

## Evaluate human resource performance in 360° method using the ERP system A case study of a sample of oil companies in Algeria

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**Summary:** This study aims to reveal the contribution of a 360° method in assessing human resource performance using the ERP system. A field study of a sample of oil companies operating in Algeria. To achieve this goals, a descriptive approach was adopted, the researchers relied on the interview and observation as an essential tools for data collection, where the interview was conducted with 43 individuals, managers and heads of departments, and using mathematical averages, standard deviations and an SPSS 25, showed a set of results, the most important is the high level of the process of evaluating the performance of workers by using a 360° method in the sample companies, the study also demonstrated the use of its results, especially in Identification of training needs, employment, rewards and promotions, mobility and contract extension.

**Keywords:** Performance Evaluation; Human Resource; Enterprise Resource Planning System; oil companies; 360° method.

**Jel Classification Codes :** M12 ; M59 ; M15

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### I- Introduction:

Institutions in different fields of activity, whether industrial, commercial or service, must use modern technology that provides convenient and appropriate information, and to be shared at the appropriate time for their users at all administrative levels of the institution, the most prominent of these are Enterprise Resources Planning Systems ERP as programs designed to create an integration between activities, through which all the functions of the institution are linked.

The Enterprise Resource Planning System ERP is considered an integrated system that seeks to unify financial and non-financial operations and reduce labor costs and as an aid to decision-making and helps in speeding communication within the institution, so that the latter can know its ability to reach its goals, it needs to assess its performance, and if we consider that the institution is a group of jobs, it inevitably needs to evaluate the performance of each one of its functions, and the goals of the institution may vary and multiply, but in general it remains the main goal of the institution is to achieve economic efficiency that is not achieved unless there is an effective management of its human resource, and for effective management it is necessary the presence of an effective performance appraisal system, and there are multiple methods used to evaluate performance, and among the modern methods used is the 360° performance appraisal method, as with the introduction of digital technologies to processes and their administrative systems, especially ERP programs, and with the integration of performance appraisal systems and digital technologies, the evaluation process becomes easier and more effective.

- **The problem of the study:**

Based on the above, the following problem can be raised:

- **How far does the 360 degree method contribute to assessing human resource performance using the ERP system in an economic institution?**

- **Sub-questions:**

Based on the problem of the study, we can ask the following sub-questions:

- What is the reality of the process of evaluating the performance of the human resource In the companies researched?

- What does the human resource performance appraisal process system using the 360°method using the ERP system In the companies researched contribute to?

- In what is used the human resource performance evaluation process using the 360°method using the ERP system In the companies researched?

- How is the performance evaluation process done using the 360° method using the ERP system In the companies researched?

- **The hypotheses of the study:**

Based on the above, we have adopted the following hypotheses as a basis and a starting point for discussing the subject of the study:

- The human resource performance evaluation process using the 360° method using the ERP system In the companies researched is characterized with a high level;

- The human resource performance evaluation system using the 360° method using the ERP system In the companies researched contributes to increasing competition between employees within the institution, and between interests as a team work;

- The results of the human resource performance evaluation using the 360° method using the ERP system In the companies researched are used in determining training needs and all administrative decisions;

- The performance evaluation process using the 360° method using the ERP system In the companies researched is carried out by comparing the previous performance with the current performance.

- **Study variables and model**

In the study we relied on the basic elements through which the reality of the HR performance evaluation system can be analysed using the 360° method using the ERP system, and therefore we suggested that we focus on the method and the criteria and the periodicity of evaluation, and the addition that the ERP system added to the evaluation using the 360° method, also, the two elements which discuss the results with workers, the extent of using the outputs or the outcome of the evaluation process in both defining training needs and administrative decisions.

- **The importance of the study:**

The importance of the study can be summarized in that it contributes to covering part of the studies related to the performance of the HR in the oil companies, and also no such topic was touched, which is to evaluate the performance of the HR using the 360° method using the ERP system in the southeast of Algeria within the limits of the researchers learned, and highlighting the importance of evaluating the performance of the HR using the 360° method on individuals, and the importance for the management of the institution and the extent of its impact on the credibility of administrative decisions.

- **Objectives of the study :**

The objectives of this study are as follows:

- Accurately identify the reality of the HR performance evaluation process using the 360° method using the ERP system (importance, methods, uses);

- Benefiting from the results of the field study in presenting some proposals that help national economic institutions to adopt this method, as well as increasing and improving methods that evaluate the performance of their HR using it;

- Enriching this field of studies, and opening horizons for depth and expansion in future studies;

- The topic is still relatively recent and dealing with it entices researchers to know its concept and how to apply it, and it needs more conceptual theoretical giving, as its philosophy and its processes still accept enrichment.

• **Previous studies:**

-**Dida Kamal (2019)<sup>1</sup>**, entitled: **The effect of using the Enterprise Resource Planning System ERP to improve the performance of the economic institution, a field study of a sample of oil companies operating in Algeria**, where the researcher aimed through this study to try to give a picture of the reality of the ERP system in the institution, and the most important performance indicators, which the institution must take it into account to ensure the benefit from the system used, using the quantitative descriptive approach and by drawing on the interview and questionnaire distributed to a sample of 149 users and using the statistical package for social sciences SPSS to test the hypotheses of the study. The study reached a set of results, the most important are:

-Implementing such systems increases the amount of transparency in performance evaluation and improvement, and reduces opportunities of administrative corruption;

- It also helped in eliminating some of the work pressures, the difficulty in transferring and circulating information, and thereby raising the efficiency and productivity of human resources, which facilitates the performance evaluation process;

-The use of the ERP by oil companies, affects the improvement of performance by 68%.

- **Khaled Redjem, Rachid Menasria(2019)<sup>2</sup>**, entitled: **The reality of evaluating employee performance from the point of view of HR managers, sample of oil companies in HASSI Messoud**, where the aim of the study was to see the reality of employees performance evaluation of four national oil companies and two foreigners oil companies, where the researchers used the descriptive approach depending on the interview mainly to gather information, and in order to reach the results, the researchers conducted the interview with a sample of 28 individuals from the managers and heads of departments to manage human resources for the institutions of the study sample, and the study reached a number of results, the most prominent are:

- The existence of a very big difference in the reality of the process of evaluating the performance of workers between the national and foreign oil companies of the study sample;

- The level of interest in the process of evaluating the performance of workers has decreased significantly in national institutions, due to the lack of interest of the higher management in the application of its results, the lack of clarity of its goals and importance and how to implement it, and considering it as a merely additional routine administrative work without charge, unlike its counterparts that attach great importance to the process of evaluating the performance of workers due to its great impact, especially on employment, identifying training needs, rewards and promotions and all management decisions;

-Lack of attention to the process of evaluating the performance of workers in national institutions is directly reflected on the rest of the HR management processes;

-One of the most important manifestations of foreigners interest in the process of evaluating the performance of workers is the use of the latest and most powerful programs applied in management, namely the ERP program, which depends in its design on the best applications and the most successful management practices of the leading institutions in the world, especially in the field of human resources management.

- **EceKuzulu&Cemaliyem (2016)<sup>3</sup>**, study entitled: **Is 360 Degree Feedback Appraisal an Effective Way of Performance Evaluation**, this literary review was carried out on the application of 360 ° for the purposes of performance evaluation, and comparing the process with other methods and determining its quality, where its superiority over traditional methods leads us and the dominance of advantages over defects, and the authors in the literature review on 360 ° feedback applications provided different answers, there were arguments about the purposes of assessing their use and the results of the evaluation process, while some researchers showed strong support for use (Ward, Carter, Silverman, Kerrin, Lepsinger Lucia, Atwater, McCarthy, Garavan) 360° performance appraisal method, others were more sceptical (Rohan-Jones, Nickols, Albright, Levy) in defining the process, required steps, collecting different notes and methods of presenting them, but various parties assert that it is a detailed technology, however, these details, which provide the best coverage of all aspects of the employees performance, can be said that more comments are gathered from different sources, the information's obtained about the individual increases, besides there are many factors that influence the result, such as the personality of the residents, the culture of the organization, and the study provides us with an analysis of the distinction between 360 ° feedback and other methods, in addition to presenting the general picture of positive and negative

results, and from it many authors agree that it is a useful way to develop also, and the study has reached several conclusions, the most important are:

- 360° method is effective in evaluating human performance;
- Difficulty in applying the 360° evaluation method;
- The Correct use of the 360° evaluation method, their results are shown in determining the formations, and (promotion, transfer, expulsion, motivation) are very satisfactory;
- It is considered an effective way to evaluate the performance of the work teams as well;
- It was noted that more research is needed on multi-source feedback as a tool to assess human resource performance.

- **Valentin Florentin Dumitru & all, (2015)<sup>4</sup>**, titled: **ERP implementation and organizational performance. A Romanian case study of best practices**, the researchers aimed in this article to study the impact of ERP implementation projects on the performance of PME in the Romanian state, and to verify the status of institutions after the implementation of the ERP system, and its impact on performance through several aspects we mention including: the strategy (competitiveness, strategic development, and market share), the staff side (training, and career development opportunities), the management side (improving participation, senior management decisions), researchers used the questionnaire as a tool to gather information, and the study concluded a set of results, the most important are:

- The adoption of the ERP system in small and medium enterprises, which led to improve performance, especially the performance of the HR;
- The managers and employees realize that it is possible to make optimal use and utilization of the system after determining the appropriate training needs.

- **Saleh & all, (2009)<sup>5</sup>**, entitled: **Evaluating the performance of heads of scientific departments using the 360 degree feedback approach, a field study at the College of Administration and Economics - University of Qadisiyah**, this study aims to highlight the contribution of the 360 degree feedback feed as a successful alternative than the approved method in performance evaluation (Annual direct head evaluation), and by adopting it in the study of the seven-questionnaire, where a sample of 65 singles distributed as follows 05 questionnaires for department heads and 12 for each department was retrieved 65 with a response rate of 100%, and after analysing the results by adopting arithmetic averages and differences, the study reached several results, the most important are:

- The need to expand the adoption of this approach in the process of evaluating performance and disseminating it at all levels;
- Approval of its results in the process of promotion, training, transfer and awareness of individuals that this process was found to develop performance and improve it, and not to hunt mistakes.

**The study of Ilieş Liviu & all, (2009)<sup>6</sup>**, entitled: **The Use Of 360-Degree Feedback Method**, the study aimed to evaluate the performance of heads of the Romgroup organization, applying the 360-degree feedback method as a tool to assess the performance of individual competencies of employees, the researchers distributed 197 questionnaires (including superiors and subordinates), he retrieved the number of 180 usable questionnaires, where each participant made a self-evaluation, then by the direct supervisor, and from his colleagues and subordinates, and after the analysis the study concluded a set of results, we mention of them:

- The officials did not accept the results, which may mean that there is no real reaction culture inside Romgroup organisation;
- The severity of the higher managements tendency to use its results in identifying areas for improvement and developing the performance of individuals, and then with a lesser degree, using evaluation results in a 360-degree feedback method in administrative decision making.

### **I.1-Human resource performance evaluation by 360°method:**

The human resource is one of the pillars of the institution on which all functions are based, and as important as it is difficult to evaluate it and in administrative norms this process is carried out by evaluating the direct supervisor only, which proved its many negative aspects, that it was not sufficient to cover all aspects of the evaluation of the HR and on this basis the scientists created a group of methods of evaluation, the most recent of which is the way to evaluate the performance of the HR by 360°method.

### **I.1.1- Human resource performance:**

Before discuss the HR performance and its measurement methods, it is necessary to address the general performance concept and the HR performance concept.

- **Performance:** means execution of work according to specific foundations, rules and standards<sup>7</sup>, and is defined as reflecting the institution ability to achieve its goals by making optimal use of available resources<sup>8</sup>, and that it is also efficiency and effectiveness to reach a certain level of achievement of results within a specific time period, provided that there is the ability, desire and provision of the necessary requirements to reach that<sup>9</sup>.

-**The performance of the human resource:** it is what individuals do and not what they produce<sup>10</sup>, as it is also known as the establishment and completion of individual for the various actions and responsibilities assigned to him by the organization<sup>11</sup>, and means the implementation of a task or doing a work<sup>12</sup>, the degree of achievement and completion of the tasks that make up the job of the individual and it reflects how it achieves or satisfies an individual job requirements<sup>13</sup>, are the result of a series of activities related to a job, department, or a circle, in which the employee or manager carries out a specific goal<sup>14</sup>.

### **I.1.2-Methods of evaluating human resource performance**

The methods of evaluating the performance of the human resource can be classified into two groups: the traditional methods and the modern methods. Before we get acquainted with them briefly, we discuss the concept of evaluating the HR performance.

**The concept of human resource performance evaluation:** evaluating the performance of workers is to measure their competence, analyse and evaluate patterns and levels of their performance and determine their current and expected degree of competence as a basis for evaluation<sup>15</sup>, Given the importance of human performance evaluation, it has been described as a mediator between HR management practices and the performance of the organization<sup>16</sup>.

**The methods used to evaluate the performance of the human resource:** Through table (1), it is clear the multiplicity of methods and ways used in assessing the performance of the HR in institutions. This is due to the increasing interest in it, and the variation of methods according to the nature and activity of the institution. There are traditional methods that were applied in institutions and are still in small and medium enterprises. As for modern methods, they can be applied to any institution, no matter how large, with varying costs, and it is possible to pair between more than one method and style in one institution.

**The objectives of evaluating the performance of the human resource:** Through these concepts, it is clear that the institutions seek, through the process of evaluation of the performance of their HR, to achieve a set of goals, the most important of them: <sup>17</sup>

- ✓ Achieving fairness and accuracy in rewards;
- ✓ Determine individuals who are can be promoted;
- ✓ Providing a two-way communication system;
- ✓ Identifying training needs; Determine performance goals;
- ✓ Assessing the level of past performance and improving current;
- ✓ Provide feedback to workers on their performance levels;
- ✓ Assist in career path planning and human resource planning;

### **I.1.3-Evaluate performance by using 360 degree method**

After presenting the conceptual framework for the HR performance and its evaluation methods, we will discuss in detail one of these methods, which is one of the newest methods for its association with modern information systems likewise the ERP system.

#### **First: the concept of the 360° method**

The 360° method is defined as one of the modern systems in evaluating the performance of the HR, under which the employee is evaluated from several sides in a 360° circular shape, as it is evaluated by his direct supervisor and colleagues at the same level in addition to his evaluation from the subordinates, as it is evaluated by clients and in some senior positions, the evaluation process is entrusted to external experts, which is a difficult system that is applied only in major companies<sup>18</sup>, but it is a system that helps in evaluating the HR from all sides, which gives credibility in the evaluation process without bias or intransigence by the direct manager whose

opinion is the basis for the evaluation process according to administrative norms. This is illustrated in Figure (1).

### Second: Justifications for using the 360° method

Among the most important reasons for using the 360°HR performance evaluation are:<sup>19</sup>

- **Transformation of organizations from hierarchical to horizontal:** where communication has become in two-way instead of one-way, allowing for the investigation of the opinion of subordinates and colleagues together.
- **The breadth of departments:** After the manager supervised between 3 to 8 employees, and the administration was crowded with managers, it is now possible for one director to oversee more than 50 employees, and this is what happens in big organizations often, this big number of employees may not give to him an opportunity to know his subordinates levels sufficiently and to give his opinion on them, which led to the necessity of introducing other parties to the evaluation process for a more accurate and fair manner.
- **Technological development and technical leaps:** The manager often lacks the technical and artistic knowledge necessary to evaluate employees, especially in jobs that require a large amount of technological knowledge that may not be available on him, and therefore the employee must evaluate his colleagues in order to achieve fairness in the evaluation because they are more knowledgeable of his skill than technologically speaking.
- **The need for client's feedback:** companies prefer to do investigation to measure the degree of clients' response to their latest issues or to conduct market surveys before issuing a new product / service.
- **Achieving justice and granting employees the right to participate in management:** When determining the individuals who are entitled to rewards or promotions, it is better to conduct a colleague and clients survey rather than just evaluating the manager only, and in this way the employee is granted the right to participate in the rewarding of effective performance.

### Third: Requirements for applying the 360° method

According to Figure(1), and for the success of the 360° method to evaluate the performance of the HR, several basic requirements must be met, we mention the most important of them:

**The Direct responsible:** He is the most suitable person who has sufficient information about the employee's performance. He is his direct boss, as the person who is fully aware of everything related to his subordinates and assessing their level of work competence. However, there are some writers who warn against completely and definitively relying on the direct boss only. As this situation will give him area to control the results of measurement and create bias and favouritism, and therefore they emphasize about setting up an administrative level higher than the direct head with the results review that he reached through his evaluation in order to ensure their placement and to ensure their integrity and validity before presenting them to management<sup>20</sup>.

**Self-evaluation:** done by the same individual who is subject to evaluation, the purpose of it is that he knows than all people the truth of his performance, and the task of the direct boss in this case is to express his observations about the evaluation and this evaluation is used by employees for developmental purposes and not for purposes of issuing a judgment on a specific performance and one of its advantages is its involvement in the evaluation process, and one of its drawbacks is that it may be tainted by a deliberate process of personal bias<sup>21</sup>.

**Colleague evaluation:** A colleague in the same work, level, and group in which the evaluator individual works, due to their possession of sufficient information about the behavior, performance and achievement of the individual, and from its drawbacks that there may be internal conflicts between them that ultimately lead to subjective measurement results, so it is advised that the opinion of colleagues be indicative, assisting the original evaluator in reaching an objective judgment about the competence of the individual who measures his performance<sup>22</sup>.

**Evaluation of subordinates:** The subordinates evaluate the performance of their president regarding their behaviour and performance in the work, as a result of daily friction between them. One of its disadvantages is the possibility of existence of the disagreements between the president and some of his subordinates, which makes the results of measurement and evaluation subjective, on the other hand, the results benefit in making this president aware about the truth of his

performance, and the opinion of his subordinates about it, which helps him to avoid his mistakes in the future and thus develop his performance for the better<sup>23</sup>.

**Clients evaluation:** This evaluation is used by clients or clients in the case of service institutions, where clients differ in their evaluation from the rest, as they are not required to evaluate a specific person, but rather they assess the overall performance of an administration or a specific department or the institution as a whole, here we find that customers or clients represent the appropriate body that can provide notes on employee performance and is the best source for obtaining the required information's, and the disadvantage is that it is somehow expensive, and for this the institutions perform this evaluation once a year and for a limited time<sup>24</sup>.

**The evaluation of external experts:** the external evaluator may give an objective picture and is not integrated in the processes of competition and daily friction with employees, and among its disadvantages is the cost, also the external evaluator may not have enough time to know the field of the employee work and may be deceived by external appearances, and this type is used to evaluate jobs which great importance, seriousness and sensitivity<sup>25</sup>.

**Evaluation of the committees:** It is used in the case where the work of the subordinate is related to more than one director or head of the department, and here a committee can be formed consisting of department heads who work directly and have a relationship and knowledge of the employee under evaluation, and the committee sets up a joint evaluation among them for each subordinate and this evaluation is the summary of the report that presented by each committee member separately<sup>26</sup>.

## **I.2- Enterprise resource planning system ERP :**

Because of the lack and the deficiency of integration and the required interconnectedness of information and its consistency, and with the continuous development of technology, especially in the field of information systems and the desire of institutions to remedy the lack of performance, conversely the urgent need has emerged to develop new software that addresses the deficiency of previously applied programs to be in line with the mechanisms of evaluating the performance of the HR, Which led to the need for new systems that operate in an organizationally integrated manner called ERP systems.

### **I.2.1- ERP system concept and success factors**

The enterprise resource planning system is management program that integrates and combines a set of automated media applications, formed and consistent with each other, in the aim of integrating and improving management operations, setting a single reference (a unified database) and based on standard administrative rules<sup>27</sup>, It provides a unified view of all the jobs and departments of the institution through a unified database in which all the transactions are collected, registered, processed, monitored and delivered easily to its beneficiaries<sup>28</sup>, as it is defined by (Jean-Louis LEQUEUX) as a management branch of the information system, effective for most of the functions of the institution, working through integrated units and consistent software to ensure the integrity of the procedure, by rapidly adapting to business rules, with similar user interfaces, within a unified database<sup>29</sup>, Farzaneh added that it is a technology systems that rely on a package of modular software, which was developed and designed to serve all the major operations of the organization in one system that serves the different needs of departments, based on a unified database<sup>30</sup>.

### **I.2.1- Success factors of ERP system:**

The concept of success factors is a widespread concept in information systems, to measure the efficiency and cost-effectiveness of implementing the system in all its phases, and to justify the significant costs of adopting an ERP system<sup>31</sup>. Through Table (3) it is clear that there is a difference in the opinions of researchers about determining success factors, as the researchers unanimously agreed on the factor of supporting senior management and training, followed by project management and communication, then the re-engineering process and support providers of the system supplier to a lesser degree, etc., These differences are due to the nature of the activity sector for the study sample and its size.

### **I.3.1-Advantages of using an ERP system:**

- The data is entered once and used by all applications, which makes it more accurate and better quality, and the unity of the system enables to avoid duplication of information between the various departments in the institution<sup>32</sup>;
- The ability to restore data immediately or register updates to databases in real time and it reaches to the relevant software units;
- Consistency of user interfaces across different applications, which contributes to reduce user training and improve performance;
- Enhancing data and application security through greater monitoring and centralization of equipment<sup>33</sup>;
- Contributes to give solutions to problems and practical applications;
- An alternative to the circulating information systems;
- Reducing errors during the general use of databases;
- Reducing response time to orders for workers and clients;
- Standardization of human resources information, and manufacturing processes and used units;
- Increase communication between business units and completion sites<sup>34</sup>;
- Gain a strategic advantage over competitors;
- Facilitating maintenance and support where the information technology team do its work centrally.

## **II- Methods and Materials:**

After presenting the most important theoretical concepts, we will address in this part a description of the approach used in the study and the study community, as well as the study tool used in collecting data, and also includes the statistical methods used in data analysis.

**1- The method used:** Given to the nature of the research that aimed to study the extent of the contribution of a 360-degree method to assess the performance of human resources using the ERP system in the economic institution, a case study of my institution (Haliburton, HESS), and on this basis, the descriptive approach was used, which it depends on studying the phenomenon as it exists in reality and illustrate it quantifying by collecting information about the problem, classifying it, analysing it and subjecting it to careful study.

**2- Study community and sample:** The study community is represented in a sample of the petroleum institutions operating in Algeria, where the study was conducted in two foreign institutions with a total sample consisting of 43 individuals from managers, heads of departments and services, see Table (5).

**3- Tools used in data collection:** In this topic of our research, the interview will be relied heavily as a tool for collecting data for the study, and by asking the questions to the interrogated and recording the discussions reasons, then determining the appropriate degree of response of the interrogated to answer the phrases related to the interview questions then adopting on "The triple Leicarte" scale as follows:

- Agree, given three degrees;
- Neutral, given two degrees;
- Not agree, given one degree.

The "Leicarte triple" scale divides the general direction of the responses of the sample members according to three areas as shown in Table (4).and register it on a final way to help in comparing the respondents views on how well the answers matched, and it was emptied using Excel.

**4- Statistical methods used:** To answer the study questions and test the validity of the hypotheses, the SPSS 25 program was used, where the data was encoded and entered into the computer, where the arithmetic averages, standard deviations and percentages were used.

## **III- Results and discussion:**

In this section, we will cover a presentation of the various study results, which were reached by collecting, analysing and discussing data to arrive to a denial or proof of hypotheses through the study conclusions.

### **III.1- Testing the study hypotheses:**

• **The first hypothesis testing : The human resource performance evaluation process using a 360 ° method using the ERP system In the companies researched is characterized with a high level.**

Through Table (6), it turns out that the mean value of the phrase "the institution assumes great importance to the process of evaluating the performance of workers" is equal to [2.929] and its standard deviation [0.261], as that it shows the high level of the performance evaluation process In the companies researched, and the general average of answers of the sample of the study on the performance evaluation process using the 360° method using the ERP system In the companies researched, which was equal to [2.743] and with a standard deviation [0.273], illustrates the high level of the performance presentation process using the 360 ° method In the companies researched, and the extent of the commitment of the latter to its application, This makes us confirm the validity of the hypothesis that **the process of evaluating the performance of the human resource using the 360 ° method using the ERP system In the companies researched has a high level.**

• **The second hypothesis testing: The human resource performance evaluation system using the 360 ° method using the ERP system In the companies researched contributes to increasing competition between workers within the institution, and between interests as a team work.**

To prove the validity of this hypothesis, the phrase "the evaluation system contributes to increasing competition between workers and work teams within the institution" has been analysed. And the Table (6) shows the arithmetic means and standard deviations of the sample responses about this phrase, where we note that the mean is [2.651] and its standard deviation [0.650], and this means that the level of the evaluation system contributes effectively to increasing competition between workers and teams within the institution, and this makes us confirm the hypothesis that **says the human resource performance evaluation system using the 360° method using the ERP system In the companies researched contributes to increasing competition between workers within the institution, and between interests as a team work.**

• **The third hypothesis testing: The results of the human resource performance evaluation using the 360° method using the ERP system In the companies researched are used in determining training needs, and all administrative decisions.**

To ascertain whether or not this hypothesis is correct by referring to Table (6), it becomes clear to us that the arithmetic mean and the standard deviation of respondents answers about the phrase "evaluation results are used to determine training needs" with a value [2.465] and [0.592], and in the same context the phrase " The evaluation results are used in all administrative decisions (increase recruitment, promotion, transfer, contract renewal, motivation, annulment of the contract) "with an average of [2.698] and a standard deviation [0.465], and this high level of arithmetic means that the institutions under study use results of evaluating the performance of the HR using the 360 ° method using the ERP system in determining training needs, and all administrative decisions (increasing recruitment, promotion, transfer, contract renewal, incentivization, and termination of contract), from the point of view of the sample individuals. And from it we accept a hypothesis that uses **the results of human resource performance evaluation using the 360 ° method using the ERP system In the companies researched in determining training needs, and all administrative decisions (increase employment, promotion, transfer, contract renewal, motivation, contract termination).**

• **Testing the fourth hypothesis: The performance evaluation process is done using the 360 ° method using the ERP system in the companies researched by comparing the previous performance with the current performance.**

To test this hypothesis, and through Table (6) it is shown that from the value of the arithmetic mean and the standard deviation of the respondents answers about the phrase " the institution continues to improve the performance of the individual through comparison between past and current performance "respectively [2.884], [0.324], and it is clear from this high level of the arithmetic mean that the institutions under study follow the improvement of the individual performance using the 360° method using the ERP system by comparing his previous and current performance. From it we accept the hypothesis, **the performance evaluation process is done using the 360° method using the ERP system In the companies researched by comparing the previous performance with the current performance.**

Through the interview conducted with the managers of the institutions under study, and by note it appears that both institutions use two other evaluations in assessing the performance of the HR using the 360° method using the ERP system, which are automatic evaluation and evaluation of the parties related to the evaluated person, see Figure (2) it clarifies that, and the managers emphasized that sometimes the automatic evaluation is the cut-off point if the need arises in some administrative decisions and the determination of training needs related to the ERP system, because of its impartiality in the evaluation, and the rapid appearance of its results. See Table (2), and the study sample was almost unanimous, that using the ERP system, it facilitates the process of assessing performance in a 360° method, and this is shown in Table (6) through the values of the arithmetic mean (2.837), and with a standard deviation [0.324].

### III.2- Discussion the study results:

Through studying the extent of the contribution of 360-degree method to evaluate the performance of human resources using the ERP system in a sample of petroleum institutions operating in Algeria, and analyzing the reality of evaluating the performance of the HR using it, focusing on each of the method and the criteria and the periodicity of evaluation, and the addition that ERP added to the evaluation using the 360° method and also the two elements of discussing the results with the workers, and the extent of using the outputs or the result of the evaluation process in both defining training needs and administrative decisions, this study reached a set of results that we explain in the following:

-The human resource performance evaluation process by using a 360° method using the ERP system In the companies researched is characterized with a high level, and this is agreed with the study of (Dida Kamal, 2019), which focused on trying to give a picture on the reality of the ERP system in the institution, and the most important performance indicators that the institution must take it into account to ensure the benefit of the system used, as it concluded that the use of ERP system by oil companies affects performance improvement in a significant percentage in addition to the application of such systems, increases the amount of transparency in performance evaluation and improvement, and reduces administrative corruption opportunities; this is also the study result of (Khaled Redjem, RachidMenasria, 2018), which is among the previous studies that concerned with studying the reality of evaluating the performance of workers from the viewpoint of human resources managers: a case study of a sample of four national oil companies and two foreign oil companies in HassiMessaud, where was the level of interest of evaluating performance process of workers in a large degree in foreign institutions, in contrast to their national counterparts, which the study showed that the level of interest about the process of evaluating the performance of workers is very low, due to the lack of interest of the higher management in applying its results, as agreed with the study of (Valentin FlorentinDumitru& all, 2015), Which also interested in studying of the impact of the ERP implementation projects on the performance of PME in the Romanian state, and checking the status of the institutions after the implementation of the ERP system, and its impact on performance, as it concluded that the adoption of the ERP system in small and medium enterprises and increased interest in it led to improve performance, especially the performance of the HR, as agreed with the study of (Saleh, et al. 2009), which sought to highlight the contribution of the 360 ° feedback as a successful alternative instead of the method adopted in performance evaluation,( the evaluation annual direct president), And which reached the necessity of expanding the adoption of this approach in the process of evaluating performance and generalizing it at all levels, and this study contrasted with the study of (IlieşLiviu& all2009), which aimed to evaluate the performance of the heads of the Romgroup organization, applying the feedback method 360° as a tool to evaluate the performance of individual competencies of employees, as it showed that officials did not accept the results, in other phrase officials refused to evaluate them in this way which according to our humble opinion that Romgroupresponsible refused to be evaluated by persons lower than them in rank;

-The human resource performance evaluation system using the 360° method using the ERP system In the companies researched contributes to increasing competition between workers within the institution, and between interests as a work team, and each worker sought to raise his capabilities and self-skills to get the best evaluation for benefiting from privileges such as training abroad, with that method the competition increases, which raises the level of HR performance, either individually or as a team work, and the same what the study indicated (Khaled Redjem, RachidMenasria, 2018), that the results of the evaluation using the ERP system increase the level

of competition among workers in foreign institutions, but what defective performance appraisal, especially the process of training abroad, is one of the easy and inexpensive ways to hunt Algerian genius and talents, and transfer them to the institutions branches in other countries.

- The results of the HR performance evaluation using the 360° method using the ERP system In the companies researched are used in determining training needs, and all administrative decisions (increase recruitment, promotion, transfer, contract renewal, motivation, and contract annulment), for example the training needs of ERP system cannot be identified only through direct responsible evaluation and automatic evaluation, where it accurately determines the places of deficiency in the performance of the individual, and contributes to the preparation of formation plans accordingly, and this is what was agreed with the study of (Khaled Redjem, Rachid Menasria, 2018), which concluded that the the foreigner institutions assumes great importance to the process of evaluating the performance of employees because of its great impact, especially on each of the employment, determining training needs, rewards and promotions and all administrative decisions, and agreed with the study of (Valentin Florentin Dumitru & all 2015), which was interested in studying the impact of implementing the ERP projects on PME performance in the Romanian state, and checking the status of institutions after the ERP system implementation, and its impact on performance through several aspects, and concluded that managers realize that the Erp system can be exploited and benefit in evaluating the resource after determining the appropriate training needs, as well as what was presented by the study of (Saleh, et al. 2009), which warned of the need to increase the adoption of the results of the 360 ° evaluation method in the process of promotion, training, transfer and awareness of individuals that this process was found to develop performance and improve it and not to monitor errors.

-The process of evaluating the HR performance In the companies researched is done using a 360° method using the ERP system by comparing the previous performance of the worker with his current performance, where the performance results are presented for each worker and the system performs an automated comparison between his previous and current performance and after displaying the deviation which is colored according to the case, as an indicator on performance, this process is done periodically or upon request, as well as after a period of doing a formation, and each worker can use the password to view his final evaluation, and all members of the sample have approval this feature in the ERP system.

#### **IV-Conclusion:**

After studying and analyzing, the field study concluded and by linking it with the theoretical framework and previous studies that covered topics of the contribution of 360-degree method to evaluate HR performance and the exploitation of automated information systems in the evaluation process, especially the ERP system in measuring HR performance, where our current study sought to know the extent of the contribution of a 360-degree method to evaluate the performance of human resources using the ERP system in the petroleum corporation, as it has proven that the process of evaluating the HR performance in petroleum institutions is characterized by a high level, and that the method used in the evaluation process is a 360° method using the ERP system, also that latter in institutions under the study contributes to increasing competition between workers within the institution, and between the interests as a team, and this is due to the concern of high management, and its encouragement to adopt this system, in addition to that, the petroleum institutions use the results of evaluating the performance of the HR using the 360° method using the ERP system in determine its training needs, and all management decisions (increase recruitment, promotion, transfer, contract renewal, motivation, contract annulment), and the process of evaluating HR performance is done by comparing the previous performance of the worker with his current performance, to accurately determine the places of deficiency in the performance of the HR and how to treat it, and in light of the results reached we can provide the following recommendations:

- Applying the 360° method to evaluate the performance of the HR as an effective tool;
- We recommend that national institutions in general to adopt the application of this system in accordance with the available capabilities;
- The study of the possibility of applying the 360° method to evaluate the performance of the HR in the education sector;
- Activate the use of a package that evaluates the performance of the HR in the ERP system, for national institutions;

- It was noted that research is more needed on the 360° method as a tool to evaluate the performance of the human resource.

**- Appendices:**

**Table (1): Methods and styles used to evaluate the performance of the human resource (traditional, modern)**

Modern methods	Traditional methods
Critical events method	Graphic gradient method
Evaluation based on results	Arrangement method
Style of management of goals	The marital comparison between two factors or the gradient method
Gradient behavior scale	Compulsory distribution method ABC
Performance evaluation by 360° method	Lists method
	Expression of evaluation freely method

Source: Preparing by researchers based on previous studies

**Table (3): Opinions of number of researchers on the success factors of the ERP system**

Sources	ERP implementations success factors																
	Supporting higher management	Education, formation and training	Convenient ERP system testing	Human resource (team selection)	project management	Re-engineering processes	Use of counselors	the management of change	User involvement	Clarity of goals and objectives	Performance Measurement	Compatible software and hardware	Seller support (system supplier)	Reducing modulations connection	Resource planning and infrastructure stressors unit of competitive		
Rasmy et al, 2005, P.P: 4-6	*	*	*		*			*			*	*	*	*			
Yingjie, 2005, P.P: 23-37	*	*			*	*			*		*	*					
Sterned & Bobek, 2006, P.P: 280-288	*	*	*	*	*	*	*			*			*	*	*		
Kalbasi, 2007, P 25	*	*		*					*		*	*					
He, 2007, P.P: 32-36	*	*			*	*	*			*	*			*	*		
AL-Fawaz, et.al, 2008, P.P: 64-6	*	*	*	*	*	*				*	*	*	*		*		
Kronbichler, et.al, 2009, P.P: 16-19	*	*	*	*	*	*		*					*		*		
Kamhawi, 2009, P.P: 3-5	*	*				*		*				*				*	*
Garg, 2010, P.P: 1-6	*	*	*	*							*	*	*		*		
Amalnik, et.al, 2011, P.P: 161-168	*	*		*	*	*		*						*	*	*	
Abadi, Bilal, 2012, p.p: 64-72	*	*	*		*	*		*					*		*		
Aljalili, Alaa, 2012, p 106	*	*	*		*							*	*		*		

Source: Prepared by the researchers, based on the sources mentioned above

**Table (2): Scope and responsibilities for performance evaluation 360 ° using the ERP system**

Characteristics, conditions and results of the evaluation process	Evaluation responsible	administrative skills	leadership skills	communication skills	decision making skills	Artistic skills	Self-motivation	Skills of dealing with clients
		<ul style="list-style-type: none"> <li>- For his good knowledge of the rights and duties of his subordinates; He is considered a reference to obtaining information about the implementation of their tasks;</li> <li>-He knows well his capabilities, skills, behaviors and attitudes;</li> <li>- He has sufficient ability to identify strengths and weaknesses points, as a result of his continuous and durable friction.</li> </ul>	Superior	x		x	x	x
<ul style="list-style-type: none"> <li>-Full confidence among co-workers with each other;</li> <li>-The colleagues conducting the evaluation should be of the same job grade with those who will be evaluated.</li> </ul>	Colleagues			x	x	x	x	
<ul style="list-style-type: none"> <li>-Evaluating the heads of work by expressing the presidents competence in leading and directing subordinates and his role in developing team spirit and encouraging cooperation and conflict resolution.</li> </ul>	Subordinates		x	x				
<ul style="list-style-type: none"> <li>-It is considered a weak source and the reason is due to the following considerations:</li> <li>-Exaggeration of the individual in a positive evaluation for himself in order to be promoted or to increase his salary;</li> <li>-The tendency of subordinates to justify low performance by lack of cooperation of colleagues, poor guidance, or work pressure...</li> </ul>	Self evaluation	x	x	x	x	x	x	x
<ul style="list-style-type: none"> <li>- Techniques for the employee to interact with the clients; Good reception;</li> <li>- A good offer of the service provided by the employee;</li> <li>-Behaviors that the institution may lose the learners' loyalty</li> </ul>	Clients			x		x	x	x
<ul style="list-style-type: none"> <li>-It is characterized by a high degree of neutrality and lack of favoritism;</li> <li>- Response and execution speed time, number of times to print, and how long it actually takes to work;</li> <li>- The percentage and number of proposals problem solving;</li> <li>-Dealing with all system outputs;</li> <li>- Processing time for system, Input accuracy.</li> </ul>	Automated evaluation	x		x	x	x		x
<ul style="list-style-type: none"> <li>- Linking the relations between the workers to the institution and its branches</li> <li>- Using the repetition of e-mails between the two parties in the evaluation process;</li> <li>-Increasing the spirit of communication between the parent institution and the various branches;</li> <li>-The evaluation process is reciprocal between the parties .</li> </ul>	Related parties	x		x		x		x

Source: Preparing by researchers based on previous studies

**Table (4): shows the general direction of answers of the sample members**

General direction	Weighted arithmetic mean range
Low	From 1 to 1.66
Medium	From 1.67 to 2.34
High	From 2.35 to 3

Source: Preparing by researchers based on previous studies

**Table (5): the distribution of the study sample according to degree and companies**

	Class	Number / institution		Study sample	Repetition
		Haliburton	HESS		
1	Manager	1	1	2	5%
2	Humanresources	2	2	4	9%
3	Finance	2	2	4	9%
4	Follow-up projects	1	2	3	7%
5	Document control	1	2	3	7%
6	Purchases	1	2	3	7%
7	Automated media	2	2	4	9%
8	Stores	2	2	4	9%
9	Hygiene and securityHSE	2	2	4	9%
10	Foreign relations	1	2	3	7%
11	Quality control	1	2	3	7%
12	Configs	2	2	4	9%
13	Transit	1	1	2	5%
<b>Total</b>		<b>19</b>	<b>24</b>	<b>43</b>	<b>100%</b>

Source: Preparing researchers based on the interviews program

**Table (6): shows the results of the answers of sample individuals about the performance evaluation using the 360 ° method**

°N	Phrase	Average	Standard deviation	Order	Direction
1	The Foundation assumes great importance to the process of evaluating the performance of workers	2.929	0.261	1	High
2	The evaluation system contributes to increasing competition between workers and teams of work within the institution	2.651	0.650	5	High
3	The evaluation results are used to determine training needs	2.465	0.592	6	High
4	The evaluation results are used in all administrative decisions (increase recruitment, promotion, transfer, contract renewal, motivation, salary increase, contract annulment)	2.698	0.465	4	High
5	The 360° system under ERP facilitates the performance evaluation process	2.837	0.374	3	High
6	The institution follow up the improvement of the individual's performance by comparing the previous and current performance	2.884	0.324	2	High
<b>Overall average of performance evaluation using the 360 ° method</b>		<b>2.743</b>	<b>0.273</b>	--	High

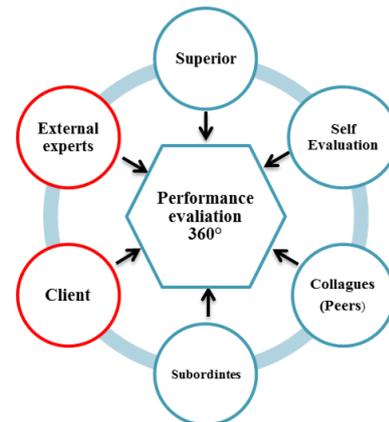
Source: Preparing by researchers based on SPSS outputs

**Figure (2): Performance evaluation 360° method using ERP system**

**Figure (1) : Performance evaluation using the 360° method**



Source: Preparing by researchers based on previous studies and interview



Source: Preparing by researchers based on previous studies

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