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COST CALCULATIONS IN THE CONSTRUCTION SECTOR: EVIDENCE FROM THE SLOVAK REPUBLIC AND THE CZECH REPUBLIC

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Abstract. Ensuring the company's competitiveness in globalised economies requires a dynamic (flexible) costing system. The objective of this paper is to evaluate the use of costing methods in businesses in the construction industry, to identify the degree of use of the Activity Based Costing (ABC) method in practice, to evaluate the appropriateness of costing methods for use in businesses in the construction sector and to make recommendations. For analysis, we used the Chi-squared test, the Chi-squared data distribution test, the Wilcoxon paired test and the Mann-Whitney U-test. Using analysis, we found that 36.7% of all the studied businesses use the ABC method. We quantified the level of doubt among managers about the suitability of the ABC method for construction companies. Through analysis, we found that managers of construction companies are mainly concerned that project implementation would be highly time-consuming. Management's doubts about the project's contribution to the business are a less compelling reason for not using ABC in practice. Managers of companies operating in Slovakia are more convinced of the unsuitability of this method for their company than companies operating in the Czech Republic. In conclusion, we make a recommendation for practice in construction companies; we recommend implementing the ABC method, especially in medium-sized enterprises. The analysis was carried out in the Slovak and Czech Republics. However, the analytical conclusions can also be applied in other European countries, especially countries with a similar history, a similar type and state of the economy, and a similar mentality of managers and people.

Keywords: activity-based costing (ABC); margin-based costing; construction sector

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1. Introduction

The cost accounting system in a construction company must contribute to the most thorough analysis of operational data on costs, their structure and types, and classification by particular buildings, responsibilities, and places of origin (Gerasimova, 2020; Al Amri & Marey-Perez, 2020).

The construction industry needs innovative technologies due to its complex and dynamic nature (Demirkesen & Tezel, 2021). In construction, the prime concern of project organisations is how to strike a balance between the optimal level of quality and the associated costs (Shafiei et al., 2020). The lack of a standardised approach, expertise, and reliable data are considered to be the most significant obstacles (Manege & Kennedy, 2020).

However, it is essential to achieve sustainable competitive advantages in the construction industry (Tam et al., 2021). Sustainability in the construction sector can be seen in many areas. A sustainable supply chain and cost management are two aspects. Cost and supply chain management influence the overall success of

construction projects. Sustainability is based on reducing costs and, thereby, material items. Information technology and promising management approaches can significantly help supply chain and cost management (Mandicak et al., 2021).

Based on the above, we decided to discover the rate of use of more accurate costing methods in the construction industry, the attitudes of managers towards cost calculation methods, evaluate the perception of doubt about the suitability of the activity-based costing (ABC) method for construction companies and then make recommendations and suggestions for practice.

2. Theoretical background

Given the high level of competition among companies in the market and the demand on the part of consumers for quality products, companies need to gain more control over production processes and the costs of these processes (Braga et al., 2021; Maâlej, 2022; Nguyen et al., 2024). Knowledge and use of appropriate costing methods can be an advantage over competitors. Small and medium-sized businesses face increasing pressure to keep going in a highly competitive environment. These businesses are primarily unable to adopt newer management accounting practices and adapt to the changing business scenario. Manufacturers must act as custodians of their assets, knowing the strengths and weaknesses in their production systems (Araujo et al., 2020). Costs and budget calculations in the construction industry are an ever-known and controversial topic (Shaikh et al., 2020). It is, therefore, essential to use cost control and reduction techniques effectively in the construction industry (Oyegoke et al., 2021).

The construction technology has several specifics that influence the organisation of analytical and synthetic accounting for business entities. The high level of competition and the search for reserves to reduce the cost of construction products and increase profitability require information on the actual levels of costs and the rationality of using different resources. The management of construction costs should form an essential part of the management system of a construction company (Bozgulova et al., 2019).

High competition in the industry forces companies to have a new cost calculation focusing on the company's profit. The problem in practice is that production costs are not calculated accurately. The study results show that in the traditional system, there is unused capacity and distortion of the cost of each product. A comparison of the actual and planned costs of goods manufactured shows an increase of 1%. Based on the projected costs of goods manufactured, the company can determine the offer price according to the required profit. Thus, the analysis of the actual and planned costs of goods sold using activity-based costing can be used both as a financial reporting tool and an effective management tool (Pratiwi et al., 2024).

The activity-based costing system (ABC) has emerged as a method of cost calculation that can overcome the limitations of traditional costing systems in light of economic and technological developments, eliminating the arbitrary and inaccurate allocation of indirect costs. In the current context, developing an adequate cost system in organisations is extremely important because they feel the need to properly manage the resources at their disposal and control their costs to achieve efficient and effective management (Quesado & Silva, 2021).

Volatility, uncertainty, complexity and ambiguity are four aspects that generally describe today's world and the unique challenges of manufacturing companies. Increasing volatility requires rapid innovation cycles, while uncertainty and ambiguity prevent companies from knowing what customers really want. Many products and product options are being developed and offered to the market to anticipate possible future requirements. Increasing complexity leads to increasing effort and, therefore, costs of product implementation, especially in indirect areas (overheads) that cannot be correctly attributed to the product that induced the overhead. This is mainly due to the shortcomings of commonly used costing systems (Riesener et al., 2021).

In practice, the potential of the cost strategy - activity-based costing (ABC) still needs to be addressed despite research demonstrating its importance for the competitiveness of businesses in the sector (Sorros et al., 2021).

Among the main reasons for low operational efficiency (loss, low profit) are outdated management methods and low cost-effectiveness. Applying the ABC method improves business performance. If businesses use the ABC costing method, their performance will improve significantly (van Tran & Nguyen Thao, 2020).

Promoting ABC implementation can help manufacturing companies develop steadily and sustainably and continuously improve their position and company performance. Research recommends that business managers pay more attention to the application of modern management methods, especially ABC. In addition, business managers should pay greater attention to environmental uncertainties caused by suppliers, competitors, customers and other factors. All these factors influence company performance through their impact on implementing ABC, which impacts company performance (Pham et al., 2021).

For the system to be effective, managers must ensure the cooperation of departments and staff involved in the design and implementation of ABC (Vetchagool et al., 2021). It is essential to simultaneously involve accountants in the design of the product costing system. The involvement of accountants in the design of the costing system is vital to implementing ABC, thereby increasing the quality of the cost system created. In practice, there is a positive relationship between product diversity and the need to adopt Activity Based Costing. The ABC method significantly impacts the importance and accuracy of the product cost data collected. In addition, high product diversity has been identified as a significant negative predictor of ABC adoption (Mazbayeva et al., 2022).

Traditional management accounting practices include systems for costing, budgeting, performance measurement, and decision-making. The accounting practices of modern (strategic) management include activity-based management, competitive analysis, industry analysis, long-term forecasting, value chain analysis, target cost calculation, and overall quality management (Chandrarin & Zuhroh, 2021).

The ABC method is used as a cost allocation technique due to its better ability to determine the exact overheads based on the volume of resources consumed for each particular activity compared to the traditional costing method. It eliminates the inaccuracies and shortcomings of the traditional costing system. Compared to other costing methods, it significantly changes, in particular, how indirect costs are allocated to activities based on actual causes and, consequently, the allocation of activities to the cost items themselves according to the consumption intensity (Stopka et al., 2021).

The use of ABC, in combination with additional information from management accounting, enables verification of results for each stage of the production process and provides essential information for decision-making (Gonçalves & Moreira, 2021). It offers comprehensive information on every commercial level about all the attributes of the product, thereby contributing to cost management and optimal resource use (Azeez et al., 2020), assisting in decision-making (Ganorkar et al., 2020), and providing relevant information on costs for businesses (Sánchez et al., 2020).

A Greek study (Alexopoulou et al., 2024) examined the extent to which fundamental factors such as the structure, complexity and utility of a cost system influence the design of cost systems and the resulting satisfaction and help companies make the right decisions. The findings revealed that the structure and utility of a cost system, but not its complexity, significantly affect the satisfaction of users who are forced to make quick and correct decisions. The results show a positive correlation between user satisfaction with a cost system and the extent of information, the provision of accurate information, and the quality of information. The more competition affects a company's pricing policy, the more the company seeks systems that categorise costs based on behaviour (structure) and greater cost allocation (complexity). The larger the company, with a long (> 20 years) and international presence, the higher the likelihood that the company will have a system with a more detailed cost information structure.

Using the ABC method can reduce additional costs and has a solid and essential impact on decision-making on the product mix (Mohsin et al., 2021). ABC increases transparency in cost accounting (Schuh et al., 2021). A business can improve its decisions by allocating the indirect costs of its products more effectively, thereby eliminating the distortions present in the scheduling base when using the traditional method (Braga et al., 2021).

Newer accounting and costing systems enable managers to track resource cost flows accurately. They provide accurate information on the use of resources and identify excess or unused capacities of such resources (Jassem, 2019).

ABC is an alternative method to overcome the limitations of traditional indirect cost systems, which distort actual cost accounting. The ABC system is adequate for determining actual costs and can bring more reasonable and competitive prices to the market. However, there is still resistance to its implementation due to human and technological ignorance (Escobar-Mamani et al., 2021).

Activity-based costing has advantages, including improving the management of activities, processes, and the chain of activities. As an important cost management tool in management accounting, ABC extends cost management across the entire value chain. In this way, the business will receive adequate assistance in establishing systematic cost management (Zhang & Li, 2021).

A study conducted in industrial (specifically foundry) production (Zavrbska & Besta, 2024) confirms that the main benefit of implementing the ABC method is the accurate allocation of costs to activities, which allows for a better understanding of the economic efficiency of processes. The ABC method opens up new possibilities for data automation and optimisation of production and logistics processes through digital technology, contributing to modernising production management.

Businesses make rational decisions about implementing ABC. In cases where the problems perceived during implementation are relatively small, the company will adopt ABC. Conversely, when a company perceives implementation problems as quite compelling, it rejects implementation (Pietrzak et al., 2020).

Managers are willing to use ABC as a costing strategy if they perceive it as providing accurate information for decision-making, indicating its potential to increase cost efficiency, competitiveness, performance, and firm survival. ABC is a proper costing technique for leveraging cost efficiency, competitiveness, and high performance, even for startups (Daowadueng, 2024).

Activity-based or process costing allocates costs to products, especially indirect costs and overheads. Because the required data for the cost model must be collected manually, existing approaches are significantly time-consuming and costly and do not represent the current state of costs. Increasing digitisation and increasing use of business information systems in businesses provide new opportunities for faster collection of cost-relevant data and improve the timeliness of costing (Riesener et al., 2019). The trend of information technology in construction requires automation and digitalisation of all activities, including cost optimisation, for a better level of work by construction professionals and the efficient implementation of contracts (Igwe et al., 2020).

The rapid development of production processes in industry requires systems capable of quickly adapting to dynamic market conditions and evolving customer needs. Manufacturing emphasises flexibility, adaptability, and real-time responsiveness, which poses challenges in analysing cost flows and production times. A two-stage approach using an activity-based costing mechanism addresses these challenges well. It enables real-time cost accounting and decision-making, unlike traditional methods that rely on historical data. The authors validated this approach in a study. The results demonstrate the effectiveness of the proposed method in providing a detailed overview of costs and production times, thereby increasing the efficiency and competitiveness of manufacturers (Javed et al., 2025).

3. Research methodology

This paper aims to assess the use of costing methods in companies in the construction sector in the Slovak Republic and the Czech Republic in comparison with each other and, based on the findings, to make recommendations, assess the level of use of the margin-based (traditional) costing method and the Activity Based Costing method, to evaluate managers' awareness of the advantages and disadvantages of both approaches and evaluate the suitability of the costing methods for practice in businesses in the construction

sector. We chose the construction industry for the analysis because it is an essential sector of the economy; it is not dependent on the economic cycle, and in the event of a crisis, it could help stabilise the situation.

We performed the analysis on Slovak companies, and for comparison, we chose companies in the Czech Republic. The reason was the historical and cultural proximity of the countries, but especially the linguistic proximity, which is essential for data acquisition. However, the outputs can also be applied to other European countries, especially Eastern and Central Europe.

To meet the stated objective, we set out the following research questions and hypotheses:

Research questions:

RQ1: What costing methods do businesses operating in the construction sector use? How many companies use the ABC method?

RQ2: Are managers convinced of the suitability of the current costing method? Do they doubt the suitability of other methods?

RQ3: Why do some businesses consciously reject more modern, more accurate methods and remain with traditional cost calculations?

Hypotheses:

H1: We expect that there are statistically significant differences between the two countries analysed in the types of costing methods used.

H2: The most common reason for not using the ABC method is doubt about the suitability of this method for construction companies.

H3: Levels of doubt about the suitability of the ABC costing method vary by country.

The material for the analysis is the data obtained by a questionnaire survey accompanied by data from relevant published materials from a sample of 150 companies operating in the construction sector, of which 80 are businesses operating in the Slovak Republic, and 70 are businesses operating in the Czech Republic.

In the questionnaire, we looked at:

The division of enterprises by size (micro, small, medium-sized, and large). In the selected sample of businesses, we included companies focused on building construction, civil engineering works, and specialised construction works, which must be part of the construction processes.

In particular, we looked at data on: the types of costing methods that are currently used by construction businesses in practice, the reason for not using the ABC method (for those construction companies that do not use or plan to introduce this method) – we offered reasons for the choice: we do not know the ABC method, the ABC method is not suitable for our company, the expectation that implementation of the ABC project would be highly time-consuming, management doubts about the contribution of the project to the company, the natural resistance of employees to change, benefits obtained by the introduction of the ABC method.

Given the established hypotheses and nature of the data, we used the Chi-squared Test, the Chi-squared Data Distribution Test, the Wilcoxon Paired Test, and the Mann-Whitney U-Test for two independent selections for statistical analysis. We used each of these tests for individual hypotheses based on the nature of the specific data appearing for the given hypothesis. We carried out statistical analysis in the programme SPSS 22.

4. Research results and discussion

The sample consisted of 150 respondents. Of these, 80 companies in Slovakia represented 53.3%, and 70 in the Czech Republic represented 46.7% of the entire sample.

The largest group in the sample regarding company size were medium-sized enterprises, which accounted for 43.3 % of the sample. Conversely, the most minor numerous groups were microenterprises, accounting for only 12.7% of the sample.

Table 1. Distribution of the sample by country of operation

Country	Number	Percentage
Slovak Republic	80	53.3
Czech Republic	70	46.7
Total	150	100.0

Source: own research

Table 2. Distribution of the sample by size of the company

Size of the company	Number	Percentage
Micro enterprises	19	12.7
Small enterprises	44	29.3
Medium-sized enterprises	65	43.3
Large enterprises	22	14.7
Total	150	100.0

Source: own research

H1 We expect that there are statistically significant differences between the two countries analysed in the types of costing methods used.

Table 3. Costing methods used

Country	Costing method used			Total
	Margin based costing	Variable costing method	Activity-based costing	
Slovak Republic	49	3	28	80
Czech Republic	38	5	27	70
Total	87	8	55	150

Source: own research

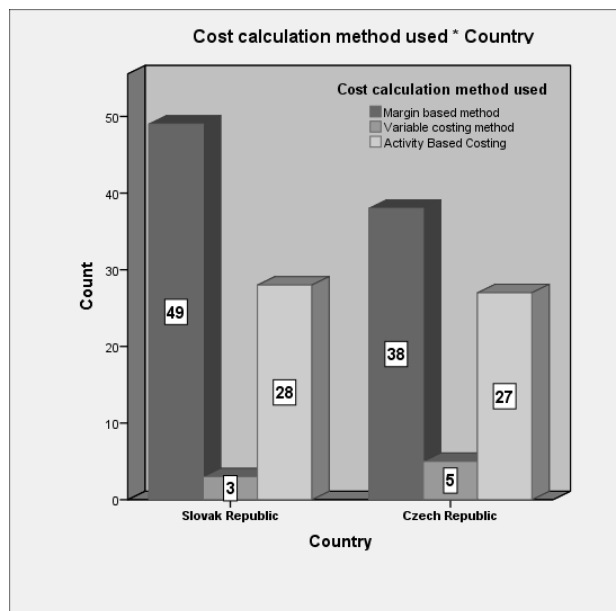


Fig. 1. The cost calculation method used

Source: own research

Based on the results in Table 3 and Figure 1, margin-based costing is the method used most often in both countries.

For the correct selection of the test for hypothesis 1, it is necessary to test the normality of the distribution of the variables represented in the sample. This means whether the test data has a Gauss curve distribution or not. Due to the nature of the variables, we will use non-parametric tests to test hypothesis 1.

For hypothesis 1, we examined whether there was a statistically significant difference in using the costing method in the country of operation. After considering the variables' nature, we used the non-parametric Chi-squared test to analyse the hypothesis.

Table 4. Chi-squared test

Chi-squared test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.248	2	0.536
Likelihood Ratio	1.251	2	0.535
Linear-by-Linear Association	0.457	1	0.499
N of Valid Cases	150		

Source: own research

If the value in the Pearson Chi-squared row in the Asymp Sig. Column (2-sided) is less than 0.05; we know that there is a statistically significant difference between the groups. In this case, the value is 0.536. Based on the results presented in Table 4, no statistically significant difference exists between businesses in Slovakia and the Czech Republic regarding using costing methods.

Hypothesis 1 was not confirmed.

H2 We expect that statistically significantly the most common reason for not using the ABC method is doubting the suitability of this method for construction companies.

Table 5. Reasons for not using the ABC method

Reason for not using the ABC method	Response	Number	Percentage
ABC method is not suitable for our company	Rather yes	30	46.2
	Certainly yes	35	53.8
	Total	65	100.0
Assumption of extended time for implementation of the entire project	Rather yes	27	41.5
	Certainly yes	38	58.5
	Total	65	100.0
Management doubts about the benefits of the project for the company	Rather yes	33	50.8
	Certainly yes	32	49.2
	Total	65	100.0
Natural resistance of employees to change	Definitely not	5	7.9
	Rather not	18	28.6
	Rather yes	40	63.5
	Total	63	100.0

Source: own research

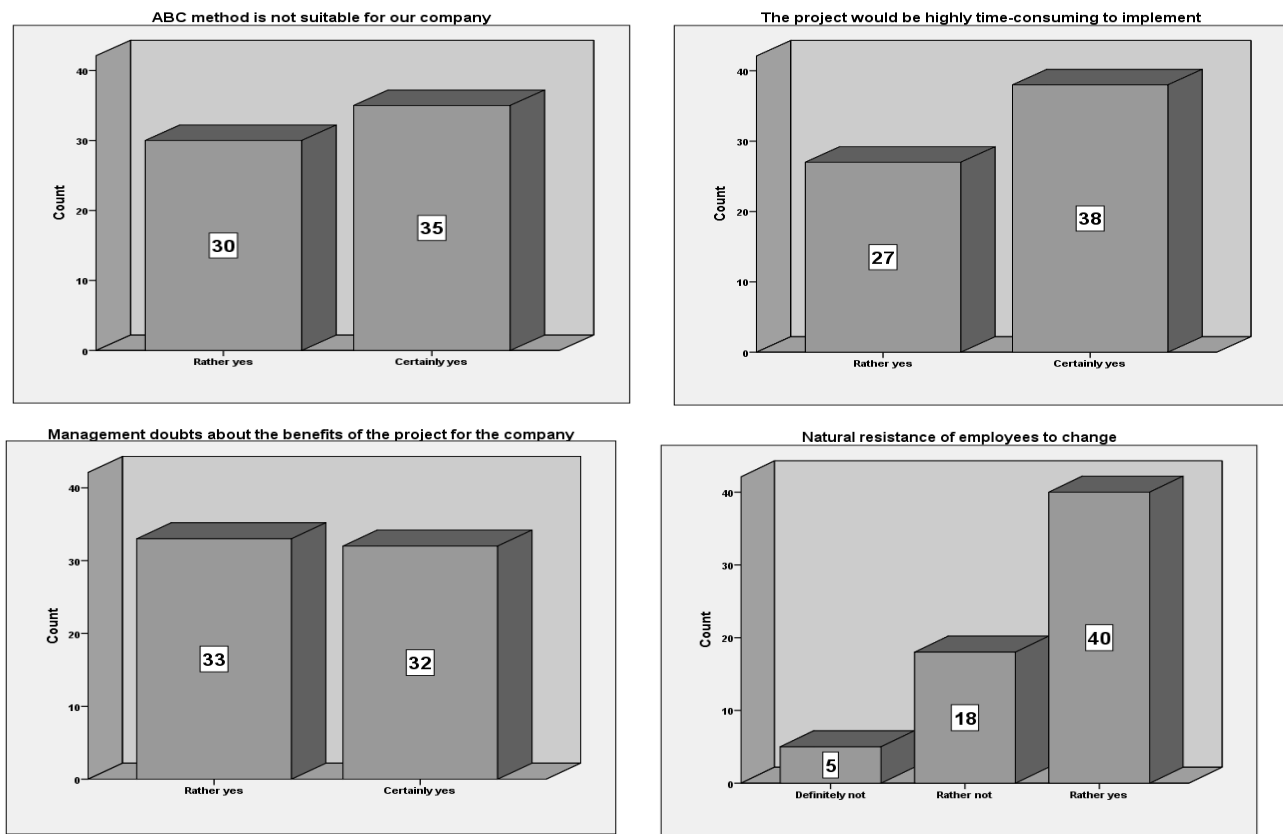


Figure 2. Reasons for not using the ABC method

Source: own research

Based on the results presented in Table 5 and Figure 2, the fewest respondents think that their most significant reason for not using the ABC method is the natural resistance of employees to change.

Based on the nature of the variables, we will use non-parametric tests to test hypothesis 2.

For hypothesis 2, we determine whether there is a statistically significant difference between the reasons for not using the ABC method. Considering the nature of the variables, we analysed the hypothesis using the non-parametric Wilcoxon paired test.

Table 6. Wilcoxon paired test

Wilcoxon paired test	Reasons for not using the ABC method	Pairs	Ranks	N	Mean Rank	Sum of Ranks
Z Asymp. Sig. (2-tailed)	-0.832 0.405	The project would be highly time-consuming to implement - ABC method is not suitable for our company	Negative Ranks	5	7.00	35.00
			Positive Ranks	8	7.00	56.00
			Ties	52		
			Total	65		
Z Asymp. Sig. (2-tailed)	-0.688 0.491	Management doubts about the benefits of the project for the company - ABC method is not suitable for our company	Negative Ranks	11	10.00	110.00
			Positive Ranks	8	10.00	80.00
			Ties	46		
			Total	65		
Z Asymp. Sig. (2-tailed)	-6.257 0.000	Natural resistance of employees to change - ABC method is not suitable for our company	Negative Ranks	47	24.00	1128.00
			Positive Ranks	0	0.00	0.00
			Ties	16		
			Total	63		
	-2.449		Negative Ranks	6	3.50	21.00

Z Asymp. Sig. (2-tailed)	0.014	Management doubts about the benefits of the project for the company - The project would be highly time-consuming to implement	Positive Ranks	0	0.00	0.00
			Ties	59		
			Total	65		
			Negative Ranks	48	24.50	1176.00
Z Asymp. Sig. (2-tailed)	-6.290 0.000	Natural resistance of employees to change - The project would be highly time-consuming to implement	Positive Ranks	0	0.00	0.00
			Ties	15		
			Total	63		
			Negative Ranks	45	23.00	1035.00
Z Asymp. Sig. (2-tailed)	-6.132 0.000	Natural resistance of employees to change - Management doubts about the benefits of the project for the company	Positive Ranks	0	0.00	0.00
			Ties	18		
			Total	63		
			Negative Ranks	45	23.00	1035.00

Source: own research

Wilcoxon's pairing test created six pairs of tables. These represent the comparison between the pairs. First, we look at the table on the left and the value on the Asymp. Sig. Row (2-tailed) is less than 0.05, then there is a statistically significant difference between the different disadvantages in that pair of tables. Then, we find out which direction to go from the paired comparison. Based on the results presented in Table 6, employees' natural resistance to change is statistically the least compelling reason not to use the ABC method. Subsequently, we found that the expectation that the project would be highly time-consuming to implement is statistically significantly considered a more compelling reason for not using the ABC method than management doubts about the project's contribution to the company. For other comparisons, we did not find a statistically significant difference.

Hypothesis 2 was not confirmed.

H3 We expect that the levels of doubt about the suitability of the ABC costing method for the company vary statistically significantly between companies operating in Slovakia and the Czech Republic.

Table 7. Degree of doubt about the suitability of the ABC costing method for the company

Country	Response	Number	Percentage
Slovak Republic	Rather yes	8	21.1
	Definitely not	30	78.9
	Total	38	100.0
Czech Republic	Rather yes	22	81.5
	Definitely not	5	18.5
	Total	27	100.0

Source: own elaboration

Based on the results presented in Table 7, we can observe that in terms of the degree of doubt about the suitability of the ABC costing method for a company, companies operating in Slovakia are more convinced that this method is unsuitable for them than companies operating in the Czech Republic.

Based on the nature of the variables, we use non-parametric tests to test hypothesis 3.

With Hypothesis 3, we need to determine whether there is a statistically significant difference in the level of doubt about the suitability of the ABC costing method for the company in relation to the country of operation. Considering the nature of the variables, we analysed the hypothesis using the non-parametric Mann-Whitney U-test for two independent selections.

Table 8. Mann-Whitney U-test

Country	N	Mean Rank	Mann-Whitney U-test	Degree of doubt about the suitability of the ABC calculation method for the company
Slovak Republic	38	41.16	Mann-Whitney U	203.000
Czech Republic	27	21.52	Wilcoxon W	581.000
Total	65		Z	-4.779
			Asymp. Sig. (2-tailed)	0.000

Source: own research

If Asymp. Sig. (2-tailed) is less than 0.05, then there is a statistically significant difference between the groups. Here, there is a value of 0.000, so we know that there is a statistically significant difference between the groups. The higher value for Mean Rank is the one for companies from Slovakia. Based on the results presented in Table 8, we can conclude that there is a statistically significant difference in the extent of doubt about the suitability of the ABC costing method for the company, namely that companies operating in Slovakia are statistically significantly more convinced than companies operating in the Czech Republic that this method is not suitable for their business.

Hypothesis 3 was confirmed.

From the theoretical perspective, we described the ABC method as a strategic tool important for the competitiveness of businesses in the industry. ABC is an alternative to traditional indirect cost calculation systems, which in some manner always distort the accounting of the actual costs. Although it has some limitations, the ABC system is adequate to determine actual indirect (overhead) costs and can enable the determination of more reasonable and competitive prices in the market. In practice, however, it remains neglected.

By analysis, we determined that 61.25% of companies in the construction industry in the Slovak Republic use the traditional margin-based costing method. 35% use the ABC method, and 3.75% use the variable costing method. Similarly, the most widely used costing method in the Czech Republic is the traditional margin-based method. It is used by 54.28% of businesses. The ABC method is used by 38.57% of companies (here, we include the businesses that currently use ABC in practice and the businesses that are putting this method into practice). The variable costing method is used by 7.14% of companies.

In practice, firms using ABC have defined the following as the most important advantages of the method implemented: more accurate cost identification, particularly for overhead type, and more efficient cost management. Conversely, optimising the portfolio of clients and products has been identified as the least important advantage of the ABC method.

The biggest reason for not using the ABC method would be doubt about its suitability for construction companies. This hypothesis was not confirmed. By analysis, the expectation that the implementation project would be highly time-consuming is considered to be statistically significantly a more compelling reason for not using the ABC method than management's doubts about the project's contribution to the company. The natural resistance of employees to change is statistically significantly the least compelling reason for not using the ABC method.

Next, we expected that the degree of doubt about the suitability of the ABC costing method for a company varies statistically significantly between companies operating in Slovakia and the Czech Republic. This hypothesis was confirmed. By analysis, we found that companies operating in Slovakia are more convinced of the method's unsuitability for a company than companies operating in the Czech Republic.

5. Conclusions and recommendations

We understand and describe ABC as a quality tool for determining overheads in construction companies. Through analysis, we find that in the practice of construction companies in the Slovak Republic and the Czech Republic, traditional costing methods prevail, precisely the margin-based cost calculation method. This method

for determining the sum of overheads uses one stable scheduling base for all types of overheads, resulting in the inaccuracy of these costings. It allocates overheads per production unit based on workload or machine hours, often leading to incorrect unit costs.

The greater the share of business costs that overheads form, the more critical the allocation of overheads becomes more important. It is not rare that for construction companies, direct costs represent less than 50% of the total costs; the rest are overheads – they cannot be quantified directly with individual cost items of the price of construction works but are related to the whole preparation of construction, including taking the contract. These are costs related to the management of activities and the operation of the production process, the cost of shipping, customer service, research, product design, or quality control. They cannot be specified directly by a costing unit but only through the selected scheduling base and the percentage margin base. As a rule, these costs are recorded according to the chart of accounts used or according to the overhead catalogue if they are kept in the company to categorise them according to their place of origin.

In practice, overhead costs are considered the most challenging part of calculating unit prices for construction works. Research question RQ1 was: What calculation methods are used by companies operating in the construction sector? How many companies use the ABC method?

Our analysis confirmed that the margin-based method usually accounts for overhead costs. This is mainly because it is easy to use. The level of overhead costs per calculation unit is calculated using a percentage margin – a rate determined from internal company accounting – or taken from the indicative price of the works. The basis for calculating overhead costs may vary.

In the Slovak Republic, 61.25% of companies in the construction industry use the traditional margin calculation method. 35% use the ABC method. Similarly, in the Czech Republic, the traditional margin-based method, the most widely used calculation method, is used by 54.28% of companies. The ABC method is used by 38.57% of companies. Hypothesis H1 was thus not confirmed (H1: We expect that there are statistically significant differences in the types of costing methods used between the two analysed countries).

ABC helps eliminate the inaccuracy of the margin-based method by allocating overhead costs to products according to the extent to which these products contribute to the overhead costs incurred. In addition to overhead costs incurred directly in production, the ABC method also allocates non-production costs, such as customer service and support, product design or logistics costs. For example, the ABC method is suitable if some products require significantly more customer support and other activities related to orders and delivery.

In the second research question RQ2, we addressed whether: Are managers convinced of the suitability of the current costing method? Do they doubt the suitability of other methods?

100% of managers (46.2% rather yes, 53.8% definitely yes) using the traditional costing method are convinced that the ABC method is unsuitable for their company. Likewise, all 100% of managers (here: 41.5% rather yes, 58.5% definitely yes) are convinced that using the ABC method is time-consuming and unnecessary. All managers doubt the benefits of another method for their company. Employees' natural resistance to changes is the least significant reason for not using the ABC method.

This was also confirmed by statistical analysis. We found that the expectation that the project implementation will be highly time-consuming is statistically significantly considered a more compelling reason for not using the ABC method than management doubts about the project's benefits for the company. In other comparisons, we did not find a statistically significant difference.

Hypothesis H2 was therefore not confirmed (H2: The most common reason for not using the ABC method is doubts about the suitability of this method for construction companies).

These are also the answers to the third research question, RQ3: Why do some companies consciously reject more modern, more accurate methods and remain with traditional cost calculations?

Managers who still use traditional mark-up costing methods are convinced of their suitability and sufficiency for their company. Most of them are not interested in changing it. They want to avoid unnecessarily time-consuming calculation work that would lead, in their opinion, to the same or similar result.

There is a statistically significant difference in the level of doubt about the suitability of the ABC costing method for the company between countries. Companies operating in Slovakia are statistically significantly more convinced than those operating in the Czech Republic that this method is unsuitable for their business. Hypothesis H3 was confirmed (H3: The level of doubts about the suitability of the ABC costing method varies across countries).

In summary, our analysis found that 35% of construction companies in the Slovak Republic and more than 38% of companies in the Czech Republic already use the ABC calculation method. In practice, construction companies that already use ABC identified the most important benefits as more accurate identification of costs, especially the type of overhead costs, and more effective cost management. They consider optimising the client and product portfolio as the least important benefit. These findings correspond with the results of other studies, according to which newer costing methods allow for real-time cost accounting and decision-making; unlike traditional methods that rely on historical data, they focus on creating efficient production activities based on product requirements, which allows for detailed cost analysis, adapting products to customer requirements (Javed, 2025), the main benefit of implementing the ABC method is the accurate allocation of costs to sub-activities, which allows for a better understanding of the economic efficiency of production processes (Zavrska & Besta, 2024), the results of the studies also indicate a positive correlation between user satisfaction with the ABC costing system and the extent of information obtained, the provision of accurate information, the quality of information and detailed cost information (Alexopoulou, 2024).

However, it is also necessary to bear in mind the limitations of the ABC method. Although the ABC method looks simple initially, its implementation and use are challenging and complex. It requires extensive preparatory work and analyses, information technologies that capture the measured parameters in operation, a qualified project team, and intensive support from company management. The method is demanding in data acquisition, and further problems may arise with allocating costs typical to several activities. Last but not least, there may be a problem with the relationship of the ABC module to other accounting methods used in financial accounting when pricing a product.

Through analysis, we found that construction company managers are mainly concerned that project implementation would be highly time-consuming. Management's doubts about the project's contribution to the business are a less compelling reason for not using ABC in practice. Managers of companies operating in Slovakia are more convinced of the unsuitability of this method for their company than companies operating in the Czech Republic.

In practice, the ABC method can be implemented in any company whose processes are sufficiently established to identify individual activities. However, companies must benefit sufficiently to compensate for the costs of its implementation and operation. Therefore, it is especially suitable for companies with a complex production process that produce more goods. If a company operates in a strong competitive environment that affects its pricing policy, it looks for systems and methods that categorise and allocate in more detail.

The analysis was conducted in the Slovak and Czech Republics, but the results can be applied to all countries with similar historical and economic backgrounds. Based on the above, we propose considering the introduction of the ABC costing method, especially in construction companies that meet the following conditions: when deciding to introduce the ABC method, a business should consider the structure of its costs. This is primarily the proportion of overheads within the company's total costs. The higher the proportion of overheads, the more inaccurate cost allocation using scheduling bases will be.

ABC is suitable for businesses whose production program is diversified - it contains multiple types of activities that differ from each other in their size, the size of production series or production technology. The more

diversified the production programme, the greater the inaccuracies that arise when using traditional costing methods.

Another factor influencing the suitability of introducing the method is the characteristics of the competitive environment. Fierce competition in the sector means that incorrect pricing or an unsuitable range can negatively affect the business. With intense competition, there is a growing need for knowledge of the exact costs of individual products.

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