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FINANCING VOCATIONAL EDUCATION AND TRAINING: MODELS AND BEST PRACTICES

Abstract. *The article considers the main framework and models of financing vocational education and training (hereinafter – VET). The analysis of the best practices of financing VET is carried out, the main tasks and challenges to which the chosen model of financing should respond are defined. It is established that depending on the main source of funds, there are three groups of models of financing VET: models that use mainly national (central) budget funds, models that use mainly local budget funds, models that use a uniform combination of public and private funds. The allocation of public funds can be based on criteria set by the government in each situation, determined by the financing formula, or on a competitive market basis. In order to effectively involve employers in the process of providing VET, a dual system of training is gaining more and more development, in which the theoretical part of training based on vocational education institutions is financed by the state, and the practical part is financed directly by employers. The best practices show that an adequate model of financing VET can improve the quality of educational services provided. Requirements for receiving funds create incentives for educational institutions to improve the quality of services provided. In general, in the OECD countries, funding is provided per student from the state budget and additional targeted direct funding from the local budget. The main requirement for receiving funds from the state is the efficiency of their use, which in this case is measured as a high level of training of as many applicants for educational services. Our analysis has shown that successful financing models must be based on consistent principles, be transparent and simple, as complex funding frameworks lead to a loss of openness and distortions in the allocation of funds.*

Keywords: *vocational education and training, models of financing vocational education and training, frameworks of financing vocational education and training, financing formula, dual system of vocational education and training.*

JEL classification: I21, I23.

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Ukraine is currently reforming its education system, including funding frameworks and models, to improve the quality of educational services and graduate training. There is a certain shortage of qualified specialists in the labor market, the training of which is carried out by institutions of vocational training (vocational education). Also, radical reform of vocational education

funding is underway, involving the transfer of relevant institutions to municipal ownership and the identification of funding sources. To determine the most effective framework for financing vocational education and training, it is necessary to consider the basic models, best practices and the possibility of their implementation.

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VET is very important for the development of the human capital of the state, as a result, it's a topic of a wide range of studies including the research of financing VET. There are several organizations created to facilitate the development of the VET in the world, such as the European Training Foundation, the UNESCO International Centre for Technical and Vocational Education and Training, the OECD, the International Labour Organization; they monitor the VET models, frameworks, financing patterns, etc. Many researchers examined the topic of the VET funding, among them Aryal B., Bergseng B., Dorleans M., Eichhorst W., Gasskov V., Hanni M., Masson J., Rajczakowska E., Ziderman A., etc.

Analysis of best practices shows that many different frameworks are used to finance VET: different ratios of sources of funds, the use of formulas for allocating funds, raising private funds and more. Different countries spend varying amounts on educational institutions per full-time equivalent

student for the vocational programmes (Figure 1). It depends on the system of financing VET because some systems combine in-class learning with on-the-workplace learning.

This is due to the fact that some national education systems consider VET as additional, i.e. the period of its procurement is not more than one year, as a result of which the graduates who passed the qualifying exam receive a certificate of mastery of certain skills. Sometimes VET is a part of professional development and is a requirement for career growth and obtaining certain positions. Total expenditure on educational institutions as a percentage of GDP for vocational programmes varies as well (Figure 2). The OECD countries on average spend 0,5 % of the GDP on vocational programmes. Finland spent 0.9% GDP in 2017. On the contrary, Australia spent just 0,2 %.

Mostly the financing model is determined by the available amount of funds and the need for qualified specialists. Other criteria are the

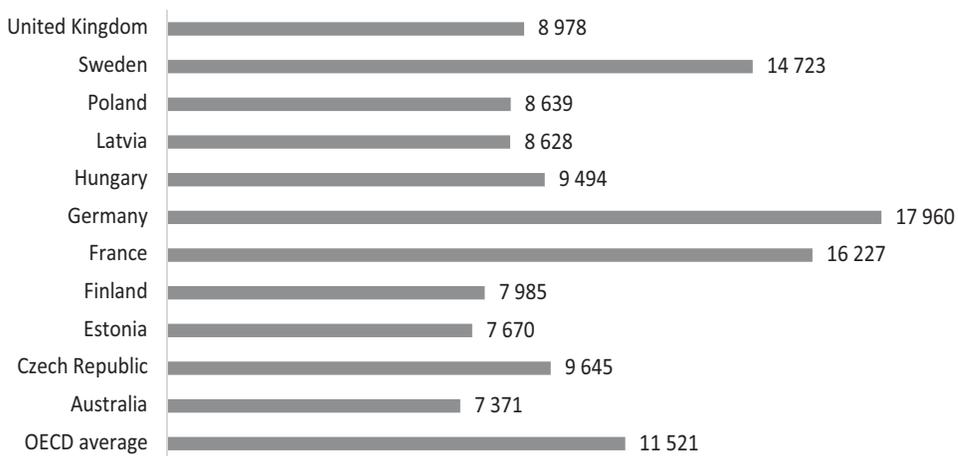


Figure 1. **Total expenditure on educational institutions per full-time equivalent student for vocational programmes (2017), USD**

Source: OECD (2020). *Education at a Glance 2020: OECD Indicators*, OECD Publishing, Paris. URL: <https://doi.org/10.1787/69096873-en>.

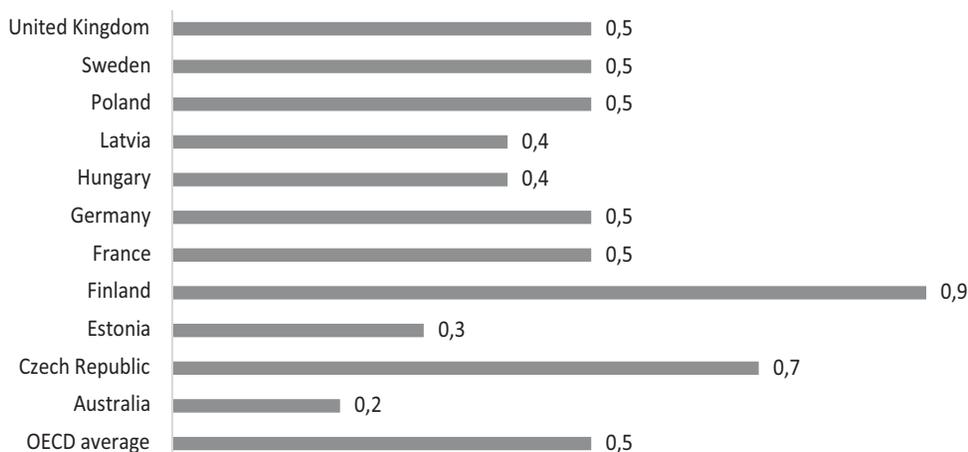


Figure 2. **Total expenditure on educational institutions as a percentage of GDP for vocational programmes (2017), %**

Source: OECD (2020). *Education at a Glance 2020: OECD Indicators*, OECD Publishing, Paris. URL: <https://doi.org/10.1787/69096873-en>.

types of institutions where VET can be obtained, which can be a component and alternative to general secondary education or provided in individual institutions solely as vocational training [1]. The following main frameworks for financing vocational education can be identified (Figure 3).

Let us now consider the best practices of the practical application of the above-mentioned frameworks.

1. Multilevel financing, in which the bulk of funding comes from the

national budget, i.e. at the central level. The requirements and purposes for which these funds are spent are determined centrally. For example, in France, the main areas of educational development are determined by the country's Ministry of Education, which is responsible for teaching staff, curriculum development and inspection of educational institutions [2]. Heads of education departments are responsible for allocating funds to these institutions. In turn, the construction

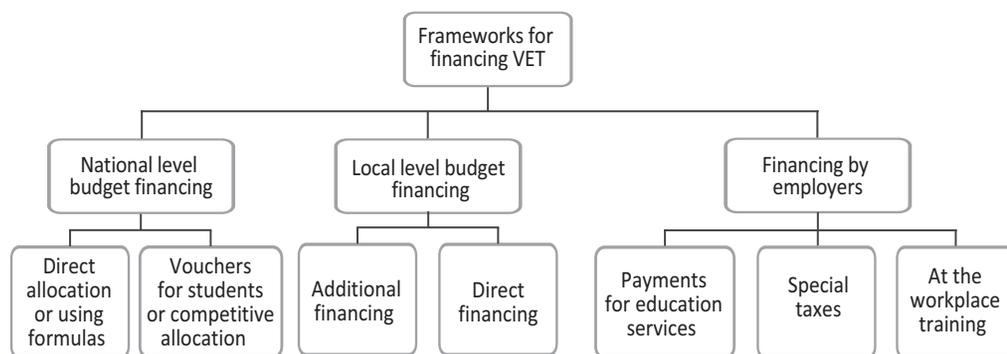


Figure 3. **Frameworks for financing VET**

Composed by author.

and maintenance of educational institutions, equipment, teaching materials and operating expenses (excluding salaries of the teaching staff) are financed from the state and local budgets. To this end, the central government allocates an annual grant for the logistics of vocational education institutions, covering approximately 60 % of the maintenance costs and 95 % of the operating costs. Expenditures on teaching staff are financed from the state budget, although the number of staff is determined by local authorities. Local budgets can spend additional resources at their own expense [3]. The state finances a certain number of teaching positions for each vocational education institution, measured by the number of teaching hours, and the educational institution itself is responsible for the distribution of these hours [4].

2. Multilevel funding, in which the bulk of funding comes from local budgets, i.e. at the local level. Funds from other sources can be used, but they are an ancillary resource. An example of such a model is the United States. In this country, the main responsibility for financing VET belongs to the local authorities, and the source is property tax revenues. The main problem with such a system is that the whole system is divided into separate school districts, within which the tax is collected. That is why in this country there is very uneven funding between different districts. Each district can determine the amount of this tax by voting, while the state determines the minimum amount at which the district can receive additional co-financing from the state. Depending on the needs of qualified professionals, each state may allocate additional funds to fund VET. Since the source of

income for VET is the property tax and income tax, the total amount of which varies significantly depending on the territorial unit, vocational education institutions can receive funds from the federal budget, but only for certain programs and by co-financing, and at the level of school districts. An equilibration formula is used for this. The main requirement for receiving these funds is the coordination of training programs with the federal authorities. The condition for using such a model is a high level of decentralization in the country, under which the central (or federal) government has very limited powers [5].

3. Financing through a special tax. In some cases, VET can be financed by a special corporate tax or by grants from enterprises provided to educational institutions. For example, in Hungary, VET is funded from three sources (state subsidies, subsidies from local budgets and the Vocational Education Fund). State subsidies are allocated annually for vocational high schools and colleges, with funding per student. Funding is standard and does not depend on the type of program. In turn, companies must spend 1,5 % of the salary fund to improve staff skills. They can contribute to the Vocational Education Fund, organize training on their own, or transfer funds to existing vocational education institutions. Vocational education institutions are funded from state and local budgets through payroll taxes and depend on the number of students in the institution, although there are no restrictions on the targeted use of funds. The Vocational Education Fund distributes funds among institutions based on the results of competitions [6].

4. Funding that depends on performance indicators. Under this model, vocational education institutions do not receive direct funding from the budget but can set tuition fees. Usually, the state is the main customer, so it can determine the amount and terms of funding. Such a scheme stipulates that in order to receive funds, a vocational education institution must have certain performance indicators and meet the goals set before them. In this case, allocation formulas and requirements for obtaining resources are used, as well as contracts between providers and recipients of services. Such a model is most developed in the United Kingdom and Denmark, where vocational education institutions have full autonomy and operate on a market basis [7]. For example, in Denmark, the Ministry of Education does not participate in the management of vocational education institutions, but only sets a general policy in this area - general requirements for the courses taught and for the curricula. To receive public funding, educational institutions must meet the established criteria. They operate exclusively on a market basis, i.e. they must make a profit by selling their services, although the main customer remains the state. In the United Kingdom, vocational education institutions are generally independent institutions in the form of government-founded corporations, which are funded through the Council for the Financing of Further Education, which actually orders educational services from them. To receive funding from the Council, vocational education institutions enter into contracts with it, which determine the conditions for receiving funds. In addition to performance targets, these

may be requirements for the teaching of certain courses, the minimum number of enrolled students, learning outcomes (graduates compared to enrollment) [8].

5. Financing through vouchers, which is an entitlement confirming the right to receive certain services, paid by the state. It determines the selection criteria, issues vouchers and monitors compliance with all the requirements set out in it. The purpose of this approach is to create a competitive market environment in the provision of educational services, improve the quality of these services and provide students with more choice. Under such a system, it is not the educational institutions that select entrants on a competitive basis, but the applicants choose the educational institution that best meets its needs and offers the best conditions [9].

6. Cost recovery model. Under this funding scheme, vocational education institutions are commercial organizations engaged in lucrative activities. They do not receive state funding but work collecting tuition fees. In some cases, public educational institutions that receive state funding also operate in the market of educational services. For example, in the United States, a specific segment of vocational education has been developed, funded by such a model. These are municipal colleges that offer a 2-year technical training program, one of the areas of which is retraining and advanced training [10].

7. Financing of the dual system. In Austria, Denmark, Germany and Switzerland, there is a dual system of VET, when its procurement is divided into two parts: theoretical training (based on secondary education) and

on-the-job training (at the enterprises). The government covers the costs of theoretical training, and the company pays for practical training [11].

The best practices show that an adequate model of financing VET can improve the quality of educational services provided. In the OECD countries, the main source of funding for vocational education is public funds, but the phenomenon of financial decentralization is actively developing, in which various stakeholders are involved in the allocation, management and utilization of funds, which allows increasing resource efficiency. The requirements for receiving funds create incentives for educational institutions to improve the quality of services provided. In general, in the OECD countries, funding is provided per student from the state budget and additional targeted direct funding from the local budget [12].

The main condition for receiving funds from the state is the efficiency of its use, which in this case is measured as a high level of training of as many applicants for educational services.

Another condition for an effective system of financing VET is to ensure equal access to educational services throughout the country. This is achieved through the allocation of additional funds for less prosperous regions, as well as additional support for target groups to ensure equal access to education. Two approaches are used, namely equal allocation of funds at the horizontal level, i.e. providing equal funding for similar training programs, or equal allocation of resources at the vertical level, i.e. determining different amounts of funding for different groups

of students depending on the individual needs of each group [13; 14].

Our analysis has shown that successful funding models must be based on stable principles, be transparent and simple, as complex funding frameworks lead to a loss of openness and distortions in the allocation of funds. The decision to provide further funding should be based on reliable data and transparent criteria. Moreover, funding should be projectable so that educational institutions can determine the approximate amount of resources they will receive in the future. In many OECD countries, a funding formula is used to allocate funds. The main criteria used in the formula are the number of students and the level of training, individual needs of students (inclusive education), curricula and characteristics of educational institutions. Also, criteria of efficiency and effectiveness can be used [15].

Creating an effective model of financing VET is the basis for training qualified professionals. Usually, the main source of funding for vocational education is the state and local budgets. With the development of the vocational education system, there is a gradual increase in the funds of the private sector spent on vocational education. The best practices show that to meet the needs of the labor market in skilled professionals a more effective model of financing vocational education is needed, in which vocational education institutions compete for resources on a market basis, as it encourages more efficient use of funds, improving the quality of educational services and modernization educational training programs.

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ОСНОВНІ МОДЕЛІ ТА СВІТОВИЙ ДОСВІД ФІНАНСУВАННЯ ПРОФЕСІЙНОЇ ОСВІТИ

Анотація. У статті розглянуто основні механізми та моделі фінансування професійної освіти. Проведено аналіз світового досвіду її фінансування, визначено головні завдання й виклики, яким повинна відповідати обрана модель фінансування. Встановлено, що залежно від основного джерела залучених коштів моделі фінансування професійної освіти поділяються на три групи: моделі, котрі використовують переважно кошти державного (центрального) бюджету; моделі, що використовують здебільшого кошти місцевих бюджетів; моделі, які рівномірно поєднують використання і державних, і приватних коштів. Розподіл державних коштів може відбуватися на підставі критеріїв, що встановлюються урядом у кожній конкретній ситуації, визначатися формулою фінансування або здійснюватися на конкурентних ринкових засадах. Із метою ефективного залучення роботодавців до процесу здобуття професійної освіти дедалі більша увага приділяється розвитку дуальної системи підготовки, за якої теоретичну частину підготовки на базі закладів професійної освіти фінансує держава, а її практичну частину безпосередньо на робочому місці – роботодавці. Світова практика свідчить, що адекватна модель фінансування професійної освіти дає можливість підвищити якість наданих освітніх послуг. Умови отримання коштів стимулюють заклади освіти поліпшувати якість наданих послуг. Загалом по країнах ОЕСР фінансування здійснюється в розрахунок на одного учня з державного бюджету та додатково з місцевого бюджету. Головною умовою отримання коштів від держави є ефективність їх використання, котра в цьому випадку вимірюється як високий рівень підготовки якомога більшої чисельності здобувачів освітніх послуг. Досвід показує, що успішні моделі фінансування повинні базуватися на стабільних принципах, бути прозорими й простими, оскільки складні механізми фінансування призводять до втрати відкритості та викривлення при розподілі коштів.

Ключові слова: професійна освіта, моделі фінансування професійної освіти, механізми фінансування професійної освіти, формула фінансування, дуальна система професійної освіти.