

HUMAN CAPITAL REPORTING AND ITS LINKAGE WITH KEY PERFORMANCE INDICATORS OF COMPANIES: EVIDENCE FROM ESTONIAN COMPANIES LISTED ON NASDAQ OMX BALTIC

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Today the subject of non-financial accounting and reporting has become very popular. Human Capital Reporting (HCR) has become a vital part of everyday business activities of companies across the world. Most companies declare that human capital is the most important factor of their competitiveness, which is also reflected in their CSR reports by incorporated social disclosures. The subject of the present research is human capital reporting and its linkage with the performance indicators of companies. The aim of this research is to establish whether there is a linkage between HCR and financial performance indicators of Estonian companies listed on the Nasdaq OMX Baltic (Tallinn market). The authors calculated various ratios and carried out HCR scoring to examine the presence of linkage between HCR reporting and companies' financial performance. The results demonstrate that there is no direct relationship between the level of HCR and the financial performance of selected companies.

Keywords: CSR; Human Capital Reporting; performance indicators; market value added; sustainability.

JEL classification: G30.

Introduction

Human Capital Reporting (HCR) is becoming a matter of great importance and high concern all over the world largely due to the emerging of the world of Corporate Social Responsibility (CSR). For many years, the information on human capital resources has been “neglected in the formal reporting and accountability structures of organizations” (Stittle, 2004). According to Andrikopoulos (2010), intellectual capital emerged approximately two decades ago “as an alternative paradigm with the ambition to identify, measure, report and manage knowledge assets” (Andrikopoulos, 2010). Abeysekera and Guthrie (2004), in their studies, claim that the recent introduction and development of Human Capital management and accounting has led to the external demand for HCR, which made many companies be more involved in non-financial reporting in order to satisfy the requirements of stakeholders.

Today, more and more companies claim that human capital is a vital factor of sustainable and successful financial and non-financial performance of the company. All over the world, companies tend to allocate more value to human capital and provide the information related to the strategy and the policy of company in this area either through respective disclosures in standalone CSR reports and/or in the form of disclosures in the annual reports of companies. In its 2011 briefing, the Sustainable Human Resource Management Organization (SHRM) pointed out the increasing concern of companies in regard to CSR; it was also mentioned that human resources play a vital role in the successful strategy towards social responsibility (SHRM, 2011).

Training on Human Capital and Sustainability held in Dubai in 2009 revealed that human capital development is a contribution to business sustainability, and further investments in human capital will result in a valuable impact on the company. The development of human capital should be promoted by the company and inspired by its stakeholders (Arabia CSR Network, 2009).

Today, the European Union also encourages companies to provide more and more social and environmental related information in companies' reports. Directive 2014/95/EU on disclosure of non-financial and diversity information "requires companies concerned to disclose in their management report, information on policies, risks and outcomes as regards environmental matters, social and employee aspects, respect for human rights, anticorruption and bribery issues, and diversity in their board of directors." This will give the stakeholders a broader overview of a company's performance (European Commission, 2015). However, these new rules are applied to the companies with more than 500 employees, including listed companies as well as other public-interest entities, such as banks, insurance companies etc., including approximately 6 000 large companies and groups across the EU (European Commission, 2015). Therefore, for most companies the disclosure of non-financial information remains voluntary as there are only a few obligatory requirements for such disclosures, which is also confirmed by the studies of Wyatt and Frick (2010) and O'Donnell et al. (2009), stating that across various industries, human capital is not reported in a standardized way. It should also be noted that still many companies find CSR and HC reporting too costly and time-consuming with no immediate benefits to the company. However, the authors are of the opinion that HCR will bring long-term benefits to companies by ensuring sustainable business.

Literature Review

Within the contemporary research about CSR and Human capitals reporting the following trends are mainly discussed: the importance of non-financial reporting and the linkage between CSR and Human Capital Reporting with financial performance of the company.

The studies of Wyatt and Frick (2010) suggest that the benefits to stakeholders of disclosing information relating to human capital investment are most likely to outweigh the costs associated with this procedure. The results of the studies of Cormier et al. (2009) suggest that efficient governance leads to more social and human capital related information disclosure. Gamerschlag and Moeller (2011) stated that positive effects of HCR can be regarded as one of the key-drivers of corporate reputation and also as an instrument that may affect the financial performance of the company and increase its shareholder value (Gamerschlag and Moeller, 2011). However, most companies still prefer to provide minimum human capital related information, preferring to report on such matters as numerous workshops and training and creating a good work environment for the staff.

Vuontisjärvi (2006) investigated the extent of implementation of social reporting practices in general and HCR in particular by large Finnish companies. The HCR research was based on content analyses of the annual reports of companies. The results of the study revealed that CSR reporting was at the early stage and that the most reported aspects were 'training and staff development', 'participation and staff involvement' and 'employee health and well-being', nearly one-third made references to their work atmosphere or job satisfaction survey (Vuontisjärvi, 2006).

Nurul Absar (2014) examined the extent and nature of HCR practices in corporate annual reports in Bangladesh, India, and Malaysia. The study used content analyses of the annual reports of 60 leading listed companies of Bangladesh, India, and Malaysia. The study revealed the insignificant differences in the extent of reporting among the selected countries. However, the most reported item turned out to be training and staff development.

Numerous analysts and investors use CSR related disclosures and especially the ones on human capital in order to evaluate financial performance and sustainability of the company's business activities. The findings of Abhayawansa and Guthrie (2014) suggest that intellectual capital disclosures are often used by the analysts. The findings of a study by Sakakibara et al. (2010) suggested that analysts observed that most non-financial measures were value relevant and that value relevance in general is stronger for small firms than large ones (Sakakibara et al., 2010).

Several researchers found that there is a direct relationship between CSR disclosures and the financial performance of companies. The study of Reverte (2012) provided the evidence of the quality of CSR reporting on the cost of equity capital for a sample of Spanish listed firms. The results revealed a negative relationship between CSR disclosure ratings and the cost of equity capital. The study also confirmed that CSR reporting is a vital tool for communication with stakeholders, but in order to use CSR reporting to evaluate performance of company it should be mandatory (Reverte, 2012).

Furthermore, there is no unanimous opinion whether large investments in human capital significantly influence corporate financial performance. According to Murphy (2009), some leading firms are starting to support human capital development because they understood that they will be among its main beneficiaries and top firms in the key emerging markets of China and India are beginning to invest in the development of human capital in order to increase the competitiveness of the company (Murphy, 2009).

Several studies confirm that CSR also has an impact on the financial performance of the company to make it more competitive in the modern rapidly changing business world. Economic competitiveness is at the top of national, regional and global political and economic agendas. Sabadie (2013) suggests that human capital and new social behaviors are critical factors to combine economic competitiveness and sustainability. Wei and Hao (2011) found that human capital has a significant and positive effect on the total factor productivity growth of Chinese provinces.

Review of the scientific literature shows that performance measurement is a difficult and complex phenomenon and evaluators lack widely recognized performance measurement methods. There also seems to be no agreement on preferred method of financial performance measurement. Performance measurement methods used by the authors in the present research have been applied to suit the researchers' aims and objectives. By using alternative financial performance measurements (such as return on equity, and employee productivity), the authors intended to broaden the scope of the research and to measure the productivity of the company.

Research Design

The stated developments have influenced the present research. The aim of this research is to find out whether there is a linkage between HCR and key performance indicators of Estonian companies listed on the Nasdaq OMX Baltic (Tallinn market). The authors

used data obtained from annual financial reports of the companies for the years 2012 and 2013. The authors believe that the listed companies tend to be more advanced in HCR reporting in comparison with non-listed companies. Fifteen companies listed in Tallinn Stock Exchange as of April 2015 were included into the research.

For the present research, the authors have used HCR scoring based on the human capital related information disclosures either in the annual report or in the standalone CSR report for the years 2012 and 2013. Each company was granted one point for the disclosures on the following aspects:

- good modern work conditions, safe and healthy working environment for the staff;
- employee of the year program;
- various events for employees like summer days, briefing day, Christmas party, reception for graduates, sports activities;
- various training courses for employees, induction program for new employees;
- cooperation with various educational institutions;
- guarantees and motivation scheme, including bonus system for employees;
- evaluation programs for employees;
- priority for employees to apply for the vacancies inside the company;
- mentoring, coaching, job shadowing, graduates' recognition and support, employee exchange programs, intra-group knowledge sharing, leadership programs;
- employees' participation in sponsorship via volunteering and various engagement;
- promotion of a healthy lifestyle, payment of sports and health allowance.

Calculating financial, non-financial and market based ratios as the companies' performance indicators measures, the authors examine the existence of linkage between HCR reporting and companies' performance. Return on equity (ROE) is an accounting based indicator of how profitable a company is relative to its total equity (net profit for the year/average total equity). Calculated by dividing a company's annual net profit for the year by its average total equity, ROE is displayed as a percentage.

Return on employee is the indicator of the productivity of the company's workforce. It measures the amount of net profit per employee and also measures the efficiency of utilization of human resources. Return on employee is calculated by dividing a company's annual net profit (p) for the year by the average number of employees (n). Standardized return on employee is a dimensionless quantity obtained by subtracting the population mean from an individual raw scores and then dividing the difference by the population standard deviation:

$$z = (x - \mu) / \sigma \quad (\text{Eq.1})$$

where x denotes the return on employee, μ is the mean of the population and σ is the standard deviation of the population.

The absolute value of z represents the distance between the raw score and the population mean in units of the standard deviation. z is negative when the raw score is below the mean, positive when above.

Weighted standardized return on employee is a ratio in which each quantity to be standardized is assigned a weight:

$$z'_i = \left(\frac{x_i - \mu}{\sigma_x} \right) \frac{n_i \times m}{\sum_{i=1}^m n_i} \quad (\text{Eq.2})$$

where m denotes the total number of companies and i denotes the ordinal number of the company.

The authors considered this ratio to be of a high importance as it involves the human factor which is also a matter of human capital related disclosures.

MVA is calculated as the market evaluation of the company minus invested capital. Market evaluation of the company is calculated as the number of shares outstanding multiplied by the share market price at the end of the reporting year. Invested capital equals to the amount of the book value of stockholders' equity at the end of the reporting year. is a specific type of MVA calculation (Eq.3) displayed as a percentage. The intention to use this ratio in research is that these normalized values allow the comparison of corresponding normalized values for different companies in a way that eliminates the effects of certain gross influences. To calculate the normalized Δ MVA:

$$\text{Normalized } \Delta \text{MVA}_t = (MVA_t - MVA_{t-1}) / I_{t-1} \quad (\text{Eq.3})$$

where:

MVA_t is MVA at the end of the period 1 (in our example at the end of the year 2013)

MVA_{t-1} is MVA at the end of the period 0 (in our example at the end of the year 2012)

I_{t-1} is the invested capital at the end of the period 0 (in our example at the end of the year 2012)

It should also be noted that market value added (MVA) is the most popular market based approach to measure performance.

Results

Table 1 presents the ROE ratios of the fifteen listed companies (in order of decreasing ratio value). The authors have calculated ROE ratios using data from 2013 annual reports. Table 1 also shows the HCR score based on the authors' criteria of the listed companies for 2013.

Results shown in table 1 clearly indicate that companies with the low HCR score of zero or one have also shown the low value of ROE. However, it should be noted that two companies (Property development, services, construction; Casino operations and hotel management;) with the highest value of ROE (67.06% and 27.62%) are characterized by the HCR score of 3 and 5 respectively. However, three companies (Wholesale and resale of goods; Construction; Maritime transportation) with the highest level of HCR (8) disclosure have low values of ROE (11.12%, 8.58% and 5.65%). Consequently, the higher level of HCR disclosures does not improve the financial performance (as measured by ROE) of the Tallinn stock exchange listed companies.

Table 2 presents the normalized Δ MVA ratios of the fifteen listed companies (in order of decreasing ratio value). The authors, using data from 2013 annual reports, have calculated normalized Δ MVA. Table 2 also shows the HCR scores of the listed companies for 2013.

Table 1 | Accounting based performance measure ROE and HCR score for the listed companies for the year 2013

Sector	ROE (%)	HCR score
Property development, services, construction	67.06	3
Casino operations and hotel management	27.62	5
Water supply, wastewater collection and treatment	23.20	5
Production and sale of women's lingerie	15.57	4
Construction and engineering	14.22	6
Wholesale and resale of goods	11.12	8
Electrical engineering and telecommunication	9.08	5
Construction	8.58	8
Maritime transportation	5.65	8
Media and publishing	2.59	0
Food & Beverage	2.57	2
Clothing retail	0.94	1
Real estate development	-0.40	0
Property development	-3.94	0
Production of fibreboards	-9.88	1

Source: Authors.

Table 2 | Market based performance measure normalized Δ MVA and the HCR score for listed companies for 2013

Sector	Normalized MVA (%)	HCR score
Water supply and wastewater collection and treatment	60.78%	5
Property development	46.62%	0
Construction	15.41%	8
Real estate development	12.02%	0
Production of fibreboards	7.85%	1
Food & Beverage	4.17%	2
Casino operations and hotel management	3.35%	5
Media and publishing	3.00%	0
Maritime transportation	0.42%	8
Wholesale and resale of goods	-2.24%	8
Clothing retail	-7.00%	1
Production and sale of women's lingerie	-6.78%	4
Electrical engineering and telecommunication	-24.00%	5
Construction and engineering	-26.42%	6
Property development, services, construction	-129.00%	3

Source: Authors.

Note that the first company in table 2 (Water supply and wastewater collection and treatment) has produced the highest normalized Δ MVA (60.78%) and has a high HCR score of 5. Other companies with high values of normalized Δ MVA ratio are characterized by “zero” HCR score. However, companies (Property development, services, construction and construction and engineering) with a HCR score of 3 and 6 respectively have the lowest value of normalized Δ MVA (-129% and -26.42%). Consequently, the higher HCR score does not influence financial performance (as measured by MVA) of companies listed at Tallinn Stock Exchange.

Table 3 presents the standardized and weighted return on employee of the fifteen listed companies (in order of decreasing ratio value), calculated by using data from 2013 annual reports. Table 3 also shows HCR score of the listed companies for 2013.

Table 3 | Standardized and weighted Return on Employee and the HCR score for listed companies for 2013

Sector	Weighted standardized return on employee	HCR score
Water supply, wastewater collection and treatment	1.435	5
Casino operations and hotel management	0.862	5
Construction	0.389	8
Property development, services, construction	0.182	3
Electrical engineering and telecommunication	0.180	5
Real estate development , services, construction	-0.001	0
Construction and engineering	-0.016	6
Food & Beverage	-0.025	2
Maritime transportation	-0.086	8
Production of fibreboards	-0.235	1
Property development	-0.265	0
Wholesale and resale of goods	-0.416	8
Clothing retail	-0.608	1
Production and sale of women's lingerie	-0.663	4
Media and publishing	-0.733	0

Source: Authors.

Results shown in table 3 indicate that the higher level of HCR disclosures does not indicate the high efficiency of utilization of human resources measured by standardized and weighted return on employee of the Tallinn stock exchange listed companies.

The authors also performed the correlation test by calculating the Pearson Product-Moment Correlation Coefficient for several pairs of variables in order to measure strength of the relationship. The descriptive statistics are presented in table 4.

Table 4 | Pearson Product-Moment Correlation Coefficient: Descriptive statistics

Correlation Coefficient between ROE and HCR	Correlation Coefficient between Normalized MVA (%) and HCR	Correlation Coefficient between Weighted standardized return on employee and HCR
0.259065	-0.05628	0.347092

Source: Authors.

The results clearly indicate that there is a slight negative correlation between the Normalized MVA (%) and HCR; however, there exists a positive correlation between HCR and ROE as well as between HCR and weighted standardized return on employee. That enables the authors to assume that there may be a certain type of linkage between HCR and key performance indicators; however, in order to prove this statement the sample of the research should include more companies and the time scale should include data for several years.

Discussion and Conclusion

The results of our research indicate that there is no direct linkage between Human Capital Reporting and key performance indicators of the company as demonstrated by the selection of companies listed on the Nasdaq OMX Baltic. However, in future, the authors consider it necessary to broaden the scope of this research and investigate the existence of such a linkage among the listed West-European companies for the period of several consecutive years.

It can also be concluded that human capital reporting has neither a positive nor negative impact on the results of a company's business activity. However, it should be mentioned that most companies do not provide detailed human capital related disclosures, which in the authors' opinion, may be explained by a number of facts: the importance and usefulness of HCR is not yet fully recognized by the companies, companies find no practical implementation for human capital related disclosures, there is no long-term practice of HCR in Estonia, no unanimous opinion on the form and the context of HCR.

It should also be noted that HCR in Estonia is quite popular in the form of disclosures to annual financial statements as this option is less time and effort-consuming. This may be explained by the fact that more and more information about CSR initiatives are available in Estonia and more CSR-related events have taken place during the last few years.

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