



Audit Report

20/06

State funds provided to public universities

The audit was included in the audit plan of the Supreme Audit Office (hereinafter also the "SAO") for 2020 under number 20/06. The audit was managed, and the Audit Report drawn up by SAO member Mr. Petr Neuvirt.

The aim of the audit was to examine whether the current method of financing public universities motivates universities to improve the quality of their activities and is aimed at meeting the needs set by the government.

The audited period was 2017-2019; both the previous and subsequent periods were also considered for contextual reasons.

The audit was carried out at the audited entities between March 2020 and December 2020.

Audited entities:

The Ministry of Education, Youth and Sports (hereinafter also "MoEYS");

Academy of Performing Arts in Prague (hereinafter also "APA");

Czech University of Life Sciences in Prague (hereinafter also "CULS");

Czech Technical University in Prague (hereinafter also "CTU");

Palacký University Olomouc (hereinafter also "PU");

Tomas Bata University in Zlín (hereinafter also "TBU");

Academy of Arts, Architecture and Design in Prague (hereinafter also "AAAD").

The Board of the SAO, at its 6th session held on 22 March 2021,

approved, by resolution No. 10/VI/2021

the ***Audit Report*** as follows:

Public universities

26

Number of public universities

91%

Percentage of university students studying at public universities

CZK 45 billion

Expenditure of the MoEYS on public universities in 2019

CZK 5 billion

Increase in per-student funding between 2014 and 2020, at the expense of a decrease in the performance incentive

29th

Ranking of the Czech Republic in the list of the 50 countries' higher education systems in 2020. This is a drop by seven places in the last four years

15 %

Share of university graduates in jobs not requiring a university degree in 2019

I. Summary and Evaluation

The SAO examined whether the current method of financing public higher education institutions (hereinafter also "HEIs") motivates universities to improve the quality of their activities and is aimed at meeting the needs set by the government. The audit focused especially on the definition of needs and objectives, the method of monitoring their fulfilment and the mechanism for allocating support.

The MoEYS has set out the public needs to be met by universities¹. However, these needs are not being effectively met. One of the main causes is the current method of funding set by the MoEYS, which does not motivate universities to long-term development, to increase the quality of education, research, and other activities. At the same time, the MoEYS does not take effective measures leading to the efficient use of the state budget funds provided for higher education. Expenditure of the MoEYS on public universities in 2019 amounted to CZK 45 billion.

International comparisons show, among other things, that the quality of Czech universities is not increasing and that the Czech Republic's position in the evaluation of higher education systems is deteriorating in the long term. Thus, the MoEYS is not fulfilling its long-term goal of improving the quality of the higher education system and the activities of universities.

Long-term planning for the development of public universities is in many cases unspecific. Universities use the support provided mainly to meet short-term needs, as their long-term development plans are general, there is no adequate evaluation of the fulfilment of long-term goals and the way of providing funds from the state is not very motivating for universities. This is evidenced, for example, by the low ability to draw funds from the state budget for long-term investment projects.

Although according to the analysis of the MoEYS, there is a shortage of funds in higher education, public universities have repeatedly failed to use available funds and have increased their fund balances every year. The increase in funds is taking place even though the amount of expenditure per student is low in international comparison.

Another problem is the reduced ability of universities to raise funds for research and development in international grant competitions and in cooperation with the private sector. The results achieved by Czech universities in research show its deteriorating quality and relevance. The system of research evaluation and funding, which focused mainly on quantity rather than quality, is still evident here. Support for this area has not been effective.

Compared to other countries, the Czech Republic largely favours a master's degree over a bachelor's degree. The MoEYS introduced measures to increase the proportion of bachelors and to link courses more closely to labour market requirements only partially and after a very long time. The studies are not very focused on the graduates' ability to find a job, and almost every year in the CR, there has been an increase in the number of university graduates in jobs that did not require such a degree.

The existing method of financing public universities does not motivate universities to improve the quality of their activities and is therefore not aimed at meeting the needs set

¹ The competence of the MoEYS is specified in the provisions of Section 87 of Act No. 111/1998 Coll., on universities and on amendments and supplements to other acts (the Higher Education Act) (hereinafter also referred to as the "Higher Education Act").

by the government. The method of funding is a crucial tool for the state to influence the activities of universities, given their academic freedoms and rights. Ultimately, universities do not develop in a targeted way to increase the quality of their activities in the long term.

The overall evaluation is based on the following main audit findings:

1. The method of funding of HEIs did not correspond to the stated needs and objectives

The MoEYS has long declared the need to improve the quality of university activities. The method of distributing funds was to serve as a basic tool to support quality improvement. Thus, the MoEYS should have increased the share of funds distributed based on results and performance, at the expense of funds distributed on the basis of the number of students. In recent years, however, the MoEYS has done the opposite and increased the funds paid to public universities based on the number of their students. Thus, the share of funds distributed to public universities based on their results and performance has been declining. The share of funds allocated to other priority areas, namely student welfare and university development, has also been declining. Thus, the way the aid was distributed did not correspond to the needs and objectives set. Due to the strong autonomy of HEIs under the Higher Education Act, the mechanism for the distribution of funds is a fundamental tool through which the MoEYS can influence the higher education sector.

2. In the Czech Republic, the share of bachelor's degrees is low in the long term, and these are almost never vocationally oriented²

The Czech Republic is on track to meet the national target for the share of people with a university education, as set out in the *Europe 2020 strategy*. However, the structure of achieved university education is very different in comparison with the countries of the European Union (EU) and the Organisation for Economic Co-operation and Development (OECD). The average share of bachelor's degrees is two and a half times higher in the EU than in the Czech Republic and even three times higher in the OECD. The MoEYS has not introduced effective measures to support the increase of this share and the task set out in the International Competitiveness Strategy has thus not been met. The bachelor's degree is less financially demanding than the master's degree due to its shorter duration. Increasing the number of graduates with a bachelor's degree at the expense of those with a master's degree would reduce the economic difficulty of obtaining a university education, increase the available resources per university student, and ultimately could contribute to improving the quality of higher education.

Vocationally oriented bachelor's courses were introduced in the Czech Republic only in 2018, seven years after the approval of the International Competitiveness Strategy, which tasked the MoEYS with supporting the share of students in these programmes. In international comparison, the share of students in vocationally oriented bachelor's degree programmes is very low, approximately one quarter compared to European countries with available data.

Increasing the proportion of university-educated people in the current structure, where graduates of academic forms of study clearly predominate, leads to a mismatch with the

² For vocationally oriented courses, emphasis is placed on the mastery of practical skills needed to perform a profession supported by the necessary theoretical knowledge. The accreditation standards correspond to this definition, which significantly consider the involvement of professionals in the activities and processes of the university. Compulsory professional experience has been introduced into the curricula of vocationally oriented courses.

requirements of the economy and the labour market. Almost every year there is an increase in the number of university graduates in jobs that did not require such a degree.

3. Cooperation between HEIs and the private sector remains low in the long term

The MoEYS set out measures and recommendations in strategic documents to eliminate the shortcomings identified in the cooperation between public universities and the private sector and to significantly increase this cooperation. However, the MoEYS has not set up a system of allocating funds in a way that would significantly motivate HEIs to cooperate with the private sector and has not implemented effective measures that would strengthen this cooperation in a meaningful way. Cooperation between public universities and the private sector has long been at a low level, especially in research and development.

4. Universities are not successful in international competitions for research grants

In its strategic documents, the MoEYS set out objectives and measures to link Czech higher education with the international environment and to support HEIs in their ability to succeed in international competitions for research grants. Support for obtaining international research grants is not evident from the system of allocating funds to individual HEIs. However, the MoEYS has not set up a system of allocating funds in a way that would significantly motivate HEIs to succeed in international competition, and has not implemented effective measures that would efficiently strengthen the achievement of international grants. In order to assess how well the objectives in this area are being met, the MoEYS has established indicators that capture the success in getting European Research Council grants³ and funds from the EU programme *Horizon 2020*. The expected improvement in these indicators has not occurred. On the contrary, according to some sub-indicators, the ability of Czech universities to get these funds has deteriorated and remains low in the long term in international comparison.

The ability to obtain international research grants was not considered by the MoEYS in the system of allocating support, and the objectives in this area were not met. In contrast, the links with the international environment have been considered by the MoEYS in the system of allocating support, and it is clear from the available data that the objectives have been met in this area.

5. The established indicators are indicative of the deteriorating quality and relevance of research, development and innovation at Czech HEIs

For the evaluation of the priority objective "*high quality and relevant research, development and innovation*", the MoEYS has set five indicators. These indicators are not being met and therefore the relevant priority objective is not being met either. On the contrary, the achieved results indicate the deteriorating quality and relevance of research, development and innovation at Czech HEIs. In the field of research, Czech HEIs have not been successful in drawing funds from the private sector and from foreign grant programmes in the long term. Similarly, the emphasis on quantity rather than quality is still visible in Czech HEIs' research due to the funding system.

6. Despite repeated extensions, the investment programme funds remain unspent

The MoEYS announced an investment programme for the period from 2011 to 2016, the aim of which was the renewal and development of university infrastructure. In this period, the

³ European Research Council (ERC) grants reflect the quality of the conditions for carrying out the so-called frontier research, the EU term for world-class, primarily basic research that is expected to drive progress.

universities have spent CZK 5.7 billion, which represents only 41% of the approved projected amount. The MoEYS has updated the programme twice and extended its validity until 2021. Even with this extension, the originally allocated amount of CZK 13.9 billion will not be spent. Throughout the implementation of the programme, the actual use of funds in each year was significantly lower than the allocation approved in the relevant programme documentation. Already in 2017, the SAO pointed out in its audit report from Audit No. 16/31 - *Development and renewal of the material and technical base of public universities* that the programme was poorly set up and that the investment projects of universities were not prepared well.

7. Despite the declared shortage of funds, the fund balances of HEIs have grown significantly each year

Within the framework of analyses of the state and development of universities, the MoEYS stated, among other things, the lack of resources in higher education. However, it is clear from the data of individual HEIs that they do not use the available funds and transfer them to their own funds. HEIs' fund balances increased annually between 2014 and 2019. Overall, they increased by almost CZK 6 billion, or 45%, in this period. In 2019, HEIs had almost CZK 19 billion in funds, which corresponded to approximately 42% of the MoEYS' spending on HEIs for the year.

8. The Czech Republic's position in international rankings of higher education systems has been deteriorating for a long time

In the audited period from 2013 to 2020, the deteriorating position of the Czech Republic in the *Universitas 21* ranking of higher education systems is evident. The deterioration is evident both in the score achieved against the most successful country and in the ranking between countries. The CR lagged behind the most in the area of results, where it achieved only about a third of the performance of the most successful country.

9. The position of Czech HEIs in international competition is not improving

It is clear from the data of the three rankings, which assess the quality of universities in different ways, that Czech HEIs are not succeeding in improving their position in international competition. The top 1,000 universities according to the oldest ARWU ranking in 2020 include 364 European universities. More than half of them were in the top half of the ranking. Seven out of 26 Czech HEIs were among the top 1,000. Only one of them was ranked in the top half of the ranking, and the remaining six ranked HEIs were in the bottom half of the ranking.

10. Due to their setting, the fulfilment of the strategic objectives of the audited HEIs cannot be evaluated

Universities prepare strategic plans for their development on the basis of applicable laws, which the MoEYS considers when providing support. None of the six schools audited comprehensively evaluated the implementation of this strategic document for the period 2011 to 2015. For the strategic objectives for the period 2016-2020, the situation has improved to some extent. However, for four schools, as they have not set the target state, it will not be possible to clearly assess the implementation of this key strategic document. The MoEYS did not require the setting of target levels for the possibility of evaluation. The MoEYS discussed the strategic plans with HEIs but had no reservations and did not take the opportunity to influence their strategic development.

II. Information on the Audited Area

HEIs are legal entities established by the Higher Education Act. This law regulates their status and activities. Universities, as the highest link in the education system, are the ultimate centres of learning, independent knowledge and creative activity and play a key role in scientific, cultural, social and economic development. In 2020, there were a total of 26 public universities in the Czech higher education system and 91% of all university students studied at these schools.

The MoEYS is the central state administration body for, among other things, universities, education, science policy, research and development. The MoEYS is the administrator of the state budget chapter from which the educational activities of HEIs are financed and is the administrator of the investment programme aimed at the reproduction of the assets of public universities.

The MoEYS is also a provider of special-purpose and institutional support for research, development and innovation at HEIs. Furthermore, the MoEYS is the managing authority of the Operational Programme *Research, Development and Education* (hereinafter also referred to as "OP RDE").

On the basis of the Higher Education Act, the MoEYS, among other things, prepares an annual report on the state of higher education and a strategic plan for this area, discusses and evaluates the strategic plans of HEIs, allocates funds to them and controls their use. On the basis of this Act, HEIs, among other activities, prepare annual reports on activities and management, develop their own strategic plan and carry out internal quality assessment.

The basic strategic document was the *Strategy of the Education Policy of the Czech Republic until 2020*. The area of higher education was further addressed in the documents *Framework for the Development of Higher Education until 2020* (hereinafter also "Framework") and the *Long-Term Plan⁴ of Educational and Scientific, Research, Development and Innovation, Artistic and Other Creative Activities for Higher Education for the Years 2016-2020* (hereinafter also referred to as "HEI LTP 2016"). This document has been updated annually by the MoEYS. After 2020, the main strategic documents are, in particular, the *Ministry's Strategic Plan for Higher Education for the Period from 2021* and the *Czech Republic's Education Policy Strategy 2030+*.

Other strategic materials, not authored by the MoEYS, also have an impact on higher education. These include, for example, the European Commission's *Europe 2020 - A strategy for Smart, Sustainable and Inclusive Growth* (hereinafter "the Europe 2020 strategy"). Here, a target has been set for the EU to increase the share of 30-34-year olds who have completed tertiary education⁵ to at least 40% by 2020. In 2012, the Government of the Czech Republic committed itself to achieving a 32% share, and the MoEYS subsequently set a target of 35% in the HEI LTP 2016. Another such material is the *Strategy of International Competitiveness of the Czech Republic for the Period 2012-2020* (hereinafter also as the "Strategy of International Competitiveness") by the Ministry of Industry and Trade. This document contains 43 projects in various fields, including higher education, with the aim of creating favourable conditions for creative entrepreneurship, innovation and rising living standards.

⁴ Until 31 August 2016, the term "long-term plan" was used on the basis of the Higher Education Act, and was replaced by the term "strategic plan".

⁵ In the Czech Republic, this mainly concerns education at universities and higher vocational schools.

The following table shows the development of the total expenditure of the MoEYS on public universities.

Table 1: Total expenditure of the MoEYS on public universities from 2017 to 2019
(in CZK thousands)

	2017	2018	2019
Expenditure on public universities	32,678,612.23	46,178,738.95	44,958,746.38

Source: closing accounts of Chapter 333 - MoEYS for 2017, 2018 and 2019.

The MoEYS' spending on HEIs increased significantly in 2018. This growth was due, among other things, to an increase in the funds allocated to university teachers' salaries and expenditure on research, development and innovation.

Funding of universities by the MoEYS can be divided into four basic areas in terms of the way of provision, administration and consequently the use of the funds provided:

- normative funding, intended mainly for the fulfilment of the basic mission of universities, namely educational activities;
- programme funding, designed to create conditions for the further development of universities, namely the reproduction of their assets;
- support for research, development and innovation carried out at universities;
- funding from abroad, especially from the EU's structural funds and Community Programmes.

Normative funding

Higher education institutions are granted a contribution from the state budget for educational and scientific, research, development and innovation, artistic or other creative activities under the Higher Education Act. In addition, subsidies are provided to HEIs for their development and subsidies especially for accommodation and boarding of students. The type and costs of accredited courses and lifelong learning courses, the number of students and the results achieved in educational and scientific, research, development and innovation, artistic or other creative activities and how demanding these activities are decisive for determining the amount of the contribution. The amount of the contribution and subsidies provided is also influenced by the strategic plan of the school and the strategic plan for higher education developed by the MoEYS. The granting of a contribution or subsidy is decided by the MoEYS on the basis of an application from a university. Normative funding represents the most significant part of the MoEYS's expenditure on HEIs.

Programme funding

Programme funding serves to develop and renew the assets of HEIs and was implemented mainly through the 133 210 - *Support for the Development and Renewal of Public Universities* programme, which is administered by the MoEYS.

Support of research, development and innovation

Funding of research, development and innovation at universities takes the form of targeted and institutional support. In addition to the MoEYS, other providers, such as the Grant Agency of the Czech Republic or the Technology Agency of the Czech Republic, also finance targeted support for research, development and innovation at universities.

Funds from abroad

Universities also receive funds from abroad to finance their activities. Funding from EU Structural Funds and Community programmes plays a crucial role. The most important source of these funds in the 2014-2020 programme period was the OP RDE programme, whose managing authority was the MoEYS. The total allocation of this operational programme for the period 2014-2020 was EUR 2.77 billion. OP RDE focused, among other areas, on increasing the capacity for research and development of universities and human resources for research and development (hereinafter also "R&D").

Determining the amount of support

The MoEYS provided contributions and subsidies to HEIs under the *Rules for the Provision of Contributions and Subsidies to Public Universities by the Ministry of Education, Youth and Sports* (hereinafter also as "Rules"). These rules have been updated annually by the MoEYS.

The contribution and subsidies provided to HEIs are broken down into budget areas and indicators. The largest part of the support is provided by the MoEYS under budget area I, i.e., approximately 83.7% of the volume of all budget areas in 2019. Budget area I focuses on the institutional financing of HEIs, which is derived from the scope and economic intensity of the performance of HEIs (fixed part) and the outputs of HEIs and their quality (performance part). As of 2019, budget area I also provides funds specifically earmarked to support educational and other creative activities in specific areas of education, defined on the basis of public demand. To compare quality and performance, HEIs are divided into four segments, in which the values achieved in each quality and performance indicator are compared separately. The funds allocated under budget area I are provided to HEIs in the form of a contribution.

Budget area II brings together indicators aimed at supporting students in the form of scholarships or grants. Budget area III contains instruments to support the development of HEIs. Budget area IV includes indicators for international cooperation and other expenditure of HEIs.

The most significant public source of funding for HEIs was the contribution of the MoEYS, which also showed the largest absolute increase in the period under review. Personnel costs were the most significant cost item for HEIs, accounting for more than half of all costs. Since 2015, there has been a clear annual increase. The share of personnel costs in total costs was 50.8% and 55.6% in 2015 and 2019, respectively.

III. Scope of the Audit

The public audit concerned state funds provided to public universities. The aim of the audit was to examine whether the current method of financing public universities motivates universities to improve the quality of their activities and is aimed at meeting the needs set by the government.

The audit was carried out at the MoEYS and six selected public universities. These included the Academy of Performing Arts in Prague, the Czech University of Agriculture in Prague, the Czech Technical University in Prague, Palacký University in Olomouc, Tomáš Baťa University in Zlín and the University of Applied Arts in Prague. These universities were selected for the audit mainly based on the amount of support received and to represent different segments of HEIs.

The audited period was 2017 to 2019; where relevant, the preceding and following periods were also scrutinised. Based on the availability of data, some indicators have been examined since 2010. This included mainly an assessment of trends. A longer period of time was deliberately chosen to obtain more reliable information.

The audited volume at the system level was based on the MoEYS' expenditure on public universities and amounted to CZK 124 billion for the years 2017 to 2019.

In particular, the SAO examined whether the MoEYS has a clear idea of what it wants to achieve with the support it provides and why, and how successful the MoEYS is in doing so. The audit thus focused in particular on the definition of needs and objectives, the method of monitoring their fulfilment and the mechanism for allocating support. At the same time, international comparisons were made in each area.

For six public universities, the audit examined in particular the setting and concreteness of the strategic plans of individual schools and the success in their implementation. It was thus examined whether individual HEIs have a specific idea of how to use the support provided for their long-term development and whether they are succeeding in fulfilling this idea.

IV. Detailed Facts Ascertained by the Audit

1. The method of funding of HEIs did not correspond to the stated needs and objectives

In its strategic documents, the MoEYS has long declared the need to improve the quality of university activities. This was to be achieved mainly by a mechanism for the distribution of funds. To do so, the MoEYS set out measures in the HEI LTP 2016: *"Increase the proportion of funds allocated based on the results and performance of universities: The role of funding according to indicators on the input of university activities and funding according to the number of students will be reduced. The current output indicators will be strengthened and complemented by new ones to increase the share of the budget allocated according to performance and to better reflect the quality of the universities' activities."* Other priorities include supporting their development and student welfare.

The MoEYS divided HEIs into four segments, within which their performance was then compared. This method considered the specificity of the activities of individual HEIs. From 2019, the MoEYS also provides funding based on public priorities.

The system of support distribution includes a number of performance indicators that should motivate HEIs to, e.g., international cooperation, support graduate employment, obtain their own sources of funding and should lead to an overall improvement in the quality of the activities of HEIs. In the performance part, which accounted for 17.15% of the funds under the most important budget area I in 2018-2020, the MoEYS has set eight indicators. The average weight of one performance indicator was only 2.1% of the total funds under budget area I. E.g., the weight of the indicator *"study in a foreign language"* for individual HEIs was at most only 0.6 % of the total funds in budget area I. The weights of these indicators are very low, which significantly weakens the incentive effect. The incentive effect is also undermined by the principle that a change in the calculation algorithm may result in a maximum 2% year-on-year decrease in budget area I for a single HEI.

The R&D indicator is the most important performance indicator for the vast majority of HEIs (20 out of 26) with a weight of 30%. The decisive part of this indicator consists of the so-called

RIR points⁶, which motivate research organisations, including HEIs, to mass production of scientific papers, often at the expense of their quality. Thus, the main indicator of the performance part is not very telling in relation to the quality of the activities of HEIs.

The following tables show the use of funds by budget areas between 2014 and 2020. The first table shows financial figures, the second shows percentages.

Table 2: The following tables show the use of funds by budget areas between 2014 and 2020 (in CZK million)

Budget area	2014	2015	2016	2017	2018	2019	2020
BA I – Institutional funding	15,602	16,466	15,811	16,562	18,693	20,305	20,979
<i>of which the fixed part</i>	12,091	12,514	12,017	14,905	15,487	16,313	16,795
<i>of which the performance part</i>	3,510	3,952	3,795	1,656	3,206	3,377	3,477
<i>of which part of social demand</i>	0	0	0	0	0	615	707
Fixed/performance part ratio	77.5/22.5	76/24	76/24	90/10	82.85/17.15	82.85/17.15	82.85/17.15
BA II – Student Support	2,074	1,999	1,910	1,832	2,221	2,206	2,305
BA III - Development of HEIs	1,150	1,150	1,150	1,150	1,150	1,225	1,195
BA IV – International cooperation and others	429	403	447	544	739	512	651
Total	19,255	20,019	19,319	20,087	22,803	24,248	25,130

Source: MoEYS information.

Note: For 2020, these are projected figures.

Table 3: The following tables show the use of funds by budget areas between 2014 and 2020 (in %)

Budget area	2014	2015	2016	2017	2018	2019	2020	Average
BA I – Institutional funding	81.0	82.3	81.8	82.4	82.0	83.7	83.5	82.4
<i>of which the fixed part</i>	77.5	76.0	76.0	90.0	82.8	80.3	80.1	80.4
<i>of which the performance part</i>	22.5	24.0	24.0	10.0	17.2	16.6	16.6	18.7
<i>of which part of social demand</i>	0.0	0.0	0.0	0.0	0.0	3.0	3.4	0.9
BA II – Student Support	10.8	10.0	9.9	9.1	9.7	9.1	9.2	9.7
BA III - Development of HEIs	6.0	5.7	6.0	5.7	5.0	5.1	4.8	5.5
BA IV – International cooperation and others	2.2	2.0	2.3	2.7	3.2	2.1	2.6	2.5

Source: MoEYS information.

Note: For 2020, these are projected figures.

The largest budget area (area I), showed an increasing share of disbursements over the period under review, accounting for 81.0% in 2014 and 83.5% in 2020. On the other hand, the share for budget area II decreased, from 10.8% in 2014 to 9.2% in 2020. Similarly, the share for budget area III decreased, from 6% in 2014 to 4.8% in 2020. The share of budget area IV oscillated around an average of 2.5%.

Under budget area I, there is also an apparent increase in the fixed part at the expense of the performance part. In 2014, the performance component accounted for 22.5% of the amount

⁶ These are the points obtained for each type of result in research, development and innovation, recorded in the register of information on results. These points were used to allocate support to research organisations.

earmarked for budget area I, and even 24% in 2015 and 2016, followed by a noticeable drop to 10% in 2017 and a 17.15% share of the performance component in 2018-2020. Thus, the share of the performance part was noticeably lower in the period from 2017 to 2020 than in the period from 2014 to 2016.

In financial terms, the amount allocated to the performance component in 2020 was still below the 2014, 2015 and 2016 levels, even though the total amount of funding for budget area I has increased considerably. Compared to 2014, the funds allocated to the fixed part in 2020 were higher by approximately CZK 4.7 billion. Almost the entire increase in the budget of budget area I in the years 2017 to 2020 (not including the newly created part of public demand) was thus used by the MoEYS to increase the fixed part of the budget, which is based mainly on the number of students. The number of students at HEIs has shown a long-term downward trend due to demographic developments, falling from 308,219 to 261,269 between 2014 and 2019, i.e. by approximately 15%.

The proportion of funds distributed on the basis of results and performance was lower in the period from 2017 to 2020 than in from 2014 to 2016. Expressed in financial terms, it is also clear that the MoEYS increased the funds paid primarily on the basis of the number of students, not on the basis of performance and quality indicators. The importance and weight of the performance and quality indicators, on the basis of which the MoEYS allocated support to individual HEIs, were thus reduced in this period in favour of the number of student's indicator. Similarly, the shares of the funds provided under budget areas II and III, which were earmarked for student welfare and university development, have been decreasing. Thus, the way the aid was distributed did not correspond to the needs and objectives set.

2. In the Czech Republic, the share of bachelor's degrees is low in the long term, and these are almost never vocationally oriented

The *Europe 2020* strategy sets a target to increase the share of people with tertiary education. The following table shows developments in this area.

Table 4: HEIs graduates in the population aged 30-34 (%)

	2012	2013	2014	2015	2016	2017	2018	2019
CR	25.6	26.7	28.2	30.1	32.8	34.2	33.7	35.1
EU Average	35.8	36.8	37.9	38.7	39.1	39.9	40.7	40.3

Source: Eurostat, own analysis of the SAO.

The baseline for the Czech Republic in 2012 was 25.6% of the population aged 30-34 with tertiary education. The national target set in 2012 by the government under the *Europe 2020* strategy (32%) was already met by the Czech Republic in 2016, and the priority target set in 2015 by the MoEYS in the HEI LTP 2016 (35%) was met by the Czech Republic in 2019. The EU is also on track to meet the target, having exceeded the 40% threshold in the last two years. Compared to the EU, the Czech Republic has about five percentage points lower share of people with tertiary education aged 30-34, but the difference is decreasing almost every year.

However, as the following table shows, the structure of university-educated people in the Czech Republic differs greatly compared to the EU and the OECD.

Table 5: Share of graduates from bachelor's and master's courses in the population aged 25-64 (%)

	2014	2015	2016	2017	2018	2019
CR – bachelor's degree	5	5	5	6	6	6
CR – master's degree	16	16	17	17	17	17
EU average ⁷ – bachelor's degree	12	13	13	14	14	15
EU average – Master's degree	13	13	14	14	15	16
OECD average ⁸ – bachelor's degree	16	16	16	17	17	18
OECD average - master's degree	11	11	12	12	13	13

Source: OECD - *Education at a Glance*; own analysis of the SAO.

Within the population aged 25-64, the Czech Republic has a higher share of persons with a master's degree than the EU and OECD average. In contrast, the Czech Republic lags far behind in the share of graduates from bachelor's courses, as the EU average is two and a half times higher, and the OECD average is three times higher. In the Czech Republic, the number of people with a master's degree is almost three times higher than the number of people with a bachelor's degree. In the EU average, the ratio is even, and in the OECD, there are even more people with a bachelor's degree.

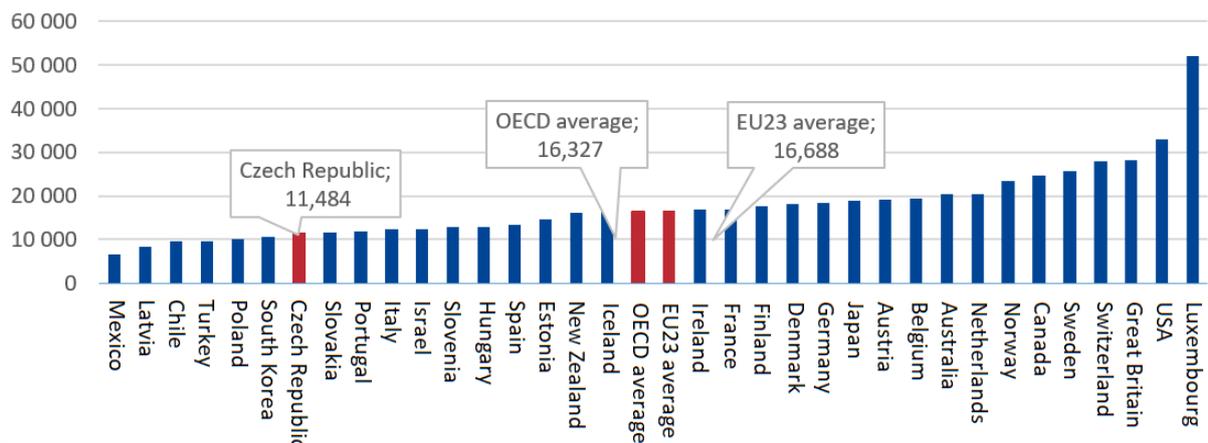
In 2011, the government approved the International Competitiveness Strategy. One of the projects is "5.22 Higher Education Reform", where among other things the following task was set: "The state should direct an increase in the ratio of students in BA courses to students in MA courses and encourage a higher proportion of students in career-oriented BA courses." The MoEYS, as the promoter of this task, has not introduced effective measures to encourage an increase in the ratio of students in BA programmes to students in MA programmes. This ratio has not increased significantly and is very low in international comparison. The objective set out in the International Competitiveness Strategy is thus not being met.

An international comparison of higher education spending per student is shown in the following chart.

⁷ EU average – calculated as a weighted average of data values from all EU countries for which data are available. This is mostly an average of 22 countries.

⁸ OECD average - calculated as a weighted average of data values from all OECD countries for which data are available.

Chart 1: Average total expenditure on tertiary education per student in 2017 (in USD)



Source: *Education at a Glance 2020*; OECD Indicators; own analysis of the SAO.

Note: This is the total expenditure on educational institutions and programmes for which data is available. Expenditure in national currencies is converted into US dollars by dividing the value of the national currency by the purchasing power parity index for gross domestic product.

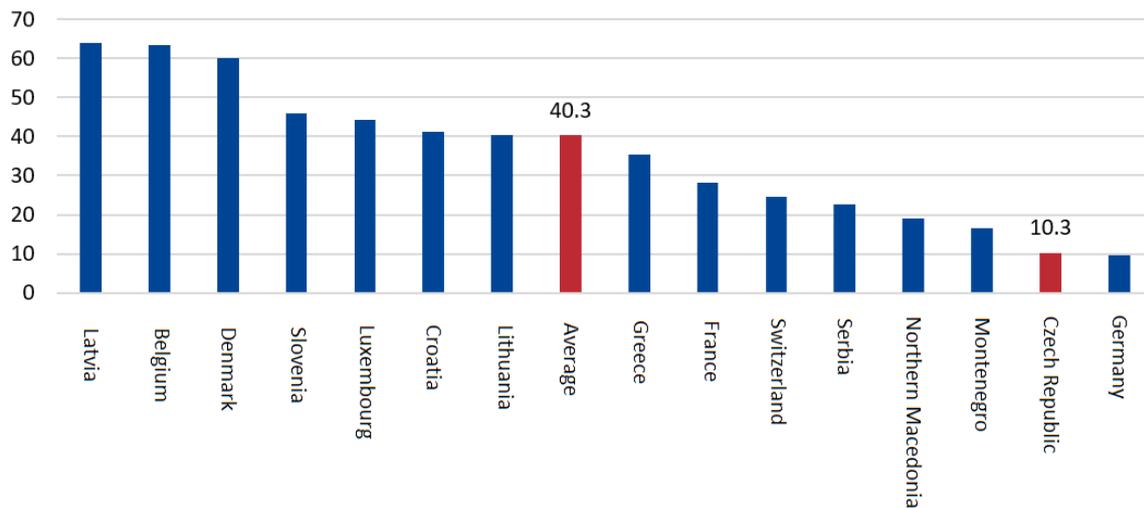
In 2017, the Czech Republic's average per-student spending on tertiary education was USD 11,484, almost a third lower than the EU and OECD average. Master's courses are significantly more financially demanding than bachelor's courses due to the longer study period. Despite the limited resources, the proportion of financially demanding master's courses is high in the Czech Republic and the less demanding bachelor's courses are used only very little in international comparison.

As part of the implementation of the second part of the above-mentioned task in the form of supporting the share of students in professionally oriented bachelor programmes, an amendment to the Higher Education Act was approved. This amendment, effective from 1 September 2016, introduced a profile of courses divided into academic and professional. For vocationally oriented courses, emphasis is placed on the mastery of practical skills needed to perform a profession supported by the necessary theoretical knowledge.

Although the International Competitiveness Strategy was already approved in 2011, the first students did not enter the professionally oriented bachelor's degree programmes before 2018. According to the MoEYS, their share in the total number of students (bachelor's and master's) was 0.5% this year and increased to 3.6% in 2019.

An international comparison of the proportion of students in vocationally oriented bachelor's courses is shown in the following chart.

Chart 2: Percentage of students in vocationally oriented education at bachelor's or comparable level out of the total number of bachelor's students in 2018 (%)⁹



Source: Eurostat, own analysis of the SAO.

In 2018, the share of students in vocationally oriented bachelor courses was almost the lowest in the Czech Republic compared to other countries. Of the 15 countries that have introduced vocationally oriented bachelor courses and that had the relevant data, the Czech Republic ranked 14th. According to Eurostat statistics, the share of students in vocationally oriented bachelor courses in the Czech Republic was 10.3%. The average for the other countries for which this data was available was 40.3%, almost four times higher than in the Czech Republic.

The number and structure of university-educated people, as well as the profile of courses, is related to the subsequent employment of graduates. Eurostat tracks the share of university graduates in jobs that do not require a university degree. This expresses alignment with the labour market. Changes in the number and structure of university graduates should be based on the requirements of the labour market and the direction of the economy. The following table shows the evolution of this indicator.

Table 6: Representation of university graduates in jobs not requiring a university degree (in %)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CR	8.3	12.7	12.5	13.4	13.3	13.4	13.7	14.5	14.6	15.1
EU Average	20.3	19.6	20.7	21	21.7	21.8	21.7	22.1	22.1	21.9

Source: Eurostat, own analysis of the SAO.

In the Czech Republic, 15.1% of university graduates worked in jobs that did not require a university degree in 2019. In this indicator, the Czech Republic is better than the EU average, which was 21.9%. However, the trend in the Czech Republic is considerably unfavourable, as in the last ten years the share of university graduates in positions not requiring a university degree has increased almost every year. In 2010, this indicator reached 8.3% in the Czech

⁹ The methodology of counting data according to the MoEYS and according to Eurostat differs. The MoEYS considers data on professionally oriented courses according to the Higher Education Act. Eurostat does not include this data, but does provide data for higher vocational schools, for example.

Republic, i.e., 6.8 percentage points lower than in 2019. The EU average also increased over the ten-year period, but only slightly, by 1.6 percentage points.

3. Cooperation between HEIs and the private sector remains low in the long term

In its strategic documents, the MoEYS cited, among other things, the low level of cooperation between universities and the sphere of application as a weakness. It also set out measures to promote this cooperation. As the only measurable indicator for the evaluation of cooperation between HEIs and the private sector, the MoEYS has set "*The share of revenues for research, development and innovation activities in the higher education sector of the Czech Republic coming from private sources will grow year-on-year and will at least double in the period under review.*" The baseline year was 2015, and the target year was 2020.

Table 7: Share of business funds flowing to the higher education sector in R&D funding between 2015 and 2019 (%)

2015	2016	2017	2018	2019
4.2	5.3	5.4	5.0	4.2

Source: CSO; own analysis of the SAO.

Private sector funds used in 2015 in the higher education sector to finance R&D amounted to 4.2%. In 2019, this share was at the same level as in the 2015 baseline year and thus not likely reach the required double value in 2020. Even in 2019, this was only a fraction of the total private sector R&D funding in the Czech Republic. According to CSO statistics, private sector sources of R&D funding in the higher education sector in 2019 amounted to CZK 1,020 million, which represented 1.6% of the total private sector sources of R&D funding.

The cooperation of HEIs with the private sector can also be partly monitored by the indicator of revenue from knowledge transfers¹⁰. Income from knowledge transfers was considered by the MoEYS when distributing funds to individual HEIs. This was one of the three components of the "*external revenue*" indicator. The weight of this indicator for individual HEIs was only 1.1% of the total amount of funds under budget area I. Moreover, income from knowledge transfers was only one of the three items on which this indicator was based. The motivational effect of supporting cooperation between HEIs and the private sector was thus negligible in this respect.

4. Universities are not successful in international competitions for research grants

Supporting the linking of universities with the international environment and the ability of HEIs to succeed in international competitions for research grants was addressed by the MoEYS, e.g., in the Framework. Among other things, the MoEYS has set out measures "*to motivate universities to strengthen the international aspect in creative activities and to take more account of success in international grant competitions in the funding mechanism*".

In order to support the ability of HEIs to succeed in international competitions for research grants, the MoEYS established the indicator "*external income*" in the system of allocating funds within the framework of normative funding, which was part of the indicators of the performance part of budget area I. One of the three components of this indicator was targeted non-investment support for research, development and – this was the volume of targeted

¹⁰ Knowledge transfer is the process of acquiring, collecting and sharing explicit and tacit knowledge, including skills and competences, in economic and non-economic activities, which may include, for example, research collaboration, consultancy, licensing, publications and mobility of researchers involved in these activities.

non-investment funds (including foreign funds) for research and development excluding funds obtained from EU structural funds programmes and excluding funds obtained under the *national sustainability programmes* of the MoEYS. The weight of the indicator "*external income*" for individual HEIs was only 1.1% of the total budget area I. Moreover, targeted non-investment support for research, development and innovation was only one of the three items from which this indicator was drawn. The motivational effect of supporting the ability of HEIs to succeed in international competitions for research grants was thus negligible in this respect.

In order to assess the fulfilment of the objective of improving the ability of HEIs to succeed in international competitions for research grants, the MoEYS has set two measurable indicators. The first is the share of funds obtained by the Czech higher education sector from the EU Framework Programme for Research and Innovation *Horizon 2020*. The MoEYS has determined that this proportion will increase both in frequency of participation and in absolute values. Another indicator was set by the MoEYS in the form of the number of ERC grant holders obtained by the Czech higher education sector. According to this target, the number of ERC grant holders from Czech universities should approach the EU average and grow year-on-year during the period under review.

Table 8: Financial support to Czech universities (excluding ERC grants) from *Horizon 2020* programme and the number of Czech universities participating in this programme between 2015 and 2020

	2015	2016	2017	2018	2019	2020*	Average
Czech Republic - amount of support to universities (in EUR)	20,988,540	12,537,632	13,544,483	20,228,780	47,210,007	28,076,266	23,764,285
Czech Republic - number of participating universities	81	57	65	62	89	103	76
Average participation of universities in the EU	229	208	195	219	218	232	217

Source: European Commission (SEDIA), [link](#); own analysis of the SAO.

Note: In addition to universities, other research institutions have benefited from *Horizon 2020* programme. These are not included in this table.

* Data as of 16 February 2021.

In 2015, Czech universities received support from the *Horizon 2020* programme in the amount of EUR 21 million. This was based on 81 participations in supported projects. These values were surpassed by Czech HEIs in 2019 and 2020. Between 2016 and 2018, participation numbers and aid amounts were always lower than in the baseline year of 2015. The average for the period under review increased slightly in the amount of support compared to the baseline year, while the number of participants decreased slightly.

The target of increasing the amount of funds raised and the number of *Horizon 2020* participations was not met. Czech universities are not successful in the long term even in international comparison. The average number of participations of the higher education sector in *Horizon 2020*-funded projects was almost three times higher in the EU than in the Czech Republic.

Table 9: Number of ERC grant holders in the Czech higher education sector and total amount of support between 2015 and 2020

	2015	2016	2017	2018	2019	2020*
ERC grant holders from Czech universities	3	2	5	3	2	2
Total amount of support (in EUR)	6,564,728	3,499,874	7,917,104	4,241,959	2,143,750	3,485,066

Source: European Research Council, [link](#); own analysis of the SAO.

* Data as of 16 February 2021.

Czech universities (always public universities) were awarded a total of 19 ERC grants between 2015 and 2020. Only 17 of them are recorded in the table, because the Czech Republic lost two grants in 2017 and 2018 because their researchers (both from Charles University) left with their grants to foreign universities. In the baseline year of 2015, Czech HEIs received three ERC grants for a total amount of almost EUR 6.6 million. Czech HEIs achieved a higher number of ERC grant holders and a higher volume of support only in 2017. In the following years, there was a decline in both the number of ERC grant holders and the amount of support received. In the interim evaluation of the HEI LTP 2016, the MoEYS stated that the average number of grant holders in the EU is around 12.3. The MoEYS commented on this as follows: "*Participation in ERC grant-funded projects in the Czech Republic may be influenced by the ability of the higher education sector to obtain resources from the OP RDE, which is not as competitive.*"

The set target of year-on-year growth in the number of holders of prestigious ERC grants and approaching the European average was not met. On the contrary, according to the available data, there has been a deterioration in this area, as in most years Czech HEIs have been less successful than in the baseline year 2015 in terms of the number of grants and the total amount of support received. In the period under review, two scientists also left for foreign universities with ERC grants.

The support for the connection of universities with the international environment was also considered by the MoEYS in the system of allocating funds to individual HEIs. Budget area IV is set to support international cooperation. Also, under the performance part of budget area I, the MoEYS has set the indicator "*international mobility*" with a weight of 20-22%, which is above average for this part.

In the area of links with the international environment, the MoEYS has set five measurable indicators, the development of which was evaluated in the HEI LTP 2016 interim evaluation. These include mainly indicators monitoring international student mobility, the number of courses implemented in cooperation with foreign universities and courses taught in a foreign language. The interim evaluation shows that improvements are being made in this area and that the targets are being met.

5. The established indicators are indicative of the deteriorating quality and relevance of research, development and innovation at Czech HEIs

The success in the use of ERC grants and *Horizon 2020* funds was monitored by two of the five indicators used by the MoEYS to assess the fulfilment of the priority objective 5 of the HEI LTP 2016: "*high quality and relevant research, development and innovation*". The third indicator

was the share of income for research, development and innovation activities in the higher education sector of the Czech Republic coming from private sources. As mentioned in the previous paragraphs of this Audit Report, these three indicators could not be met.

The remaining indicators represented the number and citation rate of publications produced in the higher education sector in the CR per employee in research and development according to the Thomson Reuters *Web of Science* register. The aim was for both indicators to show a growth trend and to reach at least the EU average. In the interim evaluation of the HEI LTP 2016, the MoEYS stated that these indicators have limited informative power. However, certain trends are evident. The number of publications in the CR did not change much in the period under review and was almost double compared to the EU average, while in terms of citations we are below the European average and, in the period 2015 to 2018, there was a deterioration compared to both the EU average and the baseline in 2015. In 2016, the average standardised citation rate in the Czech higher education sector was 1.19 and was even slightly higher than in the EU. However, in the following years, there was a clear decline: in 2018, the citation rate was only 0.95 in the Czech Republic and 1.10 in the EU. In the Czech HEIs, the emphasis on quantity rather than quality is still evident in research and development, which is also influenced by the evaluation of research organisations, including HEIs, on the basis of RIR scores.

The indicators set for assessing the quality and relevance of research, development and innovation of HEIs could not be met.

6. Despite repeated extensions, the investment programme funds remain unspent

Resolution of the Government of the Czech Republic No. 653 of 31 August 2011 approved the programme 133 210 - *Development and renewal of the material and technical base of public higher education institutions*. The aim of the programme was the renewal and development of university infrastructure supporting the improvement of teaching, research and culture of the academic environment. The MoEYS announced the programme for the period 2011-2016.

The SAO already examined the 133 210 programme in the framework of Audit No. 16/31 - *Development and renewal of the material and technical base of public universities*. In its audit report of July 2017, the SAO stated, among other things, that the programme was not based on clearly defined technical parameters, was not implemented in accordance with the originally set assumptions and could not be adequately evaluated. The MoEYS approved strategic plans that did not contain complete information on the financing of the development of HEIs' investment needs. The SAO also pointed out, among other things, the risk that insufficient preparedness of individual actions would lead to further prolongation of the programme.

The MoEYS has updated the 133 210 programme twice. The first update was approved by Government Resolution No. 494 of 24 June 2015. This resolution extended the deadline for the implementation of the programme until 31 December 2019. The second update was approved by Government Resolution No. 899 of 9 December 2019. This resolution extended the deadline for the implementation of the programme until 31 December 2021. Based on the second update, HEIs could no longer register additional investments in the programme, as the extension only served to complete the implementation of investments already started. The following table shows an overview of the allocation and actual use of the programme funds from the state budget.

Table 10: Allocation and actual implementation of programme 133 210 (in CZK)

Year	Documentation to programme 133 210	Update of programme 133 210 documentation from 2015	Update of programme 133 210 documentation from 2019	Actual to 2019 + plan for 2020 and 2021
2011	211,254,000.00	27,803,190.00	27,803,190.00	27,803,190.00
2012	1,764,410,000.00	314,385,575.28	314,385,575.28	314,385,575.28
2013	2,882,000,000.00	583,904,703.57	583,904,703.57	583,904,703.57
2014	3,004,000,000.00	996,857,520.88	996,857,520.88	996,857,520.88
2015	3,004,000,000.00	4,095,733,892.00	1,833,150,344.83	1,833,150,344.83
2016	3,004,000,000.00	2,263,529,999.00	1,981,548,342.39	1,981,548,342.39
2017		2,263,530,001.00	1,488,152,588.63	1,488,152,588.63
2018		2,039,337,788.00	1,605,336,766.53	1,605,336,766.53
2019		1,249,613,330.00	3,559,431,709.47	2,729,267,053.85
2020				282,820,086.37
2021				368,802,271.00
Total	13,869,664,000.00	13,834,695,999.73	12,390,570,741.58	12,212,028,443.33

Source: MoEYS information.

In 2011, the amount allocated from the state budget for the entire period of the 133 210 programme was approximately CZK 13.9 billion. Actual spending of the allocated amount between 2011 and 2016 was only around CZK 5.7 billion, i.e., 41% of the approved forecasted amount. Including the extended period from 2017 to 2019, the actual drawdown from the state budget amounted to CZK 11.6 billion, which is still more than CZK 2 billion less than the allocated amount approved for the entire originally planned period from 2011 to 2016. Throughout the implementation of programme 133 210, the actual use of funds from the state budget in each year was significantly lower than the allocation approved in the programme documentation, including its updates.

The documentation of the programme shows that its administration is very time-consuming, both for the programme administrator and the beneficiaries. The funds allocated to investment programme 133 210 have not been fully used despite repeated extensions.

Programme 133 210 is followed by programme 133 220 with an approved allocation of CZK 12.5 billion for the period 2019 to 2026. The MoEYS started disbursing funds under this programme in 2019, providing CZK 29.9 million. CZK. The approved allocation for this year was CZK 500 million. Thus, similarly to programme 133 210, the actual use of the state budget funds was significantly lower than the approved allocation of these funds.

7. Despite the declared shortage of funds, the fund balances of HEIs have grown significantly each year

The MoEYS had a comprehensive analysis of the state of universities with regard to public needs that universities are supposed to meet. Here, the MoEYS noted, among other things, the high dependence of HEIs on public funds and the overall lack of resources in higher education. The MoEYS also monitors developments at individual HEIs through annual activity reports and annual reports on management, which HEIs publish annually in a specified

structure and with specified formalities. Data on how funds are created taken from annual management reports are shown in the following table.

Table 11: HEI fund balances from 2014 to 2019 (in CZK thousands)

Fund	2014	2015	2016	2017	2018	2019	Difference between 2019 and 2014 in %
Working capital fund	7,339,241	8,133,741	7,937,893	8,595,118	10,223,428	11,161,946	52%
Fixed asset replacement fund	3,393,737	3,323,311	3,663,381	4,064,773	4,115,346	4,498,928	33%
Scholarship fund	788,638	809,481	849,691	890,270	945,191	932,089	18%
Assigned funds	626,893	665,914	741,041	817,961	925,413	1,194,759	91%
Reserve Fund	434,337	468,346	476,458	540,303	571,064	556,669	28%
Social Fund	217,631	229,201	242,708	262,148	309,785	353,214	62%
Remuneration Fund	266,959	257,573	246,752	251,947	240,100	249,419	-7%
Total	13,067,436	13,887,567	14,157,924	15,422,520	17,330,327	18,947,024	45%

Source: information from the MoEYS; own analysis of the SAO.

Although there are insufficient funds in higher education according to the economic analysis, the table shows an annual increase in the balances of HEI funds. In 2019, the balances of HEI funds amounted to almost CZK 19 billion, which is CZK 5.9 billion more than in 2014; i.e., 45% more. All funds increased by tens of percent over the period under review, except for the smallest *remuneration fund*, which decreased by 7%. The most significant fund was the *working capital fund*. The HEIs had more funds in this fund each year than in the other funds combined. In 2019, the balance of this fund was 52% higher than in 2014.

The MoEYS is not getting prepared for the possible reduction of funding for HEIs from EU structural funds. According to the MoEYS, the system of funding of HEIs is set up in such a way that the financial funds flowing to HEIs from EU structural funds are a source of funds over and above those necessary to finance the costs of their current operation.

In contrast, the MoEYS is responding to the impacts caused by the covid-19 pandemic. The MoEYS is communicating with universities about the covid-19 pandemic. The MoEYS has an estimate on universities' economic situation. For the period of the first eight months of 2020, this amounts to approximately CZK 1.2 billion. This especially includes losses of income stemming from students studying in a foreign language, for courses and educational events, for contracted research, losses in the operation of dormitories and canteens, increased costs due to the necessary strengthening of IT systems, etc. No compensation was provided by the MoEYS at the time of the audit, but the expected impact of the pandemic was considered in the draft budget for 2021.

8. The Czech Republic's position in international rankings of higher education systems has been deteriorating for a long time

In the international environment, there is a long tradition of evaluating the quality of universities' activities. There are a number of university rankings that assess the quality of universities across the full range of their activities. There is also a ranking of the quality of

higher education systems in each country as a whole. An example of such ranking is [Universitas 21 \(Ranking of National Higher Education Systems\)](#).

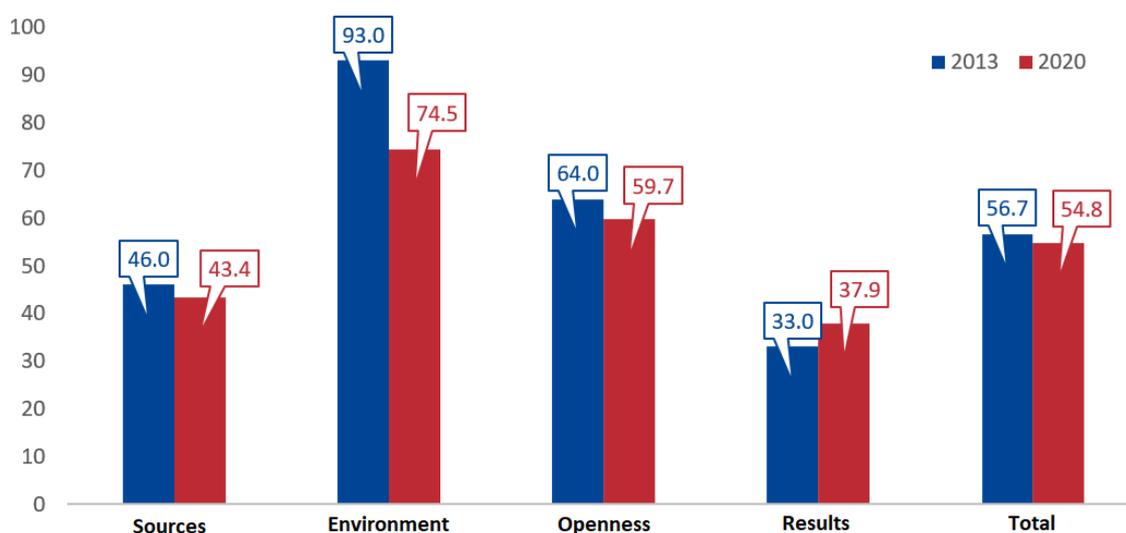
The **Universitas 21** international ranking assesses and compares the overall higher education system of each country. It is based on the idea that the economic, social and cultural development of a country depends on the quality of the entire higher education system, not just on the quality of a few prestigious research-oriented universities. The ranking of higher education systems in fifty countries is published by U21, a multinational association of research universities. The evaluation is conducted by a team of researchers at the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne.

Universitas 21 ranks higher education systems on more than two dozen indicators across four areas. Areas representing **resources** (public and private spending on higher education and research), **environment** (government policy and regulation, quality of information provision, share of women among teachers and students, etc.), **openness** (international cooperation and international students, open access to information) and especially **outcomes** (international rankings of a country's universities, number of research articles and citations, and employability of graduates in the labour market) are assessed.

The country that is most successful in that area is given a score of 100. The ranking of the other countries is expressed as percentages of this highest score. Each country's score is therefore always relative to the best result. However, an improvement in score does not necessarily mean a move up in the ranking. It is always necessary to consider the dynamics of development in other countries.

The following chart shows the evolution of the Czech Republic's scores in individual areas and in the overall assessment.

Chart 3: Czech Republic's score in the *Universitas 21* ranking in 2013 and 2020



Source www.universitas21.com; own analysis of the SAO.

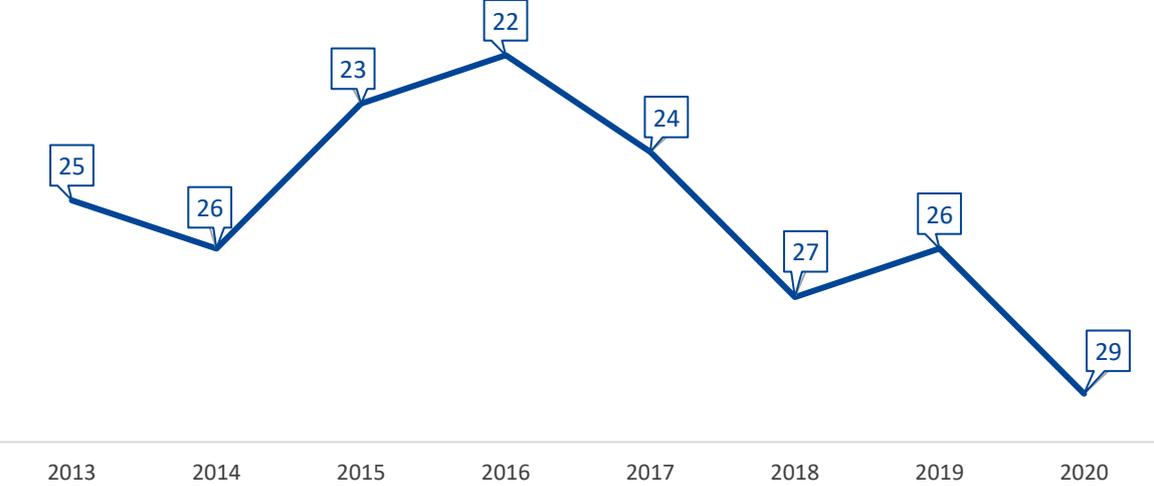
The Czech Republic achieved the best results in the area of assessment of environmental factors. Yet, over the last eight years, the Czech Republic has lost almost 19 percentage points compared to the top-ranked country in this area. In contrast, the Czech Republic regularly scores lowest in performance assessment. While there has been an increase in scores in this

area of almost 5 percentage points over the last eight years, the Czech Republic has the worst score in this area year after year, significantly underperforming both the other areas monitored and the best performing country. However, it is the area of results evaluation that has the greatest impact on the overall assessment.

In the overall ranking, the Czech Republic achieves a score that is only slightly above the half of the best-performing countries in the long term. In 2020, the Czech Republic's overall score was 54.8% of that of the most successful country, the United States. This is the lowest ranking of the Czech Republic in the last eight years.

The above-mentioned development of the ranking has an impact on the position of the Czech Republic in the list. The following chart and table show the development of the Czech Republic's ranking in the overall assessment and in individual areas.

Chart 4: Ranking of the Czech Republic in the overall *Universitas 21* ranking from 2013 to 2020



Source: www.universitas21.com; own analysis of the SAO.

Table 12: Ranking of the Czech Republic in individual areas of the *Universitas 21* ranking in 2013 and 2020

	Openness	Environment	Sources	Results
Ranking in 2013	15th	11th	34th	29th
Ranking in 2020	21th	33th	37th	30th

Source: www.universitas21.com; own analysis of the SAO.

In the country ranking, the Czech Republic has deteriorated in all areas assessed and in the overall ranking. In the overall ranking *Universitas 21*, the Czech Republic did not follow the positive development from 2013 to 2016. Although the Czech Republic was still ranked 22nd in 2016; in 2020, the Czech higher education system was ranked 29th out of the 50 countries assessed. This is the worst ranking of the Czech Republic in the entire eight-year period under review.

9. The position of Czech HEIs in international competition is not improving

In addition to the evaluation of entire higher education systems, international comparisons of the quality of activities are also made at the level of individual universities. A number of international rankings assess universities on the basis of selected indicators relevant for assessing the quality of their activities. The best known and most internationally recognized include:

[The Academic Ranking of World Universities \(ARWU\)](#)

[QS World University Rankings \(QS\)](#)

[The Times Higher Education World University Rankings \(THE\)](#)

The **ARWU** ranking is the oldest international ranking of universities. Initially developed under the auspices of Shanghai University, it is currently compiled by Shanghai Ranking Consultancy. The ranking focuses primarily on the scientific and research level of university-type HEIs, which it compares on the basis of six indicators.

The following table shows the position of Czech HEIs in the ARWU ranking.

Table 13: Ranking of Czech HEIs in the ARWU ranking

HEIs	2005 to 2016 500 universities	2017 800 universities	2020 1 000 universities
Charles University	Shared 201st to 300th place		
CTU	–	Shared 601st to 700th place	Shared 701st to 800th place
Masaryk University	–	Shared 601st to 700th place	
Palacký University	–	Shared 601st to 700th place	Shared 501st to 600th place
Czech University of Life Sciences	–	–	Shared 801st to 900th place
University of Chemistry and Technology	–	–	Shared 901st to 1,000th place
University of South Bohemia	–	–	Shared 901st to 1,000th place

Source: www.shanghairanking.com; own analysis of the SAO.

The number of Czech HEIs in the ARWU ranking has gradually increased from one representative to seven HEIs. However, this increase was only on the basis of an expansion of the rankings. The top 1,000 universities according to the ARWU ranking in 2020 include 364 European universities. More than half of them were in the top half of the ranking. The Czech Republic, on the other hand, is included only once in the top half of the ranking, and the remaining six HEIs are in the bottom half of the ranking.

The MoEYS also monitors the position of Czech HEIs in international rankings. In the HEI LTP 2016, under the priority objective "quality assurance", the following indicator was set, among others: "At least three Czech universities will be among the top five hundred highest ranked institutions in the international QS ranking and at least two Czech universities will be among the top four hundred in the international Times Higher Education ranking."

The **QS** ranking is the second oldest international ranking of universities and publishes the rankings of thousands of universities. It is designed to provide a multi-dimensional view of the

relative strengths of leading universities. It is based on an assessment in six dimensions and places great emphasis on feedback from academics and graduate employers.

As can be seen from the table below, the number of Czech HEIs ranked in the top five hundred of the QS ranking varied over the period under review.

Table 14: Number of Czech HEIs in the top five hundred universities in the QS ranking

2015	2016	2017	2018	2019	2020	2021
2	2	1	2	1	3	3

Source: www.topuniversities.com; own analysis of SAO.

The target set by the MoEYS for the period under review was met only in the rankings for 2020 and 2021¹¹, in which three Czech HEIs were ranked in the top five hundred.

THE ranking has been published since 2010. It is based on an assessment of 13 indicators in five areas and considers to a large extent the size of the institutions assessed. The ranking currently assesses over 1,500 universities. In the THE ranking, one Czech HEI was among the top four hundred schools in 2015 and 2016. Between 2017 and 2020, the first four hundred in the ranking are without Czech HEIs. The MoEYS target was thus not met. Instead, there has been a deterioration compared to the baseline.

The above international comparisons of universities do not show an increase in the quality of Czech HEIs, which would lead to a significant shift in the ranking or to a more numerous representation in the upper half of the mentioned rankings. The above overview also shows that in the international rankings monitored by the MoEYS, Czech HEIs have not been able to improve their position in the long term and meet the stated priority objective of "*quality assurance*".

10. Due to their setting, the fulfilment of the strategic objectives of the audited HEIs cannot be evaluated

The key strategic document of the MoEYS, which has set priorities and measures in higher education policy, is the so-called strategic plan. In this document, valid for the years 2011 to 2015, the MoEYS did not determine indicators for the fulfilment of the set objectives and was therefore unable to evaluate their fulfilment or the actual impact of the implementation of this document. In the strategic plan valid for the period 2016-2020, the MoEYS has already set measurable indicators and, in 2018, regularly evaluated the implementation of this document.

The MoEYS did not evaluate the implementation of the Framework, even though the document sets out, among other things, the main objective, measures and tasks, timetable and implementation indicators. Relevant measures and objectives of the Framework have been reflected in the OP RDE and in the HEI LTP 2016, the implementation of which is the subject of a separate evaluation.

In addition to the strategic plan of the MoEYS, data from the strategic plans of individual HEIs are also decisive for the amount of the contribution to the HEI. The strategic objectives of HEIs are intended to serve their development and to help meet the objectives set by the Ministry of Education, Youth and Sports. These plans must be drawn up, discussed with the MoEYS and published by HEIs.

¹¹ The rankings are compiled in advance for the coming year.

The audit of six HEIs found that none of them had comprehensively evaluated their strategic plans for the period 2011 to 2015. The strategic plans of all HEIs audited for the period 2016-2020 contained measurable indicators of a qualitative or quantitative nature. However, only the CULS and, in its non-public materials, the CTU have set target values or desired states. For the other HEIs, the targets were not known, and it was therefore not possible to determine the extent to which the targets and the overall strategic plan had been met. Thus, neither the HEIs nor the MoEYS will be able to adequately evaluate these key strategic documents. The MoEYS did not stipulate the obligation to provide indicators that can be used to demonstrate the degree of achievement of the set objectives, including baseline and target values.

Between 2016 and 2019, the MoEYS discussed the strategic plans of all HEIs, including their annual updates. The MoEYS has always prepared minutes of these meetings. These were standardised and at the end of each minutes, it was stated that the documents under discussion were in line with the priorities of the strategic documents of the MoEYS and had been discussed, and thereby effectively approved. The Ministry of Education, Youth and Sports did not raise any objections to the documents discussed by the six audited HEIs.

Other facts found at the HEIs

The HEIs were legally obliged to adopt the "*rules of the system of quality assurance of educational, creative and related activities and internal evaluation of the quality of educational, creative and related activities*" as an internal regulation by 31 August 2017. Only two of the audited universities (CULS and TBU) registered and adopted this regulation within the time limit, whereas all others adopted it after the time limit, even with a ten-month delay (CTU).

The method of internal quality assessment varied greatly from one HEI to another. For example, APA fragmented the evaluation of individual activities into many activities with annual evaluation, which it was subsequently unable to implement according to the set rules. Universities have a legal obligation to describe the results of internal evaluation in their reports and to indicate the measures taken to address the identified shortcomings. CTU did not list the measures taken and, in 2019, did not list the identified shortcomings, only described the most significant changes.

The audit found that four of the six schools audited had long-term investment plans in place. AAAD and TBU did not have such plans; these schools only mentioned some investments in their strategic plans. For 2019 and 2020, all universities have developed plans for investment activities. All audited HEIs drew funds from the 133 210 investment programme. There were delays in the implementation of investment projects, which were caused by problems related to securing part of the funds required in the form of school participation in the investment (e.g., CULS), insufficient flexibility of subsidy conditions for changes in projects (AAAD, CTU), problems with the deadlines of tendering procedures (AAAD, APA) or lengthy approval process in the administration of projects (APA).

List of Abbreviations

AAAD	Academy of Arts, Architecture and Design in Prague
APA	Academy of Performing Arts in Prague
ARWU	Academic Ranking of World Universities
BA	Budget area
CR	Czech Republic
CSO	Czech Statistical Office
CTU	Czech Technical University in Prague
CULS	Czech University of Life Sciences in Prague
ERC	European Research Council
EU	European Union
<i>Europe 2020</i> strategy	<i>Europe 2020 – A strategy for smart, sustainable and inclusive growth</i>
Framework	<i>Framework for the Development of University Education until 2020</i>
HEI LTP 2016	<i>Long-term plan of educational and scientific, research, development and innovation, artistic and other creative activities for the field of higher education for the years 2016-2020</i>
HEIs	higher education institutions (public universities)
Higher Education Act	– Act No. 111/1998 Coll., on higher education institutions and on amendments and additions to other acts (Higher Education Act)
Chapter 333 - MoEYS	state budget chapter 333 - <i>Ministry of Education, Youth and Sports</i>
International strategy competitiveness	<i>Strategy of international competitiveness of the Czech Republic for the 2012–2020 Period</i>
IT	Information technology
MoEYS	Ministry of Education, Youth and Sports
OECD	Organisation for Economic Co-Operation and Development
OP RDE	Operational Programme <i>Research, Development and Education</i>
PU	Palacký University Olomouc
QS	International University Rankings <i>QS World University Rankings</i>
R&D	research and development
Rules	<i>Rules for the Provision of Contributions and Subsidies to Public Universities by the Ministry of Education, Youth and Sports</i>
RIV points	scoring of research results listed in the "Register of Information on Results" (RIR)
SAO	Supreme Audit Office
TBU	Tomas Bata University in Zlín
THE	<i>Times Higher Education</i> international university rankings
USD	US dollar