

ANALYSIS OF WORKING CAPITAL EFFICIENCY FOR ARABLE CROP FARMS IN HUNGARY

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Abstract: *Our study is a thematic analysis of the literature on working capital, aiming to present the latest research and interpretations on working capital management. In the second part of the paper, we present an assessment of capital adequacy and working capital efficiency and their results, based on our own data collection and compared with the findings of the literature. There is a substantial international literature on the impact of working capital, which examines the returns and the impact on profitability of the stock of inventories, the turnover of various current assets and the cycle days associated with working capital management. In our study, we used these aspects to select asset endowment and turnover-income profitability indicators from the EMIS database for Hungarian arable crop farms, searching for correlations by regression analysis for three years 2018, 2020 and 2022. Our results show that working capital endowment specifically showed significant correlations with operating revenue in all three years, while the other explanatory variables mostly gave significant correlations only for the year 2022. The size of the Hungarian agricultural economy is specifically characterised by micro and small enterprises, therefore we categorised the enterprises into micro, small, medium and large enterprises based on the value of their assets and their revenue. The number of enterprises specifically engaged in cereal and oilseed production by size category thus differed significantly, and multivariate regression was no longer possible for the two larger categories. In these cases, correlation analysis preceded regression analysis. Examining working capital efficiency by firm size, small farms showed significant correlations with profitability, but they also tended to do so only for the year 2022.*

Keywords: *asset value; working capital; profitability; regression analysis; different sizes of firms*

JEL Classification: *M21; Q10*

1. Background

In the context of the intensification of production, the technical development of agriculture over the last century and its continuing trend, the increasing efficiency of inputs and the achievement of international competitiveness, the following questions need to be answered:

- which factors influence the size of businesses and, in particular the size of individual divisions and branches?
- is it possible to determine critical and optimal capital supply and capital expenditure values for enterprises?
- to what extent does a different capital supply change the risk-bearing capacity of the enterprise?
- to what extent various environmental and (socio-economic) conditions can and should be taken into consideration in efficiency studies?

A key driver of the development of enterprises is the need to satisfy the owner's interest, which is primarily realised through revenues and expenditures in relation to the capital invested, complemented by less measurable and thus less controllable external environmental factors, such as perceptions by investors, markets, partners, and other stakeholders. Ensuring that the enterprise operates in line with the interests of its owners is the main task of managers, who expect to ensure compliance through their decisions made based on strategic and operational plans. For owners who are not involved in the management of the company, their investments must generate a return in line with their expectations. This expectation is usually expressed in terms of the returns on risk-free investments, supplemented by an empirically determined but rather merely desired excess return reflecting the riskiness of the given investment. Quantifying these are facilitated by the pricing model for capital goods and, for decision-makers of leveraged companies, by the weighted average cost of capital model. Obviously, these models formulate expectations "only", the realisation of which can be achieved through joint decisions of the board and managers, where working capital management will have a significant role in ensuring the efficient running of operative processes.

Working Capital Management (WCM) is one of the most important decision-making processes for managers, as it has a profound impact on the liquidity and profitability of the company (Appuhami, 2008). Working capital is the primary driver of businesses and if it is not managed properly, it may lead to business failure (Padachi et al., 2012). According to Fenyves et al. (2016) and Pupos et al. (2011), working capital (WC) is the surplus of the current assets over the current liabilities. Accordingly, inventories, trade receivables and trade payables constitute the main components of an enterprise's working capital, which is a working, i.e. income-generating, non-cash part of its assets (Lux, 2017). Pricewaterhouse Coopers Global's 2019/2020 Working Capital Report suggests that efficiency improvements in working capital management could unlock up to EUR 1,200 billion of cash on a global level, increasing returns on capital investments by 48%. The three key findings of the report regarding the financial performance of globally listed companies over the past five years are:

- (1) a decline in the Return on Capital Employed (ROCE);
- (2) a sudden drop in investments;
- (3) and the extension of outstanding debts to suppliers, which puts a significant strain on supply chain efficiency.

With these findings in mind, it is imperative to take action now to improve WCM in firms. Equally important is to know what the consequences are if a company does not have adequate working capital management. This is also addressed by a large

volume of literature, primarily at an international level, guiding corporate decision-makers.

2. Literature review of factors affecting working capital management

2.1. Correlation between working capital and profitability

Several authors (Deloof, 2003; Charitou et al., 2010; Raheman et al., 2010), in their analysis of the impact of working capital management on profitability, most frequently mentioned the cash conversion cycle (CCC) and the net trading cycle (NTC)¹ concerning working capital. Others considered the ratio of current assets to current liabilities to be an important vertical indicator of the balance sheet but also mentioned the liquidity ratio, the turnover rate of inventories, customers, suppliers, and the ratio of customers to suppliers (Afza, 2008; Singh and Pandey, 2008; Danuletiu, 2010).

Regarding profitability, researchers have analysed several indicators derived from accounting statements, the most commonly used ones being net operating profit (NOP), return on sales (ROS), return on equity (ROE), and return on invested capital (ROIC) (Azam and Haider, 2011; Akoto et al., 2013; Padachi, 2006; Nazir and Afza, 2008). The indicators include the Tobin's Q ratio, which integrates also market valuation and can be calculated by adding the market value of equity to the book value of liabilities (= e.g. in the case of a public limited company, the current share price x the number of shares) and dividing this by the value of total assets (Abuzayed, 2012; Hajdu, 2017; Tamásné and Lamanda, 2020; Várkonyiné, 2022). Working capital management profitability analyses based on the cash cycle (CCC) are deduced based on the days in inventory, days receivables and days payable. In the following, I will briefly present the results of studies examining the relationship between each of these periods and profitability:

- Most analyses show an essentially significant negative correlation between the receivables (Days' Receivables, DR) period and profitability, an almost obvious correlation, since if the receivables period shortens, the income per unit period should increase, thus also increasing profitability (Abuzayed, 2012, Vural et al., 2012; Akoto et al., 2013]. However, some studies have shown a positive correlation, as the extension of the lending period has a positive effect on the increase in customer interest and thus on the increase in sales (Sharma and Kumar, 2011).
- Concerning the impact of the Days' Inventory (DI) period on profitability, most studies, similarly to DR, indicate a negative significant correlation, as expected, since e.g. a longer production period reduces the production of finished goods per unit period, thus reducing the sales revenue, leading to a reduction in income and profitability. Naturally, in the opposite case, profitability is increased due to the shorter time needed to absorb capital into the production process (Sharma and Kumar, 2011; Napompech, 2012). Nevertheless, Gill et al., (2010) and Mathuva (2010) have reported also a positive correlation, which they attribute to higher stock levels due to the elimination of stock shortages, and thus safer production.
- For the impact of the Days' Payable (DP) period on profitability, a positive significant correlation can be anticipated, since the later the repayment of

trade credit – debts (= interest-free short-term liabilities), the higher the cash flow of the company becomes, thus increasing its development potential and consequently its profit (Alipour, 2011; Azam and Haider, 2011; Abuzayed, 2012).

2.2. Valuation of working capital investments and fixed assets

Only a small part of the available literature explores the relationship between working capital and capital expenditure (Capex) to measure efficiency, but all of them found a significant negative correlation (Appuhami, 2008). Ding et al. (2013) claim that Chinese firms that invest more in working capital are more sensitive to fluctuations in cash flows, and their investments in Capex tend to show a lower level of sensitivity to cash flow fluctuations. This basically suggests that companies increase or decrease their investment in working capital according to their Capex investment needs and according to cash flow fluctuations. Companies with a higher level of working capital investment are organisations with stronger financial constraints and more investment opportunities. They have concluded that Chinese companies facing financial constraints could focus on improving their working capital efficiency in order to minimise the negative impact of financial constraints on their investments in fixed assets.

2.3. Valuation of investments in working capital

Over recent decades, several highly cited authors have examined the characteristics of investments in organisational working capital. Chiou et al. (2006) state that it is the debt ratio and operating cash flow that determines the working capital investments of US companies. Hezam et al. (2017) concluded that there is no evidence of the effect of complex economic indicators of the enterprise (such as company growth, company size, and company performance) on the working capital investment of companies.

Nazir and Afza's (2009b) study based on data from listed Pakistani manufacturing companies, reports that operating cycle, ROA and Tobin's Q are factors that positively and significantly correlate with the companies' working capital requirement (=WCR), whereas leverage has a negative effect on WCR, and has a significant effect on the WC requirements of companies.

Hill et al. (2010) have concluded that operating cash flow and company size have a significant positive impact on the WCR of companies and that sales growth, sales volatility, financial difficulties, and the market-to-book value ratio of companies have a negative and significant impact on their WC needs.

Finally, Banos-Caballero et al. (2010) have concluded Spanish small and medium-sized enterprises (SMEs) that operating cash flow, the company's age and the lagged cash conversion cycle (CCC) have a positive and significant relationship with CCC, whereas the leverage, growth potential, investment in fixed assets and ROA of SMEs have a negative and significant effect on CCC in the case of SMEs.

3. Methods

Based on the literature analysed above, although not fully investigating every relationship, our research was carried out by examining the working capital

efficiency of Hungarian enterprises having agriculture, including crop production, as their main activity.

We have extracted our data from the EMIS database and supplemented it from the public financial reports of enterprises available on the website e-beszamolo.im.gov.hu.

The selection of the enterprises included in the analysis was based on Act XXXIV of 2004 on the classification of small and medium-sized enterprises (SME Act). The SME Act categorises enterprises by size, based on the number of employees and certain value limits, but each category is also distinguished by general characteristics, according to which:

Micro-enterprises:

- Usually employ less than 10 people.
- Have a low level of revenue and low value of assets.
- Are often run by the owner or by a small number of professionals.

Small enterprises:

- Usually employ 10 to 50 people.
- Have higher revenue and more assets compared to micro-enterprises.
- May have multiple separate specialised activities and departments.

Medium-sized enterprises:

- Typically have 50 to 250 employees.
- Generate more revenue and have more assets of greater value and stock than small businesses.
- May have more than one establishment or branch.
- Often have more complex organisational structures and management systems.

According to the Hungarian SME Act, in addition to the number of employees, it is also necessary to take into account the value of the annual turnover and total assets, whereby a micro-enterprise is defined as an enterprise with an annual net income and total assets of less than EUR 2,000,000, a small enterprise between EUR 2,000,000 and EUR 10,000,000, a medium-sized enterprise with a revenue of more than EUR 10,000,000 but less than EUR 50,000,000 and total assets of less than EUR 43,000,000. Enterprises with employee headcount and profit and loss assets exceeding the upper limits of the medium-sized category are already considered large enterprises.

To analyze the efficiency of the working capital of Hungarian plant-growing enterprises, we carried out correlation studies concerning the following basic balance sheet data and the economic indicators derived from it, sales revenue and additional income and profitability indicators:

Explanatory variables:

- Total assets
- Working capital
- Working capital turnover
- Current assets turnover
- Durable assets turnover
- Current ratio
- Quick ratio
- Cash and Cash Equivalents Ratio
- Cash Ratio
- Inventory/Total Assets %

- Cash/Total Assets %

Dependent Variables

- Operating income
- Operating profit or loss (EBIT)
- Profit after tax
- ROA, ROS, ROE profitability indicators and
- EBITDA Margin

In line with the findings of the literature, we have been looking for correlations in terms of the effects of the above explanatory indicators on operating income, different profits and profitability indicators. In this study, bivariate and multivariate regression analyses were conducted, supplemented by statistical hypothesis testing, allowing us to make more robust claims about the reliability of the relationships.

Regression analysis is of great importance in statistics and research since it provides a way to examine and predict relationships between variables.

The process of regression analysis is usually followed in the course of regression analysis, whereby the data and the model are tailored to the specific research or analytical objective. It is important to note that regression analysis can be an iterative process, and evaluating the results and making any necessary adjustments can lead back to an earlier stage of the process, as required.

In our study the grouping of enterprises into size categories has been based only on annual net turnover and total assets for lack of employee headcount data, which does not perfectly follow the principles of the SME Act, however, in this case, financial indicators are more relevant for grouping than labour force indicators.

4. Results

The EMIS database contains enterprises engaged in crop production for the years 2018, 2020, and 2022, and within it, the Hungarian enterprises involved in the cultivation of oilseeds and grains were filtered. As mentioned in the previous chapter, we looked for the effect of the balance sheet's basic data and the indicators derived from them as explanatory variables on operating income, EBIT, and profit after tax, in addition to the usual three profitability indicators (ROA, ROE, and ROS) and the general EBITDA margin indicator in the economic analysis of medium- and large-sized enterprises.

Applying multivariate regression for the 12 explanatory variables was not a problem for a relatively large number of micro- and small-sized enterprises. If the "p" value of the regression was below 0.05, the relationship between the variables was considered significant.

A much smaller number of companies represented the size of medium- and large-sized enterprises (Table 1). Bivariate regression was used in their case, preceded by a correlation test, looking for the closest relationship between the explanatory and dependent variables.

Table 2: Number of companies by size category

| | 2018 | 2020 | 2022 |
|---------------------------------|------|------|------|
| Micro-sized enterprises | 106 | 233 | 179 |
| Small-sized enterprises | 313 | 287 | 236 |
| Medium-sized enterprises | 9 | 23 | 19 |
| Large-sized enterprises | 5 | 7 | 6 |

Source: own collection based on EMIS, 2024

In the case of micro- and small-sized enterprises, as a result of the regression, and in the case of medium and large-sized enterprises, as a result of the correlation and regression calculation, the significant correlation was involved in values below $p < 5\%$. The selection of the three years (2018, 2020, and 2022) was justified by the period before, during, and after the COVID-19 epidemic, looking for possible differences in the individual periods as well.

4.1. Micro-enterprises

Regarding micro-enterprises, the relationships in Table 2 were determined.

Table 2: Correlations regarding working capital efficiency of micro-sized enterprises

| Micro-sized Enterprises | Operating income | | | EBIT | | | Profit after tax | | | ROA | | | ROE | | | ROS | | | EBITDA Margin | | | |
|---------------------------------|------------------|-----|-----|------|-----|-----|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|-----|-----|---|
| | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | |
| Total Assets | | | x | | | | | | | | | | | | | | | | | | | |
| Working Capital | x | | x | x | | | x | | | | | | | | | | | | | | | x |
| Working Capital Turnover | x | | x | | | | | | | x | | | | x | | | | | | | | x |
| Assets Turnover | x | | x | x | | | x | | | x | | | | | | | | | | | | |
| Current Assets Turnover | | | | | | | x | | | x | | | | | | | | | | | | |
| Durable Assets Turnover | x | | | | | | | | | | | | | | | | | | | | | x |
| Current Ratio | | x | | | | | | | | | | | | | | | | | | | | |
| Quick Ratio | | | | | | | | | | | | | | | | | | | | | | |
| Cash and Cash Equivalents Ratio | | | x | | | | | | | | | | | | | | | | | | | |
| Cash Ratio | x | | x | | | | | | | | | | | | | | | | | | | |
| Inventory/Total Assets % | x | x | | | | | | | | | | | | | | | | | | | | |
| Cash/Total Assets % | | | | | | | | | | | | | | | | | | | | | | |

Source: Own calculation, 2024

The table shows the results of the multivariate linear regression, with the x marks indicating significant correlations between each explanatory variable and the given dependent variable.

The most significant correlation in the efficiency of working capital can be defined as operating income, which is supported by the ROS indicator. Examining the

years, we found the highest frequency of correlations in 2022. In this year, working capital (with 5 dependent variables), its turnover ratio (5), assets turnover (5), and current assets turnover (3) showed a close relationship with the most results and profitability indicators in addition to operating income. We did not obtain verifiable correlations for the working capital efficiency of micro-sized enterprises operating in the other years included in the investigation.

4.2. Small-sized enterprises

Small business size was the category with the largest elements examined (Table 1) in all three years. The results of the regression analyses are summarized in Table 3.

As can be seen from the density of x marks, in this size category, the explanatory variables showed more significant correlations with the individual dependent variables compared to micro-enterprises. In terms of operating income, 2018 shows a similar picture to micro-enterprises, but here, the current assets turnover is significantly related to operating income.

Table 3: Correlations regarding working capital efficiency of small-sized enterprises

| Small-sized Enterprises | Operating income | | | EBIT | | | Profit after tax | | | ROA | | | ROE | | | ROS | | | EBITDA Margin | | | |
|---------------------------------|------------------|-----|-----|------|-----|-----|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|-----|-----|---|
| | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | |
| Total Assets | | x | x | | | | | | | | | | | | | | | | | | x | |
| Working Capital | x | | x | x | | | x | | | | | | | | | | | | | | | x |
| Working Capital Turnover | x | | x | x | | | x | | | | | | | | | | | | | | | x |
| Assets Turnover | | x | x | | | | | | | | | | | | | | | | | | | x |
| Current Assets Turnover | x | | x | | x | | | x | | | x | | x | x | | | | x | | | | |
| Durable Assets Turnover | | x | | | | | | | | | | | | | | | | | | | | |
| Current Ratio | | | | x | | x | x | x | | x | x | | x | | | x | x | | | | | |
| Quick Ratio | | | | x | | | x | | | x | | | x | | | x | | | | | | |
| Cash and Cash Equivalents Ratio | | | | | | | | | | | | | | | | | | | | | | |
| Cash Ratio | | | | | | | | | | | | | | | | | | | | | | |
| Inventory/Total Assets % | | x | | x | | | x | | | x | | | x | | | x | | | | | | |
| Cash/Total Assets % | | | | | | | | x | | | x | | | x | | | | x | | | | |

Source: Own calculation, 2024

Operating income has the most demonstrable influence of the individual explanatory variables compared to the other dependent variables, but EBIT and profit after tax also indicate a causal link with five explanatory variables in 2022. Overall, for the 3 years and the 7 dependent variables, the current ratio (in 9 cases), the current assets turnover (8), and the inventory ratio (6) show a significant relationship with an outcome variable. If we examine only the outcome-related dependent variables, even the quick ratio shows a stable, close relationship in 2022.

4.3. Medium-sized enterprises

This company size was much smaller in terms of the number of elements that could be included in the analysis compared to the previous two categories, which is not surprising due to the categorization criteria used (operating income 10-50 million €/company, value of assets 10-43 million €/company). Therefore, a multivariate regression could only be done to the 12 explanatory variables in 2020, and in the next two years, the variables deemed suitable for regression analysis were first selected using correlation analysis. In the case of correlation, the explanatory variables with an R-value greater than 0.4 were included in the regression analysis. However, as seen in Table 4, high correlations rarely showed a significant relationship.

Table 4: Correlations regarding working capital efficiency of medium-sized enterprises

| Medium-sized Enterprises | Operating income | | | EBIT | | | Profit after tax | | | ROA | | | ROE | | | ROS | | | EBITDA Margin | | | | | |
|---------------------------------|------------------|-----|-----|------|-----|-----|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|-----|-----|----|----|---|
| | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | | | |
| Total Assets | | c | c | | | | | | | | | | | | | | | | | | | | | |
| Working Capital | c | x | c | | | c | | | | | | | | | | | | | | | | -c | -c | |
| Working Capital Turnover | | x | | | | | | | | | | | | | | | | | | | | | c | c |
| Assets Turnover | c | | | | | | | | | | | | | | | | | | | | | | | |
| Current Assets Turnover | | | | | | x | | | | | | | | | | | | | | | | | | |
| Durable Assets Turnover | c | x | | | | | | | | | | | | | | | | | | | | | | |
| Receivables Turnover Ratio | | | | | | | | | | | | | | | | | | | | | | | | |
| Payable Turnover Ratio | | | | | | | | | | | | | | | | | | | | | | | x | |
| Current Ratio | | | | | | | | | | | | | | | | | | | | | | | x | x |
| Quick Ratio | | x | | | | | c | | | | | | | | | | | | | | | | x | x |
| Cash and Cash Equivalents Ratio | | | | | | c | | c | | | | | | | | | | c | | | | | | |
| Cash Ratio | | | | | | c | | c | | | | | | | | | | c | | | | | | |
| Inventory/Total Assets % | | | | | | | | | | | | | | | | | | | | | | c | | x |
| Cash/Total Assets % | | | | | | c | | c | | | | | | | | | | c | | | | | | |

Source: Own calculation, 2024

In the table, the “x” marks show a significant relationship, and the “C” indicates a correlation higher than 0.4, but they no longer show an actual relationship.

Among the four size categories, the lowest significant correlation between the assumed explanatory and dependent variables can be seen here, even though the range of explanatory variables has been expanded with the turnover of durable assets, receivables, and account payable turnover, for which the EMIS database provided an opportunity (in the case of micro and small sizes, the previously mentioned indicators were available in very few cases, so we did not take them into account).

It is clear from Table 4. that by 2020, there were several significant correlations in the case of the operating income and, in this connection, the EBITDA margin. Operating income had an actual relationship with the liquidity indicators of working

capital, its turnover ratio, the durable assets turnover, and the EBITDA margin, which also prevails in the two previous size categories.

4.4. Large-sized enterprises

Similarly to the methodology used for medium-sized companies, the explanatory variables included in the two-variable linear regression were first selected by correlation for the individual dependent variables. Naturally, much less correlation was detected than for the first two size categories (Table 5).

The table again shows several significant correlations between the examined variables for the year 2022 and, similarly to the previous measurements, they occurred here in most cases in the case of operating income, and correlations that cannot be considered significant also occurred here in the largest number.

Due to the small number of elements (5-7-6 in 2022-2020-2018), the correlation studies were only performed for completeness due to the size categories, knowing that the results cannot be considered representative.

Table 5: Correlations regarding working capital efficiency of large-sized enterprises

| Large-sized Enterprises | Operating income | | | EBIT | | | Profit after tax | | | ROA | | | ROE | | | ROS | | | EBITDA Margin | | |
|---------------------------------|------------------|-----|-----|------|-----|-----|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|-----|-----|
| | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 | '22 | '20 | '18 |
| Total Assets | x | x | C | x | C | C | x | C | C | x | | | x | | | -C | | | -C | | |
| Working Capital | x | C | C | C | | | C | | | C | | -C | C | | -C | x | -C | -C | -C | x | -C |
| Working Capital Turnover | x | C | C | x | C | C | x | C | C | x | | | x | | | -C | | -C | -C | | -C |
| Assets Turnover | | C | C | | | | C | | | C | | -C | x | | -C | x | -C | -C | x | -C | -C |
| Current Assets Turnover | x | C | C | | | C | x | | | x | | | C | | | -C | -C | -C | -C | -C | |
| Durable Assets Turnover | C | C | C | C | | | C | | | C | | -C | C | | -C | x | -C | -C | x | -C | -C |
| Receivables Turnover Ratio | | | | | | | | | | | | | | | | | | | | | |
| Payable Turnover Ratio | | | | | | | | | | | | | | | | C | | | C | | |
| Current Ratio | -C | | | -C | -C | -C | | | | -C | | | -C | | -C | | | | | | |
| Quick Ratio | -C | | | -C | -C | x | | | | x | | | -C | | | | | | | | |
| Cash and Cash Equivalents Ratio | | | | | | -C | | | | | | | | | | | | | | | |
| Cash Ratio | | | | | | -C | | | | | | | | | | | | | | | |
| Inventory/Total Assets % | | | | | | | | | | | | | | | | | | | | | |
| Cash/Total Assets % | | | | | | | | | | | | | | | | | | | | | |

Source: Own calculation, 2024

5. Conclusions

Based on the literature sources, we set the goal of analyzing the impact of the assets and working capital of enterprises dealing with Hungarian crop production, including the cultivation of oilseeds and grain crops, on profitability, income, and operating income for three years (2018-2020 and 2022) by size category. We could

not provide all the explanatory variables in the literature for the analysis due to the shortcomings of the database and the reports with different details, but we still looked for the effect of at least 12 explanatory variables on seven dependent variables.

The large number of items per size category for micro- and small-sized enterprises enabled multivariate linear regression, where the effect of working capital and current asset turnover on operating income was significant in all three years, especially for small-sized enterprises. In the same size category, the current ratio and quick ratio for 2022 significantly correlated with almost all variables, corresponding to the effects mentioned in the literature (Afza & Nazir, 2008; Singh & Pandey, 2008; Danuletiu, 2010). In the case of medium- and large-sized enterprises, the explanatory variables of working capital and liquidity showed a significant relationship almost only for 2022; for the medium-size category, the EBITDA Margin, and in the case of the large size, adjusted to the operating income.

Overall, it can be concluded that out of the three examined years, only the working capital, turnover rate, and current ratio and quick ratio indicators for the year 2022 gave a relationship that could be classified as significant in the selected economic dimensions.

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