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The human capital theory as the basis for development of integrated reporting

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Abstract

The article presents the method of preparing a report on the level of payment of human capital of the employees in the light of the concept of integrated reporting. For this purpose, an original model of measuring the value of human capital of employees and the method of determin-ing the size of remuneration were introduced.

Keywords: Human Capital; Integrated Reporting; Economic Constant; Fixed Wage; Premium Wage.

1. Introduction

The fundamental principle of double entry bookkeeping, which has been functioning for thousands of years, allows understanding and explaining the nature of the category of capital in economy. Being the basis of the balance, it reveals that capital on the liabilities side is nothing else but the capability to perform the labours presented on the other side, i.e. assets. The understanding of this relation indicates appropriate bonds between the notions of capital, labour and remuneration for work done. As a result of the economic research in this field that was initiated at the Krakow University of Economics in the 1990s by M. Dobija, an original scientific research programme was created in the sphere of capital theory. This research is developing each year and the scope of issues that find accurate theoretical explanation is wider and wider. A signal indicating thorough changes in the economic thought was on the latest papers by M. Dobija [2015]. There is plenty of evidence suggesting that the new scientific programme proposed by this author and termed labour economics is progressive from the point of view of I. Lakatos's methodology. In this programme, capital, labour and fair wages make an inseparable triad in which labour is presented as a transfer of capital to objects of labour. At the core of the research programme lies the understanding of the nature of capital as the capability to perform the labour and the development of an extended theory thereof. It is this fact that forms the central part of the hard core of the entire programme.

The purpose of this paper is to present the possibilities of reporting information on the value of employees' human capital (as determined based on the models developed in the new research programme) in the light of the concept of integrated reporting. Since each research methodology involves certain constraints, deduction was applied in order to achieve the purpose, and a case study was conducted.

2. The essence of the concept of integrated reporting

In recent years, there is increasing talk of the concept of integrated reporting [www1]. K. Kobiela-Pionnier [2012], in her paper entitled Integrated reporting: the concept of reporting business performance for the needs of the 21st century, aptly points out that the current financial model constituting the basis for reporting in companies, was created back in the era of industrial economy. The value of a company depended to a large extent on tangible and financial assets possessed. However, this model is becoming less and less useful for reporting purposes. Thus, the idea of an 'integrated report' is aimed at creating one joint report that would indicate the value creation process in the company. Therefore, it seems understandable that there has been a tendency towards including within the framework of such a report also other important factors which were until recently difficult to quantify but often had and still have a major impact on the market position of the enterprise. One of such factors is the employees' human capital.

The concept of integrated reporting is a relatively new idea. It is evidenced by the short history of institutions responsible for it, as presented in a brief outline by the aforementioned author [Kobiela-Pionnier 2012]. The establishment in 2004 of the organisation Accounting for Sustainability (A4S) was the first step. The objective of the activity of this institution is to assist various organisations in joint development of practical tools enabling proper linking of ecological and social achievements with the strategy and financial results, and thus including them into the daily operational activity and decision-making. As a result of the project, commenced by A4S in 2006 in collaboration with the community of investors, enterprises and non-governmental organisations the concept of Connected Reporting (CR) was developed [Druckman and Fries, 2010, p. 81], which was finally transformed into the idea of Integrated Reporting (IR). In 2010 A4S and the organisation Global Reporting Initiative launched the International Integrated Reporting Council (IIRC) which was made up of representatives of the IASB, FASB and IFAC, the accounting community, global corporations, governments and international non-



governmental organisations as well as representatives of the academia. The main goals adopted by the IIRC concerning its operation include [KPMG, 2011, p. 19]:

- reaching an agreement between government, institutions regulating the securities market, the business, investors and agencies responsible for setting accounting standards in order to meet the challenges with regard to integrated reporting.
- identification of unregulated priority areas and presentation of a plan of development.
- development of entire concept frameworks of integrated reporting specifying its scope and key elements.
- consideration whether standards in this field should be voluntary or mandatory.
- promotion of acceptance for integrated reporting in the environment of regulatory and reporting authorities.

Prior to the establishing of the IIRC some leading corporation made an attempt to create a single report. The pioneer of integrated reporting was the Danish pharmaceutical corporation Novo Nordisk which was first in the world to create an integrated report in 2004 and has been effectively building its competitive advantage ever since then [Blesener, 2011, p. 29]. Also some other European enterprises created consolidated reports, like the French insurance giant AXA, the German chemical company BASF and the Swiss. On the American side, the first enterprise was the United Technologies Corporation (2008), followed in 2009 by the American Electric Power and Southwest Airlines.

The country that is most engaged in work for presenting sustainable development in a full annual report is the Republic of South Africa. In 2010 the Integrated Reporting Committee of South Africa (IRC SA) came into being. Its purpose was to create a standard and to establish good practices with regard to integrated reporting. As a result of the Committee's work, guidelines on application of integrated reporting were issued in 2011. Currently, in compliance with the regulations of the South African stock exchange, all listed companies must submit an integrated report for the fiscal year or explain in detail the reasons for failing to comply with this obligation [Kobiela-Pionnier, 2012].

Also worth mentioning is the influence of the International Organization for Standardization (ISO) which published, in November 2010, the standard ISO 26000 containing guidelines concerning corporate social responsibility [Verschoor, 2011, p.13, Wójcik-Jurkiewicz, 2017].

In the simplest terms an integrated report can be defined as a single document containing both financial and non-financial key information presented in such a manner as to answer the question how they exert a reciprocal influence on each other [Eccles and Krzus, 2010, p. 30]. Fuller definitions are proposed by both the IIRC and the IRC SA. According to the IIRC definition, an integrated report combines in itself essential information on the strategy, management, effectiveness and perspective of the organisation so as to reflect the economic, social and environmental context of its functioning. Such a report should clearly and briefly present the way in which the enterprise is managed and how it creates value. The IIRC wants integrated reporting to combine the most essential elements of information that are currently presented in separate documents (financial statement, management commentary, corporate governance statement, statement on remuneration and on elements related to sustainable development) into a consistent totality, and most importantly, to capture the relations taking place between them as well as to explain in what way they affect the organisation's capability to create and maintain value in short, medium and long term [IIRC, 2011, p. 2]. In the opinion of the IRC SA, in turn, an integrated report presents a 'whole story' of the enterprise presenting w wide range of users with the strategy, results and operation of the organisation in such a manner as to capture the entity's capability to create and maintain value in short-, medium- and long-term perspective. An integrated report reflects the conviction that the capability of organisations to create and maintain value is based on financial, social, economic and environmental elements as well as on the quality of relations with the stakeholders. In order to be useful for the interested parties, a report must be written in a clear and understandable way.

R. Eccles, lecturer at the Harvard Business School and one of the first authors of the concept of integrated reporting, indicates examples of questions that such a report will answer and lists, among others, the following [Eccles and Armbrester, 2010, p. 14]:

- what is the effect of training programmes on the employees' increased productivity, lower staff turnover and customer satisfaction?
- in what way does satisfying other stakeholders' needs (such as e.g. employees, customers and the community) contribute to creating value for the shareholders and in what time?
- in what way does satisfying the needs of other interested parties has a negative effect on value for the shareholders, at least in the short term (e.g. wages higher than offered by the competitors)?

In accordance with the idea of integrated reporting, in order to understand the way of the functioning of an organisation, it is necessary to focus on six capitals the use of which accounts for the production result achieved. The authors of this concept remark that this creates a completely new space for non-financial data in reporting. This idea is presented by A. Niemiec [www2] who presents in his paper the following chart of the aforementioned six capitals (Fig. 1).

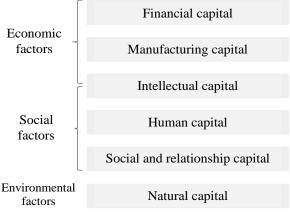


Fig. 1: The Concept of Six Capitals in A Company.

Source: own work based on [www2].

It should be stressed that the current literature lacks a consistent, theoretically justified approach in defining the company intellectual capital. The existing definitions are so varied that they caused methodological confusion, which finally contributed to the working out of

the model of 'five capitals' (the intellectual capital was omitted). The problem is even worse due to the fact that the category of capital is also erroneously defined in the literature. Typically it is identified with the individual items of assets. However, it follows from the fundamental bookkeeping principle of dualism that capital is an abstract category standing for the capability to perform labour [Dobija M., 2011, 2015]. This general definition of capital provides the basis for defining intellectual capital. Within the present study it is perceived as the capability of an organisational entity to achieve above-average results in the industry (see [Dobija D., 2003]). Therefore, intellectual capital can absolutely be placed among social factors accounting for the results achieved by the company.

It is worth pointing out that an integrated report does not mean a simple combination of the annual financial statement with a presentation of information on corporate social responsibility. The purpose of the integrated report is above all to demonstrate the proceeding of the enterprise, from the assumed strategy to the accomplishment of its objective where each key (financial and non-financial) element is treated equally. A certain role is also played by the introduction of a report on the rate of remuneration for the employees' human capital in the enterprise. Picking the necessary data from the additional information in the reporting, this report will be aimed at satisfying the information needs not only of the company employees but also other recipients of this information.

The next part of the paper presents a proposition to extend the current information contained in the financial statement with information on the rate of remuneration for the employees' human capital in the enterprise. The data provided, appropriately quantified, being different from the traditional information presented in statements, take account of the perspective in which the human capital owned by the employees is not only a tool for the purpose of accomplishing financial results in accordance with the schedule but also is also measurable and financially rewarded at a decent rate.

3. Systematisation of human capital measurement models for integrated reporting

Drawing up an appropriate report on the human capital remuneration rate in a company for the purpose of integrated reporting requires an organisation of a measurement system that provides for specification and application of a theoretically justified method of determining the individual human capital owned by the employees. For each individual, the size of their human capital is determined by the necessary outlays, such as the cost of living, the cost of education and experience as well as own labour input as in the case of academic teachers. The identification of these outlays and the definition of the function of capital growth resulting from the experience being acquired lead to the well-known and well-verified human capital model as presented in many earlier papers [Koziol, 2007, 2010; Kurek, 2004; Dobija M., 2009, 2010].

Human capital is a function of many variables which always include the following values: k – monthly cost of living; e – monthly cost of education; t – time-lapse variable; T – years of professional experience and p – economic constant of potential growth. The identification of these outlays and the definition of the function of capital growth resulting from the experience being acquired lead to the repeatedly verified models of human capital presented in numerous earlier studies, such as [Dobija M., 2009; Dobija (ed.), 2010; Cieślak and Dobija, 2007; Holda and Renkas, 2014, 2015; Koziol, 2007; Kurek, 2011; Renkas, 2011, 2012a, 2012b, 2014, 2016a]. These models are shown below. The human capital model for an individual without professional education or professional work experience is shown by the formula:

$$H(k, p, t) = K \tag{1}$$

where, H(k, p) – value of human capital, K – capitalised cost of living k with capitalisation rate of p. Capitalised cost of living (K) is determined according to the formula (using continuous capitalisation):

$$K = k \times 12 \frac{e^{pt} - 1}{p} \tag{2}$$

Where, k – monthly cost of living, t – time-lapse variable, p – economic constant of potential growth (0.08 [1/year]), e – mathematical constant approximately equal to 2.7183.

The size of human capital calculated according to the above formulas is the basis for determining the level of minimum wage in the economy of a particular country because this is the wage that employees who do not have professional education or work experience deserve.

If a young person receives professional education, then their capital increases by the capitalised expenditure related thereto. Thus, the model for an individual on the threshold of their career is as follows:

$$H(k, e, p, t) = K + E$$
 (3)

Where, H(k, e, p) – value of human capital, K – capitalised cost of living, E – capitalised cost of education. Capitalised cost of education (E) is determined according to the formula:

$$E = e \times 12 \frac{e^{pt} - 1}{p} \tag{4}$$

Where, e – monthly cost of education.

The human capital model for an employed individual contains an additional variable related to professional experience being acquired in the course of the employment [Cieslak and Dobija, 2007, p. 5-24]:

$$H(k, e, T, p, t) = (K + E) \times [1 + Q(T)]$$
 (5)

Where, H(k, e, T, p) – value of the capital attributed to a person with T years of work experience, K – capitalised cost of living, E – capitalised cost of education, Q(T) – coefficient of experience growth over T years of work. The value Q(T) is a derivative of the well-known learning curve [Stańdo-Górowska, 2014] and is determined according to the formula:

$$Q(T) = 1 - T^{\frac{\ln(1-w)}{\ln 2}}$$
 (6)

where, w - learning coefficient.

The above model can also be presented in an additive form [Koziol, 2010a, p. 79-80]:

$$H(k, e, T, p, t) = K + E + D(T)$$
 (7)

Where, D(T) denotes capital of professional experience over T years of work and $D(T) = H(0) \times Q(T)$, where D(0) = 0. This model is more convenient for analysing and determining wages.

Separate models have been developed by W. Koziol [2010] for employed individuals who continue their education and incur expenditure for this purpose. These models take account of the size of the capitalised cost of obtaining the i-th degree of qualification (where, t_i denotes the number of years from obtaining the appropriate degree to the time of measurement). The models discussed are systematised in Table 1 (in order to simplify the entries, the value of human capital has been shown as the variable H(p), because the economic constant p plays the most important role in these models, being a cause of capital growth).

Table 1: Models for Measuring Employees' Human Capital

Human capital meas- urement models	Characteristics of human capital measurement models
H(p) = K	Human capital of an employee without education or professional work experience (consists only of capitalised cost of living)
H(p) = K + E	Human capital of an employee that has higher education (includes the additional variable of capitalised cost of education)
$H(p) = (K + E) \times (1 +$	Human capital of an employee who has professional experience (the indicator of capital growth due to professional experience
Q(T))	depends on the number of years of work, where the initial years of work are of the greatest importance)
H(p) = K + E + D(T)	Additive form of the model of an employee's human capital
H(p) = K + E + D(T) + R	Human capital of an employee who has capital due to creativity
H(p) = K + E + D(T) +	Human capital of an academic (where, t - number of years form the time of obtaining the relevant degree to the time of meas-
$U_{i} \times (1 + Q(t))$	urement)

Source: own work.

It should be emphasised that an important feature in the above models is the level of capitalisation, defined by means of the economic constant of potential growth (p) and, as shown in research [Kurek, 2008; Renkas, 2011, 2016b], being equal to 8% per annum. Thus, based on the models presented the sizes of the particular employees' remuneration can be determined as a percentage of the value of their individual human capital. Therefore, the annual base salary (L) is as follows:

$$L = H(T) \times p \tag{8}$$

The employee's monthly salary is in turn calculated by dividing L by 12. The thus determined remuneration is fair because it prevents dispersion of the employees' individual human capital.

4. Assessing employees' bonus fund based on the function of economic activity

In addition to the fixed part in the form of base salary (L), the system of work remuneration at an enterprise usually includes a variable part (bonus) which depends on the financial results achieved. The overall wage fund (W), i.e. both the fixed and the variable part, can be presented by means of the following formula:

$$W = u \times H(T) = p \times H(T) + g \times H(T)$$
(9)

Where, u - variable of the actual work remuneration, p - 8-per-cent economic constant, g - bonus percentage.

In order to determine the size of the bonus due to the employees with regard to the human capital theory, the model of the function of economic activity is used. The starting point of developing the function is to present the production process in exercise prices as a function of the manufacturing costs [Dobija and Renkas, 2011, p. 179-188; Holda and Renkas, 2016; Renkas, 2015]:

$$P = S(1 + r)(1 + I)$$
(10)

Where, P – value of products manufactured in the year, in exercise prices; S – production manufacturing cost; r – profitability percentage at a level above the average.

If the difference between the exercise price (P) and the production manufacturing cost (K) is denoted as variable Z (i.e. Z = P - S), then in the above equation the variable r is presented as r = Z/S = P/S - 1. The value of Z/K represents in itself return on costs and is a function of two variables, return on assets, ROA = Z/A and the indicator that determines asset rotation in relation to costs K. As is known [Kurek, 2011], the mean value of ROA is at the level of 0.08 [1/year].

The variable I in the equation (10) denotes the profitability percentage that is at a level above the average. When the I percentage appears, this means that there is a value at the enterprise which is called intellectual capital. This issue is described in more detail by D. Dobija [2003] and M. Wojcik-Jurkiewicz [2011]. It is just then that the profit percentage exceeds its average value in a particular sector, which, as is shown in research [Kurek, 2008], is 8% per annum. Thus, the intellectual capital at the enterprise (J) can be calculated by means of the following equation:

$$ROA = Z/(A + J) = 0.08$$
 (11)

That is,

$$J = (Z/0.08) - A = 12.5Z - A = 12.5(P-S) - A$$
 (12)

where, A - value of assets at the enterprise (equity and debt capital), J - value of the enterprise's intellectual capital.

Let us use a specific example. If the value of assets (A) at an enterprise is 846,000, sales revenues (P) are 318,000 and the manufacturing cost (S) is 165,000, then the value of the intellectual capital (J) at this enterprise is: J = 12.5(P-S) - A = 12.5*(318,000 - 165,000) - 846,000 = 1,066,500.

Thus, by means of the formula (12) it is possible to calculate the value of the intellectual capital at an enterprise based on financial reporting data (such as balance sheet and profit and loss account) as well as on the average ROA rate of 0.08 [1/year].

Assuming that rotation is represented by the value w = S/A, we obtain:

$$S = w \times A \tag{13}$$

hence, r = N/wA, i.e.:

$$r = ROA/w$$
 (14)

Factors of production, in turn, contain: W – labour cost; and B – other costs provided for in the technology and the managing process, of which we obtain the equation:

$$S = W + B \tag{15}$$

The inputs of materials, amortisation and the value of the services, which make up the value of B, are related to assets. Thus, we obtain the value of asset consumption in relation to costs, less the amount of remuneration. Then, B/A = z, i.e. $B = A \times z$, where, z – the ratio of annual asset consumption.

Thus, we can now write the formula:

$$P = (W + A \times z) (1 + r) (1 + I)$$
(16)

where, A – assets in historical prices. Following mathematical transformations, the value of production is represented as:

$$P = W \times [1 + (A/W) \times z] (1 + r) (1 + I)$$
(17)

Since the cost of labour is a derivative of human capital ($W = u \times H$, where, u - percentage of human capital remuneration, and H - over-all value of an employee's human capital), then, after appropriate transformation, the following formula is obtained:

$$P = W \times [1 + (A/H) \times (z/u)] (1 + r) (1 + I)$$
(18)

Because the sizes of the values of r and I are very small (close to zero), then by applying the approximate equation: $1 + x \approx e^x$, we can express the production function with the formula:

$$P = W e^{r+1} [1 + (A/H) \times (z/u)] = W \times Q$$
(19)

$$Q = e^{r+1} [1 + (A/H) \times (z/u)]$$
(20)

Where, Q – value determining labour productivity.

The value of Q is labour productivity, which is understood as the multiplier of labour costs determining the value of production. At the same time, it is also the value of production which is attributable to each unit of the labour cost. It is a function of many important variables which are well known in the theory of productivity management. The functional relation thus obtained expresses the non-linear relation between seven variables determining labour productivity:

$$Q = \left[1 + \frac{A}{H} \times \frac{z}{u}\right] \exp\left[\frac{ROA}{w} + I\right] \approx \exp\left[\frac{Az}{uH} + \frac{ROA}{w} + I\right]$$
(21)

Based on the economic activity function, it is possible to develop a production model with a synthetic variable of management M [Dobija and Jedrzejczyk, 2007, p. 209]. It will look as follows:

$$P = W \times e^{r+l} \left(1 + \frac{A}{H} \times \frac{z}{u} \right) \cong W \exp \frac{A \times M}{H}$$
(22)

Where, M – synthetic variable determining the level of management.

The variable M integrates in itself the effects of the above presented variables related to decision-making: the variable of asset consumption (z), of the level of labour remuneration (u), of profitability (r) profitability percentage at a level higher than the average (I): M = M(z, u, r, I). these variables are related to current decisions made by the management.

There may appear some difficulties when determining the variable H. But it can be calculated by means of the formula H = L/p (where L is the overall amount of the employees' base salary at the enterprise which is not difficult to determine based on the financial reporting data). As a result of changing the variable H into appropriate indicators, the following production model is obtained:

$$P = W \times Q \cong W \times e^{\frac{A \times M}{H}} = W \times e^{\frac{AMp}{L}}$$
(23)

The above model enables determining the real utilisation rate of human capital in the production process as well as its appropriate remuneration.

As a result of the proper transformations of the model of the economic activity function, we are provided with a formula that can used to calculate the variables M and Q:

$$M = \frac{L \ln Q}{Ap} , Q = \frac{P}{W}$$
 (24)

Also from this model we can obtain a formula for calculating the labour remuneration fund W, as a function of the data that characterises the economic results of the enterprise:

$$W = \frac{P}{e^{\frac{AMp}{L}}} \tag{25}$$

By means of the above mentioned formulas we can analyse the system of labour remuneration in each enterprise and calculate appropriate indicators for the next year based on the set parameters.

Table 2 presents an example of calculations of the indicators discussed for the current year with a prognosis for the next year. These indicators served as the basis for determining the variables M and Q and for calculating the bonus percentage in relation to the base salary.

Table 2: An Example of Calculation of the Work Remuneration Rate at An Enterprise

Financial data	Current year	Next year
Production in progress (P)	64,125,000.0	65,030,000.0
Value of assets (A)	56,904,000.0	56,936,000.0
Fixed remuneration (L)	9,552,000.0	9,576,000.0
Labour remuneration fund (W)	11,011,000.0	11,173,540.0
Management variable (M)	3.70	3.70
Work productivity (Q)	5.82	5.82
Bonus percentage (h), %	15.27%	16.68%
Bonus remuneration	1,459,000.0	1,597,540.0

Source: own calculations.

The last column in Table 2 presents the planned budget for the next year. The plan provided for a production increase by several percent along with a slight increase in the costs. The variable of management should not decrease because it comprises both profitability and asset rotation. The achievement of the anticipated financial results will enable us to pay a bonus in the amount of 1,597,540, which is 16.68% of the amount of base salary. This bonus is a good incentive for the employees to accomplish the planned budget. Such an incentive will promote increased labour productivity in the future.

The proposed method of awarding bonuses allows for determining the volume of the bonus that is divided between the employees in accordance with the bonus system adopted at the enterprise. It should be added that based on this example it is possible to predict several variants of development of the financial situation at the enterprise.

5. Creating a report on the rate of remuneration of employees' human capital at an enterprise

By means of the basic models presented in Table 1 it is possible to determine the value of the individual human capital of each of the employees at a particular enterprise and also of the overall value of this indicator in the company. Calculation of the value of the individual elements of an employee's capital requires certain data which can be retrieved from the personal files. The only requirement is that the employee should provide the information listed in Table 3 upon commencement of employment.

Table 3: Information Necessary for Calculating the Value of An Employee's Individual Human Capital

Basic information	Number of years
Age	
Number of years of relevant professional education	
Number of years upon graduation in the profession	
Number of years of work (experience)	

An accountant who has access to the above information can use the formulas (1)-(7) in order to determine the value of the employees' individual values of human capital, and the formula (8) in order to calculated the fair wage due to them. Examples of such calculations based on the Polish economy are shown in Table 4. The values of the human capital and fair wages are calculated for employees:

- 1) without professional education and professional work experience.
- 2) without professional education with two years' professional experience.
- 3) with three years' professional education (bachelor's degree), without professional experience.
- 4) with five years' professional education (master's degree) and four years' professional experience.
- 5) with five years' professional education (master's degree) and twenty years' professional experience.

The monthly cost of living has been assumed at PLN 900. Annual cost of education: PLN 4,000. Learning coefficient (w): 0.1. As we can see in Table 4, determination of the value of the individual employees' human capital enables calculating fair base salary for them.

As we can see in Table 4, determination of the value of the individual employees' human capital enables calculating fair base salary for them. This gross remuneration which also includes the related costs borne by the employer. Such a size of remuneration prevents dispersion of the individual employee's human capital.

Table 4: Calculation of the Size of Human Capital and Fair Wages for Enterprise Employees Based on Formulas (1)-(8)

No.	Input da	ata (number of year Years of capitalisation K	Years of education	Years of pro- fessional experience	Capitalised cost of living, K	Capitalised cost of education, E	Capital of professional experience over T years of work, D(T)	Value of human capital, H(p)	Base salary, L = 0.08×H(p)/12
1)	18	18	-	-	435,313	_	-	435,313	2,902
2)	20	18	-	2	435,313	_	43,531	478,844	3,192
3)	21	21	3	-	590,119	13,572	_	603,691	4,025
4)	27	23	5	4	716,022	24,610	140,720	881,352	5,876
5)	43	23	5	20	716,022	24,610	271,071	1,011,703	6,745

Thus, the synthetic model of measurement of human capital provides the possibility to organise a system of recording data concerning the employees' human capital as well as the rate of its remuneration. This is a reference to the concept of the report on the rate of remuneration of human capital. The input data for the illustration of the process of determining rate of remuneration of the employees' human capital are presented in Table 5.

Table 5: Input Data for Determining Rate of Remuneration of the Employees' Human Capital at An Enterprise

Indicator	Amount
Human capital calculated based on the cost of living (K)	1,270,014.00
Capital due to education (E)	71,830.00
Capital due to experience (D(T))	312,130.00
Total value of employees' human capital	1,653,974.00
Amount of remuneration (actual cost of labour), wherein:	167,100.00
- bonuses	30,000.00

Based on the elements of information referred to above, Table 6 presents calculations of the rate of remuneration of the employees' human capital at an enterprise.

Table 6: Structure and Rate of Return on Employees' Human Capital

Indicator	Amount
Enterprise employees' human capital	1,653,974.00
Employees' intellectual capital	383,960.00
Capital due to experience	312,130.00
Normative salary (p.1 \times 0.08)	132,317.92
Actual base salary	137,100.00
Amount of difference $(p.5 - p.4)$	4,782.08
Compatibility percentage (p.5/p.1×100%), %	8.3%
Bonus amount	30,000.00
Total amount of actual remuneration $(p.5 + p.8)$	167,100.00
Actual rate of labour remuneration (p.9/p.1×100%), %	10.1%

Source: own work based on data from Table 5.

As can be seen in Table 6, the real rate of labour remuneration at the enterprise is 10.1% (of the total value of all employees' human capital). From this, it can be concluded that employees have the possibility to set off the natural dispersion of their individual human capital (the rate of which, according to the theory, is 8%) and, additionally, to utilise the remaining 2% for its development. Thus, each enterprise employee who has this kind of information can analyse and evaluate the rate of remuneration of their individual human capital. Table 7 presents a proposed structure of a report on the rate of remuneration of employees' human capital, which can be individually extended and adapted in accordance with the remuneration tariffs applied at the particular enterprise. This gives the possibility to analyse the value and remuneration rate of the human capital in the context of the division of employees according to their qualifications. Thus, the proposed report bridges the information gap concerning the rate of remuneration of employees' human capital.

Table 7: Report on the Rate of Remuneration of Employees' Human Capital at An Enterprise

No.	Item	As of beginning of the reporting period	As of end of the report- ing period
I. Stru	cture and rate of return on employees' human capital		81
1.1.	Enterprise employees' human capital		
1.2.	Employees' intellectual capital		
1.3.	Capital due to experience		
1.4.	Normative salary (p.1.1 \times 0.08)		
1.5.	Actual base salary		
1.6.	Amount of difference $(p.1.5 - p.1.4)$		
1.7.	Compatibility percentage (p.1.5/p.1.1×100%)		
1.8.	Bonus amount		
1.9.	Total amount of actual remuneration $(p.1.5 + p.1.8)$		
1.10.	Actual rate of labour remuneration (p.1.9/p.1.1×100%)		
II. Str	ucture and rate of return on employees' human capital, Category I		
2.1.	Enterprise employees' human capital, Category I		
2.2.	Employees' intellectual capital, Category I		
2.3.	Capital due to experience, Category I		
2.4.	Normative salary (p.2.1 \times 0,08)		
2.5.	Actual base salary		
2.6.	Amount of difference $(p.2.5 - p.2.4)$		
2.7.	Compatibility percentage (p.2.5/p.2.1×100%)		
2.8.	Bonus amount		
2.9.	Total amount of actual remuneration $(p.2.5 + p.2.8)$		
2.10.	Actual rate of labour remuneration (p.2.9/p.2.1×100%)		
III. St	ructure and rate of return on employees' human capital, Category II		
3.1.	Enterprise employees' human capital, Category II		
3.2.	Employees' intellectual capital, Category II		
3.3.	Capital due to experience, Category II		
3.4.	Normative salary (p.3.1 \times 0,08)		
3.5.	Actual base salary		
3.6.	Amount of difference $(p.3.5 - p.3.4)$		
3.7.	Compatibility percentage (p.3.5/p.3.1×100%)		
3.8.	Bonus amount		
3.9.	Total amount of actual remuneration $(p.3.5 + p.3.8)$		
3.10.	Actual rate of labour remuneration (p.3.9/p.3.1×100%)		

The report cited above requires an additional source of information, i.e. the employees' personal files supplemented with evaluations of each element of their individual human capital. This clearly speaks of the uniqueness of this report. Because business activity takes account of all sorts of capital (regardless of its location) and equal rights are provided for its preservation and multiplication, then also the report, oriented at satisfying employees' needs for information concerning the value and remuneration of their individual human capital, is a manifestation of social market economy.

The report presented herein can be placed as a separate chapter in additional information. Therefore, each recipient of financial reporting will be able to read the information on the value of the employees' human capital as well as information of its remuneration rate.

6. Conclusions

In recent years, there is increasing talk of the concept of integrated reporting. The introduction of the report on the rate of remuneration of employees' human capital at an enterprise also has its contribution thereto. Taking the necessary data from additional reporting information, this report will be aimed at satisfying the employees' needs for information concerning the value and remuneration of their individual human capital at the enterprise. Since there is no problem with obtaining the information necessary in order to draw up the report on the human capital remuneration rate, the only obstacle that remained was finding the right method to determine the value of the individual human capital based on which the size of the fair wage is calculated. The concept presented in the paper enabled solving this problem. It was determined that the size of remuneration is directly correlated with the value of the particular constituents of their individual human capital. Today, using the concept presented, companies can develop appropriate calculation cards in order to establish the value of their employees' human capital and the amounts of fair wages due to them. This, in turn, makes it possible to draw up a report on the rate of remuneration of human capital at the company. The data presented therein allow comparing different enterprises with regard to the values and the rate of remuneration of the employees' individual capital.

References

- [1] Blesener S., 2011, Connecting the dots, "Communication World", September-October.
- [2] Cieślak I., Dobija M., 2007, Teoretyczne podstawy rachunkowości kapitału ludzkiego (Theoretical ground of the human capital measurement), Zeszyty Naukowe nr 735, Akademia Ekonomiczna w Krakowie, ss. 5-24.
- [3] Dobija D., 2003, Pomiar i sprawozdawczość kapitału intelektualnego przedsiębiorstwa. Warszawa: Wydawnictwo Wyższej Szkoły Przedsiębiorczości i Zarządzania im. Leona Koźmińskiego.
- [4] Dobija M., 2009, Analiza zbieżności gospodarki polskiej i ukraińskiej według zmian produktywności pracy, Konwergencja modeli ekonomicznych. Polska i Ukraina, Fundacja Uniwersytetu Ekonomicznego w Krakowie, Kraków, ss. 107-129
- [5] Dobija M. (red), 2010, Teoria pomiaru kapitału i zysku. Wydawnictwo Uniwersytetu Ekonomicznego w Krakowie, Kraków.
- [6] Dobija M., 2015, Laborism. The economics driven by labor, Modern Economy, vol. 6, s. 578-594. https://doi.org/10.4236/me.2015.65056.
- [7] Dobija M., Renkas J., 2011, Zatratnaâ funkciâ proizvodstva v formirovanii zarabotnoj platy na predpriâtii, Zbìrnik naukovyh prac' čerkas'kogo deržavnogo tehnologičnogo universitetu. vipusk 27 (2011), s. 179-188.
- [8] Druckman P., Fries J., 2010, Integrated reporting: the future of corporate reporting? [in:] R.G. Eccles, B. Cheng, D. Saltzman (eds.), The Landscape of Integrated Reporting. Reflections and Next Steps, Harvard Business School, Cambridge, Massachusetts.
- [9] Eccles R.G., Armbrester K., 2011, Integrated reporting in the cloud, "IESE Insight", first quarter, issue 8.
- [10] Eccles R.G., Krzus M.P., 2010, Integrated reporting for a sustainable strategy, "Financial Executive", March.
- [11] Holda A., Renkas J., 2014, Czelowieczeskij kapital i finansowaja otczotnost, Visnyk ChDU, Serija Ekonomiczni nauky, №6/2014, Cherson.
- [12] Holda A., Renkas J., 2015, Fair Wage and the Size of Pension Contributions in the Theory of Human Capital Measurement, Actual Problems of Economics: Scientific Economic Journal, no. 12 (174), Kiev, s. 302-311.
- [13] Holda A., Renkas J., 2016, Labour productivity and exchange rate in Ukrainian economy, Actual Problems of Economics: Scientific Economic Journal, no. 2 (176), Kiev. s. 337-347.
- [14] IIRC, 2011, Towards Integrated Reporting Communicating Value in the 21st Century, http://theiirc.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011_spreads.pdf, dostep: 20.02.2012.
- [15] Kobiela-Pionier K., 2012, Sprawozdawczość zintegrowana: koncepcja raportowania osiągnięć przedsiębiorstwa na miarę XXI wieku, Zeszyty Teoretyczne Rachunkowości, Tom 66, nr 122, s. 75-85.
- [16] Kozioł W., 2007, Wykorzystanie analitycznej funkcji produkcji w procesie motywacji płacowej, "Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie", nr 752, Uniwersytet Ekonomiczny w Krakowie, Kraków.
- [17] Kozioł W., 2010, Kształtowanie wynagrodzeń podstawowych nauczycieli akademickich na podstawie pomiaru kapitału ludzkiego i intelektualnego, [w:] Nierówności społeczne a wzrost gospodarczy. Spójność społeczno-ekonomiczna a modernizacja gospodarki, Zeszyt Nr 16, M.G. Woźniak (red.), Wydawnictwo Uniwersytetu Rzeszowskiego, Rzeszów.
- [18] KPMG, 2011, Integrated Reporting. Performance Insight through Better Business Reporting, issue 1, London.
- [19] Kurek B., 2004, Culture Creating Function of Accounting, [w:] Dobija M., Martin S. (red.), General Accounting Theory. Towards Balancing the Society, Cracow University of Economics.
- [20] Kurek B., 2008, The risk premium estimation on the basis of adjusted ROA, [w:] I. Górowski (Ed.), General Accounting Theory. Evolution and Design for Efficiency, Wydawnictwa Akademickie i Profesjonalne, Warsaw, ss. 375-392.
- [21] Kurek B., 2011, Hipoteza deterministycznej premii za ryzyko, Monografie: Prace Doktorskie Nr 10, Uniwersytet Ekonomiczny w Krakowie, Kraków.
- [22] Renkas J., 2011, Rozmir ekonomicznoji staloji potencijnogo zrostu ta wstanowlennia za ii dopomogoju minimalnoji zarobitnoji platy dla Ukrainy. Problemy teorii ta metodologii buhalterskogo obliku, kontrolu i analizu. Miżnarodnyj zbirnyk naukowych prac, Wypusk 2(20), s. 406-413.
- [23] Renkas J., 2012a, An Analysis and Assessment of the Minimum Wage in the Economy of Ukraine on the Basis of the Human Capital Theory, [w:] Malina A., Oczkowska R., Rojek T. (ed.), Knowledge Economy Society. Dilemmas of the contemporary management, Cracow University of Economics, Cracow, s. 81-86.
- [24] Renkas J., 2012b, Empiryczny test modelu kapitału ludzkiego i minimalnych wynagrodzeń, Nierówności Społeczne a Wzrost Gospodarczy: Modernizacja dla spójności społeczno-ekonomicznej w czasach kryzysu, Zeszyt 24, s. 180-191.
- [25] Renkas J., 2014, The human capital theory as a basis for the development of financial reporting. W: Knowledge Economy Society. Managing Organizations: Concepts and Their Applications / ed. by Andrzej JAKI, Bogusz MIKUŁA. Cracow: Foundation of the Cracow University of Economics, s. 343-352.
- [26] Renkas J., 2015, The Prospects of the Creation of Economic Unions in the Context of the Labour Productivity of the National Economies. W: Knowledge Economy Society. Challenges and Development Trends of Modern Economy, Finance and Information Technology. Cracow: Foundation of the Cracow University of Economics, s. 29-39.

[27] Renkas J., 2016a, Ekonomia pracy: teoria godziwych wynagrodzeń (Economics of Labor: Theory of Fair Remuneration), Research Papers of the Wrocław University of Economics / Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, Issue 439, pp. 284-301. https://doi.org/10.15611/pn.2016.439.25.

- [28] Renkas J., 2016b, Nierówności płacowe a stała ekonomiczna potencjalnego wzrostu, Nierówności Społeczne a Wzrost Gospodarczy, Zeszyt nr 47(3), s. 466-480, https://doi.org/10.15584/nsawg.2016.3.34.
- [29] Stańdo-Górowska H., 2014, Oczekiwania płacowe studentów, a model kapitału ludzkiego, Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie, red. A. Pocztowski, nr 4(928), s. 51-59. https://doi.org/10.15678/ZNUEK.2014.0928.0404. [30] Verschoor C., 2011, Should sustainability reporting be integrated?, "Strategic Finance", December.
- [31] Wójcik-Jurkiewicz M., 2011, Kapitał intelektualny w teorii i praktyce rachunkowości, Zeszyty Naukowe Uniwersytetu Szczecińskiego, nr 668 (41), s. 321-329.
- [32] Wójcik-Jurkiewicz M., 2017, Role of CSR Reporting. Evidence from Poland, Theoretical Journal of Accounting, Vol. 94, No. 150, pp. 173-188, https://doi.org/10.5604/01.3001.0010.5001.
- [33] www1: http://integratedreporting.org (access: 2019-11-21).
- [34] www2: https://rachunkowosc.com.pl/zintegrowane_raportowanie (access: 2018-05-21).