

# The power of funding in steering performance of higher education institutions

Policy Conclusions from the PLA in Zagreb

ET2020 Working Group on Higher Education

# SETTING THE SCENE

## Objective and aims

This report summarises the discussions and conclusions of the Peer Learning Activity (PLA) on “The Power of Funding in Steering Performance of Higher Education Institutions” that took place on 7 and 8 November in Zagreb under the auspices of the ET2020 Working Group on Higher Education and hosted by the Croatian Ministry of Science and Education.

The aim of the PLA was to advance the understanding of, share good practices and derive general recommendations on effective mechanisms for funding allocation, notably performance-based funding (PBF), among the participating Member States, by exchanging on the recent experiences of changes and reforms in the funding systems.

The PLA outcomes will contribute to the discussions at the next meeting of the Directors General for Higher education of the EU Member States under the upcoming Romanian Presidency.

## Context

The time is right to invest more in higher education given the economic growth in most Member States and the increasing need for high-level skills and competences to meet the demands of the current and future EU labour market. Still, the EUA data shows a widening divide between systems that increase their public investment in higher education, and those that have reduced/or maintain a low level of investment since the 2008 financial crisis. Recovery has been slow, and only a few systems report funding increases that match student numbers and GDP growth<sup>1</sup>. Many others require more investment in order to close the gap, or are generally starting from a low base<sup>2</sup>.

In this context, the governments are increasingly expecting higher education institutions to achieve greater effectiveness, efficiency and value for money in education, and to address diverse challenges such as reducing skills mismatches, improving inclusion and completion in higher education and boosting research, innovation and the ‘third mission’.

As a result, many Member States undergo reforms of their higher education funding systems and in return for the state funds, raise expectations of the performance of higher education institutions. However, the outcomes and the success are contingent on the institutional autonomy and governance arrangements, as well as the amount of funding available, the share of performance-based funding (PBF) in the overall institutional income structure and the goals and indicators used for performance measurement, as indicated in the EUA Define project<sup>3</sup>.

In 2017, the EU Member states renewed their commitment to improving their higher education systems along the priorities set out in the Renewed EU agenda for higher education. These priorities provide a direction for the further modernisation of higher

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<sup>1</sup> The EU Public Funding Observatory Report for 2018 will be published early 2019. See also <https://eua.eu/101-projects/586-public-funding-observatory.html>

<sup>2</sup> Declining student numbers have improved the funding per student in some countries, but they still lag behind the EU and OECD averages.

<sup>3</sup> Claeys-Kulik A-L and T. Estermann (2015), DEFINE Thematic Report: Performance-Based Funding of Universities in Europe, see <https://eua.eu/resources/publications/361:define-thematic-report-performance-based-funding-of-universities-in-europe.html>

education systems and a useful framework for the development funding models. They include nurturing of skills excellence among students and graduates through improving the quality and relevance of teaching and learning, enhancing the connectedness of higher education systems with the communities through cooperation and social inclusion, innovation and research excellence as well as efficiency in funding and governance.

Despite diverse strategies and policies by the EU, national authorities and institutions, the case studies showed that most systems are moving in the same direction: they are introducing or rethinking performance incentives in allocating public funds<sup>4</sup> with the aim to enhance quality, diversity and profiling of higher education institutions. Recent evidence shows that in about one third of countries of the European Higher Education Area, higher education institutions' performance in reducing drop-out and improving completion rates influences the institutions' funding levels<sup>5</sup>. Similarly, 11 countries linked in 2016/2017 the institutional funding to performance in graduate employability.

At the same time many countries have more work to do to ensure that in defining objectives and aims, important aspects are taken into consideration such as: the overall investment in higher education, the evolution of student numbers, diversity and profile of HEIs, linkage of funding to staffing and financial autonomy, the system needs for education, research and innovation, and the wider needs of the economy and society.

## **PLA programme and participation**

The event spread over 1.5 days and was organised in a seminar format consisting of keynote speeches, country case studies and roundtable discussions on four themes reflected in the structure of this report. The event brought together representatives of public authorities and higher education institutions (HEIs) from 9 countries<sup>6</sup>, each with a specific interest in the topic and each in various stages of designing or implementing higher education funding reforms. In addition, experts and speakers were invited from the European Students' Union, European University Association, the World Bank and two institutes for higher education research (the Center for Higher Education Policy Studies from the Netherlands and the Centre for Higher Education from Germany). The Croatian Minister opened the event, presented the Croatian funding reform and engaged in discussions with the PLA participants. Other Croatian representatives, including the state secretary, were present throughout the event.

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<sup>4</sup> This includes both PBF and other performance incentives such as competitive/excellence funding.

<sup>5</sup> European Commission/EACEA/Eurydice, 2018. The European Higher Education Area in 2018: Bologna Process Implementation Report. Luxembourg: Publications Office of the European Union, page 211/212

<sup>6</sup> AT, EE, FI, FR, HR, HU, LUX, RO, SI

# SUMMARY OF POLICY CONCLUSIONS

## **1. On the preconditions for a successful PBF model:**

- An agreement on policy priorities forms the basis of funding reforms.
- Lean legislative frameworks allow swifter reform through by-laws.
- Financial incentives boost the reform process particularly in transition periods and may take different forms
- Funding cuts and shrinking basic funding may be an incentive for institutional efficiency and reform, but chronic underfunding will prevent such efforts.
- Institutional autonomy over organisation, estate and finances, payroll and academic affairs is a key condition for reforms, but cannot guarantee positive reform outcomes in chronically underfunded systems.
- Non-strategic institutional funding allocation, does not allow institutions to make strategic investments, and may, in turn, lower the impact of PBF.
- Dialogue is key for commitment and trust between government, HEIs and key stakeholders and should become an integral part of policy design and implementation.

## **2. On the selection and design of indicators:**

- To achieve policy goals the guiding principle is to keep the funding model simple, transparent and stable, and ensure that it addresses the diversity of the HE sector.
- The number of indicators and the amount of funding dependent on the fulfilment of the goals should be limited in order to avoid financial shocks and counter effects.
- No indicators should be included in the funding model whose outcomes are beyond the influence of HEIs.
- A key challenge is the balance between national and institutional priorities and objectives.
- Indicators should be reliable, consistent in interpretation, applicable to different institutions and systems, comparable across the time and space, and have European-wide relevance.
- Widening the scope of indicators to cover the three missions of the HEIs as well as 'personal development' and 'active citizenship' would more accurately reflect the role of higher education in society today.

## **3. On monitoring and evaluation of institutional performance:**

- Sound funding policies are based on evidence: they require investments in measuring performance, monitoring the intended and unintended effects of funding tools, and analysing the complexity of underlying factors.
- Administrative effort for the monitoring should be limited, keeping reporting duties to the necessary minimum.
- A bureaucratic overload resulting from the repeated collection of the same data by authorities should be avoided.
- Monitoring solely against indicators which are retrospective by nature and measure the past performance rather than the potential of institutions can be avoided with performance agreements.

- The commitment to the agreed financial consequences for the achievement of targets is important to avoid the erosion of trust among HEIs. Supportive quality assurance systems can help and enhance monitoring and evaluations.

**4. *On the diversification of funding sources:***

- In the context where the share of third party funds is increasing in many systems, a key challenge for authorities is to find the right balance between public and private funding in higher education.
- The generation of additional income from external sources is important for the sustainability of HEIs, but a prerequisite to the effective use of external funding is a sufficient level of core funding.
- Setting the overhead rates above 25% helps enhance HEIs' ability to create financial headroom and accumulate resources for strategic openings, central services and university-wide strategies.
- The diversification of funding sources increases the complexity of reporting, monitoring and evaluation, which calls for enhanced capacity development in the state and HEIs administrations.
- Exit strategies are needed to mitigate the sustainability issues that arise from the substitution effect where the EU structural funds have taken the place of core funding.

# PLA COUNTRIES AND PERFORMANCE-BASED FUNDING

The PLA countries are in the process of planning or implementing funding reforms. The scale and scope of these reforms vary across HE systems: some cover the entire HE sector and the three missions, while others target part of the HE sector or some of the missions; some leave out the payroll which represents over 60% of the HEI budgets. Some countries are introducing new funding mechanisms and a mix of funding tools, while others are revising indicators or developing the space for individual negotiations with institutions.

The reasons for the recent, ongoing and planned HE funding reforms vary across countries. They are often connected to the HE strategy and typically address inefficiencies, quality challenges, concerns about funding stability and other policy issues. Depending on the stage of the reform process they find themselves in, the PLA countries can be divided into three groups:

- (i) systems with substantial experience of diverse PBF, implementing or developing reforms (Austria, Estonia, Finland, Luxembourg),
- (ii) evolving HE systems at various stages of implementing or revising PBF systems (Croatia, Romania, Slovenia), and
- (iii) systems at early stages of developing models that will eventually use PBF (France, Hungary).

The typical design of a funding model is depicted in Figure 1. The block grant can be allocated through diverse allocation mechanisms where the PBF can be delivered through a funding formula based on output and throughput indicators and/or through performance contracts. Most PLA countries report using some type of a funding formula connecting funding allocation to a mix of measurable indicators, but due to the complexity of funding mechanisms and the mix of elements, identifying the average share of PBF across the countries is challenging.

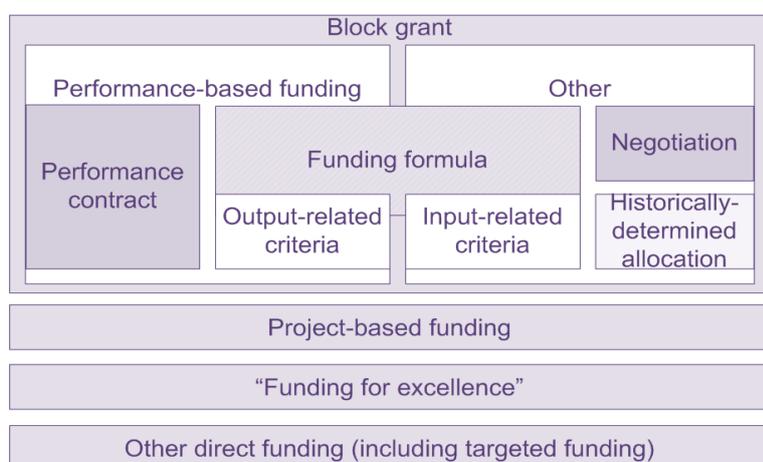


Figure 1. Block grant allocation mechanisms (EUA<sup>7</sup>)

<sup>7</sup> Claey's-Kulik A-L and T. Estermann (2015), DEFINE Thematic Report: Performance-Based Funding of Universities in Europe, see <https://eua.eu/resources/publications/361:define-thematic-report-performance-based-funding-of-universities-in-europe.html>

Most PLA countries, apart from Hungary and Romania, implement performance agreements which are usually linked to institutional funding allocation, but not always (see example of France below). The proportion of funding allocated through performance agreements varies across countries. For example in Finland, the HEIs' block grant from the ministry is almost entirely performance-based and output-oriented. Performance agreements determine strategic funding which covers about 5% of the total funding (including external funds) for the universities of applied sciences and 12% for the universities, and these shares are expected to further grow to 8% and 15% in 2021. On the other hand, in France, the current budget allocation system is based on historical determination, coupled with competitive funding from various agencies. The previous budget allocation model which was partly performance-based and implemented in 2009-2015, is now used only to provide comparative data while the five-year performance agreements do not currently impact funding.

## **1. PRECONDITIONS FOR A SUCCESSFUL FUNDING REFORM**

### **Enabling policy frameworks**

**Country experience shows that higher education funding reforms benefit from a set of preconditions and mutually enforcing policy interventions.**

Enabling policy mixes for funding reforms typically cover the following elements: a higher education strategy identifying a long term perspective and system-wide policy priorities; a lean legal framework which allows reform implementation through by-laws,; additional financial incentives; institutional autonomy; dialogue between the government, institutions and key stakeholders to create trust, and transparency and accountability mechanisms.

### **An agreement on policy priorities forms the basis of funding reforms**

**A key enabler for a funding reform is the agreement on policy priorities for higher education, often in the form of a national HE strategy.** In Slovenia the funding reform was based on the long-term HE strategy, which entrenched the commitment of allocation of 1% of GDP to higher education as well as the use of performance agreements<sup>8</sup>. In Estonia, the new funding model is aligned with the objectives of the Lifelong Learning Strategy<sup>9</sup>. In Finland, the ongoing reform of funding models for universities and universities of applied sciences pursues the goals

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[http://www.mizs.gov.si/fileadmin/mizs.gov.si/pageuploads/ANG/Resolution\\_on\\_the\\_National\\_Higher\\_Education\\_Programme\\_2011\\_2020.pdf](http://www.mizs.gov.si/fileadmin/mizs.gov.si/pageuploads/ANG/Resolution_on_the_National_Higher_Education_Programme_2011_2020.pdf)

<sup>9</sup> [https://www.hm.ee/sites/default/files/estonian\\_lifelong\\_strategy.pdf](https://www.hm.ee/sites/default/files/estonian_lifelong_strategy.pdf)

set out in the new HE strategy to boost the attainment levels and RDI investments<sup>10</sup>. In the absence of a national higher education strategy, elements in other strategy documents can provide a basis to guide the reform as the experience of Latvia shows<sup>11</sup>.

## **Appropriate legislative frameworks allow reform through by-laws**

**Higher education funding reforms often require changes in legislation, but the scope of these changes depends on the flexibility of the Higher Education Act.** An overly detailed higher education legislation may slow down or hinder the reform as a complete rewrite of the relevant Higher Education Act becomes necessary, whereas in the context of a 'lighter' framework law, changing the by-laws will suffice. This is important as most PLA countries have introduced several reiterations of their funding models over time. In Estonia, the 2013 reform changed the main principles of HE funding, but due to the nature of the legal framework the funding model was not sufficiently flexible to ensure long term sustainability. In 2017, a new funding model had to be launched via a new piece of legislation that allowed a revision of indicators without a complete rewrite of the Universities Act. In Slovenia, the 2016 amendments to Higher Education Act included the novelties envisaged in the strategy five years before<sup>12</sup>.

## **Financial incentives will boost the reform process particularly in transition periods**

**Additional funding facilitates the reform process particularly in the transition phases of PBF.** In most PLA countries funding reforms have been boosted with some element of financial incentives, whether in the form of fresh money injected into the system (Latvia), a general increase of funding (Slovenia) or freezing the funding levels despite declining student numbers (Estonia, Romania). In Slovenia the reform was possible because all key stakeholders HEIs, trade unions and students gained. There is mixed evidence of impacts regarding a zero-sum game where institutions compete for the same money. Luxembourg stands out thanks to its consistently high investments in HE and the new institutional bonus as a top-up funding.

**The country experience confirms that even marginal increases in funding can create rapid changes in behaviour of institutions.** Several countries have used competitive or non-competitive time-limited funds to boost reforms (e.g. Croatia's funding for digitalisation, Hungary's excellence funding, and the Investment for the

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<sup>10</sup> Vision for HE and Research in 2030: <https://minedu.fi/documents/1410845/4177242/Proposal+for+Finland.pdf/08a7cc61-3e66-4c60-af75-d44d1877787d/Proposal+for+Finland.pdf.pdf> (in English); <https://minedu.fi/documents/1410845/4177242/visio2030-taustamuistio.pdf/b370e5ec-66d3-44cb-acb9-7ac4318c49c7/visio2030-taustamuistio.pdf.pdf> (in Finnish)

<sup>11</sup> Arnhold, Nina; Kivistö, Jussi; Vossensteyn, Hans; Weaver, Jason; Ziegele, Frank. 2018. World Bank Support to Higher Education in Latvia : Volume 1. System-Level Funding. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/29740> License: CC BY 3.0 IGO."

<sup>12</sup> [http://www.mizs.gov.si/en/legislation\\_and\\_documents/](http://www.mizs.gov.si/en/legislation_and_documents/)

Future in France). Slovenia has used time-limited project funding to incentivise institutions to develop central services which the universities have mainstreamed at the end of the project period.

## **Institutional autonomy and efficient governance can unleash the potential of higher education institutions**

**Institutional autonomy over organisation, estate and finances, payroll and academic affairs is a key condition for reforms and progress in efficiency gains, but it cannot guarantee positive reform outcomes in severely underfunded systems.** The financial autonomy of institutions implies that HEIs are free to allocate internally the state funds and use any surplus they generate. Often by necessity due to high fixed costs for staffing or lack of capacity due to suboptimal governance arrangements, public HEIs continue to emulate the national funding allocation system or pass on state funds to the faculties, making little or no modifications. These approaches do not necessarily allow institutions to develop efficiency measures to address budget cuts or make strategic investments, and may, in turn, lower the impact of PBF.

**Funding cuts and shrinking basic funding may be an incentive for institutional efficiency gains, but chronic underfunding will effectively prevent these efforts.** Policy makers and institutional leaders can facilitate the move away from the discourse of “cuts” to the dialogue on effectiveness, efficiency and value for money. The Erasmus+ project USTREAM (Universities for Strategic, Efficient and Autonomous Management)<sup>13</sup> shows significant efficiency gains in the operational context of HEIs through transferring estate ownership to institutions, collaborative procurement and investments in enabling technology and skills etc. Further gains can be achieved through inter- and intra-institutional collaboration.<sup>14</sup>

**Institutional autonomy means less involvement of the state in the running of HEIs on a day-to-day basis, with state steering increasingly expressed through funding modalities and accountability requirements<sup>15</sup>.** Developments in the last decades across Europe show that reforms often fail to address the different dimensions of institutional autonomy, and have in some cases resulted in stronger direct state control. For instance, in Hungarian universities the Chancellor is directly appointed by the government and has a final veto on all aspects linked to institutional funding. Sound accountability arrangements including dialogue and evaluations, all the while respecting the autonomy of institutions, can be more effective in creating trust and unleashing the potential of institutions.

## **Inclusive policy making and dialogue are key to developing commitment and trust**

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<sup>13</sup> <https://eua.eu/101-projects/607-ustream.html>

<sup>14</sup> The ‘Efficiency Hub’ generated by the USTREAM project provides evaluation tools and good practice example for institutions to improve the effectiveness, efficiency and value for money. For details see <http://efficiency.eua.eu/>.

<sup>15</sup> See [www.university-autonomy.eu](http://www.university-autonomy.eu)

**An inclusive process of dialogue between government, HEIs and key stakeholders is essential for developing commitment and trust.** Failure to engage in transparent dialogue regarding the goals, contents and effects of policies can lead to non-performance. Policy makers in several PLA countries engage in a dialogue process to develop and implement funding reforms.

**The coverage of the dialogue on funding reforms varies across systems. In some countries the dialogue involves HEI management/leadership, while in others also the representatives of HE staff and students and/or external stakeholders are included.** For instance in Austria, the indicators for the new three pillar funding system have been designed and modified in collaboration with the universities' management. In Finland, the proposal for the new funding models and the underlying strategy were co-developed by representatives of the ministry, HEIs and stakeholders including HE staff, student unions and business and economy<sup>16</sup>. In France, the ministry is piloting a dialogue process with ten universities which is expected to lead to a reformed, partially performance-based funding allocation and monitoring system. In low-trust contexts, a neutral broker may help instigate the change process as the example of Latvia shows where the funding reform was launched by the World Bank and facilitated by the willingness of the finance ministry to inject additional funding to the system.

## **2. SELECTION AND DESIGN OF INDICATORS TO ACHIEVE POLICY GOALS**

**The guiding principle is to keep the funding model simple and transparent.** A formula of a complex set of indicators may be useful for funding allocation purposes, but if the link between the change in behaviour and the resulting change in funding is not clear, its steering effect will be reduced. In the same vein, using a large number of indicators may lead to less impact and to a general lack of transparency of the formula. For instance in Romania the 'Additional funding' is distributed according to 15 quality indicators grouped into four broader classes, with a specific weight for each individual indicator and for each class of indicators as a whole. In 2018, three more indicators are being tested. This approach reduces the steering effect of the funding.

**The amount of funding dependent on the fulfilment of the goals should be limited in order to avoid financial shocks and counter effects.** As authorities have the obligation to minimize the uncertainty and sudden changes in the higher education sector, several PLA countries are using stable indicators based on three-year averages which help reduce year-to-year fluctuations or in-built buffers to limit fluctuations. Most PLA countries have developed some type of a multiannual guarantee of funding to prevent large oscillations, typically by using three-to-four-

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<sup>16</sup> The selection of HEI representatives to the working group on the funding model was delegated to the rectors' conferences of the universities and universities of applied sciences.

year averages for calculating indicators in order to moderate changes.<sup>17</sup> In principle the higher the share of performance-based funding, the greater the need for stability.

**The funding formula and the selection of indicators should address the diversity of the HE sector.** Half of the PLA countries have devised funding mechanisms, indicators or weighting to address different types or size of institutions. In Austria, Finland, France and Hungary, institutions of different type/size are treated differently, whereas Estonia, Romania and Slovenia treat all HEIs the same way. In Estonia, a single funding allocation model is implemented for all HEIs, but there is a debate whether the indicators should be revised to address the different types and sizes of institutions.

**There should be an agreement between authorities and the HE sector on the purpose and main components and mechanisms of the model**<sup>18</sup>. Accordingly, the choice of indicators should be agreed with the sector as has been the case in Austria which is tackling the challenge of non-completion and over-extension of studies: in the new funding system it will be rewarding universities on the basis of active students taking exams as a key indicator in the new three pillar funding model for universities.

**No indicators should be included in the funding model whose outcomes are beyond the influence of HEIs.** For example reducing or increasing funding dramatically on the basis of graduate tracking results and/or the unemployment rate of graduates is undesirable as graduate employment typically depends on the local labour market that the institutions are serving and can lead to detrimental effects for institutions. Country experience from Estonia showed that in systems with small institutions even one unemployed graduate can lead to a significant reduction in core funding.

**The challenge in measuring the performance of HEIs is to balance between national and institutional priorities and objectives.** Indicators need to reflect national policy goals, while respecting the diversity and profile of institutions. Generic indicators make all institutions develop towards the same direction, but may hamper the diversification of institutions and profiling. A remedy to this concern could be a set of indicators reflecting national policy priorities, while allowing room for a limited number of HEI-specific objectives, tailored by the institutions. Care should be taken that the decentralised approach to choosing institutional goals and indicators for measuring success does not lead to large differences in the level of ambition among institutions and to ensure that the institution-specific indicators are measurable (including across time). For example Croatia's PBF carrot of 10% of additional funding could not be delivered partly due to the fact that universities were not able to prove the achievement of their individual targets. Examples of balancing national and institutional priorities and objectives come from Luxembourg and Estonia. For example, Estonia uses EU structural and investment funds (ESIF) for this purpose:

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<sup>17</sup> institutions in capitol regions usually get better results than those in peripheral regions See for example The Regional Innovation Scoreboard 2017, downloadable at [http://ec.europa.eu/growth/industry/innovation/facts-figures/regional\\_en](http://ec.europa.eu/growth/industry/innovation/facts-figures/regional_en)

<sup>18</sup> Claey's-Kulik A-L and Estermann T. (2015), DEFINE Thematic Report: Performance-Based Funding of Universities in Europe. EUA. <https://eua.eu/resources/publications/358:designing-strategies-for-efficient-funding-of-universities-in-europe-define-final-publication.html>

part of structural funds have been channelled to HEIs in the form of ASTRA institutional grants in line with the national strategies but universities decide how they use the funding based on their own priorities.

**The choice of the type of indicators, whether input-, output- or throughput-oriented, will determine to what extent PBF can drive the institutional behaviour.** Regressive elements that value quantity over quality and encourage collection of points rather than excellent performance should be avoided. These types of indicators are often used for scientific research and knowledge transfer, where counting the number of different types of outputs, publications, research grants etc. allows for gaming the system<sup>19</sup>.

**Robust indicators are dependent on data which allow reliability, consistency in interpretation, applicability to different institutions and systems, comparability across the time and space, and European-wide relevance.** Here, data availability is an important concern as well as the costs to generate, collect, use and monitor the data and the effects versus efforts.

**Widening the scope of indicators to cover the three missions of the HEIs as well as 'personal development' and 'active citizenship' would more accurately reflect the role of HE in society today, despite disagreements on the feasibility.** Performance agreements offer an opportunity to complement quantitative (simple and easily measurable) indicators with qualitative indicators. Current PBF and performance agreement regimes make a limited use of relevance indicators for 'personal development', 'active citizenship' and 'sustainable employment'. Performance agreements offer opportunities to integrate performance and indicators on these more qualitative aspects, some of which have been identified in a recent study commissioned by the European Commission<sup>20</sup>. The feasibility and potential impact of such indicators would deserve further analysis, testing and piloting in view of the importance placed on these aspects in the European policies.

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<sup>19</sup> Horizon 2020 Peer Support Facility Reviews have identified several countries where the funding for the research system values quantity over quality. For more details see <https://rio.jrc.ec.europa.eu/en/policy-support-facility/peer-reviews>

<sup>20</sup> The study on "Promoting the relevance of higher education" (HEREL) identified key indicators for HE relevance: Personal development: trust in others, happiness, perceived health; Sustainable employment: unemployment rates, relative earnings, over-qualification, rate of return, ICT skills; and Active citizenship; self-confidence for political participation, social representation in student body. <https://publications.europa.eu/en/publication-detail/-/publication/59d3a999-84b9-11e8-ac6a-01aa75ed71a1/language-en/format-PDF/source-73267534>

### 3. APPROACHES TO PERFORMANCE MONITORING

Monitoring solely against indicators which are retrospective by nature and measure the past performance of institutions are increasingly being complemented with performance agreements where the institutional performance and future aspirations are contextualised. PLA countries have developed monitoring and reporting systems, which are to a varying degree supported by negotiations with the institutions and regular evaluations. The dialogue between the ministry and the HEIs should become an integral part of the funding model in all systems and should be supported by transparency about the policy goals and clear incentives.

**Sound policies are based on evidence. Evidence-based funding policies require investment of efforts into measuring success and monitoring intended and unintended effects of funding tools, as well as analysing the complexity of underlying factors.** The monitoring and evaluation system should allow learning from trial and error which is necessary to improve the next cycle of reforms. European policy tools can offer support for countries in this respect, for instance Slovenia sought assistance through peer counselling to assess the progress made in the funding reform initiated in 2017 and 2018. Reliable data is a precondition to evidence-based decision making for the design and implementation of funding reforms. Given the rapid development of advanced data analytics, all countries irrespective of their experience in PBF are faced with new opportunities and challenges and need to build their capacity to use these systems.

**Experience across countries shows the need to strike a balance between accountability and institutional autonomy, by limiting administrative effort for the generation and collection of data and keeping reporting duties to the necessary minimum<sup>21</sup>.** Lean systems which ensure maximal flexibility and minimal effort for HEIs, and take advantage of existing data and procedures are advisable. Bureaucratic overload may result from the repeated collection of the same data by authorities, sometimes even by different departments of the same ministry, and the limited access to collected data. Data sharing and taking assurance from available reviews and surveys can provide solutions. Introducing national information systems for instance for graduate tracking is particularly helpful in systems where each university has developed its own system or as in Slovenia, where each faculty had their own distinct system or no system. Studies of the accountability burden placed on institutions and measures how to reduce it could lead to savings and reductions in regulatory burden.<sup>22</sup>

**The failure to implement the agreed financial consequences for the achievement of targets may lead to the erosion of trust among HEIs and challenges in the further steps of the reform.** These challenges should be closely monitored and mitigated through enhanced trust-building efforts. However, there is

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<sup>21</sup> Claeyns-Kulik A-L and Estermann T. (2015)

<sup>22</sup> The Higher Education Funding Council in England (HEFCE) commissioned three reviews during the period 2000-2008. More recent reviews of accountability burden have focused e.g. on Research Excellence Framework 2014, see: <http://www.hefce.ac.uk/pubs/rereports/year/2015/refreviewcosts/>

limited experience of concrete sanctions and there is no agreement on how they should be administered. For instance, sanctions were envisaged in the Dutch performance agreements but not entirely implemented, partly due to the difficulties of some HEIs to reach the targets of widening access and ensuring completion in HE.

**In addition to hard data, HE systems and institutions use research and regular surveys to develop an understanding of the needs and expectations of the key stakeholders to develop effective policies.** While several PLA countries now collect feedback from graduates, there is less evidence on how this intelligence is used to inform PBF policies. Authorities can encourage a uniform approach to data collection at HEI-level and extract indicators from the national surveys to feed into the funding model. Accordingly, in addition to employment data, answers to some questions from Finland's graduate survey feed into the PBF formula, while the overall impact on funding allocation is kept limited. Furthermore, Erasmus+ funded projects such as CALOHEE<sup>23</sup> and the graduate tracking initiative may eventually inform policies at national and institutional level, by providing evidence of learning outcomes including active citizenship and sustainable employability.

**Supportive quality assurance systems can play a vital role in monitoring and evaluation.** Aspects such as personal development and citizenship could be integrated into quality assurance mechanisms which would allow monitoring whether HEIs are active in these domains. Equally important can be the role of national agencies such as the National Council for Financing Higher Education (CNFIS) in Romania which can drive the higher education funding reform as they allow accumulation of specialised knowledge. CNFIS develops the funding model and drafts annual reports on the state of financing of higher education and recommendations for improvements of the funding model.

## **4. DIVERSIFICATION OF FUNDING SOURCES**

**A key challenge for the higher education authorities is to find the right balance between public and private funding, including tuition fees (and administrative fees) which are a source of income for HEIs in some PLA countries.** Few countries without robust progressive tax systems have been able to reform their HE systems without cost-sharing between the state and households, but introducing or increasing student fees would require investments in student support systems to ensure opportunities for equal access and success in higher education. Other measures to enhance cost-sharing include support for university-industry mobility schemes, creation of a demand-pull among the private sector (e.g. tax incentives, vouchers) or incentives for HEIs through matched funding schemes, top-up funding and support for capacity building and centres focusing on technology transfer, entrepreneurship and incubation.

**Generation of additional income from external sources is important for the sustainability of HEIs, but a prerequisite to the effective use of external**

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<sup>23</sup> CALOHEE stands for an Erasmus+ funded project on "Measuring and Comparing Achievements of Learning Outcomes in Higher Education in Europe" (<https://www.calohee.eu/>)

**funding is a sufficient level of core funding**<sup>24</sup>. This is because HEIs are often expected to both co-fund projects and mainstream the new structures and services after the end of project period. As a result, HEIs become less flexible in using their core funding which in turn may force them to arbitrarily compete for more external funding, which in a worst scenario could result in a sustainability/incentive trap and a dilution of institutional profile and capacity as was shown in a recent study based on the experience of higher education institutions in two German states<sup>25</sup>.

**Consequently, higher education systems which reward external funding need to acknowledge that external funding typically covers only partial costs and HEIs will need to use their own core funding.** Countries such as Austria provide matched funding for the European Research Council grants, while several countries such as Croatia and Luxembourg have introduced additional funding for institutions that have raised external competitive funding. In the case of Luxembourg this refers to top-up funding for the income from Horizon 2020. In France the new dialogue with universities aims to examine the proportion of external funding in the university budgets and support the institutions' projects to increase this funding. These efforts need to be balanced with support for co-funding.

**An important remedy is to set the overhead rates at an appropriate level (>25%) which will enhance HEIs' ability to create financial headroom and accumulate resources for strategic openings, central services and university-wide strategies.** In countries with low or no overhead system developing a roadmap that shows what can be achieved with appropriate overhead levels can guide the way forward.

**The diversification of funding sources increases the complexity of reporting, monitoring and evaluation which calls for enhanced capacity development among the state and HEIs administrations.** The EU new Multiannual Financial Framework for 2021-2027 will provide a substantial budget for Member States and HEIs to tap into<sup>26</sup>. At the European level there is an intention to increase synergies between different sources (programmes and funds) while simplifying procedures. Harmonisation and reduction of reporting duties and spending rules at the European level are welcomed by countries where HEIs are faced with heterogeneous regulatory rules, different spending and reporting rules, and multi-level accounting. National schemes for capacity building among the state and HEI administrations and cross-country collaboration could provide opportunities for peer learning in risk management practices, strategic distribution of risks, overhead policies, as well as policies to create financial room for manoeuvre and transparent division of labour and accountability within HEIs between the central administration and the department level.

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<sup>24</sup> The definitions of external funding vary across countries and may include ministry funding external to the HE core budget. It generally refers to funding from contracts with business and industry, competitive or non-competitive European and national funding, provision of services and donations.

<sup>25</sup> Babyesiza A., Christian B. and F. Ziegele (2018) Diversifizierung der Finanzquellen.

CHE gemeinnütziges Centrum für Hochschulentwicklung. Arbeitspapier Nr. 209. April 2018.

<sup>26</sup> For instance the ERASMUS budget will grow from €14.7 billion to €30 billion. The significant Regional Development and Cohesion Funds of €374 billion will be channelled through the ERD (€273B) and ESF+ (€101B). The Horizon Europe will have a €97.6 billion and the Invest EU Fund with €15.2 billion will mobilise €650 billion. The budget of Digital Europe is €9.23 billion.

**Exit strategies are needed to mitigate the sustainability issues that arise from the substitution effect where the EU structural and investment funds (ESIF) have taken the place of core funding.** In Latvia the World Bank has encouraged the development of an innovation pillar in the national HE funding system by 'relabelling' the funding from the ESIF. In the Croatian funding model, the ESIF funding is channelled to the development pillar. To mitigate the risks involved in the substitution of national funding with structural funds, authorities could take the lead on developing sound exit strategies as has been the case in Estonia.

## **FURTHER ACTION AT THE EU LEVEL**

**The European Commission contributes to strengthening the evidence-based policies in countries and institutions by commissioning comparative research, fostering training opportunities for staff, HEI collaboration and mobility opportunities.** New research efforts could cover for example: Comparative analysis and research on diversification of funding streams and their impacts and the related risk management systems (co-financing rules, overhead, reporting etc.); a comparative research on the accountability burden in HE, including identification and quantifying the sources and the extent of this burden and ways to mitigate it; clarification of the terminology around different types of funding across systems; and an analysis on various cost-sharing models in higher education systems including student fees and their impacts.

**The open method of coordination enhances peer learning, networking and cooperation between governments and higher education institutions.** Further exchanges between policy makers and HEIs and researchers can be valuable, for instance in the area of models of voluntary funding and matched funding streams and 'capitalisation' in the form of state ownership transfers. The open method of coordination could also facilitate shared learning on how countries and institutions can reap efficiency gains without undermining quality.

## Annex. Overview of HE funding reforms and performance-based funding (PBF) in PLA countries (state of play November 2018)

CASE STUDY / POLICY/PROJECT	
<b>AT</b>	<p>In Austria, the university part of the HE system is steered by the 2016-2021 national university development plan. The new three-pillar funding model with indicators co-developed with universities covers teaching, research/arts, and Infrastructure, clinical expenditure, strategic incentives. The model is implemented through performance agreements modified by the 2018 amendment to Universities Act of 2002. The related subsidiary/secondary regulation has been partly passed already.</p> <p>The government has increased the global university budget from EUR 9.7 bill in 2016-2018 to EUR 11 bill in 2019-2021. The combined teaching and research pillars cover 52.9% of the global university budget, while the pillar for 'Infrastructure, Clinical Expenditure, Strategic Incentives' covers about 44.5%.</p> <p>About 55% of the HE funding is formula-based based on indicators. The formula aims at: i) enhancing quality of teaching by lowering staff to student ratios; ii) strengthening university research profiles by only new indicator for research staff; iii) improving steering and planning of capacities; and iv) rendering public university funding more transparent.</p> <p><b>The university funding reform implies that instead of allocating the majority of funds within a basic budget, in 2019-2021, there will be a significant part of allocation in funds through the teaching pillar through more relevant indicators for active students (16 ECTS per year) and active fast students (40 ECTS per year).</b></p> <p>The new three-pillar funding model, an initiative prepared by the previous governments, matches funding directly to the number of active students, which are agreed on in the performance agreements with each individual university.</p>
<b>EE</b>	<p><b>Estonia's reform in 2013 changed the main principles of HE funding for education-related operational funding</b>, by moving away from the state-commissioned study places with different field specific costs and fee-paying study places to <b>free full time study places (in Estonia language)</b>. Due to the inflexibilities of the legal framework the funding model (where the volume-based performance indicators were identified in the Universities Act), the system was changed at the end of the 3-year transition period.</p> <p><b>In 2017 the new funding framework with performance-based funding and indicators was introduced with the aim to enhance stability of financing and the quality, efficiency and role of HEIs in society.</b> Currently at least 80% of the state budget funds for operational funding covering HE instruction are divided between HEIs as baseline funding based on the last 3 years average operational support to the institution basic funding. Up to 20% is performance funding, based on fulfilling performance indicators (17%) and fulfilling the conditions of the performance agreement (3%). HEIs with better results will get proportionally more performance funding. The funding model and its qualitative and quantitative indicators, which are same for all HEIs, were co-developed with the HE community and have been used in 3 rounds of allocations. There no plans for a wider reform other than adjustments to meet the needs of the small system with institutions of different sizes and types. <b>The R&amp;D base funding is also performance-based in general.</b> It is allocated to R&amp;D institutions that have passed regular evaluation. All universities have been evaluated positively, while professional HEIs have not yet applied for this evaluation.</p>
<b>FI</b>	<p>Finland's ongoing reform of the HE funding models for universities and universities of applied sciences (UAS) is part of the implementation of the Vision for HE and Research 2030, and will enter into force in 2021. The proposal for the new funding models was co-developed by representatives from the Ministry of Education, HEIs and stakeholders and was published in November 2018. <b>Finland's HE core funding is output-oriented and performance-based and the new reform will maintain the orientation towards results and competition.</b> The basic HE funding from the ministry is allocated almost entirely based on mainly output-based funding formula. Key calculatory elements of the formula are degrees, lifelong learning, cooperative studies, employment, student feedback, external funding, and publications. All indicators are calculated based on 3-year averages to avoid year-to-year fluctuations. In addition to the calculatory elements, the funding formula includes strategic funding. Currently, the ministry's</p>

	<p>formula-based allocation constitutes on average about 64% of funding for universities and over 80% for UAS. The rest of the HEI funding comes from external sources such as Academy of Finland (competitive national research funding), Business Finland, international sources etc.</p> <p><b>Strategic funding is negotiated at the performance agreement negotiations between the ministry and the institution and allocated to support education and R&amp;D policy aims.</b> Strategic funding represents 12% of the total funding for universities and 5% for UAS; these shares are expected to increase to 15% for universities and 8% for UAS in 2021.</p> <p><b>Despite multi-annual agreements, the ministry allocates HEI funding on an annual basis, since the resources are agreed annually in the state budget.</b></p>
FR	<p>The reforms of higher education and research in France are challenging due to the large complex system with multiple sources of funding. The system is also stretched because of growing student numbers, e.g. in 2018, 30 000 new students entered the higher education system. The reform of the funding system is estimated to require a substantial additional investment worth EUR 2 bill.</p> <p>In 2009-2015, the university core funding was allocated based on multiannual contracts; 25% of global funding was based on calculations of the performance and activities based system SYMPA. Sympa is currently used for collecting comparable data but not for funding allocation which is based on historical allocation. Universities also also competing for grants.</p> <p><b>The ministry is piloting with ten universities a new annual strategic institution-specific dialogue with the aim to develop a partially performance-based funding allocation and monitoring system.</b> Linking the new structured dialogue with the budget allocation system will be the next challenge.</p>
HR	<p>Croatia introduced a HE funding reform in 2012 when it moved away from the line item financing towards PBF. <b>The pilot performance agreements were introduced in 2012-2015, covering 10% of funding.</b> The decentralised approach to choosing institutional goals and indicators for measuring success allowed large differences in the level of ambition among institutions with consequences on the distribution of funds. The agreed bonus of 10% was not paid to the institutions because universities did not report on results and because the ministry did not ask for the reports due to the cuts in state budget.</p> <p><b>From 2015, a single set of national goals and input indicators was introduced for all institutions.</b> To encourage HEIs to enrol and retain more STEM students, a variable formula funding was introduced. In addition to subsidising only first-time enrolments and those who achieve 55 ECTS within the first year of studying, it linked the amount of funding (for material expenses) to the study field so that STEM fields received a higher amount of funding per student than other fields. At least 1% of funds had to be spent on direct support for underrepresented groups.</p> <p><b>The current round of performance-based funding 2018-2022 aims to strengthen the link between funding and the achievement of agreed objectives.</b> For the first time, research funding is an integral part of the funding agreements, but the university payroll is still not covered. Both input and output indicators are used. PBF is based on national indicators that all universities need to follow and institution-specific indicators which can be selected from the predefined list of indicators (list can be broadened during negotiations) and which reflect an institutional profile.</p>
HU	<p>In 2012 the core funding allocation was reformed based on the self-determined costs of student places by universities within the limits of the government decree. <b>In 2016 the first step to PBF was taken with the introduction of a task-based funding for education (70%), research (20%) and other tasks (10%). In addition targeted time-specific excellence funding was made available for institutions.</b> Future plans include the revision of the cost base and the introduction of a graduate tracking system which may determine part of the funding and student support. The role of the Chancellors in state-owned HEIs have implications on the funding and autonomy of HEIs. <b>The Chancellor, who is directly appointed by the Government, has the veto right to all funding related matters in the institution. Further changes are planned in the university governance models.</b></p>
LT <sup>27</sup>	<p><b>Latvia's HE funding reform of 2013-2014 was facilitated by the World Bank</b></p>

<sup>27</sup> The Latvian case was presented by the Word Bank

	<p><b>and introduced a three-pillar funding model: Basic funding pillar for labour market alignment of teaching and research (85€m), PBF pillar for HE and research integration, and Pillar for innovation-oriented funding for development and strategic specialisation.</b> The PBF Pillar benefited from the injection of additional funds (€6.5€m) by the Finance Ministry, while the third pillar for innovation was created by relabelling EU investment and structural funds. Subsequent stages of funding reform, covering the institutional HE governance and funding, and the doctorate and HR policies, have also been facilitated by the World Bank. The consolidation of the HE system and student funding were out of the scope of this reform.</p>
<b>LUX</b>	<p>In Luxembourg, the HE and research system consists of a young university (established 2003) and four public research centres. The university's multi-annual financing framework with 4-year performance contracts were introduced in 2006. The university is well-resourced (total budget EUR 225.5 mill in 2017) and the investment in HE and research is growing. Multiannual performance contracts link the university to government: the university must meet objectives and measure performance while the government ensures funding and other framework conditions including buildings. <b>The current contract for 2018-2021 has a focus on research excellence: the institutional bonus, a top-up funding based on three-year mean value of income from H2020</b> aims to boost international competitiveness in research (envelope of EUR 25 mill, up to 5% of funding).</p>
<b>RO</b>	<p><b>In Romania, the majority of institutional financing allocated by the ministry is formula-based divided into three components: Core Funding (72.5%), Additional Funding (26.5%) and the Institutional Development Fund (1%).</b> The core funding is allocated through 'study grants' calculated on the basis of the average cost per student, per field, per study cycle and per teaching language. Additional funding is distributed according to 15 quality indicators grouped into four broader classes, with a specific weight for each individual indicator and for each class of indicators as a whole. The Institutional Development Fund allocates funding to the best performing institutions in each category using a competitive mechanism. The formula-based additional funding and the competitive Institutional Development Fund are the key elements for driving excellence as envisaged in the Strategic Plan for HE for 2017-2020.</p>
<b>SI</b>	<p><b>Slovenia's ongoing HE reform is introducing stable public funding by gradually increasing budget funding to 1% of the GDP and by introducing 4-years funding agreements.</b> The reform is being introduced in two stages: The amendments to the HE Act (Dec 2016) launched performance agreements with further regulation in July 2017. In the next stage the new systemic HE Act will define the HE public service and renew the system of public funding for private HE. Funds have already been allocated based on the funding formula and the negotiated agreements, but the monitoring system of the agreements is under development. In the new system, the basic funding formula which funds education-related activities is based on two pillars: the basic pillar of financing and the development pillar. The basic pillar that encompasses at least 97% of all funds is formula-based. The main objective of the complex funding formula is to secure stable financing through the fixed part of basic pillar, based on historical determination (taking into account previous year's allocation) while at the same time stimulate better performance of HEIs through variable part of the basic pillar (up to 25% of Basic pillar of financing) which is calculated based on 6 indicators. The Development pillar (up to 3% of overall funding) allocates funds according to the performance agreements.</p>