

ACCOUNTING OPTIONS AND LIMITS IN QUANTITATIVELY DETERMINING THE ADDED VALUE OF HUMAN RESOURCE MANAGEMENT

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ABSTRACT

The task of human resource accounting is to establish the added value of the individual employees. This is determined with the help of other company departments so the applicable data can be collected, processed and evaluated. Only quantitative factors such as costs, economic feasibility and profitability are taken into account for this. With qualitative factors, measuring and determining viable numbers is problematic.

The present work demonstrates options and limits which quantitatively determine the added value of human resource management.

Many approaches are described for evaluating the measuring of human capital: for one, the necessary data can be ascertained or calculated by the accounting system. For another, the market directly supplies the data. A very popular method companies use is working with indicators. The final procedure is the results-oriented approach.

In the added value HR centre, the value of the employee is measured on the basis of the management, service and business dimensions. The management dimension illustrates the way strategy and effectiveness are organised in the HR department. The evaluation as well as the implementation of strategic tasks by the HR department and management are paramount here. In the service dimension, the tasks established in the management dimension are optimised. The business dimension deals with the financial, economical and added value-oriented management, also called financial management.

The limits will subsequently be described upon determining the human capital. Thus, figures can be very useful, however they must be viewed in a critical light because they always assume the ideal case. False figures can occur due to the smallest changes in the market or inaccurate data collection by the HR accountant. Data relating to personnel cannot be readily ascertained, processed and collected. Every company must comply with the data protection policies and employment law regulations in the country of residence.

KEY WORDS: human resource accounting, added value human resource centre, human capital

INTRODUCTION

The employee is the key to the company's success in many ways. From the top management position to the worker, everyone makes their added value contribution to achieve the company's objectives. While the managerial tasks are administered on the level of management, the lower hierarchal levels are where the work is carried out.

Measurement of success factors in the HR department occurs through human resource accounting, which can fall back on many different options to quantitatively determine the added value. However, a human resource accountant is also limited in measuring human capital.

The present work addresses the question of which options and limits exist in human resource accounting in regard to added value for the company. Measuring added value has fundamentally changed over the past few years; the reason for this is the history of human resource accounting. New methods and procedures are constantly being developed due to the new perspective of the relationship between a company's success and the employees. Today,

the accountant has a substantial range of options available, depending on the objectives of the measurement. Each method has its own advantages and disadvantages.

MATERIAL AND METHODS

First, the various human resource accounting approaches will be briefly described. The focus here is on the implementation and dimensions in human resource accounting. Under point 2, the individual methods and procedures for quantitatively measuring added value in HR management are summarised. A strong relation between the methods to determine and evaluate measuring human capital will be demonstrated, as well as a more accurate analysis of the added value HR centre. In the final section, the limits for the accountant in processing and collecting personnel data will be illustrated.

This subject will heavily refer back to books from the last 20 years because determining human capital does not have a very long history, and methods from the last 20 years are continuously being improved. This subject is in reference to German companies for the most part. These methods can be implemented globally, however different regulations and laws must be complied with depending on the country.

RESULTS AND DISCUSSION

1. Human resource accounting approaches

1.1. Implementing human resource accounting

The main task of human resource accounting is to advise and support company management in its objectives. Thus, human resource accounting can be implemented at many points in the company, for one as a staff position with a purely consultant function, or human resource accounting can take on a line function.¹

1.2. Dimensions in human resource accounting

As support to the company management, the task of human resource accounting is to supply the applicable data and figures. These include the current and future personnel work, as well as the current employment of staff and the anticipated personnel requirements. For one, qualitative dimensions in being able to track the data must be considered, such as psychological and social aspects. Qualitative aspects can, on the other hand, only be determined with difficulty in the applicable values because employee satisfaction, motivation, identifying with the company, management style and work climate, for example, cannot be measured. With quantitative aspects it is completely different. With the help of certain tools, these data are accessible and easy to understand for management as well as outsiders in the applicable figures. The figures refer to employed workers at the company in regard to number, structure and costs.²

2. Added value-oriented evaluation of HR management

2.1. Quantitatively determining HR management

Quantitatively determining HR serves as a big contribution to the process of added value for the company.³ For planning, management and supervision, only quantitative aspects are considered, for example costs, economic feasibility and profitability.⁴ With human resource accounting, cooperation between financial management and human resource accounting is unavoidable, that is, both of these departments cannot be in competition with each other, rather, their work should complement one another.⁵ On the basis of the illustration of the three

¹ Cf. (Peemöller, 2005), page 88

² Cf. (Deutsche Gesellschaft für Personalführung (Hrsg.), 2009), page 21-23

³ Cf. (Brinkmann, 1991), page 45

⁴ Cf. (Zdrowomyslaw, 2007) page 55

⁵ Cf. (Papmehl, 1999), page 46

levels model according to Wunderer/Sailer, in which accounting of costs, efficiency and effectiveness is carried out, quantitative human resource accounting can be comprehensively described, expanded on and improved.

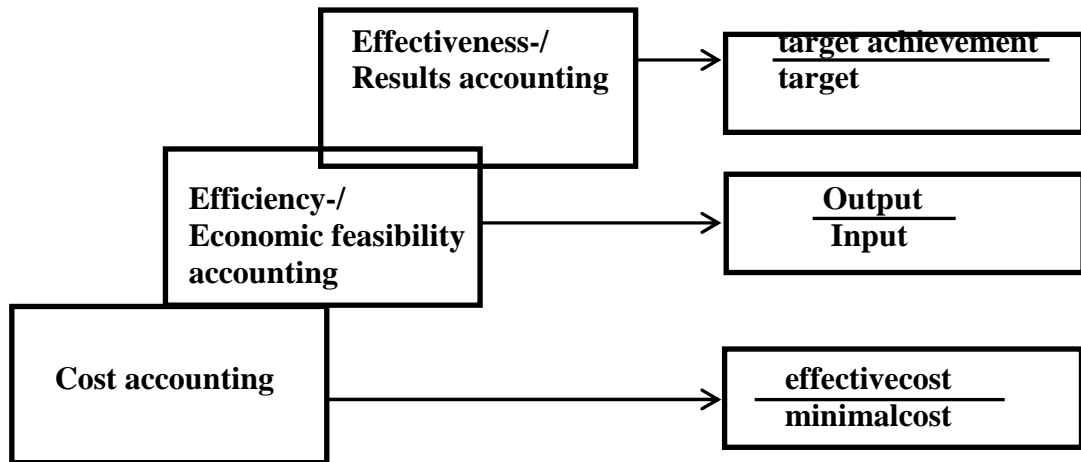


Illustration1: the three levels of HR accounting(Source: own representation based onWunderer (2001), page 418)

The first level consists of cost accounting, in which employee costs and department costs are periodically recorded in order to plan and regularly monitor them. Efficiency accounting (economic feasibility accounting) is on the second level, which evaluates and analyses the productivity of employee output by comparing actual and planned resource operations for personnel management processes.⁶ By monitoring and evaluating the individual processes or operations, and with a final determination of the resource requirements in question, minimising the resource operations for human resource management should be achievable. The aim is to optimise the resource operations and costs of individual operations. The necessary data for this can be gained from the accounting department.⁷ Effectiveness accounting (results accounting) demonstrates the profit contribution of employment output for the company's success.⁸ In this context, important figures such as additional personnel costs, costs for taking leave, turnover costs, and legal costs, for example, are of great significance. With the use of data processing tools, the effectiveness of the individual departments can be calculated and made transparent, so that a target/performance comparison can be undertaken at any time.⁹ There is the option to make a time comparison in which the costs can be compared with past terms. Comparing the figures with figures from other company departments (internal comparison), as well as with other companies which have different operations in the same or a different industry, is also an option, which in practice is called benchmarking. This is a simple comparison of figures, whose significance depends on the comparability of other figures.¹⁰

2.2. Evaluation methods for measuring human capital

There are many approaches and methods for evaluating human capital. They are differentiated between by accounting-oriented, indicator-based and results-oriented approaches.

2.2.1. Accounting-oriented approaches

The accounting-oriented approaches aim to record the value or the added value of the personnel in the balance sheet. This is made possible by two different human capital

⁶ Cf. (Wunderer & Schlagenhauser, 1993), page 22

⁷ Cf. (Berthel, 2004), page 1444

⁸ Cf. (Wunderer & Schlagenhauser, 1993), page 22

⁹ Cf. (Papmehl, 1999), page 47

¹⁰ Cf. (Scherm & Süß, 2010), page 225

accounting approaches. With the first approach, the input-oriented side is recorded, that is, all expenditure incurred by personnel is recorded (human resource cost accounting). With the second approach, the value of the personnel is accounted for on the earnings side. With this evaluation method, attention is mainly focused on output-orientation (human resource value accounting).¹¹ The task of accounting is to determine the financial values of the human resource and try to carry out corporate billing of these resources.¹²

With the input-oriented perspective, also called an expenditure-based approach, the method of approach is in the sum of capital that the company invests in its employees and the costs that the company would have to expend to replace the employee.¹³ Human resource cost accounting follows the costs already implemented or the estimated costs of the HR department.¹⁴

Human resource value accounting is oriented towards the costs of salaries and wages. The value of personnel is a proportional share of the company's profits. The aim of this method is to quantify the human capital for future contribution uses on the part of employee willingness on the basis of financial and non-financial performance contributions.¹⁵

2.2.2. *Indicator-based approaches*

The indicator-based approaches should identify the cause-and-effect relationships of measures based on their results. Indicators are based on indirect measurements. It is often not possible to completely determine phenomena related to personnel, therefore they are carried out with the help of indicators in one or multiple types of dimensions.¹⁶ For this reason, only a theoretical construct should be constructed from the indicators. The indicators are differentiated between with reference to the construct as follows:¹⁷

- Full/partial indicators (for example: the price of crude oil is an indicator of petrol prices)
- Partially identical indicators (for example: income per head of the population is an indicator of standard of living)
- Non-identical indicators (for example: negative correlations between general unemployment and sick leave)
- Direct measurement (for example: economically defined profits for the company)

There are many approaches in the references for indicator-based methods; the most significant are the EFQM model and the balanced scorecard.

2.2.3. *Results-oriented approaches*

Results-oriented approaches measure which results the company achieves from employing personnel. To determine the success of the company, the various resources are distributed with reference values:¹⁸

¹¹ Cf. (Streich, 2006), page 66

¹² Cf. (Papmehl, 1999), page 77-79

¹³ Cf. (Papmehl, 1999), page 79

¹⁴ Cf. (Jung, 2011), page 535

¹⁵ Cf. (Papmehl, 1999), page 79

¹⁶ Cf. (Eichenberger, 1992), Seite 89-95

¹⁷ Cf. (Wunderer & Jaritz, 2007), page 23

¹⁸ Cf. (Jansen, 2008), page 237-238

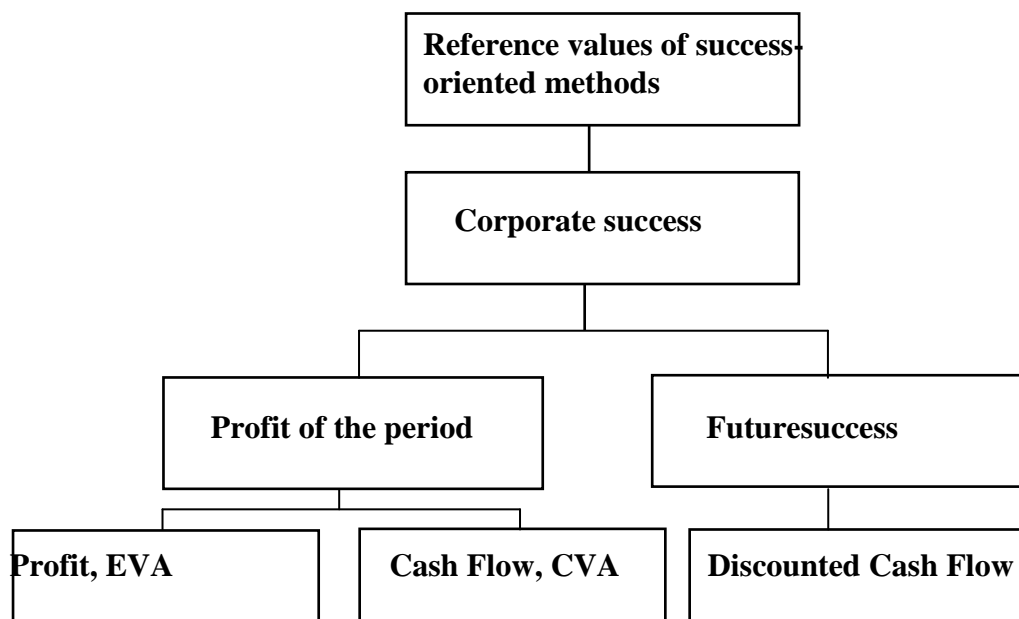


Illustration2: reference values of the results-oriented approaches(Source: own representation based on Jansen (2008), page 238)

2.3. Measuring added value in the added value HR centre

Measuring added value refers to personnel management processes.¹⁹The aim of HR accounting is to demonstrate and supervise the benefits or the “added value” performance data of the employee’s work. On the management level, essential decisions and suggestions are provided early on in order to then be able to initiate measures in good time.²⁰

The added value HR centre has all required main functions for fulfilling tasks in its system and is therefore a strategically designed, independent business unit responsible for profits. The structures of the main functions in the HR department are as follows:²¹

- Personnel research / personnel development
- Personnel marketing
- Personnel training
- Personnel administration / management systems

Supervising the added value centre occurs via three dimensions, which will be described in the following – the management dimension, the service dimension and the business dimension.²²

2.3.1. Measuring added value in the management dimension

The management dimension should identify the organisation of strategy and effectiveness in the HR department; determining strategic tasks and their implementation by the HR department and management is the priority.²³In this dimension, the problem of measuring added value is that the strategic considerations of an objective, quantitative and direct evaluation is only accessible with difficulty.²⁴To be able to critically challenge quantitative analyses, a qualitative evaluation must be made as an integral method.²⁵Measuring the added

¹⁹ Cf. (Wunderer & Jaritz, 2007), page 203

²⁰ Cf. (Zdrowomyslaw, 2007), page 111

²¹ Cf. (Wunderer & von Arx, 2002), page 49

²² Cf. (Jung, 2011),page 47-49

²³ Cf. (Jung, 2011), page 48 / (Wunderer & Jaritz, 2007), page 249

²⁴ Cf. (Wunderer & Jaritz, 2007), page 249

²⁵ Cf. (Hinterhuber, 1996), page 273

value occurs from this by developing and utilising potential for success. This dimension can only be produced with indicators because the potential for success itself cannot be measured. Success factors can be measured with a system-oriented company approach, e.g. in technological (thinking in quantity, time and quality), economical (thinking in values) and social (thinking in appreciation, requirements and roles). The objective of the management dimension is, above all, to quantify the profit contribution, that is, it is a matter of the technological, economical and social evaluation of the strategic concepts of HR and their implementation. The first goal is the structure and security of potential for success.²⁶ According to Gerpott, four methods of measurement can be differentiated between in HR for quantitatively determining a profitability analysis: a cost-comparison analysis, a cost-benefit analysis, a cost-effectiveness analysis and a value-benefit analysis.²⁷

2.3.2. *Measuring value in the service dimension*

This dimension deals with the economical value of a high level of service.²⁸ The service processes in the company are monitored and optimised by restructuring individual operations for the benefit of the customer.²⁹ The specified objectives in the management dimension, as well as in service philosophy and culture, are substantiated by creating processes which are quality-oriented and customer-oriented.³⁰ The added value of the service dimension can only be quantitatively determined with difficulty, because qualitative dimensions in particular play a role. An example of evaluating service quality is the importance of service qualifications in the HR department. Competency, reliability, responsiveness, communication, comprehension, contact and manners are evaluated and summarised for this. The data are gained on the basis of surveys carried out with customers, suppliers, or an internal company department.³¹

Clearly measuring the service quality provides the factor of time. Usually, fast process and reaction times of personnel lead to higher service quality.³² However, it must be kept in mind that determining the times is only one indicator, which can be considerably influenced by other indicators, in the added value of the HR department.³³

2.3.3. *Measuring added value in the business dimension*

The business dimension deals with the financial, economical and added-value management, however the focus is on the financial and cost-analysis aspects. The purpose is to evaluate the financial benefits of services on the basis of cost, revenue and profit centre conceptions.³⁴ It deals with traditional dimensions of accounting such as costs, expenditure, yield, profit margin, economic feasibility and profitability. On the basis of these data, the management, as well as service dimensions, are to be monitored and profitability calculations of the individual services are to be made. Optimising the costs, that is, optimisation of processes and resources is the priority.³⁵

In the business dimension, four areas are differentiated between for measuring added value. The individual levels are connected to each other and support each other:³⁶

1. Discretionary-expense-centre level
2. Cost-centre level
3. Revenue-centre level

²⁶ Cf. (Wunderer & Jaritz, 2007), page 250-253

²⁷ Cf. (Gerpott, 1995), page 23

²⁸ Cf. (Wunderer & Jaritz, 2007), page 280

²⁹ Cf. (Jung, 2011), page 48

³⁰ Cf. (Wunderer & von Arx, 2002), page 54

³¹ Cf. (Wunderer & Jaritz, 2007), page 287-298

³² Cf. (Kiehn, 1996), page 71-75

³³ Cf. (Wunderer & Jaritz, 2007), page 290

³⁴ Cf. (Wunderer & von Arx, 2002), page 55-57

³⁵ Cf. (Jung, 2011), page 48

³⁶ Cf. (Wunderer & Jaritz, 2007), page 312

4. Profit-centre level

These various business centre concepts are summarised by Wunderer/v. Arx in a three centre organisation³⁷ for the HR department:³⁸

- Expense-/ Cost-Center
- Revenue-Center
- Profit-Center

The discretionary expense centre deals with the budget-controlled overhead cost management.³⁹ Reducing the level of overhead or improving cost-benefit relationships is the actual aim of this centre.⁴⁰ Traditional budget management does not offer an ideal method of resolution, because exact inventory changes are not considered in the budget processes as future expenses can only be established on the basis of past data and the relevant developments. This can lead to inaccurate calculations due to a lack of cost transparency.⁴¹

The basis of the cost centre is in cost and performance accounting. The cost control objectives according to the profitability principle are the priority. The cost centre is an organisational section in which cost comparisons are constantly undertaken with the services of other companies on the market.⁴² This is corporate safeguarding on behalf of management, which is implemented as a management concept, that is, management of these services for the predetermined budget. Because these data are very critical of the results and specific to the company, they are not offered on the external market.⁴³

There are different variations for quantitatively determining added value, which are however in large part mainly focussed on the variable individual costs, and thus on industrial production. But because the overhead instead of variable costs are not differentiated between in HR, the cost accounting process is appropriate for determining them.

The revenue centre deals with the turnover of HR services of external customers. In contrast to the cost centre, where everything is about consumption of commodities, this level of business dimension deals with turnover.⁴⁴ It forms a basis for pricing policy with the help of cost accounting to determine the cost-effective process for products and services. On the other hand, the applicable reference values for calculating the services as the purchaser must be created. This can occur by adjusting the cost accounting procedure.⁴⁵ To quantitatively determine the added value, the revenue centre drafts a performance analysis. In the past, the performance analysis has been much neglected in comparison to cost accounting. Considering this, it is not surprising that the cost-oriented perspective has dominated in HR. Cost accounting only begins when the concept development and production procedures for products and services have been established. The aim is to determine and calculate cost fluctuations.⁴⁶

The profit centre deals with the internally operated accounting of services, both generally as well as specifically, for HR. HR can be seen as an internal service provider, which on the one hand must fulfil its service obligations to internal customers, and on the other hand is

³⁷ Wunderer & von Arx summarise level 1 (discretionary expense centres) and level 2 (cost centres).

³⁸ Cf. (Wunderer & von Arx, 2002), page 56

³⁹ Cf. (Wunderer & Jaritz, 2007), page 312

⁴⁰ Cf. (Melzer-Ridinger, 2008), page 130

⁴¹ Cf. (Wunderer & Jaritz, 2007), page 312-313

⁴² Cf. (Wagner, 1998), page 62-64

⁴³ Cf. (Wunderer & von Arx, 2002), page 259-260

⁴⁴ Cf. (Wunderer & Jaritz, 2007), page 333

⁴⁵ Cf. (Wunderer & von Arx, 2002), page 270

⁴⁶ Cf. (Peemöller, 2005), page 294

responsible for achieving results.⁴⁷ On the basis of empirical research, Robert Eccles has proven that there is a connection between the type of internal prices and the type of organisation. He categorises them in four organisational ideal types, which differ depending on their vertical integration and diversification (cooperative, collaborative, collective and competitive).⁴⁸

3. Limits of accounting in determining the human capital

Figures are an important aid for accounting in order to evaluate the human resources and additionally serve as a basis for decision-making at management level. However, it must be kept in mind that the application usually takes place on the basis of average values and thus is not necessarily relevant to individual cases. The task of accounting is to filter the maximum amount of information from unmanageable data quantities.⁴⁹ This creates the following problems: generating inflated figures, errors in establishing the figures, a lack of consistency in the figures and problems with monitoring the figures.⁵⁰ An additional problem is that qualitative factors such as employee satisfaction, identifying with the company or motivation, for example, are difficult to measure, or cannot be measured at all, and thus cannot be included in the evaluation. In order for accounting to properly determine the added value in HR, it requires access to important personal data. However, this is not always possible because a considerable amount of legal regulations must be complied with, which restrict access to personal data.⁵¹ First and foremost, the fundamental, protected rights of informational self-determination must be adhered to, as well as the EU data protection regulations 95/46/EC and the Federal Data Protection Act (FDPA). Additionally, for the operational use of an electronic HR accounting system, the Industrial Relations Law (IRL) must be taken into account.⁵² These regulations are to protect individual employees from the collection, storage, processing and forwarding of their personal data.⁵³ However, accounting usually does not collect any data, instead it only evaluates existing data such as the formation of figures for example, which are still directly affected by the regulations. If the purpose of use cannot be clearly justified or there is no sufficient reason, accounting is prohibited from collecting and processing personal data.⁵⁴ Every employee must also provide written consent for data protection regulations in order for accounting to be able to process and collect them. The employee is free to make this decision. The extent to which this is possible in the scope of a working relationship is questionable.⁵⁵

The participation of the workers' council plays a large role in the type of industrial relationship in the company, which is also regulated by the Industrial Relations Law. The focus of co-determination in business are social and personal issues, the design of work spaces, work processes and working environment, as well as participation in business matters.⁵⁶

CONCLUSION

To summarise, it is possible to determine the HR added value quantitatively with the tools described in the text, but not its complete value. Aside from the quantitative aspects, possible

⁴⁷ Cf. (Jung, 2011), page 47-49

⁴⁸ Cf. (Eccles, 1985), page 279

⁴⁹ Cf. (Merkle, 1982)

⁵⁰ Cf. (Wunderer & Jaritz, 2007), page 28-30 / (Schulte, 2011), page 97-106

⁵¹ Cf. (Potthoff & Trescher, 1986), page 92

⁵² Cf. (Deutsche Gesellschaft für Personalführung (Hrsg.), 2009), page 49

⁵³ Cf. (Drumm, 2007), page 54

⁵⁴ Cf. (Schübbe, 2011), page 27

⁵⁵ Cf. (Deutsche Gesellschaft für Personalführung (Hrsg.), 2009), page 50-51

⁵⁶ Cf. (Deutsche Gesellschaft für Personalführung (Hrsg.), 2009), page 56

qualitative aspects such as work atmosphere or company identification should be considered. One problem is that measuring this is difficult, very expensive, or in some areas impossible. These qualitative elements are often dismissed, despite the fact that they are also very important for measuring added value.

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