THE IMPACT OF HR POLICY ON CORPORATE PERFORMANCE

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Abstract: *This research contributes to the ongoing discussion on the relationship between corporate performance and human resource policies implemented by companies. It provides empirical evidence for Romanian companies that invest in the development of their employees, which generates high employment costs. The panel data analysed is consisting of 203 companies operating in the Western region of Romania, referring to financial data over the period 2010-2016. The analysis is based on comparative regression models (OLS, fixed effects, random effects). The results indicate a positive and immediate effect of employment costs towards economic performance, while the financial performance could be impacted over the long-term. Providing continuous development of employees would improve the corporate performance, most probably because it increases the effectiveness of human resources and production process. For the negative relationship between ROE and employment costs, we conclude that the financial performance is affected only over the short-term, as net profits are reduced due to high employment costs. However, the development of employees could increase the future returns ensuring sustainable growth through a steady increase in future profits.*

Keywords: *human resource development; corporate performance; Romania.*

JEL Classification: *L25; O15.*

1. Introduction

The literature on human resource development may be classified into three main categories (Kramar, 2014). The first one is related to the creation of sustainable competitive advantages through human resources management policies. The second type is related to sustainable practices through which the human resource management addresses human, social and environmental-friendly outcomes. Finally, the third category refers to the relationship between human resource management and various organisational outcomes (related to performance, effectiveness, social and environmental factors), tending to minimise the negative effects on the community, society, and environment.
This research contributes to the ongoing discussion on the relationship between the performance of organisations and their human resource policies, by providing evidence for Romanian companies. The human resource management is currently viewed as sustainability practice, and its analysis can be developed over multiple

levels: social or economic dimensions, time perspectives (short-term or long-term), effects on individuals or organisation etc. This paper will examine the immediate influence of human resource costs on economic and financial performance.
The following section of this paper presents a brief description of the European funded Programe on Human Resources Development, along with some major aspects related to the impact of human resource development on the performance of organisations, as they were identified in the literature. The third section will describe the data and methodology employed to analyse the impact of human resource costs on corporate performance, whilst the results will be commented in section four. The fifth section concludes.

2. Literature Review

In Romania, the largest human resources development program supported by the European Union is the Sectoral Operational Program Human Resources Development (SOP HRD), financed by the European Social Fund in Romania. The name of the program changed into the Operational Program "Human Capital" (POCU), setting up investment priorities, specific objectives and national actions in the field of human resources. In fact, POCU continues the investments made through the European Social Fund over the period 2007-2013. Launched 50 years after the foundation of the European Social Fund, which is the oldest of all European structural funds, SOP HRD provided more than 4 billion euros in 2007-2013, offering more opportunities and higher efficiency for the Romanian labor force by responding to a changing labor market, improving the trainings offered, the ability to adapt and the latest professional skills necessary.
Although human resource management became part of the business strategy, official studies emphasised that companies tend to hire employees based on their skills and capabilities, which are required for the open position (OECD, 2013). This way, the organisations do not have to provide training as their employees already have the required qualifications.
According to the Eurostat statistics, over the period 2007-2013, approximately 10% of the EU population in age bracket 25-64 benefit of training or educational courses. The highest rate was registered in Northern countries such as Norway and Iceland, where 19% and 26% of the population respectively attended such courses, confirming an innovative character for such economies, concerned by the human capital. Over the period 2014-2020, the European Union devotes even more resources on the adaptability of the labour force, as the European Social Fund has committed a little more than 83 billions of Euros.
Studies on the quality of life of beneficiaries of human resource development programs can be very useful in the implementation of European funded projects, by assessing the impact of their investment in the life of beneficiaries and the real needs of beneficiaries, for maximised effectiveness. The quality of life is defined as the perception of individuals on the social conditions in the context of a system of cultural values in which they live, depending on their own needs, standards and aspirations (World Health Organization, 1998). Therefore, through the quality of life offered to beneficiaries of projects in the development of human resources, we may understand the physical, psychological, economic, social and welfare aspects of participation in these projects, as well as their ability to gather knowledge and experience accumulated over the implementation of these projects to achieve an

aspiring life standard, and an objective that involves both personal development and professional life (Tecau, 2015). Essentially, human resource development contributes to an increase in financial performance and employees' satisfaction as it enables their commitment towards the organisation they work for, also increasing their well-being (Sotome and Takahashi, 2014).

Among the most relevant papers published in the field of projects for human resource development sustained by EU funding, we mention the annual reports on the implementation of SOP HRD and a few evaluation reports elaborated within the projects implementation process. Only a few articles related to the impact of human resource development programs may be identified in the literature. For example, Iova (2009) analysed the effective implementation of SOP HRD in Romania addressing the issue of efficient use of Structural and Cohesion Funds, with a cost-benefit analysis related to positive results for all social levels. In terms of reaching the potential of EU member states, the main challenges for Romania were related to improving employees' performance, balance economic competitiveness with social welfare, optimize organisational performance based on the technological progress, and solve the aging population problem and economic burden of the social security system. SOP HRD may help in mitigating the challenges previously mentioned by promoting equal employment opportunities, offering training and managerial qualifications, and raising employees' awareness of their continuous development and vocational training.

The actual impact of the projects financed by the European Social Fund on the audience targeted was observed by Chiţu (2012) through documents indicating marketing research carried highlighting the importance of receiving feedback from the project beneficiaries and information on actions to be taken to improve the satisfaction of beneficiaries of EU-funded human resources projects. Another study for this purpose led to the identification of the needs of the personnel within the organizations and the labor market trends in terms of the qualifications required in the central region (Ciuhureanu and Gorski, 2012).

An obvious impact of the continuous development of the skills and competencies of the employees is to increase the production capacity and corporate competitiveness. As a consequence, regardless of the fact that some economies may have an open market if their competitive advantages do not address the development of human resource, the performance management of the companies operating in these economies will be greatly affected (Adhikari, 2010). Nowadays, human resource development represents one of the main parts in the strategic plan for companies focusing on sustainable performance. From the sustainability point of view, organisations should have goals related to more than growth, development and efficient allocation of resources. They should provide a friendly work environment, adapted for the young generation, promoting gender equality, and proactive and productive work from employees (Chams and Garcia-Blandon, 2019).

The first theories on human resource considered that training for employess should be provided mostly in organisations focused on innovation (Dostie, 2017). However, the current business models changed their view and realised the importance of human resource development regardless of their economic activities. Consequently, the latest trends emphasise the fact that soft skills are as important as the technical ones, especially over the long run. In reality, the management of human resource should be related to the overall strategy of the organisation, based on its long-term needs and productivity (Lastra, 2014; Esteban-Lloret et al, 2016).

In terms of profitability, the management of human resource should focus on cost reduction while offering corporate performance over the long-term. This means that human resource practices should rely on sustainability and this may be achieved only through constant development of employees and their well-being within the firm. Therefore, there is an ongoing discussion on the topic related to the relationship between the performance of organisations and their human resource policies.

3. Data and Methodology

3.1. Data

In order to test to which extent the cost of human resources influences corporate performance, an econometric analysis of panel data will be conducted. The panel is consisting of financial data for 203 companies operating in the Western region of Romania, over the period 2010-2016. The data used was collected from the annual financial statements (profit and loss account, balance sheet). The indicators used in the econometric models were computed based on the financial data available and will be used in the analysis of staff cost efficiency.

The performance indicators will be treated as dependent variables. They refer to return on assets (*ROA* = Profit before tax / Total assets) and return on equity (*ROE* = Net income / Shareholder funds). A list of nine independent variables will be considered, and then reduced to those with statistically significant impact on each performance indicator. The list is consisting of average cost per employee: *emplcost* = Log (Total cost of employess / Number of employees);
short-term debt ratio: *shtdr* = Current liabilities / Total Assets;
long-term debt ratio: *lgtdr* = Non current liabilities / Total Assets;
size: *size* = log(Turnover);
current ratio: *cr* = Current assets / Current liabilities;
liquidity ratio: *lr* = (Current assets – Stocks) / Current liabilities;
solvency ratio: *sr1* = (Shareholders funds / Total assets) * 100;
sr2 = [Shareholders funds / (Non current liabilities + Current liabilities)] * 100;
gearing ratio: *gr* = ((Non current liabilities + Loans) / Shareholders funds) * 100.

3.2. Methodology

The first stage of the analysis will consider the linear regression model known as ordinary least squares (OLS). The model is presented in equation (1):

$$y = \alpha + \beta_1 x_{1n,t} + \beta_2 x_{2n,t} + \beta_3 x_{3n,t} + \beta_4 x_{4n,t} + \beta_5 x_{5n,t} + \beta_6 x_{6n,t} + \\ + \beta_7 x_{7n,t} + \beta_8 x_{8n,t} + \beta_9 x_{9n,t} + \varepsilon_{n,t} \quad (1)$$

Our dataset is consisting of 203 cross-sections (n = 1..203, representing the number of companies) for T consecutive periods (t = 1..7 years, according to the period analysed 2010-2016). The variable “y” represents the dependent variables, i.e. return on assets and return on equity. The variables denoted "x" are the independent variables; they are used to describe the variations in the performance indicators: x_1 represents staff costs, x_2 is the short-term debt ratio and x_3 is the medium- and long-term debt ratio, x_4 represents the size, x_5 is the current ratio, x_6 is the liquidity ratio, x_7 and x_8 are the solvency ratios, and x_9 is the gearing ratio. More specifically, the general regression model of the most complex model can be exemplified in the following form:

$$\text{Performance indicator} = \alpha + \beta_1 \text{emplcost}_{n,t} + \beta_2 \text{shtdr}_{n,t} + \beta_3 \text{lgtdr}_{n,t} + \beta_4 \text{size}_{n,t} + \\ + \beta_5 \text{cr}_{n,t} + \beta_6 \text{lr}_{n,t} + \beta_7 \text{sr1}_{n,t} + \beta_8 \text{sr2}_{n,t} + \beta_9 \text{gr}_{n,t} + \varepsilon_{n,t} \quad (2),$$

where α represents the constant of the model, $\beta_1..\beta_9$ are the regression coefficients to be determined, and $\varepsilon_{n,t}$ represents the residual variable.
The next step is to apply the stepwise regression in order to identify the independent variables that have the highest statistical significance in determining the variance in the performance indicators. Based on the indicators emphasised as statistically significant in determining every performance indicator, a model with fixed (FE) and random (RE) effects will be tested and based on Hausman test we will identify whether or not the characteristics of the companies are important when determining the performance of Romanian companies. For data analysis, the statistical software package STATA was employed.

3.3. Results Robustness

In order to test the results robustness and to emphasise whether or not the human resource development has a high impact on corporate performance, a sub-sample will consider only companies that provided training and development courses for their employees. According to the latest data published by the National Institute of Statistics, the number of companies that offered continuous professional training increased by 20% between 2010-2015. However, over the last decades, the largest number of training providers was in 2005, when about 40% of the companies operating in the national economy were investing in employees. The employees participation rate tripled from 1999 to 2015 (from 7% to 21%).
Based on the official statistics available on the website of the National Institute of Statistics, the average cost of training of 1,705 lei per employee (the ratio between the cost of continuous professional training for all activities in the national economy, 1,246,270,836 lei, and the number of participants in training courses: 730,876 persons). This is the most recent data available, reported for 2015. Taking into account that the financial data taken does not provide details on the division of staff costs, we will consider the average cost per employee as the threshold to select from the whole sample the companies that, most likely, have incurred training costs for their employees. Considering that about 25% of the companies in Romania offered training opportunities for employees (according to the official statistics) we establish the sub-sample as the last quartile of the entire sample, based on staff costs: 47 companies with an average cost per employee exceeding 45,000 lei.
In order to emphasise the relevance of human resource development (observed through higher staff costs) on the performance of companies operating in Romania, we will test the same regression models (OLS, stepwise, random and fixed effects) on the sub-sample, observing the differences between the results.

4. Results

The comparative regression results for the models considering ROA as dependent variable can be observed in Table 1. The OLS model indicates that the average cost per employee and long term debt have a negative influence on the economic performance of the company. However, current debt has a direct influence on ROA, along with the solvency ratio evaluated based on total assets. The results of the stepwise model are consistent with the OLS model. In addition, liquidity ratio and size appear to have a direct influence on ROA. Considering the models with fixed and random effects, the cost per employee sustains the negative influence on economic performance. However, the debt changes its influence on ROA depending

on its term: current debt indicates a negative influence on ROA while long-term debt has a positive influence on performance. Size and solvency maintain their direct influence on ROA. Based on the Hausman test, the individual characteristics of the companies may influence the results and therefore the model with fixed effects is more appropriate for this database. Although the R-squared is not very high, this model may describe between 10% and 26% of the variance in ROA, depending on the regression model tested. The model is also confirmed by the F statistic, which is statistically significant in all the models.

Table 1: Results of regression models – dependent variable ROA

	OLS		**Stepwise OLS**		**FE**		**RE**	
	Coef.	T	Coef.	t	Coef.	t	Coef.	Z
emplcost	-3.62**	-1.98	-3.467**	-1.98	-6.675***	-2.55	-5.24***	-2.67
shtdr	6.445**	2.33	5.247**	2.39	-9.962***	-3.88	-4.275**	-2.09
lgtdr	-13***	-3.33	-13.4***	-3.32	7.199	1.4	2.743	0.61
size	1.128	1.59	1.196*	1.72	9.319***	7.48	6.71***	7.98
cr	0.401	0.56						
lr	0.888	1.16	1.197***	2.92	-0.083	-0.97	0.072	0.87
sr1	0.362**	2.14	0.186***	5.84	0.197***	7.69	0.183***	9.59
sr2	-0.082	-1.11						
gr	0.000	0.10						
_cons	3.900	0.45	5.103	0.62	-13.476	-1.12	-9.138	-1.03
R-sq.	0.097		0.092		0.23		0.26	
F / Wald test	7.34***		10.79***		54.4***		351.22***	
Hausman (chi sq.)					68.32***			

***, **, * - statistically significant at 1%, 5%, and 10%, respectively

The regression results for the models considering ROE as dependent variable are presented in Table 2. The regression model with all independent variables indicates that the only variable statistically significant is the average cost per employee. Compared to the ROA model, the regression coefficient for “emplcost” is a lot higher, suggesting that the cost of employment has a lot more influence on financial performance than on economic performance. Essentially, the higher the cost with employees, the least effective the management will be, as the shareholders’ returns will decrease. The results of the stepwise model confirm the relationship between employment cost and ROE reflected by the OLS model. In addition, liquidity ratio has a direct impact on ROE, and gearing ratio indirectly influences ROE. Considering the models with fixed and random effects, the cost per employee maintains its highly negative impact on financial performance. Based on Hausman test, the fixed effects model is more appropriate as the companies characteristics may influence the results. In addition, short-term debt has a large negative influence on ROE (according to the high coefficient values), along with the gearing ratio, which restrains the financial performance along with higher debt. The R-squared is limited: the model

may describe up to 5% of the variance in ROA, mainly based on employment costs. Although the R-squared values are low, the model was confirmed by the F statistic.

Table 2: Results of regression models – dependent variable ROE

	OLS		Stepwise OLS		FE		RE	
	Coef.	T	Coef.	t	Coef.	t	Coef.	z
emplcost	-50.9***	-4.17	-50.96***	-4.49	-69.5***	-5.83	-43.31***	-4.95
shtdr	17.888	0.97	22.047*	1.91	-40.86***	-3.61	-4.819	-0.58
lgtdr	-39.034	-1.44	-40.775	-1.53	22.303	0.95	-1.785	-0.09
size	2.017	0.42						
cr	-1.124	-0.24						
lr	7.472	1.48	6.574**	2.48	-0.504	-1.01	-0.028	-0.06
sr1	-0.601	-0.53						
sr2	0.280	0.56						
gr	-0.024	-1.18	-0.022*	-1.61	-0.056***	-3.95	-0.034***	-2.83
_cons	227***	3.93	230.33***	4.41	348.21***	6.31	215.03***	5.33
R-sq.	0.05		0.049		0.05		0.04	
F / Wald test	3.6***		6.41***		11.39***		31.92***	
Hausman (chi sq.)					38.69***			

***, **, * - statistically significant at 1%, 5%, and 10%, respectively

Table 3: Results of regression models for the first sub-sample (average cost per employee higher than 45,000 lei) – dependent variable ROA

	OLS		Stepwise OLS		FE		RE	
	Coef.	T	Coef.	t	Coef.	t	Coef.	z
emplcost	4.023	0.67						
shtdr	3.725	0.52						
lgtdr	8.485	0.96						
size	5.254***	3.35	4.566***	3.19	6.168***	2.39	5.58***	3.37
cr	5.341***	2.2	2.036***	2.26	-2.254	-1.1	-0.676	-0.4
lr	-4.34***	-1.8	-3.754*	-1.7	1.644	0.71	-0.165	-0.1
sr1	0.678	1.44	0.377***	5.21	0.379***	8.88	0.318***	9.37
sr2	-0.106	-0.5						
gr	0.005	0.55						
_cons	-64***	-1.9	-33***	-4	-40.85	-3.1	-9.138	-1.03
R-sq.	0.23		0.22		0.27		0.27	
F / Wald test	4.08***		8.99***		25.06***		121.19***	
Hausman (chi sq.)					7.59*			

***, **, * - statistically significant at 1%, 5%, and 10%, respectively

By observing the results in Table 3, for the sub-sample with companies considered to ensure training and development opportunities for their employees, we can state that the relationship between employment costs and return on assets is positive, although not statistically significant. Despite of this result, the companies that invest in their employees tend to be more profitable if their liquidity ratio is reduced. However, statistically significant coefficients from OLS and stepwise model indicate that current ratio has a direct impact on ROA, which proves that these companies have a correct management of stocks as the higher the stocks, the better their economic performance will be. Based on the results of this sub-sample we are confirmed that larger companies or those with higher solvency ratio (to total assets) tend to be more profitable.
From the results included in Table 4 we conclude that, although the regression coefficient for the average cost per employee is not statistically significant, higher employment costs reduce the shareholders' returns. While the solvency ratio computed to total assets induces a direct influence on ROE, the solvency ratio referring to the ability to pay the obligations significantly restrains the financial performance of companies that invest more in human resource development. Also, current liabilities tend to restrain ROE, while larger companies offer higher returns to their shareholders.

Table 4: Results of regression models for the first sub-sample (average cost per employee higher than 45,000 lei) – dependent variable ROE

	OLS		**Stepwise OLS**		**FE**		**RE**	
	Coef.	t	Coef.	t	Coef.	t	Coef.	z
emplcost	-23.524	-0.7						
shtdr	-10.396	-0.2	-45.762**	-2	91.008	1.48	23.014	0.46
lgtdr	87.302*	1.66						
size	19.853**	2.12	15.394*	1.8	35.338	1.11	17.773	0.84
cr	29.920**	2.06						
lr	-28.951**	-2.1						
sr1	7.229***	2.56	7.382***	3.25	14.746***	4.91	17.562***	-6.3
sr2	-2.544**	-2.2	-2.759***	-2.6	-5.511***	-3.8	-6.08***	-5
gr	-0.028	-0.5						
_cons	-94.151	-0.5	-149.12***	-2.8	-419.21***	-2.9	-328.28***	-3.2
R-sq.	0.23		0.19		0.34		0.32	
F / Wald test	4.02***		7.16***		14.02***		73.54***	
Hausman (chi sq.)					13.84***			

***, **, * - statistically significant at 1%, 5%, and 10%, respectively

The results proved that there are some differences within companies, depending on their commitment to offering employees development. Based on the goodness of fit indicators, the model describes more variance in the performance of companies that

invest more in human resources (up to 27% of the variance in ROA, and up to 34% of the variance in ROE).

5. Conclusions

This research provides evidence sustaining the idea that human resource policies can induce a better corporate performance if they are focused on the continuous development employees, through training or educational courses. The results prove that the positive effect on economic performance (ROA) is immediate, most probably because it increases the effectiveness of human resources. Moreover, although the financial performance (ROE) may be affected over the short-term, as net profits are reduced due to high employment costs, the development of employees could increase the future returns ensuring a sustainable increase in profits. The financial data does not provide details on the division of staff costs, but considering that the employees participation rate in training courses tripled from 1999 until 2015, the assumption that at least 25% of the companies analysed (considering those with highest employment costs) provide training and other types of vocational courses for continuous development for their employees is acceptable.
Due to limited space, we did not develop further the analysis, but we mention that results for the rest of the companies (156 companies, after excluding the 47 companies with high cost of employment) indicate similar relationships to those presented for the overall sample. The coefficient of the average cost per employee is negative and statistically significant for most models, another proof for considering that lower levels of employment costs, therewith restricted development of human resources, affects performance. For all the models it was confirmed that the fixed effect model is more appropriate, indicating that the individual characteristics of the companies included in the overall sample or sub-samples may be correlated with the independent variables considered, influencing the regression results. Further research could consider sub-sampling on industry sectors, as well as considering the models on each quartile in order to observe in more detail the differences in the regression coefficients values and signs.

References

1. Adhikari, D.R. (2010) Human resource development for performance management: The case of Nepalese organizations, *International Journal of Productivity and Performance Management*, 59(4), 306-324.
2. Chams, N., Garcia-Blandon, J. (2019) On the Importance of Sustainable Human Resource Management for the adoption of Sustainable Development Goals, *Resources, Conservation and Recycling*, 141, 109-122.
3. Chitu, I. B. (2012) The real impact of projects financed through European Social Fund – Sectoral Operational Programme for Human Resources Development - Over target audience, *Journal of Applied Economic Sciences*, 7(4), 366-372.
4. Dostie, B. (2017) The impact of training on innovation, *ILR Review*, [Online], Available: 10.1177/0019793917701116 [2 March 2019].
5. Ciuhureanu, A. T., Gorski, H. (2012) Study on Identifying the Need for Personnel within Organizations and the Labor Market Tendencies from the Perspective of Required Qualifications in Centre Region, *Journal of Knowledge Management, Economics and Information Technology*, ScientificPapers.org, 2(1), 1-10.

6. Esteban-Lloret, N. N., Aragón-Sánchez, A., Carrasco-Hernández, A. (2016) Determinants of employee training: Impact on organizational legitimacy and organizational performance**,** *International Journal of Human Resource Management*, 1-22, [Online], Available: 10.1080/09585192.2016.1256337 [2 March 2019].
7. Iova, C. (2009) The efficiency of implementing SOPHRD in Romania – Evolutions and perspectives. *Theoretical and Applied Economics*, 9(538), 51-75.
8. Kramar, R. (2014) Beyond strategic human resource management: is sustainable human resource management the next approach?, *International Journal of Human Resource Management*, 25(8), 1069-1089, [Online], Available: DOI: 10.1080/09585192.2013.816863 [4 March 2019].
9. Lastra, S.F., Alcázar, F., Gardey, G. (2014) Functional flexibility in human resource management systems: Conceptualization and measurement, *International Journal of Business Administration*, 5 (1), 1-14, [Online], Available: 10.5430/ijba.v5n1p1 [24 February 2019].
10. OECD (2013) *Skills development and training in SMEs. Local economic and employment development (LEED)*, OECD Publishing, ISBN 978-92-64-16942-5.
11. Sotome, R., Takahashi, M. (2014) Does the Japanese employment system harm productivity performance? A perspective from DEA-based productivity and sustainable HRM, *Asia-Pacific Journal of Business Administration*, 6(3), 225-246, [Online], Available: https://doi.org/10.1108/APJBA-02-2014-0031 [24 February 2019].
12. Tecau, A. S. (2015) Impact assessment of human resources development programs funded by the European Union on improving beneficiaries' quality of life, *Bulletin of the Transilvania University of Braşov Series V: Economic Sciences*, 8(57) No. 2, 443-450, [Online], Available: http://webbut.unitbv.ro/BU2015/Series%20V/BILETIN%20I/52_Tecau%20A.pdf [4 March 2019].
13. World Health Organization (1998) *The World Health Report 1998. Life in the 21st century. A vision for all,* [Online], Available: http://www.who.int/whr/1998/en/whr98_en.pdf. [24 April 2018].