



*The* **UNIVERSITY WITHOUT  
BORDERS** *Journal of*  
**ECONOMICS & BUSINESS**

*Volume 1 - 2018, No 1*

*Edited by:* **Dimitrios A. Giannias**, *Professor*  
**HELLENIC OPEN UNIVERSITY**

ISSN: 2585-2825

*Athens 2018*  
*Publisher: D. Giannias*

## PERSONNEL WORK TIME MANAGEMENT IN ORGANIZATION

**Galina GAGARINSKAIA**  
SAMARA STATE TECHNICAL UNIVERSITY

**Irina KUZNETCOVA**  
SAMARA STATE TECHNICAL UNIVERSITY

**Aleksandr GAGARINSKII**  
SAMARA STATE TECHNICAL UNIVERSITY

### **ABSTRACT**

The authors uncover socio-economic aspects of working time management, analyze social working conditions of employees in the organization, and also show socio-economic indicators and analyze the factors affecting the work time efficiency in the organization. The article provides a methodology for planning the number of employees by category depending on the time spent to manufacture the products. Presented are the results of surveying 84% of the total number of personnel in organizations (by the quota sample: status, age, sex), and the work time balance for an employee is created. Planned and actual number of the main staff categories in the organization is given.

**Keywords:** working time, number of workers, work time balance, labour intensity, productivity, methodology for planning the number of personnel.

## **JEL Classification: J20**

### **Introduction**

Research of time factor is becoming increasingly important today. This is due to the fact that one of the most important problems in the activities of an organization is insufficiently effective use of working time by the staff. Urgency of research of this problem is dictated by the peculiarities of modern reality when the organization's internal environment becomes more complex, and the external environment requires the organization to constantly look for improvements in work performance.

Work time of most of the employees in modern organizations is compacted to the limit, the working day is not standardized, and yet often it is still not possible to complete all the scheduled tasks by the specified deadline, and the results of the activity itself do not always satisfy the leadership. Therefore, managing the rationalization of the work time use by personnel as the society develops, higher dynamics of changes, and increase of "information component" in the final product become a significant factor in the organization's performance.

### **Theoretical aspects of the research**

There are two components in performance of an organization: economic and social. The latter depends on the balance of social ties acting in the form of integration of social functions arising from the organizations' activities and is achieved by creation of conditions for implementation of common interests and reconciliation the group ones. Consequently, the modern social management exposes a growing need to adapt the organization to the external environment and to improve it's performance.

Social aspects of the study of the time factor have repeatedly been the object of consideration by the scientific thought of the last century. Concepts "time", "social time", "working and free time", as well as social management issues are the subject of research in many sciences.

There are many definitions of the organization which usually contain a concept of organization as a rational system, or a system aimed at achieving the goal. There are four approaches to the definition of "organization":

1) according to Barnard (1938), the organization is the kind of cooperation among people that differs from other social groups by consciousness, predictability, and purposefulness. Barnard and his followers paid most attention to joint activities of people, their cooperation, and considered the need to achieve goals as secondary;

2) the second approach reflects the point of view of March and Simon (1958) who thought the organization was the community of interacting human beings, which is the most common in society and contains a central coordinating system. Highly specific structure and coordination within the organization distinguish it from diffuse and disordered ties between unorganized individuals. All this makes the organization similar to a separate complex biological organism;

3) Blau and Scott (1963) presented third approach to definition of an organization. This definition indicates the main, in their opinion, characteristic of the existing organization - that it should be formalized to achieve specific goals and must have formal structure;

4) according to Etzioni, organizations are social associations (or groups of people) that are consciously designed and reconstructed for specific purposes. The focus here is on conscious membership in the organization and the conscious activity of its members (Etzioni, 1961).

Today, there is no single approach to the problem of the time factor since the research subject is too complex, extensive and multifaceted. But this does not mean lack of knowledge set. Time itself is characterized as a form of reality showing the phenomena as following one after another. In addition to established ideas about the objectivity of time, its movement from the past to the present and the future, the direction of movement and the irreversibility of time, the modern science contains a set of knowledge about the physical, biological, psychological, and social time.

### **Research methods and materials**

Main base of research was an energy company, where a quota sample of 82 people were chosen that being 84% of the organization's total staff.

Apart from the energy company #1, a research, for comparative analysis, was conducted in other organizations: #2, #3, #4, and several other organizations where a quota sample of 350 people was surveyed.

In total, 432 employees took part in survey. In addition, a group of experts from the energy company #1 was involved which consisted of the director, administrative director, chief accountant, chief engineer, and chief of production department.

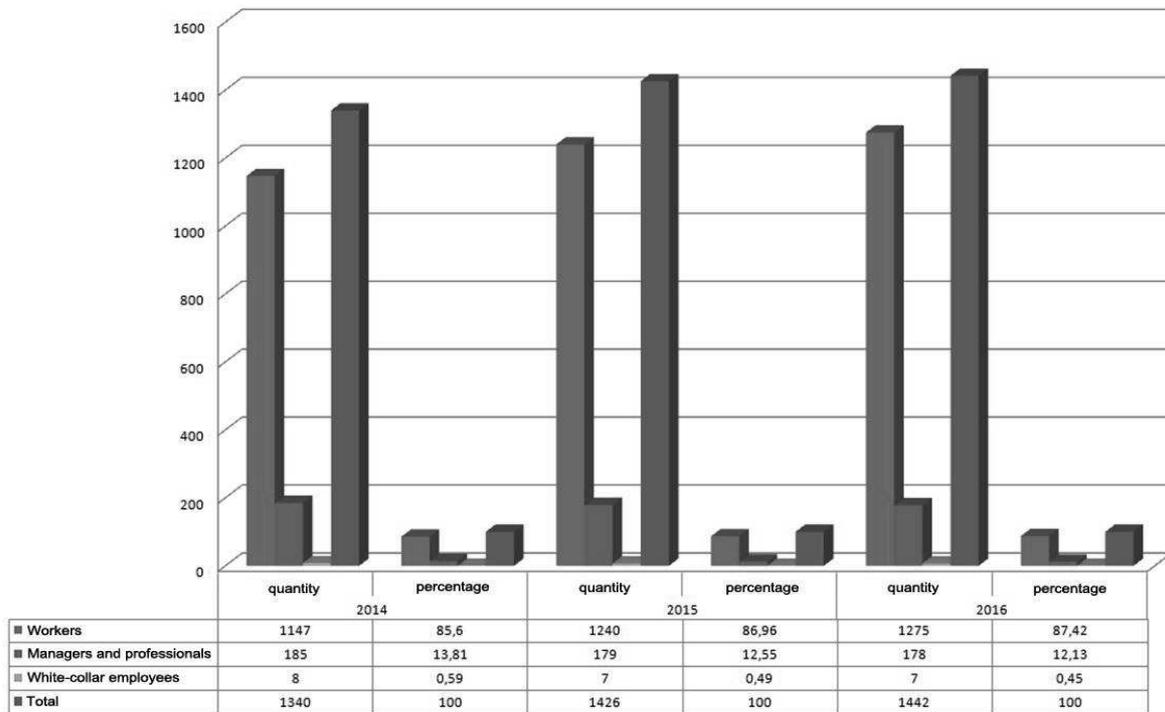


Figure 1. Quantity and composition of staff

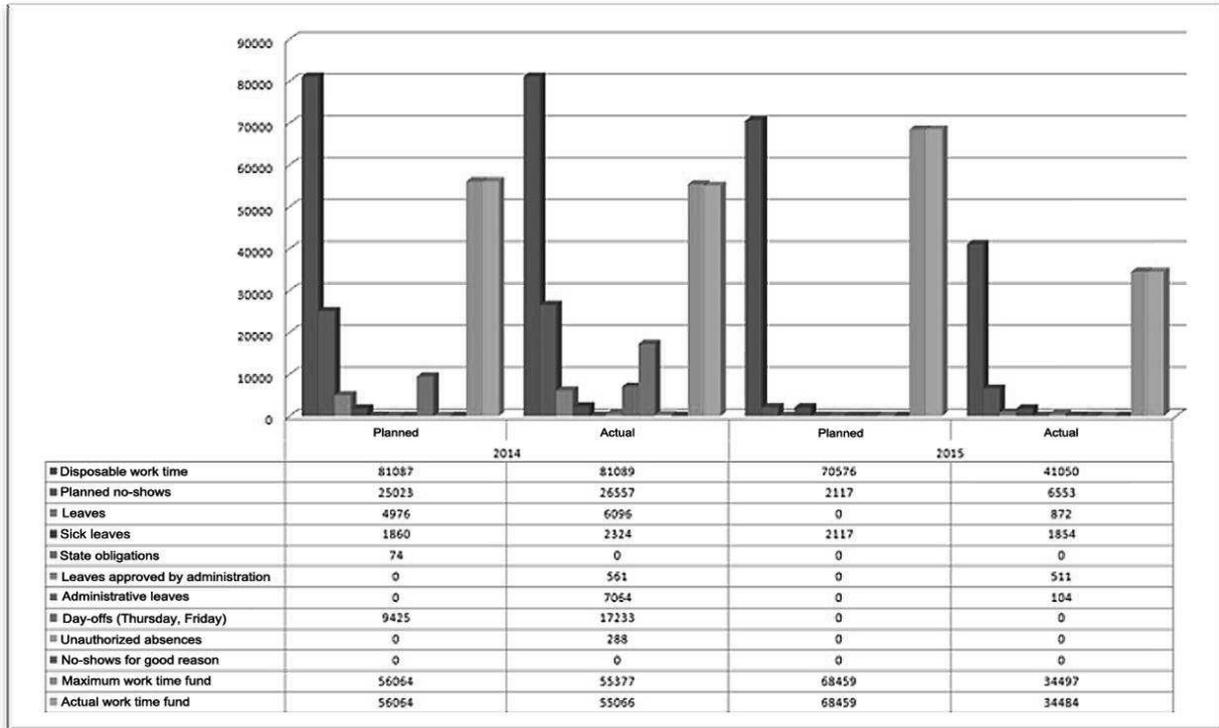


Figure 2. Work time balance for one employee

## Methodology for planning the number of employees by category

The number of workers for installation, shop, or other subdivision of the enterprise can be calculated by different methods.

### 1. By minimum staffing level.

Required number of workers is determined based on the labour intensity of equipment maintenance, i.e. number of workers of certain professions and qualifications necessary to ensure the normal operation of a given unit (installation, site, shop) per shift. Technically justified minimum staffing level is determined by setting up work schedules for shift personnel (based on the work time balance).

### 2. By labour intensity of production programme

$$N_w = I_p : Pr,$$

where  $N_w$  is planned number of workers;

$I_p$  is labour intensity of production programme;

$Pr$  is planned productivity per one worker.

$$I_p = S \cdot N_{t_{Bi}} \cdot Vp_i,$$

where  $N_{t_{Bi}}$  are time norms for different products and works;

$Vp_i$  are planned production volumes for different types of products or works to be performed.

### 3. By work spots.

The required number of workers is determined by the number of work spots.

Minimum number of employees is calculated by minimum staffing level and work spots. The plan for the number of workers should be used to set the average number of workers. For this, minimum number of employees is multiplied by the calendar fund (i.e. the planned number of work days for 1 registered worker per year).

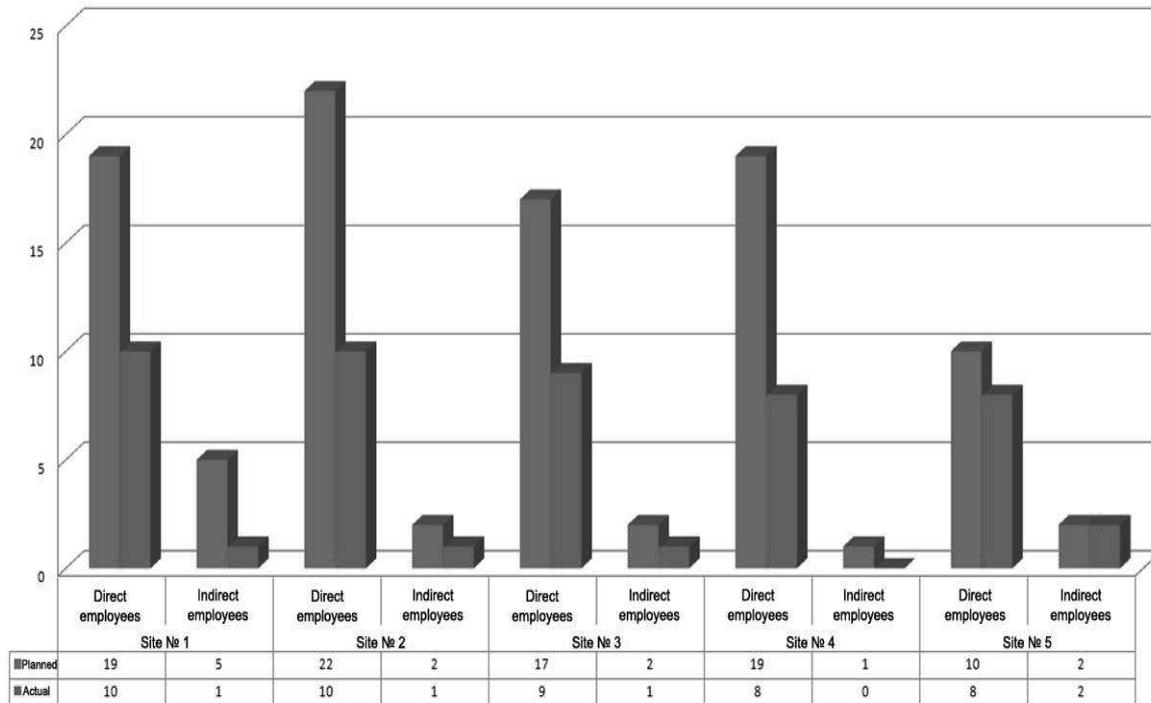


Figure 3. Planned and actual number of the main staff categories

## Conclusions

The results and conclusions obtained by the author can be used in the process of social management of the activities of a commercial organization for more rational organization of staff time; in the implementation of the program to introduce technologies to improve the social efficiency of working time in the activities of commercial organizations and in the development of new technologies based on the approaches and methods proposed in the research.

The results of the study can also be used to develop training programs, workshops, and training aids for both higher education institutions and corporate training.

## References

- Barnard, C., 1938, *The functions of the executive*, Cambridge.
- Blau, P., Scott, W., 1963, *Formal organizations: A comparative approach*, San Francisco.
- Etzioni, A., 1961, *The comparative analysis of complex organizations*, N.Y.
- Gagarinskaia, G.P., Kuznetcova, I.G., Spulber, D., 2015, *System of motivation and stimulation of employees' labour activity in organizations: theoretical and practical aspects: monograph*, Samara: SamGTU.
- Kibanov, A.Y., Gagarinskaia, G.P., Kalmykova, O.Y., Muller, E.V., 2017, *Personnel Management. Textbook*, Moscow: Drofa.
- Korotkova, E.M., Gagarinskaia, G.P., (Editors), 2006, *Management of the processes of organization of labor activity in the enterprise: Textbook*, Moscow: Akademicheskyy Prospekt.
- March, J., Simon, H., 1958, *Organizations*, N.Y.

UNIVERSITY without borders  
UNIVERSITY without borders

***Journal of ECONOMICS & BUSINESS***

<https://universitywithoutbordersjournal.wordpress.com>