

Implementation of Human Resources Information System: Exploratory Case Study on Lebanon Universities

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Abstract: Human Resources Information System (HRIS) condenses the incorporation between Human Resource Management (HRM) and information technology. Due to its importance (HRIS) was newly implemented to service industry organizations in Lebanon, mainly hospitals, banks and universities. We aim in this exploratory research as it is the first attempt done in Lebanon to focus on the current scenario of HRIS in Lebanon looking at the various aspects of (HRM), taking universities as a sample of our study. Respondents from all 37 Lebanese universities are taken to observe research objectives, through a survey done with the assistance of a questionnaire. According to research results, although the impact of HRIS was valuable, its impact did not reach its prospective in this area of study.

Key words: Human resource development, HRM strategies, HRIS, managing human resources for sustainability, Lebanon universities, impact

INTRODUCTION

HRIS is the system that enhances the efficiency of HRM by the application of technology. It converts the manual database that the HR department uses to compute based form. Now a days and due to the big increase in HRIS application, organizations use this system for achieving many objectives.

HRIS computerized software becomes a common source of information for human resources department employees and managers. It increases the accuracy, reliability and validity of the data by eliminating the costs and wastage which occur with manual maintenance of records. Moreover, it achieves the function of collecting appropriate data and converting them into information and knowledge, improving timeliness and quality of decision making and helping in faster processing of information and powerful decision making. Also, it helps HR managers focus more on strategic issues in HRM by easing them from routine operational duties. As a result, it enhances the efficiency and effectiveness of the organization by guiding HR administrative activities.

HRIS is now a days, the solution for extensive and complicated administrative tasks of the HR department. All organizations of all sizes have recognized the benefits of this system and they are implementing its software programs, trying to improve the efficiency and effectiveness of their work.

According to Fletcher (2005), HRIS helps in recording and analyzing employees and organization information and documents such as employee handbooks, emergency evacuation and safety procedures. It also helps the organizations to keep an accurate, complete and updated database that can be retrieved from reports and manuals. Kovach *et al.* (2002) stated HRIS advantages as it:

- Improves human resource operations leading to the increases of competitiveness
- Implement new and different operations to human resource
- Help the HR managers focus on strategic human resource information rather than focussing on the operational (transaction) human resource information
- Make HR Department employees an active part of the HRIS
- Patterns the entire Human Resource department

Cys and Barman (2011) summarized the benefits of HRIS as mentioned in Fig. 1. HRIS benefits can be classified to benefits for management, benefits for Human Resource Department and benefits for employees. Management benefits include increasing the efficiency of the overall decision making, budget controlling, clear business vision and intelligent premeditation for the process of hiring and firing employees. The department of HR will benefit by being able to take control of database



Fig. 1: Benefits of HRIS (Cys and Barman, 2011)

regarding employees with all necessary information with the ability to update the databases solving the problem of diversified companies. HRIS leads to the standardization of business processes, resulting in minimizing human factor errors as well as eliminating paper forms. At the employee's level, HRIS changes the way individuals are related to each other and to their organizations through several communication means. It also allows the automatic pursuit of business duties and events. It reinforces employees time management by making data available all the time and encourages them to be more initiative and share decision making process by benefiting from the information available on HRIS.

Littruture review: Patel (2015) announced that human resource information system plays an important role in Human Resource Management (HRM) were it improves administrative and analytical purposes of HR department. According to his study, the use of technology has a direct effect on the function of HR executives where HRIS is becoming a need as well as an integral part of organizations.

Beadles *et al.* (2005) stated that using organizations to HRIS in day-to-day administrative operations, leads to efficient administrative HR department having the ability to hold records of employee information and helping HR professionals in handling large amounts of information efficiently.

Prasad (2015) revealed in his study that HR employees from different levels of different organizations feel that HRIS is really good for organization. His study finds that remarkable decrease in costs of HR as well as a

decrease in time spent on different HR activities happened as a result of using HRIS system. Also managers can provide superior data collection and analysis, regarding employee performance and skill testing. His study remarked an effect on recruitment and retention, management development and team and project management.

Nagendra and Deshpande (2014) found that the contribution of HRIS to the efficiency and effectiveness of HR planning through HRIS training needs analysis, HRIS skill's inventory, HRIS succession planning and HRIS labour demand and supply analysis is the greatest uses of HRIS. More over if HRIS aligns with information system strategy and HR strategy an organization can record good HR planning efficiency and effectiveness.

Sheehan and Cooper (2011) and others suggested that the positive impact of HRIS on traditional HR departement functions such as recruitment, selection and training and development is a part of the utility of this system and it leads to a positive effect on staffing practice of HRM.

Gurol *et al.* (2010) recognized that the response of HR departement employees plays a vital role in HRM practices and performance.

Lebanon case and significance of the study: Although, HRIS play a vital role in many businesses today, yet no studies have been conducted on the HRIS impact in Lebanon. This study will provide insight into the implementation of HRIS by Lebanon universities as a sample of Lebanon organizations. It will help the practitioner to better understand the benefits and barriers to the implementation of HRIS. The most important is that this is the first study in the in Lebanon regarding HRIS.

The importance of HRIS becomes vital when it is related to a service industry organizations like education universities. Universities in Lebanon showed an enormous growth over the last decade, leading to an increase in the desire of skilled, brilliant and passionate learning personnel. However, this increase in demand still lacks the compatibility of unsuitable supplies of such probable candidates leading to a discrepancy. On the other hand, many challenges are still facing the implementation of HRIS in Lebanon in its proper way where IT advancement is the third force that is most affecting the improvement of HR in Lebanon, coming after globalization and mergers of companies forces (Hejase *et al.*, 2012). In this research, we have tried to explore the current scenario of HRIS in Lebanon universities looking in the various aspects of HRM and

expectation of HR department managers related to the use of HRIS in Lebanon. We took the 37 Lebanon official universities as a sample.

Objectives of the study: The purpose of our study is to gather information regarding the implementation of HRIS in Lebanon, regarding its perceived benefits and its administrative strategic impact. Also, we focused on decision making process and to which extent it is affected by information HRIS provides. The study mainly aimed at finding the applications of HRIS in Lebanon universities. The specific objectives can be identified as:

- Knowing if HRIS reached its administrative potential in HR Departments at Lebanon universities as well as if reached its strategic goals
- Evaluating the extent HRIS is being used in traditional HR processes

MATERIALS AND METHODS

The research is exploratory in nature, conducted with an aim of exploring the application of HRIS in HRM in service organizations in Lebanon taking universities as a sample.

The sample selected is all Lebanon universities. There are 37 universities in Lebanon officially recognized where 36 are private and one is public. Regarding study period, the study is conducted over a 6 month period from March-August 2016. Regarding data collection method, the nature of the data is primary. Data for the research were collected through a structured interview with the HR managers of these universities. Concerning demographic characteristics of the respondents, a total of 37 HR managers of 37 universities were interviewed whose age ranges from 28-56. Out of 37 respondents 31 found to be males while 6 were females. Among these managers 27 have experience in the HR field with specific training on HR while the rest 10 managers have HR related degree but not HR experienced in real sense. Statistical tools used, the collected data were fed to the Statistical Software called SPSS-20 to analyze. Simple statistical tools like, frequency distribution, percentile, etc. were applied to emphasize to what extent HRIS is being practiced and to detect the conception of HR managers about the necessity of HRIS. To ensure the research tool and for verifying its accuracy, the questionnaire was distributed among 5 experts and advisors as a pilot and after fixing defects, the final questionnaire was designed based on the questions in the survey. The Likert questionnaire design was used from among the famous models Osgood,

Bugardus, Thurston and Guttman which was the most effective scale in evaluating the attitude. After developing the questionnaire it was sent to the human resource directors of Lebanon universities. Likert-type items on a five point scale and open-ended questions were employed on the survey to measure the perceptions of the HR managers in regard to the impact of the HRIS on HR traditional processes, the cost and time spent on various HR activities, levels of share and use of information within the organization, the function of the HR department and strategic decision making.

RESULTS

The nature of this research is exploratory, trying to determine if HR managers of Lebanon universities, recognized that HRIS had a prospective strategic impact in the organization. We used frequency tables to measure the percentage of responses to the questionnaire trying to evaluate HR manager's perception of HRIS. The results of the survey are contained in Table 1 through 9. The percentages shown are the percentage of respondents for each item who either agreed or strongly agreed with the statement.

The items are divided into categories concerning satisfaction with the HRIS (Table 1); improvement of traditional HR process (Table 2); cost savings due to the HRIS (Table 3); the effect of the HRIS on time saving (Table 4); decision-making (Table 5) and information (Table 6) and the strategic impact of the HRIS on the role of the HR function in the organization (Table 7).

Moreover and to support our analysis, trying to arrive to better conclusions and by the help of the 7 tables of results, we dissected the maximum positive impact as shown in Table 8 and Fig. 2 as well as the minimum positive impact as shown in Table 9 and Fig. 3.

Satisfaction with the HRIS: It is important that the system should be tested regularly and that the satisfaction experienced by the users be surveyed (Grobler, 2005). According to Ngai and Wat (2006), a quick response is extremely important for employees as rapid access to data makes it. Table 1 and Fig. 2, measures the satisfaction with HRIS, giving more concern on manager's satisfaction. As we see, 91.9% of managers were satisfied with the system, meaning that the HR managers seemed to be in general, oftenly satisfied with the HRIS. Moreover, we tried to measure the level to which HRIS met expectations. Although, the majority of managers were satisfied, 59.5% responded found that it had met their expectations while 70.3% of them believed that it

Table 1: Satisfaction with the HRIS

Satisfaction with the HRIS/Items	Agreed	
	Frequency	Percentage
Manager satisfaction	34	91.9
Employees satisfaction	33	89.2
Expectations from HRIS	22	59.5
HRIS utilization	26	70.3
Total	37	100.0

Table 2: Impact on traditional HR process

Improvement of traditional HR process/Items	Agree	
	Frequency	Percentage
Recruitment process	4	10.8
Training process	4	10.8
Forecasting staffing needs	4	10.8
Data input process	18	48.6
Decreased paperwork	12	32.4
Data maintenance process	23	62.2
Total	37	100.0

Table 3: Impact on cost

Decreased cost/Items	Agreed	
	Frequency	Percentage
Hiring	8	21.6
Recruiting	0	0.0
Training	0	0.0
HR employees salary	4	10.8
Data input	15	40.5
Total	37	100.0

Table 4: Impact on time spent

Decreased time spent/Items	Agreed	
	Frequency	Percentage
Recruiting	0	0.0
Training	0	0.0
Taking staff decisions	1	2.7
Inputting data	19	51.4
Information exchange through organization	7	18.9
Processing paperwork	18	48.6
Correcting errors	23	62.2
Total	37	100.0

Table 5: Impact on decision making

HRIS positive impact on decision making/Items	Agreed	
	Frequency	Percentage
HR decision making	15	40.5
Hiring decisions	4	10.8
Raising employees	23	62.2
Promotion decisions	15	40.5
Selection between job candidates	4	10.8
Training and development	5	13.5
Total	37	100.0

Table 6: Impact on information

HRIS positive information impact on/Items	Agreed	
	Frequency	Percentage
Usefulness	31	83.8
Distribution	30	81.1
Coordination between HR department and top management	15	40.5
Sharing with top management	26	70.3
Use by top management	7	18.9
Total	37	100.0

Table 7: Impact on organization strategic role and HR role

HRIS impact on organization strategic role and HR role/Items	Agreed	
	Frequency	Percentage
HR department	11	29.7
Became more important		
Effective in meeting strategic	19	51.4
Organization goals		
Improved the strategic decision	15	40.5
Making of top administrators		
HR became a strategic partner in the organization	15	40.5
Confirming organization's	7	18.9
Competitive advantage		
Total	37	100.0

Table 8: Analyzing maximum positive impact

Variables	Items	Percentage
Satisfaction with	Manager satisfaction	91.9
HRIS	Employees satisfaction	89.2
Traditional HR process	Data maintenance process	62.2
Cost	Data input (cost)	40.5
Time spent	Inputting data (time)	51.4
Impact on decision making	Raising employees (decision making)	62.2
Impact on information	Usefulness (information)	83.8
	Distribution (information)	81.1
Organization strategic role and HR role	Effective in meeting	51.4
	Strategic organization goals	

Table 9: Analyzing minimum positive impact

Variables	Items	Percentage
Satisfaction with HRIS	Expectations from HRIS	59.5
Traditional HR process	Recruitment process	10.8
	Training process	10.8
	Forecasting staffing needs	10.8
Cost	Recruiting	0
	Training	0
Time spent	Recruiting	0
	Training	0
Impact on decision making	Hiring decisions	10.8
	Selection between job candidates	10.8
Information	Use by top management	18.9
Strategic role and HR role	Organization's competitive advantage	18.9

could be better applied. Regarding employee satisfaction, 89.2% of managers believed that their HR Department employees were satisfied with HRIS.

Improvement of traditional HR process: According to Targowski and Deshpande (2001), while recruitment ensures that the selection process has a large applicant pool to select the most suitable candidate, information systems can help the recruitment and the selection process in many ways and suggested that part of the utility of an HRIS is its positive impact on the traditional HR processes such as recruitment, selection and training and development. In our research, even though HR managers were satisfied with the system when it comes to studying the impact of HRIS on improving traditional HR process as shown in Table 2 and Fig. 3, traditional HR tasks were not positively affected with 10.8% of managers that agreed on the positive impact on recruiting, training and staffing processes. While more positive effect was on

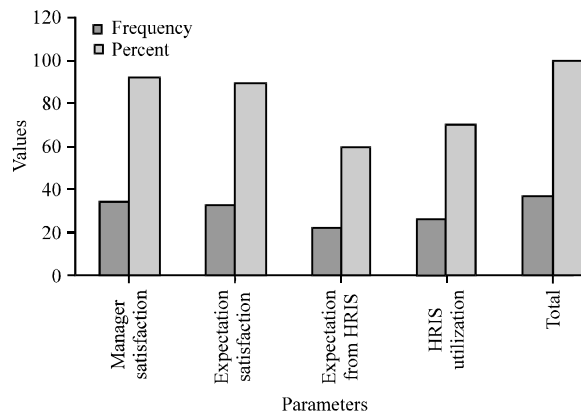


Fig. 2: Satisfaction with the HRIS

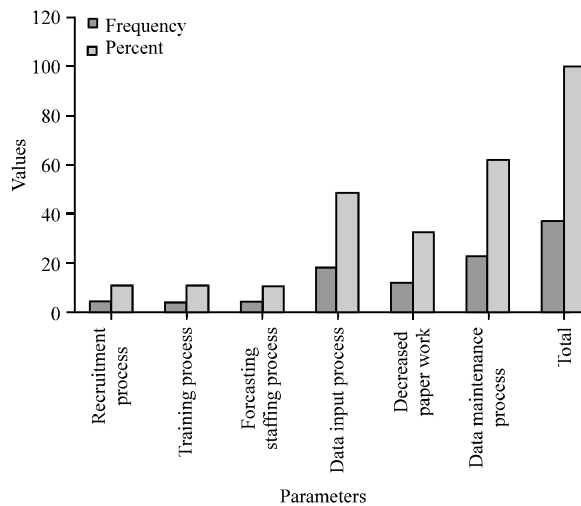


Fig. 3: Impact on traditional HR process

data input, paperwork and data maintenance processes with 48.6, 32.4 and 62.2% of managers, respectively accepting that these processes had improvements due to the HRIS.

Cost saving: Costs are decreased when a HRIS is implemented due to less paper being used, less space being taken up and due to the system being faster and more accurate, therefore, the excessive costs of a HRIS can be justified and an organization will begin to experience its return on investment (Kumar and Parumasur, 2013). As Table 3 and Fig. 4, there was no effect of HRIS on decreasing the cost of recruiting and training while only 21.6% of managers agreed on the effect of the system on cost reduction regarding hiring and 10.8% regarding HR employee's salary. The most impact of HRIS was on data input with 40.5% of managers agreed on that.

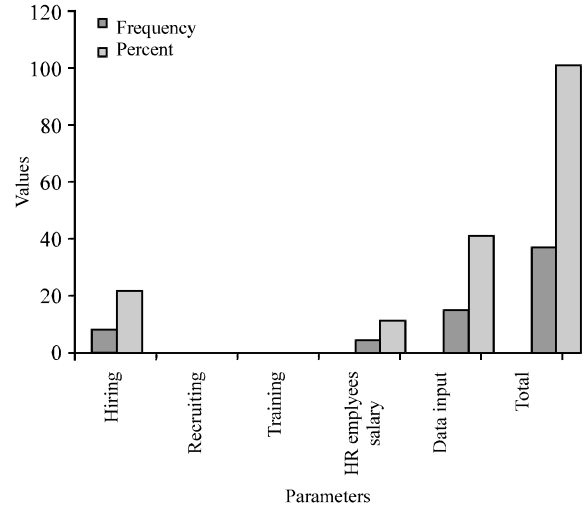


Fig. 4: Impact on cost

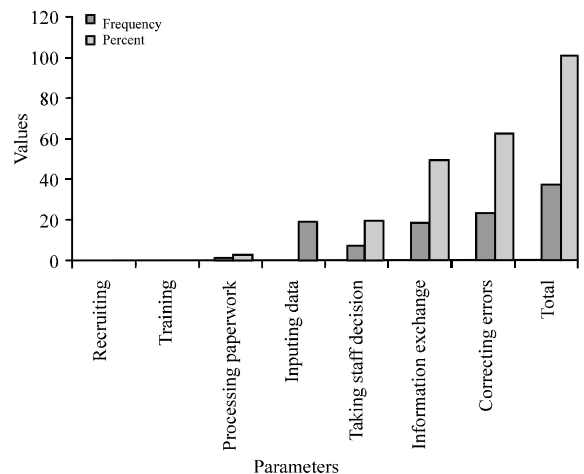


Fig. 5: Impact on time spent

Time saving: HR information systems were implemented to reduce the total time that employees spend on routine administrative functions (Kumar and Parumasur, 2013). In our research and as shown in Table 4 and Fig. 5 that 51.4% of the managers, believed that HRIS had a positive effect on the time spent on inputting data as well as 48.6% believed that the system saved time on the paperwork process. On the other hand, there was little effect on exchanging information through the organization with 18.9% of managers agreed on that while no effect on traditional HR tasks specially on recruiting and training with only 2.7% of managers agreed on the decrease in time spent on taking staff decisions.

Decision making: The HRIS has improved decision making and increased the flexibility of

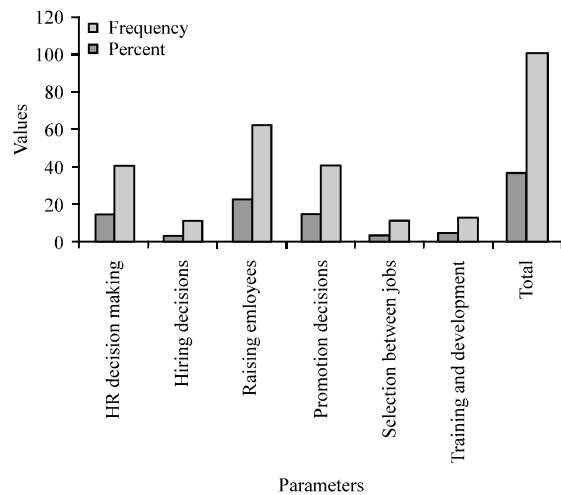


Fig. 6: Impact on decision making

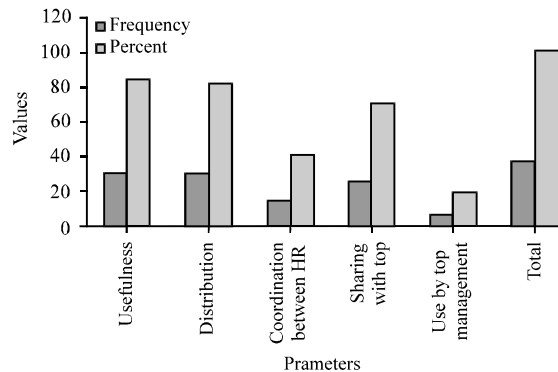


Fig. 7: Impact on information

HR (Al-Dmour *et al.*, 2015). There is no doubt that personal computers can support real human resource decisions but the information must be available in a form that can be utilized effectively in the decision making process (Kovach and Cathcart, 1999). In our research and as Table 5 and Fig. 5 reveals, the most positive impact was on decisions related to raising employees were 62.2% of managers agreed on that. While in general, there was little impact on other decisions related to hiring and selection decisions as well as training with 10.8 and 13.5% respectively of managers agreeing on that. However, 40.5% of managers accorded that the system increased HR department decision making.

Information: Kovach and Cathcart (1999) suggest that there are many different types of computer software available to help in developing a comprehensive human resource information system. As seen in Table 6 and Fig. 7, it appears that 83.8% of the HR managers believe that the HRIS had a positive impact on the

usefulness of information as well as 81.1% of managers agreed that the system increased the ability of distributing information. But despite the positive effect of information's usefulness, only 18.9% of managers agreed that this information is used by top management. Moreover, 70.3% of managers share information produced by the HRIS with top administrative management and 40.5% of them think that the system improved the coordination between the administrators and the HR department.

Strategic impact and HR's role: Through the appropriate use of HRIS such as automating and devolving many routine HR tasks to line management, HR professionals would be able to focus on more business critical and strategic level tasks such as leadership development and talent management (Al-Dmour and Zu'bi, 2014). The efficient and effective management of human capital is an immense challenge to the Human Resource departments (Krishna and Bhaskar, 2011). In our research, it is clear from Table 7 and Fig. 7 that HRIS did not have a significant influence on the role or the importance of HR department where only 29.7% of HR managers realized that HR department became more important and 40.5% of them agreed that their department became a strategic partner in the organization's role. Moreover, only 51.4% of the managers replied that the system led the HR department to meet strategic organization's goals and 40.5% of them agreed that HRIS affected positively top management decision making. Regarding organization's competitive advantage, only 18.9% believed that the system confirmed the organization's competitive advantage.

DISCUSSION

The results of studying the impact of HRIS in Lebanon universities were in general promised but mixed. As HR managers were satisfied with the system, its positive impact was limited on the information sharing and usage. There was no big impact on traditional HR process but only on data maintenance. Moreover, the benefits of the system seem to be prospective because managers agreed that HRIS was not fully utilized.

For more focused analysis (Table 8 and Fig. 8), the maximum percentage of HRIS positive impact on each item. As we said before, the items were divided into categories to measure the effect of HRIS implementation. Among the seven categories, the highest positive impact was on the satisfaction of managers and employees with HRIS as well as its impact on the usefulness and distribution of information.

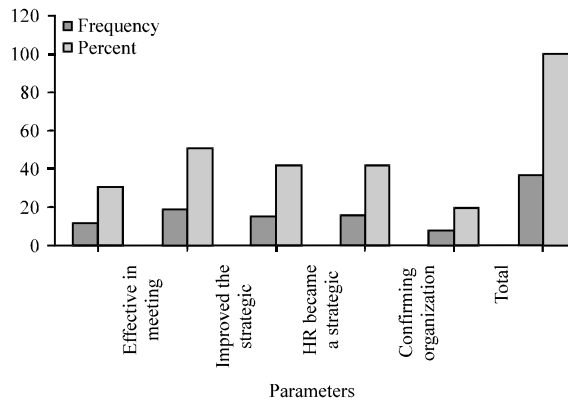


Fig. 8: Impact on organization strategic role and HR

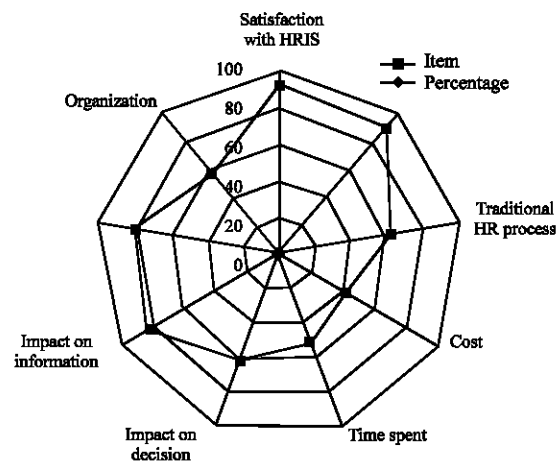


Fig. 9: Maximum positive results chart

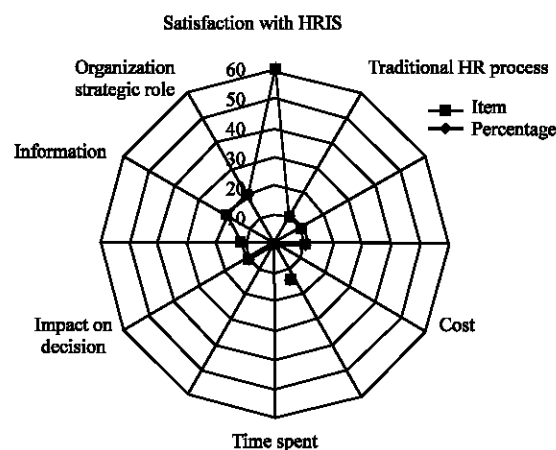


Fig. 10: Minimum positive results chart

Regarding the minimum positive impact on categories, (Table 9 and Fig. 9, 10) where the impact of HRIS was at least. As shown in Table 9, there was no impact on recruiting and training time and cost. As well as the

impact of the system on traditional HR process and decision making concerning selection and hiring was also low.

CONCLUSION

Relating all the analysis together and taking into consideration and as the study shows that HRIS is not fully utilized, we can say the following: prospective contributions of HRIS are recognized but further improvements are needed before the potential can be achieved, managers and employees are satisfied with the system and the most positive impact was on the usefulness and distribution of information. But yet, this information is not well used by top management, there was a positive impact on data processing leading to the decrease of time and cost of data inputting, the positive impact of the system on decision making was higher on raising employees while it is still minimum on selection and hiring processes. This also fits with the minimum impact of the system on traditional HR process mainly concerning recruitment and training processes, the effect of HRIS on strategic organization's objectives was not encouraging.

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