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METHODS OF PUBLIC SECTOR ACCOUNTING: HISTORICAL RESEARCH

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Abstract

Which method of accounting should be preferred for the public sector: cash-budgetary or accrual - is a subject of scientific discussion for several centuries. In Russia since olden times the priority was given to cash-budgetary model of accounting, while the accrual accounting found limited application in some units of public economy. Five years ago sudden changes have been made to the Russian governmental accounting. The essence of these changes was in adoption of private sector accounting model throughout the public sector.

Fast diffusion of accrual accounting in Russian public sector has generated questions, the answers on which are not evident. Among them are the following: whether it is necessary to recognize all state capital assets and how to value some of them; is the charging of depreciation maintains capital of the State; how to calculate and interpret profit or loss rate of government entities and whether it can be used for decision-making purposes? And the general question is: does accrual accounting deliver managerial effectiveness?

The same questions were asked in the past. The given research turns to the history of accounting and compares public accounting models of famous scientists: M. Puehberg, G. Cerboni, F. Hugli and A. Rudanovsky. It shows that contradictions between the purpose of public units' activity and methods of commercial accounting lead to a number of accounting paradoxes and that the public sector accounting should have its own method, distinct from accepted in private sector.

Key Words: Cash-budgetary accounting, accrual accounting, public sector, capital assets, depreciation, income and expenditure

Introduction

In the early nineties the new public management (NPM) paradigm was recognized, and then distributed all over the world. It introduced market mechanisms in public sector 'as a means of improving its governance and control' (Pina *et al.*, 2009, p. 766). In the Russian Federation NPM ideas have been defined in the 'Concept of budgetary process reforming in 2004-2006' (2004).

Transformations in public sector accounting were included in number of measures, called to change budgetary process. Galina Makleva, the Head of the Federal Exchequer Department of the Public Sector Accounting and Reporting (2004, p. 27-28) noted that:

Such system of public sector accounting and reporting should be created, which could not only trace correctness of budgetary expenses, but also its productivity on each fiscal year... and also give the chance to evaluate objectively assets and liabilities of the Russian Federation public authorities.

The basic idea of the Russian public sector accounting reform is in adoption of private sector practices. One of the authors of this reform Sergey Romanov, The Deputy Director of Budgetary Policy and Methodology Department of the Ministry of Finance, has identified operation result - key element of private sector financial reporting - as new, very important

object of public sector accounting, 'forming finally result of public sector activity' (2005). As well, in the Concept (2004) the accrual method, depreciation, cost of operations - terms, traditionally used in private sector accounting practice, are mentioned.

Ideas for the new concept of the Russian public sector accounting came from two international sources (Zelensky, 2004, p. 20-21): 'The Government Finance Statistics Manual 2001' (GFSM 2001), issued by the International Monetary Fund, and 'The International Public Sector Accounting Standards' (IPSAS) of the International Federation of Accountants (IFAC). Both documents are corresponding with the private sector accounting standards. The GFSM 2001 introduces accrual accounting and balance sheet for government finance statistics (Kohler, 2001, p. vii). The IPSAS Board develops accrual IPSASs that are converged with International Financial Reporting Standards (IFRSs). In undertaking that process, the IPSASB attempts, wherever possible, to maintain the accounting treatment and original text of the IFRSs (IPSAS, 2007, p.4-5).

Officials of the Russian Ministry of Finance and Federal Exchequer explained their choice of GFSM and, especially, IPSAS as the public accounting reform basis, by its approval in other countries. Tatyana Nesterenko, the Head of the Russian Federal Exchequer in 1998-2007, advocated accrual accounting adoption by the Russian Federation public sector following the other world, due to the set of reasons:

- as the state has ceased to be a monopolist in the socially-focused services (public health, education, culture, cinema, sports, etc.) their price must be comparable with the same services in private sector, and cost-based on this occasion;
- it is necessary for politicians to get information about state or municipal liabilities in order to plan cash outflows; in this sense the information, which accrual-based accounting create, reflecting the future financial consequences of current financial decisions;
- in some countries the information on net assets of the state has the great political value, especially before elections, when society is analyzing, how much well-being of nation has increased during the last governing;
- Russia, acting as the borrower on international financial markets, should convince creditors in a condition to repay its debts (Nesterenko, 2004, p.40-41).

These arguments seemed convincing until new rules of the public sector accounting became obligatory in all Russian public entities and public accountants has generated first questions, the answers on which were not evident. Among them are the following: whether it is necessary to recognize all state capital assets and how to value some of them; is the charging of depreciation maintains capital of the State; how to calculate and interpret profit or loss rate of government entities and whether it can be used for decision-making purposes? And the general question is: does accrual accounting deliver managerial effectiveness?

Russian experience of accrual accounting adoption in public sector proceeds not for long to make conclusions about its efficiency. So, the discussion about correctness of the last reform is not developed yet in Russian scientific literature. Other countries, using principles of private sector accounting in public sector for more than ten years, have already felt some disappointment in results of public sector accounting transformation. The following comment of I. Lapsley *et al.* (2009, p.721) support this statement:

However,* while... a number of countries... had adopted accrual accounting for government (including the UK, USA, New Zeland and Australia for central government and France, Italy and Germany for local government), there was only limited evidence available on the efficacy of these systems.

On the Congress of the European Association of Accountants, passed in Finland in May, 2009, the dilemma, what accounting model is more adapted to a public economy: cash

(budgetary) or accrual accounting - again became a discussion subject. Sheila Ellwood, representing researches of applying commercial accounting approaches to the public sector, executed in the University of Bristol, questions finality of the public sector accounting model choice. She recognised debatable several points: whether the public sector accounting should be under the same standards, as commercial or under its own standards; how to recognise and value assets; whether it is possible to use the dynamic accounting in public sector (Ellwood, 2009)?

The same or similar questions were asked in the past, that's why this paper turns to the history of accounting and compares public accounting models of famous scientists: M. Puehberg, G. Cerboni, F. Hiigli and A. Rudanovsky. All of them were involved, at various times and in the different countries, in public sector accounting transformations, consisting in introduction of 'advanced' methods of private sector accounting.

Puehberg's Budgetary Accounting

It is known that one of the first attempts to adopt private sector practices into the public accounting took place in 1770 in Austro-Hungarian Empire. Reform of public accounting of that time is connected with the name of Empress Maria Theresia. She appointed the special commission for discussion of using double-entry book-keeping (business accounting model, became fashionable in Europe) in the Austria-Hungarian state economy. The commission has answered in the affirmative and soon Austria-Hungary began to apply new system of the state accounting. It operated two years and has appeared unsuccessful. In 1772 Austria-Hungary has returned to budgetary accounting.

It is necessary to notice that at that time large privately owned, princely and public economies of Austro-Hungarian Empire preferred budget accounting. Cash receipts and expenses were in the account of these economies, thus stock and capital assets remained outside accounting books. The state farm differed from other sectors of Austria-Hungarian economy only in the sizes of incomes and expenses, so it would be natural to use the same accounting principles, but reformers ignored them.

The Russian scientist A. Galagan (1879-1938), analyzing experience of Austria-Hungary, has come to a conclusion that budget accounting have been rejected by officials, as at that time its theory was at an initial stage of development. The double-entry bookkeeping with accrual method was considered as new scientific system of accountancy, while budget accounting - as out-of-date practice (Galagan, 1914, c.14).

The first work under the theory of budget accounting of the Austrian author M. Puehberg was issued in 1762 however at publication it has not been far-famed. Only the disappointment in results of double-entry bookkeeping application in the Austria-Hungarian state farm has compelled reformers to address to ideas of the scientist.

Puehberg scientifically grounded and essentially changed budget accounting. First of all, he has added traditional cash inflow-outflow accounting with a new element which has allowed it to surpass double-entry bookkeeping regarding possibilities of public finances control and management. He has decided to account not only cash receipts and expenses, but also the rights to their execution, i.e. budget assignments. The budget accounting has received function, not peculiar to other accounting systems - control over budget execution and allocation of money for a budget undertaking. Each type of income and expenses, learnt Puehberg, must be reflected in corresponding budget article and registered in special account. Linear record on accounts of budgeted and actual incomes and expenses would demonstrate deviations from budget assignments.

Puehberg also conducted common accounting system for the managers of budgetary financing and officials responsible for the budget execution. 'Such order not simply strengthens control, - underlines Y. Sokolov, making comments on Puehberg, - it an organic part of the budgetary system which each link operates within strictly limited competence' (Sokolov, 1996, p. 206-207).

Thus Puehberg merit in the theory of accountancy by creating new improved model of budget accounting. This model, in contrast to previous, could account and compare budgeted and actual incomes and expenses. Absence of assets and liabilities accountability was its lack - it did not give data on a financial position of the state economy.

Despite noted lack, Puehberg's budget accounting became popular not only in Austria-Hungary, but also in other countries of Europe, both among practical accountants and academicians. His theory was lectured on university chairs of Vienna, Budapest, Prague and Lviv, and also of Italy and Germany. The end of the 18th and first half of the 19th centuries could be recognised as an epoch of Puehberg's accounting model domination. However at the end of the 19th century it has conceded, just for time, its positions for the new registration theory.

Cerboni's Logismografia

If we put a task to restore logic of the public accounting development and its interrelations with private sector practices, we need to address to experience of Italy in the second half of the 19th century. In sixtieth Ferrara, the Minister of Finance of this recently incorporated country has formed the commission for development of the bill on the governmental accounting. Known Italian accountant G. Cerboni was one of its participants.

The new law entered principles of the private-sector accounting into the public sector. Not only receipts and expenses, but also assets and liabilities became accountable. Several years later Cerboni has suggested extending his own system of accounting named 'logismografia'. The suggestion has been approved, and logismografia was adopted in the Chief Accounts Office, in the Ministry of Defence, in the Ministry of Agriculture, Mails and Telegraphs, in Deposit-Loan State Bank and in provincial exchequers. These and other facts, as Austria-Hungary experience, are known in Russia from A. Galagan's works (1914).

Logismografia is based on juridical theory of double-entry. Formulating accounting rules of the economic life facts (*F*), its author recognised that each of them leads to occurrence of the right of the requirement on the one hand and liabilities - with another. Cherboni considered all *F* as change of the rights and obligations of the proprietor, meaning that all contracts consist from his name. As consequence, the numbers of the operations which he registered in accountancy were doubled. So, operation of asset receipt from suppliers was registered in logismografia as two independent events for behind it there are two contracts. The first one proprietor concludes with the supplier, the second - with the person responsible for property safety. Under the first contract at the moment of asset receipt the proprietor admits itself the debtor (should pay for the goods), on the second - the creditor (transfers the goods to the responsible person). Thus, logismografia unlike any other system, provided data acquisition about person, responsible for property, whom to ask in case of its loss.

Cerboni's accountancy advantage in comparison with Puehberg's is in maintenance of property safety. His method makes assets an object of regular accounting and the means, spent on acquisition of property, recognized their as assets and are capitalized in balance. Logismografia also recognize the rights of the requirement (debts receivable) and the duties to pay (accounts payable). So, Cerboni has introduced accrual method in the public accounting and thus became open to criticism this approach.

Accrual method kept public accounting away from the budget. While Puehberg introduced control over budget execution in public accounting, Cerboni's logismografia has lost it. This method is helpless when expenses accrued within the estimate limits, but not paid, and, on the contrary, expenses accrued over the estimate. At least four parities of the estimate, accrued revenues/expenses and paid revenues/expenses are possible.

Situation 1. The accrued and paid revenues/expenses correspond to budget assignments, the estimate is executed. It's an ideal situation, indifferent to the model of accounting.

The second, third and fourth situations illustrate different deviations from an ideal and logismografia's possibility to catch and account these deviations.

Situation 2. Budget assignments coincide with the accrued revenues/expenses, but the estimate is not executed, as the accrued liabilities are not paid completely. Logismografia does not demonstrate the difference, as cash receipts and expenses are not compared with the estimate.

Situation 3. Accrued revenues/expenses are exceeding the estimate, but paid for the estimate. Infringement of financial discipline takes place - the public entity was obliged to collect receipts and (or) to make the expenses which have been not provided by the estimate. In logismografia this infringement will not be appreciable, as only the accrued revenues and expenses are accounted while budgeted are ignored.

Situation 4. Revenues and (or) expenses are accrued and paid in the sum smaller, than in the estimate. Again logismografia does not show that the accrued and paid revenues and (or) expenses do not correspond to the budgeted, and the estimate is not executed.

Cerboni considered logismografia as universal system, equally suitable for the private and public entities in spite of the fact that the purposes of their activity differed. So several points distinguish logismografia from Puehberg's budget accounting:

1) logismografia is based on accrual method, so the total sum of revenues and expenses recognised under accrual accounting in Cherboni's accountancy does not coincide with corresponding indicators in Puehberg's cash-based accountancy;

2) in logismografia budget assignments are not accounted, whereas Puehberg considered it necessary;

3) logismografia identify and account assets and liabilities, while Puehberg leaves these objects behind accounting framework.

Logismografia as the practical bookkeeping existed not for long. It was applied in a state farm of Italy only until Cerboni was its Chief Accountant. Galagan noted, that after Cherboni has left the post (on April, 30th, 1891), 'logismografia has been cancelled at first in exchequers and the separate ministries, and then, on insisting of minister-president L.Lutsatti in the Chief Accounting Office (1892)' (1914, c.19).

Hiigli's constant accounting

The next attempt of commercial accounting adoption to the public sector took place in Switzerland.

Till second half of the 19th century traditional cash-budgetary model of accounting was applied in the Swiss cantons. Obviously, plans of business accounting principles application were maturing. In 1870 accounting transformations in one of the largest cantons of Switzerland - canton Bern - have begun. They were headed by the person perfectly informed on lacks of canton's accountancy - F. Hiigli, the Chief of Financial Control. In 1873 he introduced his own model - so-called 'constant accounting'¹.

Hiigli was familiar both with the Puehberg's budgeting accounting and with the Cerboni's logismografia, so he could draw on predecessors' experience.

Puehberg and Hiigli were uniform in aspiration to reflect in governmental accounting the results of budget execution, but they understood this process differently. Puehberg's budget accounting compared budget and actual revenues and expenses. Hiigli solved another problem: to compare both the prescribed and the executed receipts and expenses. Thus under 'prescribed' he understood receipts and expenses accrued at the moment, when the budget get the right to require to the third parties or the third parties get the right to require to the budget. Hiigli considered, contrary to Puehberg, that the estimate is not an active document, but the usual plan of entity's cash flows. On his opinion, it's important to verify with the estimate the fulfillment of operations, but not binding to supervise its execution. Thus, Hiigli did not recognise the estimate as an object of the public accounting, and control over its execution - as its problem.

Hiigli considered incomes and expenses prescribing as important control element of constant accounting. By its rules the accounts department had no right to accrue revenues or expenses while the administration has not accepted corresponding documents. The accepted documents went to accounts department and cash desk. The accounts department acquired the right to accrue revenues and expenses, cash desk - to receive or give out money resources within the appointed sums. The difference between accrued and paid incomes equaled to the sum of a shortage of the payer on the end of the accounting period, between the added and paid expenses - the sum of not paid documents. If the public entity made the estimate, in accounting registers budget appointments could be additionally specified - Hiigli did not give them such value, as Puehberg.

Hiigli's constant accounting as well as Cerboni's logismografia, considered necessary to record assets. The result of financial performance under this method treated as net assets increase. Meanwhile Hiigli put an equals sign between this indicator and operation result - profit or loss - of public entity.

Rudanovsky's public accounting

Enthusiasm for the idea of two opposite accounting models rapprochement has captured Russia in the 19th century. A. Rudanovsky promoted this idea in Russia better than anybody else. In the beginning of the 20th century he was the Chief Accountant of the Moscow Town Council and has received popularity as the author of fundamental books under the public accounting .

Rudanovsky divided sights of Cerboni and Hiigli (last one he considered as the teacher), but did not followed them completely. He created his own model of public accounting, not so well-known outside of Russia.

Following Cerboni and Hiigli, he recognised possibility of commercial accounting approaches to the public sector. At the same time Rudanovsky, like Puehberg, considered it necessary to record budget assignments. However, he suggested comparing the estimate not only with cash receipts and payments, but also with the sums of the accrued revenues and expenses.

He has organized the current accounting so that to compare budget revenues with the accrued revenues, and budget expenses - with the accrued expenses. Thus, the public accounting became the tool of control over budget execution at the stage of contracts conclusion.

In Rudanovsky's accounting the accrued revenues did not compared with the accrued expenses, and the operation result under accrual method did not calculated. In commercial

accounting operation result calculation assumes comparison - during the current accounting period - of those expenses which have ensured required result. If entity purpose to earn profit this indicator becomes important. In a state farm, confirmed Rudanovsky, the profit, is impossible. The public entity incurs expenses with other purpose - to carry out the task of the proprietor, fixed in the estimate. The difference between the received revenues and the suffered expenses means for this entity non-observance of budget appointments. There is no necessity for comparison of accrued revenues and expenses and in distribution of them, with a view of correct comparison, between several accounting periods. The expenses should be recognized at the moment of its fulfilment without dependence from its character and possibility of future benefits.

The assets accounting Rudanovsky created, changing rules both commercial and public accounting. Purchase of assets he treated not as the budget expense (like in cash accounting) and not as the capitalized future expenses (like in dynamic accrual accounting). He recorded this operation, on the one hand, as increase in cost of property, and on the other hand - as accumulation of budget expenses in special fund - the property capital.

Rudanovsky was the first one, who has considered a problem of property repayment and depreciation charge in public accounting. In his opinion depreciation is not the mechanism of expenses on property purchase distribution in time, it is a capital reduction. Such treatment of depreciation has been justified, as the property was purchased not for the purpose of the income accumulation. Comparison of expenses on property to incomes of its operation during service life had no bases.

Rudanovsky also was the first who has mentioned questions of an estimation of property in the public accounting. Cerboni and Hiigli recognized property as an object of the public accounting, but have left its estimation behind frameworks of their theories. Rudanovsky preferred an initial estimation of assets. He wrote: 'It is necessary to avoid any revaluation of material accounts before the actual transaction' (1925, c.42).

Rudanovsky managed to finish synthesis of cash-budget and accrual accounting and created almost faultless system of accounting for the public sector. Unfortunately, it has not received a due estimation in due time. Probably, Rudanovsky has passed ahead of time.

Conclusion

Modern concept of the public sector accounting in Russia is uncompromising in a choice of accounting model. It is completely focused on rules of the private sector accounting while market-styled transactions on a plan of budgetary reform should not be carried out by the public entities. The different purposes of public and private entities activity exclude unity of their accounting methodology, but it's also impossible to neglect both an accrual method and a cash method. Puehberg, Cerboni, Hiigli and Rudanovsky theories offer an idea of an optimum combination of these methods.

1. Accrual method application by public entities is doubtful. Necessity to record the state assets and liabilities and to inform the third parties about state financial position is certainly necessary. At the same time, as Rudanovsky underlined, operation result of public entity under accrual accounting it is not meaningful.

2. At use of accrual method is better to express a result of entity's activity as net assets gain, than as operation result. First indicator testifies true prosperity, second - its visibility.

3. In Rudanovsky opinion, initial estimation of budget assets must be preferred.

It is possible to agree with Cerboni, Hiigli and Rudanovsky that the accrual-based accounting can be adopted, with some restrictions, in public sector. At the same time,

Puehberg and Rudanovsky are right in view that the public sector accounting also should have its own rules, distinct from accepted in private sector.

Notes

¹ Hiigli named his system of accounting 'constant' as for each account it has provided only one, invariable, correspondence on the debit and one - under the credit.

² Rudanovsky published five books, devoted to the public accounting theory and practice. Among them: 'Main Provisions on the Accounting Organization of Municipal Entities and Branches' (1910); 'The General Theory of Accounting and the Moscow City Bookkeeping Estimation From the Theory and Practice of Accounting Point of View in Their Modern Development' (1912); 'Principles of Public Accounting' (1913, 2-nd edition - 1925); 'the Supervising Beginnings (Principles) on Bookkeeping and the Reporting in the State Associations' (1924); 'The State Balance Construction' (1928).

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