

Costs of quality in the appraisal of an organisation's human resources by means of selected (cost-based, income-based, multiplier, and mixed) methods

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Abstract

This article's subject matter combines the issues of human resource management, quality management, and value management. The issue of appraisal has been limited to the micro (management) level, although it can also relate to the macro (economic) level. It has been assumed that, as a fairly complex process, diagnosing the value of human resources in an organisation entails costs (also quality costs) if its objective is to achieve reliable and correct results. The goal of this article is to identify such costs, taking into consideration the process of selecting a human resource appraisal method, algorithms of applying particular selected methods, and applications of achieved results. The author has relied on both the classical and newer appraisal methods presented in the literature on this subject as well as the classification of quality costs proposed by Bank.

Paper type: conceptual article

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Introduction

The appraisal (valuation) of human resources in an organisation causes many more difficulties than the appraisal of the value of tangible assets (Lipka, Król, Waszczak, & Satoła, 2008, pp. 103–109). Although this type of appraisal has been the subject of considerations in the worldwide literature on the subject since the middle of the 1960s, its reliability is still far from perfect and continues to raise numerous doubts (Gebauer, 2005, p. 216). Therefore, it is reasonable to review the existing appraisal methods within the context of quality, or more precisely – quality costs.

In view of the usefulness of the continuation of the author's previous research (Table 1), this article is based on the classification of quality costs proposed by Bank (1999). This classification comprises the following elements:

- costs of conformance (costs of prevention and appraisal),
- costs of non-conformance (costs of external failures, costs of internal failures, costs of exceeding requirements), and
- costs of lost opportunities (costs of lost benefits).

The objective of this article is to identify quality costs in accordance with this classification, taking into consideration the process of selecting a human resource appraisal method, algorithms of applying particular selected methods, and applications of achieved results. The scope of the analysis comprises the methods being “representatives” of the most frequently presented groups of appraisal methods together with their divisions presented in the literature on the subject (Bechtel, 2006, pp. 38–39, 51–54, 82–83).

The article focuses on the verification of the following hypothesis: In the case of all analysed human resource appraisal methods, it is possible to identify all types of quality costs included in Bank's (1999) proposal.

This classification of quality costs can be also applied to identify such costs within the process of selecting a human resource appraisal method. It seems that, apart from investigations conducted by experts, the only effective method of verifying the hypothesis is inference based on a critical analysis and evaluation of the literature on the subject. And this particular method is used in this article.

Table 1 *The author's own and co-authored publications concerning the application of the concept of quality costs to the area of human resource management*

Particular research area	Type/method of analysis	Source
Indexes of quality costs of personnel activities and services Examples of quality costs for selected personnel activities, e.g. derecruitment	Theoretical and methodological analysis	Lipka, 2005b, pp. 25, 45–48
Tendencies in changes of costs related to quality-oriented activities	Theoretical analysis	Lipka, 2007, pp. 13–27
Optimisation of quality costs from the perspective of personnel risk	Theoretical analysis	Lipka, 2009, pp. 339–350
Identification of quality costs of personnel processes and projects supporting knowledge management	Analysis of 17 cases; measures and indexes of quality costs	Lipka, Król, Satoła, & Waszczak, 2009, pp. 49–80, 89–118
Quality costs of autotelic motivating; relations: quality costs – risk of shaping internal motivation	Theoretical analysis supplemented with exemplification	Lipka, 2010b, pp. 34–45, 53–54, 79–107, 121–203
Quality costs of various types of investments in human resources	Exemplification for 22 various types of investments	Lipka, 2010a, pp. 286–297
Quality costs of managing employee loyalty programmes	Theoretical analysis together with exemplification	Lipka, Winnicka-Wejs, & Acedański, 2012, pp. 15–161
Quality costs of preparing and conducting experiments in the area of human resources management	Exemplification of quality costs of experimenting	Lipka, Waszczak, & Winnicka-Wejs, 2015, pp. 83–84
Issue of reducing consequences of (cyber) discredit by quality costs	Theoretical analysis	Lipka, Król, Waszczak, & Winnicka-Wejs, 2016, pp. 123–124
Personnel activities preventing social exclusion and their quality costs	Theoretical analysis	Lipka, 2005a, pp. 207–217

1. The quality costs of the process of selecting a human resource appraisal method

The process of selecting a human resource appraisal method is determined by various conditions. It occurs after a decision according to which an organisation will be carrying out such an appraisal because related expenditures are lower than benefits. The documenting of the existence of such conditions by appraisal specialists can be considered as prevention costs. They are connected with the costs of appraising various groups, and within their scope – types of appraisal methods.

The aforementioned conditions include determination whether a particular method can be applied in a given enterprise. The possible barriers include the following:

- the number of employees,
- the diversity of the organisation's human resources,
- the incompatibility of the method with the appraisal basis expected by the company,
- the lack of concurrence between the method and the company's expectations regarding considered temporal perspectives,
- access to data,
- not taking into consideration the internal contextual factors (strategy, structure, culture) of the organisation's functioning,
- the turbulent environment,
- not taking into consideration flexibility and the organisation's implementation of the lean management concept,
- incompatibility with the ideas of work-life balance and downward movement,
- failure to meet the expectations regarding the form of expressing appraisal results,
- impossibility of documenting the relation between human resource management and the value of such resources.

An obvious general barrier (not connected to any particular appraisal method) is the lack of appraisal specialists in a company or the economic inefficiency of employing such specialists or training them internally. A given method can also prove unprofitable because of considerable expenditures necessary for its application. In such cases, it is appraisal specialists who decide whether the basic criterion for the selection of an appraisal method is the quality of results or the effectiveness of the procedure itself (in which quality and other effects of the procedure are determined in relation to incurred expenditures). This choice can be influenced by not only knowledge but also the attitude of the aforementioned specialists to methods based on costs, income or strategic value carriers, as well as variables included in such methods. The selection of a method based on an improper prioritisation of selection criteria generates costs of lost benefits (lost opportunities), while adjustments made to such a selection – depending on their time – generate the costs of internal errors (before an appraisal is made publicly known) or external errors (after an appraisal is made publicly known). Prevention costs, including an analysis of trends in the evolution of appraisal methods, a verification of the degree to which the proposed appraisal method meets relevant requirements (e.g. that of objectivity), can decrease the scope and weaken the consequences of non-conformance costs.

Prevention costs make it also possible to lower costs of lost opportunities consisting in not selecting a particular appraisal method which, in the case of comparable expenditures, would provide data concerning various areas, e.g. both enterprise appraisal and personnel controlling (Lipka, 2014, pp. 81–97).

2. The quality costs of using the replacement method

The replacement method proposed by Flamholtz in 1971 belongs to the group of cost-based human resource appraisal methods together with, among others, the historical cost method developed by Brummet, Flamholtz, and Pyle. For the purposes of this analysis, the former method has been selected as it contains more cost elements than the latter (Flamholtz, 1985, p. 11). It is an individual employee that constitutes a methodological foundation for value determination in the replacement method. This method disregards the internal contextual conditions of an organisation's functioning, i.e. its strategy, structure, and organisational culture.

The application of the replacement method gives results expressed in monetary terms. Depending on whether it is conducted during the appraisal process or during the application of its results, the verification of such results entails non-conformance costs: internal ones or external ones. Non-conformances may concern any of the three appraisal elements, i.e. acquisition costs, training costs and/or redundancy costs. Within acquisition costs, they may be related to indirect costs (of promotion or employment within an organisation) and/or direct costs (of a job description and/or recruitment and/or candidate selection and/or employment). The identical cost structures with respect to acquisition costs in both the replacement method and the historical cost method result in the occurrence of the same quality costs in the case of the latter method. As far as training costs are concerned, the adjustment of non-conformances within quality costs may refer also to indirect costs (in this case, in the form of an instructor's working time) or to direct costs, i.e. formal on-the-job education and/or training. Non-conformance costs comprise also redundancy costs (which do not occur in the case of the historical cost method). Direct costs are related to adjustments to the level of remuneration immediately before an employee's departure, while in the case of indirect costs, such adjustments concern a degree to which work efficiency falls before an employee's departure and/or the costs of a vacancy before a new employee is hired. The level of such costs depends, among other things, on the current situation in the labour market. If the replacement method is followed, the aforementioned non-conformance costs may be high in view of the fact that "the market is a basis for determining the replacement value of resources in a business enterprise. However, this measure may be regarded as subjective because managers may assign various values which they consider as replacement costs to the particular elements of the model" (Dobija, 2003,

p. 134). In order to reduce the scope of errors in the appraisal of such cost elements, prevention costs and appraisal costs may be incurred within the scope of conformance costs. Appraisal costs concern also the determination of expenditures on employee recruitment, introduction, and development. If these costs are too high because of excessively detailed analyses or appraisals, costs of exceeding requirements occur. Costs of exceeding requirements indicate that expenditures on the personnel processes are not in a profitable relation to their effects in the form of a higher quality or value of a new employee replacing the one who has left the company. In particular cases, it is possible that no replacement costs will appear because of advanced technologies or the absence of employees with required skills and qualifications in the market (Dobija, 2003). Then the application of the human resource replacement cost model entails costs of lost opportunities. Such quality costs occur also because of variables in the analysed method, which takes into account economic variables only. Another condition for the generation of such costs is the fact that, "In the replacement method (...), the value of human capital (human resources of high quality and value) is determined as at the date of the 'replacement necessity,' which entails the impact of the current (present) situation in the labour market on the value of human capital" (Bochniarz & Gugąła, 2005, p. 26). Thus costs of lost opportunities are the consequence of not taking into consideration either historical data or prospective data. The replacement method takes account of inter-individual differences and also the issues of flexibility and the implementation of work-life balance and downward movement, as well as lean management. Therefore, costs of lost opportunities incurred in this context are not related to this method.

3. The quality costs of using the discounted cash flow method

Developed by Flamholz in 1975, the discounted cash (revenue) flow method has returned to considerable popularity recently. It belongs to the group of income-based appraisal methods. It allows one to appraise an employee following a particular career path (Bochniarz & Gugąła, 2005, p. 26). Thus it takes into consideration an organisation's structural context (organisational structure).

Conformance costs (prevention costs and appraisal costs) concern the very determination of a career path. As implied by the method, they can also refer to the possibility of managing allocation as well as motivation risk (motivating employees to move to higher positions) and derecruitment risk, and thus to the possibility of shaping the quality of these processes. On the other hand, (internal or external) non-conformance costs related to the use of this method may be connected to errors in determining added value generated at particular positions by an employee who holds them during the course of her career. Such errors, in turn, result from misjudgements in determining revenues and/or costs. Furthermore, errors of this

type can be made while determining the probabilities of a given employee's transfer to higher positions or leaving the organisation. They can also occur in calculating the expected and discounted values for particular years, thus distorting the acquired result. If the principal of annual capitalisation is not adopted in calculations, what appears is costs of exceeding requirements – another element of non-conformance costs. The growth of the enterprise or the occurrence of unstable revenues causes the necessity of giving up the method, which entails costs of lost opportunities. In connection with such costs, the method uses economic variables and takes into account prospective (not historical) data only in order to calculate the current value of incurred expenditures. With respect to costs of lost opportunities, inter-individual differences are disregarded as well because, in the analysed method, it is the types of job positions that constitute its methodological basis of reference. But the method takes into consideration flexibility and lean management, as well as work-life balance and downward movement, hence there occur no costs of lost opportunities related to these factors.

4. Quality costs in the A. Mayo Monitor

Developed in 2001, the A. Mayo Monitor is a multiplier method because the value of human capital (of an individual, team or a whole organisation) determined on the basis of this method is the product of the value of a multiplier and a variable functioning as a basis for comparisons. The level of appraisal costs (within the meaning of conformance costs) and – in the event of errors – the costs of internal or external errors determine the reliability of the appraisal of the four aspects included in the Monitor (Mayo, 2001), i.e. a talent profile, a potential profile, a contribution to the creation of value, and conformance with values important to an organisation (the last aspect proves that the cultural context is taken into account in value determination).

Errors may concern, for example, an incorrect assignment of a score (0.5, 1.0, 1.5 or 2.0) caused by a wrong interpretation of an employee's hierarchy of values as compared to the values embedded in organisational culture. Such errors are facilitated by the lack of objectivity in the appraisal of the aspects, the complex character of the method, or the scope and detail of information (Pocztowski, 2004, p. 180). On the other hand, the appraisal method based on a point scale does not entail costs of exceeding requirements. Also, there occur no costs of lost opportunities because:

- a mix of economic, psychological, and organisational variables is not taken into consideration,
- there are no references to prospective data,
- the diversity of human capital in the organisation is not taken into account.

But this type of costs does occur when:

- the impact of human resource management practices on the value of human capital is not determined,
- flexibility, lean management, work-life balance and downward movement are not taken into consideration.

5. The quality costs related to the application of the Saarbrücken formula

The Saarbrücken formula was invented by Scholz, Stein, and Bechtel (2006, p. 10) in 2005. It should be remembered that the authors did not provide all details of its application algorithm, most probably for commercial reasons. It is one of the mixed appraisal methods. Its methodological basis of reference comprises employment categories (groups). Conformance costs or non-conformance costs influencing appraisal reliability are connected with the appraisal of all elements included in the formula, i.e.:

- basic value (the number of employees in terms of full-time positions),
- loss of value (obsolescence of knowledge),
- compensation of value (intensity of training activities),
- changes in value (changes in market salaries, motivation, employee retention) diverging from the established procedure of their determination (e.g. with respect to determining employees' motivation) and relational dependencies occurring among them.

Failure to use this method means giving up the opportunity not only to base an appraisal on historical and prospective data as well as strategic value carriers and various, not only economic variables, but also to use such an appraisal to determine the following:

- progress in the implementation of a personnel strategy (e.g. an offensive strategy or a development and stimulation strategy) and its communication within the organisation,
- contribution of particular personnel activities to the value of human resources,
- the effectiveness of human resource management practices (including the use of flexibility, lean management as well as work-life balance and downward movement), which is related to costs of lost opportunities.

Costs of this type will not occur in connection with taking into account the most frequently analysed features of the diversity of human resources (the features of the primary identity and secondary identity).

Conclusions

This article presents two older (from the 1970s) and two newer (from after the year 2000) methods of appraising human capital in/of an organisation which represent the following groups of methods:

- cost-based methods,
- income-based methods,
- multiplier methods,
- mixed methods.

Providing examples for each elementary type of quality costs as defined by Bank (1999), the author has demonstrated that they can be applied with respect to each of the aforementioned methods of this classification. It has been shown further that this classification can be used in the appraisal method selection process. The discussed problems should be assigned to the qualitology of human resources because quality costs are its inseparable part. It seems that, in the conditions of demographic deficits, the concept of quality costs in the field of human resource management will be gaining in importance in view of the necessity of compensating such deficits with improved quality of such management. Additionally, quality costs can be related to each personnel process/activity, i.e. not only to human resource appraisal (constituting a part of research on such resources assigned to the strategic management level [Scholz, 1989]).

In further research on the issues presented in this article, one could apply Bank's concept of quality costs or other structural presentations of such costs to the other methods of appraising human resources in organisations. Another possibility is an attempt to determine the level of such costs.

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