

COST OPTIMIZATION AND HUMAN RESOURCE EFFICIENCY IN INDUSTRIAL ECONOMIC ENTITIES: THE ROLE OF FUNCTIONAL ANALYSIS AND IMPROVEMENT STRATEGIES

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***Abstract:** It is well known that economic entities of any type generate costs and obviously fixed expenses. It is also known that industrial economic entities are permanently concerned with reducing production costs with the help of production programs by restructuring production costs and permanently improving labor productivity. The direct involvement of industrial economic entities with the help of the departments of specialized sections can lead to the dematerialization of writing efforts and the launch of projects necessary to reduce structural costs, especially in economic and commercial relations and relationships with third parties. The article explores the importance and implication of functional analysis in the management of costs and human resources within industrial economic entities. Through a detailed approach, the job evaluation processes, the identification of functional relationships and the integration of human resources quality into the overhead structure are examined. Also, strategies and principles are proposed for improving the management of human resources, considering the objectives of reducing costs and increasing efficiency. The study emphasizes the importance of a comprehensive approach and continuous analysis to optimize performance and profitability in the industrial environment.*

***Keywords:** costs, labor productivity, human resources, optimization of expenses, dashboard.*

***JEL Classification:** M41.*

1. Introduction

It is well known that economic entities of any type generate costs and obviously fixed expenses. It is also known that industrial economic entities are permanently concerned with reducing production costs with the help of production programs by restructuring production costs and permanently improving labor productivity.

The direct involvement of industrial economic entities with the help of the departments of specialized sections can lead to the dematerialization of writing efforts and the launch of projects necessary to reduce structural costs, especially in economic and commercial relations and relationships with third parties (fig.1):

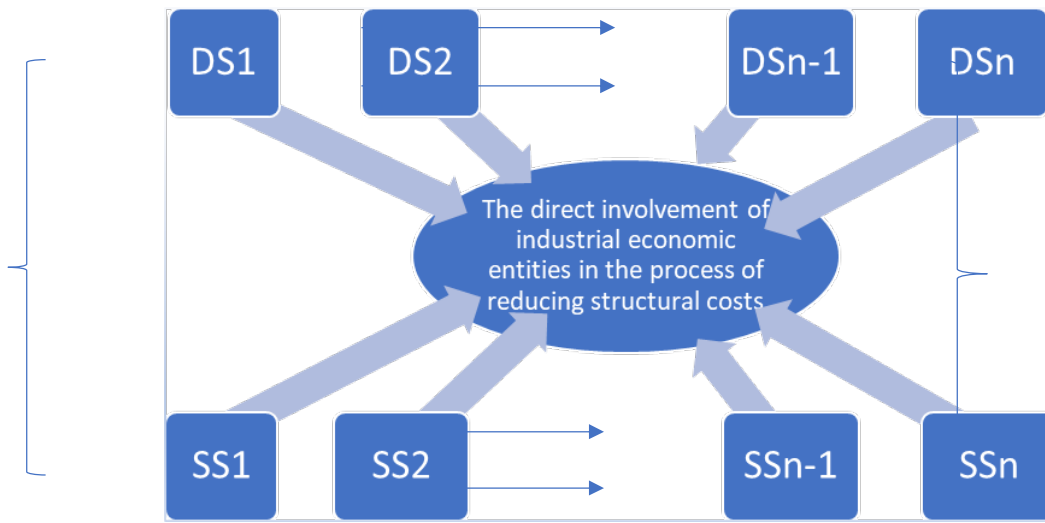


Fig.no. 1 Global vision regarding the reduction of structural costs in industrial economic entities (own conception)

In the figure above, I used the following notations:

- a) For specialized departments;
- DS1 = Specialized department 1
 - DS2 = Specialized department 2
 - DS_{n-1} = Department n-1
 - DS_n = Department S_n
- b) For specialized sections;
- SS1 = Specialized section 1
 - SS2 = Specialized section 2
 - SS_{n-1} = Specialized section n-1
 - SS_n = Specialized section S_n

The reduction of structural costs in industrial economic entities requires the following stages (fig.no. 2):

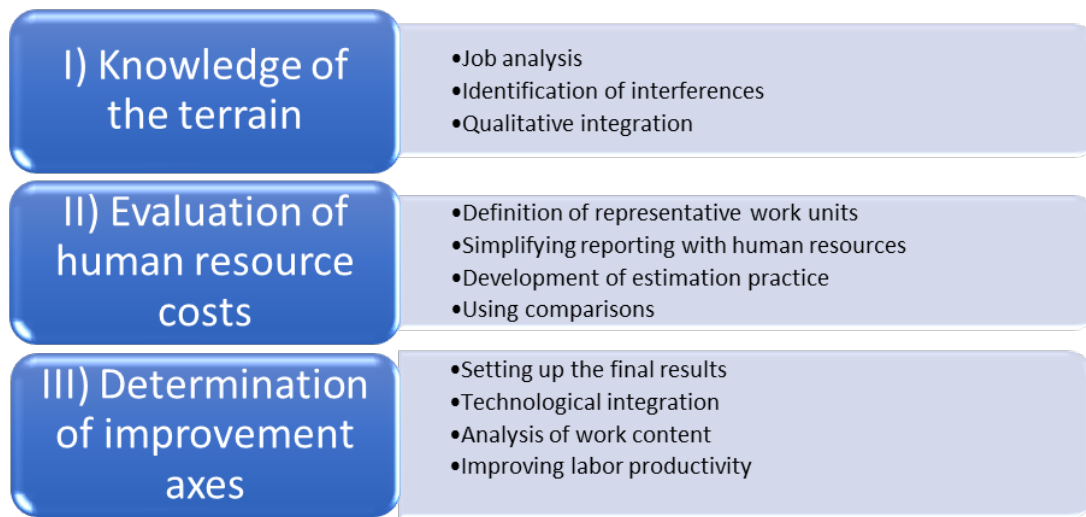


Fig.no. 2 Completing the stages necessary to reduce structural costs in industrial economic entities (own contribution)

I) Field knowledge

Administrative and functional knowledge of the terrain is relatively difficult and logistically limited.

Functional analysis looks at the following:

- ✓ the logical description of the activities provided for in the activity of the industrial economic entity, starting with the description of the job descriptions and ending with the obligations of all employees;
- ✓ analysis of the strengths and weaknesses of the analyzed industrial economic entity;
- ✓ the collection of a significant number of supporting documents, which will ensure, if necessary, the probative force regarding the contractual relations between the clients and the suppliers of the industrial economic entity during the periods of activity necessary to measure their evolution.

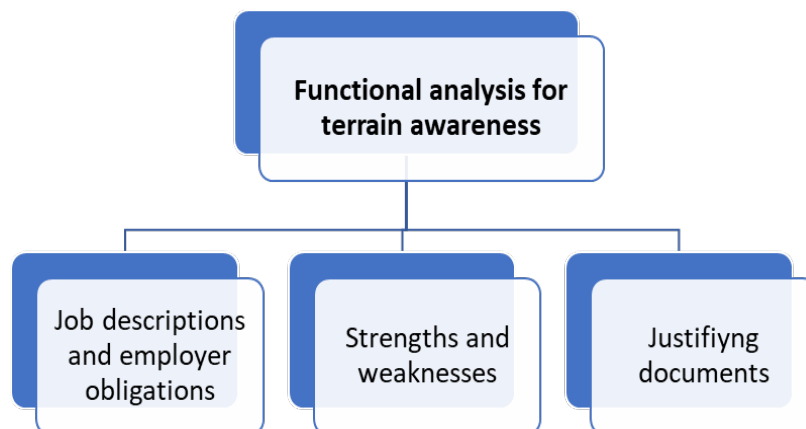


Fig.no. 3 Functional analysis for knowing the land of the industrial economic entity (own concept)

We consider it necessary, timely and useful to use the functional analysis to know the realities on the ground in order to evaluate the costs of human resources in the second stage

and respectively to determine the axes for improving the management of human resources in industrial economic entities.

The functional analysis based on the estimates established in the field are the aim of our scientific research approach "to make the figures considered through the expertise speak".

I thought that a diagnostic study, as a preparatory document, for the maintenance of the interviewed public should be developed and made available to the specialized operational team within the administrative management service, which should not lack: the topic addressed, the objective and the main activities; main customers and suppliers among respondents; self diagnosis; suggestions for action and progress for the future.

Contributors must have their own and permanent confidentiality on their side. The entire action must be based on a "code of conduct" intended for a relationship of trust and discrete, honest, integral and impartial commitment found in all deontological books at national and international level. It is mandatory for all consultants to sign this code of ethics.

2. Content analysis of job descriptions

From the start, the sampling will be established, which includes the number of industrial economic entities engaged in the established functional analysis and the personnel analyzed post par post estimated at a global level of the entire national/regional sample.

The detailed analysis will be carried out by the collaborators in the field and/or in the work stations. 4 work steps will be required for this analysis:

Stage I. Description of duties and functions

In this stage we go through two levels:

- ✓ the first LEVEL – the person in charge of each industrial economic entity analyzed, describes his mission and that of his group, highlighting the strengths and weaknesses of these industrial economic entities. The main tracks of action and progress will be noted in due course.
- ✓ second LEVEL – all collaborators enter the job details, job by job, respectively:
 - for each function analyzed (job description), they collaborate directly to establish the major activities and the purpose of each of the duties.
 - the necessary functions will be specified in order to achieve the intended objectives.
 - the main activities will be identified for each function separately;
 - will be detailed for all activities, all operations necessary for implementation.

Stage II. Identifying the respective relationships

- establishing formal/informal relationships;
- establishing internal/external relations;
- establishing the periodicity of volumes/works;
- the nature and volume of the deliverables are established.

Stage III and IV, it is proposed to formulate here a self-diagnosis regarding progress actions.

Next, to estimate human resources costs, it is necessary to integrate the random elements into the overall score, as follows:

- updating the database regarding the calculation and estimation of human resources costs, including individual pay slips;
- updating daily records;
- preparation of periodic payment procedures;
- the treatment of "overall human resources specialists of industrial economic entities that are part of the human resources cost estimation system";

In order to ensure a faithful image, it is preferred to add to the level of random analysis all information, of any nature, found on all computer media.

Identification of process interfaces in order to reconstruct functional relationships

For functional analysis to be effective, it must be conceptually evolving on an ongoing basis. For example, if cost reduction remains the primary objective, then all operational information highlighting the entire human resource cost management system will help improve resources by strengthening functional relationships through customer-supplier interfaces.

Among the significant functional relationships at the level of industrial economic entities, we can consider that the human resources payment management function can represent for each employee the "sole interlocutor for personnel administration and human resources cost management at the level of economic entities component of the system"! As shown below in figure 4, every employee automatically becomes a potential customer. We identify a significant number of "Deliverables" during each reporting period.

In this case we will have a number of 7 data providers and a minimum number of 8 customers (fig.no. 4).

PAYMENT MANAGEMENT				
PROVIDERS	DELIVERABLE	GESTIUNEA RESURSELOR UMANE (GRU)	DELIVERABLE	CUSTOMERS
RP	CE 1		LP 1	RS
			OP 2	RP
			TB 3	CTB
RU	NC 2		NS 4	RU
////////////////////	////////////////////		////////////////////	////////////////////
I₁				I₂
<ul style="list-style-type: none"> • I_n • I_{fn} • TOTAL I_{fn} 	(I _n -I _{fn})4		BP	<ul style="list-style-type: none"> • RU_{in} • RUI_{fn} • TOTAL
IG	EXP 5		IG 6	EXP
GRU	NWBD 6		GRU 7	NWC

Fig.no. 4. Data providers/clients from the human resource management operating system (edited by Daniel Boeri - Reduire et optimiser les couts, 2012

Next, we explain the meanings of the presentations contained in Fig. no. 4, "Data providers/customers from the human resource management operating system" (edited by Daniel Boeri - Reduire et optimizer les couts - 2012 as follows:

providers

RP = responsible for payments

RU = human resources

I1 = interlocutor 1

in = personal with interlocutor

ifn = personal without interlocutor

iG = management informatics (system)

GRU = human resources management

CE1 = deliverable control and expertise

NC2 = number of nominated customers

INFO1 = daily information
FXP5 = expertise
NWBD6 = New Provider Database

A CUSTOMER

LP1 = deliverable payments
OP2 = payment operators
TB3 = human resource dashboards
NS4 = number of treatments/specializations
DJP5 = customer supporting documents
BP = pay slips
NWC = New Customer Database

Integrating the quality of human resources, respectively the weak points and the strong points in the impact of the general expenses of the structure
Making a true diagnosis regarding the viability and the impact of the quality of human resources on the general structural expenses of industrial economic entities can reach significant values if there will be a good fair and pertinent analysis, respectively mobilizing, of the original ideas rigorously quantified by the factors generating points strengths and weaknesses on the overhead track.

An in-depth case study will exemplify the successful integration of qualitative elements of the nature of strengths and weaknesses across the many influences of dysfunctional factors.

II) The actual evaluation of human resource costs in industrial economic entities under the impact of dysfunctions

The experience accumulated in the evaluation and optimization of the expenses of the structure of general expenses in industrial economic entities demonstrates that, in the absence of an evaluation, respectively a specific estimate, all expenses structured under the ratio of human resources present the great difficulty of measuring/estimating productivity. Obviously, this great deficiency always concerns the process of cost management with human resources in industrial economic entities.

An intermediate solution can always be found in the absence of possibilities to measure/estimate the level of productivity, by choosing some indicators to estimate the costs of human resources.

These representative indicators are in fact "significant ratio packages depending on the specific activity of each industrial economic entity" established as a rule starting from the field and having two origins respectively: to belong to an information - documentation - registration system specific to the industrial economic entity located in this case and has a permanent autopilot system. In principle, specialized practice has demonstrated the good functioning of these autopilot systems both in terms of the quality of the information made available to the beneficiaries and in terms of the correctness of the calculations and the results obtained.

We will mention below some indicators - ratios proposed to be passed on a salary rights payment bulletin (table 1):

Table no. 1. Indicators – ratio for evaluating human resource costs

	NAME	UM	Explanations	Mp
0	1	2	3	4
1	HUMAN RESOURCE OFFICES	mp	Surface	120
2	ACCOUNTING OFFICE	mp	Surface	80
3	ADMINISTRATIVE	mp	Surface	60
4	SALES - COMMERCIAL	mp	Surface	70
5	CALCULATION OF COSTS	mp	Surface	40
6	CASH	mp	Surface	30
7	AUTHORIZATION	mp	Surface	140
8	STORE - RETAIL	mp	Surface	120
9	MAINTENANCE	mp	Surface	200
10	SECRETARIAT	mp	Surface	40
11	LIBRARY	mp	Surface	20
12	WORK PRODUCTIVITY	mp	Surface	30
13	COURIER	mp	Surface	20
14	Total effective	pers.	TOTAL	220
(14)	-DIRECT	pers.	TOTAL	(180)
	-INDIRECT	pers.	TOTAL	(40)
15	DISLOCATIONS	pers.	TOTAL	(6)

Source: processing after Daniel Boeri - Reduire et optimiser les couts, 2012

We recommend the following four tracks to use for HR costing functional analysis respectively:

- ✚ defining the representative work unit for each industrial economic entity;
- ✚ the homogenization of the entire workload for the entire journal volume;
- ✚ dividing the annual workload into balanced sampling to reduce costs and increase labor productivity;
- ✚ the use of benchmarks;

III) Identifying the possibilities for improving the axes of homogenization of human resources management

The following principles are the basis of the proposals to improve the development of human resources management in industrial economic entities. (fig.no.5)

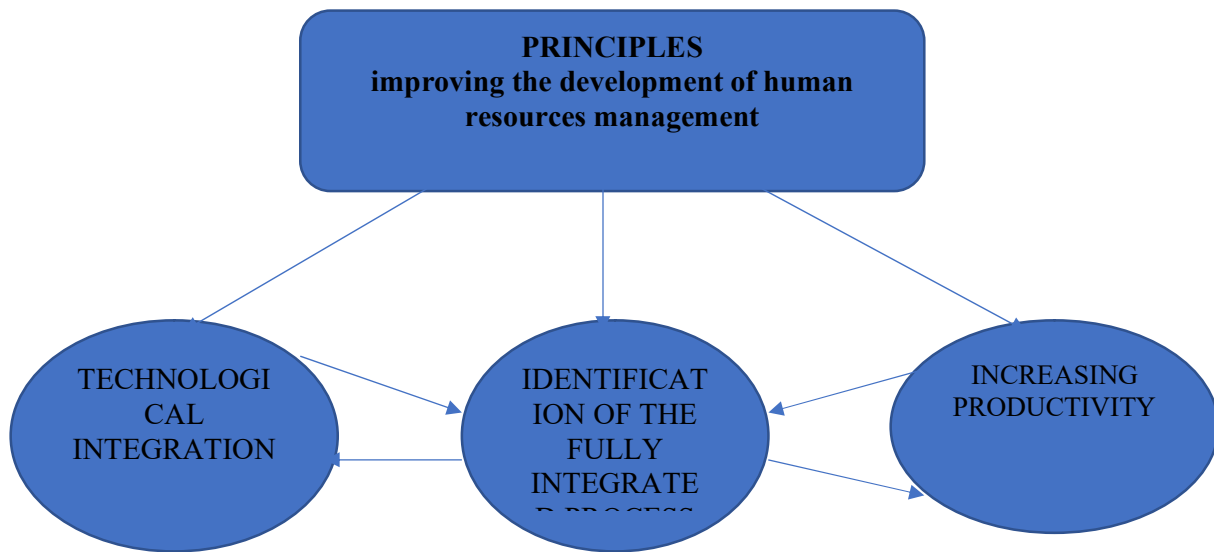


Fig.no. 5. Principles for improving the development of human resources management (own concept)

3. Summary

The field functional analysis still in operation also implements some tasks and their application methodologies considering that the cost reduction operation offers the possibility of substantial complementary quality improvement, at the level of collaborators and customers present in the common platforms.

Obviously the capitalization of the tasks is clear and leads to PROFITABILITY in terms of the work of the entire staff related to motivation. On the other hand, the reduction of costs lead to the superior utilization of human resources through the results obtained.

Therefore, it is agreed to work in:

- ✚ complete units – with deliverables for customers;
- ✚ complete units to allow the establishment of direct links with upstream services, but also with their own colleagues;
- ✚ defining a scoreboard (TB), informational with the results of all personal or collective actions obtained;
- ✚ it is necessary to implement two basic principles: workplace preparation and achievement control (fig.no.6).

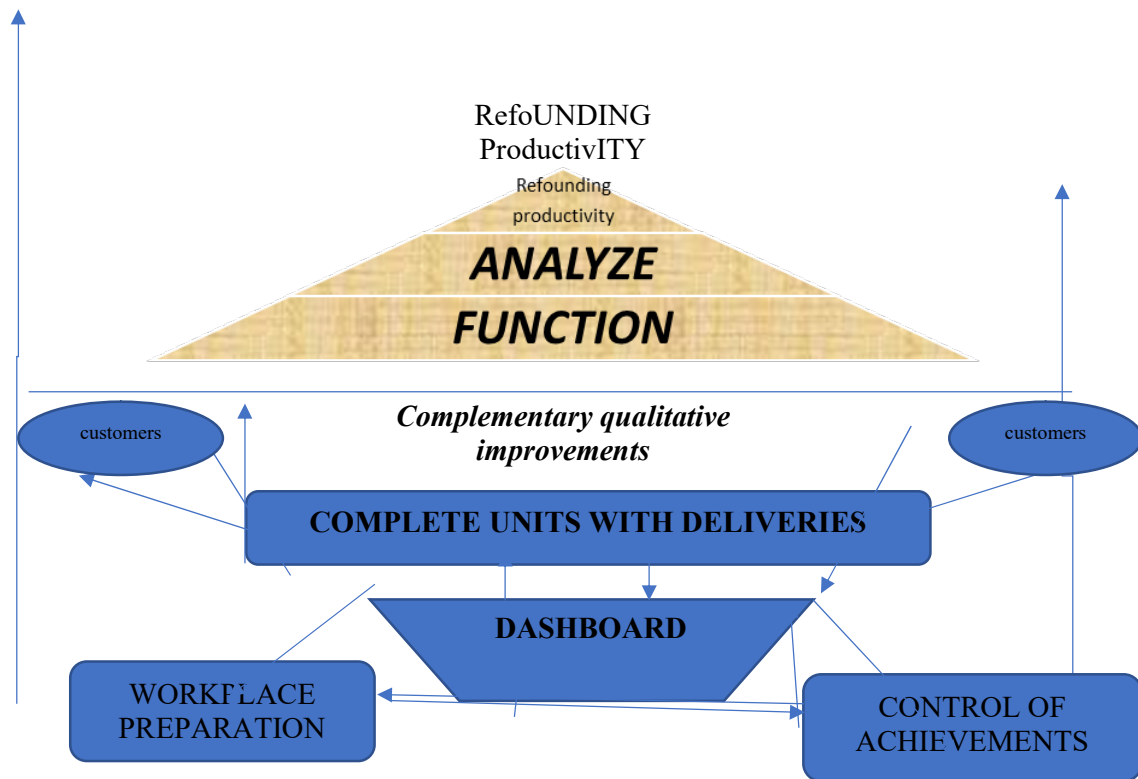


Fig.no. 6. Recapitulative synthesis graph on functional analysis (own conception)

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