

ZHYBER Tetiana,

PhD (Economics), Associate Professor

SHEI "Kyiv National Economic University named after Vadym Hetman"

Peremohy ave., 54/1, Kyiv, 03057, Ukraine

E-mail: tzhyber@kneu.edu.ua

ORCID: 0000-0002-4557-023X

GENESIS OF BUDGETING AT THE MACRO-LEVEL

The intermediate results of the study about the essence and development of budgeting technology were shown. Budgeting technology changes at the macro level in the public policy tasks implementation are systematized and concretized. It is proposed to unify the use of the concept with the context of the use of "budgeting" in domestic publications on financial issues

Keywords: public budgeting, spending unit, performance budgeting, budgeting methods, public finance, budget management.

Background. The development of financial resources allocation technology at the macro level requires further specification of the modern budgeting evolution study to determine its proper spot among the financial science concepts. In the research process of budgeting, the conclusion about this technology as an integral objective property of financial relations was obtained, although it received the modern name "budgeting" only a few centuries ago. "Budgetary policy", "budgetary mechanism", "budgetary management" and "budgetary architecture" terms connected with the essence of "budgeting" in the discourses about public finance management.

Modern budgeting as a technology of combining management and politics methods and tools with the financial relations and financial resources [1] uses development of management techniques to ensure additional accuracy in achieving the public administration expected results. In other words, organization of budgeting that meets the available resources and goals, ensures the ideas of budget architectonics implementation through a dynamic combination of budget mechanism and budget policy. Macro-level budgeting provides an opportunity to focus the budgetary relations system analysis either on the powers of the entities, or on the attraction and allocation of resources ways, or on the policy implementation format by involving the combination of political science and management sciences generation into the public finance management.

Much attention is paid to the use of the concept of "budgeting" for the microeconomic entities activities in domestic publications. At the same time, in foreign publications, modern "budgeting" is used both for the financial relations of all levels and for the interdisciplinary aspect to emphasize

the streamlining of resources to achieve a certain goal. It is necessary to specify the significance of this concept for domestic science through the essential meaning, systematization of historical development in public finance and the current context.

Analysis of recent researches and publications. In modern domestic publications, budgeting as a borrowed term (budgeting in English) is used in two main contexts: to describe work directly with budgets (of any level); to describe the technology of combining separated in time and characteristics of the components of financial relations and management tools of economic entities. S. Polishchuk [2] defines budgeting as a separate technology of financial planning and begins the historical countdown of budgeting as an activity of economic entities from the middle of the last century. N. Yuvzhenko [3] (as well as other authors) supports this opinion and emphasizes the spread of budgeting technology in the direction from the micro level to the macro level.

The facts of public budgeting development through the adoption of specific laws since the 1960s were given by L. Vasiutynska and M. Slatvinska [4]. V. Demianyshyn and Z. Lobodina considered the budgetary mechanism [5], the aspects of budget policy implementation are studied in the works of I. Chugunov and co-authors in different years [6]. S. Kondratiuk through the genesis of the budget in Great Britain brought the formation of modern budgeting meaning with the development of parliamentarism and showed the evolution of "budgets" essence concept at the state level [7]. The migration of the concept of "budgeting" between the branches of science will be demonstrated by the example of the article on mental budgeting in inflationary expectations of the consumer for rationalization in human thinking by S. Hirschman and others [8]. Now the concept of "budgeting" is applied to many economic-related practical mechanisms for financial resources consolidation and relations to achieve a certain goal.

The leading role of financial resources of cities in the formation of US budgeting (1910-1950) is emphasized in the articles of American researches [9]. P. Foreman emphasizes government budgeting until the 1940s in Australia through the development of state order and the public sector of industry [10].

The statements in this article are supported by selected publications, but it should point out a significant number of publications, textbooks for universities and civil servants, collective volumes under the auspices of the OECD and the World Bank on public budgeting and its evolution. They were published more than 10 years ago, they are not mentioned to avoid overloading the bibliography.

The **aim** of this article is a coverage of some results of a comprehensive study about budgeting as a technology for managing financial resources, its development towards universalization; as well as a demonstration of the evolution of budgeting, which in different periods of time exhibit the approbation of certain techniques to achieve goals and results.

Materials and methods. The results of the article are based on the study of foreign and domestic publications on budgeting, systems management and cybernetic approach over the last two centuries, the author's empirical observation of budgeting practices in the world through official sources of information. Theoretical generalization methods based on the results of the analysis of the budgeting practices components have been used in the article for obtaining the results.

Results. Human communities organized common resources through financial and management technologies to adapt for their environment in ancient India, China and Egypt. The concept "fisc", which meant the place of the treasury of the head of state in the Roman Empire, was later transformed into the name of the policy of redistribution of funds from payers and sources for the interests and will of the authorities. It is necessary to emphasize the important role in the history of the common centralization of value by removing it from individuals in favor of the power subjects subsequent redistribution (including religion) without equating finance and money. The right to redistribute value through the parts of production division between producers developed, and with the development of trade unions and similar associations – between employees [11]. The need for redistribution and pooling of financial resources for further redirection in the process of achieving the goal is objectively inherent in society, and its subjective implementation determines the constant development of financial relations forms and methods [12].

Although the name "budget" became fixed for the financial and legal object of fiscal policy several centuries ago [7], prototypes of embodiments of government search for revenues and their subsequent distribution in the management process exist throughout government history, implemented in fiscal policy (e.g, history of revenue sources is shown in the publication O. Baik [13]). Along with taxes, the state included in the budget the public sector of the economy, its ownership of production and infrastructure using [10]. Raising funds from securities also took place to support certain government projects. The term "budgeting" spread with the strengthening of the political component in fiscal policy, when budgets became the subject of compromise discussion.

The concept of budgeting was actively used at the beginning of the last century. In the 1920s, the main task of budgeting was to streamline the formation and implementation of budgets at all levels (followed by the formation of budget systems), accounting and accountability of participants in the budget process, "budget awareness" of the public and democratic control [14]. At the same time, the concept of "architecture" of budgeting was mentioned and two budget classifications were used, which fit the format of budgets by lines to streamline analysis and management: prototypes of modern departmental classification of budget expenditures (by budget entities) and economic appointment.

The economic thought of the Russian Empire, and then of the Soviet Union, to which Ukraine belonged, tended to limit the scope of financial science to state budgeting. The concept "budgeting" itself was not used, it was about "finance" as a service for the formation and use of resources to authorities needs and government policy activities, starting with the works of M. Speransky, and "state (*not public*) finance" as primary tool of regulation and stimulation economy for the prospect.

It is interesting to draw parallels between English-language and Russian-language discourses on budgeting. In English-speaking countries, including the United States, budgeting was seen as a set of applied ways to centrally organize a decentralized system of financial relations with authorized entities that performed functions at public expense. Russian-language science considered "finance" as a theory of servicing a single centralized state financial economy, where financial relations needed to be streamlined through the correct definition of income and expenditure components of a holistic (as a single object) financial cost estimate – the budget. However, more than a hundred years ago, scientists took a systematic approach to the organization of public finances and budgeting.

In the first half of the last century, the development of budgeting continued as a technology with a set of methods and tools to combine financial resources in government activities, their accounting, planning and reporting. This technology was not used in the private sector at that time on the example of Australia: "Private industry did not generally adopt budgeting and standard cost techniques before the 1940s, partly due to the size of industry units..." (small – *auth.*) [10, p. 50]. First of all, budgeting in the private sector at the beginning of the last century did not develop due to the lack of the williness to report about internal financial flows and due to the low complexity of economic and financial operating of the privat enterprises.

Budgeting at that time was correlated with the managing public financial resources based on scientific approaches to management and accounting of revenues and expenditures. The use of shares and debt securities also took place at the state level and state-owned companies or with the direct participation of government officials after speculative fever and the "Bubble Law", which during its action gave rise to new ways to fulfill state budgets and the government officials needs [15]. Programs and bonds were used in particular for the construction of road networks or railways (for example in India, tsarist Russia in the nineteenth century).

Budget relations with the development of democracy and the government institutions system (instead of personal power) have acquired a comparable between the countries of the whole world's "budget format" [16] and features of public budgeting technology: consistency, accountability, streamlining the organization management of subjects [17] and legal nature. Although these features are common to modern budgeting, their compositions involve a combination the financial relationships with management techniques such as plans, programs, performance and efficiency, accounting tools, and data analysis techniques.

The systematization of knowledge about management and the combination of its scientifically described methods with systematic and analytical approaches gained considerable popularity among scientific circles in the middle of the last century. Tectology, cybernetics, the theory of behaviorism are devoted to the organization and management of systems. Planning is one of the universal tools for organizing the activities of entities, which is used in management. Programs, goal setting, evaluation are tools of information management provided through the accounting of universal management, which can be applied both in combination with planning, and at budgeting. The above is concretized through the development of budget formats in the budget system, basic budgeting techniques and decision-making management for budgeting by fund managers (spending units).

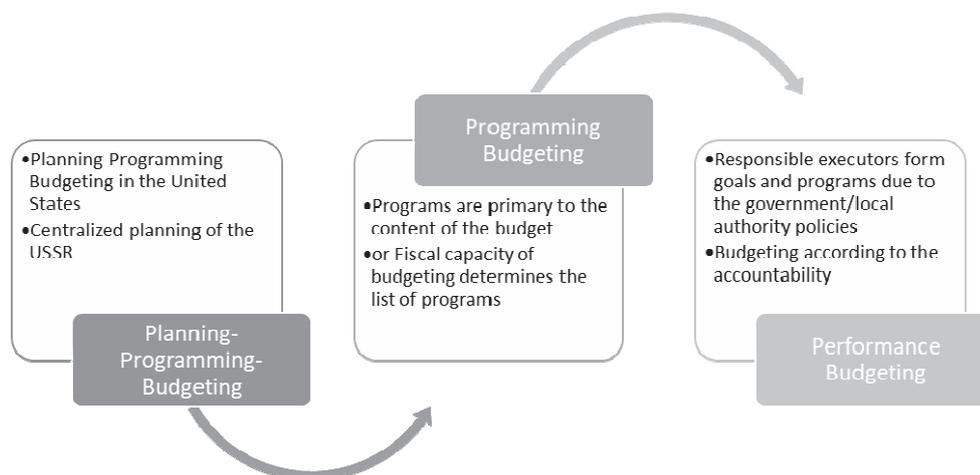
In Ukrainian budget science, four bases of the budget system have been identified, which distinguish the types of budgets, their interrelations, revenues and expenditures characteristics and components. At the same time, foreign budgeting is often described in relation to the "policy" of the government to which budgets are subordinated. The rapid development of management sciences and the study of systemic interactions brought to the fore in the 1950s the idea of systemic comprehensive planning through the budgeting [4]. At the same time, the relationship of financial, non-financial resources, goals and objectives began to formalize in programs designed for several years of use, and in the early 60's proposed a format of public finance "planning-programming-budgeting" (PPB is name from the USA) [18]. But the impact on budget systems through external (centralized) plans and programs has not justified itself due to the difficulty of taking into account the implementation of the needs, powers and behavior of performers in complex systems. Therefore, on the example of the United States, the system was reformatted until the 1970s. During this period, such budgeting techniques (methods) as "zero-based" budgeting and "incremental" budgeting were singled out and tested. The incremental budgeting method developed further and have been allowed to allocate the project components in in budgets which were revised on other conditions and could have various duration of performance in comparison with traditional operating parts of budgets.

During the 1970s, goals and policy makers became key elements in public budgeting. Since the 1980s, along with administrative management in the civil service, which provided for a clear vertical of orders and many units of subordinate officials, developed competitive management between departments and even individual positions. The word "administrative" has even become synonymous with describing the public sector before this. Budget holders have been empowered to freely allocate budget resources within a certain approved framework (limits, "ceilings"), to set intermediate goals for the best achievement of their public policy goals. Instead, "spending units" have become more responsible, accountable and dependent on their performance for further funding from the budget [22]. Such techniques

as *program budgeting*, where the executors followed the programs of activity, and *performance budgeting* have been developed, where the result of the activity within the program or budget unit became decisive for obtaining further financing. These techniques, as well as any manifestation of modern budgeting, in a complex system of implementation have many nuances of application, but they are topics for future publications.

At the beginning of the 21st century, public budgeting, along with the public sector as a whole, start has been influenced by a personalized approach to performers not only as heads of departments. Attention is paid to the civil servants personalization, the calculation of KPI for a particular position. Informatization and practice of "good governance" involve such a component of performance budgeting as assessment of civil servants not only by the government system standarts indeed but also by consumers of "public services", which built the comprehensive feedback and its impact on the activities of individual employees inside and outside the budget unit in the overall scheme tasks of a comprehensive, systemic government policy. At the same time, such management tools as a plan, program, or accounting tool – cost sheet – can be used in the future. But monitoring and evaluation of the activity of performers for budget funds is necessary, so in European countries it is about performance budgeting as the most modern and advanced technology [20]. Performance budgeting involves different algorithms for linking public funds and performance. Budgeting techniques generally differ in the criteria of grounds for obtaining budget (or public) funds in managing their distribution. At the same time, the concept of "budgeting" in the general context still refers to the formation and implementation of "budgets".

The stage of budget systems format and government policies development in combination with budgeting after complicating its implementation with plans and programs is shown in the *figure*.



Development of budgeting in the system of public management

Source: developed by the author.

The evolution of budgeting methods has developed according to the following objects of financial resources allocation: "budget bodies (institutions) – allocation of funds (by functions) – plans and programs – goals and performance indicators of their achievement – tasks of managers / recipients of the budget funds – public services, diversified according to specific individuals needs". Various names for the combination of methods in the framework of budgeting techniques commit an additional complication to the modern interpretation of the technology itself, so this publication shows the essence of budgeting through resource allocation.

Subjects of modern public budgeting in the public finance system are engaged in revenue planning, streamlining and direction of expenditures, monitoring and evaluation of the spending funds results for their activities. Each specific design (or architectonics) of these combinations allows researchers to identify and describe both concrete manifestations of budgeting technology, and to identify methods in the technology, some of which are described in previous ukrainian publications [21]. Complications of economic tasks and acceleration of the exchange of information on budgets took place along with the systematization and fixation in science of management techniques in the budgeting system. The objects of management were public budgets as plans and regulations, public finances with the inclusion of the budget system, the subjects-institution's powers impact on the organization system. The latter includes building in Ukraine a relationship between the Ministry as the main administrator of funds (key spending unit) and subordinate executors of budget programs to obtain the best "impact" on the results of budgeting in Ukraine.

Additionally, a superstructure for the management of public financial resources in the form of budgeting for personalized needs is being developed: gender, participatory, environmentally responsible, etc. These built-in basic budgeting tools for identifying needs under the sustainable development goals provide additional opportunities to achieve results in primary (traditional) budgeting.

A whole stratum of domestic economics considers "budgeting" as a technology that appeared at the level of economic entities only in the 1960s. It can be assumed that this is due to insufficient familiarity with foreign language professional literature (for example, as an analytical paper [22]), after all, in the last century, only some textbooks on systems management and public finance were translated. Well-known Western systemologists were interested in the influence of the subjects of the system on its management, self-organization of the systems, including economic activity in particular. R. Akoff published his book in 1970 [23] and it was translated in the USSR, it did not mention budgeting, it was devoted to planning in the economic system by combining a management approach and economic (including financial) methods. His book which was published in 1981 [24] dealt with planning in corporations with the consideration of their employees interest

(R. Akoff is a recognized behaviorist, in addition to studying applied approaches to systems), and mentioned program budgeting as a tool for quantitative analysis.

The term "budgeting" in connection with the organization of corporate finance on the basis of criteria for distribution between units of the system and "active" control (translated as controlling) could be used by I. Blank, whose work became the basis for domestic scientific development of corporate financial management. Domestic publications were interpreted the work of system-managers in the middle of the last century on the use of planning and behaviorism in economic systems as a basis for the concept of "budgeting". The origins of this interest in the combination of plans and programs since the 1960s, and its connection with the budget sphere, are shown in the previous article.

Conclusion. With the development of the essence of budgeting, this term has acquired a very wide range of applications, so it makes no sense to limit the use of this name to a particular area of financial science. However, the use of the concept of budgeting in the study of public finance provides significant advantages due to the experience of its technologies, techniques, applied methods and tools, which detaization is rarely used in domestic publications on public financial relations, in particular adaptation the budget architecture in the useful working techniques and budgeting methods. Management developments in the use of budgeting in the world allow to detail "budget politics" from a whole object and combine it with specific government decisions in terms of specific responsible subjects policies due to the emergence of this term in its modern form.

Modern budgeting has developed in the context of using first external influence on budget units in the form of plans and programs, then creating competitive conditions for budget units to perform their tasks, and today the responsibility of both employees of budget units and the citizens has become direct involvement in the budgeting process with the permanent purpose of efficiency financial resources management performing. The concepts detailing and concretization in financial management is a necessary prerequisite for the formation its results predictability through the avoidance of the content substitution and the absence of "blind spots" among the selected technology.

The direction of further research and additions on the subject of this publication is to systematize the essence of effective techniques and budgeting tools through its empirical use, analysis of the such tools as "program", "goals" and "indicators" apply in budgeting without static fixation in the content of technology as enhancement of the flexible management tools combinations using by the subjects of financial relations is the purpose of modern budgeting.

REFERENCES

1. Fedosov, V. M., & Babych, T. S. (2008). Sutnist' i problematyka bjudzhetuvannja: ukrai'ns'ki realii' [The essence and problems of budgeting: Ukrainian realities]. *Finansy Ukrainy – Finance of Ukraine*, 1, 3-23 [in Ukrainian].
2. Polishhuk, C. V. (2013). Istorychni aspekty rozvytku teoretychnyh pidhodiv do bjudzhetuvannja [Historical aspects of the development of theoretical approaches to budgeting]. *Ekonomichnyj visnyk Nacional'nogo tehničnogo universytetu Ukrainy "Kyiv vs'kyj politehničnyj instytut" – Economic Bulletin of the National Technical University of Ukraine "Kyiv Polytechnic Institute"*, 10, 230-235 [in Ukrainian].
3. Juvzhenko, N. M. (2017). Teoretychni pidhody do vyznachennja sutnosti ta pryrody bjudzhetuvannja [Theoretical approaches to determining the essence and nature of budgeting]. *Investyicii': praktyka ta dosvid – Investments: practice and experience*, 7, 74-78 [in Ukrainian].
4. Slatvins'ka, M. O., & Vasjutyns'ka, L. A. (2014). Konceptual'ni zasady bjudzhetuvannja u sferi derzhavnyh finansiv [Conceptual principles of budgeting in the field of public finance]. *Ekonomika. Finansy. Pravo – Economy. Finance. Law*, 4, 21-24 [in Ukrainian].
5. Dem'janyshyn, V. & Lobodina, Z. (2017). Konceptual'ni zasady bjudzhetnogo mehanizmu social'no-ekonomichnogo rozvytku derzhavy [Conceptual bases of the budgetary mechanism of social and economic development of the state]. *Visnyk Ternopil's'kogo nacional'nogo ekonomichnogo universytetu – Bulletin of Ternopil National Economic University*, 1, 77-88 [in Ukrainian].
6. Chugunov, I. Ja., & Kachula, C. V. (2020). Derzhavna finansova polityka zabezpechennja social'nogo rozvytku suspil'stva [State financial policy for provision of the social development of society]. *Visnyk Kyi'vs'kogo nacional'nogo torgovel'no-ekonomichnogo universytetu – Herald of Kyiv National University of Trade and Economics*, 2, 87-98 [in Ukrainian].
7. Kondratjuk, C. Ja. (2015). Genezys bjudzhetu u Velykobrytanii' kriz' pryzmu konstytucijnoi' istorii' ta parlamentaryzmu [The budget genesis in Great Britain through the prism of constitutional history and parliamentarism]. *Finansy Ukrainy – Finance of Ukraine*, 8, 114-127 [in Ukrainian].
8. Hirshman, S. at all. (2018). Mental Budgeting versus Relative Thinking. *AEA Papers and Proceedings*. 108: 148-52. DOI: 10.1257/pandp.20181095 [in English].
9. Tees, D. W. (2013). The Budget Reform Movement: How Local Government Is Leading the Way. Retrieved from <https://gato-docs.its.txstate.edu/jcr:0b0e5680-5903-4228-b6ee-65dfcae1f4af/Moten-Dedrick,Sakura.pdf> (Accessed 2020-09-16) [in English].
10. Foreman, P. (2001). The transfer of accounting technology: a study of the Commonwealth of Australia government factories, 1910-1916. *Accounting History*, 6(1), 31-59. DOI:10.1177/103237320100600104 [in English].
11. Sutormina, V. M., Fedosov, V. M., & Andrushhenko, V. L. (1992). *Derzhava – podatky – biznes (Iz svitovogo dosvidu fiskal'nogo reguljuvannja rynkovoi' ekonomiky) [State – taxes – business (From the world experience of fiscal regulation of market economy)]*. Kyiv: Lybid' [in Ukrainian].
12. Rodionova, V. M., Vavilov Ju. Ja., Goncharenko L. I. i dr. (2002). *Finansy [Finance]*. V. M. Rodionova (Ed.). Moscow: Finansy i statistika [in Russian].

13. Bai'k, O. I. (2015). [Formation of taxes in ancient Rome]. *Visnyk Natsional'nogo universytetu "L'vivs'ka politehnika". Jurydychni nauky – Bulletin of the National University "Lviv Polytechnic". Legal sciences, 813*, 185-191 [in Ukrainian].
14. Lutz, H. L. (1930). Public Budgeting: A Discussion of Budgetary Practice in the National, State, and Local Governments of the United States. By Buck A. E. (New York: Harper and Brothers. 1929.). *American Political Science Review, 24(01)*, 202-203. DOI:10.1017/s0003055400113681 [in English].
15. Harris, R. (1994). The Bubble Act: Its Passage and Its Effects on Business Organization. *The Journal of Economic History, 54(03)*, 610-627. DOI: 10.1017/s0022050700015059 [in English].
16. Morgan, D., & Robinson, K. (2000). Handbook on public budgeting. Portland, OR: Portland State University, Hatfield School of Government [in English].
17. Smith, R. W., & Bertozzi, M. (1998). Principals and agents: an explanatory model for public budgeting. *Journal of Public Budgeting, Accounting & Financial Management, 10(3)*, 325-353. DOI: 10.1108/jpbafm-10-03-1998-b001 [in English].
18. Schick, A. (1966). The Road to PPB: The Stages of Budget Reform. *Public Administration Review, 26(4)*, 243. DOI: 10.2307/973296 [in English].
19. Hood, C. (1995). The "New Public Management" in the 1980s: variations on a theme. *Accounting, organizations and society*. Vol. 20, 2-3, 93-109 [in English].
20. OECD. (2019). OECD Good Practices for Performance Budgeting. OECD Publishing, Paris, DOI:org/10.1787/c90b0305-en [in English].
21. Babych, T. S., & Zhyber, T. V. (2011). Makrofinansove bjudzhetuvannja [Macrofinancial budgeting]. V. M. Fedosov (Ed). Kyiv: KNEU [in Ukrainian].
22. Northern Ireland Assembly (2010). Methods of Budgeting. Retrieved from <http://www.niassembly.gov.uk/researchandlibrary/2010/0610.pdf> (Accessed 2020-09-16) [in English].
23. Russel L., Ackoff (1970). A Concept of Corporate Planning. John Wiley & Sons. Planirovanie v bol'shiih jekonomicheskiih sistemah [Planning in large economic systems]. G. B. Rubal'skij [Transl.]. I. A. Ushakov (Ed.). Moscow. *Jelektronnaja publikacija: Centr gumanitarnyh tehnologij – Electronic Publication: Humanitarian Technologies Center*. 21.09.2014. Retrieved from <https://gtmarket.ru/library/basis/7086> (access 2020-09-16) [in Russian].
24. Akoff, R. (2002). Planirovanie budushhego korporacii [Planning of the corporation future]. [Trans]. Moscow: Sirin [in Russian].

The article submitted to editor's office on 01.10.2020.

Жибер Т. Генезис бюджетування на макрорівні.

Передмова. Визначено, що технологія бюджетування є невід'ємною об'єктивною властивістю фінансових відносин. Бюджетування на макрорівні надає можливість фокусування аналізу системи бюджетних відносин або на повноваженнях суб'єктів, або на точках тяжіння та алокації ресурсів, або у форматі системи імплементації політики.

Метою публікації є еволюція бюджетування, яка у різні періоди показувала апробацію окремих технік досягнення цілей і результатів.

Матеріали та методи. Під час дослідження використано методи теоретичного узагальнення за результатами аналізу складників практик бюджетування.

Результати дослідження. Поняття бюджетування активно використовувалося вже на початку минулого століття. У 1920-х роках основним завданням бюджетування вважалося впорядкування формування та виконання бюджетів усіх рівнів.

З 1950-х років спостерігався розвиток форматів бюджетів у бюджетній системі, основних відокремлених технік бюджетування та управління прийняттям рішень щодо бюджетування розпорядниками коштів. Еволюція методів бюджетування розвивалася за такими об'єктами алокації фінансових ресурсів: "бюджетні одиниці (установи) – призначення коштів (функції) – плани і програми – цілі і результативні показники їх досягнення – завдання розпорядників/одержувачів коштів – публічна послуга, диверсифікована за потребами конкретного індивіда". Різноманітні назви для поєднання методів у рамках технік бюджетування додатково ускладнюють сучасне трактування самої технології, тому у цій публікації показано сутність бюджетування через алокацію ресурсів.

Висновки. З розвитком сутності бюджетування цей термін набув дуже широкого діапазону застосування, отже, немає сенсу обмежувати його використання окремою сферою фінансової науки. Разом з тим, використання поняття бюджетування при вивченні публічних фінансів надає значні переваги через напрацьований досвід його технологій, технік, методів та інструментів, деталізація яких мало використовується у вітчизняних публікаціях щодо публічних фінансових відносин, зокрема адаптації бюджетної архітектури у прикладні техніки і методи бюджетування.

Ключові слова: публічне бюджетування, розпорядник коштів, результативне бюджетування, методи бюджетування, публічні фінанси, бюджетний менеджмент.