

PROFESSIONAL PERFORMANCE APPRAISAL OF THE HUMAN RESOURCES. SOME CONSIDERATION AFTER A CASE STUDY IN AN ECONOMIC ORGANIZATION

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Abstract

Performance appraisal of the employees is a structured and systematic process that measures employee performance in the organization to determine whether they are productive and if they are likely to improve performance in the future. Currently, performance appraisal is important in the decision-making process as regards the results to be achieved by employees as well as on the strategic management of human capital within the organization. Unfortunately in many cases the performance appraisal process is just descriptive one without any sociological or statistical secondary analysis.

The main goal of our article is to describe some statistical results after a quantitative appraisal process in an economic organization. The results and method can be used further to compare diverse tools and findings used in performance appraisal of the human resources in other (economic) organizations.

Keywords: performance appraisal process, evaluation scales, evaluation indexes

Résumé

L'évaluation du rendement des employés est un processus structuré et systématique qui mesure la performance des employés dans l'organisation afin de déterminer s'ils sont productifs et s'ils sont susceptibles d'améliorer les performances à l'avenir.

Actuellement, l'évaluation des performances est importante dans le processus de décision en ce qui concerne les résultats à atteindre par les employés ainsi que la gestion stratégique du capital humain au sein de l'organisation. Malheureusement, dans de nombreux cas, le processus d'évaluation des performances est simplement descriptif sans aucune analyse secondaire sociologique ou statistique.

L'objectif principal de notre article est de décrire quelques résultats statistiques après un processus d'évaluation quantitative dans une organisation économique. Les résultats et la méthode peuvent être utilisés pour comparer divers outils et résultats utilisés dans l'évaluation des performances des ressources humaines dans d'autres organisations (économiques).

Mots clé: processus d'évaluation des performances, échelles d'évaluation, indices d'évaluation

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Rezumat

Evaluarea performanței angajaților este un proces structural și sistematic care cuantifică comportamentele legate de rezultatele individuale ale angajaților în cadrul organizației, pentru a determina dacă sunt productivi și dacă sunt premise pentru a-și îmbunătăți performanțele în viitor. Evaluarea performanțelor este importantă în procesul de luare a deciziilor, în ceea ce privește rezultatele ce trebuie atinse de angajați, precum și în gestionarea strategică a capitalului uman în cadrul organizației. Din păcate, în multe cazuri, procesul de evaluare a performanțelor rămâne doar unul descriptiv fără alte analize secundare sociologice sau statistice.

Scopul principal al articolului nostru este de a descrie unele rezultate statistice după un proces de evaluare cantitativă într-o organizație economică. Rezultatele și metoda pot fi utilizate în continuare pentru a compara diferitele instrumente și constatări utilizate în evaluarea performanței resurselor umane în alte organizații economice sau nu.

Cuvinte cheie: proces de evaluare a performanțelor, scale de evaluare, indici de evaluare

1. Introduction

Performance appraisal of the employees (PAE) is a central issue in all the working processes and already have historical roots (Murphy&Cleveland 1995, 3). PAE is the principal source of information for the improvement of motivation and remuneration policies, for training and development of the human resources (Florea 2013,197). Continuous evaluation, far from being a punishment activity can help any organization to understand the contribution of every employee in the organizational functional structure and to adjust possible dysfunctions. PAE have a lot of methods, from self-evaluation to the analysis of the organizational goals attainment based on the theoretical and methodological models already applied. Bogathy (2004) details some of these models: Murphy & Cleveland model (1995) based on four components: rating (organizational) context, judgment (of the performances and evaluations), rating, evaluation of the PAE process; Landy-Farr model (1984) who emphasized in the same time the traits of the evaluators and the evaluates etc. We can add the Chiavenato model (2007) with two types of appraisal: formal (based on structured methodology) and informal (based on social relations between employers and employees). In every situation we do have standards for performance: personal and professional traits and skills, social and decisional abilities etc. The hazardous changes of these issues can have a negative impact in every organization (Prowse & Prowse 2009).

In Romania the appraisal right of the employers is stipulated in the *Work code*: they have the legal obligation to establish the appraisal criterion of the employees and they have the right to establish the performance goals (Ticu

2015, 127). The appraisal criterion are stipulated in both personal and collective working contract.

The process of PAE can have different type of design: the superiors evaluate the subordinates, the superiors evaluates by subordinates, auto evaluation, evaluation made by external services. In our present research we discuss about the first type of evaluation.

The evaluation methods can be based on the traits of the assessed (psychometric tests, evaluation scales, systems for comparing people); based on behaviour evaluation (critical incident technique, assessment scales with behavioural anchors, behaviour observation scales); based on results (management by objectives, list of responsibilities, feedback 360°) [see for details Luckacs 2002; Craiovan 2006; Tureac 2011; Nica 2006; Johns 1998]. We can add documentary records and automated performance evaluation (Popa 2008). Another important issue is the problem of errors appeared during the PAE process. Novac (2002) explains some categories of these errors: administrative, implementation issues, evaluation problems. The author indicates the sources of errors: subjectivity of evaluation, variable standards of evaluation, the moment of evaluation, rigidity of evaluation etc. Other authors resume these errors as fallows: tolerances faults (when ratings are above the level of merit), severity errors (when ratings are under the level of merit), central tendency errors (when the evaluators prefer the middle of the evaluation scales), halo effects (when evaluation for one dimension can influence other evaluation for another dimension). Another important issue is the training of the evaluators (see McIntire, Miller 2010, 565-566). After the PAE there are conditions to the next steps: discussing, developing, rewarding and performance (see broad explanation on Rudman 2003).

2. Methods: participants, instruments

Our research has been done in a economic organization named A.B. and consisted in a secondary analysis of the appraisal process data. The A.B. firms have 4000 employees and 10 unities all over the country. The actual organization date from 1999 and was a result of a reunification of other four ancient factories from Romania. The sector of activity is public alimentation.

The process of evaluation in A.B. is well structured and is implemented once a year. For our research we constructed a data base with managers

evaluations of the employees from three departments in Iași branch: production, distribution and technical. The quantitative research (counting 153 evaluation questionnaires) was accompanied by a qualitative research (by applying some semi structured interviews). In this article we intend to present just the results of the quantitative research focused on execution personnel evaluation. In this firm the evaluation questionnaires (in fact graphic scales) are completed by the direct superior for every employee. The evaluation instrument is divided upon six dimensions:

- a. Quality and quantity of work
- b. Problem solving
- c. Professional / technical knowledge of the employees
- d. Evaluation of the effectiveness of training programs
- e. Evaluation of the interpersonal abilities
- f. Discipline and ethic behaviour.

Every dimension has 3 items evaluated with a 6 scale levels: from 1. *Unacceptable* to 6. *Has significantly outstripped the goals*.

3. Results

An example of the general results without any weighting of the variables in the PAE process are in the *Table 1*.

Table 1. Means of the evaluations dimensions

Performance criterion	Mean of scores	Mean by gender	
		Male	Female
Quality and quantity of work	3,6	3,67	3,55
Problem solving	3,7	3,74	3,72
Professional / technical knowledge	3,8	3,86	3,66
Evaluation of the effectiveness of training programs	3,6	3,69	3,51
Evaluation of the interpersonal abilities	3,9	3,89	3,81
Discipline and ethic behaviour	4,1	4,17	4,06

In the *Table 1* we can observe the values of non-weighting dimensions. Another case is the situation where we can add a weighting procedure (as is the case with our research). Forwards, for every dimension we constructed six statistical indexes (see *Table 2*).

Table 2. *Indexes of evaluation dimensions*

Index	Cronbach α	Nr of items
a. Index of quality and quantity of work (IQW)	0.891	3
b. Index of problem solving (IPS)	0.828	3
c. Index of professional/technical knowledge (IPK)	0.881	3
d. Index of training programs (ITP)	0.875	3
e. Index of interpersonal abilities (IIA)	0.871	3
f. Index of discipline (ID)	0.859	3

Forwards we intend to present the methodology used just for first index. In this case all the three component items was weighted with 50, 20, 30 percents (procedure explained in the applied methodology of the firm!). We divided final results for the first indexes in three situation for the stage of PAE where dominant are middle and superior evaluation:

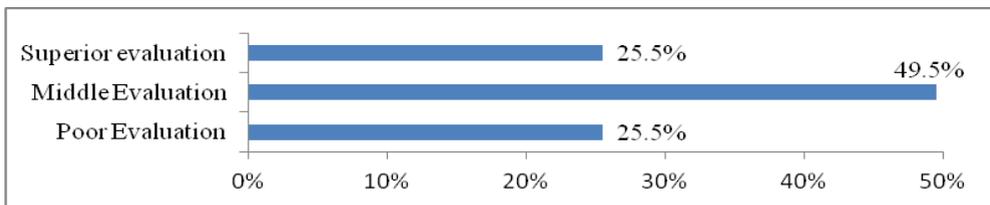


Fig. 1.

The first dimension generated the index of quality and quantity of work (IQW) formed with three items (degree of achievement of the expected results; level of compliance with working procedures; involvement in cost reduction). For this index Cronbach $\alpha=0.891$. According to the objectives of the research we stated for this index the following hypothesis:

H.1. There are significant differences between departments according to the index of quality and quantity of work (IQW).

To test this hypothesis we intended to use ANOVA univariate but because of failure of the assumptions we preferred to use non/parametric tests (k-independent samples and 2 independent samples). From the analysis we concluded that there is no difference between departments performances for IQW [H(2)=2.0, p=0.368]. The comparison two by two from our three departments were not statistically significant: distribution vs. production [U=1869.5, Z=-0.108, p=0.914], distribution vs. technical [U=292, Z=-1.027, p=0.304] and production vs. technical [U= 648, Z=-1.473, p=0.141].

H.2. There are significant differences between gender according to the index of quality and quantity of work (IQW).

The result shows that there are no significant gender differences for the IQW index [$U= 2797$, $Z=-0.434$, $p=0.664$].

Afterwards, in PAE analysis we can use all the previous indexes with the same independent variables for comparison between independent categories. We do not intend to present all this results but we can exemplify with the Index of training programs (ITP) with significant differences between departments of distribution vs. production [$U= 1290$, $Z=-2.941$, $p=0.003$]. This index is computed with three evaluation items [response and participation in training (attendance, passing tests); the ability to apply knowledge developed through training (follow up training); interest in the development of new skills needed for the job (self-tuition, own training)]. We conclude that the results of training programs are better evaluated in the distribution department.

An important issue can be the computation of all indexes in one index named *overall performance index* (OPI) that can be used in a variety of comparison during the process of PAE. For example we advanced the following complex hypothesis:

H.3. There are significant differences in the *overall performance index* (OPI) depending on the independent variables (department, sex, length of work, age of the employee).

The analysis can be divided for all four independent variables:

a. Departments (production, distribution and technical). We applied here one way ANOVA analysis. Based on the results there are significant differences between departments [$F(2, 151)=5.057$, $p<0.05$] and comparison with Tamhane's test revealed that there are significant differences between technical and production departments [mean diff.=0.47, $p=0.05$] but there are no significant differences between distribution and production [mean diff.=0.17, $p>0.05$]. The conclusion was that *overall performance index* (OPI) is significant superior to the index of other departments.

b. Age of the employee (under 30 years, 30-45, over 45 years). In this case there were no conditions to apply ANOVA and we used nonparametric tests. Using Mann Whitney test we decide that there is no significant differences between ages categories [$U=783$, $z=-0.391$, $p=0.696$] and all comparison two by two were no significant.

c. Sex (male, female) There were no significant differences between sexes [$U=2784$, $z=-0.476$, $p=0.634$] for *overall performance index*.

d. Length of work (maximum 2 years, between 2-5 years, between 5-10 years, over 10 years).

We applied here one way ANOVA analysis. Based on the results there are significant differences between all four categories [F(3, 150)=3.077, $p < 0.05$] and comparison with Tamhane's test revealed that there are significant differences between the extreme categories "maximum 2 years" and "over 10 years" [mean diff.=-0.44, $p = 0.005$]. Between all other categories there were no significant differences.

In conclusion, after the application of the PAI process referring to *overall performance index* (OPI) we observed that there were some specifically evaluation differences between departments or between categories of "length of work".

4. Conclusion and discussions

During the research we have drawn some important conclusions. First of all we determined that the process of PAE in the researched organization is very well structured at all decision levels and is implemented with a specialized software. The process is continuous but can be triggered in various situations: when the trial period expires, when it occurs changes from one job to another etc. Before the beginning of the process all the implied executives are trained for the completion of the evaluation questionnaires and for the next steps. Even so, there are many sources of errors already mentioned: leniency, severity, central tendency errors, halo effect. In our research we observed that before the implementation of PAE all the evaluators are advised to avoid the exclusive concentration to positive or negative facts, to avoid personal impressions about employees, to avoid any kind of discrimination. As a consequence the questionnaires are discussed with the employees and signed by them. At the end of the process of PAE the evaluation report is drawn up and the analysis identifies any promotional proposals, relegations or layoffs, salary changes, futures training actions. Each head of department make a hierarchy, and those at the top of the list can be rewarded, others can be proposed for job changes etc. In conclusion we can say that the process has achieved its purpose if the appropriate measures for salary changes, training, promotion or relegation are identified. Beyond this level we proposed in this article some statistical developments for a general view of the entire organization as far as the comparisons with whole groups of employees are concerned, characterized by a number of key variables: age, gender, department, length of work and so on. In the same time this kind of methods can be useful for comparative analysis in an entire economic branch or at regional/national level.

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