business may now increase its total efficiency, and adjust its relationships with customers, consumers, suppliers, and staff.

The birth of e-HR is a part of the HRF's transition (Laval, F. et al, 2010). As a result, there has been a significant shift in the way human resources are managed to maximize the benefits of ICT. The technological solutions implemented all aim to dematerialize and optimize HR processes. Organizations improve the management and implementation of their HR processes by making them more efficient, refining information transmission, and, as a result, enhancing communication among the actors involved in the processes.

As a result, the influence of ICT on the HRF may be divided into three areas as stated above. The influence is first operational due to the adoption of a Human Resources Information System (HRIS): computerization of administrative tasks, construction of HR databases, and so on. The impact is then relational or transactional, giving birth to the most

complex and interactive HR activities. Finally, the transformative impact involves reorganizing the HRF into a virtual and interactive teamwork with new modes of collaboration by entrusting it with a more strategic function and activities. The study of the relationship between ICT and the HRF, having given rise to an e-HR, obliges us to question the nature and the stakes of this relationship and leads us to ask the following central question

How can the emergence of e-HR assist in modernizing HRF of the public sector by increasing its efficiency?

To answer the above question, first, we will address (in the **Literature Review** section) that 'e-HR makes it possible to meet the new requirements related to the management of human resources. Secondly, in the **Result of the Study** section, we will analyze the impacts of the integration of ICT with the HRF in Bahrain's public sector.

2. Literature Review

ICTs have fostered the emergence of a new concept, One-to-One marketing (Hutt & Speh, 2014) defined as individualized and mass relational marketing. A new marketing approach involves keeping in touch with the customer to guarantee loyalty. The study of this new marketing approach's characteristics and implementation will allow us to identify the related Web techniques that underlie the concept of e-HR.

2.1 e-HR as a response to new HR needs

If we speak today of e-RH, it is simply because the environment of the HRF has changed and, mainly, because ICTs have developed and now allow new applications in the field of HRM (Shepherd & Patzelt, 2018). Thus, if it seems evident that the evolution of the technological environment opens up new possibilities for HRDs, we must ask ourselves about the nature and extent of the changes at work to understand their impact on management.

2.2 Performance

HR managers are convinced that HR systems must generate a specific value for the company's shareholders and internal customers (Ulrich & Brockbank, 2005). Referring to the work (Holbeche, 2016), value creation arises from the need to measure performance. The author is a visionary and perfectly translates organizations' evolution and the HR function. On the one hand, HRM does not provide services to internal clients since they do not pay for this service. The HR function puts in place the mechanism necessary for the proper performance of activities and translates the company's strategic vision.

The development of ICT applications in the service of Human Resources Management (HRM) therefore makes it possible to obtain satisfactory results: maximization of the administrative efficiency of the HR department by automating repetitive manual processes, easy access to individual data of employees, updating of information intended for employees, integration of HR processes into the company's information system, etc (Ahmed et al., 2018).

2.3 Flexibility

Today, the flexibilization of work concerns all dimensions of work. The researchers have presented several classifications: Quantitative and qualitative flexibility, internal and external flexibility, etc. Taskin (2009) specifies two principles:

Flexibility is an “imperative of competitiveness” for the company in the context of the globalized market economy (Roychowdhury, 2018). It is essential to respond to customers as quickly as possible, communicate with the parent company, take time differences into account, and get ahead of the competition.

Flexibility allows a better reconciliation between private life and professional life, in line with the evolution of lifestyles (consumption and leisure society) favored by reducing working time.

Scholars have claimed that the capacity of human resources to be flexible is closely related to the profitability of the firm. Flexibility benefits from business efficiency, motivation, and intellectual asset growth, which is the foundation of an organization's competitive edge (Upton, 1995).

2.4 e-HR: new value-creating missions

(Condrey, 2005) point out that the HRF has evolved, with the introduction of ICT, from a predominantly administrative function, most often centralized, to a function that takes care of the most strategic and value-creating activities for the organization. More concretely, ICT (Internet, e-mail, Groupware,

Workflow, Intranet, etc) has introduced significant innovations into the HR function, profoundly transforming its missions and activities. Following are the some of the innovations:

- Remote work and collaborative group work offer the possibility of reducing the constraints linked to the dimensions of space and time, giving rise to network work and new forms of work organization.
- The reengineering of HR administrative management processes led to the appearance of “online HR services” for employees.
- Facilitating the “sharing of the HR function” for the benefit of operational managers, leading to greater accountability of the latter in the management of HR in their structures.
- New management methods imposed by individual remote work or in project teams, access to information for all.
- The development of Knowledge Management, a source of value, thanks to the electronic management of documents which also facilitates the conservation and access to administrative documents of personnel legally subject to archiving.

All e-HRM technological applications and management procedures are now concentrated in the HR Intranet, which is a major evolution of the HRF's information system by moving from a centralized information system to a shared information system in which the various actors of the company - managers, employees, HRDs - benefit from specific interfaces and thus have access to databases required for their activities.

According to (Skripak, 2016), the driving force behind advanced automation and the transfer of responsibility is to enable HRM experts (fewer in number but of higher caliber) to devote themselves to so-called strategic missions, i.e. those directly related to the company's development and competitiveness. Thanks to ICT, the HR department has launched a dramatic reengineering movement of its processes, organization, and assignments inside the corporation. e-HR emerges as a tool for boosting organizational performance because it promotes employee

accountability for professional objectives and career development and because it increases operational managers' capacity for maneuvering in HRM with a view to higher professional engagement.

Sparrow et al. (2004) summarizes several consequences of an HRIS on the HR function and its areas of responsibility: decentralization of administrative management to local management and employees, real-time information and communication, significant improvement in HR reporting, modification of relationships with social partners (transparency and responsiveness), more complex payroll and the possibility of advising on "comp and ben", better management of training and development.

Thus, e-RH transforms the HRF and becomes more interactive, communicative, and reactive, enabling it to focus on its strategic missions, which create more value, while the employees carry out a large part of its administrative tasks and internal actors of the organization. It should be emphasized, however, that not all organizations are ready to set up such a system, a certain IT culture is essential. The risks of a new form of exclusion within the organization are real, among those who know how to use a computer and its resources and those who do not.

3. Hypotheses Testing

To verify the contribution of ICT to the modernization of Bahrain's Public administration, we surveyed Bahrain's public administrators. Thus, through this work we seek to validate a certain number of postulates and hypotheses that we have developed to answer our problem:

- H1:** The introduction of ICT is associated with a restructuring of the HRF: new organization of work, decentralization, and automation of administrative tasks.
- H2:** The introduction and use of ICT enhances the effectiveness and efficiency of the HRF.
- H3:** ICT (Internet, Intranet, Groupware, Workflow, etc.) allows the development of practices for creating, sharing, capitalizing, and disseminating knowledge.
- H4:** The introduction of ICT contributes to strengthening qualifications and developing new skills among actors.

ICTs are now viewed as an important tool for modernization and administrative change. Their administrative challenges are now known, at least in theory: faster access and better information sharing, increased organizational flexibility, the evolution toward cross-functional work in a project group, increased productivity, development of new professions, automation of certain procedures, administrative efficiency, and so on. This study is justified by the awareness on the part of public officials of the performance of human resource management as a lever for modernization and the effectiveness of public action. Today, ICT offer possibilities and essential sources of performance.

3.2 ICT: source of efficiency for the HRF

Human resources management was limited for a long time to carrying out certain administrative tasks (payroll, mobility, leave, etc.), but faced with new demands. Thus, it claims a new legitimacy, in particular strategic approach. Its challenges can be divided into three categories:

Administrative management:

Management of administrative files (personal files, payroll, remuneration, recruitment, mobility, etc.).

Qualitative management:

Increasing human potential through better qualification and adaptation of job profiles.

Reporting and decision support

It consists of the use of data from the administration

To improve understanding of current functioning and clarify choices interms of public employment and overall management of human resources.

ICTs allow the HRF to ensure the transition from purely administrative activities – which are becoming automated – to more strategic activities that create more value. Thus, the HRF represents an opportunity to exchange experiences regarding the impact of ICT on structural configurations, and the contribution of technologies to the performance of the human resources function.

4. The Methodology of the study

Reading the literature on the impact of ICT on HRF leads one to believe that it would be worthwhile to conduct a field study to investigate the various impacts of these technologies, both on the functions of the organization and the behavior of organizational actors, in Bahrain public administrators To conduct our study, we picked a sample of 112 public agencies to complete our questionnaire while adhering strictly to the quota technique.

Authorities	Effective	%
Central administrations	38	34
Regional administrations	42	38
Local Authorities	32	28

5. The results of the study

ICTs are used for the management of human resources information by 78.0% of the administrators surveyed, 31.7% for e- recruitment, 29.3% for mobility management, 22% for staff evaluation management and e-Learning, 19.5% for knowledge management, and 5% for Human Resources Self-Service and social dashboards.

Reorganization of the Human Resources Foundation and the Human Resources Information System administrations: 43.9%, stated that there was no restructuring of the HRF following the introduction of ICT, 39% (16 administrators) stated that this reorganization was done once, and 12.2% stated that it was done numerous times. Only 65.9% of the administrators stated that an HRIS was set up with the assistance of ICT, while only 19.5% (8 administrators) stated that ICT had no role in the development of an HRIS.

5.1 HRIS and Administrative Activities

Implementing an HRIS has made it possible in 23 administrators; i.e. 56.1%) to simplify HRM administrative activities and in 5 administrators (14.6% of entities) more accessible.

5.2 ICT and Productivity

ICT contributed to improved productivity in 25 administrators (60%). Accordingly, 11 administrators declared that they have not influenced the level of productivity. While two administrators (4.9%) declared that ICT contributed to the decline in productivity.

However, only 42 administrators responded to our questionnaire.

5.3 ICT and Running Cost

The introduction and use of ICTs by the FRH have reduced operating costs. 35 administrators (85.4%) noted that ICT saves time. Accordingly, 33 administrators (80.5%) save telephones and faxes, 25 administrators (61.0%) save paper, 17 administrators (41.5%) reduced travel.

5.4 Group Work and Team Effectiveness

Working in a group has become more common since the entrance of ICT, according to 51.2% of the administrators polled, while 43.9% believe that these technologies have not developed working in a group. Similarly, while ICT improves team work efficiency in 22 administrators (53.7% of all administrators polled), 15 administrators (36.6%) believe it does not influence team effectiveness.

5.5 The Quality and Processing Time of the files

28 administrators (68.3%) noted that the quality of file processing after the arrival of ICT is satisfactory, eight administrators (19.5%) consider it very satisfactory, and 2 administrators consider it unsatisfactory. In contrast, only one administrator declared that this quality is not at all satisfactory. ICTs have also reduced the processing time of files in 30 administrators, i.e., 73.2% of the administrators surveyed. 6 administrators (14.6%) declared that this delay has not changed (stagnation), while 2 administrators note that the delay in processing files has increased.

5.6 Access to Information and Improving Knowledge

24 authorities; that is 58.5% of administrators, noted that with ICT, access to information is better than before and 16 administrators declared that it has become more accessible. Thus, 97.5% of the administrators surveyed appreciated the ability of ICT to make access to information better than before and easier. Just as 28 administrators (68.3% of the administrators surveyed) found that ICT contributed to improving staff knowledge, compared to 4 administrators (9.8% of the total) who declared that ICT had not been able to improve knowledge.

5.7 Knowledge Development

34 administrators i.e. 82.9% of the administrators surveyed, noted that ICTs have contributed to better sharing of information, 13 administrators (31.7% of the total) declared that ICTs allow the transfer of skills and knowledge from experienced employees to new employees and finally 11 administrators (26.8% of the total) observed that ICT had made it possible to put the work carried out online.

5.8 The problems encountered and the difficulties in the use

The nature of the problems verified in the case of Bahrain's public administrators are noted in officials' various writings and findings as adverse effects that may result from using ICT. Thus, we have identified five different types of problems encountered when using these technologies.

5.8.1 Security Issue

Among the challenges experienced, 28 administrators (68.3% of those polled) stated that data security remains a top priority for management. Several security risks have been identified, including violations of correspondence secrecy, sharing of information

that can only concern hierarchical managers, virus threats, user destruction of certain files, and so on. This is especially important given that certain information is critical to the administrators and should not be disclosed to an uninvolved public.

5.8.2 Frequency of connection interruptions

Connection drops were reported as an issue by 27 administrators (65.9% of the organizations examined) while using the Intranet and electronic communications in particular. These gaps cause a short halt in work, particularly for administrators, since the task execution depends on ICT. This scenario concerns both officials and residents, especially because network maintenance is typically delegated to third-party service providers.

5.8.3 Too much information and messy

33 administrators (80.5% of the entities surveyed) declared that the staffing process was too much information or information was a mess. What can be a problem, especially with the demands for fast processing of files and the time required to select and classify this information, can reduce their work efficiency.

5.8.4 Too many posts

Some civil servants often work outside working hours because of the volume of messages they receive and which sets short processing and response times. 16 administrators (39.0% of the entities surveyed) noted that their staff receives and processes too many messages, which can exhaust their working time. In other words, the treatment and consultation of the Intranet and the Internet take a lot of time.

On the other hand, 39 administrators declared that their personnel uses the Internet for non-work needs, i.e., 95.1% of the administrators surveyed, seven administrators (17.1% of the total) declared that the personnel uses computer tools. Finally, four administrators noted that the staff consumes more time carrying out the work.

5.8.5 ICT and skills development

33.7% of the administrators surveyed noted that the introduction of ICT has enabled the acquisition of new knowledge and know-how among users, 23.1% of administrators declared that ICT made it possible to develop the ability to anticipate, 21.2% initiative, 11.5% innovation and finally 6.7% of entities, responsiveness.

In addition, 70.7% of the administrators surveyed declared that only a few officials could find information at the right time using ICT, and in 75.6% of the administrators, a few employees can adapt to change. Finally, 90.2% of the administrators noted that their personnel is increasingly attentive to the environment after the introduction and use of ICT for work needs.

6. Discussion of Results

At the end of this work and after the analysis of the results, we can formulate the following remarks:

The massive investment in the computerization of the administrators must be accompanied by training not only in technical but also in other areas;

The use of ICT should not be limited to certain routine administrative tasks but

should be generalized to other more strategic activities such as knowledge management and the development of human capital. The organizations must overcome organizational and cultural problems to take full advantage of the advantages of ICT. The absence of ICT culture and the resistance to transparency are observable behaviors in administrators, particularly among executives;

Managers have to deal with the problems of using ICT. They should not be used as a simple means to carry out the work, but as a real tool for sharing knowledge with the administrators. It can also integrate the best practices of other administrations from a benchmarking approach.

Public administrators have to deal with the problem of updating data;

Managers need to address data security and confidentiality;

Administrators must facilitate teamwork. This involves managers facilitating the creation of virtual teams, getting the IT department and the communication department to work together, and involving the IT department in reform projects.

The use of ICT must be done in a logic of performance;

Finally, we specify that the individual must be at the heart of implementing ICT within the administrative systems. The implementation of these technologies must not only respond to organizational concerns, but also take care of the end user. Understanding the behavior of individuals would help win the support and involvement of all staff.

7. Conclusion

The widespread use of ICT in businesses is followed by fundamental changes in work: activity outsourcing, skill redeployment, activity automation, the evolution of professions and structures, and so on. It is thus necessary to assess the effects of ICT on the organizational and human components of the HRF. ICT fosters changes in managerial practices, imposes an efficient culture, democratizes access to information, and enables individuals and enterprises to use public services more quickly, and so on. Based on the dynamics induced by ICT, we performed an exploratory approach. The study is based on attitudes, power relations (actor games), organizational transformation, and rather organizational innovations.

The HRF has recently experienced significant modifications that have affected its substance, structure, and scope. These changes may be explained by the increased use of ICT, which has helped to define the new missions of this function, which has become increasingly strategic. ICT first accompanied the evolution of the HRF to meet the challenges of competitiveness, competition, and value creation. They contributed to the birth of a more efficient Human Resources Information System (HRIS), and finally, with the emergence of e-RH, they transformed the HRF into an interactive and communicating function. ICTs have included a new socio-technological paradigm in which information is interwoven into all human action. They include the logic of interaction and networks, facilitate the organization of complex information.

It is now time to shift the focus of the discussion to the role of ICT in enhancing governance in Bahrain's public administrations. Through the proliferation of ICT in administrative processes, actions and decisions in public administrations are subject to review by other sectors private and public entities and authorities. They can give critical assistance to effective governance. As a result, they can improve transparency. They can also help to improve efficiency and effectiveness. Public administrators are devoted to

producing high-quality products, particularly in the services they deliver to people.

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