



USING AHP FOR THE RECRUITMENT SYSTEM: A CASE STUDY AT LAFARGEHOLCIM COMPANY IN KURDISTAN REGION OF IRAQ

Shanya Nawzad 

Ishik University, Sulaimani, Kurdistan Region of Iraq
shanya.nawzad98@gmail.com

Cemil Top

Ishik University, Kurdistan Region of Iraq
cemil.top@ishik.edu.iq

Abstract

Aim of this research is to develop a new recruitment system in LafargeHolcim company which is located in Kurdistan Region of Iraq. To do this, we have initially developed nominal values from CV requirement department of the company. Secondly, we have created the comparison matrix via discussing with the HR manager of the company. Finally, we have proposed analytic hierarchy process (AHP) method in order to find the best CV among three. The model can be applied 1000 CV's simultaneously in order to filter them. There are theoretical and practical implementations for the scientist and investors.

Keywords: AHP, HR Management, Recruitment Systems, MCDMA

INTRODUCTION

The system of recruitment can be defined as the process of finding the right talent, and finding the right jobs in organizations, these organizations are playing a vital role in creating job opportunities in the area. The role of HRM has become an essential part of every organization nowadays, the efficiency of the recruitment systems is shaping the organizations around us, has an active influence on the future of the business, and resolves the employment challenges.

Additionally, according to Fiona et al. (2015), “*effective and good HRM practices and systems improve employment relationships, workers’ well-being and overall performance of employees.*”

The recruitment process has seen significant changes over the last few decades, the lookout for individual talents now requires efforts from the local and external recruitment corporates, and these corporations are focusing on activities related to recruitment and talent hunt. The quality of the employee skills can directly affect the productivity of the organization as whole, highly motivated and competitive employees (Demir, Aydinli and Talaat, 2015). This justifies the existence of an appropriate HRM in every organization, which helps professional development among the employees play the skills of the employees play an important factor in the productivity of an organization, the most qualified and skilled employees are consider a strategic asset for the organizations.

Well-managed recruitment system and the process of hiring qualified people, and professional employees can achieve organizational effectiveness, for which they are consider key assets for the business organization. Management processes involve recruitment and looking out for new talents and qualified professionals, some issues may arise in failing to recruit the wanted talents and poses difficulties and unwanted barriers in the organization, which in turn affects the profitability and a shortage of hiring the wanted skills.

Currently, HRM is an integrated part of every organization in Kurdistan Region of Iraq, it has a significant impact on the organization as a whole, a strong and mature hiring system bolsters the success of the organization, and makes a strong backbone for all their operations in the world full of competition. The success of an organization depends on the human resource, having a good system for managing human resources is a vital tool for finding and hiring skilled professionals at a right time, and for the right position which will further accelerate the achievement of the organizational goals.

The aim of this research is to develop recruitment system of driver selection in LafargeHolcim company in Sulaimani, Kurdistan Region of Iraq. We have initially developed nominal values from CV requirement of the company. Secondly, we have created the comparison matrix via discussing with the HR manager of the company. Finally, we have proposed analytic hierarchy process (AHP) method in order to find the best CV among three. The model can be applied 1000 CV’s simultaneously in order to filter them.

LITERATURE REVIEW

Human Resources

Human Resource Management refers to all the practice of hiring, employing, and recruiting the employee and persuading employee behavior, performance and attitude. Organizations state

Human Resource Management as an “employee practice”. In addition, the key role helps a business to reach its competitive advantage effectively. An effective HRM can support an organization goals and objectives. Along with, the previous research shows that operative HRM practice can improve company performance by motivating and contributing to employee and customer fulfilment, which will lead to increase the productivity, and innovation (Budur, 2018).

Besides, all the activates, examining, scheduling , shaping human resources needs (HR department Plans), Recruiting, choosing the right people to the right position (Selection), toughing all the employee how to achieve their goal and performing their job (Training & Development), reward and consequences for the employees, Appraising their performance (Performances Management) and creating a positive communication and work environment (Communication & Employee Relation). Because of those practice HRM system and HR department has a significant impact on the organizational performance according to Ji et al. (2012) proper practice of HRM significantly improves organizational performance. Suggesting the necessity of developing a more robust theory for studying issues related to collectivism-oriented HRM, and efforts should be put forth in the future in order to develop this theory.

HRM System are key drivers of for improving performance of that organization and other strategic goals made the next generation of HRM system considers the development of people as an important key factor for achieving greater performance (Budur, 2018). It has known that highly motivated and culturally fit individual’s results in an excellent performance at the workplace.

Also, according to improvement in each organization has a vital impact on performance and it has been discussed by Beckhard (1969)“Organizational development is a process or an effort that has been plan carefully to influence the organization’s performance, and is managed from the top in order to improve the effectiveness and health of the organization through studying behavioral-science knowledge as a planned intervention in all the organization’s processes.” Finally, as Jackson et al. (1995) have pointed out, HRM strategies in any business target the meets of the corporate objectives and is the result of a thorough strategic plan.

Employee is commonly people who seeks for a job, and who is hired by another employer to do a specific work especially for wages, service, and experience. Each employee has a specific target to achieve that is often defined by a job description the word of “Employee” come after some procedures of application and interview. Afterward an employee work within a efficient area or department such as (Marketing and sales, Purchasing, Communication, Supply chain, and HR), an employee inside the organization has a manager or a person who reports to and takes a direction and advice from. Moreover, receiving recurrent feedback about His/her

performance from the manager, rewards and recognition, and a reasonable benefits package (Budur, 2018).

Managers needs employee's that are capable to get the job done in a timely manner and set a clear goal for employee Hall (2008, p. 194) believed " to improve employee performance you need to set a clear idea and objective and hold regular business view to those ideas and expectations". Employee performance are crucial to overall success of the organization and influenced by other factors and elements such as culture of the organization, management style and structure of the organization. Interesting opinion is introduced by Porvazník (2007, p. 125), managers need to understand the key aids of employee performance so that they cangrow reliable objectives methods for evaluating employees. In this way, it helps to determine strength, weakness, and gaps for business organization. Alongside, performance evaluation is important for organization to determine performance level for each employee. Finally, Armstrong (2002) and Wagnerová (2008) consistently agree upon the point that the management of the performance is the process by which the performance of the organization, team and individual advance and is used by the leaders for supervision.

The recruitment word it is new inside the organizations, besides, it's the key part of HRM system. The recruitment process is a procedure of finding, attracting, and selection the best candidates for a vacant position inside the companies. Conferring to (Heneman et al., 1983) "*it's a process of attracting the individual from outside the organization who are interested for fulling the vacant position*".

However, each organization have a different recruitment system including all the activities that will affect the applicant response to the organization, in a review of this literature, Rynes, Heneman, and Schwab (1980) settled that "all the activities in the recruitments process expressively affect applicants".

The sublime foundation of any recruitment system involves having three main precursors; hiring system, criteria upon which the employees are selected, and managing the performance of the organization. Performance of the employees is a pivot on which the performance of the organization revolves around, for this reason. Many organizations around the globe invest in the development of their employees in order to have a better performance, from them, which in turn affects the overall performance, and effectiveness of the organization, development of employees is a component of organizational development (Hameed & Waheed, 2011).

The procedures of recruitment is finding the proper candidates for real anticipated vacancies inside the organization, in other word linking those who are looking for a job and filling the vacancy inside the organization, as mentioned by (Falcone, 2002)a company can

select a applicants from a different sources to recruit personnel depending on the type of available jobs. Nowadays, there are many sources for establishing a vacancy inside KRG company and all of the word such as, Social Media, External sources, Internal Sources, Existing Employee's, External Sources, Advertising, E-Recruitment, Recruitment agencies. For each vacancies inside all the organization, there are some procedures and steps for selecting an employee for a certain vacancies. The first step is identifying vacancy and evaluating the needs. Which means, aligning the staff skill and set initiative goals, besides having a proper planning and evaluate the need will aid to hire the right person for the position, the second step develop the position description. While positing any vacancies inside the agencies or social media the job description is vital, for knowing the requirement and the eligibility for the candidates. In addition, to plan your staffing program it is also a foundation for important process that should be define inside the job description such as, setting expectation, year of experience, training and performance management. The third step develop the recruitment plan, goals, strategy. The later step of recruitment and hiring process is section it involves not only choosing the right candidates to the position but also make certain that the selection process can manage to attract competent and qualified applicants suited to the job. According to Kamran, Dawood, and Hilal, (2015) the selection activates has some steps which is:

1. Initial screening interview
2. Completing the application form
3. Comprehensive interview
4. Background investigation
5. Medical/Physical examination
6. Final job offer.

Each activity represent a different aspects for some feedback for the process to finish, and each step aims to increase the organization knowledge about the applicant background, abilities, skills, and it help to make the final decision. After the selection process, the next step is orientation, which means orient or introduce the applicant for the work units (Whiddett, Kandola, and Keenan 2000). Usually the new employee receives the orientation from the coworker. After orientation the employee development start, according to (Barnerjee 2006) include developing the applicant skill by training and all the activities that help the employee.

Analytic Hierarchy Process (AHP)

Analytical hierarchy process is a tool of information, significations, and comparisons that relies on the judgments of the proficient to stem priority scales the main objective is to be to change subjective duties of relative importance to a set of overall scores or weights (Ozmen, Demir, and

celepli, 2013). In general sense, AHP is a statistical analysis, as mentioned in the previous part that all the Decisions-Theory including AHP plays an important role in all decision related to management, benchmarking, and evaluation. The AHP method is applied in this paper to determine compromise solution for the HR Department in KRI and determines compromise solutions for a problem with conflicting criteria, which could assist the decision makers for taking the final decisions (Budur, 2018). There is a fundamental 1–9 scale of absolute numbers shown in Table 1, in order to design the hierarchy. Based on (Al-Kharbi, 2001) classification for making a decision by using AHP there are main steps for determine the alternatives:

1. Determine the issue and limit its goal.
2. Structure the hierarchy from the top to the intermediate level and finally to the lowest level.
3. Comparing each alternative from the high level until the end.
4. After comparing the levels, prioritize the alternative for making a decision Table 1 the pair-wise comparisons are done in terms of which element dominates the other.

Table 1 Saaty's 1-9 Scale of AHP (Saaty, 1980)

Intensity of Importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one over another
5	Strong importance	Experience and judgment strongly favor one over another
7	Very strong importance	Activity is strongly favored, and its dominance is demonstrated in practice
9	Absolute importance	Importance of one over another affirmed on the highest possible order
2,4,6,8	Intermediate values	Used to represent compromise between the priorities listed above
Reciprocal of above If activity i has one of the above non-zero numbers assigned to it when compared with activity j, then j has the reciprocal value when compared with none zero values		

Analytical Hierarchy Process approach developed by Saaty (1980), "It's one of the statistical measurement theories" (Saaty, 2013), besides, as assumed by (Ozmen, Demir, & Celepli, 2013) "for evaluating and comparing between the best alternative for making a decision but not complete."

Decision that use to prioritize the alternative and comparing those alternatives to determine between the high-level choices to the low level (Demir, 2019). Finally, The AHP has been pragmatic to an inclusive variety of decisions and the human in many fields, such as

performance appraisal, selecting the best substitute, optimization, and resource division and assortment.

METHODOLOGY

To further investigate the significance of everything discussed in this paper, a secondary data conducted in order to develop the recruitment system of driver selection at LafargeHolcim company. The reason behind selecting this company is that the researcher of this study was working at this firm. So that the data collection would be easier.

There have already been CV parameters of the company that the HR manager evaluates. Besides, the evaluation have been done by the managers one by one and of course, time taking. Only three sample CVs have been collected. The reason is that the calculations and the decision process wouldn't change whether three or 100 CVs. Hence, for the convenience of the calculations, only three CVs have been considered to be appropriate.

In this study, we have developed nominal values from the CV criteria of LafargeHolcim company. The criterions have been compared by HR manager of the company. Using comparison matrix, we have proposed analytic hierarchy process to obtain the importance weights of each criteria. Finally, using three CVs, we have selected the best CV.

ANALYSIS AND FINDINGS

Primary evaluation done by HR manager of the company for comparing each criteria with one another, as deliberated before this measurement will be changed based on the association recruitment process. In this section, we used Expert choice Program that is Decision-Making Software and based on Multi-Criteria decision-making. The software implements the analytical hierarchy process (AHP) and has used in different fields such as manufacturing, and management. The initial comparison matrix has been shown on the Table 2 below.

Table 2 Initial comparison matrix

	Age	Experience	Security Clearance	Language Proficiency	Writing Skills	Vehicle Model
Age	1	2	1/5	3	5	1/2
Experience	1/2	1	1/7	5	4	1/4
Security Clearance	5	7	1	7	9	3
Language Proficiency	1/3	1/5	1/7	1	2	1/3
Writing Skills	1/5	1/4	1/9	1/2	1	1/3
Vehicle Model	2	4	1/3	3	3	1
Inconsistency =	0.08					

Secondly weights have been normalized in the Table 3. In this process, each value in the initial comparison matrix have been divided by the total value of the concerning column. Further, the normalized weights of each criterion comparing to other criterions have been summed and average have been taken by dividing by the number of criterions. The Table 3 shows further details.

Table 3 Normalized and final weights of AHP

	Age	Experience	Security Clearance	Language Proficiency	Writing Skills	Vehicle Model	Global Weights
Age	0.11	0.14	0.10	0.15	0.21	0.09	0.13
Experience	0.06	0.07	0.07	0.26	0.17	0.05	0.11
Security Clearance	0.55	0.48	0.52	0.36	0.38	0.55	0.47
Language Proficiency	0.04	0.01	0.07	0.05	0.08	0.06	0.05
Writing Skills	0.02	0.02	0.06	0.03	0.04	0.06	0.04
Vehicle Model	0.22	0.28	0.17	0.15	0.13	0.18	0.19

Considering the normalized weight of each comparison, there have been six comparison weights for each criterion. All weights of comparisons have been summed and divided by six. By this way, global importance weights of analytic hierarchy process have been obtained. On the other hand, the weights can be used only if the consistency level is below 0.1. In this comparison matrix, the consistency level has been 0.8 and concluded that the comparison matrix is consistent.

Next, each CV has been calculated and graded based on the weights of analytic hierarchy process. Doing this, we need to develop nominal weights that will fit the quantitative values to be calculated conveniently. The nominated values are as it is shown below;

Age= 1 (18-25), 2 (26-28), 3 (29-31), 4 (32-35), 5 (36-40)

Experience= 1 (1-3), 2 (4-5), 3 (6-7), 4 (8-9), 5 (Over 10)

Security Clearance= 1 (No), 5 (Yes)

Language Proficiency= 1 (One Language), 2 (Two Language), 3 (Three Language), 4 (Four Language), 5

(Five Language)

Writing Skill= 1 (One Language), 2 (Two Language), 3 (Three Language), 4 (Four Language), 5 (Five Language)

Vehicle Model= 1(10-8), 2 (7-6), 3 (5-4), 4 (3-2), 5 (1)

Normally, a candidate would fill the CV and HR managers would evaluate each observationally. Beside this, we have developed a nominal value set that will make HR managers' job easier. Doing this, we have considered the hiring policy of the company also. Company willing to hire drivers who are not above 40 years old but are experienced. Further, as policy of the company, vehicles are expected as new as possible and not older than 10 years. Hence, based on these kinds of policies, we have developed the nominal values.

For example, let's assume that a candidate is 32 years old. It seems that based on the nominal values, s/he will obtain 4 point from that criteria. However, s/he will have advantage comparing youngsters but disadvantage comparing to 36-40 years old candidates. The other nominal values can be compared accordingly.

Table 4 CV Grading

AHP Results	Global Weights	Initial Nominal Values			Calculated Grades		
		CV1	CV2	CV3	CV1	CV2	CV3
Age	0.13	4	5	5	0.52	0.65	0.65
Experience	0.11	5	5	5	0.55	0.55	0.55
Security Clearance	0.47	5	5	5	2.35	2.35	2.35
Language Proficiency	0.05	2	1	3	0.10	0.05	0.15
Writing Skills	0.04	1	1	1	0.04	0.04	0.04
Vehicle Model	0.19	1	4	1	0.19	0.76	0.19
Total grade obtained from the concerning CV					3.75	4.40	3.93

Given in the Table 4, initial CV nominal values are obtained based on the pre-determined groups. Secondly, each nominal value has been multiplied with the concerning weight of parameter. As result, proportional values of each candidate is calculated and normalized to obtain some value over five. Finally, the obtained and normalized grades of each candidate has been added up and finally each candidate has obtained their final grades over five. According to these results, CV2 or second candidate seems to be better option based on the importance weights those have been determined by the HR manager of the company.

The results show that CV1 has obtained 3.75 over five, CV 2 has obtained 4.40, and CV3 has obtained 3.93. In this situation, according to the calculations based on analytic hierarchy process, CV2 is the best candidate to be recruited or interviewed. By this way, a manager can evaluate 100 CVs easily. Secondly, the managers may increase the nominal values to 100 in

case there are many applications and this way the gap between two layers of nominal values will increase and more precise calculations can be obtained.

CONCLUSIONS

The aim of this paper is to explore the role of hiring system in KRI organizational development in business organization of KRI. Careful evaluates conducted before the implementation of AHP methods and processes to bring outcomes in organization HRM challenges should be minimized by this kind of methodologies to implement the best HRM systems. The emerging concepts of HRM guide planners to lead organizations for a future competition. The implementation of this paper were in LafargeHolcim company in Iraq-Sulaymaniah.

Experts during interviews also stated that hiring of talented employees (Drivers) is critical for an organization's safety and success, Well-designed system is the foundation of peak performers. HR practices have an important and encouraging effect on organizational performance and it inspires cooperation among employees. HR practices positively affect operational performance of employees.

A number of studies on employees hiring have been identified in the literature and this has been explored that employees hiring systems play a vital role in the organizational development. To sum up what discussed before, finally, to sum up with the conclusion HRM is an integrated part of every organization in KRI (Kurdistan Regional of Iraq), it has a significant impact on the organization as a whole. In addition, a strong and mature hiring system encourages the success of the organization and makes a strong backbone for all their operations in the world full of competition. The success of an organization depends on the human resource, having a good system for managing human resources is a vital tool for finding and hiring skilled professionals at a right time, and for the right position which will further accelerate the achievement of the organizational goals each organization needs to have a proper method for calculating the recruitment process. As the last set of suggestion, we used AHP method for solving this issue within Lafarge company, they needs to change their calculation way to nominal value and they have to specify between the parameters by a specific value from 1-10, or 10-100.

This paper contributes to the body of knowledge in many different ways; this thesis study has examined the vital role of the HRM hiring system in organization development in business organization of KRI. The study contributes to literature by sharing the importance of HRM systems as OD strategies to recruit and hire talented employees to enhance the organizational performance. The results of this study have provided support for the applicability an accurate recruitment process through implementing a new model (AHP) for the HRM inside the

companies and now developed in many developed country, Success of business organizations is not promising without compliant and good HRM systems.

The implementation of recruitment system by using AHP model has many practical implications. It is important for human resource practitioners in aggregation with the top management to develop effective HRM systems and procedures, aligning them with the business strategy and taking a systematic approach to meet the corporate objectives. Our findings inform the policy makers, OD practitioners, HR managers and HR planners to introduce and implement the best HR recruitment and hiring practices in KRI to comply with the local, provincial, federal and international laws and standards through an easy system in less time more efficient.

First limitation, a sample of 100 Cv Taken from the recruitment team inside Lafarge company, and randomly evaluating three CV inside the company, with a large sample which covers all the geographical areas for employees inside the companies may allow generalization of the finding. Second limitation, this paper sample only includes the people transportation drivers in Lafarge, we excluded the truck's driver and the employee to specify the thesis, it may be enhanced if this study can be prepared for the companies' employee to have more detail. Third limitation, only the driver managers were interviewed, and a sample may draw including HR team, consultants, supervisors, and directors to gain diversified opinion and views.

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