

# Considerations upon the ways of increasing the work productivity and their reflection in the company's performances

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## Abstract

*Raising work productivity constitutes the most important factor of growth in production volume, of decrease in production costs and of increase in economic efficiency and product competitiveness on the external and internal markets.*

*The analysis of domains such as planning, management systems, communication, IT resources and personnel motivation, enables identifying and applying of certain measures for productivity increase. The main methods for increasing work productivity presented in the current paper are: the promotion of technical progress, the improvement of staff training, the introduction of modern management methods, the improvement in material stimulation of personnel.*

*Besides, this article also aims to present both the direct and the indirect effects of raising work productivity upon the economic and financial performances of the company.*

*The direct effects are based on the raising of the physical production which is reflected in the value indicators of production (the gross output, the turnover, the added value, the incomes, in the costs and in the profits.*

*On the other hand, the indirect effects of raising productivity are reflected in the performance indicators calculated on the base of some indicators of effects and efforts, such as: the rates of return, the capital turnover ratios, the efficiency rates, the indicators of the efficiency of using material and human resources.*

Keywords: human resources, labour efficiency, productivity, performances

## Introduction

Productivity is a notion situated in the centre of the analysis of the global functioning of the economy, being susceptible of raising managers' special interest as an instrument of evaluating the economic performance at the level of the company.

According the Measuring Productivity OECD Manual, productivity is commonly defined as a ratio of a volume measure of output to a volume measure of input use.

The labour efficiency (the work productivity) reflects the effectiveness or the fruitfulness of the work performed in the production process, and its increase constitute an essential factor of rising the output capacity, reducing the production costs and increasing the profitability and the competitiveness of the products on the domestic and external markets.

The level and the dynamics of the productivity are influenced by a series of natural, biological, technical and organizational, economic, social and political and psychological factors, etc.

The increase of the labour efficiency represents the process by which the same work load is materialized in a bigger amount of goods and services or vice versa, the same amount of goods are made with a smaller work load.

### **Labour Efficiency Growth Factors**

According to the Romanian specialized literature, the main **ways of increasing the labour efficiency** are: promoting technological progress, enhancing the labour's professional qualification, implementing modern management methods, improving the personnel's financial incentive system. In order to determine the ways of increasing the labour efficiency in a correct manner, one must take into account all the factors influencing its level and dynamics, as well as the peculiarities of the production process of each branch and company. (Radu, 2006, p.122)

**The promotion of technological progress** is considered the main way of increasing the productivity, of saving live labour. The analysis studies the situation of implementing all its forms, as well as its consequences. In industry, the promotion of technological progress is made with the purpose of equipping companies with modern means of production and implementing advanced technologies. In this respect, we should study the situation of the production mechanization, automation and cybernetization, the endowment of the companies with high technical-level machines and equipment, as well as the implementation of advanced technologies. The implementation of technological progress in all its forms has positive consequences on the activity of the company that are materialized in the increase of production and of the labour efficiency, the reduction of the lead time per product unit and of the relative personnel requirement, the reduction of the staff costs, etc.

Research and innovation make an important contribution to corporate performance, to productivity and the supply of new and improved goods and services, and hence competitiveness, growth and employment. (Mairesse, 2003)

**The promotion of modern management methods** represents an important way of increasing the productivity, even in the circumstances where the level of the technical equipment of labour is not modified which allows for saving the investment funds. We can consider the management methods ways of increasing the labour efficiency in three main aspects: improving the management methods, improving the production management and improving the organization of work.

The improvement of the management methods need perfecting the decision-making methods and the information system, enhancing the organization structure of the company, the correct segregation of competences and responsibilities, etc. We can also analyse some aspects related to the efficiency of the management activity, such as: the way decisions are substantiated, the number of hierarchic levels and the size of the hierarchic weight, the information quantity, quality, circulation and cost, etc.

Human resource management practices have an economically and statistically significant impact on both intermediate employee outcomes (turnover and productivity) and short- and long-term measures of corporate financial performance. (Huselid, 1995)

**The enhancement of the production management** implies: the optimization of the production concentration, specialization and cooperation, improving the effective production preparation, scheduling, launching and monitoring, the rational organization of the flow of production and the adequate location of the equipment, eliminating bottlenecks, lost time in the production process, having a rhythmic supply, providing the appropriate documentation and technical support, rigorous organization of the production quality control, etc. All these measures allow for the organization of the large-scale production, the application of competitive technologies, the shortening of the fabrication cycles and the rational usage of the production factors.

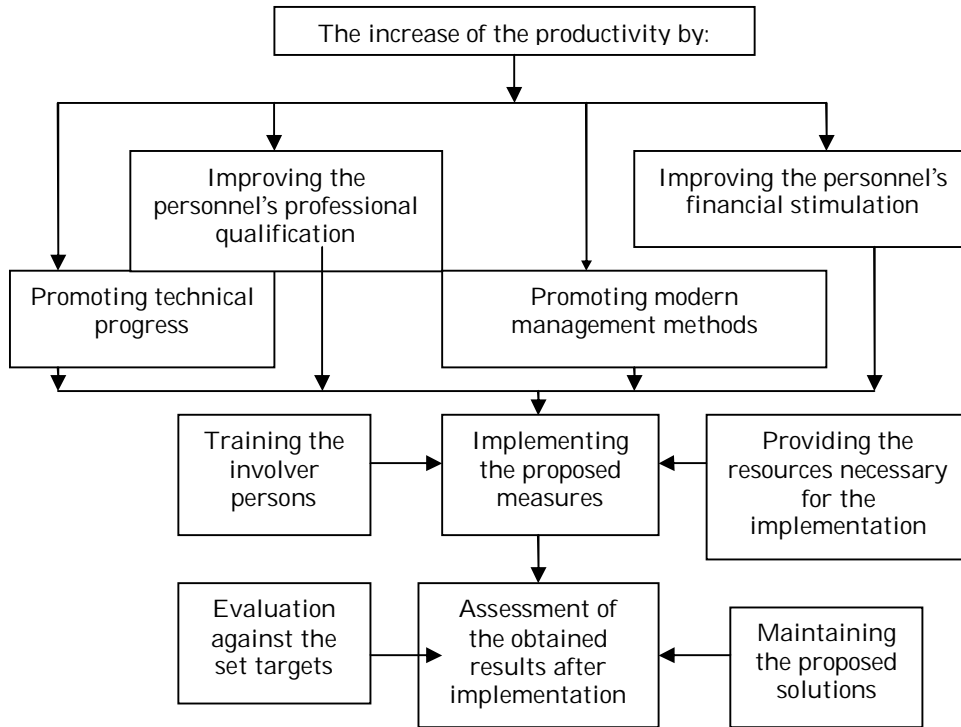
The enhancement of the organization of work contributes to the increase the labour efficiency by the complete and effective usage of the work time, by the elimination of unjustified dead time, the improvement of the norm-setting system, the rational organization of the work places and the provision of optimum working conditions according to the principles of ergonomics.

Another important way of increasing the labour efficiency is **the enhancement of the personnel's professional qualification**, while also seeking to reach an agreement between the production technical and organizational level and the professional qualification level and the use of labour.

**The improvement of the ways of financially stimulating of motivating the personnel** has a significant place, i.e. the growth reserves of the labour efficiency related to the effect of the bio-psycho-sociological factors. In this respect, blending the financial incentives for the obtained results with the employees' financial liability for damages they may cause, as well as the improvement of the forms and methods of remuneration, granting premiums, sharing profits, etc. Social factors also influence labour efficiency, such as: living conditions, socio-cultural conditions, the quality level of the work and family environment, etc., as well as meeting the personnel's cultural-sportive needs.

The implementation of these main ways of increasing the labour efficiency can be sketched as in diagram no. 1.

Diagram no. 1. The implementation of the main ways of increasing the work productivity



The international operational management consulting firm Proudfoot Consulting performs annual surveys on the situation of the labour efficiency, revealing the fact that, in any country, a great part of the working time is wasted, the losses being especially accounted for by poor work supervision, an inadequate planning or by insufficient control.

According to the latest survey on productivity published by Proudfoot Consulting (Proudfoot Productivity Report 2007), almost 70% of the company managers estimate that their global efficiency reflected by the labour efficiency has made progress between 2005 and 2006, while only 5% believe that their labour efficiency has decreased. The same study mentions that the weight of the idle time of the analyzed decreased to an average of 31.4% in 2005/2006, as compared to 35.3% in 2004/2003. For 2008, 79% of the interviewed managers declared that the labour efficiency in their companies may improve, almost half of them forecasting an increase by 10%.

The approach of these apparently commonplace issues comes second among some managers' concerns, as compared to the investments into new equipments as a factor of improving the situation of the labour efficiency.

The surveys performed by Proudfoot Consulting prove that a significant increase of labour efficiency is possible without additional investments. The analysis of certain areas such as: planning, the management systems, communication, information means and the personnel motivation, allows for the identification and application of some measures of improving the aforementioned and for the increase of the productivity and of the degree of usage of the available time up to the level of 85%, percentage deemed optimum by Proudfoot Consulting.

The analysis of the growth reserves of the labour efficiency should constitute a permanent concern of the decision-making factors of all the levels of the organizational structures, and special attention should be given to those factors that can be mobilized in due time and with economically reasonable efforts .

A series of factors of increasing productivity were also highlighted by the recently performed study of Proudfoot, according to which the first two actions the most quoted by the interviewed managers were: investment in workforce skills and investment in management skills. From the point of view of the importance given by the survey participants the following are: better use of information technology and more flexibility in labour laws (ability of hire and fire), consistent execution of strategy by top management, increased capital expenditure on ICT (Information Communication Technology), embracing a methodology (Kaizen, Lean, Six Sigma), increased capital expenditure on plant and machinery, outsourcing and a decrease in other costs of production (excluding labour). On the last places among the factors of increasing productivity there are the new competitors entering markets, lower labour costs, outsourcing and offshoring combined and the least important is offshoring.

### **Barriers in the Way of the Increase of the Labour Productivity**

At the same time, besides the factors that lead to an increase of the productivity, special attention must also be given to the approach of the main factors that constitute **barriers** in its way. The survey performed by Proudfoot in 2005, on the basis of information collected from 13 areas of activity in 12 countries offer information concerning 4 years (2002-2005). Proudfoot study highlighted that there are 6 factors that often prevent companies from reaching a high level of productivity.

On the first place among the identified obstacles there is the inadequate planning and insufficient hierarchic control, the two causes contributing together, according to the study of conform Proudfoot, in the last two analyzed years 2 (2004 and 2005), over 70% of the productivity loss. No significant improvement in these areas is noticed in these four analysed years, which proves that there are problems at the management level.

The lack of motivation (poor working morale) as an obstacle in the way of increasing the productivity is on the third place and concerns the fact that the employees can feel "devalued" and poorly rewarded and also the lack of positive team spirit and sense of correctly and fully fulfil their duties.

The inappropriately qualified workforce as cause of poor productivity is reflected into the inappropriate fulfilment of duties for which the employee has not been sufficiently trained and is on the fourth place in the top made by Proudfoot in 2005.

Ineffective communication can occur due to using a technical language instead of a simple and unequivocal one in the communication with the employees situated on bottom hierarchic levels, as a result of lack of clarity in defining the objectives of the company, lack of exact description of duties, etc.

IT-related problems are on the last place, among these being: the e-mail message exchange instead a more appropriate meeting of the parties, time wasted with searching for inadequately archived information, breakdowns of the information system, data corrupted due to bugs or incompatibility among the used information systems.

However, in the most recent study performed by Proudfoot (Proudfoot Productivity Report 2007) 12 barriers in the way of increasing productivity are highlighted, the first three the most frequently chosen by the participant managers being: inappropriately qualified workforce, external communication problems with suppliers and customers and internal communication problems within the company.

The obstacle deemed to be the less important was outdated technology/production processes, preceded by inadequate or poor supervisors' performance and by underperforming and/or poor sales performance.

### Effects of Increasing the Productivity

The effects of increasing the labour efficiency on the economic and financial performance of a company can be studied both **partially**, for each increase way or measure, as well as **globally**, as a result of the global application of these ways.

The increase of the productivity as a result of the application of the aforementioned measures generally implies the increase of the actual volume of production obtained per working time unit ( $W=Q/T$ ) or the reduction of the time used per product unit ( $W=T/Q$ ), and by the increase of all the production activity value indicators, which is, in its turn, reflected in a positive manner in the key performance indicators of the company.

The effects of the increase of the productivity on the economic and financial performance of a company can be direct and indirect.

The direct effects of the actual production that are reflected the production value indicators (production of exercise -  $Q_e$ , turnover - CA, added value - VA, total income - VT), of costs and profits.

The indirect effects of the increase of the efficiency are reflected through the performance indicators calculated on the basis of the indicators of effects or efforts, such as: the rates or return, the rates of asset turnover, the resource efficiency ratios or expenditure rates, the indicators of the efficiency of usage of the material and human resources, etc.

Consequently, the influence of the modification of the annual ( $W_a$ ), daily ( $W_z$ ) and hourly productivity ( $W_h$ ) on the production value indicators can also be calculated with the help of the method of chain substitution on the basis of the relation:

$$\Delta_{Q_e, CA, VA, VT}^{W_a, W_z, W_h} = Ns_1 \cdot (W_{a_1} - W_{a_0}) = Ns_1 \cdot Nz_1 \cdot (W_{z_1} - W_{z_0}) = Ns_1 \cdot Nz_1 \cdot Nh_1 \cdot (W_{h_1} - W_{h_0})$$

Moreover, the modification of the labour efficiency is also reflected in the total costs (CT) or in the fixed expenses (CF) for a turnover of 1,000 lei as follows:

$$\begin{aligned} \Delta_{CT/1000, CF/1000}^{Wa, Wz, Wh} &= \frac{CT_0, CF_0}{Ns_1 \cdot Wa_1} \cdot 1000 - \frac{CT_0, CF_0}{Ns_1 \cdot Wa_0} \cdot 1000 = \frac{CT_0, CF_0}{Ns_1 \cdot Nz_1 \cdot Wz_1} \cdot 1000 - \frac{CT_0, CF_0}{Ns_1 \cdot Nz_1 \cdot Wz_0} \cdot 1000 = \\ &= \frac{CT_0, CF_0}{Ns_1 \cdot Nz_1 \cdot Nh_1 \cdot Wh_1} \cdot 1000 - \frac{CT_0, CF_0}{Ns_1 \cdot Nz_1 \cdot Nh_1 \cdot Wh_0} \cdot 1000 \end{aligned}$$

The modification of the annual labour efficiency/productivity also influences the wage costs for a turnover of 1,000 lei ( $C_s/1000$ ), as follows:

$$\Delta_{C_s/1000}^{Wa} = \frac{\bar{s}_{a_0}}{Wa_1} \cdot 1000 - \frac{\bar{s}_{a_0}}{Wa_0} \cdot 1000,$$

where:  $\bar{s}_a$  - average annual wages per person.

The increase of the labour efficiency also leads to the increase of the volume of the gross profit afferent to the turnover, due both to the obtained production increase as well as to the reduction of the cost per product unit. This influence can be determined as follows:

$$\Delta_{Pb}^{Wa, Wz, Wh} = \Delta_{CA}^{Wa, Wz, Wh} \cdot \frac{Pb_0}{CA_0} = \Delta_{CA}^{Wa, Wz, Wh} \cdot Rv_0,$$

where:  $Rv_0$  - rata of sales return in the base period.

By taking into account the influences of the modification of the labour efficiency on profit, we can also calculate the influence on the rates of return (R) of the total used capital (Kt), of the equity capital (Kpr), of the permanent capital (Kper), as follows:

$$\Delta_R^{Wa, Wz, Wh} = \frac{\Delta_{Pb}^{Wa, Wz, Wh}}{Kt_1, Kpr_1, Kper_1} \cdot 100$$

Through the influence of the modification of the productivity of the profit afferent to the turnover we can also calculate the influence on the rates of return of the income (Rv) and of the used resources (Rc), as follows:

$$\Delta_{Rv, Rc}^{Wa, Wz, Wh} = \frac{\Delta_{Pb}^{Wa, Wz, Wh}}{\sum q_1 p_1, \sum q_1 c_1} \cdot 100$$

Function of the influence on the production value indicators, we can also estimate the effect on the efficiency (E) of fixed assets (Af) and of circulating assets (Ac), but also on the turnover rate of the circulating assets (Vz), expressed in days of turnover:

$$\Delta_E^{Wa, Wz, Wh} = \frac{\Delta_{Qe, CA, VA, VT}^{Wa, Wz, Wh}}{Af_1, Ac_1} \cdot 1000$$

and

$$\Delta_{Vz}^{Wa, Wz, Wh} = \frac{\bar{s}_0 \cdot T}{Ns_1 \cdot Wa_1} - \frac{\bar{s}_0 \cdot T}{Ns_1 \cdot Wa_0} = \frac{\bar{s}_0 \cdot T}{Ns_1 \cdot Nz_1 \cdot Wz_1} - \frac{\bar{s}_0 \cdot T}{Ns_1 \cdot Nz_1 \cdot Wz_0} = \frac{\bar{s}_0 \cdot T}{Ns_1 \cdot Nz_1 \cdot Nh_1 \cdot Wh_1} - \frac{\bar{s}_0 \cdot T}{Ns_1 \cdot Nz_1 \cdot Nh_1 \cdot Wh_0},$$

Where:  $\bar{s}$  - average annual balance of circulating assets,  
T - duration in days of the analysed period (360 days)

## Conclusion

Labour efficiency is one of the most important synthetic indicators of the economic efficiency of the companies because its modification generates direct and indirect effects on the whole activity. We can conclude that it is also important to study the growth reserves of the labour efficiency and their implementation at the level of the company. The increase of the labour efficiency can also help the company fighting the competition; that is why we need to be aware of both the "engines" that can amplify it as well as the main barriers that may block the way towards the increase of the labour efficiency.

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