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**EFFECTIVE FINANCING OF EDUCATION SYSTEMS AND
EDUCATION INSTITUTIONS IN HIGHER EDUCATION
AND VOCATIONAL EDUCATION AND TRAINING IN THE
EU AND CENTRAL ASIA**

Review Report



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1 Introduction

1.1 Context and Objectives of the Study

In 2007, the European Union launched the *EU Central Asian Strategy for New Partnership* in order to support various cooperation priorities, such as education. One of the agreed political and thematic dialogue was the *Central Asia Education Platform (CAEP)* focusing on the two main components of education systems: (i) vocational education and training (VET); (ii) higher education (HE).

The CAEP is consisted of two phases: (i) the first phase, launched in 2012, aimed at education and training sector modernisation, strengthen cooperation between the European Union (EU) and Central Asia (CA), improvement of inter-regional cooperation between Central Asia countries, as well as improvement of donors' activities in the education sector; (ii) the second phase (CAEP 2), launched in 2015, will continue enhancing cooperation between stakeholders from EU and CA countries, as well as between CA countries. The main goal of CAEP 2 is to strengthen education reforms in CA countries.

During the 2nd Meeting of Ministers for Education of the Central Asia countries and the European Union, that took place in Astana in June 2017, the participating Ministers and delegates reaffirmed their commitment to establish a strong, durable and stable relationship aiming at fostering a prosperous, sustainable and stable, socio-economic development of the Central Asia region in line with the global commitment to Sustainable Development Goals, in particular to 'ensure inclusive and quality education for all and promote lifelong learning' (Astana Declaration, Art. 3).¹

In order to achieve this goal, sufficient and efficient financing mechanism both in Higher Education (HE) and in Vocational Education and Training (VET) need to be in place. Consequently, ministers urged to address (vii) Effective financing of education systems and education institutions (Art. 31) as a topic to be addressed by CAEP.

Due to the intense reforms on-going in the education sector in all CA countries, the question, how to best and most efficiently and effectively execute education financing in HE and VET plays a crucial role in finally reaching the goals.

As a first step, a team of CAEP experts has elaborated a *Review Report on Financing Education (HE and VET) in the EU and Central Asia* to assess the current situation in this field and to provide a common basis for discussions as part of the planned *Webinar on Financing Education (HE and VET) in Central Asia and the EU*.

This review report has been produced in close cooperation between experts based in the EU and CA and provides a well-structured overview of good or even best practice in various aspects of financing

¹ https://eeas.europa.eu/delegations/kazakhstan/29791/node/29791_sr

HE and VET education as background for fruitful discussions during the planned webinar and thus contributing as well to an evidence-based policy approach in education.

The objective of this study is to provide a review of the current status of financing education systems and institutions in HE and VET in Central Asia countries and good practice for policies, methods and instruments supporting efficient and effective financing mechanisms both in the EU and in Central Asia, in order to create a common basis of knowledge and understanding of related topics in HE and VET for further discussion among policy makers, education practitioners and related stakeholders.

As a result, the review report will contribute to the following outcomes:

- Experience, lessons learned, good practice shared, mutual understanding/ learning enhanced.
- Evidence-based policy approach improved.
- Results of the stock-taking exercise within Central Asia disseminated.

The report is divided into 8 main sections. Following the introductory section, the second and the third section provide an overview of approaches and models of financing HE and VET in Europe. The fourth chapter presents an overview of financing methods and approaches in Central Asia, namely in Kazakhstan and Tajikistan. In addition to that, there are case study examples of good practice from EU member states (Austria, Finland, Latvia) as well as from the countries of Central Asia (Kazakhstan, Tajikistan). The subsequent two chapters provide a summary of identified challenges and formulate recommendations for stakeholders and decision makers in Europe and Central Asia. The final section lists references used in composition of this report.

2 Approaches and Models in Financing Higher Education in Europe

No institution can function properly and achieve high quality outcomes if it is not funded sufficiently and effectively. This particularly applies to higher education institutions where traditional forms of financing have been transformed and continue to change gradually. As the need for higher education has increased in the last few decades, so has the need for its effective financing, particularly in the atmosphere of continuing economic constraints and budget cuts.

The main financing source of higher education in Europe is the state: in the EU the government's share of total spending on education in 2012 ranged from 69% in Portugal up to close to 100% in Sweden, Finland and Luxembourg.² In European higher education institutions, 60-90% of their received resource income is comprised of the direct budget financing.³

In general, the higher education (as well as the vocational education) worldwide is facing three major challenges:

1. increasing demand to be relevant for the job market and to contribute towards the competitiveness of the economy at a time of increasing global competition not only in low-skill but also in high-tech sectors;
2. limited public resources and increasing pressure for the public spending efficiency in all sectors;
3. technological change, which is yet to show its full influence on the teaching ways and methods.

To deliver on the requirements, the systems need some foundation of the adequate and stable financing to ensure long-term planning and development. However, efficiency measures became the inevitable part of the education policy-making. Therefore, the financing principles increasingly include the stimuli for better performance.

Notably, the European Commissions' communication on a renewed EU agenda for higher education includes both the requirements for efficiency of the education systems and high expectations (excellence in skills, tackling skills mismatches, contribution to innovation, inclusion).

In Europe, the systems of financing the higher education fall broadly into three groups:⁴

1. fully or mostly publicly funded studies (in some cases with minor financial contributions such as registration fees which do not cover the education costs). Such systems often include the requirements like obtaining a certain number of study credit points during a semester or obtaining the degree within a certain reasonable period. For example, in Czech Republic

² Eurostat, 2016: <https://ec.europa.eu/eurostat/data/database>

³ Comparative Analysis of Financing Models of Higher Education, 2017

⁴ Full-time students in the first cycle of higher education

students do not pay for study programmes in Czech language unless they have exceeded the standard length of study by more than one year, or are enrolled in more than one programme at the same time.⁵

The concept of fully or mostly publicly funded studies is applied in several countries in Northern and Central Europe, for example Germany, Denmark, Finland, Sweden, Iceland, Scotland, Austria, Poland, Estonia, as well as Greece, Cyprus, Malta, Slovenia, Slovakia, Czech Republic.

2. the systems where all first-cycle students pay fees. This Anglo-Saxon model is notably represented by the United Kingdom (England, Northern Ireland and Wales except Scotland), and also Portugal, the Netherlands, Luxembourg.
3. mixed systems which have both publicly funded study places and those covered by tuition fees to be paid by the students - France, Italy, Spain, Ireland, Latvia, Lithuania, Romania, Hungary and Bulgaria.

2.1 Methods of State Financing of Higher Education in Europe

As the state remains the major funder of the higher education system, the applied method of state financing should guarantee effectiveness, quality and must be sufficient.⁶ However, given the financial constraints, the majority of national budgets have to face, it is potentially not a sustainable approach and new sources and mechanisms of financing higher education must be explored.

The range of methods of state financing higher education includes the following:

- formula-based funding
- programme-based funding
- service recipient funding

2.1.1 Formula-Based Funding

In formula-based funding, higher education institutions receive a pre-determined amount of funding based on pre-approved budget. Usually, the funding is allocated to a specific aim very particularly (for example for wages, infrastructure, research). There are various criteria applied for calculating allocated funding; for example, some countries distinguish funds for studies and funds for research, other countries do not separate these. One of the most commonly used criteria in this approach is the number of students admitted to a particular higher education institution. This is often combined with the number of credits obtained by students, the number of research papers, learning outcomes and so on.⁷ It is believed that this is a particularly transparent approach of financing higher education institutions as the funds allocated to individual institutions are clearly visible which reduces the possibility of lobbying by universities. However, some argue that it might have led to a common level of mediocrity as qualitative assessments were not included.⁸ This concern has been addressed by

⁵ Higher Education Financing in the New EU Member States, 2007

⁶ Comparative Analysis of Financing Models of Higher Education, 2017

⁷ Comparative Analysis of Financing Models of Higher Education, 2017

⁸ Performance-Based Funding in Higher Education: An International Survey, 2001

further reforms and adapting this financing method whereby the formula according to which the funds for individual institutions are calculated is based on performance. For example, in Finland the criteria for allocating funds are set out in a contract between the university and ministry clearly stating the direction of development and main aims of the university.⁹

2.1.2 Programme-Based Funding

In programme-based funding, the state is able to allocate funds to specific programmes rather than higher education institutions. This approach has elements of performance-based funding as there is normally an agreed set of criteria indicating the aims which should be reached by the institution executing the study programme. This has a positive impact on the quality of study programmes; however, the study programmes are typically funded for 4 years (so that students are able to finish their studies) and this means that the performance aspect of this approach is not as regular and frequent as it could be.¹⁰

Formula-based funding as well as programme-based funding can be further specified and distinguished by the level of autonomy which is given to higher education institutions in terms of utilising the funds received. In traditional line-item budgeting (e.g. Greece, Turkey), the funds are allocated to specific items (for example wages) while in block grants, the institutions have freedom to use the funds more freely (e.g. Sweden, Slovenia).

2.1.3 Service-Recipient Funding

In service-recipient financing it is upon the student to decide which higher education institution will receive the funds. It is believed that this approach encourages competition of higher education institutions and these, on the other hand, become fully independent from state policy as the final decision belongs to the service recipient, i.e. the student. This method can be applied in several different ways. For example, the size of the student fund can be stable during the whole period of studies or it can vary every year (for example, depending on structural changes such as increase in wages). This approach is applied for example in Lithuania where it is combined with another method of state financing higher education – state is financing the scientific research while funds for studies are allocated on the basis of 'student's purse'.¹¹

2.2 Trends in Public Funding of Higher Education in Europe

As previously mentioned, it is not sustainable and realistic to ask the state to continue to fund the higher education fully without any additional contributors. Therefore, in all new trends of financing higher education there is a possibility for higher education institutions to earn money or to attract private funding.¹² At present, the average for the European countries is 15% with the United Kingdom, Portugal and Italy having the highest share of funding from private sources (33%, 31% and 30% respectively).¹³

The trend towards attracting private funding is particularly relevant as the share of GDP allocated to higher education institutions is decreasing. For example, in European countries, the states that

⁹ Comparative Analysis of Financing Models of Higher Education, 2017

¹⁰ Comparative Analysis of Financing Models of Higher Education, 2017

¹¹ Comparative Analysis of Financing Models of Higher Education, 2017

¹² Comparative Analysis of Financing Models of Higher Education, 2017

¹³ Funding Higher Education: A View Across Europe, 2010

allocate the most funds to higher education are Denmark (in 2016 the share of GDP was 1.12%), Estonia (in 2016 the share of GDP was 1.13%), France (in 2016 the share of GDP was 1.8%) and Sweden (in 2016 the share of GDP was 1.26%).¹⁴ However, even though the share of GDP has slightly increased in some of these countries since 2008 (for example in Denmark, France and Sweden), there is a definite decreasing tendency over the last decades (for example, in 2002 the share of GDP in Denmark was 2.8% compared to 1.12% in 2016).¹⁵ An important factor to consider when examining the share of GDP to higher education is the student population as this may offset an increase in the share of GDP. For example, in Denmark, the share of GDP has increased since 2008; however, it is not sufficient to alleviate the high demographic pressure on the sector, even if the investment effort is above GDP growth.¹⁶

2.2.1 Key Actors in Financing Higher Education Institutions in Europe

In the map of actors relevant for financing higher education institutions across Europe, the dominant position belongs to the state and the state budget. It is the key source of income for majority of European universities and higher education institutions whereby the budget allocations are managed through various ministries, sometimes multiple in one country. For example, in Slovakia there are 4 ministries and their budgets concerned – the Ministry of Education, Science, Research and Sport for public HEIs, the Ministry of Defence for military HEIs, the Ministry of Interior for police HEIs and the Ministry of Healthcare for healthcare HEIs. In addition to the governmental funding, most systems receive income from other sources, for example in Finland the core funding is allocated by the Ministry of Education and Culture and higher education institutions also receive funding from external sources such as the Academy of Finland and the Finnish Funding Agency for Innovation. In Spain, the funding is established in the state budget and allocated through the Ministry of Education and Vocational Training and at the same time, there are funds provided by the Autonomous Communities which establish in their annual budgets the funds for universities located in their territories. Typical external sources of income for higher education institutions in Europe are tuition fees, income from universities' activities (e.g. research activities), investment and research grants, grants from legal entities and individuals, donations, subsidies from charities as well as private funding from businesses (e.g. in the Netherlands).¹⁷ Another considerable amount of financial support comes, of course, from the European Union and its programmes. The main channels of the EU support are the current opportunities offered by Erasmus+, its predecessor Tempus and the EU Structural Funds. Education and training is one of the 11 priorities for *Cohesion Policy in 2014-2020* and the European Social Fund (ESF) and the European Regional Development Fund (ERDF) support activities which help modernise education and training, including investments in educational infrastructure and promote better access to good quality education for all, from the pre-primary to the tertiary level.

2.2.2 Student Tuition Fee

The political debates on the issue of public vs. tuition-fees financed education center on the definition of education as public or private investment. In all countries, graduates of the higher and vocational education typically earn more than people who have not obtained education. This means that they have a direct personal benefit. However, the spill-over effects from the more educated and skilled workforce benefit the whole economy and country development and are not limited to an individual.

¹⁴ Data from Public Funding Observatory 2017 Country sheets, 2017

¹⁵ Comparative Analysis of Financing Models of Higher Education, 2017

¹⁶ Data from Public Funding Observatory 2017 Country sheets, 2017

¹⁷ Data from https://eacea.ec.europa.eu/national-policies/eurydice/general/3-funding-education_en

Therefore, the general consensus is that education is both a private and a public investment with the exact ratio of these two elements hard to quantify.

In addition to that, the concept of tuition fees is sensitive, particularly the level at which these fees are set and it is deemed not only an economic but also a political issue. There is a strong case, on the grounds of revenue maximisation, efficiency, autonomy, and equity, for making such fees variable, rather than fixed and uniform.¹⁸ In United Kingdom, this model was established in 2006 with the maximum and minimum amount of tuition fees determined by the government (for the academic year of 2006-07, this was up to £3,000 a year). However, in 2010 following the Browne Review (*Independent Review of Higher Education Funding and Student Finance*)¹⁹, the maximum amount of student fee was controversially raised to £9,000 a year causing large student protests in London. The following figure shows the countries with tuition fees, more specifically it illustrates the most common categories of students who pay fees of more than EUR 100 per year for participating in first cycle higher education programmes.

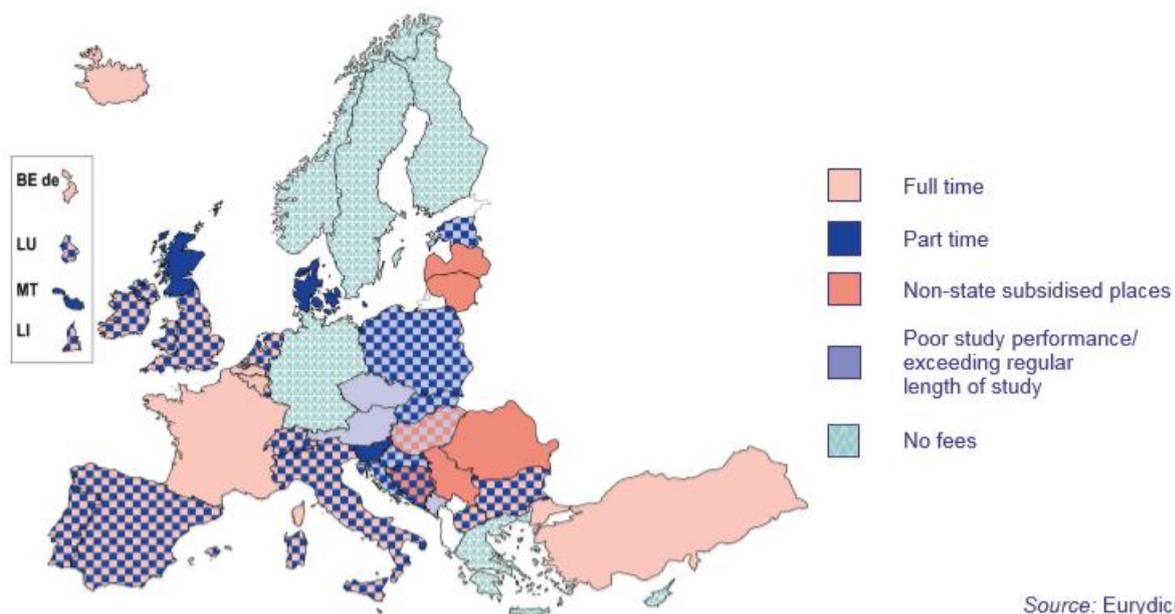


Figure 1: Most common categories of fee payers (including tuition and administrative fees) in the first cycle of study programmes, 2017/18

Source: National Student Fee and Support Systems in European Higher Education 2017/18, Eurydice

2.2.3 Student Support Systems in Financing Higher Education in Europe

The introduction of tuition fees would imply a need for student loan schemes which have been introduced by several countries with varying success. As Canning, Godfrey and Holzer-Zelazewska note in their *Higher Education Financing in the New EU Member States* study, there are several

¹⁸ Higher Education Financing in the New EU Member States, 2007

¹⁹ <https://www.gov.uk/government/publications/the-browne-report-higher-education-funding-and-student-finance>

preconditions for successful student loan schemes, including ways to keep track of people's movements and systems of withholding at the point of wage and salary payment.²⁰

A recent study by Eurydice *National Student Fee and Support Systems in European Higher Education 2017/ 2018* analysed how student fees and student support affect access to higher education and what impact they have on progression and completion rates. They focused on both angles of this matter – the financial burden of tuition fees as well as support measures how this can be alleviated. The following figure shows the main types of direct support to full-time students in the first cycle of study.

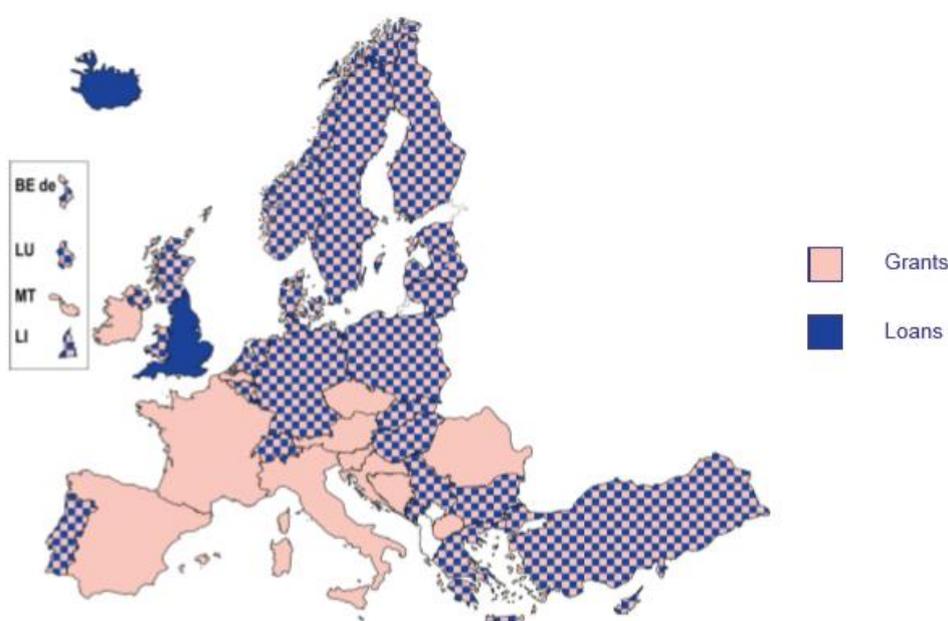


Figure 2: Main types of direct students support to full-time students, first cycle, 2017/18

Source: National Student Fee and Support Systems in European Higher Education 2017/18, Eurydice

In all European countries there is at least one type of direct support (a grant or a loan) available to students and as the figure indicates, approximately a half of the countries offers both types. In addition to that, and rather interestingly, the countries with no tuition fees offer both types of direct support – student loans as well as grants (Germany, Greece, Finland). Usually, the systems are not linked and students have to apply through separate procedures. Amounts of support usually depend on the basis of financial need.²¹ Grants are provided directly to students, are non-repayable and they are typically differentiated by the concepts of need-based and merit-based grants. The level of how grants are applied across countries is evolving. Iceland used to be the only country not offering grants at all while the Netherlands moved away from offering nearly universal to specific need-based grants to students. United Kingdom (England) has recently discontinued the maintenance grant (to cover

²⁰ Higher Education Financing in the New EU Member States, 2007

²¹ National Student Fee and Support Systems in European Higher Education 2017/18

living costs) and replaced it with a maintenance loan.²² Further information on grants and scholarships can be found in *Existing Capacity Development and Mobility Programmes between the EU and Central Asia Countries* study.²³

Most education systems in Europe offer repayable loans to enable students to finance their studies. Nevertheless, only in about half of them more than 5% of students actually take the loan – ranging from 7% in Estonia to 92% in United Kingdom (England). This is of course also dependent on whether eligibility is universal or restricted in some way. The restrictions may be based on family income, student age or academic performance. Repayment conditions differ across European countries but generally, the loans are guaranteed by the state and usually with favourable interest rates (approximately 1-2%).²⁴

In the third group of the countries where there are both state-funded and tuition-fees funded study places, the solution seems to be based not so much on the ideological preferences as on the state budget and political constraints. Therefore, in those countries, instead of limiting the number of study places in total, the institutions are allowed to attract the paying students and thus diversify their income streams. As a result, students in such circumstances are able to access education by paying tuition fees instead of competing for limited number of state-funded places and potentially staying out of higher education if deemed unsuccessful. However, this approach does not account for poorer students who are less successful in entrance examinations and cannot afford the alternative fee-paying track and they are subsequently excluded from higher education.²⁵ Therefore, the systems that include the study places covered by tuition fees usually have accompanying systems of state-backed or state subsidised loans or maintenance grants enabling students from low-income families to cover living costs and so promoting the accessibility of education. For example, in the United Kingdom, it is possible to obtain a tuition fee loan to cover the full tuition fee, and the repayment is managed through the tax system after the graduate's income exceeds a certain amount per year. Originally, when the system of tuition fees was established, the repayment threshold for tuition fee loans was at £10,000 raising to £25,000 for tax year 2018/19.²⁶

On the other hand, the countries which have fully publicly paid education tend to have more redistributive tax systems and lower social inequality since the accessibility of education is the precursor of the social mobility. Also, the dual-track system with both state-funded and tuition-fees funded study places has, to some extent, a positive effect on the equity of access to higher education.

As already indicated, an important characteristic of each education system is the availability and extent of the support for students. These subsidies may take several forms, for example reduced tuition fees or exemptions from tuition fees, stipends, scholarships, maintenance grants, subsidised loans or subsidies of items such as food, lodging, books and learning material.²⁷ This approach supports the access to higher education.

As previously stated, all European countries provide at least one type of direct support to alleviate the financial burden of higher education studies for students and their families. In addition to student loans and grants, in approximately half of the countries there is also indirect support available as the following figure demonstrates.

²² National Student Fee and Support Systems in European Higher Education 2017/18

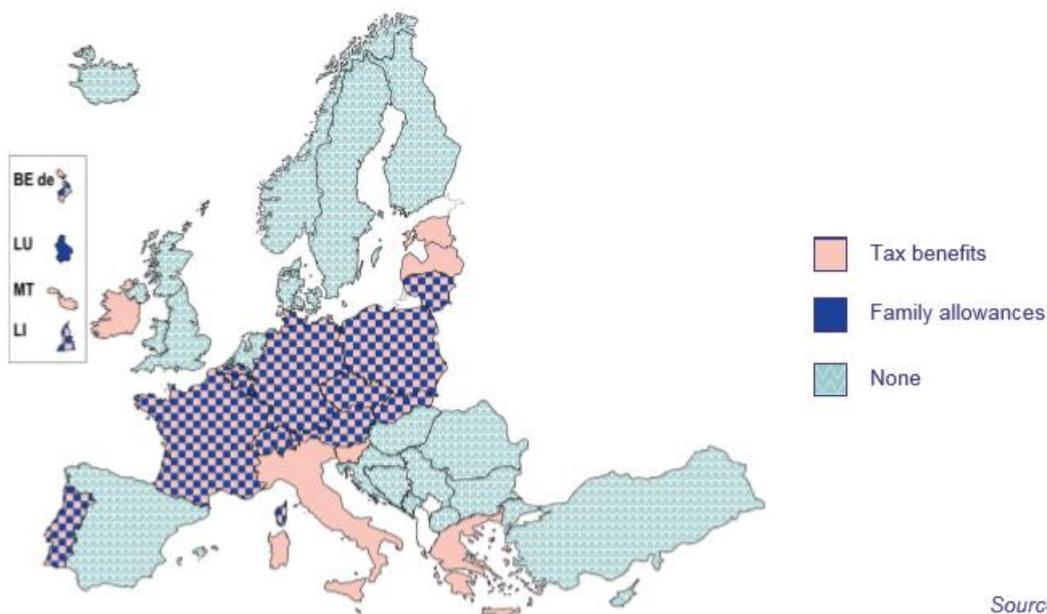
²³ http://www.caep-project.org/wp-content/uploads/2017/06/CAEP_Mobility_Report-30_04_2017.pdf

²⁴ National Student Fee and Support Systems in European Higher Education 2017/18

²⁵ Higher Education Financing in the New EU Member States, 2007

²⁶ https://en.wikipedia.org/wiki/Student_loans_in_the_United_Kingdom

²⁷ Higher Education Financing in the New EU Member States, 2007



Source: Eurydice.

Figure 3: Indirect support to students studying in higher education, 2016/17

Source: National Student Fee and Support Systems in European Higher Education 2017/18, Eurydice

In most countries²⁸, both tax benefits and family allowances are available. In Estonia, Ireland, Greece, Italy, Latvia, Malta and Slovenia, only tax benefit can be obtained by students' parents while in Luxembourg, only family allowances are possible. Typically, both tax benefits as well as family allowances are subject to certain conditions or restrictions, for example they are linked to students' residence/ nationality, age and financial status.²⁹

2.3 The Performance Element in Financing Higher Education Institutions

The third important characteristic of the higher education financing in each country is whether and to what degree the policy-makers have introduced the performance-based elements as part of the financing formula.

2.3.1 Performance Indicators

The general trend in the European education area has been the introduction of the performance or 'output' indicators in addition to the long-standing 'input' or cost-based financing. First European countries have introduced performance-based financing elements in the 1990s, the next wave has

²⁸ Belgium, Czech Republic, Germany, France, Lithuania, Austria, Poland, Portugal, Slovakia, Switzerland and Liechtenstein

²⁹ National Student Fee and Support Systems in European Higher Education 2017/ 2018, 2017

followed in the 2000s and currently, the trend is continuing. The countries which have not yet introduced the performance-based financing are working on its introduction. The initial formulae usually undergo some corrections after a few years.³⁰

The performance indicators vary and correspond to the policy goals of each country. For example, in Latvia the need to renew the academic staff has led to the introduction of such criterion as the work contracts concluded by the universities with the young researchers/ PhD students and recent graduates of the doctoral programmes.

The performance elements are set in accordance to each country's policy goals. However, some typical elements are as following:

1. output results of the core activities - the number of graduates (bachelor and master degrees) and European Credit Transfer System (ECTS) points;
2. criteria concerning the quality and intensity of the research as a proxy for the quality of higher education (conferred doctoral degrees, research publications, especially in the international peer-reviewed journals, citation indexes etc.);
3. criteria on the attracted external funding - research contracts with the industry, international, European and national research grants which demonstrate the relevance and competitiveness of the research and also stimulate the institutions to go outside of the 'ivory tower of academia', engage with the industry and diversify their income base.

Other output-oriented criteria typically can be patent applications, graduate employment, national and international rankings.^{31 32}

The number of foreign students, exchange students and international academic staff might or might not be the part of the formula depending on whether the country has the goal to internationalise its research and education. The countries that pioneered the introduction of performance indicators, added indicators such as inclusion of minorities, gender balance, and interaction with society over time.

However, whatever the criteria are, there should be a balance between their manageability and comprehensiveness. As researchers point out, indicators used have to be easy to calculate, difficult to manipulate, reliable as a guide to an institution's value added, and not subject to statistical 'noise'.³³

One of the elements of this trend towards performance orientation are performance contracts between the policy maker such as the ministry and the higher education institutions. Performance contracts often do not have a direct effect on funding. However, they typically specify certain goals and at least act as the soft instrument in shaping the institutional behaviour.³⁴

2.3.2 Institutional Mergers and Excellence Schemes

The efficiency measures shaping the European education area are not limited to the performance-based funding and performance contracts. Other notable trends are institutional mergers and excellence schemes.

The number of the institutional mergers in the European education area has been increasing since the 2000s. Several countries, for example, Northern European ones like Finland and Denmark, have undergone comprehensive top-down consolidation of the sector. The niche institutions such as

³⁰ DEFINE Thematic Report: Performance-Based Funding of Universities in Europe, 2015

³¹ DEFINE Thematic Report: Performance-Based Funding of Universities in Europe, 2015

³² Focus on Performance - World Bank Support to Higher Education in Latvia, 2018

³³ Approaches to Results-Based Funding in Tertiary Education, 2004

³⁴ DEFINE Thematic Report: Performance-Based Funding of Universities in Europe, 2015

pedagogical institutes or naval academies have been integrated into larger classical universities. The schools of applied sciences in the regions have been merged by the geographical principle. The academic and scientific institutions of similar and complementary profiles have been merged as well.

There are usually several rationales behind the mergers. One of them is the financial efficiency arising from the economy of scale, centralisation of the procurement and administration, avoiding duplication of the study programmes. However, no less important is the drive to increase the international competitiveness of the national institutions by achieving the greater critical mass in teaching and research. In such cases, for example, the consolidation that created the Aalto University in Finland, can be viewed primarily as an excellence scheme.³⁵

Apart from mergers when one or several institutions cease to exist as separate entities, there are other degrees of system consolidation, ranging from joint degrees and pooling of the research infrastructure to the consortia of universities and strategic partnerships. This trend on the EU level includes the *European Universities Initiative* promoted by the European Commission, which aims to create about 20 pan-European alliances of the universities. These 'European universities of the future' shall enable students to obtain a degree by combining studies in several EU countries.

Another prominent item on the agenda of the education policy-makers is creation of the excellence centres or excellence schemes. Introduction of the performance-based financing is usually a state initiative at the system level. Institutional mergers can be both top-down and bottom-up processes, though a comprehensive system's consolidation is usually a top-down process with incentives included.

Excellence schemes could be state-directed measures for capacity building, modernisation and institutional restructuring of the sector, for example, Germany's *Excellence Initiative* or the French *Investment for the Future*. Both initiatives include substantial financing (EUR 4.6 billion in Germany, EUR 3.5 billion in France) over a defined period (e.g. 10 years in Germany), and aim to substantially increase the international competitiveness of the national science and higher education sector. On a smaller scale, the excellence schemes can be initiatives within the institutions on creating centres of excellence to increase the institution's competitiveness.³⁶

2.4 Governance and Autonomy of Higher Education Institutions in Europe

2.4.1 Financial Autonomy of Higher Education Institutions

On the level of institution, the capacity of universities to increase cost efficiency depends partly on their degree of the financial autonomy. Different methods of financing higher education institutions allow for various levels of autonomy. The financial autonomy refers to an institution's ability to manage its funds and allocate its budget independently. In majority of European countries, there are no restrictions on the allocation of funding received through block-grant mechanism (Norway, Spain, Switzerland, Estonia, Latvia and others). On the other hand, there are countries where the block grant is split into broad categories and higher education institutions are unable to move funds between these (for example Slovakia, France, Hungary, and Portugal) or the funds are specifically allocated to particular items through line-item budgeting mechanism (for example in Serbia).³⁷ An ability to keep

³⁵ DEFINE Thematic Report: University Mergers in Europe, 2014

³⁶ Designing Strategies for Efficient Funding of Higher Education in Europe, 2013

³⁷ Data from: <https://www.university-autonomy.eu/dimensions/financial/>

or not the funding surplus is another aspect worth considering. In most European countries, the surplus can be kept without any restrictions (Austria, Croatia, Denmark, Estonia, France and others) while in Norway the surplus is limited to a maximum percentage. Or, in countries such as Iceland, Portugal and Luxembourg, the higher education institutions must seek an approval from an external authority while in Ireland, Lithuania and Serbia the surplus cannot be kept at all.³⁸

Another interesting aspect of financial autonomy is the freedom to set the level of tuition fees³⁹. There are only 4 countries where this is not restricted in any way – Latvia, Lithuania, Luxembourg, and Serbia. In most European countries, there exists a limitation of some sort; for example, the level of maximum amount of tuition fees is set by an external authority (Hungary, Iceland, United Kingdom), universities can cooperate with an external authority to set the level of tuition fees (Switzerland) or they cannot interfere in this process at all (Croatia, France, Spain, the Netherlands).⁴⁰

2.4.2 Organisational Autonomy of Higher Education Institutions

Organisational autonomy refers to a university's ability to decide freely on its internal organisation such as appointing the leadership team and internal academic structures. The ability to independently select, appoint and dismiss the executive head and to decide on the length of their term of office is not guaranteed in all European higher education systems and legal guidelines and restrictions still apply in many countries: for example (and most typically), the executive head must hold an academic position (Croatia, France, Denmark, Estonia), more specifically a doctoral degree (Finland and Lithuania) or there are other restrictions in place (Hungary, Serbia). Similarly, in majority of European countries, higher education institutions can decide on their internal academic structures while only in some countries there are some restrictions or guidelines in the law (France, Italy, Serbia).⁴¹

2.4.3 Staffing Autonomy of Higher Education Institutions

Staffing autonomy refers to a university's ability to decide freely on aspects related to human resources management including recruitment, salaries, dismissals and promotions. To acknowledge the globalisation trend in higher education and to increase the international competitiveness, higher education institutions must be able to hire the most suitable academic and administrative staff without external prescriptions as well as determine their salary levels. Only in 4 countries (Croatia, France, Poland, Hungary), there is a restriction of some type, for example to seek an approval from an external authority for some senior academic staff.

2.4.4 Academic Autonomy of Higher Education Institutions

Academic autonomy refers to a university's ability to decide freely on academic matters such as student admissions, academic content and quality assurance. The student admissions aspect is closely linked with the financial one as the number of students has direct financial implications. At the same time, the set criteria for student admission contribute directly to ensuring quality of the studies. However, quality assurance is the key accountability indicator and therefore, in vast majority of European countries, higher education institutions cannot decide freely on its mechanism. Furthermore, only in 7 countries higher education institutions decide independently on the number

³⁸ Data from: <https://www.university-autonomy.eu/dimensions/financial/>

³⁹ Tuition fees for national/ EU students at Bachelor level.

⁴⁰ Data from: <https://www.university-autonomy.eu/dimensions/financial/>

⁴¹ Data from: <https://www.university-autonomy.eu/dimensions/organisational/>

of study places. More typically, universities negotiate with an external authority on this and only in Serbia the number of study places is determined solely by an external authority.⁴²

⁴² Data from: <https://www.university-autonomy.eu/dimensions/academic/>

3 Approaches and Models in Financing Vocational Education and Training in Europe

Similarly to higher education or, indeed, to any public policy area, vocational education and training and its performance are shaped significantly by financing. Furthermore, in the present climate of economic constraints and austerity they face considerable difficulties. In addition to that, the vocational education has its own set of challenges, partly caused by the same trends affecting the higher education, partly distinct to the sector. The world is changing. The technologies are changing. The trends are automation and digitalisation in manufacturing and services. On one hand, there is an increasing migration for economic and political reasons, often considered a challenge and not an opportunity. On the other hand, there is a global competition for skilled people and shortages of skills in some sectors. The European countries are subject to the globalisation trends and have to take into account the development of education sectors in the emerging economies such as China, India and others.

Some sources suggest that although clearly the investments into research and development correlate with the innovation indicators and added-value of the country's economy, adult learning on the job, and the resulting improvements in products, services and business processes are even more important for the country's innovation performance than higher education.

The vocational education; however, is facing an image problem - it is widely perceived as the 'second-best' option or even as a 'dead-end' career option in comparison to higher education. As a result, in most EU countries the enrolment of youth into the vocational education is lower than demanded by the labour market. Simultaneously, the workers already employed need to keep upgrading their skills in line with the technological changes and developments.

Vocational education and training takes many forms, and is perhaps the least unitary of education sectors. In very few European countries is a clear dividing line between initial (IVET) and continuing vocational training (CVET). Initial vocational training tends to have a highly formalised structure while continuing vocational training in its broader sense is part of lifelong learning and may encompass any kind of education. As vocational education and training is shaped by the particular institutional and historical developments of each country, it does not have the same status across different countries and it is difficult to grasp as a single entity and define as such. This challenge is complicated by the fact that vocational education and training takes place throughout an individual's lifetime, and in formal, non-formal and informal contexts.⁴³ Especially in the last few years, a tendency towards a more holistic vision (opposed to a technical view focusing on monetary and resourcing aspects) can be seen. Vocational education and training is not organised as a system as

⁴³ The Changing Nature and Role of Vocational Education and Training in Europe Volume 1, 2017

such. In most countries, there is a wide range of VET institutions including state, non-governmental and private providers, each with different interests, structures and traditions.⁴⁴

In terms of financing, vocational education and training is considered relatively expensive as it requires not only small pedagogical group sizes (to ensure effective practical learning) but also appropriate levels of professional equipment and material.⁴⁵ The aspect of high cost is combined with another potentially hindering element – the partnership nature of vocational education and training as it is positioned between education and the labour market. This, of course, has a direct impact on the strategic approach to its financing and financing of VET is often used as a political response to unemployment and as a vehicle to promote economic growth. Furthermore, education and training are still commonly considered as costs rather than investments. It is also difficult to calculate the return on investment because of the lack of data which might contribute to potential budget cuts.

In many European public administrations, there are typically two different ministries, or at least two different departments administering higher education and the vocational education. This has a direct impact on the availability of financial data, given there are multiple budget lines contributing to VET funding. This also means that any systemic financial reforms require inter-ministerial coordination and hence, strong political leadership.⁴⁶

The nature of multiple ministries also reflects the different thinking behind the systems. For higher education, the important link is the one with science and research. Even though the professional degrees have their important place in the system, practice is becoming even more important element of the studies. However, the science background is considered the backbone of the higher education's quality. For vocational education, the most important link is the one with the industry, which determines the quality and relevance of VET.

All the aspects mentioned above influence the financing models of vocational education and training. Since the participation in the vocational education is lower than desired, sharing the financing burden with the students in a direct way is mostly not a solution. The widespread solutions are the various schemes of co-financing with the business sector. In the last few years, there is a tendency to move away from traditional forms of financing VET to innovative financing mechanisms to ensure that labour market needs are met, training costs controlled and so the national challenges of technological advancements, globalisation and competitiveness are met.

In the EU countries, the following schemes are in operation, often used in combination:

3.1 Public sector as the main source of finance of VET institutions

In traditional public funding, the largest proportion of the financial resources of VET institutions comes from governmental expenditure. The financing is mostly cost-based as in the sphere of VET, the performance funding element is less widespread than in higher education. Some countries which are usually at the forefront of public administration trends, such as Finland, have introduced performance elements in VET funding only recently. In 2012, a 'performance budget' was introduced in the Netherlands. In addition to the block grant, schools receive funding to spend on specific activities such as teaching of language and numeracy skills, science and technology, supporting the development of gifted students and the professional development of staff. The aim of the performance budget is to boost the performance of pupils, teachers and school leaders.⁴⁷

⁴⁴ The Changing Nature and Role of Vocational Education and Training in Europe Volume 1, 2017

⁴⁵ Support to VET Financing: Financial Incentives for Companies, 2018

⁴⁶ Financing Vocational Education and Skills Development, 2018

⁴⁷ https://eacea.ec.europa.eu/national-policies/eurydice/content/funding-education-53_en

Since the relevance to the labour market is the key issue of VET, it would be logical to tie the performance elements to the labour market outcomes of the graduates. For higher education, most member states have developed some sort of graduate tracking systems; it is either data from administrative registers (such as tax authorities) or survey-based information on the employment of graduates. The information typically illustrates the link between the studies and employment – i.e. is the employment in the sector relevant to the studies. However, for vocational education and training, the systems of tracking the labour market outcomes of the graduates are less widespread. Therefore, before introducing the performance elements in VET financing, the first step would be to implement a tracking system of VET graduates.

This classical approach to vocational education is indispensable to any developed country's VET provision. Its challenge is to engage more with continuing professional education, namely with upgrading the skills of employed or unemployed adults. The related question is whether the state-funded study places are available for adult learners as well.

Although this classical approach to financing offers VET institutions stability and reassurance, the drawback is that there are mostly no performance elements and most have not yet introduced the systems of tracking the employment of VET graduates. Therefore, the system remains supply-based rather than actively assessing technological developments and trends. As a result, it has little incentives to address the needs of labour market promptly and flexibly.

This system is used in countries such as Sweden, Poland, Slovakia and Spain and it was used in Estonia until 2017 when a draft legislation was approved by which a new financing model was implemented in 2018. The new model is a combination of basic financing with performance-based financing. While basic financing is fixed for three years to ensure stability in VET institutions with respect to operating, administrative and staff costs, performance-based financing supports educational innovation and a stronger connection between schools and employers.⁴⁸

3.2 Sharing financing between enterprises, public sector and students

There are many sectors competing for public funding, and with the ageing population in the EU and economic restructuring underway, few governments have the easy option of simply increasing the public funding for education. In all EU countries, the state, training companies and students finance different shares of vocational education and training by assuming different proportions of direct and indirect costs. That is why the term 'co-financing' or 'co-investment' is often used in this connection.⁴⁹ This concept can also mean a direct feedback loop on the relevance and quality of vocational education and training. The specific share of amounts contributed by these funders is typically based on political decision as the key funder is considered the main beneficiary of this training.

As Ziderman points out, the training market is fragmented into two distinctly differing sectors – public and private. Public training can be provided by public training institutions; private training can be accessed through private training institutions or private enterprises. This structure is demonstrated in the following figure:

⁴⁸ <http://www.cedefop.europa.eu/en/news-and-press/news/estonia-new-financing-model-vet-increase-funding-and-stability-schools-0>

⁴⁹ Financing of Vocational Education and Training, 1998

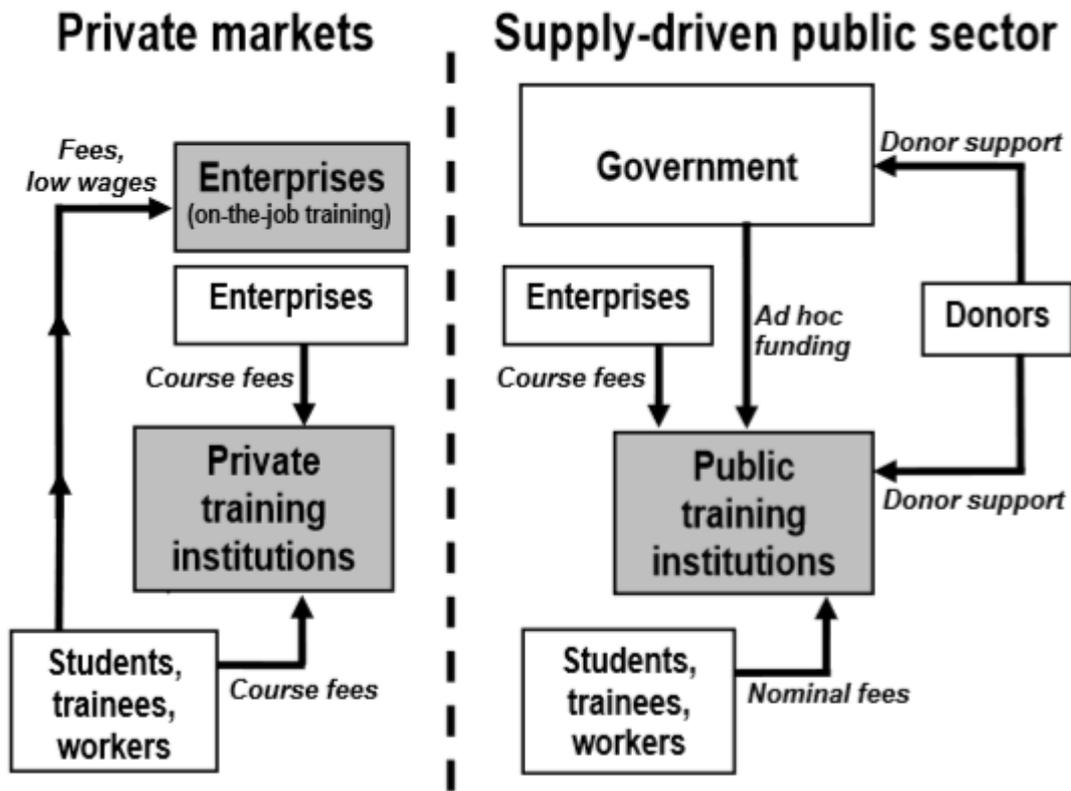


Figure 4: Finance flows: fragmented training markets

Note: Shaded boxes represent training providers

Black arrows indicate funding flows

Source: Funding Mechanisms for Financing Vocational Education: An Analytical Framework

Ziderman argues that while the private training sector is market-driven, non-subsidised and (usually) competitive, the public training sector is predominantly supply-driven and often failing to meet particular needs of informal sector as well as special needs of minority and disadvantaged groups. This is caused by the financing mechanism – public training institutions are usually funded by governmental allocations but as these are unrelated to outcome measures (for example, success in placing students in employment) there is little incentive for training providers to align their training with the needs of the labour market. Therefore, Ziderman concludes, there is a growing need for a much more flexible and responsive training system to ensure competitiveness and industrial development in the current climate of ongoing change and globalisation.⁵⁰

Dual apprenticeship schemes

The dualism of the learning venues in these schemes requires financing arrangements in which different parties are involved and contribute to or cover the cost as per their responsibilities. The state is responsible for school-based learning and it usually funds the training in VET institutions (operational costs, staff wages). On the other hand, the enterprises fund the training on the job – i.e. the company-based learning component. The enterprise typically pays at least the minimal wage to

⁵⁰ Funding Mechanisms for Financing Vocational Education: An Analytical Framework, 2016

the apprentice, thus increasing the attractiveness of choosing vocational education and training. The apprentices' output is partially reimbursing the company's costs. In some countries, the state subsidises the wages of the apprentices. The apprentices accept relatively low wages during the training period and this way they also participate in the total cost sharing. As CEDEFOP point out in their extensive study *Governance and Financing of Apprenticeships*, the evaluation of financing arrangements of apprenticeships can be then carried out by investigating whether and to what extent the three stakeholder groups mentioned above actually share the costs. Another more focused indicator concerns whether apprenticeship is cost-effective for companies involved, i.e. whether the returns generated by the apprentices/ learners are equal to or higher than the wages and the other costs associated with training.⁵¹

This financing approach is used in Germany where public funding is used to finance the dual system and also full-time vocational schools. And although no information is available regarding the amount to which the students participate in financing their training (by accepting lower wages during the training period), the Federal Institute for Vocational Education and Training in Germany estimates that their financing contribution is considerable and often underestimated.⁵²

The countries with the dual training systems usually have a comparatively high rate of participation in VET and well-developed industrial sectors.

Nation-level/ sector-level payroll levies and training funds

Within the EU, governments subsidise enterprise training for example through nation-level or sector-level payroll levies and training funds.

These take such forms as the levies on the companies' payroll and have provided governments in many countries with an alternative mechanism for promoting company training.⁵³ They could be from about 0,5% to 1% of the company's total payroll. Small enterprises are usually exempt from the levy. The proceeds could go to the national funding of VET institutions or to the sector-specific training.

Payroll levies increase the cost of labour to the employer and thus might discourage the employment. They are in place in countries such as France, which has a stark division between those who currently participate in the labour market on the permanent contracts and those on the temporary contracts and seeking a job. Such schemes are not advisable to countries with the substantial informal sector. The question is also how directly the paid levy benefits the training needs of a particular company.

In some countries, the proceeds from the levies go into national training funds or the sectoral training funds. The considerations are to separate those proceeds from the general national budget to keep it for the intended purpose, and to establish an organisation representing the employers and other stakeholders, so that they take part in the spending decisions and react to the needs of the labour market more flexibly than the governmental bodies and state-funded institutions. Such funds work well in countries with established traditions of a social dialogue between the state, employers' and employees' organisations. Most training funds are managed by governing boards with stakeholder representation (usually government, employers and unions). However, in practice, as Ziderman points out, control may rest with the responsible minister or the voice of employers may be weak (due to low representation).⁵⁴

For example, in Denmark financing of vocational education is based on a legally prescribed 'tripartite' procedure which by its title already suggests that the state, enterprises and trade unions have

⁵¹ *Governance and Financing of Apprenticeships*, 2016

⁵² <https://www.bibb.de/en/41380.php>

⁵³ *Funding Mechanisms for Financing Vocational Education: An Analytical Framework*, 2016

⁵⁴ *Funding Mechanisms for Financing Vocational Education: An Analytical Framework*, 2016

reached an agreement for all training as well as non-training enterprises to contribute to funding of in-company training. The compulsory contribution is paid into an Employer-Trainee-Fund (AER) in the form of a fixed amount for each full-time employee. The AER is jointly administered by the employers and the trade unions and each year it makes recommendation on the level of the compulsory contribution which has to be adopted by the Danish Parliament.⁵⁵

In addition to national training funds, sectoral training funds have been introduced in some countries. These offer the advantages of flexibility and the ability to focus more directly on the particular sectoral training needs. They may be also more acceptable to employers because of a greater industry-specific orientation, less bureaucracy and a greater sense of ownership. An obvious disadvantage might be the risks of duplicating of training efforts, failing to create common core skills that are transferrable across industries and are not adapted to regional needs.⁵⁶ The sectoral training funds are popular in Belgium, Italy and the Netherlands.

Tax incentives and reimbursement of training costs

In addition to payroll levies, there are other measures available to encourage enterprises to provide vocational training (in-house or externally)– tax incentives and reimbursement of training costs. Tax incentives, direct subsidies or grants to compensate for the occurred costs can be provided depending on the amount spent on training. The schemes are popular; however, as ETF emphasise, a successful incentive policy requires clarity of purpose as it must be adequate to generate the intended beneficial actions and related social outcomes without creating onerous administrative complexity leading to inefficiencies.⁵⁷ Tax incentive system creates a certain administrative burden as it needs the legislation to stipulate which types of training and costs are eligible. This also requires paperwork regarding the costs as well as an external authority to check whether the expenses are reimbursable and are not inflated.

Tax incentives only work well in the economies with a solid tax base and little informal sector. In some cases, the companies are safeguarding their investments into employees by the reimbursement clauses in the contracts, stipulating the need to keep working for the company for a certain period after the company-paid training or repay the expenses otherwise.

In training cost reimbursement, enterprises receive grants on a cost-incurred basis, for certain designated forms of training – i.e. companies are reimbursed for training expenditures incurred. Typically, a training expenditure ceiling is set, up to a given percentage of the levy paid.⁵⁸

Donor funding/ supranational funding

Many transition economies have the benefits of donor aid. If invested strategically, it could build the national capacity up to the point when further on, the state budget can finance the respective functions. Often though, the governments off-load the financing of some functions to the donor funding without ensuring their sustainability. Sustainability is one of the key risks of donor funding as it should be recognised that it will not continue over the longer term and eventually, it will cease. Another risk of donor and supranational funding is the difference in cultural norms, institutional settings and organisational capabilities between the country offering the training support and aid-recipient country.⁵⁹

⁵⁵ Financing of Vocational Education and Training, 1998

⁵⁶ Funding Mechanisms for Financing Vocational Education: An Analytical Framework, 2016

⁵⁷ Support to VET Financing: Financial Incentives for Companies, 2018

⁵⁸ Funding Mechanisms for Financing Vocational Education: An Analytical Framework, 2016

⁵⁹ Funding Mechanisms for Financing Vocational Education: An Analytical Framework, 2016

However, donor funding does represent an opportunity if available. What matters is the design of the aid. In the EU, the European Commission is promoting *A New Skills Agenda for Europe* with the help of such instruments as the European Social Fund (ESF), the European Regional Development Fund (ERDF), the European Agricultural Fund for Rural Development (EAFRD), the European Maritime and Fisheries Fund (EMFF), the Asylum, Migration and Integration Fund (AMIF), Horizon 2020 and Erasmus+. The European Social Fund and the European Regional Development Fund alone are injecting over EUR 30 billion to support skills development in the period 2014-2020, and the Erasmus+ programme supports skills development in education and training with nearly EUR 15 billion.

The need for training may include the whole sectors affected by the economic restructuring (fisheries, textile, metallurgy). The member states often use ESF financing to provide training to specific target groups that are under-represented in education.

3.3 Schemes to motivate individuals

Apart from the co-financing schemes between the government and the enterprises, in the European countries there is a whole set of incentives to motivate individuals to participate in the continuing vocational training. Schemes to encourage individuals to train or upgrade their skills are tax incentives, vouchers, grants, individual learning accounts and adult learning loans. They subsidise the training (often also the one not necessarily leading to some qualification) by direct financing or through tax deductions. Such measures are still state-financed, like the classical funding to VET institutions; however, they aim to increase the demand-driven nature of the training.

An interesting scheme was launched in France in 2004. It provided workers with access to training over their working life. Under the Individual Right to Training scheme (IRT), employees are entitled to 20 hours of annual training from employers (training is funded by employers). The training may be during or outside working hours and in the latter case, employees continue to receive 50% of their net wage. Despite these appealing qualities, the scheme proved less successful than expected with the access rate of employees under 7%.⁶⁰ On the EU level, the European Commission has launched a Blueprint for Sectoral Cooperation on Skills as part of the New Skills Agenda. The goal is to create the platforms of cooperation, which will evaluate the skills shortages in the particular sectors and develop a set of actions to address those. The sectoral platforms will include the public authorities, the enterprises, the trade unions, the research and training institutions.

The first wave started in 2018 and it includes sectors such as the automotive, maritime technology, space and geo-information, textile and tourism. The next waves of the sectoral platforms will be launched in 2019 and 2020. The blueprint is a pilot project and the member states can further replicate it on national and regional level.

As argued in the sections above, the policy objective of vocational education and its financing is to encourage the transformation of fragmented training systems with under-funded and supply-driven provision into an integrated, competitive and demand-driven training system. Therefore, the trends which are likely to continue in financing VET and its development are:

- introduction of the performance-based funding elements in the financing of VET to stimulate more demand-driven approach;
- establishing the tracking of the labour market outcomes of VET graduates, which is instrumental in introducing the performance-based funding elements;

⁶⁰ Funding Mechanisms for Financing Vocational Education: An Analytical Framework, 2016

- improved availability of data on the positive labour market outcomes as part of communication strategy to increase the attractiveness of VET;
- increased work-based learning, dual apprenticeship and other training on the job approaches including the countries where it is not yet the default training mode;
- adult upskilling and re-training will become increasingly important, to keep in line with the technological changes blurring traditional boundaries between the initial and the continuous VET; this will require more effective skills forecast and a strong feedback loop between the industry and VET.

Optimally, vocational education and training shall be an integral part of the country's economic development strategy.

Financing mechanisms and their impact on the quality of education

As stated in the last two chapters, effective and efficient financing of higher education as well as vocational education and training is crucial and critical to ensure high quality education and positive outcomes it conveys and enables. Quality education is a complex concept and it comprises: **a) equity** - gender, ethnicity, family, religion, social background should not be obstacles to entering education at any level; **b) contextualisation and relevance** - awareness of regional/ local specifics, conditions and needs; **c) sustainability** - educational change processes need time to be realised and therefore sufficient capacity should be built; **d) content** - fit for purpose education content is required to ensure relevant skills are trained, needs of the labour market are met; **e) learning outcomes** - relevant skills and knowledge are developed; **f) environment** - quality education should be provided in a healthy, safe and protective environment; **g) quality teachers** - well-educated and trained teachers are the cornerstone of quality education.⁶¹

All of the factors listed above can be directly affected by financing mechanisms of educational institutions and therefore, as already argued in this report, it is critical to ensure that the financing methods and approaches of providing funding to HEIs and VET institutions is effective and efficient to reach positive outcomes not only for learners but for the society as a whole. Adequate and diversified sources of income and sound budget planning have a direct positive impact on creating sufficient study places without discrimination of disadvantaged groups of learners at educational institutions where relevant, up-to-date curricula are taught by motivated high quality teachers acting as role models not only for professional but also for personal development of the learners. This naturally leads to achieving positive learning outcomes directly influencing the economic and social situation in a country.

While the financing mechanisms constitute the direct way of influencing the quality of education, the process does not end here and continues with an indirect (yet perhaps even more important) impact on outcomes for the whole society. Quality education is a powerful tool for shaping people's attitudes and opinions and how they react to a diversity. Given the current global situation full of violent acts and radicalisation, the role of education (i.e. quality education) is becoming even more critical. And although 'education cannot prevent an individual from committing a violent act in the name of a violent extremist ideology but the provision of relevant education of good quality can help create the conditions that make it difficult for violent extremist ideologies and acts to proliferate'⁶² as the role that education plays in addressing the *drivers* of violent extremism is indisputable. Quality education builds

⁶¹ <https://www.vvob.be/en/education/our-vision-on-quality-education>

⁶² Preventing violent extremism through education. A guide for policy-makers, 2017

learners' resilience to hateful narratives and propaganda that legitimise the use of violence and creates conditions that will strengthen their commitment to non-violence and peaceful behaviour and help them build defences against extremism and radicalisation. This narrative is further explored in the review report *The role of education in supporting social inclusion and resilience against radicalisation among youth in the European Union and in Central Asia*.⁶³

⁶³ <https://www.caep-project.org/studies-and-reports/>

4 Financing Higher Education and Vocational Education and Training in Central Asia

4.1 Kazakhstan

4.1.1 Financing Higher Education in Kazakhstan

The financing system of higher education in Kazakhstan is based on diversifying the sources of funding. The current constellation of financing higher education was created in 1999. It has remained largely unchanged since then and consists of five main elements: (1) the state grants system covering the tuition fees of high achieving and quotas for disadvantaged students; (2) tuition fees paid by students and their families; (3) public subsidies for graduate programmes (at master and PhD level); (4) student loans and family savings plans; and (5) employers' contributions.

In the higher education system of Kazakhstan, the distribution of state resources is mainly concentrated on three objects:

- provision of state grants for studies and scholarships for students with high United National Test scores for certain academic programmes;
- support for international scholarships under the Bolashak programme and other educational activities;
- support for student grants and other expenses at Nazarbayev University.

In 2017, Kazakhstan's public spending on education amounted to 3.7% of GDP. The share of public funding on higher education remains consistently low at around 0.3% of GDP⁶⁴, funding on science does not exceed 0.2% of GDP. This level of investment as a percentage of GDP is lower than in many OECD countries and below the average level of 5-7% of GDP recommended by UNESCO. The financing of higher and postgraduate education in 2017 amounted to KZT 185.38 billion against KZT 187.6 billion in 2016. This is 1.6% of the total state budget and 0.38% of the country's GDP⁶⁵. For a number of budget programmes, compared to 2016, there was a significant reduction in expenditures, but the amount of funding under the budget programme *Training of specialists with higher and postgraduate education and the provision of social support to students* increased by 4.5%. At the same time, the increase trend has been observed since 2014.

⁶⁴ Education Statistics, the World Bank: <https://databank.worldbank.org/data/source/education-statistics-%5e-all-indicators>

⁶⁵ Committee on Statistics, Ministry of National Economy of the Republic of Kazakhstan: <http://stat.gov.kz/>

Since 2014, the state has also allocated funds through grants in the framework of the programme *Serpin 2050*⁶⁶ for preparing specialists in HEIs in 7 regions. The programme aims to reduce unemployment in the southern regions and to prevent shortage of staff in pedagogical, technical and agricultural fields in the western, eastern and northern regions of the country.

In 2015, a training programme was also launched under the *State Programme for Industrial and Innovative Development*⁶⁷ in 6 sectors: building materials, petrochemical, engineering, metallurgical, chemical and food production and safety. The programme, implemented by the state, is carried out in 11 universities, distributed in 7 regions of the country, and provides for the allocation of 10 thousand additional state grants for training in the above specialties.

In Kazakhstan, the financing of higher education on a grant basis (state order) is carried out per student. The rate for calculating the cost of education per student in Kazakh HEIs under the state educational order is established by the Ministry of Education and Science. In 2017 it was amounted to KZT 596,188⁶⁸.

The state educational order for financing higher and postgraduate education is approved by the Government of the Republic of Kazakhstan depending on the specialty, type and status of the educational institution. It is placed in the form of differentiated educational grants and financed from the republican budget. Access to the state grants is opened both for public and private universities that have passed the accreditation procedure. This type of funding is channeled towards the universities and the purpose of their use is strictly monitored.

In 2017-2018, there was an increase in the amount of state orders for bachelor students by 16%, master students by 26% and doctoral students by 51%. (Figure 5)

Level of Higher Education	2014-2015 academic year	2015-2016 academic year	2016-2017 academic year	2017-2018 academic year
Bachelor degree	34 115	32 168	31 700	37 932
Master degree	6 737	6 682	7 400	10 004
Doctoral degree/ PhD	656	585	628	1 285

Figure 5: State educational orders by the level of HE (2014-2017)

Source: The Ministry of Education and Science of the Republic of Kazakhstan

Revenues from the sale of services provided under the state educational order, remaining as a result of the financial and economic activities of universities in the current fiscal year, are used by them in the next fiscal year.

In 2017, there was a sustainable growth in the dynamics of the HE students. In 2017, the number of students increased by 4%. The increase in the total number of students is due to the growing number of universities in the country in 2016, as well as the introduction of paid doctoral studies.⁶⁹

There are 131 higher education institutions operating in Kazakhstan. For reference, there are 10 national universities, 31 state universities, 1 international university, 19 corporatized universities

⁶⁶ Serpin 2050 Project: <http://new.serpin.kz/>

⁶⁷ Prime Minister of the Republic of Kazakhstan: <https://primeminister.kz/ru/page/view/gpiir>

⁶⁸ Ministry of Education and Science of the Republic of Kazakhstan: <http://www.edu.gov.kz/ru/index.php>

⁶⁹ For reference: in 2013 - 561,100 students; in 2014 - 512,000 students; in 2015 - 491,539 students; in 2016 - 512,677 students; in 2017 - 534,400 students.

(universities which were previously public and have gone corporate), 56 private universities, 14 non-civilian universities, 1 autonomous education of organisation (Nazarbayev University).

As public expenditure for higher education is relatively low, Kazakhstan's higher education relies heavily on private sources of funding. Private sources of financing tuition fees account for the largest share of higher education funding in Kazakhstan. In particular, private sources are the main source of income for private higher education institutions, where 88% of students pay all tuition costs on their own or are funded from non-state sources. Public funding is only available for about 22% of all students.

In state HEIs; however, more than half of the students (51.4%) cover the cost of education independently. In general, private funding of higher education in Kazakhstan amounts to about 0.7% of GDP: supporting private spending does not allow the country's overall level of investment in higher education to be raised to the level of other countries.

In corporatized HEIs, a part of the shares is owned by the state, another part by companies, organisations, foundations or individuals. The budget of these institutions is made up of tuition fees, government grants and other sources.

Public HEIs have the right to accept students on a fee-paying basis. From 40% to 50% of revenue of public HEIs is generated through paid educational services. Enterprises generate 0.9% of revenues for educating students in public universities; regional and local authorities also contribute to public universities' budget with 1.4%. Working conditions and remuneration in the public universities are regulated by the parameters set by the Ministry of Education and Science. Public universities have the right to increase the wage rate from extra-budgetary sources. While the use of funds allocated by the state was strictly controlled based on the parameters set by the Ministry, the institutions could use funds received from other sources according to their internal rules.

The main item of capital expenditure for public and private universities is the acquisition of fixed assets at 76% and 78%, and of capital repairs at 19% and 12.4%.

At private universities, the revenue generated by paid educational services constitutes at least 70% of the total revenues; in some universities it goes up to 99% of their incomes. On average, enterprises generate 2% of revenue of private universities, while regional and local authorities contribute for 0.9%. The income generated from research and innovation is rather low; for private HEIs it is situated between 0.1% and 3.2%.

Private universities have more freedom in terms of finances, improvement of material and technical equipment, and the determining of the salaries of teaching staff, usually higher than at public universities.

On July 4, 2018, the Law *On Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan on the Expansion of Academic and Managerial Independence of Higher Educational Institutions*⁷⁰ was adopted. With the adoption of these innovations it is expected to transfer into credit financing without reference to the terms of education. For this, the law provides for vesting the Ministry with new powers to approve financing procedures for universities, taking into account the credit technology of education and the formation of the state educational order. The term for approving state educational orders was also changed from one to three years.

In the framework of the regulation of financial policy, the norm regulating the cost of education in universities on a fee basis is excluded. This amendment is aimed at increasing the access of citizens to higher education, including those belonging to socially vulnerable groups of the population.

⁷⁰ https://online.zakon.kz/Document/?doc_id=39633866

Universities are endowed with new functions. Now they can create endowment funds, open start-up companies, set up branches in foreign countries, and also create legal entities for scientific and educational activities at the expense of extra-budgetary funds. In addition, to extract additional income from commercial activities and direct these revenues to the development of the university, norms are provided for in the Law of the Republic of Kazakhstan *On Non-Profit Organisations* to transform state and national universities into non-commercial joint-stock companies with 100% state participation. It also simplified the transformation mechanism for private universities established as commercial organisations.

In order to translate the experience of Nazarbayev University in terms of corporate governance, the exclusive competences of the board of directors at universities established in the organisational and legal form of the non-commercial joint-stock companies are defined.

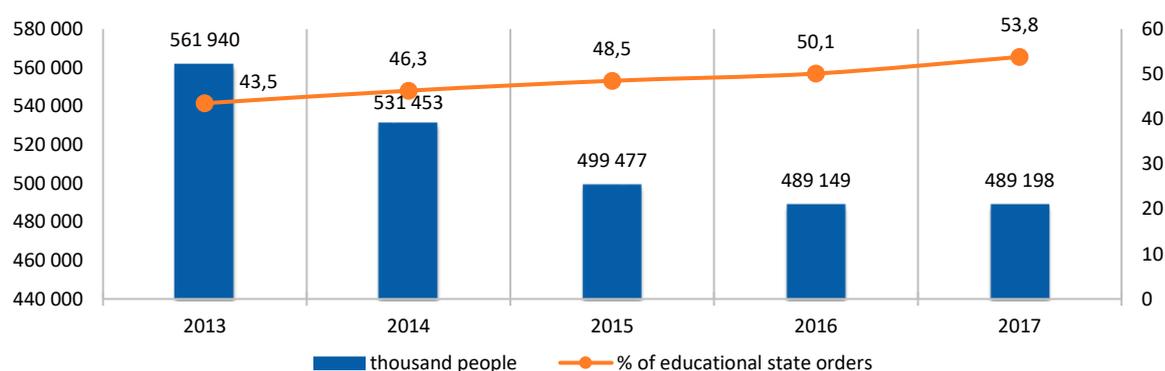
Conclusion:

- Low overall public spending on tertiary (HE) education relative to economy (0.3% of GDP vs. 1.5% average in OECD, 1.1% in newest EU members, 1.6% Ukraine)
- State grant programme (main funding vehicle for public higher education institutions) subsidises enrolment of students that often would have occurred without public investment
- Increased financial autonomy with the adoption of the new law

4.1.2 Financing Vocational Education and Training in Kazakhstan

At the beginning of the 2018-2019 academic year, 824 VET institutions were functioning in the Republic of Kazakhstan, 477 of which are state and 347 are private. The total number of students is 489,8 thousand. Compared with the 2017-2018 academic year, the number of students increased by 1.0%⁷¹.

In 2017, for the first time in 5 years, the contingent of VET did not decline. Previously, the number of college students annually decreased from 30,487 to 10,328 people. The launch of the project *Free VET for All*⁷² and the increase in the state order to 53.8% of students allowed to stop the negative trend. Analysis of the rate of admission of students to colleges over five years indicates the breaking of the trend of a sharp annual reduction in applicants (Figure 6).



⁷¹ Committee on Statistics, Ministry of National Economy of the Republic of Kazakhstan: <http://stat.gov.kz/>

⁷² <http://opencollege.kz/>

Figure 6: Dynamics of the VET system contingent in 2013-2017Source: National Education Database⁷³

According to the state educational order, 277,2 thousand people study, which is 56.6% of the total number of students, 212,6 thousand people or 43.4% of students receive paid educational services. From 2001 to 2016, the state budget expenditures on VET were almost unchanged and amounted to only 0.2%-0.3% of GDP. This is significantly lower than in other countries.

However, financing of the VET system is growing every year. In general, over the past three years there has been an increase in public spending on the VET system. Most of the funding comes from the local budget. In 2017, KZT 97,139 million was allocated from the local budget to the VET system, which is KZT 17,864 million more than in 2016. There is a decrease in expenditures from the public budget (KZT –12,457 million). For 2017, expenditures from the public budget amounted to KZT 6,431 million. The average cost per student was about KZT 380 thousand.

The financing of the VET system is carried out through the state orders provided by local executive bodies and the Ministry of Education and Science (MES), and the tuition fees. The authorized body (MES) and local executive bodies of the region, the cities of Astana and Almaty place a state educational order among VET institutions. The commission set by MES and local executive bodies includes representatives of sectoral state bodies, maslikhats and akimats, the National Chamber of Entrepreneurs of the Republic of Kazakhstan, and public organisations.

Colleges are independent in the formation of their structure and in the organisation of the educational process, selection and placement of personnel, educational and methodical, financial and economic activities within the limits established by the legislation of the Republic of Kazakhstan⁷⁴. The VET institutions are able to sell their own products, produced in training workshops, training farms and at training grounds.

The number of colleges with dual learning (60% of practice) in 2018 (486 colleges) increased by 65 compared to 2016 (421 colleges) with the participation of 3,900 enterprises with a coverage of 39 thousand students.

Appendix 1: Budget programmes of the Ministry of Education and Science of the Republic of Kazakhstan in the field of VET

Budget programme	Plan	Fact
	thousands, KZT	
203 Provision of personnel with technical and vocational education	19 095 569	18 899 036,5
100 Training of specialists in technical and vocational organisations, post-secondary education and the provision of social support to students	2 504 376	2 340 322,5
101 Methodological support in the field of technical and vocational, post-secondary education	109 914	77 435

⁷³ National Education Database, E-learning: <https://e.edu.kz/ru/statistics.html>

⁷⁴ Model rules for the activities of educational organisations implementing educational programmes of technical and vocational education: <http://adilet.zan.kz/rus/docs/P1300000499>

107 Targeted current transfers to regional budgets, budgets of cities of Astana and Almaty to increase the state educational order for training specialists in technical and vocational education organisations	4 766 479	4 766 479
108 Targeted current transfers to regional budgets, budgets of the cities of Astana and Almaty to increase the size of scholarships for students in technical and vocational education organisations on the basis of the state educational order of local executive bodies	8 168 802	8 168 802
110 Services for the development of technical and vocational education based on international experience	3 506 791	3 506 791
109 Conducting external quality assessment of technical and vocational education	39 207	39 207

4.2 Tajikistan

4.2.1 Financing Higher Education in Tajikistan

In Tajikistan, the Government has set a vision to modernise the higher education system, especially its contents towards more professionally-oriented skills to better meet labour market demand and to build Tajikistan's capacity. With a view to developing the higher education system and integrating into the European Higher Education Area, the government is currently focusing on joining the Bologna Declaration. Although the government has started undertaking some of the necessary reforms (for example, implementation of the European Credit Transfer and Accumulation System), yet major reforms, such as the establishment of a credible quality assurance system and national qualifications framework, are yet to be developed, adopted and operationalised. As the World Bank pointed out in their *Higher Education Sector Study*, the major overhaul of the higher education system, especially with regard to higher education governance, quality assurance, teaching, learning and student assessment, is to be undertaken as a matter of urgency.⁷⁵

The main problem of financing higher education in Tajikistan is the lack of public funding allocated from the budget. Strong economic growth in recent years has helped increase public funding for education in general, and for higher education. Primarily, due to low higher education enrolment rates relative to wealthier countries, higher education's share of the overall education budget is lower than that of wealthier countries, but similar to that of neighbouring countries⁷⁶.

As indicators in figure 7 show, total public funding of higher education has been growing annually since 2013 and so has the student population as shown in figure 8.

Indicator	2013	2014	2015	2016	2017
GDP, million somoni	40 524,5	45 605,2	48 401,6	54 471,1	61 093,6

⁷⁵ Republic of Tajikistan: Tajikistan: Higher Education Sector Study, 2014

⁷⁶ Republic of Tajikistan: Tajikistan: Higher Education Sector Study, 2014

Total public funding, million somoni	12 268,1	14 143,1	15 542, 4	18 594,4	19 863,1
Total public funding on HE, million somoni	337,8	397,7	477,1	556,2	632,7
Public funding on HE, % GDP	0,83	0,87	0,98	1,02	1,03
Funding on HE, % total public funding	2,75	2,8	3,07	2,99	3,19
Growth rate of HE's students	104,1	106,3	106,2	104,9	102,5

Figure 7: Public funding on HE for the period of 2013-2017⁷⁷

Indicator	2013/14		2014/15		2015/16		2016/17		2017/18	
	total	%								
Number of students, thousand people	157,8	100,0	167,7	100,0	178,1	100,0	186,9	100,0	191,5	100,0
Budgetary groups	63,4	40,1	68,8	41,0	67,0	37,6	66,5	35,6	64,5	33,5
Non-budgetary groups (contract groups)	94,4	59,9	98,9	59,0	111,1	62,4	120,4	64,4	127,0	66,5

Figure 8: Number of students in HEIs of Tajikistan for the 2013/14-2017/18 academic years⁷⁸

There are two groups of higher education students in Tajikistan – those whose studies are funded by the government from the state budget (budgetary groups) and those who are self-funded and pay tuition fees (non-budgetary or contract groups). State HEIs primarily rely on two sources for financing: (i) the state budget for budget-seats; and (ii) tuition fees. Recently, the government started counting revenues raised by HEIs as part of the state budget for higher education; about 56 percent of the higher education budget is actually raised by HEIs themselves. Budget seats have been allocated to HEIs and programmes according to historical allocations without strategically reflecting the changing labor market demand.⁷⁹

⁷⁷ Agency on Statistics under the President of the Republic of Tajikistan, 2017

⁷⁸ Agency on Statistics under the President of the Republic of Tajikistan, 2017

⁷⁹ Republic of Tajikistan: Tajikistan: Higher Education Sector Study, 2014

As the figures above indicate, the funding of higher education is growing; however, so is the student population. In addition to this, the number of students who pay tuition fees for their studies is increasing (it equals 66,5% of HE student population) while the number of students on budgetary groups is decreasing (it equals 33,5% of total HE student population).

Financing Model of Higher Education Institutions in Tajikistan

As stated above, higher education system in Tajikistan is financed from two sources - state and private. In terms of private HEIs, private investment in higher education is limited: there are only one private HEI and three fully self-financed state (*de facto* private) HEIs.⁸⁰

Regarding the financing model of higher education, it creates unnecessary bureaucracy since different ministries are involved. The main role of the state lies with the Ministry of Education and Science, while HEIs are accountable to the Ministry of Finance for the use of budgetary allocations. Other ministries are involved when discussing issues within their competence such as the Ministry of Labour, Migration and Employment of Population and the Ministry of Economy Development and Trade. The Ministry of Education and Science distributes state budgetary allocations to public HEIs in accordance with the funding methodology approved by the Ministry of Finance. HEIs are allowed to plan the spending according to their own internal planning but within the 'expenditure ceilings' (expense rates) approved by the Ministry of Finance for HEIs. In accordance with Art. 54 of the Law of the Republic of Tajikistan *On Public Finance*, unused budget or budget funds which were saved during the year must be transferred to a Treasury account of the Ministry of Finance, unless the Ministry decides otherwise.

Quality and Autonomy of HEIs in Tajikistan

The higher education system is run by the Ministry of Education and Science, which retains strong control over it. Rectors in Tajikistan are appointed by the President and Vice-Rectors are agreed by the Ministry of Education and Science. The senior academic staff (deans, faculty staff) is appointed as well as dismissed by the rector and universities maintain a hierarchical, top-down structure with decision-making concentrated in the hands of the rectors. Only the Head of Department is appointed by the Academic Council of HEI; however, the candidates have to be agreed with the rector prior to the Academic Council meeting. Such a system produces HEIs that concentrate more on maintaining good relations with the ministry responsible for its functioning rather than on students or staff which is strongly reminiscent of the Soviet era.

To conclude, the lack of autonomy of higher education institutions is demonstrated in the following:

- HEIs staff and student representatives are not involved in appointment of the governing body and so the governance of the university and higher education in general remain heavily centralized.
- HEIs are not responsible for dividing and distributing funding internally according to their needs and across various units and activities and they are required to pay back any unused funds.
- The possibilities for maneuvering resources (as provided for by the education legislation and the principle of autonomy of educational institutions) are limited due to the need for strict adherence to established budgetary procedures.
- HEIs are not involved in recruitment or promotion procedures and neither they are involved in determining the salaries of staff.

⁸⁰ Republic of Tajikistan: Tajikistan: Higher Education Sector Study, 2014

- Budget allocation is not connected either with the educational process or its results and is solely based on the observance of established estimated assignments within the framework of the economic budget classification, i.e. financial discipline.

4.2.2 Financing Vocational Education and Training in Tajikistan

In Tajikistan, vocational education and training is provided by primary vocational (lyceums) and secondary vocational institutions (colleges). Primary vocational institutions are administrated by the Ministry of Labour, Migration and Employment of the Republic of Tajikistan (MLME) and secondary vocational institutions are administrated by the Ministry of Education and Science. The division of responsibility between these two ministries for two levels of education is reflected in the strong divide between two delivery networks consisting of technical schools (colleges) and vocational schools, respectively. Both ministries maintain a centralised management structure for two subsystems. The Ministry of Education also maintains full control of the general education element of vocational curricula, and decides on the certificate for which a given vocational programme can qualify. This means that there can be no revision of the content of VET programmes without the full participation of the Ministry of Education.⁸¹

As the following table shows, the number of institutions of primary vocational education is reduced by 11 units (from 72 in 2000 to 61 in 2017), and institutions of secondary vocational education increased by 14 units in 2017 compared to 2010. Funding for primary vocational education increased 2.5 times and for secondary vocational education increased 4.3 times in 2017 compared to 2010.

	2000/ 2001	2010/ 2011	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018
Number of Primary Vocational Institutions (PVI)	72	66	63	62	62	62	61
Number of Secondary Vocational Institutions (SVI)	47	49	53	60	65	66	66
Funding for PVI (thousand TJS)	-	23239	41085	43389	43959	58632	59596
Funding for SVI (thousand TJS)	-	32517	55489	73388	83054	100162	140208

Figure 9: Number and funding for primary and secondary vocational institutions in Tajikistan

The national budget for education as a share of GDP fell from the time of independence until 1996, and since then has increased only slightly as the following figure indicates.

⁸¹ The reform of vocational education and training in the Republic of Tajikistan/
file:///C:/Users/Acer/Downloads/C12578310056925BC1257265002C932D_NOTE6YTNGJ.pdf

	1991/92	2002/03	2013/14	2017/18
National budget for education as a share of GDP (%)	9,0	2,6	4,5	6,1
National budget for VET as a share of GDP (%)	1,3	0,09	0,24	0,23

Figure 10: National budget for education in 1991, 1996 and 2002 as a share of GDP

The main financing source of VET institutions is the public sector (the government) and the learners themselves through tuition fees. There are no additional sources of funding for VET institutions in Tajikistan, except for financial assistance from international organisations (the Asian Development Bank, the EU). For example, a recent ADB project in Tajikistan is targeted at unskilled youths and adults, especially women and girls, who will be able to obtain competitive technical qualifications, skills, and jobs from improved technical and vocational education and training.⁸²

In terms of financing methods of funding VET institutions, there is no formula used either in state or private institutions and the scheme is the same as for financing higher education. The number of enrolled students (the amount is allowed under license of the Ministry of Education and Science), introduction of a new educational programme, budget lines expenditure must be negotiated with relevant ministries. The private institutions negotiate the price of their services with the Antimonopoly Agency (under the government) on an annual basis.

Directors of lyceums are appointed by the Ministry of Labour, Migration and Employment and the Director of Colleges are appointed by the Ministry of Education and Science. Directors of medical VET institutions are appointed by the Ministry of Health with negotiation with the Ministry of Education and Science. Directors of private institutions are appointed by their founder.

4.3 Kyrgyzstan

4.3.1 Financing Higher Education in Kyrgyzstan

State policy on the reform/ development of the education system (higher education as well as secondary vocational education) is one of the important priorities. This is reflected in key strategic and operational national documents:

- National Development Strategy of the Kyrgyz Republic for 2018-2040;
- Education Development Strategy for 2012–2020.

In recent years, in the system of higher education, the main direction of the reform policy has been the creation of uniform conditions for the financing of universities with a focus on providing services, rather than on financing infrastructure.

Key standards in the field of education financing are laid down in Chapter VI of the Law on Education. This chapter identifies the following legislation:

1. Sources of education funding (Art. 43); these are as follows:
 - republican and local budgets - for state educational organisations;
 - funds of individuals and of legal entities, foreign states and citizens acting as founders;

⁸² <https://www.adb.org/publications/taj-strengthening-tvet-project-brief>

- own funds of educational organisations, including foreign exchange, from consulting, research, publishing, production and other income-generating activities not prohibited by the legislation of the Kyrgyz Republic, as well as from extra-budgetary educational activities on all types of basic and additional educational programmes within the requirements of state educational standards;
 - income from deposits;
 - voluntary contributions of individuals and legal entities, voluntary donations and earmarked contributions from other individuals and legal entities, including the foreign ones;
 - loans;
 - state financing of state buildings, structures, land, equipment, in the form of reimbursement of expenses of educational organisations, nominal and other forms of scholarships, educational grants, loans, provision of benefits;
 - government grants issued to students;
 - other sources that do not contradict the legislation of the Kyrgyz Republic;
2. The procedure for financing educational organisations (Art. 44);
 3. Production activities of educational organisations (Art. 45);
 4. Material and technical base of educational organisations (Art. 46).

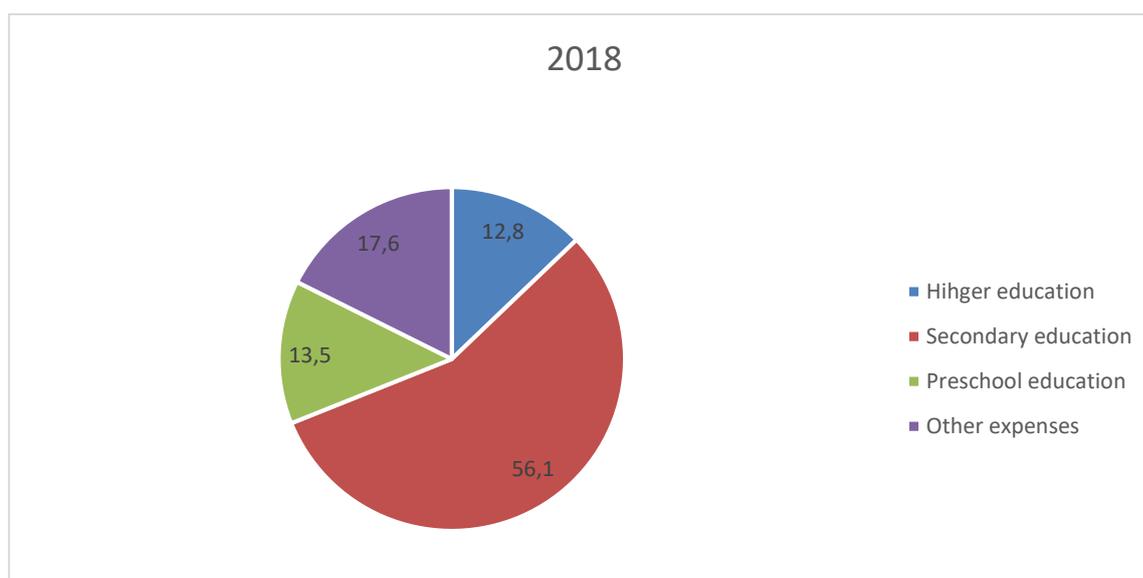
State budget expenditure on education

The republican budget expenditure on education can be seen in the following figures:

	2013	2014	2015	2016	2017
State budget expenditures for education, million soms	24 089,7	25 915,4	29 995,0	36 299,3	37 387,9
Percentage of GDP	6,9%	6,5%	7,0%	7,6%	7,2%
Percentage of total expenditures of the state budget	23,1%	21,4%	22,3%	24,0%	22,5%

Figure 11: Structure of education expenditure including special funds (including tuition fees), public investment programmes and external grants (percentage of total)⁸³

⁸³ Education and Science in the Kyrgyz Republic, 2013-2017. Statistical Collection, Bishkek, 2018 - C.30.



Higher education 12.8%
 Secondary education 56.1%
 Pre-school education 13.5%
 Other expenses 17.6%

Figure 12: Diagram of education expenditure

	2013	2014	2015	2016	2017
Higher education (in million som)	2889,5	3127,5	3505,7	4145,6	4554,8

Figure 13: Structure of expenditures from the state budget for higher education including special funds, public investment programmes and external grants (million som)⁸⁴

Currently, the procedure and methodology of financing of educational institutions is performed in accordance with the Government resolution No. 370 dated 1.07.2016⁸⁵ from the republican budget funds on the basis of the state educational grant from 1.09.2016⁸⁶.

The state educational grant consists of funds of the republican budget that are provided to pay for the education of an individual at the university in the direction of training (specialty) included in the state order for training specialists in priority areas of training for the country (specialties).

The calculation of the size of the state educational grant is carried out on the basis of the actually established consolidated costs of organisations of higher professional education both at the expense of budgetary funds and at the expense of funds from the provision of educational paid services, per

⁸⁴ Education and Science in the Kyrgyz Republic, 2013-2017. Statistical Collection, Bishkek, 2018 – C 31.

⁸⁵ As amended by resolutions of the Government of the Kyrgyz Republic from 20.07.2016, № 406; 3.02.2017, № 71; 2. 06.2017 № 339, 23.06.2017, № 404; 20.09.2017, № 591; 15.05.2018, № 234.

⁸⁶ It does not apply to higher educational institutions of the State Committee on Defense Affairs of the Kyrgyz Republic and the Ministry of Internal Affairs of the Kyrgyz Republic.

1 student. When calculating the size of the state educational grant, the expenses for student scholarships and food expenses for students from orphans are not taken into account.

Specialties of higher education, confirmed by awarding the graduate with qualifications of bachelor, specialist, master, are combined into 9 value groups of training areas (specialties) in costs and priority sectors of the economy. As demonstrated in the following table, 'equipment, technological specialties' group receives the highest amount of funding per student as it is deemed the most expensive area (therefore numbered as Group 9).

No	Group	Codes of specialties
1	Education	51/52/53/54/55
2	Construction, economics and management, ecology, tourism	52/58/60/62/75
3	Energy	64
4	Mining, transport, agriculture	61/63/65/67/73
5	Health	56
6	Musical art	57
7	Culture, art (not including musical art)	57
8	Computer technologies, telecommunications and communications	59/70/71/69/
9	Equipment, technological specialties	65/68/72/74/76

Figure 14: Cost groups of training areas (specialties) in costs and priority sectors of the economy

The state educational grant includes the norms of current expenses related to the provision of the educational process, divided into direct and indirect costs. The standard of direct costs includes the costs of:

- the remuneration of the faculty and other staff of universities;
- the acquisition of materials required in the process of providing educational services.

The standard of indirect costs includes the costs of:

- purchase of transport services;
- professional development of the faculty;
- payment of utilities;
- current repair of buildings and premises;
- current repair of equipment and inventory.

The Ministry of Finance and sectoral ministries finance the expenses of universities from the state budget under a single cumulative expenditure item⁸⁷. The formula takes into account:

- the basic level of the state educational grant, approved by the establishment of the Government of the Kyrgyz Republic;
- a correction factor to the basic level of the state educational grant in the specialty, approved by the Government of the Kyrgyz Republic;
- the number of grant holders of the specialty as of the beginning of the planned year, completing the training in the coming year;
- the number of grant holders of the specialty as of the beginning of the planned year, with the exception of grant holders completing the training in the coming year;
- monthly allowance to official salaries for work experience of employees of universities located in high-mountainous and remote areas of the Kyrgyz Republic;
- the coefficient of additional payments to wages and other social payments to university employees living and working in high-mountainous and remote areas of the Kyrgyz Republic;
- university scholarship fund for the coming year;
- food expenses for students from orphan children⁸⁸;
- funds of the republican budget allocated to the university, having a target character (purchase of expensive equipment, major repairs and construction, other atypical expenses);
- the number of specialties included in the state order for the training of specialists in priority areas for the republic and specialties.

The grant fund is subject to distribution between universities from September 1 of the upcoming year, after the universities admit students for state educational grants and a quota of grant places for targeted admission of applicants.

When estimating expenses for the republican budget for the coming year, all expenses are reflected in a single cumulative item of expenses, without specifying the directions of their use, except for expenses for the payment of scholarships and meals for students from orphans.

At the same time, heads of universities have the right to independently form and approve the staffing structure within the budget estimates for budgetary and special funds as agreed with the board of trustees.

With an increase or decrease in the volume of approved budget estimates for universities, the new budget is determined as a revised financing plan for the relevant period. The specification of the cost estimate is made by sectoral ministries as agreed with the Ministry of Finance.

Changes to the cost estimates are made for the following reasons:

- in the distribution of grant places in universities for the new academic year;
- in connection with the adoption of new or amending the existing regulatory legal acts after the approval of the expenses of the republican budget;
- in connection with the allocation of additional allocations from the republican budget.

⁸⁷ With the exception of the cost of the payment of scholarships and meals for students from orphaned children, financing of which is carried out under the relevant items of the budget classification.

⁸⁸ In accordance with the decree of the Government of the Kyrgyz Republic *On monetary norms of nutrition in social institutions* of January 15, 2008, No. 7.

Accounting and reporting of funds of the republican budget of universities is carried out according to established treasury procedures.

The report on the execution of the cost estimate for the republican budget is prepared as follows:

- the approved financing plan from the republican budget for the reporting period, excluding expenses for the payment of scholarships and meals for students, is reflected in a single cumulative item; the amount of funds allocated for the payment of scholarships and the nutrition of students from among orphans is reflected;
- the refined financing plan from the republican budget for the reporting period, excluding expenses for the payment of scholarships and meals for students, is reflected in a single cumulative item; the amount of funds allocated for the payment of scholarships and student nutrition is reflected in the corresponding budget classification items;
- the amount of funding from the republican budget for the reporting period is reflected in a single cumulative item, the amount of funding for the payment of scholarships and meals are reflected in the corresponding budget classification items;
- the amount of cash expenditures from the republican budget for the reporting period is reflected by all items of expenditure of the economic classification;
- actual expenses incurred at the expense of the republican budget during the reporting period are reflected by all items of the economic classification.

Universities prepare reports and submit them to sectoral ministries. Sectoral ministries compile summary reporting data on the means of the republican budget on the basis of university reports. Sectoral ministries then submit reports on higher education institutions to the Ministry of Finance, according to the form and deadlines set by the Ministry of Finance.

The Action Plan for the Implementation of the Education Development Strategy for 2018-2020 sets the tasks of ensuring institutional and financial sustainability of the credit system of education in universities, through the updating of the regulatory framework.

The National Development Strategy of the Kyrgyz Republic for 2018-2040 sets the task of 'changing the system of financing the higher education sector'. In particular, for the period up to 2023, it is indicated, 'the state will support the direct participation of business in training, in the formation of educational programmes, as well as the creation of *university-production* systems' and the creation of a separate national government project to support three leading public universities in the country to join the leading world rankings (the programme 3-200-2040).

4.3.2 Financing Vocational Education and Training in Kyrgyzstan

In initial vocational education, the principle of per capita financing is currently used. The methodology was developed and tested as part of the Asian Development Bank project.

Government resolution No. 545 from November 22, 2018 *On measures for the implementation of normative financing in state educational institutions of primary vocational education of the Kyrgyz Republic* approved the procedure for determining the standards of budget financing, standard norms and the procedure for the formation and execution of expenditures of state professional lyceums of the Kyrgyz Republic, as well as a list of state professional lyceums of the Kyrgyz Republic, which are not covered by the mechanism of normative financing.

The Agency, according to the calendar plan, determines benchmarks for the expenses of state vocational schools from the republican budget funds based on the general need for budget financing and a single standard for covering the need. For state professional lyceums that have financial risks of budget insufficiency, in terms of funding, based on the number of students and the standard, the

Agency is entitled to set subsidies over the budget in 2019 - up to 70% of the funding gap, in 2020 - up to 50%, in 2021, up to 30% for the period of optimisation activities. Financial risks are understood as the budget deficit of the state professional lyceums, calculated according to the standard of expenses, in comparison with the actual need for funds of the republican budget.

State professional lyceums prepare cost estimates for budget and special funds in one amount, without distribution by articles of economic classification, within the limits of control indicators in the established standard form. Estimates are prepared for the financial year by the scenario plan of the quarterly breakdown established by the Ministry of Finance, with the application of plans for the distribution of costs by economic classification.

State professional lyceums approve the cost estimates for budget and special funds in one amount, without allocation to the articles of economic classification, with the application of distribution plans for the articles of economic classification for the coming year and submit to the Agency for approval. The Agency controls the allocation of budgetary funds and the prevention of payables on wages and contributions to the social fund of the Kyrgyz Republic.

The approved consolidated cost estimates of the state vocational lyceums in the republic, with the application of the package of individual estimates, are submitted by the Agency to the Central Treasury of the Ministry of Finance. The Central Treasury of the Ministry of Finance of the Kyrgyz Republic provides funding for state vocational lyceums by the budget and special funds.

At the same time, the Agency keeps records of expenses for each state professional lyceum separately for the subsequent preparation of the report on the execution of the cost estimates for budget and special funds.

The head of the state professional lyceum is personally responsible for preventing misuse of funds and accounts payable at the end of the financial year. State professional lyceums also prepare reports on the means of the republican budget and submit it to the Agency on the forms and terms established by the Ministry of Finance for budget organisations. The Agency then forms a consolidated report on the republican budget and special funds based on reports of state professional lyceums.

4.4 Uzbekistan

4.4.1 Financing Higher Education in Uzbekistan

The financing system of higher education in Uzbekistan is based on diversifying the sources of funding. The current constellation of financing higher education was created in 1997 according to the law *On Education*⁸⁹ and *National Programme of Training and Retraining the Personnel*⁹⁰. According to these documents, sources of finance are to be diversified using budgetary and extra-budgetary sources. Self-financing of educational institutions is being developed, the attraction of private and foreign investments in education is also being stimulated. A mechanism for the provision of educational loans for citizens of the Republic with a flexible system of their subsequent repayment is put in place. The role of donors and sponsors in the material support of the system of continuous education and training is growing. An increase in the income of educational institutions is ensured through paid educational services, entrepreneurial, advisory, expert, publishing, industrial, scientific and other activities in accordance with statutory objectives.

⁸⁹National Programme of Training and Retraining the Personnel: <http://www.lex.uz/acts/19769>

⁹⁰ Law of the Republic of Uzbekistan On Education of 1997 (revised in 2007): <http://www.lex.uz/acts/15622>

In conjunction with quotas on new entrants (this system is planned to be reconsidered from 2019/20 to allow universities rather than ministries to propose quotas), the Higher Education sector has made increasing use of “student contracts “(fees) as a means of financing Higher Education places with the value of contracts more than doubling from the inception of the scheme in 2012. During this same period state funding has declined slightly as a percentage of total education spending. As of 2018, there was no private Higher Education option for students in Uzbekistan.⁹¹

Education sector expenditures are financed by both the Government and non-state sources in Uzbekistan (for that matter, any social sector expenditures). Government sources include the state budget (both national and local budgets), extra-budgetary special funds, and the funds of businesses where the government has a share (100% government owned companies and mixed companies with government share-holding).

Non-state sources of funding include the funds of non-profit organisations, private businesses, foreign investments, project-based funding and individual philanthropy. In Uzbekistan, the social responsibility of businesses boils down to the payment of the social infrastructure tax by businesses. But there is also a practice whereby responsibility for the development of certain areas is delegated to state owned enterprises by means of specific government acts.

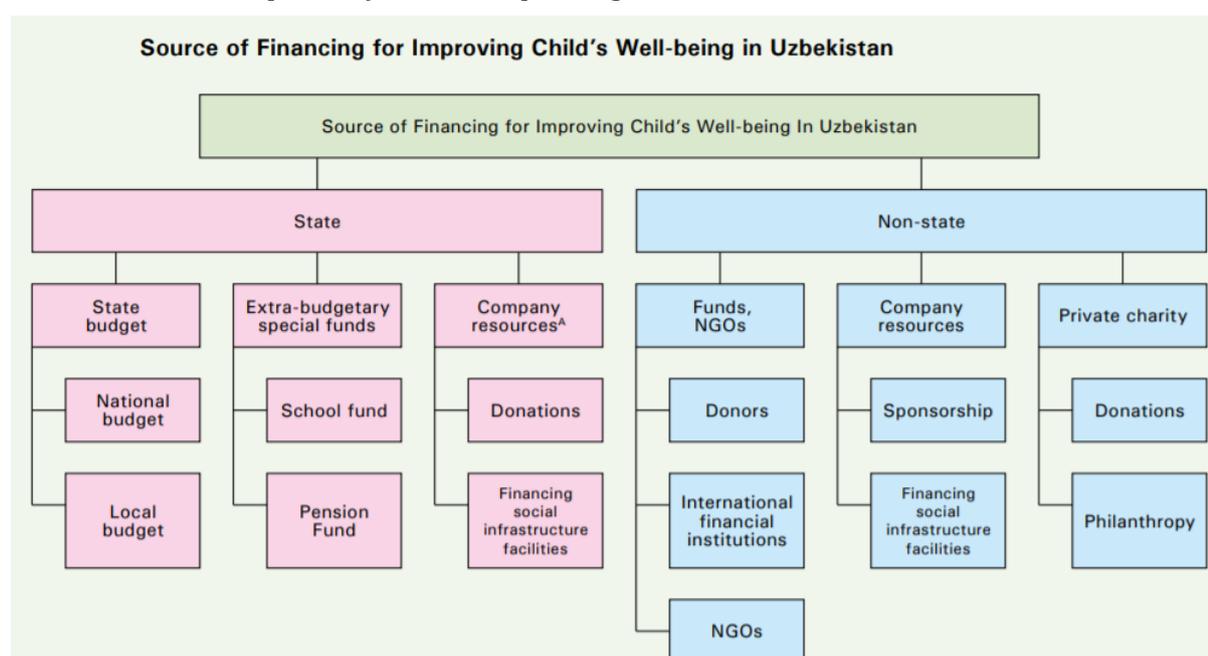


Figure 15: Sources of financing in Uzbekistan

Source: UNICEF (2009)

In Uzbekistan, the current financing model is a formula-based financing model where institutions receive a pre-determined amount of funds according to the approved budget, usually allocated very particularly (for infrastructure, wages etc). Education in Uzbekistan is mainly financed from the state

⁹¹ Education Sector Plan (ESP) of Uzbekistan 2019-2023

budget. Additional resources are obtained through fees, parents' contributions, donations, international donors as well as income generated at the school level, for example, renting out unused buildings, equipment, or providing extracurricular training courses. At the tertiary level, all universities charge tuition fees to students whose entrance test results are not at the threshold level for receiving state grant. Tuition fee constitutes about 60% of the total budget of higher educational institutions. Other extra-budgetary funds include the *Fund for the Reconstruction, Renovation and Equipment*, and the *Fund for the Development of Materials and Technical Infrastructure of Higher Educational Institutions*, both under the management of the Ministry of Finance.

In the process of local budgeting, each local administration estimates its annual budgets on the basis of local revenues and projected expenditures. Central government subsidises the local budget deficit, usually by exchange of the proportion (the percentage) of local taxes or in the form of transfers from the central budget. Regional and local administrative bodies responsible for public education make the calculation of projected numbers of children enrolled in pre-schools, primary and secondary general, and vocational educational establishments for the following year. They also make the estimates of the cost of delivering education services, and the forecast of local tax revenues as well as any potential budget deficits. Local branches of the Ministry of Finance consolidate these local budgets and submit them to the Ministry of Finance (MoF), together with all other required allocations from the central budget.

Regional and local governments prepare their draft education budgets during the July-August period and submit them to Ministry of Public Education (MOPE)/ Ministry of Pre-School Education (MOPSE)/ Ministry of Higher and Secondary Special Education (MOHSSE), which at same time prepares the global expenditure forecast of MOPE for the next financial year and consolidates all the expenditure plans for their sector for that year. These documents are usually submitted to the Ministry of Finance in mid-September. At the beginning of October, the ministry prepares a draft of the national budget and submits it to the Cabinet of Ministers for approval. The Cabinet of Ministers considers the budget draft and introduces amendments within a month period, and then submits the final draft of the budget to the Parliament. Parliamentary committees consider the submitted budget drafts and submit their recommendations to the Parliament for final budget approval, which is disclosed in November/ December each year.

All levels of budgets – both national and local – are involved in the process of financing child-focused expenditure. But most expenditure (nearly all core expenditure and part of the social benefits) are financed from local budgets.

From September 2019, both higher and vocational education are planning to implement elements of performance-based funding. It will depend on particular objectives like World International Ranking System.

To ensure the quality of education, the Government of Uzbekistan established two completely new Ministerial bodies^{92 93}: The State Inspectorate for Education Quality Control (under the Cabinet of Ministers of the Republic of Uzbekistan) and The Ministry of Innovation for Coordinating International Research Projects in the System of HE and VET.

Starting from the 2018/2019 academic year, there was a procedure introduced proposing higher educational institutions to independently develop and approve curricula and programmes in

⁹² About measures for future development of the system of higher education, Resolution of the President of Uzbekistan dated 20.04.2017 # PR-2909. <http://lex.uz/docs/3171587>

⁹³ On establishment of the Ministry of Innovative development of the Republic of Uzbekistan. Degree of the President of Uzbekistan dated 20.11.2017 # PD-5264. <http://lex.uz/docs/3431993>

relevant areas of education and specialties, in coordination with the Ministry of Higher and Secondary Specialised Education of the Republic of Uzbekistan. At the same time, the Decree of the President⁹⁴ addressed the issues of quality assurance in education through effective public control in all higher educational institutions. Including organisation of public councils consisting of students, parents, activists of the Youth Union in higher educational institutions, customers, professors and teachers, as well as representatives of civil society institutions to be carried out by the leader of the Youth Union:

- the establishment of system monitoring of the quality of education, knowledge and pedagogical skills of professors and teachers, conditions created for students;
- making recommendations to higher educational institutions for candidates nominated for faculty;
- consideration of students' appeals, conducting sociological surveys in order to thoroughly study the opinions of students about the teaching staff;
- preparing proposals for improving the educational process in a higher educational institution and submitting them for discussion by the relevant board of the institution.

4.4.2 Financing Vocational Education and Training in Uzbekistan

According to the Presidential Degree dated 26.01.2018 No. PD-5313, the vocational colleges will operate primarily in the composition of ministries, departments, business associations, commercial banks and large enterprises-customers of personnel by industry. So the funds of ministries, departments, business associations, commercial banks and large enterprises that are earmarked for the maintenance of subordinate professional colleges, training, advanced training and retraining of personnel are exempt from relevant taxes and mandatory contributions to state trust funds.⁹⁵

Professional education in Uzbekistan is mainly financed from the state budget. Similarly to the higher education sector, additional resources are obtained through fees, parents' contributions, donations, international donors as well as income generated at the school level, for example, renting out unused buildings, equipment, or providing extracurricular training courses. Spending on secondary specialised and vocational education (SSVE) in Uzbekistan is high, in comparison with EU and OECD countries. Spending on SSVE in 2017 accounted for approximately 1.27% of GDP, which was more than the spending in the EU in general (less than 1% of GDP), and nearly double the spending in OECD countries (at approximately 0.6% of GDP). Until the transition into an 11-year general secondary education cycle, enrolment in SSVE was mandatory, thus enrolment was significantly higher than that of other countries that do not have mandatory education at this level. During 2016-2017, the government invested nearly 2-2.3 million UZ soum per a student in SSVE⁹⁶.

The system of the secondary specialised and vocational education offers education in eight directions, thus covering all spheres of the national economy. Annually, more than 90% of vocational colleges' graduates are placed to jobs. The SSVE graduates receive micro-credits from banks to open own businesses. Their partnership is established between educational institutions and employers. However, the efficiency level of the existing model of cooperation between the economy and the SSVE system is to be revised in terms of social partnership mechanisms⁹⁷.

⁹⁴ On additional measures to improve the quality of education in higher educational institutions and to ensure their active participation in the custom-based reforms. Degree of the President of Uzbekistan dated 5.06.2018 # PD-3775. <http://lex.uz/docs/3765584>

⁹⁵ Degree of the President of Uzbekistan dated 26.01.2018 No. PD-5313. <http://lex.uz/docs/3523198>

⁹⁶ Education Sector Plan (ESP) of Uzbekistan 2019-2023.

⁹⁷ Education Sector Plan (ESP) for 2013-2017. <http://www.globalpartnership.org/sites/default/files/2013-09-Uzbekistan-Education-Sector-Plan-2013-2017.pdf>

5 Good Practice Examples of Effective Financing of Higher Education and Vocational Education and Training

5.1 Austria

5.1.1 Higher Education

Title of the HE case study	Austrian performance-based funding and performance contracts in higher education
Country	Austria
Name of the HE institution/ other institutions involved	Ministry of Education, Science and Research, Austrian universities
Period	2016 - present
<p>As explained in the report, a key trend in financing higher education in Europe is introduction of the performance indicators and the performance agreements.</p> <p>Austria is an example of the advanced formula-based funding system. In addition, in Austria there are comprehensive performance agreements between the Ministry of Education, Science and Research and the universities.</p> <p>The Austrian formula for financing the universities consists of a broad range of indicators capturing how the university is fulfilling the functions of teaching and research:</p> <ul style="list-style-type: none"> • the number of active students - those acquiring at least 16 European Credit Transfer System (ECTS) points per academic year; since the admission is free, a certain number of students enroll but do not actively pursue the studies; such definition counteracts the 'deadweight' students in the system; • the financing per student is differentiated by the field of study, namely, the fields of study requiring more expensive infrastructure and more individual tuition are financed with higher amounts (such as medicine, veterinary, arts, music, engineering and natural sciences), those requiring less infrastructure and less individual tuition are financed with a lower coefficient (social sciences and humanities); • the number of graduates; 	

- the indicators demonstrating the capacity and quality of research - personnel weighted by the field of research, similarly like students weighted by the field of study;
- revenues from research and development projects and arts projects;
- the number of PhD students;
- the costs of maintaining the buildings are financed separately, since several universities in Austria are located in the historical buildings with the costs unique to the building (in other countries, the real estate maintenance is usually a standardised part of the formula).

Such performance indicators reward past performance and finance the current capacity of the university. In addition, the performance agreements define and finance the future development of the university, for example strategic initiatives like creating a sectoral cluster and infrastructure development.

The ministry and the university negotiate the performance agreements. This approach is the 'new public management' aimed at creating the partnership and mutual trust. Performance agreements outline the financing for 3 years and thus allow a certain stability for the planning of development. The first set of performance agreements was concluded for 2016-2018 and the second one for 2019-2021.

The set of indicators in the financing formula is comprehensive enough to cover all major functions of the universities; however, it is not too complicated to send confusing signals about the needed behaviour and it does not create excessive burden for the university and for the public administration.

5.1.2 Vocational Education and Training

Title of the VET case study	VET education in Austria
Country	Austria
Name of the VET institution/ other institutions involved	VET institutions, Ministry of Education, Science and Research
<p>Austria is unique in its rates of enrolment into vocational education. While in the EU, the average enrolment of young people in VET is about 50%, in Austria it is about 70%, the highest rate among the EU and OECD countries. The unemployment of young people aged 15 to 24 in Austria is two times lower than the EU average for this age group (10,3%, vs 22,2%). VET enjoys a high prestige in the society.</p> <p>The success of VET participation is due to the fact that VET is distinctly oriented towards the labour market and focuses on the employability. The industry representatives are actively involved in shaping the curriculum. As a result, the labour market outcomes of the graduates are good and this reinforces the enrolment into VET. The state is the main financier of VET</p>	

institutions. However, the industry is sharing the burden in direct and indirect ways, contributing towards the relevance of the education:

1. Similarly to Germany, Austrian VET has a very high component of work- based learning. One form is the apprenticeship training which takes place at two places of learning - in the training company and at part-time vocational school (the dual system). Another common form is school-based VET; however, also in such a case, the substantial part of training is work-based learning and there are mandatory work placements. Financially this means that the state is covering the tuition in VET institution, while the employer contributes to the work part - it pays the remuneration of the apprentice, provides the facilities and the time of its experienced personnel devoted to training.

2. Sectoral organisations are often funding the studies on the future skills requirements. The results of studies lead to the update of curriculum.

3. The state provides several incentives to companies for work-based learning:

- Every company that trains an apprentice is entitled to 'basic support', which is three gross apprenticeship remunerations in the first apprenticeship year, two in the second year, and one each in the third and the fourth year. The training company can apply for this basic support at the end of the respective apprenticeship year.

- Covering non-wage labour costs - in the first and second apprenticeship year, both the company's and the apprentice's health insurance contributions are waived. The contribution to accident insurance for apprentices is waived throughout the entire apprenticeship. Contributions to unemployment insurance have to be paid only in the final year of apprenticeship.

- Companies where apprentices pass the apprenticeship-leave exam with good results or distinction can apply for grants.

Public Employment Service Austria runs apprenticeship post-support schemes designed above all to integrate disadvantaged groups into the labour market. Companies receive a flat-rate grant towards the costs of an apprenticeship. The grant is payable for categories of apprentices such as young people with mental or physical disabilities, learning difficulties, people aged 19+ who have difficulties finding employment on account of their lack of qualifications and others.

Provinces and municipalities also provide funding, either directly or via own associations and funds. For this purpose, municipalities and provincial governments mainly apply demand-driven funding instruments (education cheques, educational accounts, and similar). Preferred target groups of funding are employees, young people, and those at a disadvantage in their respective regional labour markets. Social partners also act as providers of funds for CVET for their respective clients. Similarly to municipalities and provincial governments, social partners also tend to use demand-driven funding instruments (e.g. the education voucher of the Chambers of Labour).

Tax incentive systems play a major role in Austria to support company-based CVET. Companies have the possibility to claim a tax-free training allowance amounting to 20% of the cost of external and in-house CVET measures. Employees can claim CVET expenses as tax exempt. Self-employed people can write off training expenses as business expenses if they are connected with the exercised or a related occupation.

5.2 Finland

5.2.1 Higher Education

Title of the HE case study	Performance-based funding in higher education
Country	Finland
Name of the HE institution/ other institutions involved	Ministry of Education and Culture, universities, universities of applied sciences
Period	Current
<p>Finland is one of the forerunners in the public sector innovations. In higher education, it has a considerable experience of introducing reforms and innovations, such as performance-based funding and performance contracts.</p> <p>Finnish higher education system consists of universities and universities of applied sciences. The higher education is free for Finnish students and students from other EU/ EEZ countries. Only the third country nationals pay tuition fees starting from 2017. In 2010, there was a comprehensive consolidation of the sector with several mergers of institutions.</p> <p>The Ministry of Education and Culture and the universities conclude the four-year performance agreements. The goals for each institution correspond to the general development strategy for the HE sector. The agreement outlines the profile of the institution and its focus areas, development and public funding outside of the formula-based core funding.</p> <p>The formula-based core funding for the universities consists of the following indicators:</p> <p>39% - education funding, of which 6% bachelor's degrees, 13% master's degrees, 2% study credits in non-degree programmes, 10% number of students who gained at least 55 study credits, 3% students' feedback, 2% number of employed graduates, 1% master's degrees awarded to foreign nationals, 2% student mobility to and from Finland (the indicators reflect capacity such as diplomas and active students and internationalisation, which is one of the policy goals);</p> <p>33% - research funding, of which 13% scientific publications in peer reviewed journals, 9% competed research funding (international research funding, national and industry funding), 9% PhD degrees, 2% international teaching and research personnel (the indicators reflect the quality and competitiveness of research which is the backbone of the HE quality);</p> <p>28% - other developmental goals and considerations, of which 12% strategic development in accordance to the national education and science goals, 9% field specific funding (arts,</p>	

engineering, natural sciences, medicine, dentistry, veterinary), 7% national duties (teacher training schools, National Library of Finland).

The formula for the universities of applied sciences is similar to the specified education formula but with much less emphasis on research - 79% of funding is based on indicators reflecting capacity and quality of studies, 15% of funding reflects research and development activities and 6% - strategic development.

The result is based on the average indicators for 3 years to avoid sharp fluctuations. Although the agreements are for 4 years, the ministry provides the funding for the year, corresponding to the cycle of the budget year. The institutions decide on the internal allocation of funding independently.

Similarly to Austria, in addition to the funding based on the past performance and current capacity, the performance agreements have an element of funding for the future strategic development.

Thus, the system has a balanced formula which includes the various quantitative and qualitative aspects of HE and steers the institutions according to the policy goals - to be high-quality, effective and internationally competitive.

5.2.2 Vocational Education and Training

Title of the VET case study	Introduction of the performance-based financing elements in VET
Country	Finland
Name of the HE institution/ other institutions involved	Ministry of Education and Culture, VET institutions
Period	Since 2018
<p>As explained in the report, in higher education the performance-based funding is being introduced in many EU countries. In VET, the financing is mainly still the traditional capacity and cost-based. However, Finland as a forerunner of many public sector reforms, has just started a major reform of the VET sector in 2018, which includes the introduction of performance-based funding elements.</p> <p>Similarly to Austria, the important feature of VET is its close connection with the world of work. Typically, during the first study years the trainees study at the VET institution for 3 days and work for 2 days, in the second year they study for 2 days and work for 3 days, and in the third year, they mostly learn on the job in a company. VET is organised in VET institutions or as an apprenticeship training. Finnish Ministry of Education and Culture stresses that there are 'no dead ends' in Finnish education - vocational education allows for continuation of studies at the university or university of applied sciences.</p>	

In Finland, the enrolment of young people into VET is about 70%, which is considerably higher than the EU average of 50%.

Since 2018, the Ministry has started a set of reforms, which will be fully implemented until 2022. This includes a new funding formula for VET institutions:

- basic funding (50%) guarantees education in all fields and to all students and is still based on the capacity – the number of students;
- 35% of total funding depends on the number of completed qualifications and competence points completed in vocational qualification units;
- 15% of funding depends on the graduates' employment and number of students continuing to further studies.

Starting from 2020, there will be one additional element in the funding formula: 2.5% of the total funding will depend on the feedback from students. Student feedback collection began in July 2018. The feedback is collected via a questionnaire, which students answer twice - at the beginning of the studies and in the final stage, after the qualification exam.

At the beginning of their studies, students are required to rate the following: flexibility of starting time of studies and content of the individual programme; accreditation of prior learning; and support and guidance needed.

At the end, they provide feedback on the following: flexibility in studies; the ways teaching facilities and learning environment supported the studies; receiving support and guidance during the studies; equity between students and workers at the workplace; opportunities to study and learn in the workplace; gaining entrepreneurial competence; and assessment of their individual competence and readiness for working life and further studies. After the system testing, the Ministry will evaluate whether this approach provides good results.

In addition to that, the Ministry can provide up to 4% of the total funding as so-called strategic funding. In 2018, the Ministry provided such funding for particular initiatives like the mergers of VET institutions, organisation of VET competitions, preparation for the digitalisation, development of training programmes for the immigrants and modernisation of the learning methods and environment.

5.3 Latvia

5.3.1 Higher Education

Title of the HE case study	Introduction of the new model of financing the higher education in Latvia
Country	Latvia
Name of the HE institution/ other institutions involved	The Ministry of Education and Science, all state universities, universities of applied sciences and academies
Period	2015 - current

In 2012, Latvia has received the recommendations of the European Commission to continue the reforms in higher education - among other things, by introducing a new financing model that would stimulate quality and links with the market and research institutions. The Ministry of Education and Science used the reimbursable advisory services of the World Bank to evaluate the existing model and propose a new one. The process included consultations with the higher education institutions, organisations representing the sector and other stakeholders.

As a result, after the necessary changes in legislation have been prepared and adopted, the new model was introduced in July 2015. The new financing model includes 3 pillars:

I pillar - a stable financing element - yearly financing for budget places. There is a basic cost of the budget place per year (currently about EUR 1 500 per year), which is being multiplied by the coefficient of the sector (for example, 1,5 for maths, 3,5 for medicine). The result is then differentiated by the level of studies - it is multiplied by 1,5 for master level studies and by 3 for PhD studies. This financing is fairly constant from year to year.

II pillar - the newly introduced performance-based funding. To solve existing challenges and steer the institutions in the direction of the planned sector development, the Ministry introduced the following indicators:

a) to stimulate the renewal of academic staff - how much the HE institution hires as academic and scientific personnel, students of master and PhD programmes and those who completed PhD within the last 5 years. Since the introduction of this indicator, the number of such personnel in Latvia has increased by 30%;

b) amount of internationally competed research and development (R&D) funding - this indicator stimulates the institution to compete for the international R&D funding, to make its research more relevant and internationally competitive and to diversify its income base. Since the introduction of this indicator, this amount has increased twice;

c) the amount of R&D funding attracted from the industry - the goal is to stimulate the HE institutions to engage with the industry. This amount has not increased since the introduction of the indicator. In fact, it has slightly decreased. Given this challenge, a further policy intervention with other enabling instruments is necessary. To be fair, even in countries like Denmark with the innovative, high value-added economy sectors, the policy representatives think that the academia and industry do not connect enough. The important channel of 'exchange' between those sectors are people - those from research go to work in the industry and vice versa.

The data on those indicators is being verified by the independent auditors hired by the Ministry. Then it is being used to calculate the II pillar financing for the next year.

III pillar - development funding - this pillar is currently funded by the European Union's Structural Funds. It includes programmes such as investment into R&D infrastructure (including at the HE institutions), investments into modernisation of STEM study programmes (science, technology, engineering, maths), improvement of qualifications of the academic personnel, improvement of management of the HE institutions, post-doctorate grants for young researchers, innovation grants for students and others.

It is important to note that the new financing model was introduced with the additional funding for the II pillar. Namely, no institution left out after introduction of the new model as they all got a new source of financing on competitive terms. This was important to ease the introduction of the reform.

5.3.2 Vocational Education and Training

Title of the VET case study	Training programme for employed and unemployed adults
Country	Latvia
Name of the VET institution/ other institutions involved	The Ministry of Education and Science, The State Education Development Agency, VET providers
Period	current
<p>The basic funding of the state VET institutions is a traditional, cost-based model per trainee, with the differentiation of costs by the training sectors. The Ministry is evaluating the possibilities to introduce the performance-based funding elements in VET as well, having introduced it in the higher education. Possible indicators could be the labour market outcomes of the graduates or further studies, engagement with lifelong learning of adults, engagement with various EU/ international projects, including Erasmus+ mobility projects, implementation of the work-based learning etc. Yet this is still under consideration.</p> <p>There is a development funding from the EU Structural Funds which is being invested into modernising the infrastructure and content of the study programmes. A current example of the good practice in VET is the programme for upgrading the skills of adults. Possible entrants are all adults, employed or unemployed over 25 years old up to working persons who reached the retirement age. It is possible to apply for upgrading the qualifications in 11 sectors - transport and logistics, printing and media technologies, energy sector, catering and tourism, agriculture and food processing, chemical industry, textile, metalworking and engineering, electronics and ICT technologies, wood processing and construction.</p> <p>There are the following programmes:</p> <ol style="list-style-type: none"> 1. with the award of a professional qualifications upon completion - these are also targeted at people who dropped out of the professional education before and now have a chance to complete it. Nationwide, the statistics by the education level show that having no higher or professional education carries the risk of unemployment, especially in mature age; 2. with upgrade of skills, without an exam and qualification, but with a certificate testifying the training completed. <p>There are coordinators of the programme in all regions to ensure the country-wide availability. Numerous state and private VET providers are engaged in the implementation of the programme too. The programme also offers subsidies for transport costs, assistants for persons with limited mobility and interpreters for those with impaired hearing to ensure the access to training opportunities and inclusion into labour market.</p> <p>Up to the present, the programme has had 3 calls and in the 3rd call, there are 11,000 participants, which is a large amount by the country standards. The State Education Development Agency, under the Ministry of Education and Science, has actively promoted the programme via social media and the choice of qualifications is wide.</p>	

The state with the co-financing by the EU Structural Funds covers 90% of the costs, the remaining 10% are covered by the trainee. The 10% contribution is waived for those with a status of a low-income person.

5.4 Kazakhstan

5.4.1 Higher Education

Case study 1

Title of the HE case study	Implementation of academic mobility programmes
Country	Kazakhstan
Name of the HE institution/ other institutions involved	Ministry of Education and Science of the Republic of Kazakhstan (MES RK), universities
Period	2011 - present
<p>With the accession of Kazakhstan to the Bologna process in 2010, the course of the national policy was focused on mobility implementation on the basis of national and international obligations. The programme on the implementation of academic mobility was launched in 2011.</p> <p>Aim: to provide an opportunity to gain experience in foreign studies, to improve the quality of training and subsequent employment of students, to ensure the competitiveness of students in the international labour market.</p> <p>Legislative base: the Law of the Republic of Kazakhstan <i>On Education</i>, the State Programme for the Development of Education for 2011-2020, the Concept of Academic Mobility of Students in Higher Education Institutions, the Rules of Direction for Study Abroad, including within the framework of academic mobility⁹⁸.</p> <p>Financing: In Kazakhstan, the main sources of funding for academic mobility are budget funds of the Ministry of Education and Science of the Republic of Kazakhstan and extra-budgetary funds, which include own funds of universities and students, funds of partner universities, exchange programmes, international grants and employers' funds.</p> <p>Description of the process: Among the specific features of academic mobility is a limited period of study for a student and the opportunity to form his/ her own personal learning path. It is required to synchronize the curriculum for courses and specialties from partner universities of academic mobility, to recognize educational documents and degrees not only abroad, but also at home university, and to transfer credits.</p> <p>Within the framework of budget financing, a meeting of the Commission of the MES of RK on the distribution of budget funds for academic mobility of students is held. After that, applications</p>	

⁹⁸ https://tengrinews.kz/zakon/pravitelstvo_respubliki_kazahstan_premier_ministr_rk/obpazovanie/id-V080005499_/

from Kazakhstan universities are considered. Applications show the number of students planning to travel abroad as part of external mobility, prospective partner countries/universities, estimated costs, the number of existing contracts with foreign universities. In conclusion, the Commission decides on the allocation of budget funds. At the end of the fiscal year, universities provide a report on the use of budget funds.

Implementation: The total number of students who studied via the mobility programme at the expense of budgetary and extra-budgetary funds for the years 2011-2017 was 11,693 people. Within the framework of the state programme, for 7 years of implementation of the academic mobility programme, at the expense of budget funds, 5,155 students (3,553 bachelor students, 1,599 master students, 3 doctoral students) studied at foreign universities.

Outcomes: The growth of student mobility has a positive effect and contributes to the graduate employment, the number of international agreements concluded between universities increased (804 in 2018), as well as the number of joint educational and double-degree programmes (585 in 2018) and the English-speaking students and teaching staff (in 2017 – 2,990 bachelors, 802 masters, 149 doctorates).

Case study 2

Title of the HE case study	The programme of attracting foreign experts in the top management of universities
Country	Kazakhstan
Name of the HE institution/ other institutions involved	Ministry of Education and Science of the Republic of Kazakhstan, Universities
Period	2016 – present
<p>Aim: introduction of innovations and best practice of world experience in the national management policy of universities</p> <p>Legislative base: The programme of attracting foreign specialists to the top management of universities is enshrined in the <i>State Programme for the Development of Education and Science of the Republic of Kazakhstan for 2016-2019</i>.</p> <p>Financing: For its implementation, over KZT 1 billion was allocated from the state budget. In 2016 - 11 people in the amount of KZT 115.2 million, in 2017 - 36 people in the amount of KZT 523.1 million, in 2018 - 37 people in the amount of KZT 538 million.</p> <p>Implementation: Since 2016, in Kazakhstan, on behalf of the Head of State, top managers have been attracted to domestic universities. Over the past 3 years, 84 foreign specialists have been recruited for the positions of president, rector, vice rector, dean, director of the department.</p> <p>The following requirements are made for candidates:</p> <ul style="list-style-type: none"> • have a degree/ academic degree (MSc, MBA, MA, PhD, PhD); • have experience in the system of higher and postgraduate education, science and innovation (at least 5 years); • have experience in education as a top manager (at least 5 years); • have knowledge of strategic planning, institutional management and accreditation; 	

- have experience of participation in the development of educational programmes, the commercialisation of research results.

Outcomes: Thanks to the experience of foreign specialists, new approaches to the organisation of educational and management activities are being generated: strategies for the internationalisation of universities have been developed; work has been done to participate in the QS World University Ranking rating; the required parameters of the Bologna process have been implemented; foreign experts as scientific project consultants or lecturers have been attracted; international accreditation of educational programmes has been gained. It also had a positive impact on: leadership in developing educational programmes and courses in English; implementation of programmes of external academic mobility; strengthened international cooperation of universities.

5.4.2 Vocational Education and Training

Title of the VET case study	Free technical and vocational education for all project⁹⁹
Country	Kazakhstan
Name of the VET institution/ other institutions involved	Ministry of Education and Science of the Republic of Kazakhstan, Ministry of Labour and Social Protection of Population of the Republic of Kazakhstan, more than 360 VET institutions, local executive bodies
Period	2017 - present
<p>In 2017, the project Free TVET for All initiated by the Head of State was launched.</p> <p>Aim: to provide everyone with the first working specialty free of charge; it is expected that by 2021, more than 720 thousand citizens will receive free vocational education.</p> <p>Objectives: to enhance the image of the TVET system, reducing the gap between supply and demand in the labour market, integrating socially vulnerable youth and adults in training and work.</p> <p>Target audience: graduates of the 9th and 11th grades, as well as young people who have not enrolled in educational institutions or looking for work, children from low-income families and young people who are in a difficult life situation.</p> <p>Relevance: the low prestige of the VET system, the low level of youth participation in TVET programmes, the socio-economic situation in the country.</p> <p>Description of the project: Project is concentrated on training with VET and short-term vocational training of workers from 1 to 6 months on a dual basis. A special feature is the preparation of modular programmes of training from a work qualification to a mid-level specialist. The programme participants are entitled to a scholarship in the amount of KZT 16,759 per month, one-time hot meal (KZT 365 per day) and travel privilege (4 MCI per year).</p>	

⁹⁹ <http://opencollege.kz/>

Financing: The project is carried out both from local budgets (353 thousand people) and within the framework of the *Programme for the Development of Productive Employment and Mass Entrepreneurship for 2017-2021*¹⁰⁰.

Legislative base: Legislative support for the introduction of free VET is provided by the Law of the Republic of Kazakhstan *On Education* and the *State Programme for the Development of Education and Science for 2016-2019*.

Project implementation: The Free VET for All initiative is being implemented by the Ministry of Education and Science of the Republic of Kazakhstan in close cooperation with the Ministry of Labour and Social Protection. The project Free VET for All is implemented in 361 colleges of the country. In order to fully reach young people in need of training, 1,850 mobile groups were formed, which included representatives of akimats, rural districts, cities, educational organisations, local police service, youth organisations and volunteers.

Outcomes: In 2017, for the first time in 5 years, there was no reduction in the VET contingent. Previously, the number of college students annually decreased from 30,487 to 10,328 people. The launch of the project Free VET for All and the increase in the state order to 53.8% of students allowed stopping the negative trend. In 2017, there is an increase in the proportion of students receiving working qualifications, and a reduction in mid-level specialists.

Compared to 2016, population expenses for rental housing for students have sharply decreased. This is due to the launch of the programmes Serpin and Free VET for All, which provide free vocational training, monthly scholarships, housing, meals, etc.

5.5 Tajikistan

5.5.1 Higher Education

Title of the HE case study	Quality Management System (QMS)
Country	Tajikistan
Name of the HE institution/ other institutions involved	Tajik State University of Commerce (TSUC) Supported by the World Bank and coordinating by the Ministry of Education and Science (USD 340 thousand)
Period	December 2018 - December 2020
Context: The state policy of the Republic of Tajikistan in the field of Higher Education is aimed primarily at integrating higher education in the European space and joining the Bologna Declaration. Starting from the 2005/2006 academic year, 2 universities of the Republic of Tajikistan (the Tajik State University of Commerce and the Technological University of Tajikistan), have begun the introduction of the European Credit Transfer System in educational process. The main goal of the transition to the ECTS was the integration of universities into the world market of	

¹⁰⁰ https://tengrinews.kz/zakon/pravitelstvo_respubliki_kazahstan_premier_ministr_rk/trud/id-P1600000919/

educational services by improving the quality of education. According to the analysis of the republic's HE sector conducted within the framework of the World Bank project, *'Universities carry out various measures to ensure quality, but they are often fragmented, inefficient and ineffective due to the lack of a coherent internal quality assurance system. Key stakeholders (students, teachers and employers) are not involved in quality assurance processes. Universities practice quality assurance only to a small extent, limited solely to control mechanisms and the collection of disparate quantitative data.'*¹⁰¹

The National Strategy for the Development of Education until 2020, approved by the Government of the Republic of Tajikistan, sets the goal to improve the educational programmes of higher education from the standpoint of developing competencies among graduates in order to satisfy the requirements of the internal and external labour market. Consequently, the strategic task of the HEIs is to reconsider the development strategy from the position of ensuring the quality of education complying with European standards.

Main goal:

Development of QMS documentation and introduction of QMS into the educational process of the TSUC.

Process:

- to develop and approve a new university policy in the field of the quality of education, in accordance with its alignment with European quality standards;
- to develop and implement university quality management system (QMS);

Outcomes:

- increasing the involvement of students and academic staff in the implementation of policies and goals in the field of education quality;
- improving student performance;
- formation of competence and increasing the level of employment of university graduates;
- improving the image of the university locally and internationally.

Since 2004, TSUC has actively participated in international projects as a partner, but for the first time, the university won a grant as a grant holder. International fund will be used to create the QMS and its certification with aim to increase the level of students' knowledge and their future employment.

5.6 Uzbekistan

5.6.1 Vocational Education and Training

Title of the VET case study	Changes in approaches to VET in Uzbekistan
Country	Uzbekistan

¹⁰¹ Republic of Tajikistan: Tajikistan: Higher Education Sector Study, 2014

Period	From 2018/2019 academic year
<p>Despite the fact that the Ministry of Higher and Secondary Specialised Education successfully managed HE and VET systems, in 2018 the approach to deliver VET and secondary education in general to the population has undergone a major transformation. Previously, Uzbekistan has managed a system where all graduates of 9-year schools would have to transfer their studies either to the academic lyceums – upper secondary education with mainly academic disciplines; or to professional colleges – upper secondary education, where upon graduation students were given a professional qualification. In 2016-2017, a major review of the existing system was conducted and the system weaknesses were identified. Those, among others, included the drawbacks in the financial mechanisms which led to the material and equipment provision of colleges to be only at 56% level from the requirement, unsatisfactory quality of preparation of literature and study guides, inconsistencies in the length of study programme and peculiarities of studied profession, poor alignment of the system with lifelong learning principles¹⁰². The need for a change was also clearly evident from the results of a national survey, where 352 out of 467 thousand graduates of the 9th grade of secondary schools and their parents indicated that they would like to continue to the 10th grade¹⁰³.</p> <p>Hence, for minimising the dissonance, the following changes were introduced:</p> <ul style="list-style-type: none"> • starting from the 2018/2019 school year, compulsory general secondary and specialised secondary education is carried out in general education schools, including specialised schools and boarding schools of arts and culture, specialised boarding schools of the Olympic reserve, and academic lyceums on the basis of a continuous 11 years' cycle; • starting from the 2019/2020 school year, admission to vocational colleges will be carried out from among graduates of the 11th grade of general education schools on a voluntary basis in order to obtain the relevant specialty (profession) with a term of study from six months to two years; • professional colleges operate primarily in the composition of ministries, departments, business associations, commercial banks and large enterprises – major employers; • the maintenance of vocational colleges at the expense of the State Budget of the Republic of Uzbekistan is carried out until the completion of the training of students admitted to study in vocational colleges until the 2017/2018 academic year (inclusive); <p>Additionally, in order to make sure that transition to a more sustainable system would not become a burden for aforementioned organisations, the government has indicated taxation preferences for those organisations that take responsibilities for the VET establishments as well as for those who become the major employers of the graduates.</p> <p>Proposed system reduces the state control over the VET educational establishments and replaces it with the market-based mechanisms. The changes are directed at improvement of quality of professional education, increasing the employment of graduates and contribute to the economic development of the country. At this stage, it is early to assess the results of the change as they will only bear fruit after the first cohort of graduates joints the labour market.</p>	

¹⁰² <http://lex.uz/docs/3523198>

¹⁰³ https://www.norma.uz/nashi_obzori/professionalnoe_obrazovanie_dostupno_kajdomu

6 Challenges for Implementation

As outlined in the study, the higher education system as well as the vocational education and training sector face considerable challenges (similarly to any public policy area) in the present climate of budget cuts and financial pressures of public resources. As illustrated in the analysis and the case studies examples from Europe and Central Asia, the common challenges are:

- Public spending on higher education and vocational education and training represents relatively low share of country's GDP – a sufficient level of investment is crucial to ensure stability and reassurance for HE and VET institutions.
- Student population growth offsets the increase in public funding – although the amount of governmental resources for HE and VET has been growing in the last years, this increase has not kept pace with the student population growth. This might create pressure on increasing student tuition fees which has negative implications for enrolment rates.
- Insufficient support for students and their families – VET and higher education studies in particular, are financially demanding and to ensure fair access to this provision, a comprehensive system of student loans, scholarships and maintenance grants is required. Otherwise, it has a negative impact on equity in education affecting especially vulnerable and disadvantaged groups of students.
- Introduction of performance-based elements and indicators in financing mechanisms of HE and VET – to ensure demand-driven approach, efficiency and effectiveness in utilising public resources as well as continuing development and competitiveness of HE and VET institutions.
- Low engagement with the private sector – in several countries, the substantive share of private funding of HE and VET institutions consists largely of tuition fees. Instead, enterprises and private training institutions could be motivated to contribute to share the educational costs and provide a much-needed link with the labour market and its development and needs. Without the private sector's active involvement, the system is at a risk of failing to address labour market requirements and demands.
- Unnecessary bureaucracy as multiple ministries and departments are involved in administering HE and VET institutions and their funding – this may lead to redundant or duplicate processes and subsequent delays and inflexibility in dealing with internal as well as external activities and procedures.
- Centralised approach in management of HE and VET institutions – this is demonstrated in the lack of autonomy of HE and VET institutions and ministries maintaining full control over their internal procedures. Instead, to ensure quality provision, effective quality assurance processes could be established focusing on qualitative and quantitative aspects of education provision.

For the VET sector particularly:

- The lack of graduates' outcomes data available and their usage has a negative impact on the further development of the provision as the education outcomes are unknown and not linked to the training content.
- Insufficient motivation of potential students – this is an image problem of the VET provision as many students still see it as the second-best option to higher education.

7 Recommendations

To address the challenges summarised in the previous chapter, the following measures for financing higher education and vocational education and training are recommended:

- Provide sufficient public funding to HE and VET institutions to ensure stability and continuity of programmes and projects.
- Introduce performance-based elements in funding mechanisms to reward quality education and training, research outcomes and to stimulate labour market responsiveness.
- Create comprehensive systems of student support to alleviate the financial demands of HE and VET studies by providing competitive grants, scholarships and loans.
- Diversify sources of income, in particular engage with the private sector so that the educational costs are shared in a way that provides motivation for enterprises, schools and learners to engage in the learning process. Consider introduction of stimuli for enterprises to engage in VET.
- Expand academic and managerial independence of HE and VET institutions – to support decentralisation and greater autonomy with associated responsibility, flexibility and freedom. Support decentralisation processes to mobilise funds at regional/ local levels in parallel with the transfer of responsibilities.
- Support internationalisation of HE and VET institutions to gain access to and share good practice examples and experience in financing mechanisms of HE and VET institutions.
- Create sufficient financial and other motivation for HE and VET institutions to engage with innovative trends in education funding approaches that have a positive impact on the quality outcomes on institutional as well as systemic level.

For the VET provision particularly:

- Establish tracking systems of career paths and availability of data of the labour market outcomes of VET graduates – to explore and track whether the offered learning is relevant and fit for purpose in the current labour market. This is essential to stimulate a demand-driven approach and skills relevance and their transferability.
- Improve availability of data on the positive labour market outcomes – data and their effective use can play a pivotal role not only in creating a more demand-driven system but also in the communication strategy to raise profile of the VET provision.
- Raise awareness and profile of the VET provision for potential students as well as general public to attract higher enrolment rates.
- Increase the volume of work-based learning, dual apprenticeships and other on the job learning to ensure relevant and transferrable skills are being trained and developed.

- Consider investing in continuing VET provision for adults – to keep in line with the technological developments and trends, adult upskilling and re-training will become increasingly relevant.

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