FACTORS WITH A MAJOR EFFECT ON THE BUDGETARY CONTROL PROCESS – AN EMPIRICAL STUDY FROM THE CZECH REPUBLIC

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Abstract
Superlatives are commonplace in descriptions of traditional budgeting. Within managerial accounting techniques, it is one of the most frequently used, the most researched, but also the most criticized. While academics are largely united in criticism of traditional budgeting practices due to their inflexibility and consumption of resources, the existing studies have not identified universal assumptions to improve this system. The inconsistent conclusions in current literature create a need to explore approaches to mitigation of budgetary weaknesses. Furthermore, this incomplete knowledge is an impulse to examine factors influencing the choice of these approaches.
The authors conducted a review of the literature to amass information on approaches developed to enhance traditional budgeting methods. Subsequently, research was conducted on the extent of utilization and the subjective perception of such methods at a sample of companies operating in the Czech Republic. The authors additionally attempted to determine which factors influenced the decisions of managers in selection of such a tool. A web-based survey was devised with the aim of gathering data, followed by analysis of correlation between selected variables through application of Pearson's chi-square test.
The literature review revealed the importance of conducting a budgetary review in improving the budgetary control. In total, 136 Czech companies took part in the survey, and it was discovered that a significant number of them had implemented traditional budgeting methods. More than 80% of respondents monitored any variation within their budgets. In the following part, the share of foreign capital was identified as the factor that influenced choices made in budgetary control. Since no correlation was discerned between revision of a budget and subsequent perception of its efficiency, the results lend support to arguments that minor improvements do not radically affect budgeting overall.

Keywords: budgeting, planning, budget review, Czech businesses.

JEL Classification: M41, M19

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Introduction

Budgeting and budgetary control require that a business sets goals for itself and devises processes with the aim of achieving the desired outcome (Isaac et al., 2015). Many studies emphasize the dominant role of budgeting in management control (Ostergren and Stensaker, 2009; Libby and Lindsay, 2010). According to Lorain et al. (2014), the terms management control and budgetary control are synonymous.

Studies published in the past decade on traditional budgeting methods and budgetary control have reported findings that are somewhat contradictory. While arguments have been made that a budget constitutes an ineffective tool and is merely formal in function, numerous surveys in Europe and America show that budgeting is still considered a critical method in the corporate sector. Although certain enterprises, e.g. Volvo and Swedish banks, now view budgeting as systematically broken and have abandoned the practice (Hope and Fraser, 2003), they are the exception rather than the rule. This fact is supported by surveys conducted in the Poland and Lithuania (Wnuk-Pel and Christauskas, 2018), the Czech Republic (Popesko et al., 2015), North America and Canada (Libby and Lindsay, 2010), which reveal a great many businesses continue to apply budgeting techniques in traditional form or with minor alterations.

The unanswered question is why some companies have been able to cope with the inherent weaknesses of a traditional budget, while others have abandoned the traditional budgeting system. Interestingly, study of the ways such established practices are changed to heighten their efficiency in a corporate environment and any consequent benefits for decision-making is absent from the literature. Setting aside alternative methods, such as Activity-Based Budgeting or Beyond Budgeting, some authors (Libby and Lindsay, 2010; Drury, 2015) have attempted to propose improvements to traditional budgeting practices, although this has not led to development of a unified and recognized approach.

This study summarizes recommendations for improving traditional budgeting, while also examining their application in the real world. This predominantly concerned budget review in the context of regular comparison of targets and actual performance to discern any variance therein, as implemented by companies in the Czech business environment. Research was also conducted to identify factors that contribute to adoption of such enhanced methods and gauge perception of their success following implementation.

1. Review of the scientific literature

Budgeting is considered a fundamental part of management accounting as an instrument assisting managers in decision-making processes (Williams et al., 2018). Classic monographs on management accounting describe a budget as a technique for coordinating various activities by means of preparing plans for future periods, respectively as a technique which aids control, communication, motivation and allocation of resources (Noreen et al., 2017; Král, 2018). A traditional budgeting system is also characterized by monitoring financial indicators and setting annual targets (Popesko et al., 2015).

Lohan (2013), following a comprehensive review of the literature, declared that budgeting is one of the most frequently researched topics in management accounting. Kenno et al. (2018) revealed that budgeting appeared in 251 articles indexed in the ABI Inform and ProQuest databases between 1972 and 2016. Hilton and Platt (2013) state that a budget is

the most widely employed technique to facilitate planning and control, although it would be inaccurate to consider budgeting merely in these terms. Wnuk-Pel and Christauskas, in the introduction to their study (2018), emphasize how a budget supports implementation of a business strategy or the remuneration of managers.

Since the global economy continues to change apace, with emphasis placed on flexibility and adaptation to keep up with innovations in technology, new requirements have arisen for methods that aid management. Given the speed at which alteration takes place in the marketplace, the need to administer a company more flexibly has been identified by senior executives (Miodek and Wnuk-Pel, 2017). As a consequence, an annual budget, usually completed a few months prior to its implementation, is no longer viewed as an ideal managerial tool (Ekholm and Wallin, 2000). Hope and Fraser (2003) observe that traditional budgeting can make companies less adaptive to change in the business environment, often causing dysfunctional behavior. According to Hansen et al. (2003), these "budget games" relate to traditional budgeting's financial, top-down and commandand-control nature of traditional budgeting, as embedded in processes for annual budgetary planning and evaluation of performance. Higgins (2005) points out that budgeting often fails to reflect the commercial strategy in place, while Neely et al. (2003) comment that a budget with fixed targets could lead to a circumstance of it being outdated even before it is implemented. Jansen (2001) writes that a major drawback is an impact made on relations between employees, whereby managers might err towards dishonesty, potentially pitching colleagues against one another.

Further criticism levelled at budgeting is founded on the excessive consumption of resources involved. Numerous surveys have documented that the process is time-consuming and exerts an impact on the productivity of managers. This view is espoused by Neely et al. (2003) and is supported by Libby and Lindsay (2010). Østergren and Stensaker (2009) also point out that a great deal of time is required for it, with focus being placed on reducing costs at the neglect of value creation. Bourmistrov and Kaarbøe (2013) perceive budgeting as stifling creativity and innovation. Others talk of discontinuity and contradiction in corporate plans and budgets, and the fact that the latter are often based on figures from the previous year with a reliance on prior notions. The process also reinforcing barriers between departments rather than encouraging the sharing of knowledge (Hansen et al., 2003; Hope and Fraser, 2003; Neely et al., 2003; Lohan, 2013).

In response to growing dissatisfaction with traditional budgeting, alternative methods, such as Beyond Budgeting and Activity-Based Budgeting, have been devised and picked up on in business practice (Réka, 2014). Attempts at conceiving means different from conventional procedure are in line with the opinion of Hope and Fraser (2003), who do not believe it is possible to evolve traditional budgeting at all, the only solution being to scrap it altogether due to its fundamental flaws. When Hope and Fraser expressed this courageous opinion, they backed it up with examples of contemporary, well-known companies that were abandoning traditional budgets. However, subsequent surveys have shown that such moves by the likes of Volvo and IKEA did not stir many others do follow suit, going against expectations. In fact, a significant number of studies indicate that budgeting retains its importance in management accounting, with several providing evidence of this in various countries. Ekholm and Wallin (2000) reported that very few Finnish enterprises out of the 168 surveyed had decided to abandon their traditional annual budgets. In Turkey, 94% of respondents declared their firms still carried them out (Yalcin, 2012). This trend

echoed also in a study by Wnuk-Pel and Christauskas (2018), who discerned traditional budgeting took place in 86.96% of large Polish companies and every participating firm in Lithuania of similar size. The finding that it continued to play a crucial role in management planning and control was confirmed by Libby and Lindsay (2010) and Popesko et al. (2015). The former examined budgeting practices in Canada and North America, with only 7% of Canadian and 3% of American enterprises considering the possibility of abandoning it. Comparable figures were discerned by Popesko et al. in a sample of Czech businesses, wherein less than 5% of respondents were thinking about doing away with a budget or had already decided to do so. Šiška (2016) notes that the size of an enterprise plays a vital role in decisions on whether to maintain or end the practice, with small businesses tending towards the latter. This finding is in line with the opinion of those who advocate for the Beyond Budgeting concept, who suggest traditional budgeting is usually abandoned by flexible organizations with a high level of decentralization, i.e. primarily small companies.

A clear conclusion from this is that budgeting remains a widespread managerial technique. According to Wnuk-Pel and Christauskas (2018), although the use of operational budgets had decreased compared to previous research, managers still regard budgeting (either in traditional or modified form) as maybe not perfect, but a useful tool which is difficult to find a substitute. De Waal (2011) writes that only a handful of organizations had decided to radically change their budgeting processes due to the central role they played in financial management. Hänninen (2013) notes that implementing alternative methods has proven problematic as replacements for existing budgeting systems, while their plausibility remained theoretical. Consequently, it can be assumed that such commonplace employment of a traditional process means the pros of it outweigh the cons. An analogous opinion is presented by Lidia (2014), whose research in Romania concludes that the benefits of a budget outweigh the associated disadvantages. Becker et al. (2016) take the view that in a dynamic age of crisis and essential change some functions of budgeting become especially evident, primarily its importance in planning and resource allocation, although its plays less of a part in evaluating performance. All of this points to the growth in interest in the specifics of budgeting in the current business environment (Lorain et al., 2014).

Based on these experiences by professionals and academics, we could state that usage of this system does not have to be the wrong way for companies if the system's setting flexibly responds to change in the external environment. In this context Libby and Lindsay (2010) assume any related issue lies in actual usage of budgeting, not a failure of the method as a whole. They have advised firms to seek inspiration in Codman & Shurtleff (Simons, 1987), a company which enhanced its budgeting system in various ways. Therein, ten principles were applied, e.g. highly detailed budgets across responsibility centres, operational plans linked to a long-term (strategic) plan, multiple revisions, a budgeting system which is managed interactively (not diagnostically) and a strongly decentralized management structure. Drury (2015) presents a similar approach to such enhancement, stating that budgets need to be reviewed more frequently than in the past, and new resources must be allocated outside the budgetary process to respond to changes in the business environment. A trend for carrying out systemic revisions more frequently is confirmed in research by Lorain et al. (2014), where almost 40% of the sampled Spanish companies revised budgets every month, with 38% doing so quarterly, while the remainder gave no response. Wnuk-Pel and Christauskas (2018) surveyed Polish and Lithuanian businesses, finding they did not make references to budgetary revisions but control reports. According to their findings,

more than 86% of the Polish and almost 62% of the Lithuanian enterprises produced control reports, usually monthly.

The suggestions about frequent revisions of budgets are linked with a modern concept for cost management by Stiller (2007), who declares that managerial tools should go beyond cost analysis by effectively influencing such costs. This view aligns with statements by Kaczyńska and Wnuk-Pel (2016), who perceive the transformation of economics and enhancement of strategically oriented managerial accounting as a catalyst for significant change in management methods. In the turbulent economy of the 21st century, such processes should analyse past periods and generate data for the future.

2. Research methodology

Taking the findings of the review of the literature into consideration, the aim of the study is to examine how traditional budgeting processes have been amended to suit companies in the Czech business environment and to identify factors informing the choices made.

2.1 Sample selection and research design

Although a lot of research referenced in the literature review pertained to large or medium-sized enterprises (Libby and Lindsay, 2010; Klimaitienė and Ramanauskaitė, 2019), the smaller sample would made impossible to assess the validity of statements by Šiška (2016) and the creators of the Beyond Budgeting concept (Hope and Fraser, 2003), who argue small, flexible enterprises with a higher degree of decentralization no longer largely practice traditional budgeting. Instead, the research presented is founded on a final sample of small, medium and large businesses, analogous to a study by Becker et al. (2016). The targeted group consisted of commercial enterprises operating in the Czech Republic with an arbitrary number of employees (i.e. more than nought) and an annual recorded turnover exceeding 1 million CZK (Czech crowns; approx. 40,000 EUR).

In order to gain a wide range of respondents, quantitative research was conducted in the form of a web-based questionnaire distributed via e-mail. Contact information on senior staff at firms was sourced from the Albertina database, the target group comprising executives and employees in positions such as the CEO, CFO, heads of financial and controlling departments and project managers. Individuals such as these were considered optimal due to their experience in establishing and working with budgets.

Data collection was carried out in the period from January to June 2017. In total, 1,490 companies were contacted, out of which 136 completed the questionnaire. Although this represents a return rate of about 9.1%, which might be considered relatively low, but the anonymous nature of the questionnaire did not allow for further contact with those who had not responded. Data on the respondents are given in table no. 1.

Table no. 1. Data on respondents

Sector	Frequency	Percentage
Manufacturing	55	40.4%
Automotive	7	5.1%
Construction	10	7.4%

Sector	Frequency	Percentage
Engineering	10	7.4%
Agriculture	7	5.1%
Services	27	19.9%
Energy supply	3	2.2%
Other	17	12.5%
Number of employees	**Frequency**	**Percentage**
Less than 50	33	24.3%
50-100	39	28.7%
100-250	40	29.4%
More than 250	24	17.6%
Share of foreign entities in total capital	**Frequency**	**Percentage**
A share of more than 20%	36	26.5%
A share of less than 20%	100	73.5%
Total number of respondents	**136**	**100%**

2.2. Determination of hypotheses

While previous studies by the authors (Dokulil et al., 2018; Dokulil et al., 2020) focused on essential parameters of budgeting in companies operating in the Czech Republic (budgeting purposes, indicators, the procedure for establishing a budget, the role of the ownership structure etc.), this paper is aimed at improving budgeting process.

Following the review of the literature, the authors determined the research questions below as a basis for formulating hypotheses:

- Does the perception of the external environment influence a decision by a company on carrying out budgetary control measures?
- Are foreign-controlled companies more interested in reviewing budgets regularly than those with domestic owners?
- Is it possible to affect the efficiency of a budget by conducting revision of it? Do senior staff believe frequent review of a budget positively influences its effectiveness?

Other authors (Libby and Lindsay, 2010; Drury, 2015) have expressed that, in their experience, carrying out regular revisions can diminish the fundamental limitations of conventional budgeting. A budget revision or budget(ary) review is defined as the act of comparing a quantitatively expressed plan and the actual values achieved for a given period. The survey conducted herein primarily gauged the factors that affected whether a company reviewed its budget or not. Firstly, we proceeded from the statement that budgeting, in its traditional form, is not suitable for a dynamic business environment (Neely et al., 2003; Ekholm and Wallin, 2011). Lorain et al. (2014) even state that the global economic crisis in 2008 made managers even more sceptical about the possibility of drawing up accurate budgets due to changes in the external environment. In response to such statements, budgetary review is recommended, especially if the external environment is deemed unstable. In this context, the first hypothesis below examined the impact of

perception of stability in the external environment, measured by subjective evaluation of the recipients on a scale of 1 to 5 (from "very unstable" to "very stable") in decisions on whether to carry out budget revisions.

H1a: Subjective perception of stability in the external environment is a statistically significant factor that influences whether a company regularly conducts budget reviews.

The second aspect examined the influence of foreign capital on decisions to conduct budgetary reviews. This hypothesis was initiated by two publications, the first of which referring to a specific circumstance in Czech business sector. The Czech Statistical Office wrote in 2015 that added value by foreign-controlled enterprises (880 billion CZK) accounted for approximately 42% of the total figure for the Czech Republic, highlighting the great importance of such entities. Enterprises with foreign owners, especially members of global concerns, require senior managers to control the allocation of resources and monitor economic results, with a preference for budgeting for this very purpose. The other publication, a study, concurred with this statement. Sandalgaard and Bukh (2014) describe the barriers faced by FoodCorp, a large agricultural concern, when moving away from traditional budgeting processes. These references confirm that budgets play an important controlling role for the foreign owners of, especially large, enterprises. In this context, it is possible to assume that owners request frequent monitoring of actual results and, in direct connection with this, budget revisions.

H1b: A significant share of foreign capital (more than 20% of total capital) is a statistically significant factor that influences whether a company regularly conducts budget reviews.

The previous hypothesis was devised to examine how effective budgeting was perceived to be as a result of conducting budget revisions, as an expression of a subjective perspective rather than a financial indicator. To hypothesis testing, we used answers to the question where respondents regarded whether they consider budget as a formal technique that is not supportive to manage, or they do not.

H2: Conducting a budget review is a statistically significant factor that influences subjective perception of the efficiency of budgeting processes.

The defined hypotheses were all tested by Pearson's chi-square test of independence, whereby comparison of observed frequencies with expected ones was made, assuming normal distribution. It follows that the variables were tested to see if they were dependent on each other. While the zero hypothesis (H0) assumed the independence of both variables, the alternative hypothesis (H1) was confirmed if the variables were dependent on each other. The level of significance was set at $\alpha = 0.05$. After collating the answers to the survey in Google forms, the database containing these responses was transferred to MS Excel. The calculation occurred in XL Statistics statistical software.

3. Results and discussion

Since the study investigated potential enhancement of traditional budgeting processes, it was necessary to find out which respondents employ a conventional budget. So as to avoid different interpretations of traditional budgeting, the term was defined in the questionnaire as a technique for planning on an annual basis that utilized financial variables.

According to said definition, most respondents stated that traditional budgeting did take place (88 respondents = 64.7%). Budgets are applied in 11 out of the 33 small companies (33.3%), in 57 out of 79 medium-sized ones (72.2%) and in 20 out of 24 large enterprises (83.3%). The lesser portion of small businesses that work with budgets lent support to the statement by Šiška (2016), i.e. the tendency of small, flexible businesses to dispense with traditional budgeting. However, given the disproportionate representation of enterprise groups by size (according to a number of employees as the main criterion), this statement could not be deemed as conclusively supported. The sample of respondents who answered affirmatively to the first question and carried on in the questionnaire consisted of 11 small, 57 medium-sized and 20 large enterprises. In total, 88 entities completed the survey. (Table no. 2)

Table no. 2. Link between budgeting and strategic planning

Is the budgeting process in your company linked to strategic planning?	Frequency	Percentage
Always	62	70.5%
Occasionally	22	25%
Never	4	4.5%

This question opened up the part of the survey focused on improving traditional budgets. The review of the literature revealed the lack of connection between budgeting and company strategy, thereby constituting a common issue which undermines the effectiveness of the instrument. Libby and Lindsay (2010) emphasize that linking operational plans (budgets) to the long-term (strategic) plan is one of ten significant aspects presented by the firm Codman & Shurtleff for improving conventional budgeting. The results herein show that this is not an issue for the Czech companies, since most respondents said the budget followed the corporate strategy and was not isolated from long-term planning.

The following questions focused on budget revisions. We consider budget deviations as a higher degree of managerial control to assess whether the results of a company progress in accordance with a plan. This kind of procedure was employed by almost 90% of the sample of respondents who compiled budgets, mostly on a monthly basis. Ten respondents declared no budget revisions were carried out, most of these working at small and medium-sized enterprises. This number included only one large company, which responded to the next question by saying it regularly adjusted its budget during the budgetary period, which would be almost impossible without a budgetary review. The mentioned answer to the question on budget revisions was probably caused by a misunderstanding of a question. (Table no. 3)

Table no. 3. Budgetary control

Do you regularly carry out budget review?	Frequency	Percentage
Yes	78	88.6%
No	10	11.4%
If yes, at what interval?	**Frequency**	**Percentage**
Semi-annually	5	6.4%
Monthly	69	88.5%
Weekly and in shorter intervals	2	2.6%
No response	2	2.6%

The section about budget review was followed by a section on adjustments to the budget during the period of its duration. The results are shown below (table no. 4).

Table no. 4. Adjustments to a budget during the budgetary period

Is the budget adjusted during the year to reflect the continual progress of the monitored variables?	Frequency	Percentage
Yes	51	58%
No	37	42%

While the majority of respondents update budgets at quarterly intervals, a significant percentage of respondents did not answer this question at all. Numerous firms alter their budgets according to current circumstances and needs. In this context, for example, a respondent claimed that the budget was only modified when a significant investment or unplanned repair required it. Another respondent from the agricultural sector adjusts the budget after the harvest, usually in September. Other participants referred to updating the budget continually or at fixed intervals, e.g. at the end of the first or second quarter.

The question below, on subjective perception of the external environment, was included in the questionnaire to assess the possible impact of this factor on the setting of the budgeting system, especially the periodicity and form of any budget revisions. Most considered the business environment to be very stable, stable or relatively stable (about 89%), whereas about 11% judged it as relatively unstable or very unstable. (Table no. 5)

Table no. 5. Subjective evaluation of the external environment

How do you perceive the external environment to the company?	Frequency	Percentage
Very stable	16	18.2%
Stable	33	37.5%
Relatively stable	29	33%
Unstable	9	10.2%
Very unstable	1	1.1%

The last question was directed at assessing the correctness of a statement on the efficiency of budgeting. (Table no. 6)

Table no. 6. Assessment of the correctness of a statement

A budget is a formal tool unsuitable for managing a company, which usually is obsolete upon its approved.	Frequency	Percentage
I completely disagree	9	10.2%
I tend not to agree	47	53.4%
I do not know	0	0%
I tend to agree	23	26.1%
I completely agree	9	10.2%

This part of the questionnaire follows the critical comments of many authors (Hope and Fraser, 2003; Lohan, 2013), who pointed out the formal status of budgeting and its inability to assist company executives having to contend with a dynamic business environment.

Analysing such validity in the sample of Czech firms reveals that most respondents did not agree with the sceptical statement, with no more than 36% opting to answer "I agree" or "I completely agree". While the tendency was to take an opposing stance, it was not overwhelmingly positive. The respondents predominantly chose the option "I tend to agree", indicating a slightly optimistic or neutral perception of the efficiency of a budget.

3.1. Testing the hypotheses

Pearson´s chi-square test of independence was applied for this purpose. For each of the three hypotheses presented in the "Methodology" section, a null hypothesis was defined, which expressed a variant of the independence of the investigated phenomena. If the alternative hypothesis was rejected, the null hypothesis was supported.

The first hypothesis covered the relationship between perception of the external environment and a decision to carry out budget revisions. The figures for respondents who answered "very stable", "stable" and "rather stable" were merged into a combined group of "stable", whereas those for "unstable" and "very unstable" were incorporated as "non-stable". This hypothesis was tested on the sample of 88 companies that met the condition of employing traditional budgets. The results of such testing are given below (Table no. 7).

Table no. 7. Testing H1a

Perception of the stability of the external environment	**Budget review**		**Total number (row)**
P-value = 0.361	Yes	No	
Observed frequency			
Non-stable	8	2	10
Stable	70	8	78
Total	78	10	88
			Expected frequency
Non-stable	8.9	1.1	10.0
Stable	69.1	8.9	78.0
Total	78.0	10.0	88.0
Observed freq. minus expected freq. (remainder)			
Non-stable	-0.3	0.8	
Stable	0.1	-0.3	

The data in table no. 7 reveal it was not possible to validate that a significant relationship existed between perception of the external environment and a decision by a firm to carry out budget revisions. Therefore, at the level of significance $\alpha = 0.05$, the zero hypothesis on the independence of these variables was confirmed.

The second hypothesis examined the validity of another possible factor influencing the application of budget review nationally. Due to the nature of the Czech economy, it was necessary to evaluate the impact a significant share of foreign capital had on undertaking alteration to a budget. The P-value (0.013) in this case indicated a significant dependence between both variables. It can be stated that at the level of significance $\alpha = 0.05$, the zero hypothesis of independence was rejected. According to the results in table no. 8, budget reviews are typically conducted in organizations with a significant share of foreign capital.

Table no. 8. Testing H1b

Significant share of foreign capital	Budget review		Total number
P-value = 0.013	Yes	No	(row)
Observed frequency			
Significant share of capital	27	9	36
Insignificant share of capital	51	49	100
Total	78	58	136
Expected frequency			
Significant share of capital	20.6	15.4	36.0
Insignificant share of capital	57.4	42.6	100.0
Total	78	58	136
Observed freq. minus expected freq. (remainder)			
Significant share of capital	1.4	-1.6	
Insignificant share of capital	-0.8	1.0	

An opposing trend was recognized in tests on the relationship between conducting budget revisions and subjective perception of the efficiency of a budget. Despite numerous authors recommending companies to conduct frequent budget reviews to mitigate the weaknesses of traditional budgeting, the views of the respondents did not support this notion. The P-value in table no. 9 (0.502) did not indicate statistically significant differences between enterprises that carried out budget revisions and those who answered negatively, in connection with the perceived efficiency of a budget. Consequently, at the level of significance $\alpha = 0.05$, the zero hypothesis of independence was confirmed.

Table no. 9. Testing H2

Subjective perception of efficiency of budgeting	Budget review		Total number
P-value = 0.502	Yes	No	(row)
Observed frequency			
The company considers budgeting to be effective.	32	3	35
The company considers budgeting to be ineffective.	46	7	53
Total	78	10	88
Expected frequency			
The company considers budgeting to be effective.	31.0	4.0	35.0
The company considers budgeting to be ineffective.	47.0	6.0	53.0
Total	78.0	10.0	88.0
Observed freq. minus expected freq. (remainder)			
The company considers budgeting to be effective.	0.2	-0.5	
The company considers budgeting to be ineffective.	-0.1	0.4	

3.2. Discussions

The outputs from tests of the hypotheses favour the sceptics and critics of budgets. The results showed that decisions made on the parameters of budgets at Czech companies is not primarily influenced by objective factors in the external environment, instead they pertained to ownership structure.

Conducting a budgetary review is commonplace for the vast majority of the surveyed companies operating in the Czech Republic. The authors had expected that in response to the consequences of the global economic crisis in the period 2008-2010, statistically significant differences would be evident between organizations that perceived the external

economic environment as stable and those who declared it unstable, although this supposition was not confirmed. However, these results should be viewed in the context of the time at which the research was conducted. Before the beginning of the coronavirus pandemic, the Czech economy was characterized by long-term growth in GDP, reflected in expansion of the corporate sector and a tendency towards optimism by the respondents.

Acceptance of the H1b hypothesis confirmed the privileged role that budgeting plays for business owners. Not in the sense of a technique that supports effective management, but rather as one which affords executives insight as to financial results and the allocation of resources. These characteristics are especially appreciated in the Czech corporate environment, where foreign entities own a significant percentage of the most profitable companies. As previous research by the authors has shown, a significant share of foreign capital affects the autonomy of a company within the budgeting process, hence a similar outcome could be expected in decisions on budget review. The findings for H1b fully met with the expectations of the authors.

Based on statements by Drury (2015) and Libby and Lindsay (2010), it was assumed that repeatedly undertaking budget revisions would contribute to a more positive perception of the efficiency of a budget. This assumption, as transposed in hypothesis H2, was not confirmed by statistical testing. The respondents instead declared that decisions on carrying out budget reviews were influenced by pragmatic factors, such as a requirement by business owners rather than actual managerial experience.

Nevertheless, these results could not be interpreted as confirmation of the ineffectiveness of budget review. The literature affirms that budget revision constitutes a tool capable of mitigating the inherent weaknesses of a budget. As a consequence, it can be assumed that budgeting is made more efficient by employing more than one recommended tool at a time. The example of the company Codman & Shurtleff (Simons, 1987) demonstrates that an effective budgeting system is founded on several principles, such as operational plans linked to a long-term (strategic) plan, managerial mechanisms that function interactively (not diagnostically) and a strongly decentralized management structure.

Conclusions

This study can be considered as contributing to ongoing discussions on the role of traditional budgeting systems in the economic conditions of the 21st century. The aim was to investigate real-world attempts to enhance traditional budgeting in Czech companies and to identify factors influencing choices made during these attempts.

Based on findings from review of the literature, the authors focused on budget revisions – the tool most frequently recommended for mitigating the weaknesses of conventional budgeting. The practice of conducting budgeting reviews was examined in a sample of 136 companies (about 1,490 entities were initially addressed) operating in the Czech Republic. Although the total return rate of the web-based questionnaire only equalled about 9%, which might be considered relatively low, the anonymous nature of the survey did not allow for further contact with individuals who failed to respond the first time. In any case, the rate of return is not significantly different from those for similar studies by renowned authors (e.g. 13.6% for Libby and Lindsay's (2010) work).

Three hypotheses were devised to test certain aspects of the topic as discussed in the literature. The "Results" section reveals that budget review is a commonplace for the majority of respondents, with over half of them regularly adjusting budgeting objectives to reflect the progress of associated indicators. Applying Pearson's chi-square test ruled out the hypothesis that decisions on budget review were influenced by the subjective perception of the external economic environment by the respondents. The only factor confirmed as exerting a statistically significant impact on decisions on budget review was the share of foreign capital present, since foreign owners usually required their companies to regularly carry them out. However, no relationship was discerned between the undertaking of budget revisions and perception of efficiency of a budget.

The results are presented with the aim of broadening the debate on budgetary procedures and their validity in the conditions of highly opened-up, transformed economies – mainly in Central and Eastern Europe. The budgeting practices of respondents support a notion of the derived nature of procedures conducted by companies in the Czech Republic. Such derivation has its origins in the dominant position of foreign capital in a significant percentage of companies in the country. As similar research was conducted in Spain in 2014 (focused on budgetary reviews and changes in budgeting procedures due to the development of the external economic environment), the authors intend to compare the results of both studies to identify differences in the behaviour of firms entrenched in the Western liberal economic tradition and those of the Central European country, following its economic transformation in the 1990s.

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