Volume 64 154 Number 4, 2016

http://dx.doi.org/10.11118/actaun201664041383

THE CONTINGENCY FACTORS AFFECTING MANAGEMENT ACCOUNTING IN CZECH COMPANIES

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Abstract

ŠIŠKA LADISLAV. 2016. The Contingency Factors Affecting Management Accounting in Czech Companies. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 64(4): 1383–1392.

Management accounting practices and the contingency factors affecting their application were subject of many complex studies, but none of them was carried out in the Czech Republic. That is why the article focuses on practices applied in Czech companies. Four different categories of management accounting practices (cost classifications, operational budgeting, operational performance reporting and strategic management accounting methods) were investigated based on survey data from companies domiciled in the Czech Republic. To get comparable results, respondents of the survey were asked questions developed and used by the other researchers (Henri 2006, Jansen *et al.* 2006, Widener 2007) for identification of significant contingency factors in the countries with developed markets. Factor and regression analyses were applied to process data gathered through survey. Results confirm that the Czech Republic – although sometimes considered to be economy with emerging markets – shows similar significant contingency factors affecting management accounting (MA) practices as companies in the developed countries do.

Keywords: contingency theory, management accounting practices, cost classifications, budgeting, reporting, strategic management accounting

INTRODUCTION

In their article about worldwide convergence in management accounting (MA) practices, Granlund and Lukka (1998) distinguish macro and micro level of the term MA practices: "By macro level we mean concepts, ideas, techniques, system designs and at least partly, the purpose of using certain pieces of management accounting information, which form the basis or framework for the microlevel action to take place (cf. Shields 1998). On the other hand, by micro level we refer to behavioral patterns and styles of information use. Micro level hence deals with the practical 'doing' of management accounting in the everyday life of organizational actors."

Aforementioned facets of macro level are demonstrated by Granlund and Lukka (1998) in an ABC context. "Concepts" are e.g. terms like activity

or cost driver, "idea" of ABC is improved allocation of overheads to cost objects, "technique" considers ABC as two- or multi-step cost allocation technique and under "system design" is meant software which implements ABC.

This article deals with the macro level of MA practices in the above outlined sense. It answers two basic questions; (1) which MA practices are used by Czech companies and (2) what affects their use. The article is organized as follows. Firstly, the theoretical framework is introduced and the hypothesis derived. Secondly, details are discussed concerning data and methods used for assigning MA practices into four major groups, each containing more or less traditional techniques, whose application was assessed by respondents in a survey. This categorization is followed by the description of

methods how factors influencing the selection of MA practices were analyzed. Finally, the results of analyses are presented and discussed.

Theoretical framework

According to Anderson and Lanen (1999, p. 379), MA practices commonly covered by introductory texts include:

- cost management;
- planning and control; and
- performance measurement and evaluation.

MA practices were studied outside the Czech Republic in dozens studies such as Chenhall and Langfield-Smith (1998), Wijewardena and Zoysa (1999), Joshi (2001), Hyvönen (2005), Abdel-Kader and Luther (2006), Pavlatos and Paggios (2009), Angelakis and al. (2010), Yalcin (2012), or Pavlatos and Kostakis (2015). Each study used a little bit different classification of MA practices. The most recent study by Pavlatos and Kostakis (2015) distinguishes even 9 different MA practices extracted by means of factor analysis:

- Traditional cost accounting systems
- Cost accounting techniques
- ABC techniques
- Planning
- Budgeting
- Decision support systems
- Performance evaluation
- Strategy
- Strategic management accounting

The literature suggests that MA practices are part of the broader management control system (MCS) or management accounting and control system (MACS). That is apparent in Chenhall's (2003, p. 129) definition: "Management control system (MCS) is a broader term that encompasses management accounting (MA) and also includes other controls such as personal or clan controls." That definition corresponds with Simons' notion of Levers of Control (1995). He depicted MCS as a set of controls which helps manager to realize the objectives of performance and compliance. Finally, Atkinson et al (2012) define: "A cost management system is the central performance measurement system at the core of a larger entity known as a management accounting and control system (MACS)."

Working on the assumption that MA practices are part of MCS system, in search for factors influencing

MA practices, we have to focus not only on the MA but also on MCS literature body. For example, Tessier and Otley (2012) illustrate that managerial intentions - i. e. intended diagnostic and interactive use of controls - shape the form of MCS. The contingency-based research, first comprehensively summarized by Chenhall (2003), identified many other contingency factors (in addition to diagnostic and interactive use of controls) influencing management control systems and their subset of management accounting practices. Garengo and Bititci (2007) added corporate governance as contingency factor based on their empirical study in Scottish SMEs. Cadez and Guilding (2008) emphasized type of strategy and its impact on strategic management accounting usage in Slovenia. Albu and Albu (2012) found origin of capital and size of the company to be dominant factors forming management accounting practices in Romania.

Goal of this study

This study aims at MA practices applied in the Czech Republic, which were not mapped in their entirety until now. There were just separate studies on e.g. costing done by Novák and Popesko (2014), or recently on budgeting done by Popesko and Šocová (2016), which showed less comprehensive usage of modern tools in the Czech Republic in comparison to US and Canadian practice. Therefore the goal of this study is to empirically verify, whether significant contingency factors – which do impact MA techniques applied abroad – are present in the companies based in the Czech Republic as well.

MATERIALS AND METHODS

Based on the previous bibliographic search, the questionnaire was developed consisting of three sections. The first one contained demographic questions about respondent (name and contact of the respondent and his interviewer) and the company (number of full time employees, percentage of sales for service, whether the company is subsidiary). The second section asked about MA techniques. Similarly to the previous studies, the respondents were provided with 7-point Likert scales to rate the degree of the intensive usage of the particular management accounting technique. The third section of the questionnaire focused on factors expected to impact the MA techniques (competition; interactive/diagnostic

I: Sample structure

	Frequency	Percent	Cumulative Percent
Large	40	25.0	25.0
Medium	49	30.6	55.6
Small	71	44.4	100.0
Total	160	100.0	0

Source: Author in SPSS.

use). The questions in questionnaire copied the wordings applied in the previous studies. To test the comprehension, the questionnaire was consulted with two managers and two scholars of MA. This procedure resulted in minor revisions (especially more detailed specifications) in wording of three questions.

Data collection and sample

The questionnaire with choice of closed answers was filled during interview with a manager or with an owner of the particular company. The interviewers were students studying the course of Management Accounting (MA) in fall 2013. Before, they were familiarized with the concepts used in questionnaire and so able to answer possible respondents' questions. In January 2014, they orally presented the collected data. Only data collected by students passing the MA course with grades A, B and C was analyzed to assure they were collected by sufficiently qualified interviewers.

The sample consisted of the companies with more than 10 employees because microenterprises are not supposed to apply sophisticated MA techniques. Table I shows the breakdown in the official European Union size categories: small entities (10–49 employees), medium-sized entities (50–249 employees), and large entities (more than 250 employees).

The statistical software IBM SPSS Statistics version 22 was used for data processing. In all statistical procedures, the listwise deletion of the cases with missing values was selected. That is why some computations are based on smaller number than 160 observations in the entire sample (at least 115 observations). The following subchapters introduce the applied definitions of variables and their measurement in detail.

Measurement of Management accounting practices variables

The central concept of MA practices was divided into the following four categories of the MA practices (techniques):

- cost classification
- operational budgeting
- operational performance reporting; and finally,
- strategic management accounting.

Such classification was derived especially from Anderson and Lanen (1999, p. 379), CIMA survey (2009) and content of widely used textbooks in MA such as Atkinson *et al.* (2012), Drury (2012). In the questionnaire, each category of MA practices corresponds to the battery of questions asking respondent to rate the application in his or her firm on the scale ranging from "1 - Our company does not use the classification/technique/report dimension at all" to "7 - It is the dominant classification/technique/report dimension in our company".

The aggregate score for each category (i.e. cost classification; operational budgeting; operational

performance reporting; strategic MA) was derived by adding the scores that were assigned to the particular questions by respondent. In the same way, the ultimate construct of MA techniques (variable "MA techniques altogether") was calculated as the sum of the scores from all categories. The reason for using simple summated scales to determine overall assessment of the MA techniques lied in their formative (or emergent) nature discussed e.g. by Bisbe and al. (2007, p. 792): "... the construct is understood to be formed by a series of constitutive indicators (i.e., a formative model), in which case a census of indicators is required in order to describe the construct." Similar approach was applied by Albu and Albu (2012).

The common part of the questions from the "Cost classification" category was: "To what extent does your organization use the following cost classifications?" Respondent should rate classifications such as direct/indirect, variable/fixed and/or activity based costs, i.e. basic cost classification mentioned in the textbooks or partially by Pizzini (2006).

The questions about the "Operational budgeting" category focused on methods used for budget preparation. Respondents should rate: "To what extent does your organization use the following techniques of budgeting?" The offered budgeting methods usually enumerated in the MA textbooks or mentioned by Ross and Kovachev (2009) comprised:

- incremental budgeting
- zero-base budgeting
- flexible budgeting
- rolling budgets
- cash forecasting
- activity based budgeting (ABB)

The third category of MA practices dealt with the operational reporting dimensions. Respondents were asked to rate: "To what extent do internal reports of your organization include the following dimensions of reporting?" The particular questions focused on dimensions like reporting on centers, products and customers.

The common part of the questions from the fourth category sounded: "To what extent does your organization use the following techniques of strategic management accounting?" The selection comprised the SMA practices derived from Cadez and Guilding (2008) and Ross and Kovachev (2009):

- mission and vision
- target costing
- life-cycle costing
- long-range planning
- Balanced Scorecard (BSC)
- total quality management (TQM)
- risk management.

Measurement of contingency factors "Interactive/Diagnostic use" and their "Dynamic tension"

The interactive or diagnostic manner of using MA practices was measured by questions developed by Henri (2006, p. 551): "Rate (on the scale 1 = not at all to 7 = to a great extent) the extent to which your top management team currently uses performance measures to ... " The questions are summarized in table 2. The first four questions should measure diagnostic use and the remaining six questions focus on interactive use. In order to construct latent variables of interactive use of MA, resp. diagnostic use of MA, the exploratory factor analysis (EFA) was selected as appropriate method.

Prior EFA application, the Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy. The result KMO = .896 can be interpreted as "marvellous" and therefore acceptable according to Hutcheson & Sofroniou (1999). All KMO values for individual questions were greater than the acceptable limit of .5 (Field, 2013). The Bartlett's test of sphericity was significant (p = .000) with Chi-square criterion 823.719 and 45 degrees of freedom.

For extracting factors, the method of Principal Component Analysis (PCA) was applied on the Henri's questions. In accordance with expectation, two factors evolved with eigenvalues over the Kaiser's criterion of 1 (the eigenvalues were 5.686 and 1.249). These factors in combination explained 69.355 % of the total variance.

According to Henri (2006, p. 533): "Diagnostic and interactive uses represent two complementary and nested uses. They work simultaneously but for different purposes. While diagnostic use represents a mechanistic control used to track, review and support the achievement of predictable goals, interactive use is an organic control system supporting the emergence of communication processes and the mutual adjustment of organizational actors." The complementary nature of diagnostic and interactive uses was why

orthogonal rotation method (Varimax with Kaiser Normalization) was selected instead of an oblique one, in order to get an uncorrelated solution easier to interpret. The resulting factor loadings are presented in Table II. In accordance with Henri (2006), dynamic tension was operationalized as a product term between diagnostic and interactive use of MA as well.

Measurement of contingency variable "Size", "Service character" and "Subsidiary"

Number of full-time employees (FTE) was used as the measure of company size. Fiala and Hedija (2015) tested separately three different measurements of size (FTE, revenue and assets) on data sample of thousands companies and obtained similar results for each size variable. That was why the sole measure of FTE was considered to be sufficient for capturing the size of the company. Logarithmic transformation using natural logarithm was undertaken prior to the analysis, due to the non-normality of FTE variable.

Respondents were asked to estimate the proportion of sales their companies generate from selling services. The values of their estimates are represented in contingency variable "ServicePct".

"Subsidiary" was dummy variable with values of either 0 (indicating that respondent reported the company to be standalone business), or 1 (respondent's company was subsidiary).

Measurement of contingency factor "Competition"

The contingency factors of competition at the customer markets and environmental competitive effortlessness were assessed based on testing the respondent's agreement with the statements applied by Jansen *et al.* (2006, p. 1672) and slightly reformulated statements originally developed by Widener (2007, p. 784). EFA procedure was conducted similarly to the construction of contingency variables interactive and diagnostic use of MA.

II: Factor loadings on Interactive and Diagnostic variables

	Component		
	Interactive	Diagnostic	
Track progress towards goals	.231	.802	
Monitor results	.189	.840	
Compare outcomes to expectations	.363	.772	
Review key measures	.364	.780	
Enable discussion in meetings of superiors, sub-ordinates and peers	.708	.397	
Provide a common view of the organization	.746	.324	
Devolop a common vocabulary in the organization	.765	.190	
Tie the organization together	.827	.219	
Enable the organization to focus on common issues	.792	.283	
Enable the organization to focus on critical success factors	.763	.258	

Source: Author in SPSS.

The KMO at the value of .759 indicated "middling" sample adequacy to Hutcheson & Sofroniou (1999). The Bartlett's test of sphericity was significant (p = .000) with Chi-square criterion 338.488 and 21 degrees of freedom. PCA extraction method produced two factors with eigenvalues over the Kaiser's criterion of 1 (the eigenvalues were 2.710 and 1.198) explaining 55.825 % of the total variance. The initial solution was rotated with Varimax rotation. The resulting factors "Market competition" and "Competitive effortlessness" are depicted in columns of Table III with appropriate factor loadings.

RESULTS

Findings are organized as follows. Firstly, the descriptive statistics for individual MA practices (techniques) and their categories are summarized. Secondly, bivariate correlations among four main categories of MA techniques are assessed. Finally, all factors are analyzed in combination.

Descriptive statistics of individual MA practices

Table IV reveals that classifying cost of activities is not frequent in the Czech companies. The low value (mean = 1.9) is consequence of the fact that only 32 out of 154 companies in the sample (20.8%) used

activity based costing. On the contrary, the direct/indirect cost classifications is the most common and quite dominantly applied (mean = 5.32).

The category "operational budgeting" does not show such difference like "cost classification". Again the least dominant method represents activity based budgeting (ABB) together with rolling budgets. The other end of the dominance spectrum goes with incremental budgeting and, surprisingly, even a little bit higher mean belongs to flexible (flexed) budget differentiating behavior of variable and fixed costs in budget drafts and especially during budgetary control.

Table VI focuses on descriptive statistics for "operational reporting" category. The means reveal that the most common dimension in reports is probably reporting on performance measures of responsibility centers followed closely with reporting on particular products/services of the company. Reporting on customer performance is much less frequent and 58 companies (38.9 % of the sample) do not use such a dimension at all.

Finally, table VII summarizes extent of SMA practices usage. Mission and vision statement seem to be the most popular tool followed by long-range planning and target costing. Total quality management represents the mid of the continuum, probably for its not only strategic, but also tactical and operational characteristics. Low mean of BSC

 ${\bf III:}\ \ Factor\, on\, Market\, competition\, and\, Competitive\, effortlessness\, variables$

	Comp	onent
	Market competition	Competitive effortlessness
Competition in our local market is intense.	.917	006
Price competition is a hallmark of our local market.	.914	065
Our organization has relatively strong competitors.	.895	.075
It is not easy for our customers to begin a relationship with a rival firm. (RC) $$	476	061
It is difficult for new competitors to enter our industry. (RC)	.000	676
Our competition is fragmented (i.e. many firms hold small relative market share).	.050	.626
It is easy for our organization to leave one supplier and begin a relationship with another.	.011	.581

(RC) The questions were reverse coded.

Source: Author in SPSS.

IV: Cost classifications category (descriptive statistics)

Descriptive Statistics								
	N	Minimum	Maximum	Mean	Std. Deviation			
activity based costs	155	1	7	1.90	1.819			
variable/fixed costs	155	1	7	4.22	2.484			
direct/indirect costs	154	1	7	5.32	2.228			
Cost classifications	153	3	21	11.41	4.118			
Valid N (listwise)	153							

Source: Author in SPSS.

V: Operational budgeting category (descriptive statistics)

	N	Minimum	Maximum	Mean	Std. Deviation
rolling budgets	142	1	7	2.02	1.752
activity based budgeting (ABB)	142	1	7	2.15	1.914
zero-base budgeting	147	1	7	2.50	2.243
cash forecasting	143	1	7	3.12	2.180
incremental budgeting	146	1	7	3.36	2.342
flexible budgeting	146	1	7	3.39	2.344
Operational budgeting	139	6	31	16.33	5.162
Valid N (listwise)	139				

Source: Author in SPSS.

VI: Operational reporting category (descriptive statistics)

	N	Minimum	Maximum	Mean	Std. Deviation
reporting on customers	149	1	7	3.26	2.198
reporting on products	150	1	7	4.63	2.318
reporting on centers	153	1	7	4.95	2.393
Operational reporting	148	3	21	12.90	4.407
Valid N (listwise)	148				

Source: Author in SPSS.

VII: Operational reporting category (descriptive statistics)

	N	Minimum	Maximum	Mean	Std. Deviation
Balanced Scorecard (BSC)	145	1	7	2.01	1.801
life-cycle costing	147	1	7	2.16	1.754
risk management	148	1	7	3.07	1.937
total quality management (TQM)	148	1	7	3.47	2.284
target costing	144	1	7	3.97	2.217
long-range planning	147	1	7	4.16	2.036
mission and vision	148	1	7	4.28	2.134
SMA techniques	134	7	48	23.13	9.189
Valid N (listwise)	134				

Source: Author in SPSS.

usage was caused by the facts that respondents from 101 companies (90 % of the sample) reported their companies do not use BSC at all and even implementers from usually larger companies and foreign subsidiaries often reported that BSC is not dominant method for strategic aiming and management in their companies.

Bivariate Spearman's Rho correlations among MA practices and contingency factors

Information on bivariate correlations between the introduced MA techniques and potential contingency factors is depicted in table VIII. Because the Kolmogorov-Smirnov test statistic with Lilliefors correction revealed non-normality of many variables, the Spearman's rank correlation coefficients were used for correlation assessment. The correlation matrix in table 8 shows low to moderate correlation based on De Vaus (2002, p. 259). As far as contingency factors are concerned, moderate correlation is obvious between size and subsidiary, which correspondents to the fact that in the Czech Republic, there are situated subsidiaries of big multinationals, on the contrary standalone national business are in most cases concurrently smaller ones. Regarding categories of MA techniques, based on bivariate correlations in table VIII, contingency variables such as size, diagnostic use, subsidiary and interactive use seem to be potentially important. Other potential contingency factors do not show statistically significant correlations with MA techniques.

VIII: Spearman's correlations among categories

	Interactive use	Diagnostic use	Dynamic tension	SizeLnFTE	ServicePct	Competition Products	Barriers and Sig Rivals	Subsidiary
Interactive use	1.000	036	.213*	.143	053	011	055	.108
Diagnostic	036	1.000	057	.183*	069	.120	.239**	.115
Dynamic_tension	.213*	057	1.000	.224**	038	.084	049	.209*
SizeLnFTE	.143	.183*	.224**	1.000	263**	.008	.212**	.432**
ServicePct	053	069	038	263**	1.000	060	336**	169*
Competition_Products	011	.120	.084	.008	060	1.000	070	.045
Barriers_and_Sig_Rivals	055	.239**	049	.212**	336**	070	1.000	.136
Subsidiary	.108	.115	.209*	.432**	169*	.045	.136	1.000
Cost classifications	.198*	.125	.052	.244**	.009	.123	.014	.156
Operational budgeting	.158	.233**	.084	.283**	126	.014	.013	.299**
Operational reporting	.170	.267**	.073	.207*	.038	.010	152	068
SMA techniques	.250**	.290**	.152	.453**	163	071	.069	.297**
MA techniques altogether	.257**	.325**	.164	.441**	161	042	003	.222*

^{*} Correlation is significant at the 0.05 level (2-tailed).

Source: Author in SPSS.

IX: Regression models and theirs standardized regression coefficients

Regression model:	(1)	(2)	(3)	(4)	(5)
Dependent variable:	Cost classifications	Operational budgeting	Operational Reporting	SMA techniques	MA techniques altogether
Interactive use	.189*a	.104	.175**	.181*	.178**
Diagnostic use	.106	.269**	.324**	.232**	.397**
Dynamic tension	.005	.059	.044	.136	.207*
SizeLnFTE	.185	.140	.295**	.324**	.249*
ServicePct	.022	.159	.161	.136	.233**
Market competition	.063	.004	.034	.099	.080
Competitive effortlessness	.012	.037	.221*	.007	.089
Subsidiary	.036	.142	.249**	.072	.027
F-value	2.121*	3.485**	5.249**	6.955**	6.506**
Adjusted R ²	.065	.147	.215	.291	.308

^{*} Coefficient is significant at the 0.05 level (2-tailed).

Regression analysis

Bivariate analysis indicated possible important contingency factors influencing the selection of particular MA practices, but it is not able to consider simultaneous impact of more contingency factors in combination. For such purpose, the linear OLS regression models were built.

Separate multivariate linear regression models were built for each of MA techniques categories. Table IX depicts the models in numbered columns, showing MA technique category as dependent variable and all potential contingency factors as independent variables. In the cells of table IX, the standardized regression coefficients and their statistical significance are presented.

The non-normal distribution of the majority of variables meant that the basic assumption for application of regression models was not met. That is why the 95% confidence intervals for regression coefficients were verified through Bias-corrected and accelerated (BCa) bootstrapping technique based on 1,000 bootstrap samples. In case of the contingency factor of interactive use, BCa bootstrapped 95% confidence intervals (CI) involved 0. That is why, due to the non-normal distribution, the contingency factor cannot be considered statistically significant in model (1) where unstandardized regression coefficient ranges from -.313 to 6.779, in model (3) with CI from -.073

^{**} Correlation is significant at the 0.01 level (2-tailed).

^{**} Coefficient is significant at the 0.01 level (2-tailed).

^a BCa bootstrapped 95 % confidence interval contains 0! Source: Author in SPSS.

to 1.541 and in model (5) where CI starts at -.051 and ends with 1.608.

DISCUSSION

The wider use of traditional MA practices is in line with the previous studies, e.g. Abdel-Kader and Luther (2006) found similar results in British food and drinks industry, Angelakis *et al.* (2010) in Greece, Yalcin (2012) in Turkey, or Popesko and Šocová (2016) for budgeting tools in the Czech Republic.

As far as contingency factors are concerned, regression found significant and positive impact on MA practices adoption in cases of diagnostic use, dynamic tension between diagnostic and interactive use, size of the company and the fact whether the company does its business in manufacturing. Similarly, Albu and Albu (2012) report type of capital and size of the company to be dominant factors forming management accounting practice in Romania.

The detailed regression models for each category of MA practices revealed that larger companies are more likely to use strategic management accounting techniques and only for these strategic MA practices, their interactive use was significant. Such conclusion is in accordance with the results published by Cadez and Guilding (2008), who emphasized type of strategy, strategy formulation and finally company size as factors impacting strategic management accounting usage in Slovenia.

Contrary to strategic MA practices, operatively focused MA practices are more closely connected with diagnostic use of controls and they are typical for larger Czech organizations doing their business in relatively low competitive environment. Abo-Alazm Mohamed (2013) also found that the increasing competition positively affects the level

of MA practices while lower competitive pressure leads to use of less sophisticated tools.

There are some limits of the study. Firstly, the impact of contingency factors was studied separately for each category of MA techniques. The future research should try simultaneous study, e. g. by means of structural equation modeling. Secondly, some important MA practices might have been missed and so the composite construct of the appropriate category might be imperfectly aggregated. Thirdly, the extent of analyzed contingency factors was limited to a few basic factors. The future research is intended to broaden the scope of analyzed factors. Fourthly, the consequences of financial crisis might still be present in some industries from our cross-sectional study. Pavlatos and Kostakis (2015) proved that MA practices are used differently during crisis times. Finally, the selected single informant approach could lead to biased results.

CONCLUSION

The goal of this study was to investigate the MA practices used in Czech companies and empirically verify, whether significant contingency factors, that impact MA practices abroad, are present in the organizations based in the Czech Republic as well.

The article distinguished four categories of MA practices, each consisting of three up to seven individual MA practices. The detailed analysis of the individual MA practices revealed relatively low level in adoption of modern MA practices, such as Activity-based approaches or Balanced Scorecard, which were adopted in one of ten analyzed organizations.

The analyzed contingency factors included interactive and diagnostic use of management controls, their dynamic tension, size and service character of the organization, its inclusion into broader holding structure or facets of competition. The sole impact of each contingency factor was tested by means of Spearman's correlation and theirs simultaneous impact through multiple regression analysis. The latter method showed that MA practices taken altogether are significantly and positively influenced by diagnostic use, dynamic tension between diagnostic and interactive use, size of the company and the fact whether the company does its business in manufacturing. The interactive use is statistically significant contingency factor just in case of strategic MA practices applied.

The comparison in the Discussion section confirms that the Czech Republic, although sometimes considered to be economy with emerging markets, shows similar significant contingency factors and trends to developed countries as far as management accounting (MA) techniques are concerned.

Acknowledgement

This paper was supported by institutional research subsidy of the University of Economics, Prague and its Internal Grant Agency (project F1/13/2015).

REFERENCES

- ABDEL-KADER, M., LUTHER, R. 2006. Management accounting practices in the British food and drinks industry. *British Food Journal*, 108(5): 336–357.
- ABO-ALAZM MOHAMED, F. 2013. Changes in the business environment and the level of management accounting practices in Egypt: A case study. *Journal of American Science*, 9(10): 78–89.
- ALBU, N., ALBU, C. N. 2012. Factors Associated with the Adoption and Use of Management Accounting Techniques in Developing Countries: The Case of Romania. *Journal of International Financial Management & Accounting*, 23(3): 245–276.
- ANDERSON, S. W., LANEN, W. N. 1999. Economic transition, strategy and the evolution of management accounting practices: the case of India. Accounting Organizations and Society, 24(5–6): 379–412
- ANGELAKIS, G., THERIOU, N., FLOROPOULOS, I. 2010. Adoption and benefits of management accounting practices: Evidence from Greece and Finland. Advances in Accounting, Incorporating Advances in International Accounting, 26: 87–96.
- ATKINSON, A. A. et al. 2012. Management accounting: information for decision-making and strategy execution. 6th ed. Boston: Pearson.
- BISBE, J. A., BATISTA-FOGUET, J. M., CHENHALL, R. 2007. Defining management accounting constructs: A methodological note on the risks of conceptual misspecification. *Accounting, Organizations and Society*, 32(7–8): 789–820.
- CADEZ, S., GUILDING, C. 2008. An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society*, 33(7–8): 836–863.
- CHENHALL, R. H. 2003. Management control systems design within its organizational context: findings from contingency-based research and directions for the future. *Accounting Organizations and Society*, 28(2–3): 127–168.
- CHENHALL, H. R., LANGFIELD-SMITH, K. 1998. Adoption and benefits of management accounting practices: an Australian study. *Management Accounting Research*, 9(1): 1–19.
- DE VAUS, D. A. 2002. Surveys in Social Research. Crows Nest (Australia): Allen & Unwin.
- DRURY, C. 2012. *Management and Cost Accounting*. 8th ed. Andover (Hampshire): Cengage Learning EMEA.

- FIALA, R., HEDIJA, V. 2015. The Relationship Between Firm Size and Firm Growth: The Case of the Czech Republic. *Acta Univ. Agric. Silvic. Mendelianae Brun*, 63(5): 1639–1644.
- FIELD, A. 2013. Discovering statistics using IBM SPSS statistics. (4th ed.). London: Sage.
- GARENGO, P., BITITCI, U. 2007. Towards a contingency approach to performance measurement: an empirical study in Scottish SMEs. International Journal of Operations & Production Management, 27(8): 802–825.
- GRANLUND, M., LUKKA, K. 1998. It's a small world of management accounting practices. *Journal of Management Accounting Research*; 10:153.
- HENRI, J. F. 2006. Organizational culture and performance measurement systems. *Accounting Organizations and Society*, 31(1): 77–103.
- HUTCHESON, G., SOFRONIOU, N. 1999. The multivariate social scientist. London: Sage.
- HYVÖNEN, J. 2005. Adoption and benefits of management accounting systems: evidence from Finland and Australia. *Advances in International Accounting*, 18: 97–120.
- JANSEN, J. J. P., VAN DEN BOSCH, F. A. J., VOLBERDA, H. W. 2006. Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management Science*, 52(11):1661–1674.
- JOSHI, P. L. 2001. The international diffusion of new management accounting practices: the case of India. *Journal of International Accounting Auditing and Taxation*, 10(1): 85–109.
- NOVÁK, P., POPESKO, B. 2014. Cost variability and cost behaviour in manufacturing enterprises. *Economics and Sociology*, 7(4): 89–103.
- PAVLATOS, O., KOSTAKIS, H. 2015. Management accounting practices before and during economic crisis: Evidence from Greece. *Advances in Accounting, incorporating Advances in International Accounting,* 31(1): 150–164.
- PAVLATOS, O., PAGGIOS, I. 2009. Management accounting practices in the Greek hospitality industry. *Managerial Auditing Journal*, 24(1): 81–98.
- PIZZINI, M.J. 2006. The relation between cost-system design, managers' evaluation s of the relevance and usefulness of cost data, and financial performance: an empirical study of US hospitals. *Accounting, Organizations and Society*, 31(2): 179–210.
- POPESKO, B., ŠOCOVÁ, V. 2016. Current Trends in Budgeting and Planning: Czech Survey Initial

Results. *International Advances in Economic Research*, 22(1): 99–100.

- ROSS, L., KOVACHEV, I. 2009. Management accounting tools for today and tomorrow. London: Chartered Institute of Management Accountants.
- TESSIER, S., OTLEY, D. 2012. A conceptual development of Simons' Levers of Control framework. *Management Accounting Research*, 23(3): 171–185.
- WIDENER, S. K. 2007. An empirical analysis of the levers of control framework. *Accounting Organizations and Society*, 32(7–8): 757–788.
- WIJEWARDENA, H., ZOYSA, A. D. 1999. A comparative analysis of management accounting practices in Australia and Japan: an empirical investigation. *The International Journal of Accounting*, 34(1): 49–70.
- YALCIN, S. 2012. Adoption and benefits of management accounting practices: An intercountry comparison. *Accounting in Europe*, 9(1): 95–110.