INFLUENCE OF TRADITIONAL PERFORMANCE INDICATORS ON ECONOMIC ADDED VALUE: EVIDENCE FROM INSURANCE COMPANIES

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Abstract

This research aims to explore the impact of profitability indicators (including return on equity, gross profit margin, operating profit margin, and return on investments) on EVA of equity-owned Jordanian insurance companies. Economic value added (EVA) is an innovative approach to measuring company performance and gives a more realistic view of the company's current finances compared to traditional performance indicators (Subedi & Farazmand, 2020). Many traditional indicators of performance that have been used by the companies could not provide an objective assessment that differentiates between return and capital (Siniak & Lozanoska, 2019). EVA is used to calculate the true economic profit of a company (Pernamasari, 2020). All companies that have complete annual reports from 2006 to 2019 were included in this study (n = 13). The multiple and simple regression analysis to answer the questions of the problem and test the hypotheses of the study was applied. This study found an impact of profitability indicators on the EVA. Therefore, it is necessary to draw the attention of investors and the Amman Stock Exchange to the EVA, as it is a more effective and comprehensive indicator than the traditional ones when it comes to evaluating the company's financial performance, as it reflects useful and adequate information.

Keywords: Influence of Traditional Performance, Economic Value-Added, Insurance Companies

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1. INTRODUCTION

The measurement and evaluation of value and the performance of companies have become very important concerns. Investors usually make their investment decision based on the best choice of alternatives, which depend primarily on the size and timeliness of the expected cash flows generated from the company's operations. Therefore, to create value for shareholders (Alsoboa, 2017). Indeed, there are many ways to measure corporate financial performance such as accounting-based performance measurements, market-based financial performance measurements, and hybrid financial measurements. Indeed, economic value added (EVA) is an example of hybrid financial measurement which is a complex combination of both accounting and market-based measurements (Omneya, Ashraf, & Eldin, 2021).

The EVA index has become an indicator of the performance of economic bodies, measuring the financial performance of the company based on residual wealth, which is calculated by subtracting the cost of capital from operating profit, adjusted for taxes on a cash basis (Sabol & Sverer, 2017). Also, EVA better reflects changes in enterprise value and stock returns than traditional indicators that depend on absolute book profit (Fayed & Dubey, 2016). EVA has been applauded to be the most recent and exciting innovation in the managerial performance evaluation measure (Subedi & Farazmand, 2020). Profitability is one of the most popular traditional indicators for evaluating the financial performance of companies, as it indicates the relationship between the companies' profits and the contributed investments. Profitability indicates the company's performance and financial achievements. So, it is the goal that companies' managements aspire to achieve as it is a measure of their efficiency and effectiveness in using the resources (Ayoush, Rabayah, & Jibreel, 2020).

This study shows the impact of profitability and its financial indicators on the EVA of Jordanian insurance companies. These implications are important to beneficiaries of these companies, such as investors, decision-makers, the financial market, financial analysts, and lenders. Therefore, the specific objectives of this study are:

- Evaluating the impact of the EVA on the performance of the insurance companies' indicators (gross profit margin (GPM), operating profit equity (ROE), and return on sales (ROS)).
- Evaluate the content of EVA's information beyond that provided by ROE, ROA, GPM, and OPM to judge the performance of insurance companies.

There is a feast of criticism directed at the traditional measures of evaluating the performance of companies because they are based on the accrual basis of accounting, and researchers have developed other measures assessing performance that take into account the economic income of companies, and among these measures the EVA index (Shah, Haldar, & Nageswara Rao, 2015).

The traditional methods used to evaluate business results depend on accounting profits such as return on investments (ROI), ROE, and earnings per share. However, these traditional methods have many limitations as they are mainly influenced by the accounting methods used. Therefore, more accurate instruments need to be used by using non-traditional methods such as the EVA indicator as it provides more accurate results to measure the performance of companies and highlight the company's ability to achieve the targeted financial value (Al Mamun, Entebang, & Mansor, 2012; Tripathi, 2018).

Interest in using EVA has increased among up-and-coming companies as they are driven by intense competition, which in turn has led to increased levels of expectation from investors and other stakeholders to achieve better economic and financial returns on their investments (Kim, 2006). Therefore, this study attempts to explore the influence relationship between traditional performance indicators (indicators of profitability) and EVA in Jordanian insurance companies.

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology that has been used to conduct empirical research on testing the impact of the traditional performance indicators on EVA. Section 4 reports on data collection and presents key findings. Section 5 discusses the main results with reference to previous research. Section 6 captures the conclusion and main ideas and reinforces our position on the topic.

2. LITERATURE REVIEW

The use of traditional accounting data to evaluate the value and performance of companies has been criticized over a long period because it is prepared based on International Accounting Standards (IASs). These standards then provide an estimation of many figures, in addition to the diversity of applications, which leads to distorted accounting data (Oreshkova, 2020). In the early 1990s, the advocates of EVA questioned the adequacy of traditional accounting measures such as ROE, ROA, and GPM, OPM as efficient tools for assessing corporate performance, especially the generation of information for an assessment of corporate performance (Kadar & Rikumahu, 2018).

A lot of accounting indicators have been developed to measure the value and performance of economic, financial, and service companies. These traditional performance measures, such as residual income and accounting-based returns, have also been criticized because they do not consider the total cost of capital employed and because they fail to assess the genuine economic returns (Alipour & Pejman, 2015; Mousa, Sági, & Zéman, 2021).

EVA is the concept of residual income which was refined and renamed EVA by the Stern Stewart consulting organization. Since then analysts have also found EVA to be the most significant indicator of a company's performance (Subedi & Farazmand, 2020). EVA is different from other traditional performance measuring tools because most measures mostly depend on accounting information. The problem with these kinds of tools is that accounting earnings fail to measure changes in the economic value of the companies, and some of the reasons include (Sabol & Sverer, 2017):

1. Alternative accounting methods may be employed: different methods for depreciation, inventory valuation, goodwill amortization, and so on.
2. Both business risk (determined by the nature of the company's operations) and financial risk (determined by the relative proportions of debt and equity used to finance assets) are excluded.
3. Accrual-based accounting numbers differ from cash flow from operations.
4. Dividend policy is not considered.
5. The time value of money is ignored.

EVA has been getting plenty of attention during the last few decades as a new form of performance measurement. The theory of EVA has traditionally suggested that all companies should strive to increase the shareholders' wealth. However, the companies used the traditional metrics such as ROA, and ROI to align managerial interests to shareholder's interests (Siniak & Lozanoska, 2019). The main goals of companies are to maximize their value in the capital markets and create EVA.

Achieving these goals enables the company to survive and continue to operate in its competitive environment. The company uses the results of its value to attract the largest number of interested investors (Sahara, 2018). EVA rests on two principle assertions (Maeenuddina, Hussain, Hafeez, Khan, & Wahi, 2020):

1. A company is not profitable unless it earns a return on invested capital that exceeds the opportunity cost of capital.
2. Wealth is created when a company's manager makes positive net present value investment decisions for the shareholders.

EVA is one of the most important newer and most effective indicators for measuring the quality of management and financial performance and a reliable indicator of the company's growth trend (Karpac & Bartosova, 2020). EVA is also considered a tool to measure financial performance (Yadav, Hasan, Yadav, & Gupta, 2019). In other words, it is also the profit that the company makes at the lowest cost of financing the company's capital (Putri, 2020). From all the previous definitions, we can conclude that EVA is a tool for measuring wealth and value created for shareholders, alongside evaluating actual financial performance and financial achievements and measuring the company's profitability through economic profit.

Profitability is the main goal for all profit-oriented companies, and it is necessary for their survival and continuity. Profitability is an important tool for measuring the efficiency of management in the use of existing resources. Profitability expresses the relationship between achieving profits and related investments (Kourtis, Curtis, Hanias, & Kourtis, 2021).

Profitability reflects the company's ability to generate revenue through the available resources and investments. High profitability means greater satisfaction among investors, creditors, and management (Shahzad, Fareed, & Zulfiqar, 2015), thus profitability reflects the efficiency of the company's investment, operational and financing policies (Yoon & Chung, 2018). Profitability is a measure of an organization's profit relative to its expenses. More efficient organizations will realize more profit as a percentage of their expenses than less-efficient organizations, which must spend more to generate the same profit (St-Hilaire & Boisselier, 2018).

Moreover, profitability was defined as "the net result of several policies and decisions that reflect the effectiveness of the operations of the business in its operational activities" (Brigham & Ehrhardt, 2019, pp. 104, 127). It is also defined as an indicator of good financial health and the efficiency of the business establishment's management of its activities in a way that shows its ability to achieve current and future positive revenue and appropriate returns (Suhadak, Kurniaty, Handayani, & Rahayu, 2019). Further, profitability shows the company's ability to generate income and use it to judge financial performance (Sukmawardini & Ardiansari, 2018).

Company profitability indicators deal with the elements of the company's revenue capacity that current or expected investors use, to determine their investment decisions (Ribay et al., 2007). There are many different indicators and measures of profitability, including ROE, ROA, GPM, and OPM. GPM is one of the important measures that show the company's success in controlling cost elements to generate the largest number of profits from sales. OPM shows the company's ability to achieve operating profits as a result of sales. Also, ROA shows the relationship between the profit generated and the assets that contributed to this profit. The higher the ratio, the better for the company. Its interpretation is that the company seeks to produce relatively higher profits through the better use of its resources. Finally, ROE refers to the profits that the company achieves from the funds invested in it and financed by the owners (Al-Shehadeh, El Refae, & Qasim, 2022). The various profitability indicators express the company's ability to produce current and future positive cash flows and achieve the company's profits and goals.

Many previous studies focused on EVA and profitability, including the study of Al-Zubaidi and Jasim (2021), which showed that profitability indicators had a significant impact on the prices of traded shares, except for the ROA index. On the other hand, Almagtome and Abbas (2020) concluded that the traditional performance indicators lack the possibility of achieving correct valuation benefits and using the EVA indicator is consistent and gives a clear picture of the company's management performance. While the study by Narayan and Reddy (2018) showed that modern financial performance indicators are superior to traditional ones in interpreting stock returns.

Furthermore, a previous study found a significant relationship between stock prices and the EVA, indicating the useful of using EVA as tool to evaluate the company performance (Zhu, 2020). However, the traditional performance indicators have high explanatory power as the change in the market values of share prices is better than the EVA (Obaidat, 2019). Further, it was confirmed that the market value of the company was correlated with the traditional and non-traditional performance evaluation indicators, especially the EVA (Sytnyk, Vysochyn, Zhuk, Olesenko, & Stratiichuk, 2021).

The study by Nagarkar and Gore (2020) showed that the use of EVA in the metal industries sector is the best and most accurate assessment of the company's performance than using the net operating profit and the total net profit. And a relationship was found between the EVA and weighted average cost of capital (WACC) (Patel & Patel, 2012). Also, the corporate management seeks to rely on the EVA as a measure of shareholders' wealth, and the positive relationship of EVA with ROA and ROE was confirmed previously (Akgun, Samiloglu, & Oztop, 2018).

Additionally, the study by Choong and Muthaiyah (2021) concluded that the relationship between EVA and market value added will enable managers to make the best decision regarding performance measures, while Tanjung (2019) found that there is no effect of EVA on the ROI. The correlation between EVA and ROA is negative, while the positive with ROE. Another study found that EVA has a stronger relationship with the return on shares than the traditional tools of public companies listed on the Malaysian Stock Exchange (Choong & Muthaiyah, 2021). The EVA is more able to create wealth for shareholders and creditors than ROA and ROE (Maeenuddina et al., 2020).

In this study, we hypothesise that:

H1: There is a statistically significant relationship at the level $\alpha \leq 0.05$ between profitability indicators and the EVA of Jordanian insurance companies.

H1a: There is a statistically significant relationship at the level $\alpha \leq 0.05$ between the ROE index and the EVA of Jordanian insurance companies.

H1b: There is a statistically significant relationship at the level $\alpha \leq 0.05$ between the GPM index and the EVA of Jordanian insurance companies.

H1c: There is a statistically significant relationship at the level $\alpha \leq 0.05$ between the OPM index and the EVA of Jordanian insurance companies.

H1d: There is a statistically significant relationship at the level $\alpha \leq 0.05$ between the ROA index and the EVA of Jordanian insurance companies.

3. RESEARCH METHODOLOGY

3.1. Study variables

The profitability indicators are the independent variables, including *ROE, ROA, OPM,* and *GPM*. While *EVA* is the dependent variable. In addition, all the important and applicable accounting adjustments have been taken into account when calculating the invested capital, *NOPAT*, and hence *EVA*. Equations (1)–(6) will be used to calculate *EVA* values (Al-Shehadeh et al., 2022; Obaidat, 2019; Subedi & Farazmand, 2020).

$$EVA = NOPAT - (Invested\ capital * WACC) \quad (1)$$

$$NOPAT = (Net\ income + Non\_operating\ income\ loss - Non\_operating\ income\ gain + Interest\ expense + Tax\ expense)\ x\ (1 - Tc) \quad (2)$$

$$Invested\ capital = Debt + Capital\ leases + Shareholders'\ equity \quad (3)$$

$$WACC = ((E/V) * CoE) + ((D/V) * CoD * (1 - Tc)) \quad (4)$$

$$CoD = Interest\ expense\ /\ Average\ bank\ loan\ outstanding \quad (5)$$

$$CoE = Risk - Free\ rate\ of\ return + Beta \times (Market\ rate\ of\ return - Risk - Free\ rate\ of\ return) \quad (6)$$

where,
NOPAT = Net operating profit after taxes;
WACC = Weighted average cost of capital;
E = Market value of the company's equity;
D = Market value of the company's debt;
V = Enterprise value, *V = E + D*;
CoE = Cost of equity;
CoD = Cost of debt;
Tc = Corporate tax rate.

NOPAT measures the efficiency of a leveraged company's operation. While *WACC* represents a company's average cost of capital from all sources, including common stock, preferred stock, bonds, and other forms of debt. *WACC* is calculated by multiplying the cost of each source of capital (debt and equity) by their weight and then adding the products together. *E/V* represents the proportion of equity-based financing, while *D/V* represents the proportion of debt-based financing. Thus, the higher the *WACC* in the company, the higher the beta coefficient and the ROE, which increases risks and lowers the company's valuation (Franc-Dabrowska, Madra-Sawicka, & Milewska, 2021; Obaidat, 2019). Therefore, the *EVA* indicator is interpreted as follows (Horak, Suler, Kollmann, & Marecek, 2020; Xu, Albitar, & Li, 2020):

- If the *EVA* is a positive value, then the company achieves an excess over the cost of the capital required by the shareholders, which means that the return on the invested capital is higher than the cost of capital. Thus, in case the company is successful it can increase wealth for the shareholders.
- If the *EVA* is equal to zero (which rarely happened), then the company has accomplished as much money as it has invested, and the profitability allows satisfying the creditors only and thus does not achieve any added value.
- If the *EVA* is a negative value, then there is a decrease in the shareholders' wealth as a result of a shortage in covering the cost of the invested capital.

Furthermore, for statistical analysis, the data was prepared manually for all the variables, except independent variables (*ROA, ROE, GPM,* and *OPM*), which were taken directly from the reports as computed by the firms. *GPM* is used to measure the company's ability to achieve profits from its main activities (Manríquez, 2021). *OPM* is used to measure the profit resulting from the company's main activity, as it reflects the relationship between operating profit and sales (Mahdi & Khaddafi, 2020). *ROA* considers the overall measure of profitability (Al-Shehadeh et al., 2022). *ROE* expresses the relationship between net profits after taxes and the volume of investments by the owners (Al-Shehadeh et al., 2022).

3.2. The population and sample of the study

This study used extracted data from the annual reports published by Jordanian insurance companies listed on the Amman Stock Exchange (ASE). The sample of the study was selected according to two main conditions: 1) the companies should be listed on ASE and continued with normal operations overall years from the beginning of 2006 to the end of 2019; 2) the availability of all the data required for 14 years from 2006 to 2019. Based on these two conditions, the study sample includes 13 insurance companies from groups of 23 firms listed on ASE.

3.3. Analysis of the data

The study hypotheses were tested using an appropriate statistical method, including multiple and simple regression analysis and coefficients

correlation, arithmetic mean, and standard deviations, using SSPS Program (V.26). The results of the study were tested at a significance level of $p \leq 0.05$.

4. RESULTS

4.1. Testing the main hypothesis (*H1*)

Table 1 shows the correlations between profitability indicators and the *EVA* that ranged from 0.191 to 0.662, all of which are statistically significant at the level of indication $\alpha \leq 0.01$, indicating a dyslogistic relationship between profitability indicators and the *EVA*, which also indicates that as greater of the profitability indicators, the greater the *EVA* of Jordanian insurance companies. Further, a simple linear regression analysis (Table 2) was performed to detect the predictability of profitability indicators (*ROE, GPM, OPM, ROA*) on the insurance companies' *EVA*.

Table 1. Calculation averages, standard deviations, and multiple correlation factors between profitability indicators and the AVE of insurance companies

Variables		*Mean*	*SD*	*Correlation coefficient*	*P-value*
Dependent	*EVA*	11563385.7	1665858.43		
Independent	*ROE*	5.91	2.41	0.317	0.000**
	GPM	10.66	6.91	0.662	0.000**
	OPM	0.06	0.01	0.551	0.000**
	ROA	2.03	0.85	0.191	0.02*

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

Table 2 shows the absolute value of the correlation coefficient (0.594) between profitability indicators and the *EVA* and the value of *F* was 22.3, and the p-value showed a statistically significant difference ($p \leq 0.05$), indicating the existence of a direct relationship between the two variables, thus high profitability indicators result in the higher the *EVA* for insurance companies, and the value of the square correlation coefficient ($R^2 = 0.461$) indicates that the profitability indicators have explained about 4.61% of the variance in the *EVA*, and this indicates the acceptance of the alternative hypothesis (*H1*).

Table 2. Summary of the multiple linear regression analysis models of the main hypothesis (*H1*)

Model	*Sum of squares*	*DF*	*Mean squares*	*R*	*R²*	*Adjusted R²*	*F*	*P-value*
Regression	18418.43	4	5341	0.594	0.461	0.247	223.7	0.000**
Residue	3029.5	163	1954					
Total	21447.93	167						

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

4.2. Testing the first sub-hypothesis (*H1a*)

It is noted in Table 3 that the correlation coefficient between the *ROE* index and the *EVA* was 0.324 which was statistically significant at the significance level $\alpha \leq 0.01$, indicating a direct relationship between the two variables, thus, the more the *ROE* index increased, the greater the EVA of Jordanian insurance companies. Further, a simple linear regression analysis (Table 4) was sued to reveal the possibility of predicting the *ROE* index variable with the *EVA* of Jordanian insurance companies.

Table 3. The correlation between the ROE index and the EVA of Jordanian insurance companies

Model	*Mean*	*SD*	*Correlation coefficient*	*P-value*
EVA	11563385.7	1665858.43	0.324	0.000**
ROE	5.81	2.31		

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

As shown in Table 4, the absolute value of the correlation coefficient between the *ROE* index and the *EVA* was 0.324 and it was statistically significant at the significance level $\alpha \leq 0.01$, which indicates present a direct relationship between the two variables, thus the higher the *ROE* index, the higher the *EVA* of the insurance companies, and the value of the square correlation coefficient is $R^2 = 0.163$, which means that the *ROE* index has explained 16.3% of the variance in *EVA* value. Therefore, the alternative sub-hypothesis *H1a* is accepted.

Table 4. The simple linear regression analysis model of the first sub-hypothesis (*H1a*)

Model	*Sum of squares*	*FD*	*Mean squares*	*R*	*R²*	*Adjusted R²*	*F*	*P-value*
Regression	36204.32	1	3606	0.324	0.163	0.057	14.4	0.000**
Residue	4506.4	142	2532					
Total	40710.72	143						

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

4.3. Testing the second sub-hypothesis (*H1b*)

It is noted in Table 5 that the correlation coefficient between the *GPM* index and the *EVA* was 0.616, which was statistically significant at the significance level $\alpha \leq 0.05$, indicating a direct relationship between the two variables, thus the more the *GPM* index increased, the greater the *EVA* of Jordanian insurance companies. Further, a simple linear regression analysis (Table 6) was used to reveal the possibility of predicting the *GPM* index variable with the *EVA* of Jordanian insurance companies.

Table 5. Testing the correlation between the GPM index and the EVA of Jordanian insurance companies

Model	*Mean*	*SD*	*Correlation coefficient*	*P-value*
EVA	11563385.7	1665858.43	0.616	0.000**
GPM	10.66	6.91		

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

As shown in Table 6, the absolute value of the correlation coefficient between the *GPM* index and the *EVA* was 0.316 and it was statistically significant at the significance level of $p < 0.01$, which indicates presenting a direct relationship between the two variables, thus the higher the *GPM* index, the higher the *EVA* of the insurance companies and the value of the square correlation coefficient is $R^2 = 0.164$, which means that the *GPM* index has explained 16.4% of the variance in *EVA* value. Therefore, the alternative sub-hypothesis *H1b* is accepted.

Table 6. The simple linear regression analysis model of the second sub-hypothesis (*H1b*)

Model	*Sum of squares*	*FD*	*Mean squares*	*R*	*R²*	*Adjusted R²*	*F*	*P-value*
Regression	82156.2	1	8235.6	0.616	0.164	0.157	322.4	0.000**
Residue	3638.7	136	241.3					
Total	85794.9	137						

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

4.4. Testing the third sub-hypothesis (*H1c*)

It is noted in Table 7 that the correlation coefficient between the *OPM* index and the *EVA* was 0.553, which was statistically significant at the significance level of $\alpha \leq 0.01$, indicating a direct relationship between the two variables, thus the more the *OPM* index increased the greater the *EVA* of Jordanian insurance companies. Further, a simple linear regression analysis (Table 8) was used to reveal the possibility of predicting the *OPM* index variable with the *EVA* of Jordanian insurance companies.

Table 7. The correlation between the OPM index and the EVA of Jordanian insurance companies

Model	*Mean*	*SD*	*Correlation coefficient*	*P-value*
EVA	11563385.7	1665858.43	0.553	0.000**
OPM	0.06	0.01		

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

As shown in Table 8, the absolute value of the correlation coefficient between the *OPM* index and the *EVA* was 0.553 and it was statistically significant at the significance level $\alpha \leq 0.01$, which indicates a direct relationship between the two variables, thus the higher the *OPM* index, the higher the *EVA* of the insurance companies and the value of the square correlation coefficient is $R^2 = 0.214$, which means that the *OPM* index has explained 21.4% of the variance in *EVA* value. Therefore, the alternative sub-hypothesis is accepted.

Table 8. The simple linear regression analysis model of the third sub-hypothesis (*H1c*)

Model	*Sum of squares*	*FD*	*Mean squares*	*R*	*R²*	*Adjusted R²*	*F*	*P-value*
Regression	94174.3	1	9874.7	0.553	0.214	0.321	41.7	0.000**
Residue	3645.6	161	227.4					
Total	97819.9	162						

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

4.5. Testing the fourth sub-hypothesis (*H1d*)

It is noted in Table 9 that the correlation coefficient between the *ROA* index and the *EVA* was 0.197, which was statistically significant at the significance level of $p < 0.01$, indicating a direct relationship between the two variables, thus the more the *ROA* index increased the greater the *EVA* of Jordanian insurance companies. Further, a simple linear regression analysis (Table 10) was used to reveal the possibility of predicting the *ROA* index variable with the *EVA* of Jordanian insurance companies.

Table 9. Testing the correlation between the ROA index and the EVA of Jordanian insurance companies

Model	*Mean*	*SD*	*Correlation coefficient*	*P-value*
EVA	11563385.7	1665858.43	0.197	0.000**
ROA	2.03	0.85		

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

As shown in Table 10, the absolute value of the correlation coefficient between the *ROA* index and the *EVA* was 0.197 and it was statistically significant at the significance level $\alpha \leq 0.05$, which indicates a direct relationship between the two variables, thus the higher the *ROA* index, the higher the *EVA* of the insurance companies. And the value of the square correlation coefficient is $R^2 = 0.103$, which means that the *ROA* index has explained 10.3% of the variance in *EVA* value. Therefore, the alternative sub-hypothesis *H1d* is accepted.

Table 10. The simple linear regression analysis model of the fourth sub-hypothesis (*H1d*)

Model	*Sum of squares*	*FD*	*Mean squares*	*R*	R^2	*Adjusted* R^2	*F*	*P-value*
Regression	17356.3	1	12836.9	0.197	0.103	0.281	604.7	0.041*
Residue	2353.5	155	2082.5					
Total	19709.8	156						

*Note: * Statistically significant at $p \leq 0.05$; ** Statistically significant at $p \leq 0.01$.*

5. DISCUSSION

This study aimed to define the measure of the *EVA*, as a modern procedure for measuring the internal performance of companies through their ability to create value, and as an alternative to the traditionally used indicators based on measuring the profitability of these companies. The results of this study showed that there is an effect of all tested profitability indicators (*ROA, ROE, GPM,* and *OPM*) on *EVA* for insurance companies. The results of this study showed a statistically significant and direct relationship between the profitability indicators (*ROA, ROE, GPM,* and *OPM*) with the EVA, therefore, in insurance companies, the higher profitability indicators lead to higher EVA indicators. This result is in line with the findings of several previous studies, including the study of Asuquo and Offiong (2019), Koç (2017), Mohaisen, Al-Abedi, and Saeed (2021), who confirmed that EVA is a good measure for determining the amount of change in the wealth of shareholders, lenders, and employees. Further, there is a role for traditional indicators in addition to EVA when making an investment decision and conducting financial analyzes to assess performance, and EVA can be used as an important performance appraisal tool for organizations, as the use of EVA enables enterprise managers to know that they are investing in projects where the return on projects exceeds the company's costs of capital. However, the result of this study is different from some of the previous studies. For example, previous founds reported that the change in the market value of corporate stocks was related to the traditional financial performance evaluation indicators more than the EVA, and reported a negative relationship between the EVA with ROA and ROI (Fayed & Dubey, 2016; Al Mamun et al., 2012).

Overall, profitability has a positive impact on achieving the strategic goals of companies and is the ultimate measure tool of the economic success that is achieved by the company compared to the money invested. The economic success is determined by the increase in the EVA of the company, the efficiency of capital recruitment, and the effectiveness of the performance of the management activities.

6. CONCLUSION

The results of previous studies varied regarding the best measure available to evaluate the performance of companies. Some of them considered that the EVA is the best measure for assessing performance as it measures the difference between the company's return and the cost of capital, and it is prescribed as a performance measure that approaches the measurement of the real economic profitability of the company, and it better shows the rationale for changes in shareholder value. It is worth mentioning that other measures based on traditional accounting income have many defects, as they can be easily manipulated through the freedom to choose the available accounting policies that accounting standards allowed to use in the preparation of financial statements. On the other hand, many studies considered otherwise, due to the non-limited determinants that accompany the calculation of the added economic value, especially the calculation of the cost of invested capital and the stability of interest rates and taxes.

This study sought to shed light on the relationship between traditional and modern performance evaluation indicators, in particular, the impact of profitability indicators (ROE, ROS, OPM, ROA) on the economic value added (EVA) using a sample of 13 insurance companies out of a total of 25 companies operating in the Jordanian environment and covering the period from 2006 to 2019.

According to the results of the research, the explanatory power of the independent variables to explain the dependent variable ranged between 10.3% and 21.4%, and it was the strongest between OPM and EVA and the lowest between ROA and EVA.

The authors of this study realize that these results have a set of limitations, represented in the following points:

1. To adopt the logic of the EVA and rely on it in evaluating the performance, it is necessary to understand all the restrictions surrounding its calculation, as this measure assumes the stability of interest rates, and this assumption is logical in stable markets, such as the United States of America and the United Kingdom or Japan, but the stability of interest rates in other countries is not the same as in Jordan.
2. Jordanian insurance companies operate in a complex financial and economic environment and conduct their economic activity within a range of financial challenges, for example, financial market defects, information asymmetry, and nontransparent financial reporting practices. The limited role and size of capital markets in allocating resources. This matter was directly reflected in the assumptions of calculating the EVA for insurance companies during the study period, and in particular, calculating the cost of invested capital (WACC).
3. The authors also realize that the EVA scale adds good information content and supports the decision maker compared to the traditional accounting income, but the use of the EVA scale

compared to other measures has a kind of risk because some estimation errors in calculating the cost of invested capital (WACC) is possible.

4. The authors agree with the results of previous studies, by means that, the research is necessary for understanding all the limitations of EVA in different financial environments. This means that this study emphasizes the need to conduct more studies to use EVA in evaluating the performance of other economic and financial sectors in Jordan and comparing it with other indicators' traditional evaluation.

From all of the above, the authors of this study call the investors of the Amman Stock Exchange to focus their investments and trading on companies that have higher profitability indicators, but by linking them to the economic value-added index, to rationalize securities trading operations by relying on modern financial indicators and not only traditional ones.

This study also calls for the need to pay attention to the economic value-added index by the authorities of the Amman Stock Exchange, and by inviting the companies listed in it to prepare the economic added index within the financial statements provided, and by disclosing them in the annexes to the financial statements along with the traditional performance indicators applicable.

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