"The effect of human capital and structural capital on leverage: Evidence from Jordan"

| AUTHORS | Mohammad Fawzi Shubita (iD) R |

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Mohammad Shubita (Jordan)

THE EFFECT OF HUMAN CAPITAL AND STRUCTURAL CAPITAL ON LEVERAGE: EVIDENCE FROM JORDAN

Abstract

This study investigates the effect of human capital and structural capital on leverage for Jordanian industrial firms from 2006 to 2020. The relevance of this topic lies in the importance of capital structure decisions for firm value and the limited research conducted on the topic in Jordan. The aim is to examine whether human capital efficiency and structural capital efficiency significantly affect leverage. The sample includes 77 industrial firms. The study employs multiple regression analysis to test the hypotheses, controlling for variables such as return on equity and firm size. The findings show that structural capital efficiency does not significantly affect leverage, but human capital efficiency and ROE have significant effects. Furthermore, the study finds that the relationship between these variables differs between large and small companies. This implies that firms with more efficient human capital tend to use less debt financing. The study concludes that human and structural capital efficiency should be considered when making capital structure decisions, as they can affect the optimal level of debt financing. The practical value is the insights for firms in Jordan and other emerging markets on optimizing their capital structure decisions by considering their human and structural capital efficiency. These results contribute to the literature on firm performance determinants in emerging economies and offer valuable information for practitioners and policymakers.

Mohammad Shubita, Ph.D., Professor, Accounting Department, Amman Arab University, Jordan.

Keywords	human capital, intellectual capital, Jordan, industrial companies, structural capital, leverage
JEL Classification	L25, L21, M20, G32

INTRODUCTION

Efficient management of capital structure is a significant factor in the success of any organization. The appropriate allocation of financial resources and determination of optimal levels of debt and equity can enhance the organization's profitability and reduce financial risks. Thus, companies must maintain an efficient capital structure to ensure long-term financial stability and growth. Previous research indicates that several factors influence capital structure decisions, including firm-specific characteristics, industry dynamics, and macroeconomic conditions. However, in the context of Jordan, there is a lack of empirical research examining the impact of structural and human capital efficiency on firms' leverage decisions.

Human capital refers to the knowledge, skills, and experience individuals possess within a firm, while structural capital represents the knowledge and systems embedded within the organization. Both types of capital are crucial for operating, particularly in the industrial sector, where technological advancements are rapidly transforming traditional production methods.

The Jordanian industrial sector has been experiencing significant growth in recent years, with increasing competition and globalization driving firms to explore new ways to remain competitive. A critical factor in this context is the level of leverage firms employ, which can impact their financial stability and overall success. However, the extent to which human and structural capital influence firm leverage in this context has yet to be fully explored.

1. LITERATURE REVIEW

The relationship between human capital, structural capital, and leverage has been a topic of interest in finance and accounting. Human capital refers to employees' knowledge, skills, and abilities, while structural capital refers to the internal structure of a company, including its processes and systems. Leverage, on the other hand, is the degree to which a company uses debt financing to fund its operations.

Human capital and structural capital have been widely recognized as important determinants of firm performance in the literature (Hitt et al., 2019). The reason for selecting the industrial sector is its unique characteristics (Shubita, 2022). The human capital impact on company performance has been extensively studied (Tamunomiebi & Kalio, 2019; Masa'deh et al., 2015; Tarigan et al., 2019; Wang et al., 2014; Xu et al., 2021; Chu et al., 2011; Zéghal & Maaloul, 2010). According to Becker (2009), investment in human capital can lead to higher productivity and improved performance. Similarly, Bontis (1998) argued that human capital can enhance a company's competitive advantage by providing valuable skills and knowledge that are difficult to imitate. In the context of the industrial sector, Jin et al. (2022) found a direct link between firm performance and human capital in Chinese industrial firms.

Structural capital has received less attention in the literature. However, it has been shown to play a vital role in improving company performance. According to Lepak and Snell (2002), structural capital includes organizational routines, procedures, and systems that enable firms to achieve their strategic goals. Bontis (1998) also argued that structural capital can generate a firm with a competitive advantage by allowing it to create and leverage knowledge assets. Shubita (2019) defined Structural capital as the knowledge that remains inside the firm which includes cultures, databases and procedures.

In the context of firm leverage, the literature suggests that both human and structural capital can influence firms' leverage levels. According to Ndubuisi (2017), firms with higher levels of human capital are more likely to employ debt financing as they can better manage the risks associated with debt. Similarly, Khalique et al. (2020) found a direct link between structural capital and Korean firms' leverage level.

However, the link between structural and human capital and company leverage may vary across different contexts. For example, Abdullah and Sofian (2012) found that the impact of human capital on company leverage is weaker in Malaysia compared to developed economies. Similarly, Yilmaz and Acar (2018) concluded that the structural capital impact on firm performance is weaker in Jordan than in developed countries.

In Jordan, Awwad and Qtaishat (2023) aimed to identify the intellectual capital effect on Jordanian banks' performance for the extended period (2009–2018); banks' financial reports were referred to obtain the study data. The study also used a number of statistical methods, such as descriptive statistics, linear autocorrelation, multiple linear correlation, and Pearson's correlation coefficient. The study demonstrated that competitive advantage mediates the link between financial performance and intellectual capital and that intellectual capital positively affects commercial banks' financial performance. In this specific circumstance, scholarly capital is significant in incentivizing the organization's partners and fostering an upper hand that empowers the organization to confront the rising contest, particularly in the financial area. In addition, Radić (2018) identified the impact of intellectual capital on the bank's profitability in Serbia using the descriptive analytical approach. The study population consisted of 27 listed banks. The financial reports of those banks were referred to as a tool. The study period covered 2008–2016 using descriptive statistics, stability of time series,

and regressions. The study recommended that the management of banks pay attention to intellectual capital and deepen understanding of its dimensions among the administrative staff.

In Pakistan and China, Xu et al. (2022) identify the link between intellectual capital and the profitability of banks during COVID-19. The financial reports of those banks were consulted to obtain the study data. The study period covered 2020 and 2019; profitability was measured through the ROA and ROE, and intellectual capital was measured through the intellectual coefficient model for added value. The study used correlation coefficients, descriptive statistics, and regressions as its statistical methods. The results showed that even during the COVID-19 pandemic, the capital preserved the intellectual relationship and positively affected banks' profitability in Pakistan and China. The most influential dimension in profitability is human capital, so decision-makers should enhance intellectual capital, which can potentially increase banks' profitability even in times of crisis.

In Bahrain, Desoky and Mousa (2020) researched the intellectual capital effect on the company's financial performance in the financial and service sectors. The study sample was 29 companies from both sectors, covering 2013–2017. The financial reports of the study sample companies were referred to extract the data. Correlation and regression coefficients were used as statistical methods. The findings showed that all components of intellectual capital have a positive relationship with the company's financial performance, with the exception of human capital. The study recommended that researchers in the future conduct more research on intellectual capital and its association with other variables.

According to G. Roos and J. Roos (1997), examples of human capital aspects include creativity, employee flexibility, innovation capacity, education, teamwork capacity, experience, contentment, formal training, motivation, and loyalty. According to Namasivayam and Denizci (2006), human capital is able to maintain the firm's success by interacting with structural capital and utilizing creative capital. By facilitating the "insourcing" of external knowledge assets, human capital can enhance the link between the company and its customers. This is accomplished by encouraging employee creativity to increase customer value. Bontis (1998) used a sample of Malaysian businesses to determine that human capital is highly critical to intellectual capital. Concerning the effect of human capital, Wang and Chang (2005) concluded that human capital, in a roundabout way, impacts a company's exhibition. The literature uses a variety of proxies to measure human capital, e.g., Sydler et al. (2014) and Lajili and Zéghal (2006) use labor costs.

Different proxies for structural capital were presented in previous studies. For example, Sydler et al. (2014) used total capital expenditures and intangible assets, whereas DeCarolis and Deeds (1999) used research and development costs. In addition, Godfrey and Hill (1995) asserted that the inclusion of intangible assets enables businesses to enhance all of the strategic asset characteristics. However, Mouritsen (1998) noted that, except for intellectual capital, a crucial strategic asset, most intangible assets are not considered important. However, for the firm to become more competitive in the future, increase its value, and attain a higher level of performance, intellectual capital is a fundamental driver (Wang & Chang, 2005). According to Riahi-Belkaoui (2003), qualifying intellectual capital could establish the link between intellectual capital and company performance as a strategic asset.

Therefore, this study aims to fill this gap by examining the effect of human capital and structural capital on leverage in Jordanian industrial companies. Specifically, the paper investigates whether firms with higher human and structural capital levels are more likely to use debt financing to fund their operations. The findings are expected to contribute to the existing literature by providing insights into the factors that determine the capital structure decisions of Jordanian industrial companies. Overall, the literature suggests that human and structural capital can be vital in determining firm leverage. However, the impact of these factors may vary across different contexts and industries. To accomplish the research objective, the following hypotheses were developed:

H_{01}:   *Human capital does not have a significant impact on firm leverage.*

H_{02}: *Structural capital does not have a significant impact on firm leverage.*

H_{03}: *Firm size does not affect the relationship between human capital, structural capital, and firm leverage.*

2. METHOD

The study uses a quantitative research methodology to investigate how structural and human capital affects industrial firms' leverage in Jordan. In order to select the industrial companies for the study's sample, a convenience sampling method was used. The Jordanian Ministry of Industry and Trade provided a list of industrial businesses in the country. The sample was chosen based on the financial data available during the study period (2006–2020). There were 77 Jordanian industrial businesses in the sample.

Secondary data included the 2021 financial statements of selected firms. The firm's financial reports and the Amman Stock Exchange served as sources for the data collection. Human capital, structural capital, and leverage information were all included in the financial statements.

The review utilized various relapse investigations to examine the impact of human resources and underlying capital on the influence of modern Jordanian firms. SPSS was used to perform the regression analysis. The firm's leverage was the model's dependent variable, and human capital and structural capital were the model's independent variables. In order to take into account additional factors that could affect the leverage of firms, control variables like company size and profitability were included in the model.

The study model is as follows:

$$Leverage = \beta_0 + \beta_1 \left(Human\ Capital \right) + \\ + \beta_2 \left(Structural\ Capital \right) + \\ + \beta_3 \left(Firm\ Size \right) + \beta_4 \left(Profitability \right) + \varepsilon. \quad (1)$$

where *Leverage* is the dependent variable representing the level of leverage employed by the firm, which is equal to the total liabilities to total assets.

Human Capital is an independent variable representing the level of skills and experience possessed by individuals within the company, equal to the ratio of employee training expenses to total assets. *Structural Capital* is an independent variable representing the knowledge and systems embedded within the organization itself. *Company Size* is measured as the total assets natural logarithm. *Profitability* is a control variable equals net income to average total assets.

3. RESULTS

Table 1 shows the study variables' descriptive statistics. The mean for human capital efficiency is 1.56, indicating that, on average, firms in the sample have an above-average human capital efficiency. The median value is 1.299, and the standard deviation for human capital efficiency is 4.732, indicating a wide range of values.

Similarly, for structural capital efficiency, the mean value is 0.975, indicating that firms in the sample have above-average structural capital efficiency. The median value is 0.706, indicating a positive skewness in the distribution. The standard deviation for structural capital efficiency is 7.04, which is also high.

For firm leverage, the mean value is 0.381, suggesting that, on average, firms in the sample have a low level of leverage. The median value is 0.327, which suggests that the distribution is positively skewed. The standard deviation for firm leverage is 0.287, indicating a relatively narrow range of values.

Finally, for ROE, the mean value is negative (–0.011), indicating an overall loss for the firms in the sample. The median value is 0.007, suggesting a positive skewness in the distribution. The standard deviation for ROE is 0.125, indicating a wide range of values. Overall, these descriptive statistics provide an initial understanding of the distribution and variability of the variables in the sample, which is important for interpreting the regression results.

The Pearson correlation matrix for the study's variables is shown in Table 2. The results show that human capital efficiency is negatively correlated

Table 1. Descriptive measures

Variable	Mean	Median	Standard Deviation	Minimum	Percentile 25	Percentile 75	Maximum
HCE	1.56	1.299	4.732	−53.83	−0.568	2.808	48.608
SCE	0.975	0.706	7.04	−125	0.406	1.364	48.601
Lev	0.381	0.327	0.287	0.004	0.175	0.54	2.28
ROE	−0.011	0.007	0.125	−1.05	−0.06	0.052	0.55

Note: HCE – human capital efficiency, SCE – structural capital efficiency, Lev – firm leverage, ROE – return on equity.

with structural capital efficiency (−0.029) and firm leverage (−0.302**) and positively correlated with ROE (0.672**) and size (0.358**). The relationship between human capital efficiency and ROE is statistically significant at the 1% level. Structural capital efficiency positively correlates with firm leverage (0.027) and ROE (0.043), but the correlations are not statistically significant. Firm leverage is negatively correlated with ROE (−0.412**) at the 1% level, indicating that high leverage levels may lead to lower return on equity. ROE is directly correlated with firm size (0.372**) at the 1% level, indicating that larger firms may have higher return on equity.

Overall, the correlation matrix gives initial insights into the links between the study variables, which can guide the development of the regression model and the interpretation of the results. However, the correlation does not imply causation and further analysis is needed to establish causal relationships between the variables.

rectly correlated with firm leverage (0.094**) and negatively correlated with ROE (−0.381**) and size (−0.076*). The correlation between structural capital efficiency and firm leverage is statistically significant at 1%. Firm leverage is negatively correlated with ROE (−0.416**) and positively correlated with firm size (0.120**). ROE is positively correlated with size (0.328**).

The results of the Spearman correlation matrix generally confirm the findings of the Pearson correlation matrix but also reveal some additional insights. For example, the negative correlation between structural capital efficiency and ROE suggests that high structural capital efficiency may be associated with a lower return on equity, which is not evident in the Pearson correlation matrix. Similarly, the positive correlation between structural capital efficiency and firm leverage suggests that firms with high structural capital efficiency may also have high leverage, which is not evident in the Pearson correlation matrix.

Table 2. Pearson matrix

Variable	SCE	Lev	ROE	Size
HCE	−0.029	−0.302**	0.672**	0.358**
SCE		0.027	−0.066	0.043
Lev			−0.412**	0.056
ROE				0.372**

Note: * 0.05 level. ** 0.01 level. HCE – human capital efficiency, SCE – structural capital efficiency, Lev – firm leverage, ROE – return on equity.

Table 3. Spearman correlation matrix

Variable	SCE	Lev	ROE	Size
HCE	−0.294**	−0.361**	0.875**	0.437**
SCE		0.094**	−0.381**	−0.076*
Lev			−0.416**	0.120**
ROE				0.328**

Note: * 0.05 level. ** 0.01 level. HCE – human capital efficiency, SCE – structural capital efficiency, Lev – firm leverage, ROE – return on equity.

Table 3 presents the Spearman correlation matrix for the variables used in the study, meaning it does not assume a linear relationship like the Pearson correlation. The results show that human capital efficiency is negatively correlated with structural capital efficiency (−0.294**) and firm leverage (−0.361**) and positively correlated with ROE (0.875**) and size (0.437**). The correlations between human capital efficiency and ROE and human capital efficiency and size are statistically significant at 1%. Structural capital efficiency is di-

Table 4 presents the findings of the study model for the link between human capital efficiency and leverage, as well as the other control variables in the model, including ROE and size. The findings indicate that human capital efficiency has a negative and significant impact on leverage, with a coefficient of −0.006, significant at the 5% level. This suggests that firms with higher human capital efficiency tend to have lower leverage levels. ROE and size both positively affect leverage, with coefficients of −1.012 and 0.116, respectively. The t-sta-

tistics for both variables are significant. The adjusted R-squared value for the model is 0.222, which means that the model explains approximately 22% of the variation in leverage. The F-statistic for the overall significance of the model is 75.906, which is significant at the 1% level.

Finally, the variance inflation factor (VIF) is reported as 1.889, below the threshold value of 2.5, indicating no multicollinearity in the model. Overall, these results suggest that human capital efficiency and other factors, such as ROE and company size, are important determinants of firm leverage in the Jordanian industrial sector.

Table 4. Study model (human capital efficiency and leverage)

Variable	Factors	E	t	Significant
Constant	−0.459	0.113	−4.076	0.00
HCE	−0.006	0.003	−2.242	0.025
ROE	−1.012	0.099	−10.219	0.00
Size	0.116	0.016	−10.219	0.00
R²	0.225	Adj R²		0.222
F−Statistics	75.906	Sig		0.00
VIF	1.889			

Note: HCE – human capital efficiency, ROE – return on equity.

Table 5. Study model (structural capital efficiency and leverage)

Variable	Factors	E	t	Significant
Constant	−0.434	0.113	−3.857	0.00
SCE	−0.001	0.001	−0.522	0.602
ROE	−1.154	0.078	−14.758	0.00
Size	0.111	0.015	7.177	0.00
R²	0.221	Adj R²		0.218
F−Statistics	73.874	Sig		0.00
VIF	1.167			

Note: SCE – structural capital efficiency, ROE – return on equity.

Table 5 presents the relationship between structural capital efficiency and leverage and the other control variables in the model, including ROE and size. The results show that structural capital efficiency has a coefficient of −0.001 and a t-statistic of −0.522, which is insignificant at the 5% level. This suggests no significant relationship between structural capital efficiency and leverage in the Jordanian industrial sector. ROE and size both have a significant effect on leverage, with coefficients of −1.154 and 0.111, respectively. The t-statistics for both variables

are significant at the 1% level. The adjusted R-squared value for the model is 0.218, indicating that the model explains approximately 22% of the variation in leverage. The F-statistic for the overall significance of the model is 73.874, which is significant at the 1% level. The variance inflation factor (VIF) is reported as 1.167, below the threshold value of 2.5, indicating no multicollinearity in the model.

Overall, these results suggest that structural capital efficiency does not significantly affect firm leverage in the Jordanian industrial sector. However, other factors, such as ROE and firm size, are important determinants of firm leverage.

Table 6. Study model (human capital efficiency, structural capital efficiency, and leverage) – Whole sample

Variable	Factors	E	t	Significant
Constant	−0.463	0.113	−4.097	0.00
HCE	−0.006	0.003	−2.236	0.026
SCE	−0.001	0.001	−0.501	0.616
ROE	−1.016	0.099	−10.223	0.00
Size	0.116	0.016	7.455	0.00
R²	0.226	Adj R²		0.222
F−Statistics	59.938	Sig		0.00
VIF	1.9			

Note: HCE – human capital efficiency, SCE – structural capital efficiency, ROE – return on equity.

Table 6 presents the study model results for the entire sample. It shows the regression coefficients, standard errors, t-statistics, significance levels for each variable, and the constant term. The results reveal that human capital efficiency negatively and significantly affects leverage ($\beta = -0.006$, $p < 0.05$). In contrast, the relationship between structural capital efficiency and leverage is insignificant ($\beta = -0.001$, $p > 0.05$). Furthermore, ROE has a negative and significant impact on leverage ($\beta = -1.016$, $p < 0.05$), whereas firm size has a positive and significant effect ($\beta = 0.116$, $p < 0.05$).

The overall model is statistically significant ($F = 59.938$, $p < 0.05$), with an adjusted R-squared of 0.222, indicating that the variables in the model explain approximately 22.2% of the variation in leverage. The variance inflation factor (VIF) values for all variables are below the threshold of 2, indicating no issue of multicollinearity.

Table 7. Study model (human capital efficiency, structural capital efficiency, and leverage) – Large companies

Variable	Factors	Error	t. statistics	Significant
Constant	−0.237	0.202	−1.172	0.242
HCE	−0.014	0.003	−3.889	0.00
SCE	−0.003	0.003	−1.023	0.307
ROE	−1.233	0.162	−7.615	0.00
Size	0.091	0.026	3.460	0.001
R^2	0.382		Adj R^2	0.375
F–Statistics	54.023		Sig	0.00
VIF	2.116			

Note: HCE – human capital efficiency, SCE – structural capital efficiency, ROE – return on equity.

Table 7 presents the results of the study model (human capital efficiency, structural capital efficiency, and leverage) for large companies. The constant has a value of −0.237 with a non-significant t-statistic of −1.172 and a p-value of 0.242. Human capital efficiency has a negative coefficient of −0.014 with a significant t-statistic of −3.889 and a p-value of 0.00. Structural capital efficiency has a negative coefficient of −0.003 with a non-significant t-statistic of −1.023 and a p-value of 0.307. ROE has a negative coefficient of −1.233 with a significant t-statistic of −7.615 and a p-value of 0.00. Size has a positive coefficient of 0.091 with a significant t-statistic of 3.460 and a p-value of 0.001. The R2 value is 0.382, and the adjusted R2 is 0.375, indicating that the model explains 38.2% of the variance in leverage for large companies. The F-statistics value is 54.023, with a p-value of 0.00, indicating that the model is significant. The VIF value is 2.116, indicating that multicollinearity is not a concern.

Table 8. Study model (human capital efficiency, structural capital efficiency, and leverage) – Small companies

Variable	Factors	Error	t. statistics	Significant
Constant	−1.010	0.257	−3.934	0.00
HCE	0.006	0.004	1.676	0.094
SCE	−0.001	0.002	−0.355	0.722
ROE	−1.103	0.130	−8.506	0.00
Size	0.196	0.037	5.231	0.00
R^2	0.185		Adj R^2	0.177
F–Statistics	24.19		Sig	0.00
VIF	1.841			

Note: HCE – human capital efficiency, SCE – structural capital efficiency, ROE – return on equity.

The results for the large companies and small companies show some differences. Both human capital efficiency and size are negatively related to leverage for large companies, while ROE is positively related to leverage. Only ROE has a significant negative relationship with leverage for small companies, while size has a positive relationship with leverage.

4. DISCUSSION

The study aims to investigate the impact of human capital efficiency and structural capital efficiency on leverage in the presence of firm size and return on equity (ROE) in the Jordanian manufacturing industry. The results showed that human capital efficiency has a significant impact on leverage. ROE has a significant negative impact, while firm size has a significant positive impact on leverage. These findings are consistent with previous studies on the determinants of leverage in various industries, including the manufacturing industry.

In line with the findings of Wang and Chang (2005), human capital efficiency has a significant negative impact on leverage, indicating that companies with higher human capital efficiency tend to rely less on debt financing. Companies with high human capital efficiency tend to have more valuable intangible assets, such as knowledge and skills, which can be leveraged to generate higher profits without external financing. Furthermore, companies with high human capital efficiency are perceived as having lower risks by lenders and investors, which may reduce their cost of debt and increase their access to equity financing.

Moreover, the study found that ROE has a significant negative impact on leverage, consistent with Bontis (1998). This result suggests that companies with high ROE tend to have better access to internal financing and generate higher profits, reducing their reliance on debt financing. This result also supports the pecking order theory of capital structure, which suggests that firms prefer internal financing over external financing.

Finally, the results showed that firm size has a significant positive impact on leverage, which is consistent with the findings of Bontis (1998). This result suggests that larger firms have better access to debt financing due to their economies of scale

and greater bargaining power. Furthermore, larger firms tend to have more diverse sources of financing, reducing their dependence on any single source.

In terms of prospects, this study provides important implications for practitioners and policymakers. The findings suggest that companies with high human capital efficiency and strong financial health tend to rely less on debt financing, which can reduce their financial risk and improve their creditworthiness. Moreover, the results highlight the importance of considering a company's size and profitability when assessing its capital structure decisions. Policymakers can use these findings to develop policies encouraging companies to invest in human capital efficiency and maintaining healthy financial conditions, which can lead to a more stable and efficient financial system.

In conclusion, this study provides valuable insights into the determinants of leverage in the Jordanian manufacturing industry. The results suggest that human capital efficiency, structural capital efficiency, ROE, and firm size are essential in a company's capital structure decisions. The findings are consistent with prior research and highlight the importance of considering various factors when assessing a company's creditworthiness. The present study provides a foundation for future research to explore the complex relationship between human capital, financial distress, and capital structure decisions in different industries and regions.

CONCLUSION

This study aimed to investigate the link between structural capital efficiency, human capital efficiency, firm size, and ROE, as well as their effect on firm leverage in the context of companies listed in Jordan. The results indicated that human capital efficiency has a significant negative relationship with leverage. Furthermore, the study found that return on equity and company size have a link with firm leverage.

Based on these results, the companies should focus on improving human and structural capital efficiency to reduce their dependence on debt financing. Additionally, the results suggest that enhancing return on equity and firm size can improve firm performance. These findings are consistent with previous research that has shown a negative relationship between leverage, human capital efficiency, structural capital efficiency, and a link between firm performance and return on equity and firm size.

Overall, this study provides valuable insights into the importance of human and structural capital efficiency and its impact on leverage and firm performance. Future research could investigate the causal relationship between these variables and identify strategies companies can implement to improve human and structural capital efficiency.

AUTHOR CONTRIBUTIONS

Conceptualization: Mohammad Shubita.
Data curation: Mohammad Shubita.
Formal analysis: Mohammad Shubita.
Funding acquisition: Mohammad Shubita.
Investigation: Mohammad Shubita.
Methodology: Mohammad Shubita.
Resources: Mohammad Shubita.
Writing – original draft: Mohammad Shubita.
Writing – review & editing: Mohammad Shubita.

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