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Effect of Human Resource Accounting Disclosure on Financial Performance of the Firms: An Empirical Evidence of KSE 100

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ABSTRACT

The study investigates the impact of human resource accounting (HRA) disclosures on the financial performance of KSE-100 firms. For this purpose, we use Static panel data Models, i.e., Fixed Effect Model and Random effect model, to analyze the behavior of financial performance based on the level of human resource accounting disclosures using a sample of 96 companies listed on KSE 100 Pakistan Stock Exchange from the years 2015-2020. We used return on assets as our dependent variable and developed an index based on the past literature for the independent variable. Firm Size, Financial leverage, and Foreign Ownership were used as control variables and the independent variable. Results show a significant positive relationship of human resource accounting disclosures on the firm's financial performance. The relation between firm size and financial performance is significantly positive, and there is little relation between financial leverage and foreign ownership with financial performance.

Keywords: Human Resource Accounting Disclosure Index, Financial Performance, Foreign Ownership, Return on Assets, Firm Size

1 | INTRODUCTION

There is a growing interest among the shareholders for information related to human capital. As in this day and age, every decision-maker needs updated, related, and practical information to make a sound decision (Micah, Ofurum & Ihendinihu, 2012). Disclosures about Human Resource accounting in an organization are important factors for the stakeholders to make decisions in this era of the knowledge-based economy (Syed, 2009). Beattie and Smith (2010) found that external disclosures about human resources help bring in skilled human resources, which ultimately enhance the financial performance of any organization.

The firm's financial performance is very important for investors, stakeholders, and the economy at large (Mirza & Javed, 2013). According to Mirza and Javed (2013), an investor is highly concerned with the Return on assets. Thus, most decisions taken by an investor related to investments in a firm are based on their financial performance. As the firm's financial performance is of vital importance, the firm needs to improve financial performance and measure its performance with accuracy.

According to Syed (2009), disclosing information about human resources in the company's annual reports brings a positive change in the company's profitability. It is also an integral part of the management report. However, there is no proper accounting standard for communicating monitory and non-monitory information regarding human resource accounting. That is why the information related to human resources is not properly presented in the companies' annual reports as there are no specific criteria to be met.

It is very common for companies to report information regarding Human Resource Accounting in developed countries formally. However, countries reporting information about human resource accounting in developing countries is a very new concept and is still in the infant stage (Hossain, Khan & Yasmin, 2004). Although it is not mandatory for the regulatory bodies for the companies in Pakistan to disclose information on Human resource accounting, the companies are making some human resource accounting disclosures voluntarily. Thus, this study attempts to study the pattern of human resource accounting disclosures in listed companies of Pakistan and the relationship between human resource accounting disclosures and the firm's financial performance.

2 | REVIEW OF RELEVANT LITERATURE

A series of academic research has been done to investigate the effect of human resource accounting adoption since the 1960s. It all started when Schultz (1961), in his study, proposed that skilled human being is a form of capital for any organization, and it grows at a rate greater than the non-human capital. It has been widely observed that an increase in human capital is compared with the increase in reproducible physical capital and according to him, investment in human capital is the main explanation for this difference (Schultz, 1961).

Similarly, Flamholtz (1973) found positional replacement cost to be a valid and reliable measure of costs and value of people to support the decision-making of management and investor. Flamholtz (1976), in continuation to his first research, found three kinds of information regarding human resources, i.e., traditional information and the Monitory and Non- Monitory information extracted from the new valuation method. The decision taken based on the Monitory and Non-Monitory information using the new valuation method has a better outcome than traditional information (Flamholtz, 1976). Flamholtz and Lacey (1981) find that human capital accumulates skills and then makes the benefits flow to the company. Thus, as human resource development produces future benefits, its cost is an investment. Hermannson (1964) also believed that a human resource is a form of capital for a company, so a monetary value is assigned to the human capital and then be capitalized as another form of capital in the company's balance sheets. Mincer (1984) defines *human capital* as the transmission and embodiment in people of available knowledge and relates to the production of new knowledge. The author compared human capital with economic growth and concluded that human capital might not be a component for economic growth at a certain place and time, but the growth of human capital is necessary to ensure economic development in an economy. Afterward, in his research, Sweetland (1996) defines *human capital expenditure* as a consumptive expenditure as both the humans and society derive economic benefit from the investments in people. The author also mentioned an economic component to education that is the cost related to education.

Moreover, the human capital theory deals with these economic relationships. Eklöv, Holmgren, and Mårtensson (1999) concluded three benefits that encourage a company to adopt human resource policies. The first one is the improvement of the management of human resources from the organization's perspective, as they will be having a clear picture of the investments and outcomes regarding human resources. The second is to give a better view of the company to the stakeholders to improve their company valuations and make better decisions. The third is the desire of human resource specialists to get better information about a company and use it as an argument for the suggestion of investments in human resources. However, the research of Olsson (2001) found that the information related to human capital is not more transparent today than it was at the beginning of the 1990s, even if the tendency is to have a more open and developed accounting system for information related to human capital. Abhayawansa and Abeysekera (2008) introduced an explanation of Human capital disclosure, which is more suitable as it says that literature conceptualizes human capital as a collection of knowledge employees have individually and collectively in firms. It is why the disclosures related to Human resource scores are low compared to the external and internal disclosures regarding capital and do not show Human capital in a useful way for the capital market.

Similarly, according to the exploratory research of Islam, Zaman, and Redwan (2013), human resource accounting is the method of identifying and measuring data related to human resources and then communicating the information to the stakeholders. In the valuation of human resource accounting, the costs which should be added are costs related to the acquisition, costs related to substitution, opportunity costs, and replacement costs of human resources. Afterward, Syed (2009) found that the disclosure of information positively influences the firm's profitability in its annual reports. Using a human resource accounting disclosures index as an HRAD proxy, the relationship was determined. Similarly, Beattie and Smith (2010) found that factors such as employees' skills and their education, the commitment of employees, positive attitude of an employee and their behavior, and motivation of employees are considered in the contribution to value creation the most. Beattie and Smith (2010) considered the company's annual report to be the most effective written form of communication for the information related to human resource

accounting. The exploratory research of Chaudhry and Roomi (2010) in the Pakistani market concludes that the companies in Pakistan are not giving any importance to the training and development of human capital, while the companies investing in human resources could not find the financial outcome of the investment made in the development of the human resource. The reason is that they do not have a proper system to maintain information regarding human resources as they do not have a guideline for it.

Kirfi and Abdullahi (2012) compared the policies of human resource accounting in different countries. They found that the lack of disclosing human resources as an asset discouraged using any measurement technique to quantify human resources and report it. They further said that the internationalization of human resource accounting would help cover all the problems related to human resource accounting and its disclosures. Kaur, Raman, and Singhaniya (2014) reviewed India's human resource accounting disclosure practices. They found that the accounting system currently used cannot give a monetary value to human resources, and human resource accounting disclosures made by companies are not in a structure, not consistent, and are not comparable across companies and industries. Thus, there should not be more disclosures, but there needs to have better rules and practices for the disclosure of information, and this will improve trust in accounting.

3 | RESEARCH METHODOLOGY

Initially, descriptive statistics were examined, and after that, the causal relationship among the variables was estimated using correlation analysis and statistic panel data models such as the fixed effect model (FEM) and random effect model (REM).

The study used secondary data, and all the data is extracted from the companies' annual reports. The annual reports are downloaded from the websites of the respective companies. The population for the research is KSE 100 companies, which are 98 companies listed on the Pakistan stock exchange. The condition for data collection was based on the data available for respective companies.

Human resource accounting disclosure is measured using an index of 15 variables. The index was constructed by reviewing the relevant literature. A score of 1 was assigned if the company has the desired variables in its annual report and 0 otherwise. This process was carried for all 15 variables. Then the score was put into a formula to divide the obtained score between the total score and the multiply with 100 to find the percentage of human resource accounting disclosure in a company's annual reports. The Table 1 below shows the index for human resource accounting disclosures.

Table 1. Human Resource Accounting Disclosure Index

Sr. No	Disclosure Item	Score
i	Separate HR statement	0-1
ii	Total Value of Human Resource	0-1
iii	Number of employees	0-1
iv	Human resource policy	0-1
v	Training and Development	0-1
vi	Management succession plan	0-1
vii	Employment report	0-1
viii	Employees value addition	0-1
ix	Human resource development fund	0-1
x	Workers employees fund	0-1
xi	Employee's category	0-1
xii	Managerial remuneration	0-1
xiii	Retirement benefits	0-1
xiv	Performance recognition	0-1
xv	Super annulation Funds	0-1

Source: Khan (2021)

The financial performance, which is the dependent variable of the research, is found using the formula of return on assets, which is to divide earnings before interest and tax (EBIT) on the company's total assets (TA). Following Syed (2009), the control variables taken are the size of the company, which is the natural log of the total assets (lnTA) of the company, financial leverage, which is found through the formula of total liabilities divided by total assets (D/A) and the foreign ownership of the company which is the percentage of shares owned by the foreign companies or individuals. The study uses the following model for the study.

$$ROA_{it} = \alpha_{it} + \beta_1 HRADI_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 Fow_{it}$$

Where.

ROA= Return on Assets

HRADI= Human Resource Accounting Disclosure Index

Size= Natural log of the total assets of the company

Lev= Leverage, measured by dividing total liabilities on total assets

FOW= Foreign Ownership, the percentage of the shares of foreign owners

4 | RESULTS AND DISCUSSION

Level of Human Resource Disclosures

The following table shows the average reporting level of human disclosures in the sample selected. It shows that some of the information is not disclosed in any company. At the same time, some of the information is disclosed by every company. The average disclosure level according to the index is 55 percent in KSE 100 companies.

Table 2. Human Resource Reporting Level

Sr. No	Disclosure Item	Disclosure (%)
i	Separate HR statement	64%
ii	Total Value of Human Resource	0%
iii	Number of employees	93%
iv	Human resource policy	80%
v	Training and Development	89%
vi	Management succession plan	55%
vii	Employment report	0%
viii	Employees value addition	0%
ix	Human resource development fund	38%
x	Workers employees fund	99%
xi	Employee’s category	22%
xii	Managerial remuneration	97%
xiii	Retirement benefits	100%
xiv	Performance recognition	0%
xv	Super annuation Funds	100%
Xvi	Average Disclosure in KSE 100	55%

Table 3. Descriptive Statistics.

Variables	N	Mean	Sd	Min	Max
HRADI	487.000	0.556	0.135	0.000	0.733
FOw	480.000	0.081	0.141	0.000	0.567
ROA	480.000	0.111	0.135	-1.440	0.699
Size	480.000	18.090	1.966	8.010	22.630
Lev	480.000	0.571	0.257	0.008	1.000
N	96.000	96.000	96.000	96.000	96.000

Table 3 exhibits the descriptive statistics of the study variables namely human resource accounting disclosure index (HRADI), foreign ownership (FOw), return on assets (ROA), firm size (Size), leverage (Lev).

Correlation Analysis

The below table shows the correlation between the variables. The first is the correlation of HRADI with ROA and that shows a negative relationship, but it is insignificant. The second correlation describes the relationship of Size with ROA which is negative and insignificant. The correlation of size with HRADI is positive and is going towards significance which shows that size of the company does affect the Human resource accounting disclosure of the company. Leverage has a negative correlation with the ROA which goes towards significance. Leverage has got a significant positive relation with HARD. Foreign ownership has an insignificant negative relationship with ROA and a positive insignificant relationship with HRADI.

Table 4. Correlation Analysis.

	ROA	HRADI	Size	Lev	Fow
ROA	1				
HRADI	-0.0158	1			
Size	-0.106	0.4313	1		
Lev	-0.2294	0.3413	0.5706	1	
FOw	-0.0487	0.077	-0.1196	-0.0233	1

Where;

ROA= Return on Assets

HRADI= Human Resource Accounting Disclosure Index

Size= Natural log of the total assets of the company

Lev= Leverage, measured by dividing total liabilities on total assets

Fow= Foreign Ownership, the percentage of the shares of foreign owners

Hausman's Test for Whole Sample

Before conducting the regression test the study applied the Hasuman test to choose between random effect and fixed effect. The p-value came to be greater than 5%. Thus, random effect regression was to be applied to the data.

Table 5. Hausman Test for the whole sample

Hausman Test	Between Random Effects & Fixed Effects	Chi2 (4)	9.16	Random
		Prob > Chi2	0.0573	

Random Effect Model

Since the relationship shown is negative and is not aligned with the literature. The reason though was that the COVID-19 might be the reason that the results are negative as there was a decrease in the profitability of most of the companies in the year 2020. Thus, the study applied another regression analysis.

Hausman's Test for Dummy Variable

A Hausman test was conducted before applying the second regression model and the p vale came to be less than 5%. It suggests that a fixed effect regression should be applied.

Table 6. Random Effect Estimates

ROA	Coef.	St.Err	t-value	p-value	Sig.
HRADI	-0.004	0.074	-0.05	0.960	
Size	0.013	0.006	2.15	0.032	**
Lev	-0.103	0.037	-2.75	0.006	***
Fow	-0.011	0.065	-0.17	0.867	
Cons	-0.069	0.099	-0.69	0.487	

Mean dependent var	0.111	SD dependent var	0.135
Overall r-squared	0.020	Number of obs	480.000
Chi-square	9.003	Prob > chi2	0.061
R-squared within	0.017	R-squared between	0.026
*** p<0.01, ** p<0.05, * p<0.1			

Table 7. Hausman Test for Dummy Variable

Hausman Test	Between Random Effects & Fixed Effects	Chi2 (4)	13.81	Fixed
		Prob > Chi2	0.0079	

Fixed Effect Model

In this regression, a dummy variable is created by the name of D-COVID to check the pre-Covid and post-Covid effects. The years 2015 to 2019 were denoted with 1 which is the pre-Covid time while the year 2020 was denoted with 0 which is post Covid time. If we see the effect of Human resource accounting disclosures on the financial performance of the firm before Covid the relation is significantly positive. It is supported by the literature as Syed (2009), Beattie and Smith (2010), Micah, Ofurum, and Ihendinihu (2012), and Olajide, Olugbenga, Lateef, and Ajayi (2018) also found a positive relationship. This test also proves that the negative effect developed in the first regression analysis was due to Covid as there was an abrupt decrease financial performance of most of the companies.

Table 8. Fixed Effect Estimates.

ROA	Coef.	St.Err	t-value	p-value	Sig.
HRADI(D-Covid)	0.044	0.010	4.25	0.000	***
Size	0.043	0.010	4.28	0.000	***
Lev	-0.070	0.047	-1.48	0.141	
FOw	0.001	0.104	0.01	0.990	
Cons	-0.658	0.178	-3.71	0.000	***

Mean dependent var	0.111	SD dependent var	0.135
R-squared	0.074	Number of obs	480.000
F-test	7.636	Prob > F	0.000
Akaike crit. (AIC)	-1210.201	Bayesian crit. (BIC)	-1189.332
*** p<0.01, ** p<0.05, * p<0.1			

5 | CONCLUSION

Human resource is an integral part of any organization. Thus, disclosing its information in annual reports is also very important for both the company as their financial performance is affected and the stakeholders as their decision-making is affected. The study was made to empirically see the effect of Human resource accounting disclosures on the financial performance of the company. The analysis gave an insignificant negative relationship between human resource accounting disclosures and financial performance of the company when the whole sample was taken which was against the literature reviewed. It was thought that the reason could be COVID-19 as in the year 2020 the financial performance of most of the companies fell. Thus, another test was conducted to see the real effect of Human resource accounting disclosures on the financial performance of the company. The test took a dummy variable which would give before the Covid effect and the results came to be significantly positive. Thus, it is concluded that there is a positive effect of human resource accounting disclosures on the financial performance of the companies in the Pakistani market. There is a significant positive relationship between the size of the company with the human resource accounting disclosures which means that bigger companies are disclosing more information about human resource accounting disclosures as compared to smaller companies. Foreign ownership has an insignificant negative relationship between human resource accounting disclosure and leverage has a positive relationship with human resource accounting disclosure. The study found that a maximum of 73% percent of disclosures form the index are disclosed in the annual reports of the companies. If the percentage of disclosure is increased by the companies, it would be beneficial for both the company as their financial performance would be positively affected and the stakeholders as they can make an informed decision.

Implications

The findings gave an important view of human resource accounting disclosures to both the policymakers and the firms. The focus of policymakers should be to develop a guideline for the disclosures of human resource accounting and then make sure that the firms comply with the guidelines. This would help in standardizing the disclosures regarding human resource accounting for all the firms. It would be easy for the decision-makers to extract and compare the information of companies and make informed decisions. After the study, it is recommended that a standard must be created for human resource identification, measurement, and disclosures.

Limitations

The study was carried out with a sample size of 96 companies listed on KSE-100. Thus, the study could be extended by increasing the sample size of the companies.

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