

# SPECIFIC FINANCIAL PERFORMANCE MEASURES FOR MICRO-BUSINESSES

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## **Abstract**

The aim of our study was to find the evidence on importance of using specific financial performance indicators in micro-business performance analysis from the perspective of strategy. Following the implications of theory reviewed as well as practical experience from micro-business financial analysis, we approached this question by proposing an initial set of specific financial performance indicators for micro-businesses as an alternative to traditional ratios. Subsequently, we evaluated financial performance of the companies from the sample comprising of 595 micro-businesses using both traditional and specific indicators, retrieved total scores as well as scores for particular pairs of indicators, and conducted statistical tests to examine whether these evaluations gave different outcomes. Since companies in our sample came from different industries with naturally distinct characteristics, we applied the same procedure to examine the situation for each individual industry. The analysis showed that when considering all industries, correlation between total scores was significant but not strong, and there was strong correlation between debt indicators, but only weak to low correlation between liquidity and profitability indicators. As for particular industries, correlation between total scores was found to be strong only in case of one industry, while correlations between pairs of indicators were not always significant and varied from low to moderate to very strong, showing there is no common pattern among industries. To conclude, we proved that usage of specific indicators instead of traditional ratios does not show the same results. Therefore, using specific financial performance measures in case of micro-businesses is legitimate.

## **Introduction**

This study addresses the question of legitimacy of specific financial indicators usage in performance analysis from the strategy perspective in case of Slovak micro-businesses. It is important to examine whether specific measures of financial performance from the perspective of strategy give different outcomes than traditional ratios commonly used in financial analysis in order to develop an argument for using them in later strategy research. When we want to study levels of performance that enterprises achieve and which of them can be classified as high- or low-

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performers, and to create a base to examine performance determinants, we need to know and apply appropriate measures for the perspective we use. This study contributes to the field of strategy research by opening the question of legitimacy of using specific financial performance indicators and addressing this question with empirical analysis based on real financial statements data from Slovak micro-businesses. The research question set by this study can be further developed by addressing wider sample of enterprises, enlarging the scope to cover also other size categories of businesses, broadening the set of indicators or modifying the indicators proposed in this paper.

The first part of this paper presents theory overview regarding micro-businesses and their characteristics, as well as regarding performance from the perspective of strategy, discusses theory background for using specific indicators, proposes specific indicators to be analyzed in this paper and sets the hypotheses. In the second part the research data and methods are described. Next, results of the analysis are presented. Finally, results are discussed together with implications for further research and practice, as well as limitations of the approach used in the presented analysis.

## **1 Theory overview**

In this part of the paper we present the definition of micro-businesses adopted for our analysis and summarize the common natural characteristics of this size category of businesses. Further we discuss the performance evaluation from the perspective of strategy and describe the theory background for using specific financial indicators for this field of study. Consequently, we present the proposed set of specific financial performance measures. In conclusion, we set the hypotheses for our analysis.

### **1.1 Micro-business definition and characteristics**

Following the definition by the European Commission, micro-business (or “microenterprise” as stated in the definition) can be defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million (2003/361/EC, 2003). While it is compulsory to respect the staff headcount thresholds to determine the size category, an enterprise may choose to meet either the turnover or balance sheet ceiling. It does not need to satisfy both and may exceed one of them without losing its status (European Commission, 2005). In case that microbusiness is not autonomous (i.e. with 25% or more of capital or voting rights, whichever is the higher, in one or more other enterprises, and with 25% or more of the capital or voting rights in the enterprise, whichever is the higher, in the hands of outsiders, with

some exceptions), it has to add a proportion or all of the other enterprise's staff headcount and financial details to its own data when determining its eligibility for particular size category status.<sup>12</sup>

Due to the nature of microbusinesses related especially to their size, they are characterized by certain specific features that are also frequently being presented as a part of their qualitative definition. These specifics were discussed in works of several Slovak (Strážovská & Strážovská, 1999; Šúbertová, 2005; Šubjak & Bielik, 2006) as well as foreign (Beaver, 2002; Longenecker, 2006; Deakins & Freel, 2009; Stokes & Wilson, 2010) authors. Based on their works we determine the following specifics of micro-businesses from the strategy and entrepreneurial perspective:

- Limited size of markets - micro-businesses usually operate on relatively small markets mostly within their target segment. This may not be a case in new industries and markets, but even here a micro-business capacity still limits its market size.
- Limited size of the enterprise - is natural due to the size classification of enterprises and acts as a determinant for some other specifics with both positive and negative influence.
- Greater sensitivity to various impulses - limited size makes micro-businesses more sensitive and vulnerable to negative impulses from their external as well as internal environment, as they are naturally less robust to absorb these impulses.
- Limited resources - due to their limited size micro-businesses often have limited access to all kinds of resources, that may be a limitation for some internal processes, but also for key processes, functions or activities orientated to the market.
- Limited scope of activities or production - this limited scope is related to the limited size of micro-businesses themselves as well as limited size of their markets, and to limited resources available.
- Flat organization - none or very few organizational levels are good precondition for fast and efficient information flow from market and within the enterprise, and for feedback and creation of immediate contacts internally and externally.
- Direct contact with markets - due to limited market size and typically closer relations with customers micro-businesses generally have immediate contacts with their markets, enabling them to customize and communicate their products and get instant feedback from their customers.
- Direct contacts within the enterprise - small headcount and flat organization are good preconditions for immediate relationships between employees themselves as well as with

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<sup>12</sup> For further details see 2003/361/EC and European Commission, 2005

owner-managers. This facilitates creation of good working atmosphere but also makes small-business more sensitive to human relations quality.

- Flexibility - micro-businesses are due to their size and immediate external and internal contacts generally more flexible and adaptable towards new customers' requirements and preferences, as well as new trends or other internal and external changes.
- Low level of formalization - generally low level of formalization is mostly determined by limited time and resources, but also by smaller size, less complexity and immediate information flow within micro-businesses and with external environment.
- Concentration of ownership and management - ownership and management of micro-businesses is almost always concentrated in the hands of one person, owner-manager of the enterprise.

The above mentioned specifics are often generally contributed to the whole category of SMEs (i.e. micro-business, small businesses and medium-sized businesses), which is from the strategy and entrepreneurial perspective naturally rather heterogeneous category including considerably broad size span of enterprises. Intensity of these specifics obviously varies among these size categories, and we may conclude that micro-businesses are the enterprises in which these characteristics are generally most intensive.

## **1.2 Performance from the strategy perspective**

Before dealing with performance evaluation, it is necessary to define what is understood under the term of performance. However simple this may look, there is actually no common and generally accepted definition of performance. As suggested by Hofer, the reason for this ambiguous situation is that performance is a contextual concept associated with the phenomenon being studied (as cited in Carton & Hofer, 2006). It means that different phenomenon may require rather different points of view to address the question of performance. Therefore we have to first declare that we will approach the performance issue from the strategy and strategic management perspective (Papula, J., Papulova, Z: 2010. p. 267), and we at the same time intend to apply the financial perspective, and only then provide a consequent definition of this concept.

Business performance can be most generally defined as the ability to achieve set or necessary outcomes and be successful. More specifically, in the context of business financial performance from the perspective of strategy, performance should reflect and measure the change of the financial state of a business, or the financial outcomes that result from its decisions and the

execution of those decisions, as well as values of future opportunities for the business created during the measurement period. According to these requirements reflecting the complexity of business, it is obvious that performance should be perceived as multidimensional.

This corresponds with conclusions of Carton and Hofer (2006, p. 45), who summarizing last decades of strategic management view-based business performance research concluded that performance is generally defined by researchers as multidimensional and also multiconstituency. While strategic management with its holistic and system approach concerned with managing the business for the long term quite indisputably requires considering variety of dimensions in order to develop robust performance concept, its essence also provides good support to develop single-constituency perspective that would enable, as further suggested by Carton and Hofer, the necessary comparisons across different types of businesses and industries. When deciding on the most appropriate constituency for performance measurement, it is important to respect that strategic management is concerned with managing a business for a long term, and accordingly to select a constituency perspective that is compatible with this nature. Carton and Hofer (2006, p. 122) suggest to adopt the perspective of common stockholders (in case of micro-businesses these are the company owner-managers), since they commit their resources (and in case of micro-businesses those are often not only financial resources) to the business for the longest time period (they get their resources back only after all other claimants against business assets are satisfied), and their perspective is therefore closest to the focus of strategic management issues. As they further emphasize, owner-managers have long-term interests and must balance short term satisfactions against long-term benefits.

Deciding for the single constituency for performance measurement does not necessarily mean denying the fact that organizations have multiple constituencies that must at least be satisfied to some degree. In fact, even though the spectrum of opinions in strategic management literature is rather vast, ranging from shareholder value perspective favoring solely the interests of owners to stakeholder value perspective perceiving company as a coalition between various resource suppliers rather than instrument of shareholders, the latter multi-constituency stream currently prevails (De Wit & Meyer, 2010, West & Bamford, 2010). However, Carton and Hofer (2006, p. 55) argue that single constituency selection is required because using a multi-constituency model of organizational performance is difficult for the development management theory. Therefore it is necessary to select the most appropriate constituency that would respect the perspective of performance evaluation as well as reflect the other constituencies to the best possible extent. For our purpose of financial

performance evaluation of micro-businesses from the perspective of strategy we adopt their suggestion and further employ the single constituency of owner managers in our analysis.

To summarize the above mentioned information, when trying to develop a measure of business performance from strategy perspective comprising of financial indicators, it should reflect the long-term orientation and multidimensionality of strategy, and it should also consider the single-constituency of micro-business owner-managers.

### **1.3 Theory background for usage of specific financial indicators**

Sticking to the perspective of strategy, need to reflect broader scope of dimensions within the business, consideration of owner-managers as a single constituency for business performance, as well as the characteristic nature of micro-businesses, a set of specific financial indicators for micro-businesses performance evaluation should be developed. Moreover, evidence from practical experience in micro-business financial analysis, especially in banking sector, further emphasizes the need for using such indicators (Merjavý, 2010). To ensure the relevance of these specific financial indicators, especially when they are based on financial statements, we should respect the limited information value of some financial statements items, particularly in the context of specific requirements due to evaluation perspective as well as micro business specifics.

As for the evaluation perspective, in terms of financial statements items it clearly requires construction of indicators that would to the best possible extent characterize micro-business performance from strategy perspective. These indicators should therefore avoid usage of “non-business“ as well as manipulatable or distorting items affected either by facts not related to business activities or by tendencies to tax optimization. Further, these indicators should be built upon items most corresponding to strategy perspective, i.e. forward oriented items reflecting the potential and possible future progression of the business. Finally, these indicators should not only enable financial performance evaluation of micro-business itself, but they should also be comparable with other enterprises within the industry as well as among various industries based on available comparative data.

As for micro-businesses specifics in terms of their reflection by financial statements items, they result from the fact that micro-businesses are mostly privately-owned enterprises (where ownership and management are not separated) with limited scope of business activities that are in most cases not subjects to mandatory financial statements audit. The integration of ownership and management hand in hand with low complexity of micro-business naturally eliminates the need for

precise and consistent financial reporting, because the owner-manager usually has immediate control of the business. This fact becomes an argument for need for specific financial indicators that would to greatest possible extent enable elimination of distortions and inaccuracies. These may appear especially due to the fact that financial reporting not always reflects the actual situation and activities of a business. This view has been supported among others also by Levin and Travis (1987, pp. 30-32), who determined the facts affecting the information value of financial statements in case of businesses with integrated ownership and management. As they suggest, these facts lead to the need to use more reliable methods for business evaluation, instead of traditional financial ratios. In particular, they argue that the line between equity and debt is blurred, life-style works its way into the financial statements, familiar textbook financial formulas rarely apply, and personal preferences set financial policy.

### 1.4 Proposed set of indicators

Based on above mentioned information we proposed an initial set of financial indicators to be used to evaluate micro-business financial performance from the perspective of strategy. This set of indicators contains liquidity, debt and profitability ratios, and is presented in Table 1 below. Construction of these indicators is described in Research data and method part of this paper. Arguments for proposing these indicators are stated in paragraphs below.

Table 1: Specific financial measures for micro-businesses

<b>Category</b>	<b>Indicator</b>
liquidity	working capital to turnover
debt	adjusted real debt ratio
profitability	value added margin

Source: author

Working capital to turnover: We suggest using working capital to turnover instead of traditional liquidity measures that we consider not reliable for micro-businesses. Working capital characterizes the ability to manage current assets and current liabilities. Working capital reflects the operational aspect that influences not only cash flow and liquidity, but also long term company value. Even though there are certain nuances regarding the optimal ratio, for the scoring purpose this indicator has positive polarity.

Adjusted real debt ratio: This indicator uses equity less long-term intangible assets plus liabilities within consolidated group as a numerator, because we consider intangible assets valuation as well as liabilities within consolidated group in case of micro-businesses generally not reliable. Companies may tend to distort the value of intangible assets in order to improve the appearance of their situation with equity. The adjusted real debt ratio indicator has positive polarity.

Value added margin: We suggest using this profitability indicator instead of traditional profitability measures since it avoids calculations with net income that we consider not to be reliable in case of micro-businesses. Moreover, it reflects company's ability to achieve sufficient margins, which is important from the long-term perspective. Value added item of income statement sums the trade margin and difference between production value and production consumption items. The polarity in case of this indicator is positive.

As the aim of this study is to find the evidence on importance of using above stated specific financial performance indicators in micro-business performance analysis from the perspective of strategy, we also provide a set of traditional indicators to be analyzed in comparison. These traditional indicators are generally used in financial performance evaluation, and are frequently applied without any adjustments to micro-businesses as well. We present them in Table 2 below. Construction of these indicators is described in Research data and method part of this paper. Limitations of these traditional indicators usage for micro-business performance evaluation from the perspective of strategy are stated in paragraphs below.

Table 2: Traditional financial measures

<b>Category</b>	<b>Indicator</b>
liquidity	quick ratio
Debt	total debt ratio
Profitability	return on assets (ROA) - gross

Source: author

Quick ratio: The critical performance issue relating liquidity is whether the company has enough accessible resources to continue to operate. This particular indicator does not include inventories in the numerator because they are considered not always easily convertible. However, it calculates with liabilities that are often subject to distortion in case of micro-businesses.

Total debt ratio: This indicator represents the view on company's leverage by calculating liabilities-to-total assets ratio, which can be characterized as an amount of assets that are provided

via debt. It is not adjusted for micro-business specifics, such as intangible assets valuation, blurred line between equity and debt, or liabilities within consolidated groups that may distort information about company's actual leverage.

Return on assets (ROA): ROA measures the company's ability to create profits. It contains gross income as a numerator, which is in our opinion a distorting item in case of micro-businesses. Moreover, with total assets as denominator there is also significant probability of distortions in case of micro-businesses, e.g. due to intangible assets valuation or ownership issues regarding assets used in business activities. Generally, ROA is frequently used in strategy research (Carton & Hofer, 2006), but due to above mentioned drawbacks we avoided its usage in our analysis.

## **1.5 Hypotheses**

Concluding on the above mentioned issues regarding micro-businesses financial performance evaluation from the perspective of strategy, theory background for usage of specific financial performance indicators as well as proposition of these indicators, we set the following hypotheses for our analysis:

H1: There will be no significant strong positive correlation between company financial performance total scores using set of traditional and set of specific indicators.

H1a: There will be no significant strong positive correlation between company liquidity scores using traditional and specific liquidity indicators.

H1b: There will be no significant strong positive correlation between company debt scores using traditional and specific debt indicators.

H1c: There will be no significant strong positive correlation between company profitability scores using traditional and specific profitability indicators.

## **2 Research data and method**

In the following part of this paper the sample used for the analysis, variables analyzed as well as test methods employed are described.

## 2.1 Sample

The analysis presented in this paper was based on data from business information portal UR+ („Univerzálny register plus SR“) operated by SCB - Slovak Credit Bureau s.r.o. The initial data contained financial statements (balance sheets, income statements) for year 2010 of 2,443 companies. In the first step, size classification using financial criteria as presented above (due to missing information on staff headcount and autonomy of the enterprise these criteria were omitted) was applied and micro-businesses were selected, which resulted in a sample of 1,069 micro-businesses. Next, the companies were classified according their industry reference (using 2 digit SK NACE rev. 2 classification<sup>13</sup>) and 9 industries were selected for further analysis, following two criteria: adequate representation of micro-businesses in the industry sub-sample (defined as at least 15 companies) and sufficient variety of industries. Selected industries are listed in Table 3 below. This selection resulted into creation of the final sample for the analysis that consisted of 595 micro-businesses. In addition, for the purpose of initial cross industry analysis an industry-balanced sample of micro-businesses was created out of this final sample by random selection from each industry, in order to eliminate potential influence of overrepresented industries, which resulted in a sample of 153 companies, i.e. 17 micro-businesses from each of the 9 industries.

Table 3: List of analyzed industries

<b>Code</b>	<b>Industry</b>	<b>Sample</b>
01	Crop and animal production, hunting and related service activities	150
10	Manufacture of food products	20
25	Manufacture of fabricated metal products, except machinery and equipment	40
28	Manufacture of machinery and equipment n.e.c.	17
41	Construction of buildings	28
46	Wholesale trade, except of motor vehicles and motorcycles	164
47	Retail trade, except of motor vehicles and motorcycles	57
49	Land transport and transport via pipelines	26
68	Real estate activities	93
	Total	595

Source: author

## 2.2 Variables

Variables employed in this analysis represented traditional and specific financial indicators and their totals. Their names, codes and construction (providing the number of row in financial

<sup>13</sup> For details refer to Statistical Office of the Slovak Republic: <http://portal.statistics.sk/showdoc.do?docid=1924>

statements Slovak 2009 format, where B stands for “balance sheet” and I stands for “income statement”) is provided in Table 4 below.

Table 4: Variables and their construction

<b>Name</b>	<b>Code</b>	<b>Construction</b>
working capital to turnover	liq_SPEC	$((B32+B48-B106)/(I01+I05))*100$
adjusted real debt ratio	debt_SPEC	$((B67-B03+B98+B109)/B01)*100$
value added margin	prof_SPEC	$(I11/(I01+I05))*100$
total score specific	SPEC	liq_SPEC + debt_SPEC + prof_SPEC
quick ratio	liq_TRAD	$(B47+B55)/(B105+B115+B118)$
total debt ratio	debt_TRAD	$(B88/B01)*100$
return on assets	prof_TRAD	$(I59/B01)*100$
total score traditional	TRAD	liq_TRAD + debt_TRAD + prof_TRAD

Source: author

## 2.3 Analysis and test methods

First step of the analysis was to score the micro-businesses in the final sample using both specific and traditional financial indicators. Within each industry mean values for indicators were calculated (i.e. industry adjusted mean values were used) and companies were scored from 0 to 3 points according to their indicator value. After scoring for particular indicators, total scores for specific as well as traditional indicators were retrieved. As a second step of the analysis, correlations between pairs of particular traditional vs. specific indicators, as well as between total scores using traditional vs. specific indicators have been tested for companies in industry-balanced sample using Spearman’s rank correlation coefficient (rho). This method was favored to Pearson’s r due to its better suitability for the data (it requires ordinal data, so it is based on the rank of the original values, rather than values themselves, and it unlike the Pearson’s r does not have any assumptions about the frequency distribution of the variables neither assumes the relationship between variables to be linear). On the other hand, the disadvantage of using Spearman’s rho in case of this analysis was its suitability for situations with wider range of possible variables values. Finally, correlations between pairs of particular traditional vs. specific indicators, as well as between total scores using traditional vs. specific indicators have been tested for each industry individually, also using Spearman’s rank correlation coefficient (rho). For all above mentioned tests statistical program IBM Statistical Package for Social Sciences (SPSS) v.20 was used.

### 3 Results

Results of the correlation analysis in industry-balanced sample as well as within individual industries are presented in Table 5 below.

Table 5: Correlations

Industry	Corr. liq	Corr. debt	Corr. prof	Corr. total
all balanced	.168*	.935**	.202*	.592**
01	.441**	.916**	.098	.645**
10	.720**	.840**	.440	.811**
25	.500**	.940**	.000	.568**
28	-.250	.815**	.272	.538*
41	-.029	1.000**	.171	.631**
46	.180*	.956**	.215**	.598**
47	.090	.966**	.224	.558**
49	.274	1.000**	.627**	.689**
68	.206*	.911**	.140	.537**

\*\* p<.01; \* p<.05

Source: author

H1: There will be no significant strong positive correlation between company financial performance total scores using set of traditional and set of specific indicators

A Spearman's rank order correlation test was run to determine the relationship between traditional and specific measures of financial performance for the balanced sample comprising all analyzed industries. When comparing the total scores, there was statistically significant ( $p < 0.01$ ) correlation between the achieved scores, that could be classified as moderate ( $\rho = .592$ ,  $p = .000$ ). Accordingly, we applied the same approach to each analyzed industry individually. Results are displayed in Table 5. While correlations within all industries were significant, only in case of one industry the correlation proved to be strong, and in the rest correlations were moderate. Therefore our hypothesis H1 was found to be supported.

H1a: There will be no significant strong positive correlation between company liquidity scores using traditional and specific liquidity indicators

When comparing the balanced sample comprising all analyzed industries, Spearman's rank order correlation test proved there was statistically significant ( $p < .05$ ) correlation between the achieved liquidity scores using traditional and specific indicators, however this correlation could be

classified as weak to low ( $\rho=.168$ ,  $p=.038$ ). The same approach applied to each analyzed industry individually showed that the correlation was significant within 5 out of 9 industries, and only in one case it proved to be strong, while in other cases it was moderate, moderate to low or even weak to low. All results are displayed in Table 5. The correlations among different industries were different, proving that industry characteristics affected the relationships between evaluations. To conclude, our hypotheses H1a was therefore found to be supported.

H1b: There will be no significant strong positive correlation between company debt scores using traditional and specific debt indicators

When comparing the balanced sample comprising all analyzed industries, Spearman's rank order correlation test proved there was statistically significant ( $p<.01$ ) correlation that could be classified as very strong ( $\rho=.935$ ,  $p=.000$ ) between the achieved debt scores using traditional and specific indicators. The same approach applied to each individual industry proved the correlation to be significant within all industries, while in case of 7 out of 9 industries this correlation was classified as very strong, and in 2 remaining cases it was classified as strong. Results are displayed in Table 5. The test results unveiled that the strength of correlation was quite similar for the balanced sample and all individual industries, indicating that industry characteristic have no significant effect on evaluation, and in all cases traditional and specific indicators produce similar evaluation outcomes. To conclude, our hypothesis H1b was not found to be supported.

H1c: There will be no significant strong positive correlation between company profitability scores using traditional and specific profitability indicators

The analysis of the balanced sample comprising all analyzed industries using Spearman's rank order correlation test proved that there was statistically significant ( $p<.05$ ) correlation between the achieved profitability scores using traditional and specific indicators, however this correlation can be classified as weak to low ( $\rho=.202$ ,  $p=.012$ ). The same approach applied to each analyzed industry individually showed that the correlation was significant only in case of 2 out of 9 industries, and these correlations proved to be moderate respectively weak to low. All results are displayed in Table 5. The correlations among different industries were different, proving that industry characteristics affected the evaluation. To conclude, our hypotheses H1c was found to be supported.

## Discussion

Results of statistical tests proved our main hypothesis as well as two out of our three auxiliary hypotheses to be supported. Therefore we can conclude that using specific financial indicators in micro-business performance analysis from the perspective of strategy is in general legitimate. At first glance, correlation when comparing total scores of specific and traditional indicators in case of balanced sample comprising all analyzed industries was significant at  $p=.01$  and although it was not high, it was quite remarkable ( $\rho=.592$ ). However, detailed look at particular indicators unveiled that great impact on this result was caused by very strong correlation ( $\rho=.935$ ) in case of debt indicators, while scores given by both liquidity and profitability indicators showed significant but weak to low correlation ( $\rho=.168$  respectively  $\rho=.202$ ). Also, similar findings were provided by applying the analysis to individual industries. While correlation in case of debt indicators was in all cases significant and strong to very strong, correlations of liquidity and profitability indicators were found to be significant only in case of some industries, and even among these cases they were significantly different. Therefore it is obvious that while industry characteristics have negligible effect on difference between debt indicators, in case of liquidity and profitability indicators this effect is significant.

As for limitations of the approach employed in our study, firstly, our sample comprised only of businesses from 9 industries and those with data available in UR+. In the future there should be a possibility to expand the scope of this study by using data from financial statements register that should be available soon from Ministry of Finance. Secondly, quite limited number of indicators was examined in this study, since its aim was to open the question and execute initial analysis. Because our results suggest there is definitely a potential for further analysis, it is encouraged to broaden the scope of this analysis in the future. Finally, suitability of indicators for the perspective of strategy may also be limited, since these indicators are originated in accounting and they were not specially created to describe some underlying phenomena of strategy. However they were selected with aim to capture them to the best possible extent.

As for theoretical and practical implications, it is important to stress that we are not able to confirm that proposed specific indicators describe performance better than traditional ones. We can only conclude that they give different results. In fact, there is no unambiguous reference performance measure available towards which we could test the ability of traditional or specific measures to describe the performance. Also, trying to evaluate whether our specific indicators

describe performance better than traditional ones would actually be beyond the scope of this study. However, since these specific indicators have been developed and proposed respecting implications of strategy perspective, need to reflect broader scope of dimensions, understanding owner-managers as a single constituency for performance, as well as characteristic nature of micro-businesses, we believe that they should be favored against traditional indicators that were generally developed not specially addressing the above mentioned implications.

In practice as well as in research, usage of specific indicators should be considered as appropriate approach since our study confirms that they may give different results on performance. Generally, when conducting a comparative analysis or analysis of some group of enterprises, usage of specific indicators may be more appropriate when there are signals that traditional indicators may provide distorted results. In particular, we recommend using proposed specific liquidity and profitability indicators rather than their traditional counterparts, since as confirmed by the test method employed they give significantly different evaluation results. As for our proposed specific debt indicator, we may conclude that it can be used quite interchangeably with the traditional indicator, and it depends on the situation and researchers consideration which one will be more suitable for the research interest. When addressing performance from other perspectives, development of specific indicators for these perspectives is also encouraged.

Finally, result of our study lead to some implications for future research as well. Firstly, we further encourage researchers to challenge the results of this study by trying to develop other specific indicators and examine their appropriateness in strategy research. Next, we suggest that situation with small businesses should be analyzed as well in order to find out if specific indicators usage is legitimate also in their case. Also, we recognize the potential to test the ability to capture performance between sets of traditional and specific financial performance indicators towards some reference measure. Even though no such measure has been developed for population of Slovak micro-businesses, we suggest using some predictive models (for example Altman's Z score for non-publicly traded companies) or composite measure proposed by Carton and Hofer (2006, p. 238) for strategy and entrepreneurship research as a reference measure.

## **Conclusion**

Results of statistical tests proved our main hypothesis as well as two out of three auxiliary hypotheses to be supported. Therefore we can conclude that using specific financial indicators in micro-business performance analysis from the perspective of strategy gives different outcomes and therefore should be considered in research as well as business practice. Even though the comparison of ability to describe performance between traditional and specific indicators has not been examined

in this study, we encourage the use of specific measures, since they are theoretically developed from concepts related to strategy and micro-businesses.

Issue of performance measurement is very complex and it may not be sufficient to approach it only with set of financial measures, especially when they have not been tested on population that is subject of interest of the particular research. In order to cover this issue we suggest employing also non-financial measures. However, this would be a question exceeding the scope of this paper. So far we can conclude that whether independently or as a part of more complex measurement concept, usage of specific financial performance measures from the perspective of strategy is legitimate in case of micro-businesses in Slovakia.

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