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The budgeting processes of Czech companies: the role of the ownership structure and foreign capital

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Abstract

Research background: The study investigates the initial phase of budgeting process conducted in corporations. The basic concept correlates with findings in scientific literature that describe budgeting as an inefficient tool, burdened by considerable regulation in the preparation and compilation stages. As a consequence, the majority of academics and practitioners have concluded that producing a budget is merely a formality that minimizes wrinkles on the faces of their initiators, while reaping debatable benefits for managerial control.

Purpose of the article: This paper compares data from the literature with the actual budgetary practices of companies operating in the Czech Republic. The attention was paid to the detailed aspects of the budgeting process, factors affecting the time it takes to prepare a budget, and the impact of ownership structure, especially the role of foreign ownership and foreign capital, on the level of decentralization in the budgeting process.

Methods: The authors examined these topics through a questionnaire completed by 136 respondents, primarily industrial companies based in the country. The subsequent hypotheses were assessed via application of the Z-test.

Findings & Value added: The results presented show that the budgeting practices of the Czech firms are not only influenced by traditional factors (e.g. the size of the company and its given economic sector), but also certain other aspects. Essential facets comprise the ownership structure and the share of foreign capital involved, the latter affecting the extent of autonomy of the business as to the budgetary process. This submitted paper can extend the current theory with new findings on the specific nature of budgeting in post-socialist countries with an open economy and the significant influx of foreign capital.

Introduction

Budgeting constitutes a typical instrument for managerial control in the corporate sector. Lorain *et al.* (2014) argue that the usual elements of budgeting, such as planning, regulation, or motivation, have a positive effect on managers' ability to respond to strategic uncertainties. According to a study by De With and Dijkman (2008), the benefits of budgeting lie in supporting planning, control, and motivation. The results of studies published in different countries show the crucial role of budgeting in the management accounting system (Wnuk-Pel & Christauskas, 2018; Yalcin, 2012; Libby & Lindsay, 2010).

Despite being a mechanism widely applicable to companies in general, results reported in the literature (Libby & Lindsay, 2007; Østergren & Stensaker, 2011; Pietrzak, 2013) show that the efficiency of traditional budgeting under contemporary business conditions is limited. Massive regulation and frequent efforts to standardize the process have shaped the widely held belief that traditional budgeting is merely a formal and inflexible tool which adheres to old ideas and procedures (Neely *et al.*, 2003; Hansen, 2011; Lidia, 2014).

Based on scientific literature, the presented study investigates the validity of these findings in enterprises operating in the Czech Republic, examining in detail the budgetary process in the sample polled. It is also determined whether the procedures conducted by said enterprises are influenced by features typical for the Czech economy, e.g. a significant number of strategic raw materials and businesses in the Czech Republic are owned by foreign investors. As a study on the impact of such phenomena on the budgeting process of enterprises in the Czech Republic had not previously been carried out, the authors of this paper set out to research the topic.

Therefore, the aim of this study is to examine specific aspects of compiling budgets in the Czech companies surveyed, and find out how the budgeting process in these firms is affected by the ownership structure.

Since an objective was to poll firms from across the corporate spectrum, it was decided that quantitative research was the best option. A questionnaire was devised to acquire the data.

The authors wish to contribute to the current knowledge in several ways: firstly, empirical evidence is presented about the current budgeting practices of the Czech firms; secondly, the factors that affect the time spent on them are analysed — such as the size of the company and its ownership structure; and thirdly, description is given over to the impact of ownership structure on internal roles and the efficiency of the budgeting process.

In terms of structure, the “Literature review” chapter summarizes the current knowledge of budgeting and highlights any potential research gaps. The “Research methodology” section explains how the respondents were selected, describes the technique for gathering data and presents all defined hypotheses. The “Results” part is given over to the main findings gleaned from the research, while critical examination and evaluation of them is described in “Discussion”, alongside comparison with the expectations of the authors. Finally, a summary of the results, limitations of the research and suggestions for future research are included in the “Conclusion”.

Literature review

Budgeting is an inseparable part of management control (Kenno *et al.*, 2018; Libby & Lindsay, 2010). Having extensively reviewed the topic, Lohan (2013) regards budgeting as one of the most frequently researched subjects related to management accounting. Joshi *et al.* (2003) explain the role of budgeting as a quantitative expression of future plans and a beneficial tool for performance measurement. According to Lidia (2014), the most important advantage of a budget is the assistance it provides in planning and coordinating activities. Budgetary purposes also include allocation of resources, supporting the implementation of strategy, communication, evaluation, managers’ motivation and remuneration (Wnuk-Pel & Christauskas, 2018). Becker *et al.* (2016) point out that times of past crises have highlighted the importance of certain functions, for example planning and resource allocation.

In its most common form, a budget gives financial indicators scheduled for an annual period (Bugarová & Moricová, 2017). Réka (2014) states that the budgeting process usually involves setting forecasts for revenue, costs, production, cash flow and other important factors. Before the budgeting process begins, an organization should prepare a long-term plan, also known as a strategic plan. A budget is created through an interactive pro-

cess, one specified in several rounds of dialogue between higher and lower levels of management (de Wall *et al.*, 2011). Once the budget is agreed upon, regular reports are required by the corporate centre to enable managers to monitor performance (Lohan, 2013), often monthly (de Wall *et al.*, 2011).

Other authors perceive a number of controversial elements in the traditional concept of a budget which reduce its effectiveness. Hansen *et al.* (2003) have criticized the entire process, arguing it encourages dysfunctional budget ‘games’. Šiška (2016) states that preparing and controlling budgets takes a substantial length of time, diminishing the capacity of a company to react to change in the external environment. Meanwhile, the enormous number of rules and standards pertaining to budgeting have earned it the reputation of being an inflexible managerial tool.

Neely *et al.* (2003) have criticized budgeting and lend support to their argument by stating that budgeting process takes up more than 20% of the time of managers. According to Libby and Lindsay (2010), about 30% of Canadian firms spend up to four weeks compiling budgets, while another 31% dedicate between nine and sixteen weeks to it. Such critical voices were joined by Østergren and Stensaker (2011), who describe a budget as a time-consuming tool, one which often forms a barrier to change and concentrates on reducing costs instead of adding value. A further aspersion is the observation that budgets are not updated frequently enough (Hope & Fraser, 2003). Recent studies highlight the issue of dysfunctional behavior relating to budgets. According to the findings by SeTin (2019), companies often tend to negotiate budgetary targets that will be easy to achieve. The study by Choe and Kan (2020) describes an example where budgeting may lead to increase spending.

Despite a strong wave of criticism and a number of different improvements of traditional budgeting procedures, several studies reveal the commanding position that traditional budgeting still holds in planning and controlling. In this context, Libby and Lindsay (2010) conducted a survey of Canadian and American companies and found out that 79% of participants use budgets for monitoring purposes; while 94% of that number had no intention of abandoning the practice in the foreseeable future. According to Wnuk-Pel and Christauskas (2018), either the use of operational budgeting decreased compared to previous researches, managers still regard the traditional budgeting (either in a traditional or modified version) as maybe not perfect, but a useful tool which is difficult to substitute. This statement is supported by the results of a wide spectrum of studies (Dugdale & Lyne, 2006; de Waal *et al.*, 2011; Yalcin, 2012), which present findings analogous with those of Libby and Lindsay.

Similar surveys on organizational behaviour, encompassing budgeting practices, have addressed companies operating in the Czech Republic (Wagner, 2014; Popesko *et al.*, 2015; Šiška, 2016). However, insufficient emphasis was put on the process of drawing up a budget, while the effects of substantial foreign ownership were ignored, despite the significance of this factor which relates to the structure of Czech economy (Lambovska *et al.*, 2019).

The authors decided that investigating the impact of ownership structure on the degree of autonomy permitted for budgeting should constitute one of the partial aims of this study. The expectation was that exercise of power over the budget would be limited in enterprises with foreign owners, in comparison with those with domestic owners. According to the Czech Statistical Office (2015), the proportion of foreign-controlled corporations operating outside the financial sector (about 13.4 thousand) to the total number of such corporations in the Czech Republic (over 1 million) suggests that foreign capital plays a minor role. However, the number of enterprises involved is obviously not the most appropriate indicator for gauging the level of importance of enterprises under the control of foreign capital. Indeed, looking at the issue from the perspective of employment shows that in excess of 900,000 people are employed at foreign-controlled companies, equal to one third of the total number of employees working in the corporate sector. If the added value generated by foreign-controlled companies is taken into consideration (880 billion CZK), a share of almost 42% of total added value is calculated. Hence there is little doubt that foreign capital actually contributes greatly to the economy of the Czech Republic. In fact, it is not a stretch to speak about the vital importance of foreign capital to the country, illustrated by carrying out a comparison of nations. Czech enterprises under foreign control created 22.6% of the total added value generated by the average member state of the European Union (excluding Greece as data were not available) in 2012. Only five countries achieved higher values in this indicator than the Czech Republic — Ireland, Hungary, Romania, Luxembourg and Estonia. This highlights how important the aspect of ownership structure of companies is to budgeting practices in the Czech Republic and other similar European countries with developing economies.

Research methods

A survey in the form of a questionnaire was selected as the primary means of achieving the objective of the study. The web-based questionnaire (cre-

ated as a Google form) consists of the following parts: terminology, characteristics of budgeting systems, operational budgeting, and characteristics of the company (respondent). The data from the first and third part of this questionnaire were used in the previous phase of the research (Dokulil *et al.*, 2018).

A spectrum of nine questions from the questionnaire was used in this study, as six of which focused closely on the area of research, and three of them related to the characteristics of respondents. All these questions were closed. In these questions, the respondents chose between different statements, chose between the answers "yes" and "no", or chose from the range of options generated by the literature review.

The targeted group of respondents is represented by organizations from business sector with an arbitrary number of employees that have an annual turnover of over 1 million CZK. This sample of potential participants allowed for clear comparison of budgeting practices at large (250 and more employees), medium (51–249 employees) and small enterprises (less than 50 employees), structured according to the 2003/361/ES European Commission methodology. When choosing a research sample, the authors were inspired by Becker *et al.* (2016), who also did not limit the range of respondents by size.

The anonymous web-based questionnaire, which took approximately fifteen minutes to complete, was distributed to respondents by e-mail. The contact information for individuals employed in senior and financial management in positions such as the CEO, Head of the Controlling Department or CFO, were collected from the database of Albertina. Respondents from the defined targeted group were addressed on the basis of random selection to eliminate the preference of the selected group of companies. Data collection was carried out in the period from January to June 2017. The authors approached 1,490 companies in total, out of which 136 completed the questionnaire, equivalent to a rate of return of 9.1%. See the information on the respondents below.

Distribution of respondents according to economic sector: manufacturing 55 (40.4%), automotive 7 (5.1%), construction 10 (7.4%), engineering 10 (7.4%), agriculture 7 (5.1%), services 27 (19.9%), energy production 3 (2.2%), others 17 (12.5%).

Classification of the firms according to the number of employees: less than 50 employees 33 (24.3%), 50–100 employees 39 (28.7%), 100–250 employees 40 (29.4%), more than 250 employees 24 (17.6%).

As indicated above, most respondents are engaged in manufacturing (40.4%), a sector with a strong history in the Czech Republic since the era of socialism. In total, companies from over 30 business sectors took part in

the survey, which were divided into four groups based on the number of employees at them. In line with corporate structure in the Czech Republic where SMEs dominate, the largest group of respondents comprised small (24.3%) and medium-sized (58.1%) companies, while large companies only accounted for 17.6% of the sample.

Research design

A previous study by the authors Dokulil *et al.* (2018) investigated the terminology and functions of budgeting and indicators applied by companies operating in the Czech market. The current study, in contrast, aims to provide information on the practices of such companies in these thematic areas:

- the usual time and precise procedure for drawing up a budget;
- the level of centralization or decentralization when drawing up a budget;
- ownership structure and its influence on drawing up a budget.

Following review of the literature, the authors settled on some phenomena discussed therein and decided to test the validity of these in their survey of companies. In this context, most authors (Neely *et al.*, 2003; Libby & Lindsay, 2010; Østergren & Stensaker, 2011) report about relatively high managerial time consumption as a typical feature of budgeting. As a consequence, attention was paid herein to factors influencing the duration of budget compilation. Since the earlier paper Dokulil *et al.* (2018) had showed that systems of planning and budgeting are strongly influenced by the size of the company, this factor was used also to this research. Moreover, the manuscript by Šiška (2016) confirms that size of the company influences decision-making on the budgeting process. Bearing these findings in mind, the authors started from the assumption that a larger company would spend a longer time preparing its budget than a smaller company. A time preparing a budget is expressed in weeks.

H1: The size of the company (based on the number of employees) is a statistically significant factor that affects the time spent drawing up a budget.

Thereafter, attention shifted to typical characteristics of the Czech economy for the second hypothesis. The data reported by the Czech Statistical Office, as outlined at the end of the literature review, emphasized the influence of foreign-controlled entities in the corporate sector of the country. The potential impact of ownership structure on budgeting issues is demonstrated by several studies focusing on the impact of ownership structure on

firm performance (Zandi *et al.*, 2020), or on decisions how to conduct selected operations in the company (Titman, 2017).

The presumption was that due to the need to coordinate communication between management and the foreign owners, the budgeting process in these enterprises will be more complicated and more time-consuming than in companies with only national owners.

H2: The ownership structure of the company is a statistically significant factor that affects the time spent drawing up a budget.

Previous research had highlighted significant differences in budgeting practices between firms with local owners, where internally customized methods were commonplace, and foreign-controlled firms that usually adopted the budgeting practices of the foreign owners. Based on these findings, also confirmed in a study by Wnuk-Pel and Christauskas (2018), the authors hypothesized that a given ownership structure would influence the possibility of a company to determine which budgeting procedures to follow. It was anticipated that the greater the amount of foreign capital involved, the lesser the extent of autonomy when compiling a budget.

H3: Ownership structure is a statistically significant factor that influences the autonomy of the company when drawing up a budget.

The hypotheses above were checked by applying the Z-test. Statistical methods, such as absolute abundance and simple classification of statistical characteristics, were utilized for data processing purposes. This basic sorting method facilitated expression of the relative abundance of enterprises according to the given statistical features for them (the number of employees; the period of time spent preparing a budget; whether a significant share of foreign capital was present; the autonomy of the enterprise when compiling a budget). Other methods employed included classification according to two statistical aspects and dependence between qualitative plural statistical features (a contingency table and contingency intensity); the latter of the two was gauged via the mean square contingency coefficient.

Comparing the selected groups of enterprises according to the selected statistical features determined the significance of the statistical characteristics, and the hypotheses were checked via the tests defined above to the significance level of 5%. If the p-value dropped below 0.05, the null hypothesis was rejected on the basis of variation in independence.

The Z-score test was applied to detect significant statistical differences between each change in value for the groupings of enterprises. The p-value for standard (standardized) normal distribution was utilized to evaluate the Z-score parameters. The conditions were fulfilled for carrying out the Z-test, i.e. normal distribution of statistical characteristics and a large enough sample. The calculation was performed in SPSS Statistics software.

Results

The initial pair of questions posed in the survey examined whether respondents actually use the term ‘budget’ at their place of work, and if so, what purpose carrying one out serves. These two questions were also asked in a previous study by Dokulil *et al.* (2018). Including them again allowed a more comprehensive view of the research objective.

The survey showed that, for most respondents (64.7%), it is common to apply a traditional form of budget, but differences were evident in implementation according to the sizes of the enterprises. A detailed overview confirmed that budgets are predominantly applied in medium- and large-sized companies. An opposite trend was discerned in the group of small businesses, where only 10 out of the 32 small businesses which participated in the survey draw up budgets. At this point, the survey ended for any firm that answered negatively to this question (48 in total). A total of 88 companies went on to the next part of the questionnaire.

The responses to the question on the purposes of budgeting at the company were in line with the information gleaned from the literature review. All the publications referenced in the literature search were united in describing planning as a widespread function of budgeting, which was also borne out in this survey, as almost 91% of respondents said that budgets served as such a tool. Half of them employed budgets to motivate or evaluate managers, while almost 40% stated that coordination was the reason, and less than 30% said communication was the impetus. Detailed data are summarized in Table 1.

Some of those who opted for the reply of "other" confirmed the initial assumption of the authors, their responses essentially constituting a general critique of the role of budgeting today. As Neely *et al.* (2001) admitted, a budget is just a formal managerial tool in many enterprises. This is reflected in the answer given herein: “it is a necessary condition set by the provider”.

The subsequent part of research focused on the process of putting together a budget, specifically on its initial conditions, wherein the authors analysed ownership structure and the share of foreign capital.

Choosing who to poll in the survey involved randomly selecting companies from a defined list. This meant the authors could not influence whether participants were mostly those with a significant share of foreign investors or companies owned by Czech entrepreneurs. Table 2 provides an overview of respondents and their ownership, revealing that firms with a significant share of foreign capital have less autonomy in formulating budgeting procedures. In this context, 31 companies said that foreign capital accounts for more than 20% of their total capital, out of which 25 indicated they are required to follow the instructions of the foreign owner. These results were further used when testing the hypotheses.

The degree of budgetary centralization or decentralization was addressed next in the questionnaire, the responses showing a high extent of the latter in the Czech corporate sector. In fact, 70 respondents claimed that each department at the company had its own budget, 63 of which declaring that budget was prepared in cooperation with the staff of the department. Known as the ‘bottom-up’ method of preparation, Table 3 reveals that this tendency prevails in Czech companies, the reason being that departments manage themselves more efficiently under such decentralized conditions and can influence factors affecting their performance.

However, budgetary decentralization has the capacity for more sophisticated evaluation of staff. Only 45 companies from the sample (64.3% of those with a decentralized budgeting system) utilize this potential for motivation. This is somewhat paradoxical, since the possibility to assess units and evaluate staff on the basis of their real performance is one of primary reasons to implement decentralization in enterprises.

Another part of the questionnaire comprehensively addressed the basic parameters of drawing up a budget. A frequently criticized aspect of traditional budgeting is strict adherence to an annual budgeting cycle. Neely, Sutcliffe and Heyns (2001) included it in the list of the 12 most cited weaknesses of budgeting, declaring the annual budget to be incompatible with the modern, dynamic business environment. Notably, this cyclical pattern was adhered to by the majority of the companies surveyed (see Table 4).

The participants were then polled about the time spent on the budgeting process. Half of the companies commence the activity in September or October, and the average time for putting it together ranges from 4 to 8 weeks. The period required for it is not measured by 10 firms.

The responses to the last question revealed that it is not usual to use specialized budgeting software (tools not included in the basic MS Office user

package) in Czech companies, as applications for producing ordinary spreadsheets or editing text are sufficient (see Table 5). Respondents who use particular software specified the given type, comprising: BNS, QI, Kros, Build Power, Dynamic NAV, SAP and IIS Ekonom.

Statistical hypotheses testing

The three hypotheses defined in the “Research methods” chapter underwent testing, and description is given below. While the number of enterprises that do not monitor the time spent on drawing up budgets equalled 11.4% (10/88 enterprises), those that do amount to 88.6% (78/88 enterprises). Table 6 shows that statistically significant differences exist between the types of enterprises in relation to the number of employees and period given over to preparing budgets. The number of employees is a statistically significant factor with an impact on the preparation process (chi-square = 19.434; P-value < 0.01), justifying hypothesis H1. No significant differences are evident in the period dedicated to a budget in the groups of enterprises with 100–250 employees (A/B; A/C; B/C: P-value > 0.05).

The second hypothesis complemented the findings of the first test, in that ownership structure (i.e. the share of foreign capital) was identified in the literature review as another factor that can affect the time spent working on a budget.

The number of businesses with a share of foreign capital below 20% equalled 48 (61.5% of 78 enterprises), while 30 others exceeded that percentage of capital (39.5% of 78 respondents). This data is given in Table 9, demonstrating that the given share of foreign capital is not a statistically significant factor that impacts the time spent preparing a budget (chi-square = 2.674; P-value > 0.05). These facts mean that hypothesis H2 is rejected (for a detailed view see Table 7). No significant differences exist in the period spent on a budget between the groups of enterprises in relation to ownership structure (A/B; A/C; B/C: P-value > 0.05).

The third hypothesis proposed that ownership structure would be a statistically significant factor that influences the autonomy of the company when preparing a budget. The results of testing it are displayed in Table 8. Statistically significant differences exist between the enterprise groups in relation to the parameters of structure and autonomy, indeed making it a statistically significant factor (chi-square = 36.9943; P-value < 0.05). Hence hypothesis H3 is justified by this calculation.

Discussion

The initial part of the study brought to light some interesting findings, partially in accordance with those gleaned from the literature review, as expected by the authors. For instance, insight was obtained as to the time frame for preparing budgets, the average being 5 weeks or more. This period is comparable to the figure found in the study by Libby and Lindsay (2010), who reported it usually took 6 to 10 weeks. A notable aspect related to the intended function of the budget, primarily the operations of planning and monitoring the progress of such plans; fewer than half of the respondents applied them for further observational purposes. Results suggest that companies in the Czech Republic still deploy budgets as a tool for formal rather than managerial control, whereas the latter could also permit evaluation of performance and reward. What might play into this is an extent of legacy, a mindset of post-socialist and centrally planned finances. All industrial enterprises in the Czech Republic, whose history dates before 1989, were state-owned under socialism, and several standard corporate functions, such as discovering customer needs or innovation, were performed by the state. Thus, the operating practices of these enterprises after 1989 could not be comparable to Western firms that have always operated in a capitalist economy. At the beginning of the third decade of the 21st century, the differences in the characteristics of these groups of companies (Western and post-socialistic) have been still visible, for example, in the share of foreign capital.

A noteworthy aspect concerned the question directed at budgetary (de)centralization, revealing a strong dependence for the budgeting process on the foreign ownership of companies. Employees of firms with owners outside the country tended to lack the appropriate freedom to set budgetary targets themselves.

The next part of the study dealt with hypothesis testing. The first hypothesis was validated, confirming that the size of the company significantly influences the specific form of the budget and the period dedicated to preparing it. It would seem that the larger the company, the more complex the budgeting system implemented. Small companies are often managed without specific budgetary tools, reliant instead on the skills of their management or owners. Larger companies, however, require the sophistication of a budgeting system, in addition to having greater demands in relation to data and heightened levels of cooperation among employees. This correlates with previous findings that large and medium-sized firms often monitored more indicators in the budget than smaller ones (Dokulil *et al.*, 2018).

Afterwards research shifted to testing if there was a connection between ownership structure and the period given over to preparing a budget. The expectation was that this time frame would be protracted in foreign-owned companies, due to need for communication at a managerial level between owners and executives. Interestingly, no statistically significant relationship was discerned, so it can be stated that ownership structure does not influence the duration spent on such preparation (the hypothesis H2 was rejected). This result can be explained by the size of companies with a significant share of foreign capital. In the presented research, this group of firms consisted mainly of large companies with considerable personnel capacities, which can eliminate differences in duration of budget compilation compared to medium-sized and especially small companies.

Studying the impact of foreign capital on budgetary practice confirmed the hypothesis of the authors (H3). Statistical processing of results demonstrated that the share of foreign capital in a company is an important factor that affects its autonomy when drawing up a budget. Domestically owned firms enjoy much higher levels of autonomy, whereas those with foreign owners are mandated to follow directions from colleagues abroad. This finding is in accordance with results reported by Wnuk-Pel and Christauskas (2018), who conducted a survey on the operational budgeting practices of Polish and Lithuanian companies.

If the autonomy of foreign-owned enterprises in drawing up a budget is limited, we can assume that the behavior of these enterprises will be specific even in the following stages of budgeting process, such as a budget review.

On the other hand, it is necessary to consider the limiting factors of this research. The number of 1490 addressed companies seems to be sufficient, but the return rate of the web-based questionnaire was only 9.1%. The sample of 136 companies participating in the survey should be considered limited and the results may not be generalizable for the entire corporate sector of the Czech Republic.

Conclusions

Numerous experts have analysed the planning and budgeting practices of businesses, yet the majority of such studies investigated the conditions of developed economies (Hope & Fraser, 2003; Libby & Lindsay, 2010; de Wall *et al.*, 2011). It has been far less common to identify specific factors that influence the choices of firms in post-socialist countries, which now

have an open economy and where foreign ownership of companies is widespread.

This was the main impetus behind the research detailed herein on a sample of businesses operating in the Czech Republic, a nation which fulfils these criteria. In excess of 900,000 people are employed in foreign-controlled companies in the country, equal to one third of all employees working in the corporate sector. From the perspective of contribution to added value, these enterprises governed from abroad account for 42% of the total figure.

Based on these facts, the aim of this study was to examine specific aspects of compiling budgets in the Czech companies surveyed, and find out how the budgeting process in these firms is affected by the ownership structure. The authors elected for a quantitative form of research, whereby 136 respondents completed a web-based questionnaire. The validity of the given phenomena, which were identified in the literature review, was subsequently assessed by hypothesis testing via the Z-test method.

The authors discerned that the number of employees at a firm constituted a statistically significant factor that affected the time frame given over to drawing up a budget. Most of the large enterprises participating in the survey (17 of 25) reported that they spent more than 5 weeks on the activity. Small companies typically dedicated 3 weeks to it, while the period for medium-sized ones was 4–5 weeks. Attention was also paid to the aspect of ownership structure, the results revealing that the share of foreign capital in a firm is not a statistically significant factor which affects the time given over to formulating a budget. However, the extent of foreign capital is statistically proven to impact the autonomy of a company when preparing a budget. In this context, 25 out of 31 firms in which there was a significant share of foreign capital declared that the approach and standards applied when drawing up a budget were dictated by the owners abroad.

The presented results may supplement the existing knowledge with new findings on specific characteristics of budgeting behaviour in former socialist countries with an open economy and a significant influx of foreign capital. The results reported could also prove useful to companies, especially ones based in the Czech Republic, which devise systems in-house for planning and budgeting.

Certain limiting factors have influenced the outcomes of this paper; these comprise the localized scope of research in just one country, a lower return of the questionnaire and application of a single type of research method. The advantage of the quantitative method selected, i.e. a survey in the form of a questionnaire, is the ability to address a large sample of respondents; however, experts have expressed the misgiving it is insufficient

for gaining full comprehension of the given topic. Therefore, the team of authors shall continue to explore the matter further by carrying out qualitative studies, these involving interviews with individuals at selected companies. The assumption is that such comprehensive research, in which interviews are held with people at all levels of an organization, will confirm or refute the results of this survey, in addition to yielding greater insight into the budgeting and planning practices of companies.

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Annex

Table 1. Functions of budgeting

What purposes do budgets serve at the company?	Frequency	Percentage
Planning	80	90.9%
Communication	24	27.3%
Motivation	44	50%
Plan execution monitoring	68	77.3%
Coordination	35	39.8%
Evaluation of managerial activities	44	50%
Other	5	5.7%

Table 2. Autonomy in preparation of a budget

Do foreign investors have a significant share in the total capital of the company?	Frequency	Percentage
Yes	31	35.23%
No	57	64.77%
If yes, are the method for preparing a budget and/or related standards established by the investor(s)?	Frequency	Percentage
Yes	25	80.65%
No	6	19.35%

Table 3. Budgetary (de)centralization

Question	Answer	Frequency	Percentage
Is each centre or department at the company responsible for its own budget with the intention of it being a managerial tool?	Yes	70	79.5%
	No	18	20.5%
Statement	Answer	Frequency	Percentage
If the answer to the previous question is “yes”, are the budgets of the centres (departments) created in cooperation with the staff working in them?	Yes	63	90%
	No	7	10%
If the answer to the previous question is “yes”, is such decentralization of the budget part of a wider system to motivate employees?	Yes	45	64.3%
	No	25	35.7%

Table 4. The process for putting together a budget

Are budgets compiled in relation to the calendar year?	Frequency	Percentage
Yes	79	89.8%
No	9	10.2%
At which time of year do you start working on the budget?	Frequency	Percentage
Before September	23	26.1%
September – October	44	50%
November – December	21	23.9%
How many weeks does it take to draw up the budget?	Frequency	Percentage
Less than 1 week	3	3.4%
2 – 3 weeks	12	13.6%
4 – 5 weeks	21	23.9%
5 – 8 weeks	21	23.9%
More than 8 weeks	21	23.9%
The time spent on it is not recorded	10	11.4%
How many employees are involved in preparing the budget?	Frequency	Percentage
1 – 5 employees	54	61.4%
6 – 10 employees	16	18.2%
More than 10 employees	18	20.4%

Table 5. Use of software in putting together a budget

Is specialized software used to aid preparation of the budget?	Frequency	Percentage
Yes	13	14.8%
No	75	85.2%

Table 6. Testing H1

Number of employees	Time frames for preparation of a budget			Z-test (P-value)
	Less than 3 weeks (A)	4 – 5 weeks (B)	More than 5 weeks (C)	A / B A / C B / C
Less than 50 employees	5 33.3%	4 19%	2 4.8%	0.327 0.004 0.069
50 – 100 employees	5 33.3%	10 47.6%	7 16.7%	0.389 0.174 0.009
100 – 250 employees	3 20%	5 23.8%	17 40.5%	0.787 0.152 0.190

Table 7. Continued

Number of employees	Time frames for preparation of a budget			Z-test (P-value)
	Less than 3 weeks (A)	4 – 5 weeks (B)	More than 5 weeks (C)	A / B A / C B / C
More than 250 employees	2 13.3%	2 9.5%	16 38.1%	0.719 0.076 0.017
Total (%)	15 100%	21 100%	42 100%	In total: 78 enterprises
Chi-square P-value	19.434 0.003			

Table 8. Testing H2

Ownership structure	Time frames for preparation of a budget			Z-test (P-value)
	Less than 3 weeks (A)	4 – 5 weeks (B)	More than 5 weeks (C)	A / B A / C B / C
Enterprises with a share of foreign capital of less than 20%	12 80.0%	12 57.1%	24 57.1%	0.152 0.152 1.000
Enterprises with a share of foreign capital greater than 20%	3 20.0	9 42.9%	18 42.9%	0.152 0.152 1.000
Total (%)	15 100%	21 100%	42 100%	In total: 78 enterprises
Chi-square P-value	2.674 0.263			

Table 9. Testing H3

Ownership structure	Autonomy in preparation of the budget	
	Yes	No
Enterprises with a share of foreign capital of less than 20%	31 41.9%	57 91.9%
Enterprises with a share of foreign capital greater than 20%	43 58.1%	5 8.1%
Total (%)	74 100%	62 100%
Chi-square P-value	36.9943 0.000	