

COST AND MANAGEMENT ACCOUNTING IN BUDGET-FUNDED ORGANIZATIONS IN BOSNIA AND HERZEGOVINA

Benina Veledar^{1, *}, Amra Gadžo² and Srđan Lalić³

Received: 18 March 2020.

Accepted: 2 June 2020.

DOI: 10.7906/indecs.18.2.16 Regular article

ABSTRACT

This article aims to provide information on the level of application of cost and management accounting practices in the budget-funded organizations in Bosnia and Herzegovina (hereinafter B&H) and the usefulness of these practices in the performance measurement in the B&H public sector. Namely, the current budget accounting system in B&H does not provide measurement and reporting on efficiency, effectiveness, and economy of the public administration, which results in a decrease in transparency and the creation of a favourable ground for corruption. Therefore, the study was conducted among 208 budget-funded organizations by using a survey questionnaire to evaluate the current level of theoretical and practical knowledge in the field of cost and management accounting and the possibilities for their application in the budget-funded organizations in B&H to improve current budget accounting system. Research results have shown that, even though respondents are less familiar with cost and management accounting practices, they believe that the introduction of new forms of accounting (cost and management accounting) into budget accounting system in B&H would improve the quality of accounting information as a basis for decision-making of the public management. This would enable performance measurement in the B&H public sector and therefore improve transparency and accountability of the public management.

KEY WORDS

budget accounting system, cost accounting, management accounting, performance measurement, Bosnia and Herzegovina

CLASSIFICATION

JEL: M41

¹University of Sarajevo – School of Economics and Business in Sarajevo Sarajevo, Bosnia and Herzegovina

²University of Tuzla – Faculty of Economics in Tuzla Tuzla, Bosnia and Herzegovina

³University of East Sarajevo – Faculty of Economics in Brcko Brcko, Bosnia and Herzegovina

INTRODUCTION

The accounting system encompasses the activities of collecting, recording, publishing and using accounting information to make quality business decisions. Accounting, as a separate business function, is the widest and most reliable information base for the production of financial and non-financial information for the needs of a wide range of users. Therefore, it is emphasized that the main task of accounting is to produce information that supports the management function. In the public sector, new tasks are being put before accounting. It must produce complete and reliable information on all segments of public consumption, making it an essential public management tool and public oversight tool. Budget accounting has many similarities, but also significant differences concerning company accounting. Similarities are reflected in the application of the double-entry bookkeeping system, the keeping of the general ledger, the preparation of basic financial statements, internal control, etc.

The differences between budget accounting and company accounting are, inter alia, the following: the operations of budget-funded organizations are not based on profit making; there are legal constraints on revenue generation and spending so that revenue cannot be confronted with expenditures; emphasis is placed on management accountability for public resources; use of fund accounting; etc. There is also a difference between users of accounting information in the private and public sectors. General-purpose financial statements of public sector entities aim to meet the information needs of four broad user groups: (i) the population, (ii) entities providing resources, (iii) government bodies, (iv) other interest groups cooperating with public entities on a commercial or non-commercial, voluntary or voluntary basis. However, the use of a purely normative budget accounting system, which is used to monitor operations and prepare financial statements intended for external users, does not meet the needs of efficient financial management in the budget organizations. A priority issue concerning improving the budget accounting system is the implementation of a comprehensive budget accounting model, which will allow for the monitoring of the purposeful spending of budget funds and the measurement of their effect on meeting public needs. In this context, the research proposition is set out, which assumes the following: Information provided by cost and management accounting must be an integral part of modelling modern budget accounting system, and thus enable performance measurement in the public sector and therefore improve transparency and accountability of the public management.

Unlike the private sector, whose performance is measured by the level of profit achieved, the performance of the individual budget organization and the public sector as a whole is measured by the degree to which the general and common needs of individuals and the wider community are met. It is necessary to measure a particular program and its achievement according to the purpose for which it was implemented. For the long-term sustainability of its activities and programs, public administration must reduce costs while improving the quality of services provided. A cost-cutting mission is an impossible mission without understanding the nature of cost and management accounting practices.

The goal of the article is to evaluate the current level of theoretical and practical knowledge in the field of cost and management accounting, and analize the possibilities for their application in the budget-funded organizations in B&H to improve current budget accounting system and enable performance measurement of the public management.

The structure of the article is as follows. First, an introduction to the research is defined, and the research goal was set. Second, a literature review is provided, which is oriented to the application of cost and management accounting in the budget accounting system and performance measurement in the public management. The third section, methodology, gives us an insight into how we collected data and explanation of statistical methods used. The

fourth section presents the results obtained through the descriptive statistics and regresion analysis. The fifth section, discussion, presents existing practices in the budget accounting system in B&H, discusses existing problems, and a proposes activities for overcoming them. Finally, conclusions and recommendations are provided in the sixth section of the article.

LITERATURE REVIEW

Cost accounting is significant as it provides an information basis for estimating the expenditure of government programs, projects, and activities. Management accounting becomes important when formulating and measuring financial and non-financial performance indicators for the evaluation of management processes. By combining appropriate instruments of cost and management accounting in the public sector, it is possible to build the methodology necessary to measure public service expenditures and to assess whether the effects of public services justify the costs associated with their production [1]. In addition to the private sector, cost accounting instruments can also be used in the public sector to control and eventually reduce expenditure. With the help of appropriate expenditure information, public management can: (i) compare expenditures and potential benefits of individual activities; (ii) compare expenditures over time; (iii) identify and reduce wasteful behaviour; and (iv) compare expenditures with similar benchmarking activities, identify the causes of deviations and take appropriate action accordingly to improve the business [2, 3].

The best way to determine if the goals of the business entities have been set and achieved is to measure performance [4, 5]. Although critical financial information derived from management and cost accounting instruments is crucial for rational decision making in profit-oriented entities, the importance and need for non-financial information are extremely emphasized within the public sector. Combining financial indicators with non-financial information further enhances the range of information management tools [1].

Performance Management (PM) in the public administration has a long history, and by all accounts, a long road ahead. Its development course, however, did not pass without problems. Practitioners, consultants, as well as the members of the academic community, are all searching for answers to the paradoxical and often problematic character of the PM. Various models and approaches to managing the public sector have been developed to maximize the efficient use of scarce resources, to increase transparency and accountability in public finances to the highest level and to ensure long-term economic development. One of the most important model, called New Public Management (NPM), originated at the end of the last millennium. Some of the goals of this movement are to improve performance in the public sector, to foster the accountability of budget-funded organizations to the users of their services, to reduce public spending, and to improve and increase public accountability [6].

Public administration reforms across the world have brought various approaches to performance measurement in the public sector. One of the newer tendencies is the correction of certain aspects of the NPM and its expansion towards the New Public Governance (NPG) [7]. This evolution is developing at different speeds in different European countries and public subjects. Performance management is gradually becoming an integral part of all modern arrangements of governance. Some authors go further and advocate the idea of a new movement called the New Public Service (NPS). This movement is a set of NPM-like ideas that focus on residents and their needs, and the main role of public administration should be to meet those needs in the best possible way [8]. Finding an optimal system for measuring public administration success is a challenge for scientists worldwide.

Several systems are being created to measure the performance of public sector entities similar to the so-called 3E group of indicators (efficiency, effectiveness, and economy). However,



there are also multidimensional approaches to performance measurement that emphasize the importance of the interconnections of different stakeholders within the public sector. In their study, Brignall and Modell [9] sought to find adequate performance metrics that a budget organization should discover to meet the information needs of the three major beneficiary groups: those providing funding; those providing professional services; and users of public services.

Smith and Street [10], in their study, work to measure the effectiveness of a budget organization using two methods: Data Volume Analysis (DEA) and Stochastic Frontier Analysis (SFA). Using the DEA methodology, in a combination with other methods, Rayp and Van de Sijpe [11] measured the efficiency of public expenditure management in 52 countries in development. Their research results have shown that the efficiency in the public sector is primarily determined by structural variable and management indicators and Asian countries have significantly greater efficiency in comparison to lower-income European countries.

Performance measurement in the public sector is also possible using Balanced Scorecard (BSC), which is primarily developed for the private sector to measure results from the following perspectives: financial, customer, internal operational processes, and learning and growth [12]. Using the BSC in the public sector is currently equally represented as it is in the private sector, however, it requires certain modifications. The most significant difference, in comparison to the private sector, is that in the public sector, customer perspective is placed first, that is, the customer must be thoroughly identified (donors, government, residents, and such) to satisfy their needs, while the financial perspective is placed second [13]. Detailed instructions about this are given by Niven, who transformed the concept of BSC into a tool, which is completely adapted to the public sector to improve the strategic and fiscal effectiveness and efficiency [14].

The question of measurement and improvement of the public administration efficiency is a subject of continuing research of the academic communities in the countries of the former Yugoslavia as well. A great number of studies place their focus on the improvement of the government efficiency as one of the key items within the public sector reform [15]. Jovanović and Vašiček [16] emphasize the significance of external and internal financial reports in public sector governance and argue the need for making public sector financial reporting in practice very close and similar to that of the entrepreneurship sector. Public sector subjects' financial reports are a source of data and information about spending public funds. They are a source of information about event and business processes that occurred during the year and make a foundation for decision-making since they enable recognition of good qualities of the program, as well as the weaknesses that should be corrected. Using performance indicators, it is possible to compare budget users of the same size, considering the number of employees, number of residents using their services, size of available funds, budget size (the quantity of income and expenses). They increase transparency and enable a constructive dialogue with the public administration [17]. By the introduction of program planning, integration of strategic and budget planning is realized, and this provides a possibility to measure the performance of individual programs, and with that, of the total operations of budget organizations. Program expenditure is a significant factor in political decision-making regarding program approval, modification, or eventual termination of the program. Many countries use cost information when conducting a cost-benefit analysis, all to efficiently allocate scarce resources between competing programs, projects and activities [18].

METHODOLOGY

To provide information on the level of application of cost and management accounting practices in the budget-funded organizations in B&H and usefulness of these practices in the performance measurement in the B&H public sector the study was conducted among 208 budget-funded organizations from all levels of government by using a survey questionnaire.

DATA

B&H is divided into two entities, the Federation of Bosnia and Herzegovina (hereinafter FB&H) with 51 % of the territory and the Republic of Srpska (hereinafter RS) with 49 % of the territory and the Brcko District (hereinafter BD). The FB&H is an entity divided into 10 cantons, each with its own branch of legislative, executive and the judiciary. The cantons are divided into 74 municipalities and 5 cities, all representing local self-government units. RS is an entity that is divided into 4 regions, which are further divided into 54 municipalities and 2 cities. The survey was conducted by mailing the questionnaire to the practitioners from the above mentioned budget organizations including: 79 municipalities/cities in FB&H, 56 municipalities/cities in RS and BD; 10 cantonal ministries for finance (from 10 cantons in FB&H); 16 ministries in entity FB&H; 16 ministries in entity RS; and 9 state-level ministries. The survey was sent also to the theorists in the field of finance, accounting and auditing from the 7 public universities in B&H (total number of 50). Out of 237 sent questionnaires, we received a response to 208 questionnaires, which means that we had a response rate of 87,8 %. The demographic characteristics of the respondents are shown in Table 1.

From Table 1, we may conclude that almost two-thirds of respondents are female (64,4 %); more than half of respondents are aged 36 to 55 (55,3 %); almost all respondents have an undergraduate, masters or doctorate (94,2 %). The table shows that most of the respondents (75,0 %) have one or more certificates relating to the profession. The largest number of respondents are certified accountants (51,4 %), followed by certified external and internal auditors (12,5 %),

Table 1. Demographic characteristics.

Characteristic of the surveyed respondents	Number of respondents (n = 208)	Structure, percentage	Cumulative percentage
G	Gender		
Male	74	35,58	35,58
Female	134	64,42	100,00
	Age		
Up to 25 years of age	2	0,96	0,96
26-35 years of age	52	25	25,96
36-45 years of age	42	20,19	46,15
46-55 years of age	73	35,10	81,25
56 and over	38	18,27	99,52
Not answered	1	0,48	100,00
Level of	of education		
Secondary school	7	3,37	3,37
Undergraduate	173	83,17	86,54
Masters/PhD	27	12,98	99,52
Not answered	1	0,48	100,00
	ting to the profess	sion	
Certified accounting technician	4	1,9	1,9
Certified accountant	107	51,4	53,4
Certified external auditor	20	9,6	63,0
Internal auditor	6	2,9	65,9
Certified accountant, Internal auditor	6	2,9	68,8
Certified external auditor, Internal auditor	4	1,9	70,7
Other certificates	9	4,3	75,0
No certificates	52	25,0	100,0



and some of them even have more than one certificate (4,8 %) We may conclude that it is very sure that respondents of such profile have special credibility to express their opinions on the research subject, which will ultimately contribute to the relevance and reliability of the research results, and the validity of offered measures for the improvement of the budgeting model. The institutional characteristics of the respondents are shown in Table 2.

In Table 2, we may see that budget organization from the sample are divided depending if they affiliate to the government administration at any level of governance in B&H (63,5 %), or if they are ordered budget-funded organizations (36,5 %). According to International Monetary Fund methodology, an integral part of the public sector is also public enterprises that were omitted from the sample since their accounting system is not based on principles of budget accounting. More than half of organizations from the sample (54,3 %) fall into the group of middle legal entities with 51 to 250 employees. In the sample, organizations from all levels of governance in B&H are included, and according to their total number per individual level of governance.

Table 2. Institutional character	eristics.
Organization	

Organization characteristics	Number of respondents (<i>n</i> = 208)	Structure, percentage	Cumulative percentage		
Affiliation t	o an adequate segment of	the public sector			
Other	76	36,54	36,54		
Government administration	132	63,46	100,00		
	Number of employees				
Up to 50 employees	70	33,65	33,65		
From 51 to 250 employees	113	54,33	87,98		
More than 250 employees	25	12,02	100,00		
The administrative level within B&H					
Government level	22	10,58	10,58		
Entity level	62	29,81	40,39		
Cantonal level	45	21,63	62,02		
Municipal level	78	37,50	99,52		
Other	1	0,48	100,00		

STATISTICAL METHODS

The following descriptive statistics methods were used to present the survey results: absolute and relative frequency distributions, cumulative relative frequencies, average value, standard deviation. To test the stated research proposition we used regression analysis for the variables derived using the Likert scale. Statistical processing was performed using the statistical program SPSS version 16,0.

RESULTS

KNOWLEDGE AND USE OF DIFFERENT FORMS OF ACCOUNTING

To evaluate respondents' familiarity with the theoretical background and practical application of financial, cost and management accounting in the budget accounting system, respondents were asked to rate their knowledge of grades 1 to 5 (1 - I)m not familiar at all, 5 - Im completely familiar) with the following aspects of accounting: financial accounting cost accounting and management accounting.

Table 3 shows the average of grades related to respondents' familiarity with the theoretical background and practical application of various aspects of accounting. The highest average knowledge of the theoretical background is related to financial accounting (4,41), which is

Table 3. Descriptive statistics of respondents' views on the topic: Familiarity of respondents with the theoretical background and practical application (1 - I)m not familiar at all, 5 - Im completely familiar).

	N	Average	St. Dev.			
Familiarity with the	Familiarity with the theoretical background					
Financial Accounting	208	4,41	0,846			
Cost Accounting	208	4,10	1,036			
Management Accounting	208	3,58	1,221			
Familiarity with practical application						
Financial Accounting	207	4,36	0,847			
Cost Accounting	208	3,89	1,087			
Management Accounting	207	3,28	1,273			

understandable since it is something that respondents have to deal with daily while performing their work tasks, most often with the help of an appropriate software solution. This is followed by cost accounting (estimated at 4,10), which is still underutilized in the accounting practices of budget users. The lowest average knowledge of the theoretical basis relates to management accounting (3,58), which has not yet taken root in accounting practice, both by private and public sector entities. Similar results were obtained concerning knowledge of the practical application of the aforementioned parts of accounting. Thus, the highest average is related to financial accounting (4,36), followed by cost accounting (3,89) and management accounting (3,28). It is recommended that in the future, through various types of education, the training of public servants in the field of cost and management accounting will be done, as this is the only way to identify and reap their benefits in the budget accounting system.

To evaluate respondents' attitude to the use of financial, cost and management accounting in the budget accounting system, respondents were asked to rate the level of use with a score of 1 to 5 (1 - Not used at all, 5 - Fully used) for the following forms accounting: financial accounting, cost accounting, and management accounting.

Table 4. Descriptive statistics of respondents' views on the use of forms of accounting within the existing budget accounting system (1 - Not used at all, 5 - Fully used).

	N	Average	St. Dev.	
Using forms of accounting within the existing budget accounting system				
Financial Accounting	207	4,28	0,886	
Cost Accounting	205	3,26	1,199	
Management Accounting	205	2,38	1,189	

Table 4 shows the average of estimates related to the use of particular forms of accounting (financial, cost, management) within the existing budget accounting system. The highest average of respondents' assessments of use within the existing budget accounting system was achieved for financial accounting (average score 4,28), followed by cost accounting with a slightly lower average score of 3,26, and management accounting with the lowest average score of 2,38.

Judging by the average marks in Table 3 and Table 4 respondents are most familiar with the theoretical basis and practical application of financial accounting as they use it in their daily work. Therefore, their view is that financial accounting can, to the greatest extent, contribute to the improvement of the budget accounting system. An additional circumstance that supports this claim is the fact that accounting software is nowadays available which makes it much easier to record business events, prepare financial statements and analyse them.

The foregoing supports the claim that cost and management accounting are underutilized in the accounting practices of budget users. We consider this unacceptable since it is impossible



to measure performance (efficiency, effectiveness, and economy) of public management without a cost and management accounting practices application in the budget accounting system. This is not yet the case since their application is not legally required, and therefore not sufficiently represented in the budget accounting system.

To evaluate the respondents' attitude on the usefulness of financial, cost and management accounting in the budget accounting system, respondents were asked to evaluate the usefulness of the information generated by each form of accounting with a rating from 1 to 5 (1 – Completely useless, 5 – Completely useful) for the following forms accounting: financial accounting, cost accounting and management accounting.

Table 5. Descriptive statistics of respondents' views on the use of forms of accounting within the existing budget accounting system (1 – Fully useless, 5 – Fully useful).

	N	Average	St. Dev.
The usefulness of the forms of accounting within			
the existing budget accounting system			
Financial Accounting	207	4,49	0,787
Cost Accounting	207	4,44	0,845
Management Accounting	205	4,34	0,980

Table 5 shows the average of the respondents' assessments regarding the contribution of information obtained by a particular form of accounting (financial, cost, management) to performance measurement in the public sector and improving transparency and accountability of the public management. Financial accounting has the highest average (4,49). It is followed by cost accounting with an average of 4,44 and management accounting with an average of 4,34.

However, it is interesting to note that, even though respondents have less knowledge and still not apply cost and management accounting practices, they believe that their implementation can greatly contribute to performance measurement in the public sector. In this regard, it is necessary to work on raising the level of knowledge in cost and management accounting, to find out the possibilities of their application in the budget accounting system, and thus improve the transparency and accountability of public administration.

CONTRIBUTION OF DIFFERENT FORMS OF ACCOUNTING

In this context, we consider cost and management accounting should be implemented within the budget accounting system in B&H. Both disciplines complement each other, with cost accounting dealing with the collection of information on incurred expenditures, their analysis, and information, while management accounting provides information support to management to make business decisions

In testing this assertion, it is assumed that greater knowledge of cost and management accounting statistically significantly influences respondents' attitudes about the importance of their application in modelling a modern budget accounting system. The proposition of the article was tested using the multiple regression method, whereby two models were created, for cost and management accounting.

COST ACCOUNTING

As a dependent variable, respondents' assessment of the contribution of information provided by cost accounting to performance measurement in the public sector and therefore transparency and accountability of the public management. Three independent variables were used. The first independent variable captures respondents' attitudes about their familiarity with the theoretical basis of cost accounting. The second independent variable captures respondents 'views on their familiarity with the practical application of cost accounting. The third independent variable captures respondents' views on the use of cost accounting within the existing budget accounting system.

Table 6 shows the results of the regression analysis. Regression analysis showed that variations in respondents' attitudes about knowledge of the theoretical basis and practical application, and the use of cost accounting in practice in the existing budget accounting system, could be interpreted by 22,0 % of the respondents' views on the contribution of information provided by cost accounting to performance measurement in the public sector and therefore transparency and accountability of the public management. If the corrected coefficient of determination is used, which is corrected for the number of independent variables, the percentage of variations interpreted is only slightly lower and amounts to 20,8 %. The variable measuring the respondents' familiarity with the theoretical basis of cost accounting is not statistically significant (p-value = 0,835). The variable measuring respondents' familiarity with the practical application of cost accounting is statistically significant with a 1 % probability (p-value = 0,000), and the same applies to the variable measuring respondents' attitude to the use of cost accounting within the existing budget accounting system.

Table 6. Regression analysis – dependent variable: respondents' assessment of the contribution of cost accounting information to performance measurement in the public sector and

therefore transparency and accountability of the public management.

	Estimates of regression coefficients	Standard error	<i>p</i> -value
Constant	2,843	0,237	0,000
Familiarity with theoretical background	0,020	0,097	0,835
Familiarity with practical application	0,300	0,095	0,002***
Using forms of accounting within the existing budget accounting system	0,154	0,047	0,001***
Determination coefficient	0,220		
Corrected coefficient of determination	0,208		

^{***}significant with a 1 % probability

MANAGEMENT ACCOUNTING

As a dependent variable, respondents' assessment of the contribution of information provided by management accounting to performance measurement in the public sector and therefore transparency and accountability of the public management. Three independent variables were used. The first independent variable includes respondents' views on their familiarity with the theoretical basis of management accounting. The second independent variable includes respondents' views on their familiarity with the practical application of management accounting. The third independent variable captures respondents' views on the use of management accounting within the existing budget accounting system. As it can be observed, a management accountant is not the same as a management, which task is to help the management in making business decisions with financial and non-financial information.

Table 7 shows the results of the regression analysis. Regression analysis showed that variations in respondents' attitudes about knowledge of the theoretical basis and practical application and use of management accounting in practice in the existing budget accounting system could be interpreted by 8,6 % of respondents' views on the contribution of management accounting information to performance measurement. If the corrected coefficient of determination is used, which is corrected for the number of independent variables, the percentage of variations interpreted is only slightly lower and is 7,2 %. Such a low degree of

Table 7. Regression analysis – dependent variable: respondents' assessment of the contribution of management accounting information to performance measurement in the public sector and therefore transparency and accountability of the public management.

	Estimates of regression coefficients	Standard error	<i>p</i> -value
Constant	3,439	14,369	0,000
Familiarity with theoretical background	0,040	0,434	0,665
Familiarity with practical application	0,167	1,872	0,063*
Using forms of accounting within the existing budget accounting system	0,084	1,445	0,150
Determination coefficient		0,086	
Corrected coefficient of determination	0,072		

^{***}significant with a 10 % probability

variation is the result of the fact that management accounting has been used to a lesser extent in modern budget accounting practice. The variable measuring respondents' familiarity with the theoretical basis of management accounting is not statistically significant (p-value = 0,835), and the same is true of the variable measuring respondents' attitude to the use of management accounting within the existing budget accounting system. The variable measuring respondents' familiarity with the practical application of management accounting is statistically significant with a 10 % probability (p-value = 0,063).

Regression analysis in both cases showed that greater knowledge of cost and management accounting statistically significantly influences respondents' attitudes about the importance of its application in modelling a modern budget accounting system. From all of the above, it can be concluded that the budget accounting system with integrated cost and management accounting plays a significant role in ensuring transparency and accountability when managing the public sector.

DISCUSSION

Analysing the documentation and established practices of budget-funded organizations at all levels of government in B&H in recent years, we can see that most of them used the conventional planning approach in the planning and budgeting process in such a way that the process was concentrated within the finance department, with relatively poor management involvement. The most common reasons for this are lack of knowledge and commitment of staff, short deadlines and inadequate support of public management in the planning process in general. The result of this practice is the inability to evaluate the performance of a budget organization in performing its activities, even assuming the absolute realization of the budget, ie. if all planned revenues are collected and all planned expenditures are realized following the relevant legal regulations. This is precisely the main drawback of conventional budgeting.

Even though the existing laws and by-laws, which provide for the implementation of programmatic classification of public expenditures by budget-funded organizations at all levels of government in B&H, there is a lack of initiative and creativity regarding the preparation of budget requests in the program format. In particular, the underdevelopment of the performance indicators of the candidate programs is expressed, which prevents their quality analysis and making optimal decisions on priorities when allocating limited budgetary resources. The introduction of new forms of accounting (cost and management accounting) into the budget accounting system in B&H would improve the quality of accounting information as a basis for the decision-making of public management. This would enable performance measurement in the B&H public sector and therefore improve transparency and accountability of the public management.

One of the main prerequisites for the implementation of cost and management accounting instruments in the budget accounting system is the change in the current practice of recognizing the elements of financial statements of budget organizations. It is recommended to switch to accrual accounting to enable the application of International Public Sector Accounting Standards. It is a practice that is preferred in the accounting systems of the budgets of EU Member States and which is imperative in reforming the public administration of countries aspiring to become its members. The main advantage of financial statements prepared using the accrual accounting basis is that they provide a quality information base for managing assets, liabilities, revenues and expenses, and effective internal and external supervision within the public sector. This will mean abandoning the stereotypical budgeting principle that is still applicable today and moving to more modern budgeting principles, which is a prerequisite for performance measurement.

CONCLUSION

In this article we conducted study among 208 budget-funded organizations in order to analyze the level of theoretical and practical knowledge in the field of cost and managerial accounting that public servants in BiH have. Research results have shown that despite the fact that respondents are less familiar with cost and management accounting practices, they believe that the introduction of these forms of accounting into budget accounting system in B&H would improve the quality of accounting information as a basis for decision-making of the public management. This would enable performance measurement in the B&H public sector and therefore improve transparency and accountability of the public management.

Research results of the previously conducted studies in other countries also showed that the budget accounting system with integrated cost and management accounting plays a significant role in ensuring transparency and accountability when managing the public sector.

From all of the above, it can be concluded that application of cost and management accounting in the budget accounting system in B&H would also improve the quality of accounting information as a basis for the decision-making of public management. This would enable performance measurement in the B&H public sector and therefore improve transparency and accountability of the public management.

The main limitation of the research is the fact that the focus of interest is placed on budget organizations, which represent the largest, but not the only, component of the public sector. Public companies, as an important factor within the public sector, were omitted from the analysis because of their specificity. Specifically, public enterprises are state-owned business entities whose accounting framework is the same as that of private enterprises. This means that they are already largely structured as well as for profit-oriented entities since they apply accrual accounting basis, International Accounting Standards and International Financial Reporting Standards. However, this does not indicate that public companies do not encounter similar problems, as do budget-funded organizations when delivering their goods and services. In this regard, the opportunity opens up for similar research, which will focus on this segment of the public sector. This would allow creating a more complete picture of the advantages and disadvantages of the accounting information system of the entire public sector in B&H.

REFERENCES

[1] Vašiček, V. and Vašiček, D.: Public sector Accounting, Auditing and Control in Croatia – Public Sector Accounting, Auditing and Control in South Eastern Europe. Palgrave Macmillan, Springer Nature Switzerland AGB, 2019,



- [2] Čičak, J. and Vašiček, D.: *Determining the Level of Accounting Conservatism through* the Fuzzy Logic System.
 - Business Systems Research 10(1), 88-101, 2019,
 - http://dx.doi.org/10.2478/bsrj-2019-0007,

http://dx.doi.org/10.5772/59956,

- [3] IFAC IPSASB: *Study 12: Perspectives of Cost Accounting for Government*. http://www.ifac.org/publicsector, accessed 14th November 2019,
- [4] Morales, S.N.; Martínez, L.R.; Gómez, J.A.H., López, R.R., and Torres-Argüelles, V.: *Predictors of organizational resilience by factorial analysis*. International Journal of Engineering Business Management **11**(2), 1-13, 2019,
- [5] Tyll, L. and Pohl, P.: Diminishing Role of Accounting Information for Investment Decisions. International Journal of Engineering Business Management 6, 6-30, 2014,
- [6] Barzelay, M.: *The New Public Management. Improving Research and Policy Dialogue*. University of California Press, Berkeley, 2001,
- [7] Verbeeten, F.H.M. and Speklé, R.F.: *Management Control, Results-Oriented Culture and Public Sector Performance: Empirical Evidence on New Public Management*. Organization Studies **36**(7), 953-978, 2015, http://dx.doi.org/10.1177/0170840615580014,
- [8] Denhardt, R. and Denhardt, J.: *The New Public Service: Serving Rather than Steering*. Public Administration Review **60**(6), 549-559, 2000, http://dx.doi.org/10.1111/0033-3352.00117,
- [9] Brignall, S. and Modell, S.: An Institutional Perspective on Performance Measurement and Management in the 'New Public Sector. Management Accounting Research 11(3), 281-306, 2000, http://dx.doi.org/10.1006/mare.2000.0136,
- [10] Smith, P.C. and Street, A.: Measuring the efficiency of public services: the limits of analysis. Journal of the Royal Statistical Society: Series A 168(2), 401-417, 2004,
- [11] Rayp, G. and Van de Sijpe, N.: *Measuring and Explaining Government Efficiency in Developing Countries*.

 The Journal of Development Studies **43**(2), 360-381, 2007,
 - http://dx.doi.org/10.1080/00220380601125230,

http://dx.doi.org/10.1111/j.1467-985X.2005.00355.x,

- [12] Kaplan, R.S. and Norton, D.P.: *The Strategy-Focused Organization*. Harvard Business School Press, Boston, 2001,
- [13] Kaplan, R.S.: Strategic Performance Measurement and Management in Nonprofit Organizations.

Nonprofit Management & Leadership **11**(3), 353-370, 2001, http://dx.doi.org/10.1002/nml.11308,

- [14] Niven, P.R.: *Balanced Scorecard: Step-by-Step for Government and Nonprofit Agencies*. John Wiley and Sons, New Jork, 2008,
- [15] Palić, I.; Hodžić, S. and Dumičić, K.: Personal Income Taxation Determinants in Federation of Bosnia and Herzegovina.

 Business Systems Research 10(1), 153-163, 2019, http://dx.doi.org/10.2478/bsrj-2019-0011,
- [16] Jovanović, T. and Vašiček, V.: The Role and Application of Accounting and Budgeting Information in Government Financial Management Process a Qualitative Study in Slovenia.
 - Public Money & Management 1, 1-8, 2020,
- [17] Crnković-Stumpf, B.: *Planiranje i kontrola troškova u javnom sektoru*. In Croatian. In: Vašiček, D., ed.: *II. Konferencija Hrvatski javni sektor praksa i perspektive*. Croatian Association of Accountants and Financial Experts, Zagreb, 2008,



[18] Veledar, B.: The Impact of Implementing Program B,udgeting and Responsibility Accounting on the Prevention of Corruption: Perception of Experts from the Public Sector of Bosnia and Herzegovina.

In: Proceedings of the ENTRENOVA – ENTerprise Research InNOVAtion Conference. IRENET – Society for Advancing Innovation and Research in Economy, Zagreb, 2015.



© 2020. This work is licensed under

http://creativecommons.org/licenses/by/4.0/ (the "License"). Notwithstanding the ProQuest Terms and Conditions, you may use this content in accordance with the terms of the License.

