

COSTS OF EMPLOYEE TURNOVER

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Abstract

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The aim of this paper is to establish a general methodology for calculating the costs incurred by employee turnover. This paper deals with identification of costs incurred by the departure of an employee, and does not deal with the cost of recruitment of a new employee. Economic calculations are adjusted to the tax policy in the Czech Republic. The costs of employee turnover (according to Bliss, 2012) include the costs of substitution of the unoccupied position, costs of conducting the exit interview and termination of the contract. The cost of an executive's time to understand the causes of leaving and costs of the leaving employee's training were also determined. Important factors in the costs of employee turnover also include the loss of knowledge and possibly also a loss of customers. Costs of lost employee and department productivity represent an important part of the costs of employee turnover, as well. For all of these costs there have been proposed general calculations formulas.

Bliss, costs, employee turnover

In each company, the employee turnover is a part of the human resources management. Basically, this phenomenon is rather important because without it, the performance of people could stagnate and the competitiveness of the company could be gradually reduced or even lost. However, a high degree of staff fluctuation is not desirable due to the fact that it is associated with relatively high costs. Many authors (e.g. Frech, 1986; Milkovich and Bourdeau, 1993; Dvořáková, 2004; Armstrong, 2007; d'Ambrosiová, 2009) define the employee turnover as a loss of people and/or the percentage of staff replacement within a given time interval. According to Reiß (2008), Ongori (2007), Shahnawaz (2009) and Koubek (2007), the employee turnover can be expressed as the ratio between the total movements of employees in and out of the organisation. The Saratoga Institute (Branham, 2009) estimates that average costs associated with the loss of one employee are equal to his/her annual salary. According to Bliss (2012), the average costs associated with the departure of an employee represent as much as 150% of his/her annual income.

MATERIALS AND METHODS

The aim of this study was to develop a general methodology how to calculate costs resulting from and associated with the employee turnover. The authors tried to develop mathematical formulas enabling to calculate these costs so that they could be used by employers and companies when defining total costs related to the staff fluctuation. The general methodology was based on classification of costs published by Bliss (2012).

This paper deals only with the identification of costs associated with the departure of employees; costs of recruitment and training of new employees are not discussed. Calculations are adapted to principles of taxation policy of the Czech Republic. The so-called super gross salary involves the basic gross income and standard contributions, i.e. social and health contributions paid by the employer; at present it equals to 34% of the assessment base.

RESULTS AND DISCUSSION

A practical example of employee turnover costs calculation was presented by Bliss (2012) who classified the costs as follows:

Costs induced by the employee's leaving:

- A temporary compensation of lost performance (working output) at the vacant working position (by means of overtime work of the existing staff, employment of temporary and/or part-time workers etc.);
- Loss of labour productivity (related either to the vacant working position and/or the adaptation process of a new employee);
- Performing an exit interview and termination of employee's job contract (including working time of both personnel officer and the leaving employee, administrative activities both in electronic and written form, wage settlement including bonuses and employee's benefits as well as other activities associated with and necessary to terminate the employment contract);
- Manager's time that is necessary to understand causes of the leaving employee's leaving and also the time necessary for taking adequate preventive measures;
- Company's expenditures and costs associated with education and training of the leaving employee;
- Loss of the overall labour productivity; this concerns above all calculation of effects of lost work performance of the leaving employee (e.g. due to breaching of agreed termination dates etc.);
- Loss of the know – how, skills and contacts of the leaving employee;
- Loss of customers and/or costs associated with efforts to retain them.

When following costs resulting from and associated with the employee's leaving it is necessary to take into account if this leaving was planned or not. In case of an unplanned leaving, the company must also consider extra costs resulting from such a precocious leaving without the replacement of the leaving employee (see the aforementioned need of a temporary substitution of labour output in the vacant job/working position). In contradistinction to all other aforementioned costs, these expenses need not be to involved into the calculation of costs resulting from the employee's leaving (i.e. due to staff turnover).

A temporary substitution of the labour output in the vacant working position

When calculating costs associated with a temporary substitution of the labour output it is necessary to estimate the time interval elapsing

between the employee's leaving and the entering of a selected substitute (emergence) worker because there is a rule that the longer the period for which the leaving employee is not replaced, the higher the costs associated with and resulting from the employee turnover.

A vacancy can be filled in the following two ways:

- By overtime work of current employees; in this case the costs associated with the performance of the labour output (C_{PLO}) consist of super gross salary of the leaving employee (S_E), wage supplements paid for overtime work (OW, in %), and time interval elapsing to the moment of finding a substitute (t),

$$C_{PLO} = S_E \times (1 + OW) \times t,$$

- By hiring of temporary workers; in this case the costs associated with the performance of the labour output (C_{PLO}) consist of super gross salary of the leaving employee (S_E), time interval elapsing to the moment of finding a substitute (t), commission paid to the employment agency (C_{PA}), and costs associated with and resulting from the training of temporary workers (C_{TTW}),

$$C_{PLO} = S_E \times t + C_{PA} + C_{TTW}$$

Loss of productivity as related to the labour output of the leaving employee

In case that there is a time gap between the employee's departure and the moment of entering of a selected substitute worker to the vacancy (the calculation involves also a temporary substitution of the labour output), it is necessary to involve costs of lost productivity twice (once because of the temporary substitution and once due to the entering of a new employee). According to Murtagh (2003) a lower labour productivity of a new employee represents approximately 25% of the work performance of a normal worker within the period of the first four weeks and in the course of the fifth to eight week it increases to 50 %. A full (100%) working performance is usually reached as late as after twelve weeks.

The relationship existing between an expected labour output of a substitute and his/her experiences is illustrated in Tab. I.

Costs associated with the loss of employee's productivity (C_{LEP}) are equal to the employee's

I: *Loss of labour productivity in the course of a new employee's adaptation process*

Parameter	Efficiency of the labour output			Loss of labour productivity		
	1 st month	2 nd month	3 rd month	1 st month	2 nd month	3 rd month
Overtime work	75%	100%	100%	25%	0%	0%
Hiring of a substitute	25%	50%	75%	75%	50%	25%
Hiring of a new employee	25%	50%	75%	75%	50%	25%
Vacancy	0%	0%	0%	100%	100%	100%

Source: Murtagh (2003), modified by authors

average labour output (O_E) multiplied by the percentage loss of productivity (L_p) existing in individual stages of the adaptation process, time interval elapsing till the moment of finding a substitute (t), and duration of the adaptation process of a new employee (t_{AP}).

$$C_{LEP} = (O_E \times L_p \times t) + (O_E \times L_p \times t_{AP}).$$

The average labour output of the employee (O_E) is calculated as the share of the added value created by the company within the given fiscal period (AV) per one employee, i.e. the added value divided by the average number of company employees in the period (N_E).

$$O_E = \frac{AV}{S_E}.$$

Loss of productivity in the whole company department

Costs resulting from the loss of productivity of the whole department (C_{LDP}) can be estimated on the base of the average department's labour output (O_D), coefficient of dependence (c), and the time interval elapsing till the moment of finding a substitute (t). Also in this case it is necessary to involve costs of lost productivity twice (once due to the temporary substitution and once due to the new employee because the loss of productivity within his/her adaptation period is 50 %). This consideration is based on percentages of labour efficiency as distributed within the whole process of adaptation (i.e. 25% in the first month, 50% in the second, and 75% in the third one).

$$C_{LDP} = (O_D \times c \times t) + (O_D \times c \times t_{AP}) \times 50\%.$$

The average labour output of the company department (O_D) can be calculated on the base of the added value created by the company within a given fiscal period per one employee and multiplied by the average number of workers in the department under study (N_D).

$$O_D = O_E \times N_D.$$

The coefficient of dependence (c) characterises the rate of necessity of the employee's labour output, on which the working activities of other team members are dependent. The coefficient of dependence (c) can be calculated as the percentage share of the leaving employee in the department ($1/N_D$) exponentiated by the share of the difference between the average number of employees in the department (N_D) and the number of people dependent directly on the work results of the leaving employee (d – estimated subjectively) and the average number of employees in the department under study (N_D).

$$c = \left(\frac{1}{N_D} \right)^{\frac{N_D - d}{N_D}}.$$

Manager's time

Manager's time spent for understanding and explanation of causes of employee's leaving as well as a decision how to solve this problem is another kind of costs identified by Bliss (2012). In costs associated with the turnover of employees, this time is reflected in the form of manager's labour costs. The calculation of overall costs relating to manager's time (C_{tm}) involves average time spent for the exit interview with the leaving employee (t_{EI}), average time spent in discussions with personnel officer about causes and possible solutions of this loss (t_D), wages fund of employees (WF), and manager's super gross salary (S_M).

$$C_{tm} = \frac{(t_{EI} + t_D)}{WF} \times S_M.$$

In case that the employee decides to leave the company, managers should try to reveal the causes of his/her resignation. According to Branham (2009), managers mentioned that the main reason of employees turnover were wages (and/or a better offer of jobs from the side of competitors). Similar reasons were mentioned also by Buchtová (2002) and Robinson (2008). Branham (2009) identified more than 57 reasons of a voluntary resignation of employees and he summarised them into 7 categories. Smith (2012) identified altogether ten the most frequent causes of a voluntary turnover.

Performing of the exit interview, settlement and finishing of job contract

Costs relating to the termination of employment (C_{TE}) involve the time of personnel officer spent for the exit interview with the leaving employee (t_{EI}), time of the leaving employee (t_E), time spent for carrying out written and electronic forms of administrative steps associated with the job termination (t_{AS}), single costs of wage settlement (C_{ws}), wages fund (WF), super gross salary of the leaving employee (S_E), and super gross salary of the personnel officer (S_{PO}).

$$C_{TE} = \frac{(t_{EI} + t_{AS})}{WF} \times S_{PO} + \frac{t_E}{WF} \times S_E + C_{ws}.$$

The time of the leaving employee (t_E) may consist of time spent for the exit interview, time spent for the acquisition of a certificate about his/her liabilities issued in the form of the exit certificate, and time spent for the exit health examination.

Costs of wage settlement (C_{ws}) consist of average compensation money (CM) and of average bonuses (B) that were paid to employees per year divided by the average annual number of employees (N_E).

$$C_{ws} = \frac{CM + B}{N_E}.$$

The right to receive compensation money have those employees who were either dismissed by the

employer or finished their employment on the base of an agreement due to organisational changes; this compensation represents one to three average wages (Labour Code 2012).

Investments into the education and training of the leaving employee

Investments into the education and training of the leaving employee (C_I) can be estimated on the base of share of total annual investments into the education and training of employees (I) divided by the average annual number of employees (N_E).

$$C_I = \frac{I}{N_E}.$$

Loss of leaving employee's knowledge, skills and contacts

Costs associated with the loss of knowledge, skill and contact of the leaving employee (C_{KS}) are estimated on the base of the annual super gross salary (S_E) and the number of years the employee spent in the organisation (Y). Percentages were mentioned by Bliss (2012).

$$C_{KS} = 50\% \times S_E + 10\% \times Y \times S_E.$$

SUMMARY

Fluctuation of employees represents a frequent and permanent problem in many companies. A high rate of employee turnover is an undesirable phenomenon in each company. This concerns not only departures of skilled employees but also the recruitment and hiring new ones because these people need certain time to learn about and to adopt processes that are established and quite common in their new workplace. The turnover of employees is associated with and results in a lot of costs. The aim of this paper was to elaborate a general methodology of calculation of costs resulting from this phenomenon. The authors tried to identify only costs resulting from the loss of an employee; they did not analyse costs associated with the recruitment of new employees. According to Bliss (2012), costs resulting from the loss (leaving) of an employee involve expenses resulting from the temporary substitution of the leaving employee and compensation of the labour output performed in the vacant job/working position, costs necessary for the performance of the exit interview, and those associated with the termination of job contract. The author of this paper also formulated equations enabling to estimate the value of manager's time required for understanding and explanation of causes of employee's departure and money spent for the education of the leaving employee. Another important part of costs associated with the employee turnover is related to the loss of their knowledge and, last but not least, also costs associated with a decrease in productivity of both the employee and his/her department. For the estimation of all these costs and expenses, the authors elaborated and suggested a detailed set of general mathematical formulas/equations. These economic calculations are adapted to and take into account the current taxation policy of the Czech government. Overall costs associated with the employee turnover may be as much as 1.5 – fold higher than the average annual wage of the leaving employee.

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