The Effect of The Asset Management Efficiency on Financial Performance "Evidence From Jordanian Industrial Firms"

أثر كفاءة إدارة الأصول على الأداء المالي (دليل من الشركات الصناعية المدرجة في بورصة عمان)

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Abstract:
The effectiveness of asset management practices among industries listed on the Amman Stock Exchange (ASE) is examined in this study with regard to their effects on financial performance measured by return on assets throughout the 2015–2020 timeframe. Companies in the industrial sector make up the population of this study. Purposive sampling was the method that was employed to gather data for the study subjects from as many as 33 firms. Return on assets is the dependent variable in this study. However, the independent variables are Non-Current Asset Turnover, Total Asset Turnover and Working Capital Turnover. The test technique utilized to decide the effect of three independent variables on the return on assets is regression using panel data analysis, which is carried out using Eviews (12). However, based on the results of a contemporaneous investigation, the study’s major results are that Non-Current Asset Turnover and Total Asset Turnover have a significant positive effect on Return on assets; it in turn has a positive effect on industrial firms’ financial performance, and on the contrary, the study found that Working Capital Turnover has a negative effect on Return on assets; the study suggests applying the efficiency of asset management to include additional sectors in the Amman Stock Exchange, choosing other financial indicators such as solvency and liquidity ratios, and comparing the industrial sectors with the service and financial sectors.

Keywords: Asset Management Efficiency, Financial Performance, Amman Stock Exchange.
1. Introduction

Return on assets measures a company's profitability in relation to its total assets. It provides insight into how well management uses its resources to produce profits as ROA demonstrates the profit resulting from the utilization of assets; assesses profitability ratios (Lawyer & Efeeloo, 2017). Return on assets is a reliable indicator to investors that a company's management has been making good use of the assets that were supported by both debt and equity. According to agency theory, this encouraging signal will also reduce the potential for conflict of interest between owners (shareholders) and agents (managers) (Marito & Sjarif, 2020).

Non-current assets are regarded as one of the most important investment components in a business for a variety of reasons. According to Okoro and Charles (2019), one of the most crucial components of a company in generating value for shareholders is the proper investment of non-current assets. While a low ratio suggests wasteful investment and use of fixed assets or non-current assets, a high ratio indicates efficient use of non-current assets in producing sales. If non-current assets are not invested effectively, businesses run the risk of not performing as intended (Anuar et al., 2021). On the other hand, profit-making companies employ financial performance which is measured by return on assets as a criterion for assessing the business environment. The concept is used to indicate a broad percentage of a firm's total financial health during a certain time period, and it may be applied to research rival companies in a similar sector (Stevenson, 2011).

Regarding the influence of total asset turnover (TATO) on the return on assets, it is that TATO is the comparison of sales to a company's total assets, which illustrates in a financial report how quickly the total assets change hands over a specific time period (Andari et al., 2016). TATO is a ratio used to determine how quickly all assets owned by a corporation are turned over as well as how many sales are generated from each dollar of assets. Considering the research’s assertion Total Assets Turnover (TATO) in accordance with (Jumah, 2017) and Andari et al. (2016), it significantly lowers Return on Assets (ROA). However, this assertion runs counter to Erawati’s (2013) assertion that TATO significantly boosts return on assets (ROA).

Working capital is regarded as one of the most significant sources of financing for business organizations, particularly industrial businesses as it is connected to the survival and continuity of these businesses due to its direct and obvious impact on the value and profitability of the company, as well as its advantages in fulfilling financial obligations of businesses and consequently is reflected on their financial performance generally (Ahmad et al., 2014).

Working capital management is a key element that immediately enhances a company's profitability and liquidity. In business, profitability and the efficiency with which a company uses working capital to optimize shareholder returns are strongly correlated. Profit is determined by the cost of revenues incurred in producing a high income. A statistic called working capital turnover (WCCT), often referred to as the working capital turnover ratio, is used to track or examine a company’s working capital's effectiveness over time. This is the amount of working capital that is flowing for a while (Simatupang & Sari, 2021).

Alrabadi et al. (2021) asserts that greater working capital management may be shown in the effectiveness of working capital as indicated by working capital turnover. Shorter turnover times and higher turnover rates are followed, correspondingly, by better working capital turnover and, as a result, greater and better than the rest profitability. Working capital turnover that more accurately represents the company’s financial organization structure is also important.

The industrial sector in Jordan is an important part of the Jordanian investment environment, and due to the dynamic economy, the business environment is characterized by high levels of uncertainty, which may negatively affect the continuity of the company. It should also be noted that CFOs spend a significant amount of time going over the day-to-day operations of working capital management (Al-Momani & Almomani, 2018).

In order to maximize the use of assets while avoiding a detrimental impact on the company's funds, it is through comprehending the nature of the connections between the elements of working capital and their impact on business performance, on the one hand, and their effect on guaranteeing acceptable levels of profitability and so increasing wealth of shareholders, on the other hand, as well as the same with regard to some vital and important indicators that may also affect the nature of the company’s operational operations because of their high degree and impact on the financial performance, whether positive or negative and the company’s management can achieve this balance. From here emerged the problem of the study, where the question of study questions may be written as follows:

**Is there a significant effect of asset management efficiency on return on assets?**

The following are the most three sub-questions that follow the main question:

- Does the turnover of non-current assets have a significant effect on the return on assets?
- Does the turnover of total assets have a significant effect on return on assets?
- Does the turnover of working capital have a significant effect on the return on assets?

The purpose of the current study is to examine how effectively managing assets affects the financial performance of industrial enterprises listed on the Amman Stock Exchange (ASE), how various factors affect the
financial performance of the firms, how, total asset turnover, non-current asset turnover, and working capital turnover affect those companies’ return on assets, on other words, financial performance.

The study is significant because it examines the impact of effective asset management on the financial results of industrial enterprises listed on the Amman Stock Exchange. Another crucial step in the process of management decision-making is the identification of the key factors that are relevant and have an impact on financial performance. Additionally, these variables in this research should appropriately reflect the financial developments that have affected industrial firms in order to represent the profitability of the business's stated operational success and to anticipate operational performance going forward. The contribution of this study is to investigate the efficiency of the company’s asset management on the financial performance of Jordanian industrial Firms.

1.1. Related Literature:

- Gunawan et al.’s (2022) study goal is to analyze and put into practice the relationship between return on assets and the debt-to-asset ratio (DAR), current ratio (CR), total asset turnover (TATO), and debt-to-equity ratio (DER) (ROA). The results of the study show that DAR, TATO, and DER all have positive and substantial effects on ROA while Current Ratio does not affect ROA. Additionally, TATO significantly enhances ROA. Alodat et al. (2022) results show the need for aggressive working capital management among finance managers at these companies in order to increase shareholder value and the financial performance of the three sectors.

- Alrabadi et al.’s (2021) findings demonstrate that the cash conversion cycle and Leveraged finances considerably lower the ROA of Jordanian SMEs. Nevertheless, the following factors (sales growth, working capital finance and investment strategies, firm size, and ROA of Jordanian SMEs) have a statistically significant beneficial impact on ROA. It’s interesting to note that company risk has a positive and substantial relationship with ROA (Tahiroran & Endri (2021)). In this research, the consumer products industry listed on the Indonesia Stock Exchange (IDX) is examined for the years 2015 to 2020 to see what variables impact profitability. According to the findings of concurrent research, business size and WC have a negative and significant influence on profitability (ROA), TATO, GROW, and CR have a major positive effect on ROA while oil price, exchange rate, and DER have little to no impact on ROA.

- Simatupang & Sari (2021) uses financial management theory related to variable ROA, Working Capital, Asset Turnover, and Sales Growth. The findings revealed that ROA is not significantly impacted by Asset Turnover, or Working Capital, nor is it much impacted by ROA. Working Capital and Turnover Assets are also unimportant to ROA and have no impact.

- Al-Momani & Almomani (2018) discovered that industrial enterprises generated excellent earnings. The effectiveness of using assets (rate of current assets turnover, working capital turnover, and asset growth rate) was also found to have a positive influence on improving profits quality.

- Wibowo & Rihyati (2018) finding’s of this study and subsequent debate, the working capital turnover indicator has a negative impact on the profitability of the company’s production from 2012 to 2014. Al Dalayeen (2017) reveals that working capital management has a significant effect on the profitability of particular real estate enterprises.

- Warrad & Al Omari (2015) found no significant relationship between turnover ratios, fixed asset turnover, working capital turnover, total asset turnover or and return on assets (ROA) in the Jordanian services sectors.

1.2. Hypotheses Development:

The following hypotheses are tested in order to determine how effectively an organization manages its assets in relation to its financial performance as measured by the ratios of non-current assets turnover, total assets turnover, and working capital turnover for industrial companies listed on the ASE:

**H01:** Asset management efficiency does not have a positive effect on company’s financial performance listed on ASE.

The following three sub-hypotheses are generated from the main hypothesis:

**H01-1:** Asset management efficiency by non-current assets turnover does not have a positive effect on a company by return on assets listed on ASE

**H01-2:** Asset management efficiency by total assets turnover does not have a positive effect on a company by return on assets listed on ASE.

**H01-3:** Asset management efficiency by working capital turnover does not have a positive effect on a company by return on assets listed on ASE.
2. Research Approach, Sample, and Data

The target population of the study is the industrial sector listed on ASE from 2015 to 2020. Firms that became the research sample were 33 companies every year; the sample size for this study is 33 companies a year, leading to an overall sample of 198 enterprises from 2015 to 2020 according to amman Stock Exchange. Panel regression was used to examine how the independent factors affected the dependent variable.

2.1. Measure of Variables:

The following table includes all the variables of the independent and variable study as it is clarified how to measure each variable in the main equation, what is the significance of this variable, and the studies that applied it.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Type of Variables</th>
<th>Data Description</th>
<th>Measurement</th>
<th>Previous Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent</td>
<td>Return on Assets</td>
<td>ROA gauges the effectiveness of utilizing a company's resources or a company's capacity to make a profit is known as profitability.</td>
<td>Net Income Divided by Total Asset</td>
<td>Gunawan, et al. (2022).</td>
</tr>
<tr>
<td>Independent</td>
<td>Non-Current Assets Turnover</td>
<td>Non-Current Assets turnover equation is a ratio that assesses how much a company's capacity to produce sales is dependent on its holdings of fixed assets.</td>
<td>Net Sales Divided by Net Non-Current Asset</td>
<td>Aseinimieyoforo, P. A. (2022).</td>
</tr>
<tr>
<td>Independent</td>
<td>Total Assets Turnover</td>
<td>A company's average total assets are compared to its total sales in the asset turnover ratio. Investors can use the ratio to assess how well a business uses its resources to create sales.</td>
<td>Net Sales Divided by Total Asset</td>
<td>Tarihoran, D. V., &amp; Endri, E. (2021).</td>
</tr>
</tbody>
</table>

Source: by Researcher

2.2. Empirical Models of Study:

\[ ROA = a_0 + a_1Y_1 + a_2Y_2 + a_3Y_3 + \epsilon \]

Where \( ROA \) indicates the return on assets, \( Y_1 \) indicates to Non-Current Assets Turnover, \( Y_2 \) indicates Total Assets Turnover, \( Y_3 \) indicates Working Capital Turnover, \( a_0; a_1; a_2; a_3 \) indicate Regression Coefficient, and \( \epsilon \) indicates the error term.

2.3. Descriptive Statistics:

Table 2 provides the mean, min, max, and SD for each variable used in this investigation.

<table>
<thead>
<tr>
<th>Variables</th>
<th>TATO</th>
<th>WCCT</th>
<th>N-CAT</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.595</td>
<td>69.230</td>
<td>2.841</td>
<td>1.621</td>
</tr>
<tr>
<td>Maximum</td>
<td>3.215</td>
<td>27.049</td>
<td>36.071</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>0.000</td>
<td>-85.716</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>2.467</td>
<td>3.850</td>
<td>9.522</td>
<td></td>
</tr>
<tr>
<td>Kurtosis</td>
<td>14.157</td>
<td>18.354</td>
<td>37.80239</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>198</td>
<td>198</td>
<td>198</td>
<td>198</td>
</tr>
</tbody>
</table>

The investigation of mean, max, min, and SD employed descriptive statistics as a gauge. The descriptive statistic values between variables were displayed in Table 2. 198 samples were observed in the sample. The current ratio's highest and lowest mean values had previously been noted; as a result, the current ratio’s peak was
2.88 and its bottom was 2.18 with a mean value of 2.48. The mean data value appeared to be somewhat erroneous based on a minimal dispersion of 0.17.

2.4. Empirical Results and Analysis:

Table (3): Correlation matrix of the study's variables

<table>
<thead>
<tr>
<th></th>
<th>TATO</th>
<th>WCCT</th>
<th>N-CAT</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>TATO</td>
<td>1</td>
<td>-0.1860</td>
<td>0.1398</td>
<td>0.2197</td>
</tr>
<tr>
<td>WCCT</td>
<td>1</td>
<td>0.0195</td>
<td>0.0138</td>
<td>0.0195</td>
</tr>
<tr>
<td>N-CAT</td>
<td>0.1398</td>
<td>1</td>
<td>0.2061</td>
<td>1</td>
</tr>
<tr>
<td>ROA</td>
<td>0.2197</td>
<td>0.0195</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3 presents the correlation matrix to investigate the existence of a multicollinearity problem between the independent variables; this problem exists when two or more independent variables are strongly correlated (Alqatamin, 2018; Altawalbeh, 2020), as such, the data set used in this study is free from multicollinearity problem as the highest correlation is between TATO and ROA with the coefficient of 21.97% as presented in Table 3 and this is what the graph shows in which the study variables are normally distributed.

2.5. Hypothesis Test Results:

Panel data was used for the study consisting of 32 companies and a period of 5 years (2017-2021), and accordingly, the random effect equivalent was estimated, and the results were as follows:

Table (4): The results of the random effect analysis of the Sub-Hypothesis Tests

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta Coefficients</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-CAT</td>
<td>0.402857</td>
<td>0.213096</td>
<td>1.890495</td>
<td>0.0675</td>
</tr>
<tr>
<td>TATO</td>
<td>0.002072</td>
<td>0.000402</td>
<td>5.151944</td>
<td>0.0000</td>
</tr>
<tr>
<td>WCCT</td>
<td>0.336492</td>
<td>1.263736</td>
<td>0.266267</td>
<td>0.7917</td>
</tr>
<tr>
<td>C</td>
<td>0.375787</td>
<td>0.119630</td>
<td>3.141253</td>
<td>0.0256</td>
</tr>
</tbody>
</table>

The results indicate that the total assets turnover has a positive effect of 0.002 at a significant level of less than 1%, so if the total assets turnover value increased by 1%, the ROA value would increase by 0.002%, which was non-current assets turnover for it a positive effect at the significant level of less than 10%, if the assets turnover value increased by 1%, the ROA value would increase by 0.40% while the working capital turnover did not have a significant effect on the ROA.

In order to choose between Random effects and Fixed effects, the Hausman Test was conducted. The result showed acceptance of the null hypothesis, and therefore the required analysis is Random effects, but we will display the result of Fixed effects as follows:

Table (5): results of the fixed effects analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta Coefficients</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-CAT</td>
<td>0.375787</td>
<td>0.119630</td>
<td>3.141253</td>
<td>0.0256</td>
</tr>
<tr>
<td>TATO</td>
<td>-0.000431</td>
<td>0.001215</td>
<td>-0.354622</td>
<td>0.7373</td>
</tr>
<tr>
<td>WCCT</td>
<td>0.336492</td>
<td>1.263736</td>
<td>0.266267</td>
<td>0.7917</td>
</tr>
<tr>
<td>C</td>
<td>0.417871</td>
<td>0.494830</td>
<td>0.844474</td>
<td>0.4369</td>
</tr>
</tbody>
</table>

The Effect of Non-Current Assets Turnover on ROA:

The Non-Current Assets Turnover (N-CAT), which has a positive effect on ROA, can be observed from the findings of Table 4. This shows that if the value N-CAT’s rises by one unit, the ROA would rise by the same amount (0.402857). This represents a substantial percentage of less than 10%, where it reached (0.067).

Consequently, the first null hypothesis, which states that Asset management efficiency by non-current assets turnover does not have a positive effect on a company by return on assets listed on ASE is rejected, and the alternative hypothesis is accepted that is the Asset management efficiency by non-current assets turnover has a positive effect on a company by return on assets listed on ASE.

The findings of this study's panel data regression tests, namely the Random Effect model, show that Non-Current Assets Turnover has a positive and significant influence on (ROA). It is supported by a previous researcher (Warrad & Al Omari, 2015); Non-Current Assets Turnover, according to them, has a positive and substantial impact on (ROA).

The Effect of Total Asset Turnover on ROA:

The Total Asset Turnover (TATO), which has a positive effect on ROA, can be observed from the findings of Table 4. This shows that if the value of TATO rises by one unit, the ROA would rise by the same amount (0.002). This represents a substantial percentage of less than 10%, where it reached (0.000).
Consequently, the first null hypothesis, which states that the Asset management efficiency by Total Asset Turnover does not have a positive effect on a company by return on assets listed on ASE, is rejected, and the alternative hypothesis is accepted in which it indicates that the Asset management efficiency by Total Asset Turnover has a positive effect on a company by return on assets listed on ASE.

The findings of this study's panel data regression tests, namely the Random Effect model, show that TATO has a positive and significant influence on (ROA). It supported by previous researchers (Gunawan et al., 2022; Endri, 2021; Warrad & Al Omari, 2015). Total Asset Turnover, according to them, has a positive and substantial impact on (ROA). The results of this current study do not agree with the study of (Simatupang & Sari, 2021), whose results showed that there is a negative impact on the return on assets.

The Effect of Working Capital Turnover on ROA:

The Working Capital Turnover (WCCT), which has a negative effect on ROA, can be observed from the findings of Table 3. This shows that if the value of WCCT rises by one unit, the ROA would rise by the same amount (- 0.009). This represents a substantial percentage less than 5%, where it reached (0.316).

Consequently, the first null hypothesis, which states that the Asset Management Efficiency by Working Capital Turnover hasn't had a positive effect on the company by return on assets listed on ASE, is accepted, and the alternative hypothesis is Rejected, which states that Asset Management Efficiency by Working Capital Turnover has a negative effect on a company by return on assets listed on ASE.

The findings of this study's panel data regression tests, namely the Random Effect model, show that WCCT has a negative and significant influence on (ROA). It supported by previous researchers that WCCT has a negative and substantial impact on (ROA) (Simatupang & Sari, 2021; Wibowo & Rohyati, 2018). The results of this current study do not agree with the study of Warrad and Al Omari (2015) and Al-Momani and Almomani (2018) whose results showed that there is a positive impact on the return on assets.

3. Conclusion and Recommendations for future studies

According to the analysis's findings and justifications, TATO would have a favorable and considerable effect on the industry sectors on ROA from 2015 to 2020. N-CAT significantly and positively affects on ROA of the industry sector throughout the same periods. Moreover, for the same period, the ROA of the industry sector is positively and significantly affected by the last variable: WCCT. This conclusion will motivate firm executives to effectively manage fixed assets in increase profits.

The study suggests applying the efficiency of asset management to include additional sectors in the Amman Stock Exchange, choosing other financial indicators such as solvency and liquidity ratios, and comparing the industrial sectors with the service and financial sectors. Future research may be broadened in a number of ways including increasing the sample size, comparing the service and industrial sectors, and ultimately including other dependent variables like sales growth and firm size.

The limitation of this study solely uses data in the form of financial statements and annual reports of industrial businesses registered on the ASE for the five years of observation, or the period of 2015 to 2020. Only Non-Current Assets Turnover (N-CAT), Total Assets Turnover (TATO), and Working Capital Turnover were researched as of yet (WCCT). We haven't been able to generalize studies for all industrial sectors because the number of sectors that have been investigated is still rather few.

References


