World Bank Reimbursable Advisory Service on Higher Education Financing in Latvia

Higher Education Financing in Latvia: Analysis of Strengths and Weaknesses

---

18 March 2014

Table of Contents

LIST OF ABBREVIATIONS 4

EXECUTIVE SUMMARY 5

1 INTRODUCTION 11

1.1 LATVIA AND THE WORLD BANK GROUP 11
1.2 PROJECT CONTEXT AND OBJECTIVES 12
1.3 PROJECT METHODOLOGY 14
1.4 CLARIFYING THE PROJECT SCOPE 15

2 EUROPEAN DEVELOPMENTS IN HIGHER EDUCATION FINANCING 17

2.1 RECENT EUROPEAN TRENDS IN HIGHER EDUCATION FINANCING 18
MODELS OF PUBLIC FUNDING 18
RESOURCE DIVERSIFICATION 22
FINANCIAL AUTONOMY 26
STUDENT FUNDING 30
OVERVIEW OF EUROPEAN TRENDS AND POSITION OF LATVIA 36
2.2 WHAT DO THESE TRENDS MEAN FOR THE FURTHER ANALYSIS? 40
2.3 HIGHER EDUCATION AS PUBLIC AND PRIVATE GOOD 41

3 METHODOLOGY OF ANALYSIS: CRITERIA FOR GOOD FUNDING MODELS 44

3.1 METHODOLOGY TO ASSESS STRENGTHS AND WEAKNESSES 44
3.2 SOURCES FOR THE ASSESSMENT CRITERIA 44
3.2 EXPLANATION OF THE ASSESSMENT CRITERIA 46
3.3 OVERVIEW ON THE ASSESSMENT CRITERIA APPLIED 50

4 STRENGTHS AND WEAKNESSES OF LATVIA'S CURRENT FUNDING MODEL 51

4.1 GENERAL ASSESSMENT OF THE HIGHER EDUCATION FUNDING SYSTEM AND ITS CONTEXT 52
4.2 POLITICAL CLIMATE FOR CHANGE 55
OVERALL CONCLUSIONS (POLITICAL CLIMATE FOR CHANGE) 56
4.3 INSTRUMENTS OF STATE FUNDING: FUNDING OF TEACHING - STUDY PLACE MODEL 56
OVERALL CONCLUSIONS (INSTRUMENTS OF STATE FUNDING) 67
4.4 INSTRUMENTS OF STATE FUNDING: FUNDING OF RESEARCH 68
OVERALL CONCLUSIONS (FUNDING OF RESEARCH) 75
4.5 DIVERSIFICATION OF FINANCIAL RESOURCES FOR HEIS 76
OVERALL CONCLUSIONS (DIVERSIFICATION OF RESOURCES) 79
4.6 FINANCIAL AUTONOMY OF HEIS 80
OVERALL CONCLUSIONS (FINANCIAL AUTONOMY) 82
4.7 STUDENT FINANCING (TUITION FEES; STUDY COSTS, STUDENT LOANS AND SCHOLARSHIPS) 82

OVERALL CONCLUSIONS (STUDENT FINANCING) 88

APPENDICES 90

APPENDIX 1 LATVIA'S CURRENT FUNDING MODEL 90

1.A RELEVANT FRAMEWORK CONDITIONS IN LATVIA 90
1.B DESCRIPTION OF THE HIGHER EDUCATION SECTOR IN LATVIA 93
1.C FUNDING LEVELS OF HIGHER EDUCATION AND RESEARCH IN LATVIA 110
1.D FINANCIAL AUTONOMY OF HEIS IN LATVIA 114
1.E PUBLIC STATE FUNDING TO HIGHER EDUCATION IN LATVIA 121
1.F RESOURCE DIVERSIFICATION IN HIGHER EDUCATION IN LATVIA 133
1.G STUDENT FINANCIAL ASSISTANCE 139

APPENDIX 2 LIST OF DOCUMENTS REVIEWED - DEVELOPMENT OF DISCUSSION ON HE FUNDING REFORM 144

APPENDIX 3 NOTE ON AVAILABILITY OF PERFORMANCE DATA 151

APPENDIX 4 STAKEHOLDER CONSULTATIONS 157

LIST OF REFERENCES 163

List of Abbreviations

EU	European Union
ESF	European Social Fund
EUA	European University Association
HE	Higher Education
HEI	Higher Education Institution
MoES	Ministry of Education and Science
MoE	Ministry of Economics
RAS	Reimbursable Advisory Services
RTA	Reimbursable Technical Assistance
R&D	Research and Development
SEDA	State Education Development Agency
STEM	Science, Technology, Engineering and Mathematics

Executive Summary

The report at hand is the first in a series of three papers to be prepared by the World Bank Latvia Higher Education Financing Team between December 2013 and September 2014. It sets out to shed light on the strengths and weaknesses of Latvia's funding system i) in light of European developments, and ii) with a view to comparing against general criteria for good funding models. These general criteria derive from good practice: they can be considered as largely independent from the country context. The second paper will focus on the 'fit' of the current funding mechanisms in Latvian higher education with explicit strategic priorities of the government. The third paper will propose directions for a future higher education funding model for Latvia. The report at hand was developed with support by the Ministry of Education and Science as well as other government agencies and in close consultation with stakeholders. These consultations took place at workshops but also throught a series of interviews.

Higher education is an increasingly important topic on national policy agendas for many countries. As a significant driver of national economic competitiveness in an increasingly knowledge-driven global economy, higher education policy issues have received increased attention. Alongside the increased policy importance of higher education, many systems also face serious challenges maintaining their quality and relevance and in increasing the efficiency and securing equity in the field of higher education. New higher education financing models are being developed in many European countries as policy responses to these challenges.

The Latvian higher education system has been underfunded for years. Overall funding levels are very low (and the lowest in all Baltic states); **however, in terms of public funding for higher education, Latvia figures at the bottom across European comparisons,** with an allocation of 0.8 percent of GDP as compared to 1.27 in Lithuania; 1.23 in Estonia and an EU27 average of 1.26 (Eurostat, 2010). Although the report at hand will largely focus on funding mechanisms as opposed to funding levels, it is important to keep this point in mind when the current Latvian funding system's strengths and weaknesses are discussed.

The topic of higher education financing often spurns controversy, in Latvia as elsewhere, with the discussion focusing on the question of whether higher education is a public or a private good, whether it should be funded from public resources or students' contributions —with related policy implications for public and private funding. The report argues that the outcomes of higher education have characteristics of both public and private goods, and that acknowledging economic arguments might help to avoid political reform blockades.

Student funding—that is, student contributions (mainly tuition fees or other fees paid by the students) and student financial support systems (mainly grants and loans)—is clearly among the most controversial issues in the sphere of financing higher education. Approaches that place fees and loans at the center tend to meet criticism all across Europe on the grounds of their expected negative effects on equity. However, tuition fees—combined with adequate and well-targeted student support schemes —generate additional revenues for HEIs, thus enabling increases in participation rates. They are also

regarded as more equitable by some, since they transfer part of the instruction costs to those who will directly (and disproportionately) benefit from higher education.

Latvia's Funding System in the Light of European Developments

Compared to other European countries, Latvia scores high in the area of financial autonomy. It is ranked 4th among the 28 European higher education systems in EUA's "University Autonomy Scorecard". Providing a higher level of institutional autonomy is often expected to improve the performance of higher education institutions (HEIs) and higher education systems as a whole. It is assumed that the more autonomous HEIs are, the better equipped they are to generate additional resources through fund-raising or efficiency measures, with the freedom to orient their strategy towards available funds, focusing potentially on their specific research strengths or shifting the balance between education and research. Based on this assumption, many governmental authorities among European countries have granted HEIs more freedom to manage their resources and develop new income-generation policies.

Contrary to many other European systems, the current funding model in Latvia does not offer significant incentives for greater performance- and output-orientation. The main purpose of performance-based funding is to create financial incentives for higher education institutions to produce outcomes in certain areas of their activities which want to be encouraged by the funder. There are different ways in which to cluster allocation models in the funding of higher education institutions. Three typical pillars of funding models concern basic funding, performance funding, and innovation-/profile-oriented funding. The innovation-/profile-oriented funding component in Latvia is currently composed of a number of different types of smaller and larger third-party funding streams (including EU Structural Funds) but not included in the system of state funding. In contrast to the tendency of many European higher education systems to adopt more performance-based elements in their funding mechanisms, the Latvian model has remained predominantly input-related and formula-based. The elements that are said to be performance-oriented, such as the European structural funds as well as the national competitive research programs, are not perceived by the authors to use transparent competitive criteria. This implies the system does not fully exploit its competitive capacity and strife for excellence.

Latvia has a dual-track tuition fee system with—in some cases—relatively high fees and relatively many fee-paying students. The Latvian higher education system offers mainly merit-based support in the form of state funded study places, and relies more on government-subsidized, mortgage-style loans offered by commercial banks, rather than grants. While there are concerns amongst stakeholders that 'the best students migrate to countries where students do not pay fees', this causal chain appears in fact unlikely, given that these students study for free in Latvia. To the extent that such migration of particularly gifted students takes place at the tertiary level—and more research would certainly need to be done on this issue—it would most likely be fueled by quality concerns and more general economic considerations as opposed to the current fee structure in Latvia. There is no general European trend in this area: some European countries that have previously introduced tuition fees later decided to abolish them either entirely or partly. At the same time, other European countries have decided to increase the

share of private investment by allowing public HEIs to introduce fees or charge higher fees while at the same time promoting equity of access by restructuring their student support systems. Need-based grants are the most frequently used modes of student support across European higher education systems.

Strength and weaknesses of the Latvian funding model

Derived from European trends and international practice, there are criteria for good funding models which are suitable to guide a discussion on strengths and weaknesses of the current approach to higher education financing in Latvia. These criteria are (the degree of) strategic orientation, incentive orientation, sustainability, legitimization, autonomy and freedom, and practical feasibility. These criteria can be further defined as follows:

Strategic Orientation • Promote national strategies • Promote institutional profiles • Create performance rewards and sanctions • Create a competitive environment	**Incentive Orientation** • Provide clear, non-fragmented incentives • Avoid undesired effects • Balance ex post and ex ante performance orientation
Sustainability • Stability • Guarantee continuity in funding mechanisms • Allow long-term planning • Take into account cost differences • Promote risk-spreading and management	**Legitimization** • Provide unambiguous and balanced funding structures • Make funding transparent • Support the perception of fairness • Allocate lump sums • Guarantee academic freedom
Autonomy and freedom • Implement an adequate level of regulation • Guarantee autonomy of internal resource allocation • Promote accessibility of diverse income sources	**Practical feasibility** • Use available data • Ensure administrative efficiency • Respect methodological standards • Ensure coherence with funding levels and steering approaches

The following table provides an overview of the strengths and weaknesses of the Latvian higher education and research funding system according to the aforementioned categories of criteria. It distinguishes between the context of the funding system and the features of the funding system itself. Many of these issues relate to more than one criteria dimension.

STRENGTHS	WEAKNESSES
Context: strategic orientation • Diverse system of HE (many institutions, niche players, different profiles, public-	***Context: strategic orientation*** • Apparently low political priority given to HE and science (regarding low spending on HE

private) • Substantial number of private HEIs • Start-up of quality assurance for study programs and research institutes • Research institutes with more mass and focus • High percentage of young people who qualify for HE • High employment rate and high rate of return on HE • A functioning data monitoring system (including performance and financial data) • High adaptability of system and HEIs demonstrated in times of economic crisis • MoES and line ministries are multiple voices for the interests of HEIs	and R&D) • Inconsistent policy measures and political reform blockade because of polarized discussions (public vs. private good) • Many relatively small study programs • Tendency to study abroad • Opaque HR structures in HE, with opportunities to have more than one job • High teaching loads for staff; little time for research • Quality assurance for teaching and research only in start-up phase • Many graduates seeking employment abroad • No clear way to consolidation vs. competition yet
Financing: Incentive Orientation • Study places allow national planning according to labor market needs • Study places offered on basis of merit including rotation possibilities stimulate competition • EU structural funds for research allocated with some form of competition • Attract many fee paying students (willingness to pay/additional resources for HEIs) • Existence of performance contracts between HEIs and ministry	***Financing: Incentive Orientation*** • One-pillar model of state funding instead of several pillars with balanced functions • No real performance orientation in state funding (hence also weak links to national or institutional strategies) • No funding for innovative initiatives • No clear approach to the role of state money for private HEIs • No funding options for research-related developments such as post-docs, knowledge transfer activities, etc.
Financing: Sustainability • Study places funding provides cost-oriented stability in the system, but with a "money follows student" element • Availability of substantial EU structural funds for HE and R&D (reason for survival in economic crisis)	***Financing: Sustainability*** • Underfunding of the HE and research system compared to most other European countries and to own governmental objectives • Promised funding increase not yet effectuated • Lower funding tariffs for HE students compared to primary and secondary education • Cost basis for subsidized study places outdated
Financing: Legitimization • Availability of student loans for many students with attractive repayment	***Financing: Legitimization*** • Many competing needs in case of budget increases (more quality in teaching, PhD

conditions • Full-fee paying option creates access opportunities	schools, post-doc careers, triple helix, etc.) • Opaqueness and subjectivity in allocation of subsidized study places, planning problems through yearly interventions • Subsidized study places particularly benefit students from better socio-economic backgrounds • No subsidized study places for part-time students • Student loans not attractive to some groups, e.g., the "guarantor requirement" forms a big hurdle • Hardly any need-based support nor means-testing mechanism for students from low-income families
Financing: Autonomy and freedom • Large degree of (financial) autonomy for HEIs • Financial autonomy allows entrepreneurial freedom • Substantial level and good framework conditions of resource diversification	***Financing: Autonomy and freedom*** • Heavy reliance on EU structural funds for R&D, which may not be a sustainable long-term situation (plus co-funding problem in case of matching funds) • Relatively low funding from industry/ companies
Financing: Practical feasibility • Substantial outward international student mobility (many systems have problems to send students abroad). This means other countries pay for the instruction costs.	***Financing: Practical feasibility*** • Decentralized system for student loans and scholarships (efficiency risks and problems for HEI with needs assessment) • Debt cancellation mechanisms too generous • Mismatch between academic year and fiscal year

To summarize:

Latvia has a diversified higher education sector including capital, regional, public and private higher education institutions. Universities enjoy a significant amount of financial autonomy which allows for resource diversification. The funding model based on study-places provides some basic stability for the sector and is related to sector-level planning geared towards labor market needs. In addition, Latvia has a high number of full cost-covering fee paying students and a significant share of research funding coming from EU funds.

However, as mentioned above, **the system is significantly underfunded in comparison to not only other European countries but, importantly, also vis-à-vis the government objectives and legally-set targets per study-place**.

While, in principle, public funds are allocated according to study places, i.e., educational needs, this is *de-facto* nearly the only public funding instrument, and thus has to accommodate many competing needs (partially related to research and wider institutional missions) of universities. The small performance-oriented elements, such as small competitive research funds, use criteria which are not transparent to the stakeholders and thus miss the desired effects. In practice, the system is partially opaque and leaves room to subjectivity, both with relation to the allocation of study places and research funds. Also, there are planning problems due to annual interventions (while MoES has a different fiscal year from higher education institutions). The cost basis for the study places in legislation is outdated while universities only receive 80 percent of the defined minimum costs.

The current strong merit-based approach to budget places and grants raises questions about equity, as subsidized study places and scholarships are available to the "best students" and thus are most likely to particularly benefit students from better socio-economic backgrounds. It can be questioned if this really stimulates academic excellence within the whole system. The decentralized loan system appears to be generous, but in reality creates practical problems and appears not to be attractive to those who might need it most. There is very little needs-based support or means-testing mechanisms for students from low-income families.

The current public funding model appears as a largely input based 'one-pillar' model which, overall, does not represent a balance between stability, performance, and innovation orientation. This also means weaker links between public funding and national and institutional strategies. In addition, the system relies heavily on EU funds, in particular for research and development which might not be a long-term solution to stable research funding while also funding from industry and other private sources appears to be underdeveloped.

More detail and context are provided for all of these points in the full report. Following an introduction, there are three main sections of the report. The first section discusses recent European developments in higher education financing. This is followed by a section on criteria for good funding models, which discusses *general* criteria for good funding models deriving from international practice. Utilizing the current European developments and general criteria for good funding models, the last section provides an overview of the strengths and weaknesses of Latvia's current approach. Notably, Appendix 1 serves as a key resource for the current status of higher education funding in Latvia.

1 Introduction

The report at hand is the first in a series of three papers produced under the World Bank Reimbursable Advisory Service on Higher Education Financing in Latvia between December 2013 and September 2014[1]. The introductory section of this report provides background information on the World Bank's activities in Latvia and, in particular, on the genesis of the engagement concerning higher education financing. The past decade has witnessed a significant amount of discussion on the topic of higher education financing in Latvia, further fueled by the country-specific recommendations by the European Commission, in which the Commission urged Latvia to reform its approach to higher education financing.

Higher education financing was also amongst the topics discussed between representatives of the Ministry of Education and Science (MoES), State Education Development Agency (SEDA), and the World Bank, within the framework of its regular policy dialogue. Going forward, the World Bank has been invited, as an external partner, to develop a proposal for a new higher education financing model in Latvia. The timeline for the development of this proposal is ambitious: nine months. It was also agreed that the proposal itself would be preceded by two papers: (i) an analysis of the strengths and weaknesses of the current approach to higher education financing in Latvia based on European and international good practice (including a description of the status quo of higher education financing); and (ii) a paper 'zooming in' on the 'strategic fit' of the current funding model with expressed priorities for the sector. This paper is the first output of this exercise (item i). The Bank team would like to express its gratitude to MoES and SEDA as well as to several stakeholders (see Appendix 3) who provided valuable input and thereby supported the preparation of this report.

1.1 Latvia and the World Bank Group

Latvia joined the World Bank in August 1992. In the following years, the Bank supported Latvia's transition and preparation for the upcoming EU integration through lending, policy dialogue, and analytical and advisory services. Latvia 'graduated' from the Bank in 2007: the last active Bank-financed investment project closed in June 2007. However, Latvia continued to work with the Bank through analytical and advisory services in several areas, including public finance management, international emissions trading, public-private partnerships, and regional development.

The relationship between Latvia and the Bank changed again in the context of the economic crisis. Indeed, Latvia was one of the European countries that suffered most from the crisis with GDP contracting by 25 percent, and a rise in unemployment by more than 20 percent (Aslund and Dombrovskis, 2011, p. ix). In December 2008, the Bank committed EUR 400 million in loans to help stabilize Latvia's economy. The Bank's contribution was part of a EUR 7.5 billion package, which included

[1] The term 'higher education' is used in this report in a comprehensive and inclusive manner; i.e., it is used to describe any form of tertiary education at the post-secondary level, if not specified otherwise.

contributions from the International Monetary Fund, the European Union, and Nordic countries. The first EUR 200 million loan, approved by the World Bank Board in September 2009, supported the Government of Latvia in its efforts to strengthen the banking sector and maintain long-term financial stability. The second EUR 200 million programmatic loan aimed to protect vulnerable groups in two phases, by: (i) supplementing the government's social safety net programs during the economic contraction; and (ii) laying the foundation for structural reforms in the social sectors over the medium term.

To assist with its post-crisis recovery and further its reform agenda, the Latvian government subsequently expressed interest in continuing its work with the Bank, especially through knowledge services. The Bank has been, either recently or currently, engaged in several reimbursable advisory services (RAS) activities with the Latvian government, including the following:

Latvian Social Protection System: Under this activity, the Bank developed a number of analytical products aimed at informing Latvia's social protection reforms—in particular, measures aimed at helping the long-term unemployed and inactive parts of the population reintegrate into the labor force. Four analytical products were delivered and a workshop was arranged to discuss the initial findings. The report was launched in June 2013 in Brussels with the European Commission.

Enhanced Competitiveness of Latvia: The Bank provided reimbursable advisory services for the Latvian Ministry of Economics (MoE) on industrial policies aimed at enhancing the country's competitiveness. The objective of the engagement was to support the Latvian MoE in its efforts to design and implement modern industrial policies to increase the competitiveness and productivity of the Latvian industry. The Bank provided methodological advice and examples of international good practice.

Higher Education Finance Reform: In the autumn of 2013, an agreement was reached that the Bank would provide recommendations for a reformed higher education financing model through reimbursable advisory services. The RAS agreement was signed on December 2, 2013. The report at hand is provided as one output under this latter engagement, whose details are provided hereafter.

1.2 Project Context and Objectives

In recent years, many countries have evaluated how different approaches to financing higher education can help achieve or enforce strategic policy objectives. Both the International Monetary Fund and the European Commission have encouraged Latvia to assess how its financing approach could provide better alignment with incentives and thereby support policy objectives, which may cover, for example, issues of access, quality, and efficiency (see e.g., IMF, 2013). The European Commission attributed particular importance to financing reform in one of its 2012 Country Specific Recommendations for Latvia, encouraging the country to:

> "[…] continue reforms in higher education, inter alia, by implementing a new financing model that rewards quality, strengthens links with market needs and research institutions, and avoids fragmentation of budget resources" (European Commission, 2012, p. 7).

…followed by the 2013 Country Specific Recommendations for Latvia with a strong emphasis on the need to:

> "[…] implement the planned reforms of higher education concerning, in particular, the establishment of a quality-rewarding financing model, reform of the accreditation system, consolidation of the institutions and promotion of internationalization" (European Commission, 2013).

To help address these concerns, the Ministry of Education and Science considered involving the World Bank as a long-standing external partner. An Expression of Interest was sent to the Bank on April 16, 2013. Both parties continued refining the objectives and terms of reference of the engagement until December 2, 2013, when a legal agreement was signed by three parties—MoES, SEDA and the World Bank—that focused on two main project objectives:

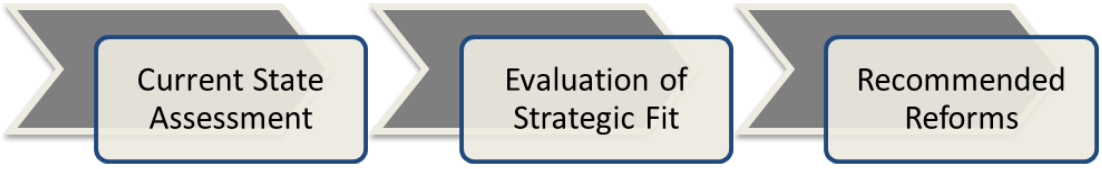
1. Identify the strengths and weaknesses of Latvia's current approach to financing higher education.
2. Recommend a reformed financing model that takes into account the criteria developed by MoES and good international practice while [also] taking into account stakeholder consultations.

Latvia seeks a new financing model that rewards quality, strengthens alignment of market needs and higher education outputs, avoids fragmentation of budget resources, and furthers other policy objectives to achieve a modernization of its higher education system. For the purposes of this engagement, the higher education funding system consists of four major dimensions:

1. Financial autonomy of higher education institutions (lump sums, freedom to spend money flexibly and to build financial reserves, financial regulations, discretion to set salaries, etc.).
2. Diversification of financial sources for higher education institutions (EU funding, tuition fees, market revenues, external research income, transfer activities, etc.) and the rules and regulations related to these.
3. Instruments of public funding of higher education (allocation from state budget, research funding, etc.).
4. Student funding and support (in particular with regard to tuition fees, loans, scholarships, etc.).

1.3 Project Methodology

The engagement began in December of 2013 and is tentatively scheduled to conclude in the autumn of 2014[2]. To accomplish its objectives, the project has been planned for three stages, each with a corresponding deliverable.



The first stage in the project's methodology is an assessment of Latvia's current approach to financing higher education. Findings and observations are based primarily on existing data, a document review and stakeholder interviews (see Appendix 1 and 3 for a list of documents reviewed and stakeholders interviewed). The deliverable at this stage—this report—is an overview of the state of higher education financing in Latvia, as well as an assessment of its perceived strengths and weaknesses in light of European developments, good international practice, and input from stakeholder consultations. These stakeholder consultations played an important role in the preparation of the report at hand and will also constitute a very important input for subsequent steps. The stakeholder roundtable on December 3 helped the team to gain a better initial understanding of higher education financing in Latvia, also in light of ongoing European developments. Extensive stakeholder interviews in early February provided an opportunity to discuss criteria for good funding models and explore strengths and weaknesses of the current Latvian funding system with respect to these criteria; thus, they served as a key input into Chapter 4 and other sections of this report. Finally, the main findings of the report are going to be discussed during a workshop with stakeholders scheduled for March 12, 2014.

The second stage of the project focuses on how well the current financing approach aligns with the policy objectives specified by MoES. Whereas the first stage provides a broad analysis of the strengths and weaknesses of the current funding approaches, the second 'zooms in' on the 'strategic fit' of the current financing system, taking into account the specific strategic objectives which the government has defined for higher education. Findings and observations at this stage will rely on the analysis of data and documents, interviews with key stakeholders, and prior team experience with various international practices. The deliverable will identify to what extent the existing approach does or does not align with policy objectives, as well as begin to surface potential alternatives in order to improve the linkages between higher education funding and strategy.

[2] On December 2, 2013, immediately after the signing of the Legal Agreement, the Bank team conducted a workshop with MoES staff. This was followed by a first stakeholder roundtable on December 3, 2013. The Bank's Latvia Higher Education Financing team consists of World Bank staff as well as international and local experts bringing together expertise from a range of countries (Finland, Germany, the Netherlands, Latvia, the wider European area, and the United States) and contexts. The Legal Agreement foresees 36 weeks, or roughly nine months, for the execution of the task (leading to August 2014). However, it might be recommended to conduct a dissemination event after the academic break, i.e., in autumn 2014.

In the third stage, the focus is on proposing reforms for Latvia's higher education financing system, specifically those that can be accomplished in the medium term, i.e., the next three-to-five years. The recommendations will take into account the policy and strategic objectives discussed in the project's second stage. The deliverable of this third phase will actually take the form of two complementary documents: (i) a proposal for a medium-term higher education financing system that takes into account the previous strengths and weaknesses analysis and clearly identifies next steps, and (ii) an information note for the government.

The implementation of recommended reforms, though a critical step, is not included within the scope of the existing agreement. Implementation activities which, for example, would focus on (i) structural aspects of the model proposed, (ii) procedural aspects of introducing the new financing model, and (iii) capacity building, are currently the sole responsibility of the Government of Latvia. In any case, the nature of the World Bank team's task is the preparation of a *proposal*. The decision to accept and implement the proposal will, however, lie with the Government of Latvia and the sector.

1.4 Clarifying the Project Scope

Throughout the cooperation, including the Bank's current engagement on higher education financing in Latvia, it is important that all parties revisit and refine expectations in accordance with the nature of the agreement. Since this engagement is focused on potential ways in which financing higher education can further policy objectives, it is important to clarify what is feasible in order to manage expectations for what the financing approach can, and cannot, do. Thus, the second stage of this project, in which critical policy and strategic objectives of MoES are in focus, is a necessary step to the resulting recommendations put forth in phase three.

It is also important to recognize in advance that some policy objectives may only be impacted to a certain degree by the funding approach, and that alternative actions might be considered more advantageous or suitable in achieving specific objectives. For example, if a government seeks to encourage degree completion, then it may consider tying a portion of its funding allocation to the number or share of graduates produced by each institution, provided that such a model is accompanied by suitable quality assurance arrangements. Certainly, though there are many other initiatives outside the realm of funding that could also help ensure more and better graduates (e.g., better secondary school preparation for higher education), it might be the case that they come at a different "cost" (e.g., longer time frame or additional political capital). The same would apply to the goal of consolidating programs or institutions. Financing can be one means of supporting and providing incentives for consolidation; however, it is not the only policy instrument in this context.

Finally, it will be important to consider higher education financing reform as one aspect of systemic reform for which sufficient support needs to be mobilized in order to ensure success. While exhaustive lists of demands and 'maximum positions' might indeed go some way in satisfying a certain political clientele, their chances of implementation in practice will be limited. Higher education reform, in

general, and higher education financing reform, in particular, has an important political economy dimension, i.e., considerations of what might be politically feasible in a given country. Such considerations—while not being the major driver of technical recommendations—should not be completely alien to a financing proposal. While certain steps might be desirable under ideal circumstances, they might not help improve the current situation. The World Bank team's intention is to use a pragmatic approach, which considers such constraints.

Following this introduction, there will be four main sections of the report. The first section discusses recent European developments in higher education financing, in particular with regards to the financial autonomy of higher education institutions (HEIs), their resource diversification, and models of public funding and student funding[3]. This is followed by a section on criteria for good funding models, which discusses *general* criteria for good funding models deriving from international practice—as mentioned above, in contrast to criteria for a suitable funding model deriving from *specific* strategic objectives as established by the Latvian government. The latter topic will be subject to a separate paper under Component 2. Taking into account current European developments and general criteria for good funding models, the last section provides an overview of the strengths and weaknesses of the current approach that the authors have observed. Notably, Appendix 1 provides a broad description of the current status of higher education funding in Latvia which, similar to the chapter on European developments and in addition to some general system features, discusses the financial autonomy of Latvian HEIs, their resource diversification, and models of public funding and student funding.

[3] The term higher education institution (HEI) is used throughout this document in an inclusive manner, referring to all post-secondary institutions of the higher education sector (universities and non-universities), if not specified otherwise.

2 European Developments in Higher Education Financing

As stated above, higher education is an increasingly important topic on national policy agendas for many countries. The widespread assumption that higher education is a significant driver of national economic competitiveness in an increasingly knowledge-driven global economy has promoted the importance of higher education (cf. Santiago et al., 2008, p.13). Alongside the increased policy importance of higher education, many systems also face serious challenges maintaining their quality and relevance, increasing the efficiency and securing equity in the field of higher education. New higher education financing models are being developed in many European countries as policy responses to these challenges.

Financing higher education has also been one of the key policy issues in European higher education policy. The European Commission's "Delivering on the Modernisation Agenda for Universities: Education, Research and Innovation" (European Commission, 2006) report identified several areas of European higher education requiring special attention. One of these areas is the funding of higher education. The Commission expressed the need to "reduce the funding gap and make funding work more effectively in education and research", and proposed that national governments spend at least 2 percent of GDP—including both private and public funding—on higher education (in 2011 Latvia spent a total of 1 percent of GDP on higher education (Eurostat, 2012, p.88)). The Commission also recommended more output-oriented funding and called upon universities to take more responsibility for their financial sustainability. Furthermore, the Commission recommended that member states "critically examine their current mix of student fees and support schemes in the light of their actual efficiency and equity" keeping in mind that "free access [...]does not necessarily guarantee social equity (European Commission, 2006, p. 7)".

In 2011, the European Commission built on the Modernisation Agenda by publishing another communication, "Supporting growth and jobs – an agenda for the modernization of Europe's higher education systems" (European Commission, 2011). In this communication, the Commission emphasized the importance of designing funding mechanisms in support of excellence; reaffirmed the need to achieve an adequate level of public and private funding for higher education; called for funding mechanisms to be linked to performance and introduce an element of competition; and recommended the facilitation of access to alternative sources of funding, including using public funds to leverage private and other public investments in higher education (e.g., through match-funding arrangements).

The recent financial and economic crisis has had profound negative effects on national and regional economies throughout Europe. Around half of the European countries have reduced their education budgets during the years 2011 and 2012 (European Commission/EACEA/Eurydice, 2013, p. 32). In countries where funding is being cut, higher education institutions have increased their efforts in seeking new funding sources to support their activities. The level of public funding allocated to higher education has not only been reduced, but also the nature and form in which it is provided to HEIs has been changing. In many countries, growing accountability requirements set by the governments have been accompanied by granting HEIs more institutional autonomy. At the same time, the efficiency of

funding in terms of the capacity of HEIs to meet certain policy goals in a cost-effective way is becoming increasingly important throughout Europe. For this reason, it will be a crucial challenge for many governments to re-think both the design and implementation of higher education funding arrangements in order to enhance funding efficiency in the sector (Estermann, Bennetot Pruvot & Claeys-Kulik, 2013, p. 4).

The purpose of this chapter is to provide a short overview of the recent trends related to financing higher education in Europe. It is organized into four sections highlighting the major topics of financing higher education in Europe: models of public funding, resource diversification, financial autonomy, and student funding. Each of these topics includes a brief description of the topic, a short analysis of the latest trends in European higher education systems, as well as Latvia's current position vis-à-vis these trends. An overview of trends as well as Latvian position with respect to trends is presented in a series of Tables (see Tables 5–9). The final section of the chapter offers a brief analysis of higher education as a public or private good, and includes some general insights to be taken into account when developing financing models of higher education.

2.1 Recent European trends in higher education financing

Models of public funding

There are a number of different ways in which to categorize or cluster alternative allocation models in the funding of higher education institutions. A frequently applied categorization distinguishes between negotiated, incremental, formula, and competitive funding (e.g., Eurydice, 2008; Jongbloed et al., 2010). For practical purposes, this report adopts the categorization of Ziegele (2013) who has identified three typical pillars of funding models: (i) basic funding; (ii) performance funding; and (iii) innovation-/profile-oriented funding.[4] Regardless of the diversity throughout higher education systems and funding models in Europe, these three pillars can, to a certain extent, be identified in most systems. Negotiated, incremental, formula and competitive funding are instruments that could be applied within the three specific pillars.

Basic funding can be described as an amount of public funding that remains largely stable over a specific period of time. The purpose of basic funding is to provide predictable and reliable financing that covers the main part of operational costs, thereby enabling HEIs to perform their core tasks of teaching and research (Ziegele, 2013, pp. 73–74). As previously discussed, in most European systems, public authorities distribute basic funding to HEIs through the use of block grants. The overall amount of the block grant may be determined in different ways; through negotiation, incrementally on a historical basis, or via a funding formula. The importance of these different elements in determining the overall

[4] In most European higher education systems, the public funding of research takes place through a *dual support system* meaning that research is funded *both* through basic funding and through innovation-/profile-oriented funding (mainly competitive research grants allocated by intermediary allocated by research councils, national academies or other national/federal intermediary bodies (cf. Jongbloed et al., 2010, p. 53).

amount of the block grant varies across the systems (Estermann, Bennetot Pruvot & Claeys-Kulik, 2013, p. 8).

Incremental funding, where historical allocations play a large role, is becoming less common, and in many systems, has already been replaced by formula-based approaches with input-oriented indicators. In 20 out of 34 European higher education systems, funding formulae were of very large importance in 2008, compared to 1995 when only seven systems attached a large importance to it (Jongbloed et al., 2010, p. 47–48).

Table 1: Importance of input- versus output-related drivers of HEIs operational grants

	Number of systems and relative importance of input-related drivers		Number of systems and relative importance of output-related drivers	
	1995	**2008**	**1995**	**2008**
Extremely important	38	24	3	8
Important	4	18	3	16
Minor importance or unimportant	3	3	39	21

Source: Jongbloed et al., 2010, p. 51

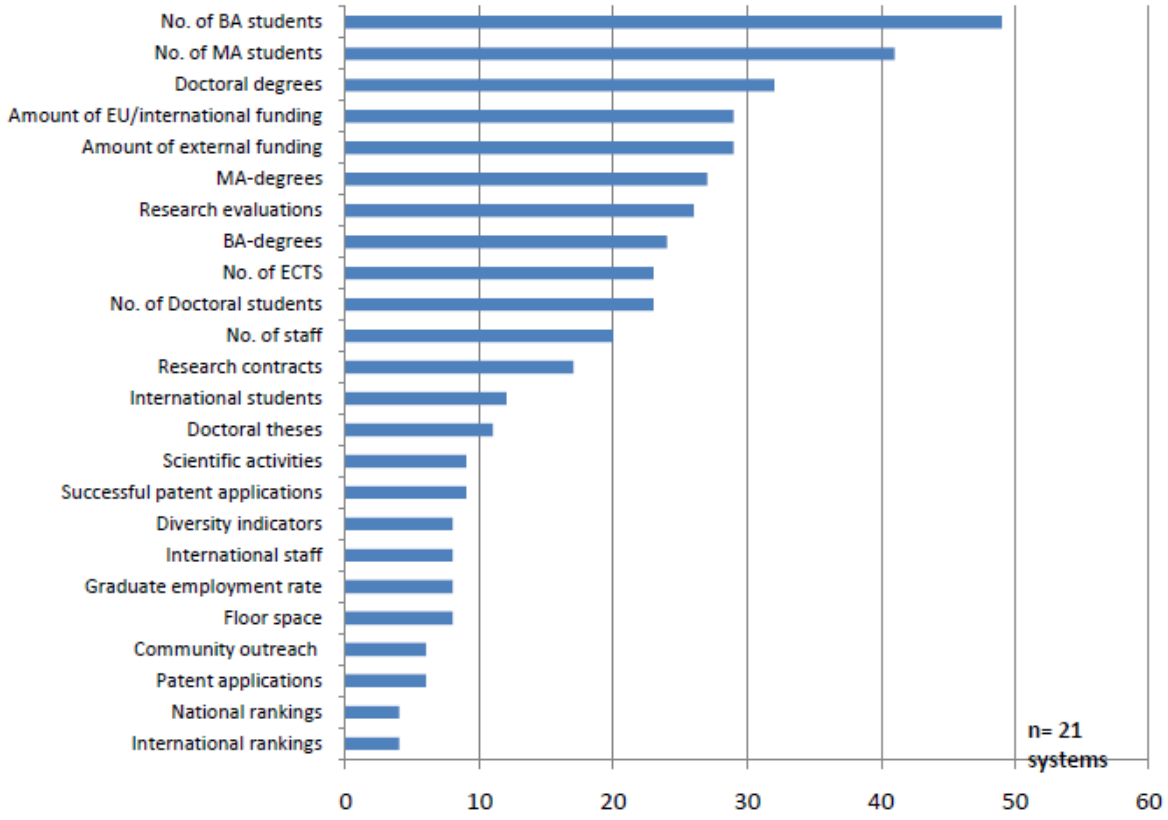
The importance of input and output drivers in determining the operational grant for teaching, research and ongoing activity is shown in Table 1. Input-related drivers remain extremely important or important in almost all European higher education systems. The most important input criteria include the number of students or publicly-funded study places, the number of staff, and past costs of an institution. However, compared to 1995, when there were only 6 systems in which output-related criteria played an important or extremely important role, in 2008, 24 European systems considered output-related drivers important or extremely important. Frequently used output criteria include elements from teaching and research activities: degrees conferred, study credits accumulated, assessment results, indicators related to publications, or competitive research grants (Jongbloed et al., 2010, pp. 49–51). Where funding formulae are used to calculate the block grants, these are largely dominated by input-oriented indicators, namely student numbers (at Bachelor level, then at Master level). The corresponding output-oriented indicators (number of Bachelor and Master degrees conferred) are used less frequently or else have less weight in the formula (Estermann, Bennetot Pruvot & Claeys-Kulik, 2013, p. 9). Output-oriented indicators are typically part of the performance-based funding pillar, to be presented next.

The main purpose of *performance-based funding* is to create financial incentives for HEIs to produce outputs and outcomes in certain areas of their activities by applying formula funding[5]. Performance-based funding arrangements reward HEIs *ex post*—that is, they reward their past teaching and research performance (Ziegele, 2013, p. 74). Despite the simplicity in terms of definition, it seems that

[5] Or performance contracts which are related to part of the budget.

performance-based funding is understood very differently across Europe. Nevertheless, a majority of systems consider their funding allocation mechanisms at least partially performance-based for teaching (via graduate-related criteria) and partially or mainly performance-based for research, where indicators related to publications and external research funding are normally taken into account (see Figure 1).

Figure 1: Relative importance of indicators used in funding formulae in European higher education systems



Source: Estermann, Bennetot Pruvot & Claeys-Kulik, 2013, p. 10

The third typical pillar of funding models, *innovation-/profile-oriented funding,* underscores intentions expected to be carried out in the future. Concretely, this type of funding is often utilized under the label of "targeted/earmarked funding", "competitive funding", "strategic funding", "project-based funding", "excellence initiatives" or "centers of excellence"—to name but a few. Regardless of the name, all these funding instruments basically aim to finance and incentivize innovations, research (or sometimes teaching) excellence, or the development of institutional profiles in advance (cf. Ziegele, 2013, pp. 73–74, p. 78). Innovation-/profile-oriented funding can take many forms, such as funding that is allocated on a competitive basis (e.g., the "Strategic Innovation Funding" in Ireland, established as a mechanism for institutional restructuring and modernization) or a non-competitive basis directly allocated to HEIs (e.g., Higher Education Innovation Funding scheme in the United Kingdom, which focuses on knowledge exchange). Innovation-/profile-oriented funding includes excellence initiatives (e.g., Germany's

"Excellence Initiative"), as well as project funding programs for carrying out strategic research found in many European countries[6].

Performance contracts (synonymous with target agreements, performance agreements), whereby certain goals are agreed between the funding authority and HEIs, are used in different ways within the funding pillars. With performance contracts, certain objectives, often in line with national strategic priorities and institution-specific missions, are agreed between the funding authority and HEIs. If performance contracts are connected to basic funding, they usually do not have to have a direct impact on funding. However, if the performance objectives are measured clearly and linked to financial incentives, performance contracts often become an organic part of performance-based funding arrangements[7]. Concretely, those performance contracts would be very broad, based on framework agreements, but might also take the form of more detailed contracts, highlighting specific and measurable objectives and targets (Jongbloed et al., 2010, p. 30). In this case, they would belong to the third, innovation/profile-oriented pillar. Over the recent years, performance contracts have become a common feature in many European higher education systems. Currently, performance-based contracts are in use in 15 out of 22 European systems. These contracts have a clear impact on funding allocations for instance in Finland, Austria, Germany and the Netherlands (Estermann, Bennetot Pruvot & Claeys-Kulik, 2013, p. 11).

When taking into account the latest developments of higher education funding models across Europe, some clear trends can be observed. First, it is likely that basic funding becomes more dynamic and demand-oriented (rather than supply-oriented) through the "money-follows-the-student" approach, where rewards and incentives are based more heavily on factors related to student enrolment, rather than on staff numbers or past institutional costs. Second, the relevance and weight of the performance-based funding, including the formula funding, is likely to increase. Performance-orientation sets HEIs incentives for improvement of quality and efficiency; both of which are crucial aspects in the increasingly competitive environment. Third, it is foreseeable that the relevance and weight of the innovation-/profile-oriented funding component increases especially in the form of competitive and targeted funding with a special emphasis on innovation and excellence, of which both are considered important prerequisites for regional or national competitiveness. Furthermore, it is likely that performance contracting becomes more widely used within the funding pillars due to the increasing performance-orientation in public funding modalities (Ziegele, 2013, pp. 74–79).

To summarize:

- Incremental funding is being applied less frequently, and in many systems has been replaced by formula-based approaches.

[6] See http://www.excellence-initiative.com/

[7] It is important to note that performance contracts are applicable to all three funding pillars (basic funding, performance-based funding, innovation-/profile-oriented funding) and not restricted to only performance-based funding arrangements.

- Although input-related drivers remain important in almost all European higher education systems, the use of output-related criteria is also continually increasing.

- It is likely that basic funding of HEIs will become more dynamic and demand-oriented (rather than supply-oriented).

- The relevance and weight of the innovation-/profile-oriented funding component is likely to increase; especially in the form of competitive and targeted funding.

Input-related and formula-based drivers of the basic funding pillar have also been important in Latvia, but, contrary to many other European systems, the current funding model does not offer significant incentives for greater performance- and output-orientation. The innovation-/profile-oriented funding component in Latvia is currently composed of a number of different types of smaller and larger third-party funding streams (including EU Structural Funds) but not included in the system of state funding.

Resource diversification

Resource diversification (a.k.a. income/revenue diversification) can be understood as a generation of additional income through new or existing funding sources that contribute to balancing the income structure of the institution (Estermann & Bennetot Pruvot, 2011, p. 26). In many European higher education systems, HEIs have been encouraged to diversify their revenues and reduce their dependence on public funding. As a result of this, many countries have decided to grant more financial autonomy to HEIs to encourage a differentiation of institutional missions and diversification of resources (Jongbloed et al., 2010, p. 10). The relative proportion of expenditure on HEIs from private sources increased in 16 out of the 19 European countries for which OECD data are available, between 2000 and 2010. Countries in which the increase has been more significant include the United Kingdom (from 32 to 75 percent), Portugal (8 to 31 percent), Slovakia (9 to 30 percent), Italy (23 to 32 percent) and Austria (4 to 12 percent), with EU21 average (14 to 23 percent) (OECD, 2013, p. 207).

There are a number of alternative ways to categorize HEI sources of income. Traditional categorization includes (i) operational grants allocated by public authorities for ongoing teaching and/or research activities; (ii) tuition fees (or other fees) paid by the students; and (iii) third-party funding, including all project and contract funding received from public, international and private sources (e.g., research council funding, ministry funded, specifically targeted policy programs, EU funding, contract research, and contract teaching) (Jongbloed et al., 2010, p. 44).

In 2008, European public universities received on average 67 percent of their funding from public sources through operational grants. About 12 percent was from private households in the form of tuition fees. Third-party funds represented the remaining 21 percent. Table 2 below shows the development of income categories over the period 1995–2008. A move towards a higher share of tuition

fees (from 8 to 12 percent) and third-party funds (from 15 to 21 percent) as well as a lower share of operational grants (from 78 to 67 percent) all show increasing resource diversification.

Table 2: Average proportion of public HEIs' main income categories in 1995 and 2008

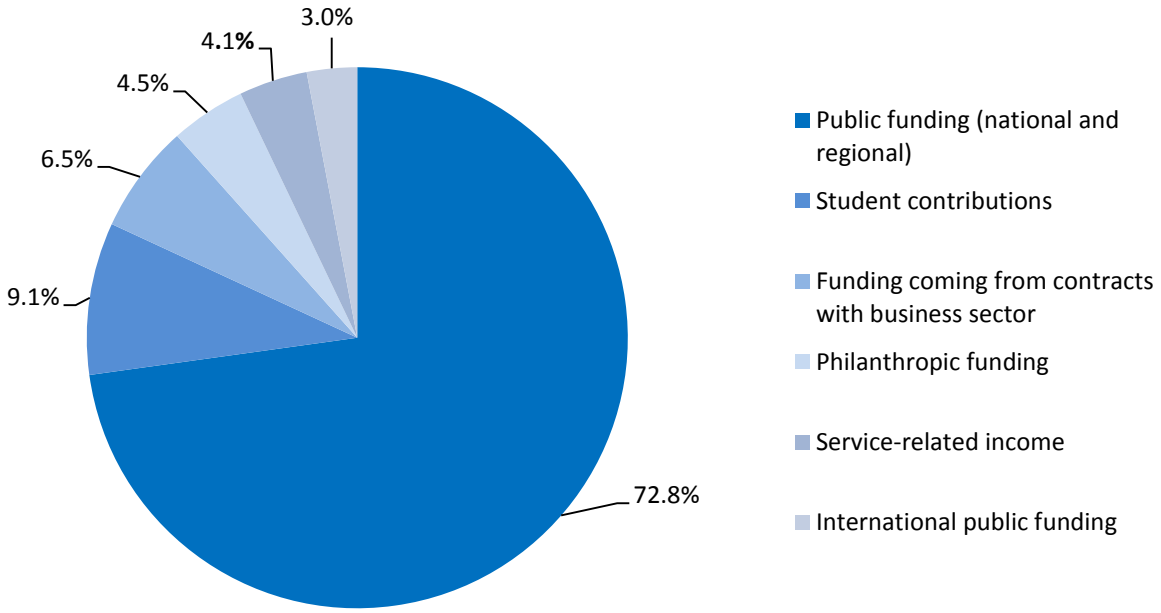
	2008	1995
Operational grant	67 percent	78 percent
Tuition fees	12 percent	8 percent
Third party funds	21 percent	15 percent

Source: Jongbloed et al., 2010, p. 44

A recent study conducted by the European University Association also confirms the existing trend of increasing resource diversification (Estermann & Bennetot Pruvot, 2011)[8]. *Direct public funding* continues to be the most important income source for HEIs in Europe, representing on average 73 percent of HEI income (see Figure 2). Although direct public funding is often allocated as a block grant, public authorities tend to also use competitive and targeted funding more frequently than before. Co-funding requirements, whereby institutions are requested to finance part of the activities, are also becoming more frequent (Estermann & Bennetot Pruvot, 2011, p. 8).

[8] Figures presented in Table 2 and in Figure 2 are not directly comparable due to the differences in data collection and methodology.

Figure 2: Average income distribution in European HEIs in 2008



Source: Estermann & Bennetot Pruvot, 2011, p. 27

Student financial contributions (i.e., tuition fees and other fees), represent a significant income source in some countries (on average 9 percent of HEI income). Student financial contributions have the potential to constitute a large income source. Especially in view of the economic downturn, the inclusion or introduction of fees continues to be at the heart of the political debate around funding models for higher education. However, in this respect, European countries seem to be moving in different directions. For instance, some of the Nordic countries (Finland, Sweden, Denmark), in which fee-free access to higher education has been a longstanding policy principle, have recently implemented fees for foreign (non-EU) students and have thereby added a cost-sharing element in their systems. On the other hand, countries like Austria, Estonia and the German states have decided to abolish fees for their domestic students and rely more on public funding (cf. Estermann & Bennetot Pruvot 2011, p. 8; pp. 30–33).

Other sources of funding together account for nearly 20 percent on average of the total income structure of European HEIs. This includes *income generated from contracts with the private sector* (6.5 percent) *philanthropic funding* (4.5 percent), *income generated by the provision of services* and financial activities (4.1 percent) and funding received from *international public organizations* (mainly from EU) (3 percent).

According to the same EUA study, it should be noted that specifically European funds are not always identifiable in the universities' income structure; this may be for instance the case of structural funds, which are delivered by the national or regional authorities, and may be thus labeled as national/regional

funds. Overall, these types of additional income source can exceed 10 percent of the average universities' income in most systems. According to EUA, a worrying trend seems to be that in some countries, European funds are perceived as a mechanism to compensate decreases in national public funding. From the perspective of long-term sustainability, this is highly problematic. Moreover, European funds are often allocated on a competitive basis and therefore success in the competition requires institutional capacities and resources that in turn depend on financial means (Estermann, Bennetot Pruvot & Claeys-Kulik, 2013, p. 8).

Resource diversification is facilitated by an institutional legal status enabling HEIs to behave entrepreneurially in terms of costing and pricing of activities, internal allocations, decision-making on commercial possibilities, and responsive supply of educational programs and research activities[9]. Furthermore, incentives for resource diversification can also take the form of matching funds linked to funding generated from outside sources as well as (tax) incentives to stimulate philanthropic giving to HEIs (Santiago et al., 2008, p. 248). It seems that a positive correlation exists between the degree of diversification of the income structure of the university and its perceived degree of staffing and financial autonomy. Noticeable positive correlations can be found in particular between income diversification and the ability of the university to invest in stocks and shares on the financial market, to borrow from banks or to carry over financial surpluses (Estermann & Bennetot Pruvot, 2011, p. 41).

In order to implement their strategies and policies regarding the diversification of higher education funding, including in particular private sources of funding other than households, almost all European countries have developed an incentive of some sort for HEIs and/or private partners. The most commonly adopted incentive has been to offer tax relief for donors/sponsors/private partners of HEIs (adopted in 20 out of 33 systems) or to provide a regulatory framework authorizing institutions to own intellectual property rights (adopted in 13 out of 33 systems), as well as financial or other support for partnerships with the private sector (adopted in 12 out of 33 systems) (Eurydice, 2008, p. 81). Many European governments have also influenced income diversification strategies through the modalities under which they allocate funding to the HEIs. For instance, specific criteria in funding formulae aimed at encouraging external funding, or the extended use of competitive funding, project funding and targeted funding can all offer strong incentives for resource diversification (Estermann & Bennetot Pruvot, 2011, pp. 46–47)[10].

[9] If HEIs do not know the costs of their activities, it is also very difficult to set adequate prices. For this reason, cost calculation is an essential element in supporting the resource diversification processes. Determining costs also increases transparency on how HEIs spend money and what the real costs of their activities are (more on costing, see Estermann & Claeys-Kulik, 2013).

[10] EUA glossary definition for funding formula: "[A]lgorithm based on standard criteria to calculate the size of public grants to higher education institutions for teaching and/or ongoing operational activity and, in certain cases, research. Criteria include input components and/or performance indicators." (E.g. Estermann, Pruvot & Claeys-Kulik, 2013, p. 6).

The main trends in resource diversification can be summarized as follows:

- During the past 10 years, the relative proportion of HEI income coming from private sources has increased in most of the European countries. This trend is likely to continue in coming years, due to the constraints in maintaining or increasing public spending on higher education.

- In many European countries the share of direct public funding (core funding) has decreased at the same time that the share of fees and third party funding has increased. Nevertheless, direct public funding continues to be the most important funding source for HEIs across most European higher education systems.

- A number of European countries have recently offered financial incentives for HEIs and third parties for actions supporting the greater resource diversification of HEIs.

Compared to many other European systems, resource diversification in Latvia can be considered very high. According to the Law on Higher Education Institutions, financial resources of higher education established by the state are formed from the resources of the State general budget, as well as other income, which institutions of higher education earn by performing activities towards the realization of the aims specified in the constitutions. In 2012, direct public funding covered only about 36 percent total income of HEIs whereas tuition fees (23 percent) and funding received from international organizations (including EU Structural Funds) (21 percent) together accounted nearly a half of HEIs income. Also funding from other sources comprised a relatively high share (20 percent) of HEI income (see Chapter 4 for further discussion).

Financial autonomy

Providing a higher level of institutional autonomy is often expected to improve the performance of HEIs and higher education systems as a whole. It is assumed that the more autonomous HEIs are, the better equipped they are to generate additional resources through fund-raising or efficiency measures, with the freedom to orient their strategy towards available funds, potentially focusing on specific research themes or shifting the balance between education and research. Based on this assumption, many governmental authorities among European countries have granted HEIs more freedom to manage their resources and develop new income-generation policies (Steier, 2003, p. 162; Jongbloed et al., 2010).

Financial autonomy is one of the most significant sub-areas of institutional autonomy[11]. Key dimensions of financial autonomy include at least (1) type of public funding allocated to HEIs; (2) HEIs ability to keep a surplus; (3) HEIs ability to borrow money; (4) HEIs ability to own buildings; (5) HEIs ability to set staff

[11] The European University Association (EUA) has compiled an "Autonomy Scorecard" highlighting four areas of institutional autonomy: organisational autonomy, financial autonomy, staffing autonomy, and academic autonomy. Autonomy Scorecard summaries are available at:
http://www.eua.be/Libraries/Governance_Autonomy_Funding/Scorecard_summaries.sflb.ashx

salaries; and 6) HEIs ability to charge tuition fees (e.g., Estermann, Nokkala & Steinel, 2011; cf. Jongbloed et al., 2010, pp. 41–43; Estermann & Nokkala, 2009, pp. 18–26)[12].

1. *HEIs freedom in internal allocation of public funding*. In Europe, there seems to be a clear trend towards the allocation of public funding through *block grants* instead of line-item budgets. Block grants cover several categories of expenditure and enable HEIs to have greater freedom in dividing and distributing their funding internally according to their needs. In line-item budgeting, funding is allocated to particular items or types of expenditure such as personnel salaries, capital investments, travel expenses, and building maintenance. With line-item budgets, HEIs have significantly less freedom in deciding internal allocations (Estermann, Nokkala & Steinel, 2011, p. 30).

   Currently, in 25 European higher education systems, HEIs receive their basic public funding in the form of a block grant, whereas line-item budgets are applied only in three countries (Cyprus, Greece, Turkey). However, there are differences in how freely HEIs are able to internally allocate the block grant. In 14 systems (including, e.g., Denmark, Estonia, Finland), HEIs have no restrictions on the allocation of funding, but in 11 systems (including, e.g., France, Hungary, Iceland) the funding authority has set more or less restrictive limitations for internal allocations.

2. *HEI ability to keep a surplus*. HEIs might either have a right to accumulate surplus from public funding or else are required to return any potential surplus to the funding authority at the end of the financial year. Currently, in 27 European higher education systems, HEIs can keep a surplus either without restrictions (15 systems) or else with some restrictions (12 systems). In contrast, only in 4 systems (Cyprus, Greece, Ireland, Lithuania) are HEIs unable to keep the surplus.

3. *HEI ability to borrow money*. Currently, in 23 European higher education systems, HEIs are allowed to borrow money from financial markets either without (7) or with (16) restrictions set by the external authority. In only 7 European higher education systems (Greece, Hesse in Germany, Hungary, Norway, Portugal, Switzerland, Turkey) are HEIs not allowed to borrow money at financial markets.

4. *HEI ability to own their buildings.* In 22 European higher education systems, HEIs are able to own their buildings. However, HEIs are not necessarily able to autonomously decide on the sale of their assets; in only 8 systems are HEIs able to sell their buildings without restrictions set by the external authority (including, e.g., Hungary, Lithuania, Sweden). In 6 systems, HEIs are not at all allowed to own their buildings (three German states, Hungary, Lithuania, Sweden).

[12] Data for these dimensions has been obtained from the European University Association's online database "University Autonomy Tool" at http://www.university-autonomy.eu/dimensions/financial/. The database contains data from 29 European higher education systems and mostly describes the state of HEI autonomy in late 2010.

5. *HEI ability to set the salaries of their staff*. Salaries for senior academic staff can be determined freely by HEIs in only five European systems (Latvia, the Czech Republic, Estonia, Sweden, Switzerland)[13]. In all other (28) systems, the ability of HEIs to set salaries is restricted in one way or another (e.g., salary bands are negotiated with other parties or they are prescribed by an external authority for all staff)[14].

6. *HEI ability to charge tuition fees*. Universities' ability to set fees and decide on their level is often essential to ensuring their financial capacity, since it enables the institution to generate new funding streams through private contributions. In Europe, there are great differences across the systems in collecting and setting the level of fees. These differences depend mainly on the level of study (Bachelor, Masters, Doctoral level) as well as on student origin (national/EU-students and non-EU students) (see Table 3).

Table 3: Setting tuition fees in Europe

	Universities free to set tuition fees	Cooperation universities/external authority	Ceiling set by law or external authority	Fees set by law or external authority	No fees
National and EU students/ Bachelor level	EE, HU, LU, LV	CH	IT, LT, NRW (DE), PT, UK	AT, CY, ES, FR, NL, TR	BB (DE), CZ, DK, FI, GI, HE (DE), IE, IS, NO, PLC, SE, SK
National and EU students/ Master level	EE, GR, HU, IE, LU, LV, PT, UK	CH	IT, LT, NRW (DE)	AT, CY, ES, FR, NL, TR	BB (DE), CZ, DK, FI, HE (DE), IS, NO, PL, SE, SK
National and EU students/ Doctoral level	EE, IE, HU, LT, LU, LV, NL, PT, UK	CH	IT	AT, CY,ES,FR,TR	BB (DE), CZ, DK, FI, GR, HE(DE), IS, NO, NRW (DE), PL, SE, SK
Non-EU students/ Bachelor level	EE, HU, IE, LT, LU, LV, NL, PT, SE, SK, TR, UK	CH, DK, PL	IT, NRW (DE)	AT, CY, ES, FR, GR	BB (DE), CZ, FI, HE (DE), IS, NO
Non-EU students/ Master level	EE, GR, HU, IE, LT, LU, LV, NL, PT, SE, SK, TR, UK	CH, DK, PL	IT, NRW (DE)	AT, CY, ES, FR	BB (DE), CZ, FI, HE (DE), IS, NO

[13] Though there is a lower-bound limit for Latvia, as discussed in Chapter 4.
[14] In EUA autonomy clustering, HEIs ability to set staff salaries is included under the area of "staff autonomy". See EUA's "University Autonomy Tool" at http://www.university-autonomy.eu/dimensions/staffing/.

Non-EU students/ Doctoral level	EE, IE, LT, LU, LV, NL, PT, SK, TR, UK	CH, HU, PL	IT	AT, CY, ES, FR	BB (DE), CZ, DK, FI, GR, HE (DE), IS, NO, NRW (DE), SE

Source: Estermann, Nokkala & Steinel, 2011, p. 35

Generally speaking, European HEIs are more autonomous in setting fees for non-EU students than for national/EU students, whose fees are often set by either an external authority or not levied at all. For instance, in 8 European systems, HEIs are free to set tuition fees at the Masters level for domestic/EU Masters students, whereas in 10 systems, fees are not collected at all (at Bachelor level fees are not collected in 12 systems and at doctoral level in 12 systems). In 11 systems, universities are allowed to collect fees from domestic/EU Masters students, but external authorities in one way or another influence the process of setting the level of tuition fees (Estermann, Nokkala & Steinel, 2011, p. 34).

The following main trends in financial autonomy have been observed in Europe (cf. Estermann, Nokkala & Steinel, 2011, pp. 36–37):

- The overall level of financial autonomy across Europe has increased significantly over the last 15–20 years. In 2008, HEIs in 28 countries had a high or medium level of financial autonomy whereas this was the case across only 19 countries in 1995 (Jongbloed et al., 2010, pp. 41–43).

- Although the level of financial autonomy has increased in all of the aforementioned dimensions, this is particularly the case in the use of block grants. On the other hand, block grants have been accompanied by more stringent accountability measures, some of which have involved reducing the capacity of HEIs to manage funds as they see fit.

- In most systems, HEIs are not required to return a surplus to the public funding authority, although their ability to retain surpluses has also been questioned lately as a result of the economic crisis.

- More European countries now allow their HEIs to borrow money on the financial markets.

- HEIs in many systems have at least formally increased their financial autonomy by gaining ownership of the buildings they occupy.

- In most European systems, HEI ability to freely set staff salaries remains restricted.

- In a number of systems, there has been a noticeable move towards student contributions in the form of tuition fees, although in some systems, fees have also been abolished. Setting the level of fees is often regulated by external authorities, especially in the case of domestic/EU students.

Compared to other European countries, Latvia scores high in the area of financial autonomy. Currently, it is 4th among the ranked 28 European higher education systems in EUA's "University Autonomy Scorecard". The financial autonomy of higher education institutions is defined in the Law on Higher Education Institutions. Institutions of higher education are financed by the founders. The funds of the State general budget to state-founded institutions are allocated as one-year block grants that are split into broad categories. The methodology of appropriating the state budget funding is specified by the Cabinet of Ministers Regulations No. 994. Latvian universities receive a one-year block grant that is split into broad categories. They may keep a surplus and borrow money, providing they have the approval of an external authority[15]. That is, institutions of higher education report annually on the implementation of the budget to the Minister for Education and Science and the Minister of the relevant field, or the founder of the institution of higher education. Latvian institutions are also free to set salaries for their staff and tuition fee levels for all student groups. However, the Cabinet of Ministers Regulations No. 836 set the minimum wage rate for academic staff. Institutions are also able to own buildings. The Law on Higher Education Institutions states that the property of HEIs may include land, movable property, immovable property and intellectual property. State institutions of higher education have the right to make use of their property in order to achieve the aims indicated in their statutes. The property of state institutions of higher education is administrated separately from state property, which has been transmitted into their possession by the Cabinet of Ministers.

Student funding

Student funding—that is, *student contributions* (mainly tuition fees or other fees paid by the students) and *student financial support systems* (mainly grants, loans)—is clearly among the most controversial issues in the sphere of financing higher education. Questions about fees and loans tend to meet criticism in all countries on the grounds of their expected negative effects on equity. On the other hand, tuition fees and student loans (instead of grants) are also gaining popularity on the grounds of equity in many countries. Tuition fees—combined with adequate and well-targeted student support schemes—generate additional revenues for HEIs, thus enabling increases in participation rates. Tuition fees and loans are also regarded as more equitable by some authors since they transfer part of the instruction costs to those who also will directly benefit from education (Vossensteyn et al., 2013, p. 15).

Tuition fees: In general, tuition fee policies can be divided into (1) up-front tuition fees vs. deferred tuition fees; and (2) universal tuition fees or no tuition fees vs. dual track tuition fees (cf. Johnstone & Marcucci, 2010, pp. 104–107)[16].

1. *Up-front tuition* fees are payable at the time of matriculation and fee levels do not depend on a student's (or his/her family's) income level. *Deferred tuition fees*, on the other hand, are often paid upon graduation on an income-contingent basis once the graduates' income has reached a

[15] In the case of Latvia, this would be the Ministry of Education and Science [authors].

[16] Tuition fees are understood here as annual contributions paid by students to cover all or part of tuition costs in higher education. They include also other contributions of students to different administrative costs (known as "administrative fees" such as entrance fees, registration fees, certification fees) (cf. Estermann & Bennetot Pruvot, 2011, p. 5).

certain agreed-upon threshold. Income-contingent loans are the most frequently-used way of deferring the tuition fee to the future. In addition, so-called "graduate tax" arrangements might also be considered a variation of the income-contingent loan scheme, whereby students who have attended higher education free of charge are responsible for paying income surtax throughout their working lifetime (Marcucci & Usher, 2012, p. 6). In Europe, at present only in the UK (England, Wales, Northern Ireland) has a deferred tuition fee system in the form of income-contingent loans been implemented (see Country Example 1).

2. In systems applying *universal tuition fees* or *no tuition fees*, all students either pay or do not pay tuition fees regardless of their academic merit or income level. However, in a *dual track tuition fees system* (a.k.a. "publicly subsidized study places" or "state-funded study places"), a certain number of free or very low cost study places are awarded to a selected number of students chosen by the public authority, while other places are available to qualified, but academically lower performing students on a tuition fee-paying basis (Marcucci & Usher, 2012, p. 6). Tuition fee-free study places are generally awarded on the basis of academic merit, although financial need might also be taken into account. In addition to Latvia, other European countries applying the study place system include Hungary, Lithuania and Slovenia, where the majority of students benefit from state-funded places. In Latvia, 55 percent of 1st cycle students and 40 percent of 2nd cycle students pay fees (Eurydice, 2013).

COUNTRY EXAMPLE 1: ENGLAND

Background

- Following the major transition in higher education funding that has been effective since September 2012, there have been systematic cuts to public funding for higher education institutions.
- Underlying 2012 reforms is a two-pronged approach designed to (i) restructure higher education financing around tuition fees, and subsequently (ii) increase the amount of financial support directly available to students, in the form of income-contingent loans and grants.
- These changes to the tuition fee and financial support system, have, among them, resulted in a three-fold increase in tuition fees in the year 2012/13.

Tuition Fees

- Prior to September 2012, fees for students pursuing 1st cycle programs were capped at GBP 3,375. Students enrolled as of September 2012 are required to pay fees ranging from GBP 6,000 (EUR 7,290) to GBP 9,000 (EUR 11,100) (maximum) per academic year, depending on the level set by individual higher education institutions. Part-time students have their fees capped at GBP 6,750 (EUR 8,200). In 2nd cycle programs, fees are unregulated.
- Students are not required to pay up front and can apply for a loan to cover the full fee. Repayments are income-contingent, and managed automatically through the UK tax system ("Pay as You Earn-PAYE") at a rate of 9 percent of income earned above GBP 21,000 (EUR

25,530) per annum. Following a policy change in 2010, the student loan is indexed in line with inflation, with interest set at 3 percent (a change from the previous 1.5 percent). Students can, however, make voluntary payments to repay the loan at any time.

- In contrast, students pursuing 2nd cycle programs face widely varying, unregulated fees and, with only some exceptions, do not have access to financial support structures.

Financial support for students

- In addition to the basic tuition fee loan offered to students, they might also be eligible for a need-based grant of up to GBP 3,354 (EUR 4,080), which is offered to full-time students from household incomes of less than GBP 25,000 (EUR 30,390). In 2012/13, 40 percent of first-cycle applicants were awarded a full grant and 14 percent were awarded a partial grant.
- Full-time students are also entitled to apply for a maintenance loan, which is intended to cover living costs for students over a 10-month period for the duration of their course or program. The maximum loan offered is between GBP 4,375 (EUR 5,320) and GBP 7,675 (EUR 9,330), depending on whether the students live in or outside of the family home, and on whether or not they are based in London. The modality of repayment is the same as for the tuition fee loans. In contrast to financial support for tuition fees, which, according to EU laws has to be granted to all students from the EU, support for maintenance is restricted to students from England.
- For HEIs that charge more than GBP 6,000 (EUR 7,297), National Scholarship Program (NSP) awards must be offered alongside these programs in order to target students from disadvantaged backgrounds. These awards might take the form of bursaries, fee waivers and "in-kind" support, such as access to personal laptops, etc. In addition to this, many institutions also offer other bursaries and scholarships for students for students from underrepresented socioeconomic groups.

Sources: Eurydice, 2013; Vossensteyn et al., 2013.

Although in the majority of European countries students pay tuition fees, there are nevertheless great differences in terms of which students pay, what they receive in return, and how much they pay. European countries fall into two groups when considering tuition fees as an HEI income source (Estermann, Bennetot Pruvot & Claeys-Kulik, 2013, pp. 7–8):

- **Group 1.** Tuition fees typically represent around 5 percent or less of HEIs income in the Nordic countries (Iceland, Norway, Sweden, Finland, Denmark), as well as in Austria, Belgium, the Czech Republic, France, and Germany. Due to legislative restrictions, none of the Nordic countries collects fees from domestic/EU students, although recent changes in national legislation across Sweden, Finland (on an experimental basis), and Denmark mean that they are now able to charge tuition fees from non-EU students.

- **Group 2.** Tuition fees typically represent around 10 percent or more of the HEI average income, and, as such, constitute the most important income source after public funding. Countries in this group are, e.g., Hungary, Ireland, Italy, the Netherlands, Latvia, Poland, Slovakia, Spain, and the

United Kingdom. The highest maximum fees at Bachelor level (first cycle) reach more than EUR 5,000 per year, e.g., in Ireland, Lithuania, Hungary, Slovenia, the United Kingdom, and Turkey (Eurydice, 2013, p. 4).

Many European countries that have previously introduced tuition fees later decided to abolish them either entirely or partly (see, e.g., Country Example 2). For instance, although Hungary introduced tuition fees in 1994–95, it subsequently abolished them in 1998 while introducing a private income-contingent loan scheme. Ireland also abolished its tuition fees in 1995, although reintroduced them in 2008. In Austria tuition fees of EUR 727 per year were put in place in 2001, but abolished again in 2008. Germany has moreover gradually given up on charging tuition fees. After enabling states to introduce tuition fees in 2007, those states that did introduce fees have been abandoning this practice in recent years. Currently, 15 of the 16 German states enable studying to be free of charge (Bavaria decided that fees are not in force as of the winter semester 2013/14). Only in Lower Saxony must students pay fees of up to EUR 1,000 per academic year, although it has decided to abolish them from the next academic year (Vossensteyn et al., 2013, p. 18; Eurydice 2013).

COUNTRY EXAMPLE 2: ESTONIA

Background

- The Estonian higher education system was one of the European systems experiencing public funding cuts of up to 10 percent in the period from 2008 to 2012. While recovering from the global recession, the higher education budget eventually stabilized in 2011 and even increased in 2012. Since research funds have not yet returned to pre-crisis levels, the result has been a greater reliance on European funds.

State-funded study places

- In Estonia, higher education institutions—both public and private—are eligible to receive public funding from the state commission ("state-commissioned places"). The state commission effectively operates through a contract between the Estonian government and any given higher education institution, whereby the former purchases a certain number of graduates from the respective institution in question. Between 1995 and 2004, approximately 80 percent of public funding for these institutions was provided in the form of study places, which institutions receive in the form of a block grant.
- State-funded places are allocated by higher education institutions on the basis of academic merit, whereby students who score above a certain threshold in the entrance examinations qualify for these places at public HEIs. These places are set by the government as a function of labor market demands.

Tuition Fees

- Prior to academic year 2013/2014, students in Estonia that qualified for a state-funded place did not have to pay fees, whereas all other students had to cover the full costs of their tuition. Both

public and private institutions were free to set their own fees; although, in the case of the former, these were capped at an increase of 10 percent each year.

- As of 2013/14, however, the government introduced a new fee system, whereby students at public HEIs are able to study without any fees, providing that they achieve at least 30 ECTS per semester and 60 ECTS per year. Anything short of this entitles HEIs to charge the student for each ECTS not obtained, providing that the cost per ECTS does not exceed EUR 50 (EUR 100 for arts, medicine, veterinary, dentistry and EUR 120 for aircraft piloting). Fees for private institutions are not regulated by the government.

Financial support for students

- In addition to state-funded places, the public sector also contributes to higher education funding in the form of direct student financial support, such as grants and student loans. From 2013/2014, a new, less merit- and more need-oriented study grant system has been implemented, whereby students are assessed on account of either (i) their household income or (ii) on academic merit. These grants—ranging between EUR 750 and EUR 2,200 per academic year for need-based grants and EUR 559 and EUR 841 per academic year for merit-based grants—are offered to approximately 17 percent of all students enrolled in state-funded places at HEIs, providing they are either Estonian citizens or temporary residents whose stay does not exceed the designated period of study. Tax benefits for parents are also available, depending on the status of the student concerned.
- Alongside grants, full-time students are also eligible to apply for state-guaranteed loans, whose maximum amount cannot exceed EUR 1,920 per academic year.

Sources: OECD, 2007; EUA, 2012; Eurydice, 2013

Student financial support: Many European countries mix and match different types of grants (universal, merit-based, need-based) and loans (commercial or publicly supported, mortgage-style, income-contingent), and so the relative importance of different types of grants and loans varies significantly between the systems.

According to the Eurydice review (2011, pp. 61–62), *grants schemes* are rarely universal, i.e., apply to all students in a given system (only in Denmark and Sweden), and are provided on the basis of financial need or academic merit, or a combination of both. Instead, need-based grants are most frequently used in European higher education systems. In fact, among all countries offering grants, only Iceland and Montenegro do not apply need-based grants. Although merit-based grants appear less often in the higher education systems, 20 out of 39 European systems still apply some sort of merit-based schemes. However, it should be noted that offering grants *solely* on the basis of academic merit raises several equity concerns. It is quite unlikely that academically-gifted students with relative financial ease would be dissuaded from attending higher education on the exclusive basis of not having a merit-based grant. Grants are, therefore, likely to serve as an effective policy instrument to promote equity of access if they are used primarily to facilitate the access of students who are simultaneously academically-able *and* financially-needy. In countries where grants (or state-funded places) conferred exclusively on a merit-

basis are common (e.g., Eastern European countries), a reliance on pure academic merit is seen as the only fair and proper criterion for student selection and financial support. However, merit is hardly ever "pure", i.e., completely independent from certain socio-economic characteristics. It is quite well known that academic merit at the point of entry into higher education often depends on prior educational opportunities, which again, are often closely associated with the socioeconomic background of the student (Santiago et al., 2008, p. 223).

A mixture of both need- and merit-based criteria for grants is present in some systems such as Belgium (Flemish Community), Greece, and Italy. The countries that provide students with the highest amounts of need-based grants—with a maximum in excess of EUR 5,000 per academic year—are Belgium (Flemish Community), Denmark, Ireland, Spain, Italy, Austria, Portugal, Finland, UK (Wales), and Switzerland. In Germany, Liechtenstein, and Norway, there is a mixed system of grants and loans where part of the amount is given as a grant and part of it has to be paid back as a loan (Eurydice, 2013, p. 5).

Table 4: Proportion of first and second-cycle students paying fees and receiving grants in academic year 2009/10 in 31 European HE

	Minority receives GRANTS systems	Majority receives GRANTS systems
Minority pays FEES systems	5	7
Majority pays FEES systems	14	4

Source: Eurydice, 2011, p. 45

Table 4 above collates information from two key characteristics related to student funding. The first is whether or not the majority of students pay fees, whilst the second is whether or not the majority of students receive support in the form of grants. By examining these two characteristics together, four main categories of systems seem to emerge across the European landscape. First, there are systems where the majority of students pay fees and also receive grants. There are four national systems that occupy this category: Cyprus, Netherlands, Slovakia, and the UK (Wales and Northern Ireland). Secondly, a category of systems that is far more numerously populated refers to occasions where a majority of students pay fees, while a minority receives grants. Altogether there are 14 systems categorized in this way, including, e.g., Ireland, France, Romania, Bulgaria, Belgium, and Spain. The third model refers to instances where a minority of students pays fees, while a majority receives grants. This model is in effect in seven European systems: Denmark, Malta, Finland, Sweden, UK (Scotland), Liechtenstein, and Norway. The final, fourth model comprises systems where only a minority of students pay fees and receive grants. This group consists of five systems: Germany, Greece, Lithuania, Hungary, and Austria (Eurydice, 2011, pp. 45–47).

Publically-supported student loan systems exist in approximately two-thirds of European countries while in 11 national systems student financial aid is based exclusively on grants. In 10 systems, loans are universal: that is, they are made available to all students (e.g., Denmark, Lithuania, the Netherlands, Slovakia, Finland). One significant difference between grants and loans is that need-based criteria are

relevant in all except in two systems for grant allocation, but only considered in two loan systems (the Walloon Community of Belgium and Poland) (Eurydice, 2011, pp. 52–54).

To summarize:

- Student funding continues to be among the most controversial issues in the sphere of financing higher education in Europe. Political debates are quite often more ideological than pragmatic. Due to the complexities related to tuition fees (or absence of fees) and student support, more comprehensive and multi-dimensional analysis are often needed in determining various equity aspects of student funding arrangements.

- There is no general European trend. Some European countries that have previously introduced tuition fees, have later decided to abolish them either entirely or partly. At the same time, other European countries have decided to increase the share of private investment by allowing public HEIs to introduce fees or charge higher fees while at the same time promoting equity of access by restructuring their student support systems.

- Need-based grants are the most frequently used modes of student support across European higher education systems.

Latvia applies a dual track tuition fee system with—in some cases—relatively high fees and relatively many fee-paying students[17]. The Latvian higher education system offers mainly merit-based support in the form of state funded study places, and relies more on government-subsidized, mortgage-style loans offered by commercial banks, rather than grants.

Overview of European trends and position of Latvia

Exploring the main European trends in higher education financing helps to position Latvian financing model vis-à-vis these trends. Nevertheless, it should be emphasised that European trends are not the main criteria to evaluate the strengths and weaknesses of Latvian financing model. What seems to be popular or good in Europe does not automatically mean that it would be applicable or good for Latvian higher education financing. European funding structures and models are tightly bound to national features (society, economy, demographics, etc.) of different countries, and it is reasonable to assume Latvia differs from these features with many respects.

Drawing from the previous sections of this chapter and Appendix 1, the following Tables (Tables 5 to 9) offer an overview of Latvia's position vis-à-vis European trends:

[17] For details see Chapter 4.

Table 5: Models of public funding- European trends and Latvia

MODELS OF PUBLIC FUNDING	European trend	Current situation in Latvia	Position of Latvia
Structure of funding model	• **Three** typical **pillars** for allocating **public funding** for HEIs can be found from most of the European countries: **(1) basic funding;** **(2) performance funding**; and **(3) innovation-/profile-oriented funding** • **Performance contracts / target agreements** are in use in 15 out of 22 European	• Latvia applies only the pillar of "**basic funding**" in allocation of core public funding to HEIs • Performance contracts are applied between HEIs and MoES	**Inconsistent** with European trend
Basic funding and performance-based funding : modalities	• **Basic funding: Formula-based** approaches with demand-based **input**-oriented indicators are substituting **incremental funding** with **historical** emphasis (mixed approach is common) • **Performance-based funding:** Majority of systems consider their funding allocation mechanisms at least partially performance-based • In 2008, 24 European systems considered output-related drivers important or extremely important (in 1995: 6 systems)	• Latvia applies **formula funding** mainly with **input-oriented** indicators (funded study places, research equipment) • The overall public budget of the HEIs remains largely constant and develops **incrementally** on a **historical basis** (rather than demand) • Current funding model does not offer **significant incentives** for greater **performance-** and **output-orientation**	**Inconsistent / consistent with** European trend
Innovation-/profile oriented funding: modalities	• **Innovation-/profile-oriented funding** is used more frequently to support national policy priorities and development of institutional profiles • The relevance and weight of the innovation-/profile-oriented funding component is likely to increase; especially in the form of competitive and targeted funding	• The innovation-/profile-oriented funding component in Latvia is currently composed of a number of different types of smaller and larger **third-party funding streams** (including EU Structural Funds) but **not included** in the system of state funding	**Inconsistent with** European trend

Table 6. Resource diversification- European trends and Latvia

RESOURCE DIVERSI-FICATION	European trend	Current situation in Latvia	Position of Latvia
Public / private funding diversity	• **Private expenditure** on HEIs has **increased** in 16 out of the 19 European OECD countries between 2000 and 2010 • **EU21 average** of private expenditure on HEIs was **23%** in 2010	• Private funds (tuition) accounted total **23%** and "other funds" (excluding international/EU funding) **20%** of Latvian HEI revenue in 2012 (Source: MoES, 2014)	**Consistent** with / **ahead** of European trend
Diversity of sources	• Funding of European public HEIs in 2008: -**67%** from **public sources** through operational grants (in 1995: 78%) -**12%** from **private households as tuition fees** (in 1995: 8%) -**21%** as **third-party funds** (in 1995: 15%) • On average, **EU funding** ranges from **3-4%** (EUA 2011) to **over 10%** (EUA 2013) of the total income of HEIs	• Latvian HEIs funding structure on average (2012): -**36% state budget** funding -**23% tuition fees** -**41% "other sources"** (out of which 21% were from international funding, mainly EU Structural Funds) (Source: MoES, 2014)	**Inconsistent** with / **ahead** of European trend

Table 7: Financial autonomy- European trends and Latvia

FINANCIAL AUTONOMY	European trend	Current situation in Latvia	Position of Latvia
HEIs freedom in internal allocation of public funding	• Block grants are used in 25 systems, line-item budgets in 3 systems • No restrictions on the internal allocation of the block grant in 14 systems • Some restrictions for internal allocations of the block grant in 11 systems	• One-year **block grant** split into sub-categories	**Consistent** with European trend
HEIs ability to keep a surplus	• HEIs are able to keep a surplus in 27 systems, not able to keep in 4 systems • No restrictions in keeping a surplus in 15 systems • Some restrictions in keeping a surplus in 12 systems	• State funded HEIs **can keep a surplus** with an approval of external authority	**Consistent** with European trend
HEIs ability to borrow money	• HEIs are able to borrow money from financial markets	• Latvian HEIs **are able borrow money** with an approval of	**Consistent** with

	in 23 systems, not able to borrow in 7 systems • No restrictions for borrowing in 7 systems • Some restrictions for borrowing in 16 systems	external authority	European trend
HEIs ability to own their buildings	• HEIs are able to own their buildings in 22 systems, not able to own in 6 systems • No restrictions in selling assets in 8 systems • Some restrictions in selling assets in 14 systems	• Latvian HEIs **own** their buildings • Latvian HEIs **can sell** their buildings (restrictions apply in the case of State property)	**Consistent** with / **ahead** of European trend
HEIs ability to set the salaries of their staff	• HEIs are not able to set salaries freely in 28 systems, salaries can be set freely in 5 systems	• Latvian HEIs **are free** to set the salaries of their staff (above the minimum wage)	**Ahead** of European trend
HEIs ability to set the level of tuition fees	• In most European systems, HEIs ability to set the level of tuition fees is restricted by the external authority, especially in the case of domestic/EU students.	• Latvian HEIs **are able** to set their fees at all levels	**Ahead** of European trend
Overview on financial autonomy	• The overall level of financial autonomy across Europe has increased significantly over the last 15–20 years	• HEIs have **a high level** of financial autonomy, Latvia was ranked 4th position in EUA's "University Autonomy Scorecard"	**Ahead** of European trend

Table 8: Student funding- European trends and Latvia

STUDENT FUNDING	European trend	Current situation in Latvia	Position of Latvia
Tuition fees / fees	• **A large diversity** of fee systems, no clear European trend • **Majority of students pay fees** in 28 systems, minority of students pay fees in 13 systems (2009/10) • During the past years, some systems have abolished fees, whereas some systems have introduced fees or raised the level of fees	• Latvia applies a **dual track tuition fee** system • **49% of all students** (full-time and part-time) **pay fees** (37% of full-time and 97% of part-time students) (Source: MoES, 2013) • Compared to many other European systems, **a relatively high fees** are charged in Latvian HEIs	No clear European trend
Student support	• **A large diversity** of student support systems, no clear European trend • **Need-based grants** are most frequently used in European higher education systems, but	• Latvian higher education system offers mainly **merit-based** support in the form of st**ate funded study places**, and relies more on government-subsidized, **mortgage-style**	No clear

	still 20 out of 39 European systems still apply also **merit-based** schemes • Publically-supported student loan systems exist in 2/3 of European countries	**loans** offered by commercial banks, rather than grants	European trend

Table 9: European trends and position of Latvia- overview

European trend	Position of Latvia
Models of public funding	Inconsistent with European trend
Resource diversification	Mixed
Financial autonomy	Ahead of European trend
Student support	No clear European trend

2.2 What do these trends mean for the further analysis?

In the previous sections, European developments have been described. Although sometimes there are clear tendencies, at other times, there are discernible differences. The European trends will be further used in two ways:

- They are the starting point for criteria of assessment, which will be defined in Chapter 4. Some of the trends are clearly seen as beneficial for higher education, such as the trend towards increased autonomy, which is seen as a positive development, since it allows HEIs to adapt flexibly to changing environments while creating adequate incentive structures. The three-pillar model is also a good standard and referent point for public funding models, as it balances different functions of funding. The clear tendency towards performance-orientation, *ex post* and *ex ante*, is also seen as a positive development. Diversification has different implications: on the one hand, it is positive, since it contributes towards the improvement of financial situation and institutional risk spreading; on the other, it might impose severe financial risks on HEIs.

- Tracing European developments also generates ideas for how Latvia might reform the system. In the final proposal/recommendation, European benchmarks will be taken into account; since there is both no need to repeat mistakes made in other countries (for instance, political polarization on the tuition fee issue), and no need to reinvent the wheel if a good solution has been successfully deployed in another context that might also correspond to the Latvian profile.

2.3 Higher education as public and private good

From an economic perspective, HEIs produce outputs that can be categorized as "public" or "private" goods. Using a standard economic definition, public goods (e.g., products, services) are goods that are non-excludable and non-rivalrous. Non-excludability means that a good cannot be provided exclusively to only some individuals in a way that other individuals could be excluded from consuming the same good. This therefore implies that consumption by some individuals does not diminish the consumption levels of others of the same good. In the case of private goods, the situation is the opposite; individuals can be excluded from consuming the service or product if they are not willing or able to pay for it (i.e., a good is excludable), and consumption of a service or product reduces the possibilities of others to consume the same good or service (i.e., a good is rivalrous). In addition, public goods create spillover effects. If they are being offered, people who do not purchase the goods nevertheless enjoy their benefits, e.g., dikes that are used to protect from water floods, etc. A public good has to be provided by the state and funded by taxes, as private markets would not lead to a sufficient provision of the good. A private good does not require state intervention and should be provided by the market.

The public vs. private good argument regarding higher education is an explanation for the diverse tuition fee developments in Europe. In many European countries, politicians tend to "buy" either one of the two positions, often leading to a politically polarized debate where the two positions are opposed in contradiction, leading either to political reform blockades or to an unreliable sequence of introducing and later abolishing tuition fees.

This paper proposes economic analysis and rational arguments to overcome the political impasse. Economists have been clear that there are private benefits to be gained from higher education, meaning that there is rivalry and excludability. But, they are also convinced that there are public benefits of higher education (see Table 10). Public benefits refer to positive externalities of the good, i.e., benefits for society not taken into account in the individual cost-benefit-analysis of the student (hence justifying public funding) [18].

Table 10: Potential private and public benefits from higher education

Benefits from higher education	Private	Public
Economic	Higher salaries	Greater national productivity and development
	Employment	Reduced reliance on public support
	Higher savings	Increased consumption

[18] Even different aspects of the same function can be both, rivalrous and non-rivalrous, as well as excludable and non-excludable. For instance, basic research published freely in the public domain is not excludable, or at least not secretive, while commercial research and development activity is likely to be subject to both rivalry and excludability (Marginson, 2007, p. 312).

	Improved working conditions	Increased potential for transformation from low-skill industrial to knowledge-based economy
	Personal and professional mobility	
Social	Improved quality of life	Nation-building and development of leadership
	Better decision-making skills	Democratic participation; increased consensus; perception that society is based on fairness and opportunity for all citizens
	Improved personal status	Social mobility
	Increased educational opportunities	Greater social cohesion and reduced crime rates
	Healthier lifestyle and higher life expectancy	Improved health
		Improved primary and secondary education

Source: Steier, 2003, p. 167

Higher education has elements of both private and public goods. People can be excluded from higher education, from a particular institution, from a particular program, or from a particular teacher. This exclusion can be based, for example, on differences in academic merit; i.e., given that an individual has to meet certain conditions in order to have access to, and to graduate from, higher education institutions. However, nobody can be excluded from the higher productivity graduates exhibit at the labor market and the advancements made through their creativity and application of skills after successfully completing quality higher education. There is also wide agreement that higher education creates both public and private benefits as well as costs, and that those who benefit from higher education should also contribute to its costs (equity principle). Higher education creates multiple social and economic public benefits thereby justifying significant public investments in higher education. However, individuals (mainly graduates) also receive significant private economic and social benefits, making the recommendation that they bear directly at least part of the costs of their training, both efficient and equitable.

Economic rationales provide no arguments for 100 percent public or private funding. Differences in opinion nevertheless arise when determining what the “right” balance might be between benefits and costs and on how to measure up the benefits and costs (especially in terms of money). In any case,

several scholars consider the full public-funding model of higher education as inequitable and regressive, based on the fact that higher education students are disproportionately from middle- and higher-income families (e.g., Barr, 2004; Bevc & Uršič, 2008; Johnstone & Marcucci, 2010)[19].

OECD's statistical yearbook *Education at a Glance* provides calculations annually on the public and private costs and benefits of higher education. According to OECD (2013, p. 135), it is very difficult to generate correct and comprehensive estimates of public and private returns, meaning that rates of return must always be interpreted with caution. Nevertheless, large discrepancies between private and public returns "should prompt additional analysis to assess whether government tax schemes or subsidies are strongly distortionary" (ibid., p. 135). Based on OECD calculations, average net private returns in EU21 countries slightly exceed public returns (ibid., pp. 144–147). However, in some specific countries (Estonia, Turkey, Poland, Slovakia) private returns are considerably higher than public returns. On the other hand, e.g. in Belgium, Greece and Italy public returns are moderately higher than the private ones.

This leads to the following conclusions:

- Higher education is a "mixed good" creating both public and private costs and benefits.

- Determining the exact public and private costs and benefits is difficult from a conceptual and methodological perspective. However, one-sided financing models emphasizing only public or only private dimensions (full public or full private funding) are neither adequate nor equitable.

- Since the real balance between private and public costs and benefits is unclear, there is a wide range of potential arrangements between private and public funding that might be considered when developing an appropriate financing model. However, neither a pure market model nor a 100 percent free higher education model is within this range.

In the case of Latvia, the first conclusion would be that economic analysis provides no basis for the polarized political discussions of the previous years, favoring either the argument of the pure private or public good. Acknowledging economic arguments might help in avoiding political reform blockades. Secondly, if we take the mixed good approach to the individual level, the dual track model seems to be problematic. Each student benefits from private returns and contributes to positive externalities. The economic rationale would instead suggest a certain cost-sharing for each student rather than an overall cost-sharing for all students combined. Third, the major question for Latvia will be where to move from the current situation: towards greater private or public funding shares (or might the current situation be adequate)? The status quo section analysis where public and private funding in Latvia stand in

[19] For instance, Hölttä, Jansson and Kivistö (2010) note problems related to equity in Finland where higher education has been free of charge for all students for several decades. Despite the fact that equal opportunity and equity have been the driving forces in higher education policy now for four decades, the middle and upper classes are still year after year clearly overrepresented in the cohorts obtaining higher education—especially in those disciplinary fields and programs that yield the highest private rates of return (Medicine, Law, Business).

comparison to other European countries, and concludes that, at present, total societal investment in higher education is too low due to both limited public funding for HE and R&D, as well as limited private contributions, particularly in the R&D sector. Private contributions through tuition fees tend to typically come from students who cannot attend HE on subsidized study places, and have to pay the full costs. Analysis shows that it is in particular students from more advantageous backgrounds that profit from the subsidized (tuition-free) study places.

3 Methodology of analysis: Criteria for Good Funding Models

3.1 Methodology to assess strengths and weaknesses

At first glance, the assessment of strengths and weaknesses of higher education funding appears easy: review the performance of the Latvian higher education sector, evaluate the ways HEIs are well- or under-performing, and relate the performance to the underlying funding system. This sounds simple, however, there is a major analytical problem: performance of higher education is not only determined by the level and the structures of funding, but also by many other factors, such as human resource policies, systems of quality assurance, the Bologna process, the governance structures, etc. Performance is a result of various factors, and it is highly difficult to isolate the influence of funding from all other factors.

In order to identify the effects of the funding system on performance of the sector, two approaches will be employed as part of this project:

- In the following analysis (component 1), the current funding model will be analyzed against criteria for good funding models that were derived from European experiences. The analysis of European experiences leads to a catalogue of criteria for which the assumption could be made "if the criterion X is fulfilled then we could expect potential effects on performance in area Y".
- In a subsequent component of this project, Latvia's funding model will be analyzed to assess its alignment with national policy objectives for higher education. From current strategic documents, a catalogue of strategic objectives will be derived and an analysis will show if the current elements of the funding system are consistent, neutral or inconsistent with the objectives. This will be done in component 2 of this project.

3.2 Sources for the assessment criteria

In order to analyze the strengths and weaknesses of the current higher education funding system in Latvia and recommend adequate reform strategies, one must start with clear normative criteria representing the features of a "good" higher education funding model. In other words, any

recommendations should be based on and justified by mutually agreed-to criteria. The criteria will then be transformed into tools for empirical analysis, especially in the interview guidelines.

The responsibility for identifying the criteria is first assumed by the World Bank team, and then subject to a feedback cycle with the MoES to ensure they are consistent with the intentions. The criteria are derived from three different sources:

- International experiences and standards regarding the features of "good" funding models;
- Feedback and approval from the MoES; and
- Stakeholder assessment of importance of the different criteria as obtained through interviews.

A major source for the following criteria is the analysis of European trends in Chapter 3, as the following two examples could illustrate:

- The European trend towards financial autonomy with lump sums, the right to keep surpluses, ownership of buildings, etc. is regarded as good practice and included in the set of criteria; and
- The practice of the "three-pillar models" of state funding (balancing stability, performance-orientation, *ex post* and *ex ante* incentives) is also used to define the criteria below.

Discussions with stakeholders revealed additional aspects, for instance, the importance to legitimize budgets by transparent calculations or the question of whether the performance-orientation is feasible in terms of availability of performance indicators.

From the various sources, we identified six major criteria to assess the financing system of Latvian higher education:

- Strategic orientation;
- Incentive orientation;
- Sustainability;
- Legitimization;
- Autonomy and flexibility; and
- Practical feasibility.

These will now be explained in more detail and broken down into a checklist that will be applied to analyze the Latvian higher education funding system. Some of the criteria refer both to institutional funding of universities and individual funding of students, while others are only relevant in the context of institutional funding (see Table 6). The criteria will be explicitly used to identify strengths and weaknesses of the Latvian funding system in Chapter 4.

3.2 Explanation of the assessment criteria

Strategic orientation

Promote national strategies. Higher education financing has to promote national strategies and objectives. If a country, for instance, wants to focus on the internationalization of higher education, then institutions should be financially rewarded if they contribute to this objective. Similarly, if a country wants to consolidate its university sector, then financial structures should not lead to a fragmentation of funds. If equal access is the top goal, then financial measures to attain this are most important. In short, funding should serve the strategies. For individual student funding, access and equity are major issues.

Promote institutional profiles. It is not, however, only about national strategies. Within the framework of national goals, a higher education system has to develop institutional diversity. The differentiation and specification of institutional profiles should also be promoted by funding. The realization of institutional objectives should be related to financial support.

A separate note (in the next phase of the project) will discuss specifically the 'strategic fit' of the current funding model vis-à-vis articulated strategic objectives. For this reason, this paper only analyzes the strategic criteria in an abstract way, investigating whether there are mechanisms able to link strategies and funding together, rather than interrogating specific strategic objectives in Latvia.

Incentive orientation

Create performance rewards and sanctions. Funding should have links to institutional performance; high performance should be rewarded, and sub-par performance should be sanctioned. The measurement of performance should follow political objectives and academic standards. Performance orientation induces financial flexibility and supports change processes financially. It is also important that the financial incentives reach the individual actors in teaching and research; hence, the reward and sanction system of the state should somehow find equivalents inside the higher education institutions. Regarding individual funding, there should be incentives for the efficient completion of one's studies.

Create a competitive environment. Performance-oriented funding is meant to induce healthy competition among universities.

Provide clear, non-fragmented incentives. From research on the effects of performance-oriented funding, we know that it is important to send clear signals with incentive systems. This is promoted by the simplicity and concentration of funding models instead of creating overly complex systems with fragmented effects. Each component of the incentive system and how performance against it will be measured must be clear and mutually understood by the institutions and the appropriate government agency.

Avoid undesired side effects. It could happen that institutions react to incentive systems in a way that leads to undesired effects. For instance, contemporary debate focuses on whether formula-funding systems that reward the number of graduates might increase the number of graduates, but only at the expense of quality, through "grade inflation". Funding systems should therefore be analyzed in terms of these potentially undesirable side effects to determine whether there are measures that can expose and mitigate them.

Balance ex post and ex ante performance orientation. Funding could set performance incentives in two ways: money can either be provided to support planned future performance (*ex ante* reward) or else past performance is measured and linked to funding (*ex post* reward). The instruments usually linked to *ex ante* performance funding are target agreements, while the typical *ex post* instrument is formula funding (leading to the conclusion that these two instrumental options should be combined).

Sustainability

Stability. Freedom of teaching and research needs a stable financial basis. Funding models, especially in the case of public funding, should, to a certain extent, include base funding components which they build upon incrementally. This would ensure a basic ability of the institutions to fulfill their academic tasks. Base funding could, for instance, be linked to study places or staff numbers.

Guarantee continuity in funding mechanisms. A funding model is able to generate the desired effects if its features are reliable over an extended period of time. If the character of performance incentives is to permanently change, then the institutions would expect changes and not adapt to the incentives. If there is not sufficient time after a change in funding models before the next change is made, then there is little chance to work with the system productively. Continuity also applies to individual student funding.

Allow long-term planning. Universities have to engage in multi-period strategic planning in order to develop their institutional profiles. Long-term planning becomes feasible if there are also elements of multi-period financial stability. Developments in teaching and research are furthered by the ability to predict and calculate future budgets and to make plans on that basis.

Take into account cost differences. There are cost differences that need to be considered, especially between different academic fields. For instance, it is substantially more expensive to "produce" a graduate in engineering than in business studies. Basic funding should take into account these differentiated cost levels.

Promote risk spreading and management. Higher education institutions generate income from a variety of financial sources. The diversification of sources could lead to effective risk spreading instead of, for example, over reliance on a single major sponsor or revenue stream. A funding system should promote diversification and create incentives for the institutions to engage in financial risk management.

Revealing financial risks and developing strategies for risk mitigation could also support financial stability.

Legitimization

Provide unambiguous and balanced funding structures. The funding mechanisms should be understood by all relevant decision-makers in the higher education system. Definitions and indicators should be clear, and the components of the funding system should not include contradictions; in other words, different incentives should lead in opposing directions. The clear orientation promotes legitimacy of the system, as it will appear linked to clear messages and policy objectives. A further, crucial criterion for the legitimacy of funding systems is "keeping the balance" in different respects. Conflicting objectives in funding systems should be balanced; for instance, in an indicator-based funding element there should not be too few indicators (as this could be seen as unfair) but also not too many indicators (as this could lead to fragmented incentives). In a typical "three-pillar model" (see also Chapter 2) there should be a legitimate balance between basic funding, performance-oriented funding, and innovation-oriented funding of future developments. Finally, performance-driven state funding models need a balance between automatic, indicator-based allocations and discretionary funding, including negotiations about specific funds.

Make funding transparent. Understandable and predictable funding is not possible without transparency of the funding mechanisms. Allocation models should explain budgets and why one institution receives more or less funding than others. If discretionary funding decisions are made, everyone should know how these decisions are made, who decides, and based on which criteria. Accountability standards should include instruments to make the balance sheets of institutions and all kinds of funding streams transparent.

Support the perception of fairness. Funding systems should lead to a perception of fairness (with the above mentioned transparency as precondition). Fairness depends on the perceptions actors have about the criteria. In the case of higher education funding, fairness typically implies that the different situations of institutions have been taken into account when allocating funds (for instance, differences in profiles/subject structures) and that funding mechanisms should not merely perpetuate the historical distribution of funds among institutions, especially if these distributions were based on decisions made a long time ago with no connection to current circumstances. Fairness is also a major issue in the context of individual student funding.

Autonomy and flexibility

Allocate lump-sums. Financial autonomy means that higher education institutions should be able to spend their money flexibly and according to their own decisions. Full autonomy includes the lack of line-item allocations, the ability to build financial reserves and borrow money in the capital market, the financial responsibility for infrastructure and buildings, and the freedom to decide on salary issues. Public funds should come as a lump-sum, and the institutions should have all rights to generate private

funds. From the perspective of individual student funding, autonomy for students' decisions should be guaranteed.

Guarantee academic freedom. Funding mechanisms must not restrict academic freedom. Public and private funding of teaching has to be without influence on the specific content of teaching (that said, a government could prioritize a number of students in different fields or universities, and industry could decide to develop a study program together to train staff academically). Research funding should not determine the outcomes of research (but of course there could, for instance, be target agreements related to research funding explicitly identifying publications and dissemination activities as desired outcomes)[20].

Implement an adequate level of regulation. Financial autonomy should not lead to a situation without any financial rules. Rules should help prevent the misuse of funds and could also set common standards. Regulation has to create transparency and foster trust but should not restrict the necessary flexibility.

Guarantee autonomy of internal resource allocation. In the previous criterion on incentive orientation, we argued that incentives of state funding models should be perpetuated inside the university to reach the individual researcher or teacher. The design of these internal allocation models, however, should be determined by the university and unregulated by the state. This allows higher education institutions to link incentive mechanisms to their own specific profiles and strategic priorities.

Promote accessibility of diverse income sources. Regulation should allow accessibility to all kinds of funding sources. State universities should be allowed to acquire all kinds of resources. This could, for instance, imply the right to establish private commercial enterprises by public universities. Another relevant issue is the promotion of philanthropy through (tax) legislation. Accessibility to various sources is also an issue for individual student funding.

Practical feasibility

Use available data. Funding models might require new or enhanced data; for instance, new performance indicators may need to be gathered if performance-oriented elements are introduced or new cost data may be needed to support a field-oriented differentiation of funding. Such models could only be introduced if the necessary data is available. Formula funding could be difficult to implement if no data is available to adequately represent the political objectives included in the formula. If, for example, there are no country-wide statistics on outgoing or incoming students, it will be difficult to integrate student mobility in formula funding, representing the goal of internationalization. There are also examples in the context of student funding: if a country has problems generating income data, this has an effect on the construction of student loan access or repayment criteria.

[20] In this context, it is interesting to note that the EUA scorecard ranks Latvia 4th in financial autonomy but 20th in academic autonomy (Estermann, T., Nokkala, T. And Steinel, M., 2011).

Ensure administrative efficiency. The development and administration of allocation models is costly. For instance, the introduction of target agreements can lead to a cost-intensive process of negotiations. Additionally, the development and maintenance of required data could demand intensive data collection efforts. Efficiency (or one could also say the minimization of transaction costs) of funding tools is an important criterion that has to be balanced against other priorities; for example, the level of precision employed to measure progress towards political objectives must be balanced with the efficiency of developing and monitoring the indicator(s).

Respect methodological standards. Modern funding instruments, such as performance-oriented funding of target agreements, have been implemented in many countries in recent years. This has led to a backlog of experience and lessons learned from various methodologies. For target agreements, one could set standards for templates to be used, funding mechanisms, reporting duties, etc. The developments of Latvian models should take into account methodological standards for institutional and individual student funding.

Ensure coherence with funding levels and steering approaches. The reform of funding models should not be undertaken independent of the broader environment. This means that, on the one hand, the combination of all instruments of governance in the higher education sector should result in a coherent approach to steering the system. Funding, quality assurance, student access, regulations, etc. have to be harmonized and lead to a clear idea of steering. On the other hand, the funding model must also be realistic about the revenue levels that could be generated. A differentiated model of resource diversification would make little sense if the government is the only realistic funding source.

3.3 Overview on the assessment criteria applied

Table 11 provided below summarizes the intentions of each assessment criterion. In subsequent stages of the engagement, these criteria were confirmed with representatives of the MoES and discussed in interviews with representative stakeholders of Latvia's higher education system. In Chapter 4, these criteria are applied to Latvia's current higher education funding model to determine its strengths and weaknesses.

Table 11: Overview assessment criteria

Strategic Orientation	Promote national strategies
	Promote institutional profiles
	Create performance rewards and sanctions
	Create a competitive environment
Incentive Orientation	Provide clear, non-fragmented incentives

	Avoid undesired effects Balance *ex post* and *ex ante* performance orientation*
Sustainability	Stability* Guarantee continuity in funding mechanisms Allow long-term planning* Take into account cost differences Promote risk-spreading and management*
Legitimization	Provide unambiguous and balanced funding structures Make funding transparent Support the perception of fairness Allocate lump sums* Guarantee academic freedom
Autonomy and freedom	Implement an adequate level of regulation Guarantee autonomy of internal resource allocation* Promote accessibility of diverse income sources*
Practical feasibility	Use available data Ensure administrative efficiency Respect methodological standards Ensure coherence with funding levels and steering approaches

* Only relevant for institution, not for student funding.

4 Strengths and Weaknesses of Latvia's Current Funding Model

As mentioned before, the four elements of the funding system to be analyzed are state funding (teaching and research), diversification of financial resources, financial autonomy, and student funding. This chapter analyzing the strengths and weaknesses of the system will follow the same four-element structure used both for the European trends in Chapter 2 and the description of the Latvia's current funding model in Appendix 1.

We will begin by presenting a general overview of the strengths and weaknesses of the Latvian higher education funding system, sorted by the list of criteria in Table 11, including a context analysis. After this we will provide a more detailed analysis of the specific elements of the funding system. In this latter

part, each single strength/weakness is presented in the following way: (i) the issue is first briefly mentioned in a box, as well as the assessment criteria from Table 11 in Chapter 3 (section 3.3) that applies is mentioned in brackets; (ii) then a text is added to explain the assessment as a strength or weakness; and (iii) an assumption about potential performance effects is made.

At the end of the analysis of each of the four elements of the funding model, a brief overall assessment is generated, which already indicate potential orientations for reforms at this early stage.

In quite a number of cases, the same issue could be considered both a strength and a weakness, depending on the criteria established. When it comes to designing proposals for reform at a later stage, we will need to make trade-offs in order to try and achieve the right balance.

Before the four elements of the funding system are analyzed, section 4.2 provides an overview and analysis of the "political climate for change" in the Latvian higher education system, as a positive climate for change could be seen as a precondition for all the detailed needs to realize change. Section 4.1 starts off with a short tabular summary of the main strengths and weaknesses observed.

4.1 General assessment of the higher education funding system and its context

The following table provides an overview of the strengths and weaknesses of the Latvian higher education and research funding system. It distinguishes between the context of the funding system and the features of the funding system itself structured by the main criteria for assessment as presented in Chapter 3. Table 12 outlines major issues that are subsequently addressed in greater detail in the following analysis.

Table 12: Overview of strengths and weaknesses

STRENGTHS	WEAKNESSES
Context: strategic orientation	***Context: strategic orientation***
• Diverse system of HE (many institutions, niche players, different profiles, public-private) • Substantial number of private HEIs • Start-up of quality assurance for study programs and research institutes • Research institutes with more mass and focus • High percentage of young people who qualify for HE • Strong autonomous position of HEIs	• Decreasing population • Apparently low political priority given to HE and science (regarding low spending on HE and R&D) • No clear higher education and R&D strategies and priorities • Inconsistent policy measures and political reform blockade because of polarized discussions (public vs. private good) • Many relatively small study programs • High proportion of drop-outs

• Principle openness towards mobility - many students interested in study abroad • High employment rate and high rate of return on HE (graduates earn on average EUR 1,000 per month; 40 percent of employees only the minimum wage of EUR 285 per month) • A functioning data monitoring system (including performance and financial data) • High adaptability of system and HEIs demonstrated in times of economic crisis • MoES and line ministries are multiple voices for the interests of HEIs	• Limited opportunities for excellent students • Tendency to study abroad • Opaque HR structures in HE, with opportunities to have more than one job • High teaching loads for staff, little time for research • Quality assurance for teaching and research only in start-up phase • Low return rates of students who study abroad • Many graduates seeking employment abroad • Low attention for practice oriented competencies • Limited (project) management capacity in HEIs • No annual (financial) report of HEIs • No clear way to consolidation vs. competition yet
Financing: Incentive Orientation • Study places allow national planning according to labor market needs • Study places offered on basis of merit including rotation possibilities stimulate competition • EU structural funds for research allocated with some form of competition • Attract many fee paying students (willingness to pay/additional resources for HEIs) • Competition for subsidized study places and scholarships • Existence of performance contracts between HEIs and ministry	***Financing: Incentive Orientation*** • One-pillar model of state funding instead of several pillars with balanced functions • No real performance orientation in state funding (hence also weak links to national or institutional strategies) • No funding for innovative initiatives • No clear approach to the role of state money for private HEIs • No funding options for research-related developments such as post-docs, knowledge transfer activities etc.
Financing: Sustainability • Study places funding provides cost-oriented stability in the system, but with a "money follows student" element • Availability of substantial EU structural funds for HE and R&D (reason for survival in economic crisis)	***Financing: Sustainability*** • Underfunding of the HE and research system compared to most other European countries and to own governmental objectives • Promised funding increase not yet effectuated • Lower funding tariffs for HE students compared to primary and secondary education • Cost basis for subsidized study places

	outdated
Financing: Legitimization • Availability of student loans for many students with attractive repayment conditions • Full-fee paying option creates access opportunities	***Financing: Legitimization*** • Many competing needs in case of budget increases (more quality in teaching, PhD schools, post-doc careers, triple helix, etc.) • Opaqueness and subjectivity in allocation of subsidized study places, planning problems through yearly interventions • Subsidized study places particularly benefit students from better socio-economic backgrounds • No subsidized study places for part-time students • Full-fee paying option and dual track system creates social inequalities • Scholarships only available to very few and only very best students, not motivating and effective • Student loans not attractive to large groups, e.g., the "guarantor requirement" forms a big hurdle • Hardly any need-based support nor means-testing mechanism for students from low-income families
Financing: Autonomy and freedom • Large degree of (spending) autonomy of HEIs • Financial autonomy allows entrepreneurial freedom • Substantial level and good framework conditions of resource diversification	***Financing: Autonomy and freedom*** • Heavy reliance on EU structural funds for R&D, which may not be a sustainable long-term situation (plus co-funding problem in case of matching funds) • Instead of diversification there is rather replacement of one large source through the other (with increased risk) • Relatively low funding from industry/companies
Financing: Practical feasibility • Substantial outward international student mobility (many systems have problems to send students abroad). This means other countries pay for the instruction costs.	***Financing: Practical feasibility*** • Decentralized system for student loans and scholarships (efficiency risks and problems for HEI with needs assessment) • Debt cancellation mechanisms too generous • Mismatch between academic year and fiscal year

Source: Authors

4.2 Political climate for change

Strengths (political climate)

+	Higher education institutions and policies in Latvia are highly adaptive to changing environments. *(Criterion: practical feasibility)*

The Latvian higher education sector has been affected by public budget cuts of around 50 percent since 2008. Nevertheless, the higher education sector has seemingly endured. Although EU funds have played a major role in this respect, this fact might also be attributed to the ability of HEIs to adapt to the cuts by reducing their costs and by generating new revenues. In general, the Latvian higher education system is able to undergo widespread changes.

Potential performance impacts: Efficiency.

Weaknesses (political climate)

-	The debate about education as a public or a private good is emotional and leads to political blockades. *(Criterion: practical feasibility)*

In economic terms, higher education is a "mixed" good, leading to the necessity of public and private cost-sharing. Contemporary debates in Latvia tend to ignore these facts to a certain extent, adopting polarized normative positions of either complete marketization (private good) or free access for all (public good). These normative positions ultimately lead to political blockades, as they are neither rational nor really feasible. For instance, the 100 percent free access-solution for all students would require substantially greater funds and would enable all students from a more favorable socio-economic background to study for free. This is not realistic in a situation of competing demands for public resources, such as research, health care, or even social security.

Potential performance impacts: Stagnation, necessary changes blocked.

-	The higher education sector is in a situation of drastic underfunding, leading to deficiencies in many respects and consequently to competing demands for higher funding. *(Criteria: practical feasibility, strategic orientation)*

Higher education in Latvia is underfunded. This became clear from the longitudinal analysis of funding in Latvia (having not recovered from financial crisis) in comparison to (i) other European countries and (ii) the government's own targets (documented in "optimal" and "minimum" prices for study places). This leads to deficiencies in many respects: there are doubts concerning the quality of studies, the decreasing quality of services (sometimes universities are even not adequately heated in winter), no time for professors to conduct research, and almost no funding for "triple helix" developments (as suggested by the Higher Education Council). Given this situation, it is quite clear that any proposed

higher education financing reform must create a kind of "package" involving an improvement of the system and its effects and an increase in public funding. Instead of "public good" discussions, reform proposals will have to focus on creating added value, with more public funds. A major task in the future strategic development of HE in Latvia must strike a balance between setting policy priorities and addressing the financial consequences that this will have for the public budget. Strategic choices must be made, and incentives must be set to achieve ambitions.

Potential performance impacts: Restrictions to performance in all respects, quality problems, problems with international competitiveness of the sector.

–	Politically the whole education sector is often seen as one unit in terms of funding. This is a problem for the higher education sector. *(Criterion: practical feasibility)*

Taking into account the budget for the entire education system, it seems to be argued that Latvia is not below the EU average. Although this might be the case, this still remains a major problem for higher education, which remains substantially below average. In a situation where (higher) education is a key driver in knowledge-based societies, the current approach of generating funds for new educational purposes from only within the education sector is highly problematic.

Potential performance impacts: Same as previous weakness, as underfunding is perpetuated.

Overall conclusions (political climate for change)

- The higher education sector in Latvia is highly adaptive and capable of dealing with drastic changes in funding. But the political climate for change in higher education funding is difficult: there are polarized normative positions and a tendency to reallocate funding only within the overall education budget.

- The higher education sector in Latvia is massively and systematically underfunded. The way out lies in a paradigmatic shift towards higher education as a key to economic development and in a "package" of additional funding and added value through the funding system. HE stakeholders would need to agree to a "social contract" in which a more explicit strategic orientation is underpinned by new funding elements that stimulate working towards national objectives in higher education and research.

4.3 Instruments of state funding: funding of teaching - study place model

State funding of teaching and research will be analyzed separately, as the current Latvian system for funding separates these two core functions of HEIs as well. This does not mean that there is no relation between the two; the section on European trends has shown that in many countries basic funding of

universities and also performance-oriented funding uses an integrated model including teaching and research funding. In the strengths and weaknesses such relations between teaching and research will not be neglected.

Strengths (study place model)

+	With the study place model the "money-follows-the-student" principle is introduced into public funding. The link to accreditation promotes quality. *(Criteria: create a competitive environment, coherence of steering approaches)*

Similar to some European countries, basic public funding in Latvia is based on a formula model using a student-based indicator and a price-per-student approach. This leads to a situation where funding is oriented towards the "money-follows-the-student" principle. Instead of funding according to staff numbers, a first step towards a "quasi-market" is taken, by basing financial allocations on the "product" of the higher education institution and by assigning a specific "price" to it. In general, this tends to promote competition between universities. In such a model, it is important that study places are allocated to HEIs on the basis of some notion of quality and competitive behavior. If new fields or study programs of high importance arise (from the perspective of students or from the perspective of national needs), funding of study places could be adapted to this. Yet, because of the use of planned parameters, it is not a fully demand-driven model. Without the decision of the central planner, adaptation cannot take place.

The funding of study places requires accreditation to ensure a minimum quality standard for publicly-funded study places. Different steering approaches are linked in a coherent way.

Potential performance impacts: Promotion of quality.

+	The study place system allows to plan [sic] national priorities and helps to satisfy labor market requirements in terms of graduates needed in different fields. The consultation and analytical process linked to planning helps to come to valid planning outcomes and represent a cooperative culture. *(Criterion: promote national strategies)*

In general, there are two options for a student-based public funding formula: (i) to follow real student demand for study places; or (ii) to fund according to greater central planning, including a structure of study places based on specific subject disciplines. Latvia primarily follows the second path: the number of study places per field and university is determined through a planning process. In the Latvian context, where a certain priority for STEM graduates is assumed (for instance because fee-paying students choose "cheaper", affordable fields with questionable labor market expectations), the planning approach enables the promotion of national priorities, ultimately leading to a certain steering effect into fields relevant for the Latvian economy.

If a ministry engages in the planning of student places, it requires objective information to underpin such plans, since a central planner does not necessarily make the right decisions. It seems to be very

positive that the MoES bases its decisions on a couple of information-gathering processes, such as analyzing parameters like the real demand or the number of graduates, stakeholder consultations, with a particular focus on labor market needs, and negotiations with universities. Such a process could lead to well-informed decisions and could relate student places to the requirements of labor markets. It also enables a kind of mixed approach between planning and real demand: planning parameters could adapt to the real demand situation. Another positive aspect of the process has been the high-level discussions between the minister, ministry representatives, and rectors regarding the principles of the study place allocation model which were particularly prominent in the process of planning study places in 2012 and 2013 (such discussions did not exist before). This leads to a cooperative culture and should be continued.

Potential performance impacts: Orientation to labor market needs.

+	The study place model differentiates prices per study place according to cost of different academic levels and different disciplines. *(Criterion: take into account cost differences)*

The cost per study place varies between Bachelor, Master and Doctoral level and also between different fields. A funding model has to take into account the cost situation and differentiate between the prices per study place. The Latvian model seems to be doing exactly this and is based on a detailed, empirically-founded cost calculation (which is not regularly updated, see *weaknesses*). For higher education institutions that fall under the responsibility of the MoES, the current differentiation in prices generally appears to be reasonable.

Potential performance impacts: Promotion of quality and proper funding levels.

+	The way in which the study places model is applied leads to a quite stable basic funding: The funding volume resulting from study places for each university remains largely the same. This is based on a three-year contract updated yearly through a specially agreed document. The fact that the budget results from a price*student place calculation also leads to transparency of allocations. *(Criteria: stability, make funding transparent)*

The study place model is used in a way that does not (or only marginally) change the budget for a HEI. MoES and the university sign a three-year contract defining budget volumes. This means that, on the one hand, there are yearly planning processes, stakeholder consultations, etc., but on the other, this largely leads to a mere shift of study places within an institution. The budgets resulting from study places are ultimately largely historical. This is an advantage in terms of stability: the university could rely on a certain amount of public basic funding that promotes long-term planning for institutions (for the downside of this, see weaknesses). Furthermore, the public allocation process is also transparent: the number of study places and the prices are multiplied, determining the budget. This simple algorithm clearly explains the rationale behind the ministry's decision to allocate funds.

Potential performance impacts: Promotion of quality.

+	The study place model does not restrict flexible allocation of funds inside the university. *(Criterion: autonomy of internal allocation)*

Latvian universities are used to dealing with a lump sum budget. During the interviews, the team heard about models that deal with the budget centrally: public funds do not go directly to the faculties but are instead initially centralized at the rectorate level. Following this, they are then allocated to faculties, but not necessarily 1:1 according to the student place model. Since internal autonomy of resource allocation is not restricted, universities are able to choose internal allocation models according to their needs.

Potential performance impacts: Performance according to HEIs profiles.

+	The study place system introduces a strong merit-based element into the funding system. This leads to high performance incentives on the side of the students. *(Criterion: create performance rewards and sanctions)*

Study places are allocated to students according to their academic performance, meaning that the allocation principle is merit-based. Aspects of social need only become relevant as a second order criterion once two equally-achieving students are compared. The result is a highly competitive situation between students, and high incentives and rewards for individual performance. It appears that this logic in Latvia is perceived to be a fair way of distributing subsidized study places. The incentives become even stronger once, as in the University of Latvia or the University of Agriculture, the "rotation principle" is applied: study place allocation is reconsidered for students every year such that students with low performance in their university courses might cede their free study place to students who, having previously paid tuition fees, have now improved in their performance. Strong performance incentives are then not only realized at the time of entry to the university, but indeed throughout the study process.

Potential performance impacts: Student performance, competition and efficiency.

+	The study place system involves a number of line ministries in higher education funding. This is beneficial for the reputation of higher education in the government. *(Criterion: promote institutional profiles)*

The study place system does not only work within the scope of MoES but also for the universities that fall under the responsibility of different line ministries (health, defense, etc.). Although this structure has its drawbacks, it also has a couple of advantages: there is close contact between the universities and the respective line ministries (i.e., those that correspond to their disciplinary profiles). Furthermore, there are opportunities to establish specific regulations that fit with the respective sector; for instance, study places funded by the Ministry of Interior are linked to the obligation to work at least 5 years as a civil servant (so the state has a guaranteed return on the investment in study places). Subsequently, a major effect is that there are "many advocates" for higher education—not only MoES, but also line ministries— which have an insight into the culture, logic, and needs of HEIs. It should also not be

forgotten that some line ministries are able to generate more favorable conditions for HEIs in the form of higher prices per study place.

Potential performance impacts: Investment in human capital, shared responsibility, recognition of public value of HE.

Weaknesses

–	The study place model is underfunded. In stakeholder consultations this was connected with two different issues: on the one hand, people said that the number of study places funded is not sufficient, leading to access problems; on the other hand, the price per study place was criticized as being too low, leading to quality issues. We see the second problem as the first priority (but there is a weakness in the one-sided focus on merit-based instead of means-tested allocation). *(Criteria: guarantee continuity in funding mechanisms, perception of fairness)*

As previously stated, there are two relevant benchmarks with regards to assessing the situation of public funding in Latvia: (i) GDP statistics compared to other European countries, and (ii) the Latvian government's own targets documented in the normative definition of "minimum" and "optimum" prices per study place. In terms of both benchmarks, however, the current state of play is characterized by insufficient funds. Insufficient public budgets can refer to both teaching and research expenditures, since, through the teaching side, the study place model is affected. Examining the features of the study place model raises the following questions: What does underfunding actually mean? Is the share of study places related to the total number of students too low, or is the price per study place too low (or both)?

The price per study place is an issue of quality, but is also related to the existence of research opportunities. Following drastic cutbacks of public funding and study place prices, some universities reacted by reducing service staff, enlarging student groups, and increasing teaching hours per academic staff such that, in some universities, there was almost no time for research (in Latvia there is a span of yearly teaching hours; cutbacks had the effect of approaching the upper level of this span to be able to fulfill teaching obligations with reduced funding). These are clear weaknesses in terms of the quality of and available time for research. Financial cutbacks minimized the potentials to generate a kind of basic funding for research through the study place model (since with lower teaching hours a certain involvement of teachers in research activities would be possible). Acknowledging that public funds per student place are too low does not necessarily mean that the model should just inflate prices: instead, it might be a good idea to link added value to increased funding (e.g., by introducing clear incentives according to state objectives, see further weaknesses below), rather than to just "throw money" into the existing system.

As previously discussed, the team does not necessarily regard the lack of a free study place model as a weakness. First, in the chapter on European trends, it was argued that there is no economic rationale behind a full publicly- (or privately-) funded model of higher education—as this typically leads to blocked reforms. Second, in a situation where there are numerous competing funding requirements and scarce

resources, it would not be helpful to give up one of the funding streams, since the diversification of financial resources helps to divide the risk. Third, with the students' veto right on tuition fee issues in the academic senate, there is a restriction in the governance structure preventing excessive tuition fee levels. Fourth, the universities we talked to seemed to have adequately adapted their tuition fee policies according to their situation (for instance, the University of Latvia charges average study place prices and the University of Daugavpils charges almost no tuition fees because of the difficult economic and social situation in the region). Fifth, even if the absolute number of study places is not increased, the percentage of free places will rise due to demographic changes. Last, it is questionable whether or not the problem of students potentially leaving the country to study abroad (often used to justify models of 100 percent public funding) is a matter of tuition fees, or whether it is instead a matter of the attractiveness of higher quality programs elsewhere. In the case of the latter, it would again be better to invest additional money in higher state subsidies per study place. One also has to bear in mind that, in general, studying abroad is relatively costly compared to studying at home.

In Chapter 4.4 on student funding, we analyze the weaknesses of this part of the system and show that the Latvian system results in serious disadvantages for potential students with lower socio-economic status. The mainly merit-based allocation of study places generates a social problem; differences in income only feature as a second-order criterion when distinguishing between equally-performing applicants. The unspecific increase to 100 percent free study places is not, however, the adequate instrument to overcome this, since it fails to collect a contribution from those students who could afford it. One should look for more targeted approaches to promote students in a needs-based manner.

Potential performance impacts: Quality problems and intransparencies.

-	Rewarding the number of study places is purely input-oriented; the system does not create performance incentives in teaching and research (neither ex ante nor ex post). A balanced three-pillar model is not realized. *(Criterion: create performance rewards and sanctions)*

Thinking through the dimensions of the three-pillar model of public funding, two of the columns do not exist in Latvia, leading to an imbalance in the funding system. Study-place funding is an adequate instrument for basic funding—the first column exists. However, a missing element involves *ex post* rewards and sanctions that can stimulate performance. This leads to a problem in funding for teaching, as student retention and successful graduation are not rewarded. The overall incentive results in the maximizing of study places, not improvements in performance. With respect to research funding, we will, in the next section, argue that basic public funding for professors is missing; and, that should this be created, it would seem more reasonable to do that not according to study places, but instead in line with research performance, generating more opportunities to fund research for successful universities on the basis of research indicators.

Also in the third column, performance-oriented pre-funding of new initiatives has not yet been realized. Although target agreements between MoES and universities exist, they are not used for investments in innovations. If universities create new study programs, they can only create new study places by deducting these from their own traditional programs; curriculum innovations are thus always at the

expense of other programs within the university, and creative ideas do not allow additional funding. It is almost impossible to generate additional funding with new programs or other innovations. Although the study place model enables top-down innovations initiated by the MoES, it does not give equal chances to universities for bottom-up initiatives.

Potential performance impacts: Problems for performance according to objectives, for quality and for innovativeness.

–	Despite the lack of separate performance-oriented funding pillars, there are performance considerations in the decision process on numbers of study places. But this discretionary, non-automatic system does not lead to performance incentives; in fact, funding remains historical. *(Criterion: create performance rewards and sanctions)*

Performance aspects like labor market perspectives, dropout and graduation rates, or the relationship between planned study places and actual demand are taken into account during the process of allocating study places numbers (in the three-year agreements and also in the annual protocol concerning university-internal shifts of study places). This, however, restricts budget place reallocations to within universities and results in the involvement of MoES in micro-managing study places. The overall public budget of the universities remains largely constant and develops incrementally on a historical basis. Ultimately, therefore, there is a lot of regulation but no financial incentive. Performance considerations are thus too dependent on negotiations and discretionary decisions (and not on automatic mechanisms).

The technical reason behind these problems is that all kinds of purposes are mixed within the study place model, as this is the only state funding component for higher education. It should lead to stability, but also to performance orientation. It should guarantee state influence on field structure, but without compromising inter-institutional allocation. These goals should be reconciled in one funding component.

Potential performance impacts: Problems for performance according to objectives and for transparency.

–	The budgets are largely historical, but there could be annual shifts in study places (whereas academic and fiscal year are not harmonized). This leads to instability for HEIs. *(Criteria: limited budgetary changes, non-fragmented incentives)*

The allocation of budget places is reconsidered annually by the state. This leads to a problematic instability in the internal planning of field structures, such that the number of state sponsored study places in specific programs is not reliable enough. This becomes even more complicated taking into account the fact that academic year and fiscal year do not correspond to one another. The detailed steering of study places in specific programs also sometimes leads to very few subsidized study places for certain programs, inducing fragmentary effects.

Potential performance impacts: Quality problem and intransparency.

-	Despite the ongoing discussions about diversity of institutional profiles in the university sector, public higher education funding does not provide incentives to develop specific profiles. *(Criterion: promote institutional profiles)*

Many European countries intend to create a HE sector with institutions pursuing differentiated missions. Mission-diversity helps to serve the various needs of stakeholders. An excellent HE system needs internationally-competitive research universities, but also universities that serve regional needs or focus on knowledge transfer as "innovative universities". Institutions should build on their strengths and develop clear profiles. The current funding system provides only a very vague mechanism for this (taking profiles into account in determining the study places, but without considering the effects on historical institutional funding, see previous weakness). There are no indicators measuring profiles and no encouragement from a central HE strategy or through incentives for the institutions to actively promote their profiles.

Potential performance impacts: Not addressing the diverse needs of different target groups and insufficient profiling of HEIs.

-	Though the analysis of the relationship between major state objectives and funding of HEI still has to be done in the second step of our project, the interviews already demonstrated that the state funding system is not based on national priorities. Promoting priorities through funding is not an easy task as the example of consolidation of the sector shows. *(Criterion: promote national strategies)*

We already mentioned that clear rewards of adhering to state objectives on funding are missing, especially once the objectives of promoting institutional profiles and minimizing drop-outs are taken into account. The public HE funding also does not help generating critical masses or reducing unnecessary duplications in study programs. We could neither find incentives for the development of the regional mission of universities, nor for engagements in knowledge transfer.

The MoES has already started to relate incentives to the idea of consolidating the higher education sector through the study place allocation criteria. In the stakeholder interviews, some interviewees voted for the establishment of large units, such as merging programs in the same disciplines, etc. Others warned of the danger of over-consolidation, since too great a focus on minimizing duplications might substantially reduce competition in the system and subsequently lead to monopolies. Centralization programs in one place could endanger regional access and interdisciplinary collaboration at a specific site. Others argue that a decentralized, regional choice of specific programs across a number of universities would promote the ability to adapt to (regional) labor market needs.

It becomes clear that potential initiatives for consolidation have to be examined critically from the perspectives of monopolization and access (in the region). It is also clear that funding mechanisms to promote consolidation are not easy to implement. A suitable approach might be a mixed top-down and bottom-up approach, whereby the state provides incentives for consolidation, but the suggestions

where and what to consolidate are made by the institutions. Then they could for instance take into account the regional aspects. A well-functioning mechanism that promotes desirable forms of consolidation is an important task for funding reforms.

Potential performance impacts: Not enough support for national priorities.

-	A system with a simple formula and a "price list" has the potential to be very fair, but there are different cases where the system is not coherently used. This endangers the reliability of the system and creates the impression the system could adapt to political considerations and that the rules of the game are unstable (or not the same for everyone). *(Criterion: support perception of fairness)*

In general the study place system is highly rational: there are numbers of student places, a transparent price system and a very simple algorithm to calculate budgets using these parameters. It could easily be justified and understood why an institution gets a certain sum of money out of the system. Applying the same algorithm to every university could also be perceived as a kind of fair solution. This position was supported by the interviews, where interviewees regarded the principles of the study place system as adequate.

The mechanism is nevertheless not applied in a coherent way. First, universities receiving their budgets from different ministries (for example, the case for medicine under the MoES and Ministry of Health) get different prices. Second, in certain cases, a reduction in study places was compensated by a university-specific price increase in order to stabilize the overall budget. In other cases, students with factor 6 (for defense) and factor 3 (for engineering) are effectively sitting together in the same classroom. In general, the allocation of study places does not adhere to a consistent rational logic and, from the perspective of some interviewees, ultimately results in a certain degree of subjectivity (for instance, in some cases it seems difficult to explain why one university receives study places in a specific field, but others in the same fields do not).

Given that the strength of such a formula system is based on its reliability and coherence, such specific exceptions endanger trust in the system or might lead to losing the competitive element. The strength of formula systems lies in their automatic character; the coherent use of the model parameters should not be compromised according to discretionary political decisions. If the rules of the game are adaptive, then this creates the tendency to put efforts into influencing the rules instead of following the rules.

The conclusions from this have to be carefully analyzed; if a recommendation to harmonize the field coefficients between all ministries were made, this might increase the underfunding if the solution were to take the lowest price (see the advantages of involving line ministries above).

Potential performance impacts: Problems with (public) trust, intransparency and feeling of fairness.

-	Excluding part-time students from the budget places model is problematic in a situation of demographic change with declining numbers of traditional students. Particularly then, increasing the number of non-traditional students, especially in part-

	time studies, can be attractive. *(Criterion: avoid undesired effects)*

The initial rationale behind excluding part-time students from free study places was the assumption that part-time students are in a more favorable financial situation. However, even students from low-income families with free study places might have the need to work during their studies; and there could potentially be students with children that look for part-time places. As the demographic transition leads to lower numbers of traditional students, the funding system should seek to promote as much accessibility as possible, especially for non-traditional students (such as those aforementioned). There is no reason why a student eligible for a free study place should not be able to choose between full-time and part-time study.

Potential performance impacts: Access problems.

-	There was almost no update of the cost coefficients and the basic price since 2002. Current studies offer the opportunity to check and correct the prices. It is more important to focus on relative than absolute prices. *(Criterion: take into account cost differences)*

Generally, the rationale behind calculating costs within the study place model is accepted in Latvia. However, the parameters used were calculated in 2002, if not before; of which there has been almost no update and revision of prices since. Since 2002, there have also been major technological changes, for example, especially regarding IT technology; indicating that it might be time to reconsider existing prices.

A study seeking to update the cost parameters was undertaken last year, calculating the coefficient for computer sciences (Erins, 2013). This is a good starting point to check and update the price structure of the model, which could generate similar considerations across all study areas. The logical approach of the study is sufficient: it attempts to calculate the cost determinants from empirical findings (on student-staff-ratios, technological features of teaching, etc.), but at the same time makes clear that any such cost factors are ultimately normative. For example, with respect to the student-staff-ratio, the study states that in 1992 the ratio was 9.2; in 2001 it was 15; and, at present, we can assume it is 19 given efficiency savings generated from developments in IT. Though the starting point is empirical one, ultimately there is a normative assumption made. Hence, it is important that these normative decisions are made transparent and are discussed with the HE community before being set by the MoES.

The student-staff-ratio example also makes clear that the relevance of absolute prices should not be overestimated: if we take the status quo of a specific year as a starting point, then this is determined by the level of state funding. The cost will change providing there is the decision to increase quality by better ratios—and, as such, one does not have an objective picture of the one-and-only real cost. This means funding levels are ultimately always determined politically. The calculated price does not justify underfunding as “the state does not cover the real cost”; underfunding always has to refer (as argued before) to the benchmarks of international comparisons and political objectives. This means that the major value of recalculation lies in the decision of whether the relative prices between the disciplines are still valid or ought to be adapted to technological changes across the disciplines. Nevertheless, an

additional aspect that could be taken into account by further cost calculations, and which refers to the absolute level, is whether there have been general developments in the last few years that have increased costs, which have not been taken into account in the old prices. For instance, changes in energy costs might be a major issue. This could lead to messages such as “compared to the old price model there were general cost increases by XY”, which could then be used as an information source for the decision on the development of public budgets.

Potential performance impacts: Quality problems.

-	Many of the weaknesses mentioned before together lead to the fact that the study place system is not transparent (despite its general nature of being an easy calculable model). *(Criterion: make funding transparent)*

Multiplying study place numbers with a price from a published list seems to be very transparent—but the factual use of the system substantially reduces this transparency. The complex and implicit value-judgment laden process of taking into account performance in calculating student numbers, the involvement of numerous ministries and the practice of granting exceptions to the rules, all lead to lack of transparency. The model should change in a way that reflects how clear it seemingly is at first glance.

Potential performance impacts: Lack of trust in the system, also among the main funders and therefore less political support for new investments in the sector.

-	There are single cases of funding student places in private higher education institutions, but no systematic approach to the eligibility of private institutions to receive money from the study places model. *(Criteria: support perception of fairness, create a competitive environment)*

In some very few cases, student places are also allocated to private higher education institutions. This is the outcome of single, specific decisions based on three criteria: higher quality, no accredited programs in the public sector, and an insufficient number of specialists. This means that study places in private HEIs are a kind of exception and effectively the second-best option, providing public institutions are unable to supply the desired places. It would be better to have a systematic approach with clear “rules of the game” for competition between public and private HEIs. Two options for a general position seem to be possible: either the allocation of study places is completely up to the choice of the best students, whether they are private or public universities (meaning that private universities would receive the same price), providing that quality standards are met; or alternatively, as the study place system, factually-speaking, is a system of basic funding, that this basic budget is only given to public institutions, on account that states should not engage in the basic funding of private institutions. In the latter case, the only option to allocate study places to private institutions would be to enable study places to feature as part of the innovation-oriented component of the funding model: if the government would grant money towards innovative new study programs and there would be a competitive process between the best concepts, then there is no reason why private institutions could not be a part of that process. Further developing the model would require choosing between these approaches.

Potential performance impacts: Intransparency and lack of coherent public policy approach undermines trust in the system.

Overall conclusions (instruments of state funding)

- Having an element of planned study places with differentiated prices is generally a positive and desirable element in the funding system. It orients the focus towards the tasks of a higher education institution, enables strategic state planning, is stable and transparent, and represents a cooperative culture between ministry and HEIs. It also incentivizes efficient student behavior and leaves some leeway for the discretion for internal university budgeting. Specific problems arise from the way in which this system is handled in Latvia.

- A major problem is that study places constitute the only component of public higher education funding. This means that the system is subsequently overburdened by having to link this funding to target agreements and performance data, both of which effectively contradict the objective of stability behind basic funding. Using performance data as an implicit mechanism in the background of the study place calculations does not lead to real performance orientation, something that could instead be solved by separating performance-oriented funding—*ex post* and *ex ante*—from basic study place funding.

- Since there is currently a "one-pillar" model, the current system is not sufficiently output-oriented and does not adequately promote the differentiation of university profiles. It could also already be seen that important state goals are not transformed into financial incentives (a comprehensive analysis of this will follow in a separate paper in the next part of the project). A tricky issue is sector-consolidation, where interviews revealed the contradicting arguments for cooperation and large units vs. competition and decentralization.

- If this separation of funding pillars is done, it should reflect the fact that the study place model is to a certain extent historic and incremental. The planning should explicitly address study places numbers of the previous planning period as the starting point for the new period, devising very clear arguments for limited and focused deviations from the status quo.

- The planning process leading to these deviations is not yet sufficiently focused. If the performance issue is separated from study places and made more explicit in a different component of the public funding model, then there are two remaining aspects that should determine the study place planning. On the one hand, it seems reasonable to plan the overall student numbers in terms of major subject areas, including stakeholder consultation and labor market analysis. This leads to an overall idea in which disciplinary fields study places have to be increased or reduced. On the other hand, the issue of real demand remains. If, over a certain period, study places do not lead to actual demand (but still are maintained), this should lead to a correction in student places assigned to the institution. With focused mechanisms, study place

budgets, on the one hand, imply a historical development, but on the other, offer opportunities to arrive at rational reallocations between institutions.

- The study place model is not entirely used in a coherent way, which reduces both its objectivity and trust in the system. Yearly state interventions by shifting budget places within the HEI create problematic instability.

- It is also problematic that study places are limited to full-time students and that outdated cost coefficients are used.

- A restructuring of the model and the implementation of new funding elements could go some way in overcoming the current underfunding of the Latvian system: new elements could create added value that makes additional financial investment attractive. Underfunding in terms of quality-related issues (resulting from low prices) is more severe than the fact that some parts of study places are free (i.e., without tuition fees).

- Restructuring is also necessary in order to increase transparency in the model and to relate it to clear "messages" for fund-recipients; in particular through clear pillars of the funding model with established functions, and more focused calculation rules and procedures.

- A systematic approach for (or against) the inclusion of private higher education institutions into the budget place system is necessary.

4.4 Instruments of state funding: funding of research

Though this section primarily focuses on state funding for research, given that many EU funds (particularly the EU structural funds) are allocated through a state agency and constitute a large share of research funding, the section addresses both funding sources. As such, the following section, focusing on "resource diversification" is limited.

Strengths (funding of research)

+	The integrated funding of universities and non-university research institutes creates competition within the whole research sector. In addition, EU research funds as well as the funds awarded through various competitive research programs, require institutions to compete with other national and international HEIs and other research organizations. *(Criteria: create a competitive environment; national strategies)*

The current funding model for research in Latvia depends, to a large extent, on EU resources, which, though allocated competitively, are contingent on criteria that are not very transparent. Until now, the State Education Development Agency has distributed structural funds in such a way that all HEIs

effectively, in some way, benefit. Other external funds, often from EU sponsors as well as industry, put HEIs in direct competition to other (inter)national research institutions. The principle to fund institutes, both within and outside, of universities leads to competition in the research sector as a whole. The same goes for the funds that are allocated through the public research programs, such as the State Research Program, the Commercially Oriented Research Program and the Fundamental and Applied Research Program, based on competitive evaluations of research proposals by committees installed by ministries, the Latvian Council of Sciences and the National Academy of Sciences using criteria that reflect national research priorities.

Potential performance impacts: Quality and adherence to national strategies.

+	In order to use the very limited resources available, HEIs must set their own priorities to wisely spend the money and to do research that can have an impact. A strong initiative is the support given to young talented researchers to establish their own research groups. *(Criterion: Promote national/institutional strategies)*

Due to a relatively limited research budget that is allocated largely by a competitive mechanism, i.e., EU structural funds, institutions and the allocating agency (State Education Development Agency) can be encouraged to link research funding to national research priorities and/or their own strengths. A positive development is the initiative to support young talented researchers to establish their own research groups with EU structural funds.

Potential performance impacts: Promotion of quality, research careers and long-term planning.

+	The cost of research differs between the disciplines; the allocation mechanisms take this into account, at least to a certain extent. For instance Riga Technical University with an expensive cost structure receives a relatively large part of the research funds. *(Criterion: take into account cost differences)*

Cost differences between disciplines are acknowledged in the state research funding, and, as such, an engineering university (like Riga Technical University, RTU) benefits from this, by way of investing and maintaining a more expensive research infrastructure. Research funding includes components explicitly dealing with infrastructure maintenance cost and there is a coefficient differentiating between disciplines. Nevertheless, the RTU example shows that there are still difficulties in financing expensive research equipment necessary to conducting engineering research at an internationally-competitive level across their research areas. This compels RTU to prioritize those areas in which it would like to achieve such an internationally-competitive position, and deprioritize others. This is a general development in many countries and institutions. The question is how many priority areas Latvia and Latvian HEIs can, and are allowed to, afford.

Potential performance impacts: Quality and guarantee continuity.

+	Basic research funding is predominantly based on historical developments and as such provides financial stability. However, the lack of transparency about the exact allocation weakens this a bit. The research funding, particularly coming through EU funding sources, has made Latvian universities survive in times of heavy economic recession and strong budget cuts for teaching. *(Criteria: stability, make funding transparent)*

Basically, research funding through EU structural funds and infrastructure funds have enabled most Latvian HEIs to survive, compensating budget cuts in teaching, which had subsequently left few resources for research. However, the way these research funds are allocated is unclear and does not provide a stable basis for the sustainable development of the research sector. The same goes for the allocation of state research funds. None of the stakeholders were able to provide clear information about the way in which it is allocated. There is a coefficient for the development of scientific institutions which depends on performance criteria, but from the perspective of stakeholders this is handled in a rather implicit way and does not lead to major financial effects. Nevertheless, research funding is motivated by a strong historical basis, which, by definition, preserves stability for the institutions.

Potential performance impacts: Quality and space for long-term planning.

+	Institutions have large autonomy to invest their resources, which enables them to set priorities and underpin their own strategies. *(Criterion: autonomy of internal allocation)*

It appears that HEIs, to a large extent, are able to use research funding to support their own internal research priorities and strengths. This enables HEIs and research centers to focus on their strengths while leaving other research domains to other HEIs. However, there are concerns at the ministry and agency that HEIs may also cross-subsidize teaching activities with research funding, whereas HEIs complain that EU research funding often requires matching the funding from their own resources (including for teaching), which are already scarce.

Potential performance impacts: Research performance and longer term research strategies.

+	Strong dependence on external research funds, like EU structural funds but also the public research funds available through the State Research Program/ Commercially Oriented Research Program and the Fundamental and Applied Research Program, provide ample opportunities for performance incentives. This is further supported by the recent research evaluation process. *(Criterion: create performance rewards and sanctions)*

The allocation of research funding through external funds (mostly EU) implicitly provides performance incentives. Though no explicit transparent allocation or performance criteria are currently applied, if HEIs do not perform well, they may lose credibility in subsequent rounds, and not be awarded such funds anymore. The recent research evaluation process provides better insights into research performance across the many research institutes in Latvia. This can encourage HEIs, research institutes, the government and the Agency to search for proper indicators that can be applied, if one wants to

strengthen the performance dimension in research-funding mechanisms. In this respect, further steps could be taken in the Latvian higher education system.

Potential performance impacts: Research performance, innovation and international competitiveness.

Weaknesses (funding of research)

-	Though the mostly historically based state research funding provides stability for HEIs, amounts are relatively limited and the matching requirements of EU funds as well as the dominance of research funding from EU structural funds endanger a stable financial foundation for the Latvian research system. The public underfunding of the Latvian system also refers to research. *(Criteria: stability, perception of fairness)*

A strong reliance on EU structural funds in order to support university research has ensured the financial viability of Latvian research during the period of economic crisis. Though this funding stream may be available in forthcoming years, the dominance over regular state research funds as well as private research capital provides future uncertainties for the research system from a financial point of view. The different funding streams produce irrationalities in planning: for instance, although machinery is financed by EU funds, its maintenance costs have to come from state funding, which might not be available or foreseen, since there is no integrated planning process. Another problem lies in the co-funding approach of European funds: successes in external funding competition might "eat up" all flexibility in state funds as more and more state money is bound in co-funding obligations.

In general, there are not enough elements of long-term, stable public funding sources for research (for instance looking at the EUR 13 million state science funding in 2011 compared with EUR 69 million EU funds in the same year (MoES, 2012)). Like with the study place system, also the funding of research covers only a part of a defined "optimal" base funding. The state funding component for scientific development of universities allocated no funds from 2009 onwards (in 2014 only as small ad-hoc funding with a specific purpose). The funding of research development is largely left to the EU funds.

Potential performance impacts: Low funding levels and uncertainty about the funding may create problems with the quantity and quality of research.

-	The mainly historical approach to distribute basic state research funds, together with perceived opaque criteria for the allocation of "additional" funds (e.g., through the EU structural funds and the competitive public research programs) does not breathe a performance oriented atmosphere. The performance oriented coefficient also does not create such a climate. *(Criterion: create performance rewards and sanctions)*

Though competition is available—particularly for EU funds—state funds for basic research appear to be in the end allocated based on historical distribution. Similar to the study place system there is a use of performance indicators "behind the scenes" which does not become transparent and hence does not lead to substantial impact. EU structural funds are also distributed on the basis of relatively unclear

criteria from the perspective of stakeholders. Until now, EU structural funds were distributed among all HEIs and research institutes according to a logic, which included relative size. Though some equality was applied, the exact criteria were opaque which hampers (performance based) competition.

The competitive public research programs invite proposals from universities, enterprise, research institutions and non-governmental organizations that address research topics meeting the goals of the research programs in line with national research priorities, scientific and national importance and innovation. However, stakeholders could not immediately indicate the importance and working of these programs, which raises the impression that most institutions are not familiar with the exact rules of the game and opportunities of these programs.

Basic state funding for equipment is, according to the MoES, related to indicators, such as the number of state-funded students, graduates, publications and patents, faculty holding doctoral degrees and professorship. In fact, it is not inductive to creating a performance-oriented climate, as the criteria and their application do not seem to be transparent to stakeholders.

Potential performance impacts: Research performance problems in terms of the quality and quantity of the outputs and potential underemployment of potentially available resources.

-	The historical allocation of basic state research funding and the relatively equal distribution of EU funds among various HEIs without using explicit performance measures create an atmosphere in which the allocation is not considered fair. *(Criterion: support perception of fairness/make funding transparent)*

Though the aforementioned strengths hinted at the potential for explicit performance orientation in the allocation of EU funds, this opportunity has not yet been exploited. HEIs seem to perceive the current distribution of research funding (including EU funds) as non-transparent because of a lack of clear awarding and performance criteria. Given that funds are not explicitly allocated on the basis of performance strengthens this perception. Moreover, although EU-funds are currently distributed in a "relatively equal way" (since everybody gets something), without clear objectives or criteria, institutions are left with the feeling that the allocation just follows historical balances, rather than openness, competition, quality, or performance. This might be regarded as unfair, and as not addressing well the needs of the country.

Potential performance impacts: Quality problems and lack of competition based on quality.

-	There is a felt lack of a national research strategy among stakeholders. This results in a research system that does not focus strongly enough on national research priorities as well as the needs of society. They also feel no support to accomplish such a strategy. *(Criteria: promote national strategies; promote institutional profiles)*

There is a general feeling among HEIs, the Ministry and the Agency that there is no real national research strategy with national research priorities that universities and research centers must adhere to. The national research system is instead largely driven by bottom-up initiatives from HEIs (rather than a top-down government steering mechanism). In cases where it becomes clear that Latvia receives fewer

funds from the EU Horizon2020 funds than it invests, the Agency is then asked to turn this situation around. As HEIs feel neither a strong push towards a national research strategy nor towards particular research priorities, they attempt to build their own research profiles. The first, and recent, research evaluation indicated that only a limited number of research institutes/centers demonstrate international competitiveness (15 out of 76). This could provide a basis for stronger research prioritization, with HEIs focusing more closely on their strengths, and funding agencies correspondingly allocating the available funds more selectively; i.e., the basis for the establishment of places for research excellence is there, but it is not yet used to promote such a development.

Potential performance impacts: Quality problems and lack of competition.

–	There is no integrated system of basic funding of teaching and research. This means that research funding is coming as a kind of top-up funding despite the fact that it's basic funding. In the logic of the three-pillar model basic funding is put into the third pillar with no funds left for focused priorities. *(Criteria: stability, balanced system)*

The general idea of close interactions between teaching and research within a university usually leads to an integrated basic funding of teaching and research. Basic funding then allows a very basic realization of the two core tasks, with flexibility in using the funds for one or the other (restricted by defined teaching loads). As has been shown in the section on state funding of teaching, this is not done in Latvia: basic funding is not sufficient to engage substantially in research; no research driven criteria are applied to determine basic funding; and with the university and the research institute there are even two separate artificial units to receive funds for teaching and research, leading to a complete separation of the revenue streams. In terms of the three-pillar model the funding of research institutes gets the character of on-top funding in the third pillar, creating the impression that research is not a basic task. This also leads to the effect that institutional public funding of research is not targeted and focused as one would expect from the third pillar. Instead of a limited basic research funding as part of a general basic budget to fulfill all tasks of a university plus a targeted investment in promising research areas and national research priorities Latvia realizes a lack of integrated basic funding and a non-targeted top-up funding of research infrastructure.

Potential performance impacts: Problems with research quantity and quality.

–	There is a lack of stimulation of important elements for the advancement of research and innovation. *(Criterion: avoid undesired effects)*

To develop research areas at levels that are internationally competitive, it is, for example, inevitable that post-doc career opportunities are made available. There are currently no systematic funding mechanisms promoting this. Despite the Higher Education Council putting forth a "triple helix" model of research, knowledge transfer and industry relations, there are only very limited competitive funds available to promote these kinds of developments. Furthermore, HEIs that seek to develop innovative

new study programs or research lines have to finance pre-investments largely by themselves, since there are no "innovation funds" available at either the ministry or institutional level.

Potential performance impacts: Lack of a competitive environment to stimulate innovative, excellent and internationally competitive research.

-	Scholarships from EU structural funds given to Master and PhD students/researchers may not always lead to successful completion or to stimulate an innovative research labor force. *(Criterion: avoid undesired effects)*

Not all Master and PhD graduates will go on to work in academia or in research-intensive jobs. Many students/graduates with scholarships that were intended to train them as specialists for the (academic) labor force might drop out of their studies or choose jobs outside the "innovation sector". This is likely to be a "loss or risk" that one has to take. In addition, the criteria for allocating these scholarships ultimately lie with the universities, and, as such neither the state nor the Agency has control over the use of the instrument. Finally, the structure of the research sector includes non-university research institutes that offer attractive working conditions for PhD candidates. However, only universities can award PhDs. This requires smooth collaboration, which is currently not supported by the funding mechanisms.

Potential performance impacts: Potentially high drop-out rates for Master and PhD programs and problems with performance of young researchers.

-	Academics working in HEIs can earn substantially different salaries based on the types of activities they are involved in (teaching and research) or where they work. *(Criterion: perception of fairness)*

Academics can earn different salaries based on the activities they are involved in. Teachers earn less than researchers working on EU-funded research projects. Depending on the number of research projects a professor is engaged in, the salaries might substantially increase. For a well-operating academic labor market, it appears problematic that the salary can so heavily depend on the type of activity one does. Although some form of salary rewards might be stimulating, differences that are too large may harm the employee-motivation, especially for young researchers with limited access to larger research projects.

Academics from Riga working in the region require substantial financial compensation for both any additional costs they accrue (e.g., travel) and for the fact that they are willing to work for a regional institution. The autonomy of institutions to respond to such demands may put financial pressure on regional HEIs, while creating a situation of (substantial) inequalities in employment conditions between employees working at the same institution.

Potential performance impacts: This provides labor market distortions with a high risk to lose young academic talents for science.

Overall conclusions (funding of research)

- Overall research funding levels are relatively low in Latvia compared to most other European countries. Basic state funding for public research is particularly limited, leading to a situation of austerity and an R&D system that is not competitive internationally. State research funding needs a good balance between basic funding of research (which should be integrated with basic funding of the teaching mission) and targeted, focused funding of research priorities. This balance does not exist in Latvian state funding which is characterized by non-focused top-up funding of research.

- Research funding from EU structural funds constitutes the main research income of research institutes/centers and enabled universities to survive financially since the economic crisis hit Latvia in 2008. One could ask the question whether EU-structural funds will endure and offer sufficient financial viability for the R&D system in the long run.

- Most stakeholders indicate a lack of any national research strategy, and suggest that research funding is not currently linked to national research priorities. They are therefore able to set their priorities and strategies (which, though necessary, results in possible fragmentation of research efforts). The institutions realize, however, that they have to compete for research funding from EU structural funds. This puts the Agency in a position to formulate priorities and national research strategy that institutions can then adhere to. However, the allocation criteria used by the Agency are not perceived as transparent and, as such, the Agency misses out on the opportunity to firmly set the agenda. Also, the criteria of the national competitive research programs appear to not be fully known among stakeholders.

- The way in which basic state research funds are distributed among HEIs and research institutes/centers is, to a large extent, non-transparent, and creates the perception of an atmosphere of unfairness, despite the fact that there seems to be a kind of formula system including performance indicators (in an implicit way).

- Many stakeholders indicate that a stronger performance orientation could help the system. If additional resources could be opened up, than a transparent relationship to explicit performance criteria would be welcomed. The idea of joint funding of the two core missions of the university could also require an integrated system of performance indicators in teaching and research, leading to a flexible lump sum from the performance oriented funding pillar.

- The evaluation process recently conducted provides a good basis for a selective research funding system that is potentially more aligned with national research priorities, competition, and focus on strength areas. The quality process can be used to formulate quality-oriented

(performance) indicators that may be integrated into the research funding systems of the Ministry and the Agency, e.g., including performance agreements.

4.5 Diversification of financial resources for HEIs

Strengths (diversification of resources)

+	The legal structures enable resource diversification. *(Criterion: promote accessibility of income sources)*

The legal framework in Latvia allows HEIs to diversify their resource base and to look for all kinds of income streams with only very few restrictions. They are allowed to charge tuition fees, principally without regulation of their volume. They are also able to generate profits from professional training or commercial companies. They might also establish foundations and rent out their facilities (for educational purposes). Overall, the system enables HEI institutions to generate specific revenues according to their particular situations (for instance, the University of Latvia owns a lot of real estate and possesses endowments).

Potential performance impacts: This autonomy is expected to generate an outside orientation of HEIs.

+	There are many fee paying students who are willing to invest in higher education. *(Criteria: stability create a competitive environment)*

Many students are apparently willing to invest in higher education and collectively create a substantial resource base for HEIs. These additional revenues for HEIs would help them survive and to start up new initiatives, such as new teaching programs (especially as public funding through the study place model does not stimulate program innovations).

Potential performance impacts: Innovativeness and orientation towards the market ("relevance").

+	Substantial funding from EU structural funds for HE and research is a major source of diversification. *(Criteria: financial sustainability; promote national strategies; competitive environment)*

EU structural funds enabled the HE sector in Latvia to survive in the period of economic crisis since 2008 and, helped to further develop the Latvian R&D sector. Given that these funds are allocated through a special agency provides the opportunity to promote national research priorities, stimulate competition, and enhance performance orientation. HEIs are strongly aware of the importance of their income from EU structural funds (allocated within Latvia) and other potential EU-research funding (allocated though EU agencies), and, as such, will be responsive to criteria related to such funds.

Potential performance impacts: Quantity and quality of activities.

+	Latvia has a substantial private higher education sector which offers students alternatives next to the full-fee paying opportunities of the public institutions. *(Criterion: stimulate a competitive environment)*

The existence of a substantial private higher education sector offers students additional choice, provides them with access opportunities beyond the scope of the public budget, and enables more professionally-oriented programs to flourish. In addition, this challenges public HEIs to offer relevant, good-quality education. This of course requires institutions some level playing field for private higher education to compete in terms of diplomas and degrees that are offered. Since private HEIs often offer more professionally-oriented programs, they also stimulate diversity in the system and foster close cooperation with industry.

Potential performance impacts: Quality, satisfaction of diverse needs, relieve of the public budget.

Weaknesses (diversification of resources)

-	There is strong reliance on tuition fees and EU structural funds rather than on a stable state budget for teaching and research (about 1/3 of total funding). *(Criteria: guarantee continuity in funding mechanisms, promote risk spreading and management)*

Alongside the positive effects in terms of creating a competitive environment through income diversification, the strong reliance on tuition revenues and EU-structural funds for research instead of stable basic funding from the government may harm the long-term financial viability of HEIs in case these revenue streams are not very reliable. Due to demographic decline, it is well-known that tuition fee-revenues are under pressure. In addition, structural funds may not be eternal, either (though they appear stable in the mid-long-term). As such, it would be good if HEIs intensify their pursuit for further resource diversification in order to further spread the risk. At the moment, financial sources outside the state budget typically lead to new dependencies and risks, instead of addressing these risks by spreading them across a balanced set of income streams.

Potential performance impacts: Quality problems and a potentially shrinking HE system.

-	Income from private sources like industry or community services appears to be underdeveloped. *(Criterion: promote risk spreading)*

Both stakeholder interviews and research suggest that revenues from other sources (like business and industry, but also from research and services for public sector organizations and international sponsors) are limited. So on the one hand the share of diversified funds seems to be high and does not necessarily have to be increased, but on the other hand the degree of diversification within these funds is not sufficient.

Though HEIs receive about 15 percent of their revenues from other income sources, it is not known how much of these revenues are linked to educational "services", donations, or, for instance, renting out facilities, etc.

Potential performance impacts: Insufficient transparency and explicit risk management.

-	A variety of funders may distract HEIs from setting their own research priorities. *(Criterion: promote institutional profiles; avoid undesired effects)*

Though it is good that institutions are sensitized to external incentives around performing in certain areas through resource-competition, such competition may have adverse effects if the performance criteria are not steering the institution in the right way. It can thus either contribute towards, or distract from, HEIs setting "the right" priorities. In the Latvian case, where EU structural funds for HEIs are so significant, it is important that these allow or stimulate institutions to develop their own (research) profiles, providing they fit with national strategic priorities for higher education. Without well-established priorities, the system can easily degenerate into ad hoc activities, which are contingent on available financing. The role of "other sources" is substantial (around 15 percent) but is not transparent.

Potential performance impacts: Less strategic focus and as a result intransparency, less mass and reduced quality.

-	National data as well as institutional information demonstrate the there are many resources, which are defined "other". This lack of transparency harms a full understanding of the funding and financial situation of HEIs. *(Criterion: make funding transparent)*

At both the national level and the institutional level, there appear to be substantial financial flows labeled as "other revenues", which might correspond to endowments, income from rental activities or anything else. It is encouraging to see that—at least the largest universities—are capable of generating additional revenues. The risk, however, is that society cannot be easily convinced that HE is underfunded. Not knowing where these resources come from and what they are spent on makes HE out to be a bit of a "black box". Although strong institutional autonomy easily allows for cross-subsidizing between various types of activities, it does so only at the expense of the real cost calculation of education and research.

Potential performance impacts: This decreases trust in the HE system and a reduced likelihood of increased public spending on HE and research.

-	Despite the positive general assessment of state regulations in the context of diversification, there are a few minor (perceived) restrictions for generating income from diversified sources. *(Criterion: promote accessibility of diverse income sources)*

Although current regulation for public universities enables them to achieve comprehensive revenue generation, there are some exceptions. Yet there is no reason why, for example, conference facilities cannot be rented out for purposes other than education; something that is presently prohibited. Similarly, machinery funded by EU structural funds cannot currently be used for commercial purposes in the first 5 years; curtailing the possibility to generate additional income.

Potential performance impacts: Underemployment of premises, equipment and resources as well as suboptimal university engagement with society.

Overall conclusions (diversification of resources)

- The Latvian HE sector has made a number of strong steps in the direction of resource diversification: the legal framework for this is favorable (with very few exceptions). As such, HEIs have become less dependent on state budgets and thus can survive political-economic shocks like the recent financial crisis. The major external resources appear to be tuition revenues for teaching and nationally-allocated EU structural funds for investment and research. However, further revenues from private resources like industry and public organizations appear to be underdeveloped. The share of diversified resource seems to be fine, but the degree of diversification through spreading revenue over a variety of sources could be increased.

- Tuition fees for additional student places may be an unreliable source of income in Latvia due to demographic decline. In addition, the strong outward international student mobility may impact on these resources. As such, HEIs must offer students attractive and good-quality education to ensure this income stream is as viable as possible. Moreover, EU structural funds may also not be an ever-lasting revenue base: although there is mid-term stability, countries and HEIs must also forecast and prepare for long-term research revenues.

- Latvia shows that many people are willing and capable to invest in higher education. However, the best students, who often come from more advantaged groups in society and are likely to have the best employment opportunities, are exempted from making private contributions. This means that Latvian HE is missing out on an additional revenue stream.

- Finally, there is an issue concerning transparency, particularly with regards to the relatively large portion of resources labeled as “other revenues”, particularly for a few universities. If the HE sector wants to plea for additional resources to overcome a situation of underfunding, one has to clearly demonstrate what is meant by “other resources” and how these are allocated.

4.6 Financial autonomy of HEIs

Strengths (financial autonomy)

+	There is strong institutional autonomy to internally distribute resources and also to build financial reserves. *(Criteria: guarantee autonomy of internal resource allocation; guarantee academic freedom)*

Latvian higher education institutions exercise a large degree of autonomy with respect to the internal allocation of financial resources. This implies that they are relatively able to reallocate resources between departments and different activities. As such, cross-subsidization is possible in cases where an institution wants or needs to do so, e.g., in order to maintain a study program with relatively low student numbers. Aside from money, state-funded student places are also able to be reallocated by the HEI, up to 10 percent of student places. Although HEIs are allowed to build reserves for future periods, this remains a theoretical proposition, since financial constraints do not allow substantial sums to be carried over to the next year.

Potential performance impacts: Strategic focus and quality.

+	The financial autonomy provides a prerequisite for developing institutional strategies and profiles. *(Criterion: promote institutional profiles and strategies)*

Within the limits of total resources, HEIs can mobilize the financial resources necessary to develop and realize their own strategies and profiles. They have the freedom to allocate funds according to their own research and teaching priorities. This is a necessary condition for HEIs in becoming successful; particularly in teaching and research areas. It sets incentives for the efficient use of resources.

Potential performance impacts: Strategic focus on strengths creates mquality (excellence) and efficiency.

+	Higher education institutions also have the autonomy to set the tuition levels for fee-paying students. *(Criteria: stability; promote accessibility of income sources; take into account cost differences)*

With the freedom to determine their own tuition levels, institutions are also able to determine which student markets they want to serve. This will help them to financially sustain particular study programs or to generate resources necessary for new initiatives and innovations. It also enables institutions to distinguish between low- and high-cost programs, and to use tuition fees as price signals on the student market. Finally, it enables HEIs to pursue their own plans for study offers, beyond those study places determined by the state.

Potential performance impacts: Satisfaction of society's needs for relevant qualifications.

+	Higher education institutions also have the autonomy to borrow money at the capital market for investing in infrastructure, like buildings or expensive research equipment. *(Criteria: stability; take into account cost differences)*

HEIs are given the freedom to borrow money on capital markets to invest in research infrastructure or "housing". Since capital markets use strict criteria, HEIs seeking to invest often also need complementary financial support via government or EU structural funds. But this autonomy provides more flexibility for long-term investments in innovative ideas.

Potential performance impacts: Innovativeness.

Weaknesses (financial autonomy)

-	Institutions are not fully aware of the degree of autonomy they have. *(Criteria: transparency; provide clear and non-fragmented incentives)*

Following stakeholder interviews, it became clear that neither representatives from HEIs, nor from the Ministry, nor the Agency knew exactly the precise limits of the financial autonomy of HEIs. Can they use teaching resources for research or the other way around? Can they cross-subsidize teaching with research grants from EU-structural funds projects? Are they able to set their own tuition levels beyond the levels of state subsidies for study places, or even beyond the actual / normative costs calculated by the ministry?

Potential performance impacts: Intransparency can lead to suboptimal levels of quality and efficiency.

-	The financial autonomy of HEIs can raise issues with external partners whether resources are used for what they were meant to do. *(Criteria: transparency; unambiguous and balanced funding)*

During the stakeholder interviews, some external partners of HEIs raised the point of questioning whether some funds are used appropriately for their intended activities. Are teaching funds used for research, or are EU structural funds for research used to maintain low tuition fees? It seemed as though there were concerns about what happens with the money given to HEIs. Such non-transparency may be harmful for public trust in HEIs. However, rather than enforcing spending and autonomy limitations, the issue of trust should could instead be resolved through more transparent performance relationships and greater transparency with regard to the volume and quality of teaching and research. It would be fatal if, given the impression of the misuse of funds, the situation returned to earmarking and specific line-items. The focus should be on the transparency of income streams and on the effects the use of money has in terms of academic performance.

Potential performance impacts: Intransparency can lead to reduced trust and therefore suboptimal investments by government, industry and students in HE.

-	Financial autonomy of HEIs may prevent them from aligning with a national strategy. *(Criterion: promote national strategies)*

If HEIs enjoy a large degree of (financial) autonomy, they may not feel strong incentives to adhere to national priorities and strategies. One can think of the number and vast diversity of study programs, e.g., leading to duplications of programs in particular fields, while leaving other fields under-served. One might also conceive of situations where strategic research orientations of various universities overlap or are not adequately filled. As a result, the ministry may have lesser grip on the HE and research landscape than they might wish for. On the other hand, activities could be organized in a more efficient and flexible way compared to a situation in which the ministry defines everything. Decentralized decisions usually benefit from better information. Finding the right balance is thus an art.

Potential performance impacts: Problems with national priorities.

Overall conclusions (financial autonomy)

- Higher education institutions enjoy a great deal of (financial) autonomy and, as such, can flexibly, efficiently and effectively spend their resources. They can also use this spending freedom to develop their own strategies and priorities for teaching and research.

- Whereas HEIs often appear to be unaware of their real autonomy—potentially leading to a sub-optimal allocation of resources—some external stakeholders perceive that they have too little influence on what universities can or can't do. Somehow the opaqueness about this situation will have an impact on the trust-relationships HEIs have with their external partners, like the Ministry, the Agency as well as industry, etc. Transparency, rather than returning to a state of greater finance regulation, should be the answer to this emerging problem.

- The freedom to make their own decisions, e.g., with respect to tuition fees, education offerings, research priorities, financial reserves or capital investments, enable universities to behave as competitive organizations. However, the rules of the game must be transparent and the system needs to be guided by some national strategies or priorities in order to generate a more effective HE system as a whole.

4.7 Student financing (tuition fees; study costs, student loans and scholarships)

Strengths (student financing)

+	Latvia has many tuition fee paying students. *(Criteria: create a competitive environment; promote accessibility of diverse income sources)*

Latvia has a very high proportion of full fee-paying students compared to many other European countries. This indicates that many people attach substantial value to higher education and are willing to bear the financial burden of the tuition fees. It also provides HEIs with substantial additional revenue to contribute towards the maintenance of their institutions, offer a wide array of study programs, and launch new initiatives. The fact that many students need to pay may also stimulate a more customer-oriented attitude among students and institutions, which may result in higher quality services.

Potential performance impacts: Investments in higher education, quality.

+	Tuition fees are often related to the amount of government funding provided for various study programs (disciplines) and as such also take into account cost differences. They also can take into account capability to pay. *(Criterion: take into account cost differences)*

Students in more expensive study programs (e.g., science and engineering) often pay higher tuition fees than those in lower-cost studies, such as law, business administration and social sciences. Since full-tuition students constitute the majority of students, this also guarantees that more expensive studies will not be underfunded. This may create a good signal to the market, although might also incentivize students to opt for cheaper programs at the expense of more expensive (and sometimes national priority) programs (what is currently counterbalanced by the distribution of state-financed study places). The University of Latvia reacts to these potential problems by setting a flat fee for all students (average of prices for study places, this also guarantees affordability of expensive programs). Some programs or institutions in the region use their autonomy to exempt students from paying the tuition fees, since many of them are from poor backgrounds (e.g., at the University of Daugavpils). These students will then have to be cross-subsidized by other students or revenues (which are also limited as seen above).

Potential performance impacts: Quality, access and well-considered/cost-oriented study choices.

+	Student loans are in general available to a substantial number of students covering tuition fees, living expenses, other study costs as well as study abroad. Repayment conditions are favorable. *(Criterion: perceived fairness)*

All students who want to borrow and who have relatives or friends that can act as their guarantors are able to take up student loans for tuition fees and living expenses. As such, most students should be able to pay for their costs of study and repay them after graduation. The loans include relatively favorable repayment conditions, such as no interest during studies, a one-year grace period, relatively low interest during repayment, and various government debt cancellation arrangements (in case of having a child or working in “socially desirable” jobs). This stimulates education investments by young people, guarantees access, and helps Latvia to attract relatively many people to higher education regardless of the very low public investments in HE. Student loans can also support students seeking to study abroad.

Potential performance impacts: Access.

+	Merit based scholarships for very few absolute top performing students on publicly subsidized student places create a positive climate for top-performance. *(Criterion: create performance rewards and sanctions)*

Students on publicly-subsidized full-time study places can compete for a relatively small number of scholarships (14 percent of them receive one, about 5 percent of all students). These scholarships (of EUR 100 per month) cover a substantial part of the monthly expenses of a student. Only the top-performing students are eligible and awarded the scholarship, thus generating a pursuit towards excellence among the top-performing students. This is another element that proves that overall the Latvian funding system is largely merit-focused, rather than means-based.

Potential performance impacts: Student performance (excellence), efficiency.

Weaknesses (student financing)

-	Heavy reliance on fee paying students in connection with demographic change creates access issues and endangers financial viability of HEIs in the long run. *(Criteria: stability, perception of fairness)*

Due to demographic developments that exhibit a declining trend in Latvia, the strong reliance on tuition fee-revenues poses a threat to the financial viability of many HEIs in the long run. In any case, it calls for a greater emphasis on efficiency in the system in terms of minimum numbers of students in study programs and classes, teaching methods, etc. The combination of a reliance on tuition fees and strongly merit-based (and not means-/needs-based) subsidization leads to problems in terms of access for students from lower socio-economic backgrounds.

Sometimes the high share of fee-paying students is declared responsible for “brain drain” from Latvia, which, in particular, occurs to tuition-free countries in Northern Europe. This is nevertheless an assumption and there is no empirical evidence confirming or rejecting this argument. Taking into account the fact that attractiveness of studies (in terms of funding) is not only related to tuition fees, but to the whole financial situation (including living costs), it is not fully plausible that tuition fees in Latvia results in students migrating to Scandinavian countries. Many stakeholders confirmed that those students choosing to study abroad do so, on the basis of expected quality outcomes and the reputation at universities in European countries, compounded by a lack of trust in the quality in Latvia. As such, this will not be used here to criticize the tuition fee situation.

Potential performance impacts: Reduced income may endanger the quality and efficiency of education.

-	Distinction between publicly subsidized students and full-cost fee paying students based on grade point average in secondary education (dual-track system) creates a potential loss of income for the HE system and could endanger fairness and hence access to higher education for lower socio-economic classes. It also forces many students to work. *(Criteria: promote risk sharing; promote accessibility, fairness)*

The one-third discrepancy between students who get on publicly-subsidized study places and those who have to pay for their own education (which is first of all based on merit, i.e., success in secondary education), though a good mechanism to stimulate high-quality students to enter HE, might also generate conditions of social unfairness. In general, all around the globe, children of richer (and often higher-educated families) tend to show substantially better results in secondary education. As such, giving the tuition-free study places to the best students in practice means that these places will most likely be given to children from the better-educated and more affluent parts of Latvian society. Rewarding excellence implicitly means sanctioning lower socio-economic classes, even when they qualify for higher education. As a result, students from poorer backgrounds more often than not have to pay for higher education. This leads to inequalities and raises concerns about the criterion of fair access to higher education. Interestingly, one can also argue that if so many students from less educated and less affluent backgrounds are prepared to pay for HE through tuition fees (currently two-thirds of the student body), then HEIs lose tuition revenues from the other third of the student population who in most cases could afford to make these payments.

The aforementioned situation leads to a high percentage of students working, many of them even full-time (stakeholders also reported students taking one year off from their studies to earn money). This calls for target-oriented and efficient study processes.

Potential performance impacts: Access/equity problems as well unexploited revenue generation capacity.

-	Calculation of tuition fees is often based on the ministerial prices from the study place system. The real cost of education is perceived to differ from this. *(Criteria: take into account cost differences; financial sustainability; promote diverse income sources; transparency)*

HEIs can charge full tuition fees and are in principle free to determine the maximum. In practice, institutions tend to charge the value that is allocated by the Ministry for the state-funded places, as this is also the amount that students can borrow through the "study loan" scheme available for study fees. Institutions nevertheless differ: for example, the University of Latvia charges every student the average amount of the various "study place subsidies" they receive from the government, while some regional HEIs substantially reduce their tuition rates or charge no fees at all because their "experience" informs them that students cannot afford to pay tuition fees. Altogether this means that the system is opaque, and that HEIs often do not charge the full costs of education to their fee-paying students. If this is true (i.e., that they are underfunded through the state study place funding model), then they are also charging tuition fees that are too low from their "full-cost paying tuition students". These then also need to be cross-subsidized from some other revenues, which endangers financial sustainability and transparency. In addition, by failing to distinguish between fees for students in different study programs results in a situation whereby some students "overpay" while others "underpay" for their program, with respect to the full costs. Finally, the full fee-paying model does not appear to work for many regional institutions. On the one hand, they feel they are not able to charge full fees to students as they will then lose their market share. On the other hand, they experience different cost structures than universities in

larger cities. Since regional institutions are generally smaller and have fewer state-funded study places, they expressed that they tend to reduce the wages for "local teachers". If they attract particular teachers/researchers from larger cities, they then have to pay them higher wages (comparable to what they could receive in the cities) in order to come work for them. All in all, cost structures are not transparent and are not well-matched to full-cost tuition policies.

Potential performance impacts: Problems with teaching quality and access levels in programs that charge the full costs.

-	The scholarships for the best publicly funded students are only available to the "happy few" and are so much focused on a very small group of excellent students that they do not create incentives for the large majority of students. *(Criteria: create performance rewards and sanctions; perception of fairness)*

Offering scholarships to only the few very best students is intended to help students with their costs of living, while stimulating excellence. Since the scholarships only serve very few students on publicly-funded places, and only the top 5 percent of students, these subsidies are only helping students who have already been awarded a subsidized study place—those most probably given to students from better socio-economic classes (see above). In addition, the envisaged competition for excellence will only happen among the few already top students on publicly-subsidized study places. All other students will consider themselves ineligible, and thus will not strive towards excellence.

Potential performance impacts: Access problems, less performance effects than advocated.

-	Student loans are offered by the institutions using government guarantees for private banks to lend the money. Also the scholarships are offered via the HEIs. *(Criteria: transparency, ensure administrative efficiency, fairness)*

Given that loans are offered on an individual basis by HEIs, one runs the risk that administrative systems differ among them; meaning that student loans are not promoted and communicated in the same way as might have been possible through one administering body. This could also lead to a situation in which students at one HEI are informed differently from students elsewhere, in the sense that they could be better helped. A strictly decentralized system is also likely to be more expensive in terms of operation costs, since HEIs have to probably each perform particular administrative actions that are then duplicated across HEIs, e.g., making arrangements with private banks; leading to inefficiencies. The same goes for the decentralized administration of merit-based scholarships. The decentralized approach—according to the stakeholders—also does not seem to work for means-testing, meaning that universities felt they were unable to adequately assess student needs.

Potential performance impacts: Access/equity problems and efficiency losses (money that could be better spent).

–	To obtain a tuition fee loan or a student loan one needs to have a guarantor guaranteeing collateral in case the student/graduate cannot repay his/her debt. But many Latvian school leavers are not able to provide such a person. *(Criteria: promote national strategies; fairness)*

In countries where a large part of the labor force earns a salary close to the social minimum (around EUR 285 per month), demanding a guarantor who can repay the debt in case of default seems to be a particularly stringent criterion. This potentially results in excluding the poorest part of the population from one of the few available funding sources, in cases where one would like to study on a fee-paying basis. This strong push towards a guarantee that student loans—rightfully—are to be repaid appears to be at odds with the various ways in which graduates can later have part, or all, of their debts written off, such as those who have children (30 percent debt cancellation for each child) as well as those working in "socially desirable jobs" (in which case the state covers the repayments).

In some cases, there are alternatives to seeking guarantors; for instance, municipalities can sometimes act as guarantors (motivated by the desire to recruit local labor force) or else there may be funds from donations. These options, however, are not widely available.

Potential performance impacts: Access/equity problems and potential loss of talented people.

–	Student loans for other costs than tuition fees (like living expenses and other study-related costs) also are merit based. Need based student loans are missing. *(Criteria: promote national objectives; fairness)*

Student loans (for living expenses and non-tuition study-related costs) can only be taken up by students on state-subsidized study places. Full-tuition students cannot take up such a loan; nor are they entitled to any scholarships. The normative approach behind the merit-based model permeates the entire system, and stakeholder interviews indicated that this is based on a widely-accepted social concept. This implies that parts of the student population most in need of financial support are denied such support. This creates a situation of inequity and disables access for students from lower socio-economic backgrounds. Since Latvia aims at increasing participation in order to generate a highly-educated labor force—expressed through its adherence to the European ambition to have 40 percent of the employees aged 25 to 34 that have been educated to degree-level—one could assume that there were stronger need-based policies to support students from disadvantaged backgrounds. This, of course, requires instruments that are able to measure financial need, which interviewees suggested, though not necessarily easy to implement (e.g., because of an extensive shadow economy in the country) are neither impossible. If it is estimated that 40 percent of the labor force has an income at the level of the social minimum of EUR 285 per month and graduates on average earn EUR 1,000 per month, there must be some basic data available to gauge income levels.

Potential performance impacts: Access/equity problems, potential loss of talents.

–	Students seem not to be well informed; they need more information for rational study decisions.

	(Criterion: promote national objectives)

It is also often the case across many countries that students make ill-informed decisions. This seems to also be true in Latvia: going abroad because of doubts about quality, debt aversion because of unclear labor market prospects, a multitude of study fee calculations, special systems such as the "rotation" of state study places, etc. Accessibility, especially for students who can't seek help from their parents since they do not have an academic background, demands that there is an information system in place to support study choices.

Potential performance impacts: Access/equity problems; loss of talented students.

Overall conclusions (student financing)

- The high proportion of fee-paying students constitutes a considerable resource to the system. HEIs get substantial additional revenues, which they can spend according to their own priorities, such as underpinning basic operational costs or funding new initiatives. However, in certain regions, people are often so poor that they cannot afford to pay the full tuition fees, resulting in some institutions dropping their prices. The fact that this occurs demonstrates that HEIs are able to adapt and respond to social issues.

- With a declining demographic tendency, the forecasted number of fee-paying students will decline, resulting in diminishing revenue possibilities for HEIs.

- Since many students have to pay full tuition fees if they want to study, this means that not all capable youngsters will enroll in higher education; or else will drop out at a later stage, due to the costs. This means that the full potential of people capable of achieving higher education may be underexploited, which ultimately might result in lower participation rates than anticipated by the government (e.g., the 40 percent ambition for the proportion of the higher educated in the 25-34 age cohort participating in the labor force).

- One can also argue that the fact that so many students in Latvia are willing and able to pay tuition fees means that the system misses out on some revenues that could be generated from other students (i.e., one-third of the student population), for whom tuition fees would likely be affordable (see next bullet).

- Problems with access to higher education are compounded by the strong merit-orientation of the system. Although it is good to stimulate student performance with merit-based elements, in the Latvian system this tends to lead to cumulative benefits for the very best: they land themselves free study places, receive scholarships, and are then able to take out an additional loan to cover living expenses. It is moreover well-known (and well-documented) that the highest-achieving students generally come from the better-educated and more affluent.

Nevertheless, means-/need-based elements also play a minor role, but only as second-order criteria for the allocation of study places.

- It is very positive that Latvia appears to have a well-functioning student loans system with relatively favorable repayment conditions, since this helps about 20 percent of the fee-paying students with their tuition costs, as well as supporting 15 percent of subsidized students with their living expenses.

- However, for several reasons, large numbers of students cannot or do not want to use the loan facilities. This might be due to the “guarantor” requirement and non-availability of student loans (for living expenses) for students on fee-paying places. As such, many students need to take on jobs alongside their studies in order to pay for their costs, or else ask for support from their families.

- Scholarships are only available to the very best students on subsidized places. As such, they only reach a very small select group of students who are likely to belong to the wealthier parts of society. This is not a very effective way of stimulating excellence, and fails to create incentives for the majority of students who will never be able to attain top performance.

Appendices

Appendix 1 Latvia's Current Funding Model

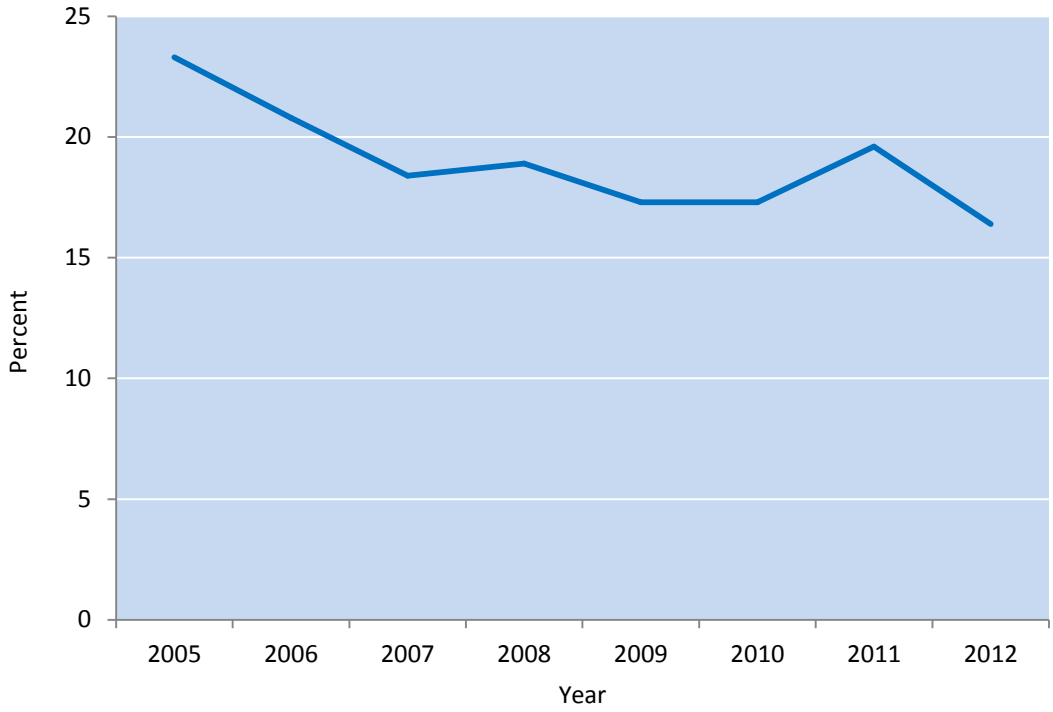
1.A Relevant framework conditions in Latvia

The development of the Latvian higher education funding model will need to take into account relevant framework conditions in the country. Latvia had one of the fastest growing economies in Europe over the past decades; however, it has also seen a dramatic contraction during the economic crisis. Annual GDP growth was cumulatively at 33 percent during the years of accession to the European Union (2004–07); the cumulative decline from 2008–10 was at minus 25 percent (Aslund & Dombrovskis, 2011, p.12). After the phase of contraction due to the economic crisis, annual GDP growth has since been picking up, reaching 5.3 percent in 2011 and 5.0 in 2012 respectively.

Unemployment fell from 16.3 percent in Q2 in 2012 to 11.3 percent in Q4 2013 (Central Statistical Bureau of Latvia). However, unemployment of tertiary education graduates is at 6 percent, significantly lower than the average rate. The individual and societal benefits of tertiary education have been extensively discussed elsewhere (see e.g., Arnhold & Kwiek, 2011, pp. 88–92); however, as for neighboring countries, tertiary education in Latvia can also be considered "the best unemployment insurance". The most recent comprehensive research on the graduate employment is dated 2007. From the data available it seems that there are comparable employment outcomes for different subject areas, with the exception of graduates of humanities and social science which have slightly lower employment outcomes three months after graduation[21] (Ministry of Welfare 2007, p. 78).

At-risk-of-poverty rate, which is the share of people with an equalized disposable income (after social transfers) below the at-risk-of-poverty threshold, for the age cohort 18–24 peaked in 2010 at 22.3 percent; slightly decreasing to 19.7 percent in 2012; with the rate being significantly higher across some regions in 2012 (e.g., 30.2 percent in Vidzeme, 30 percent in Latgale and 20.4 percent in Zemgale regions (Central Statistical Bureau of Latvia). The rate for students of that age cohort who are in tertiary education is slightly lower, as the following graph shows (Figure 3).

Figure 3: Tertiary education students at risk of poverty or social exclusion



Source: Authors' calculations, based on Eurostat, SILC database

However, approximately 16 out of 100 students are at risk of poverty and social exclusion. In 2012, the guaranteed minimum include (GMI) benefit was scaled back by 12.5 percent, from LVL 40 (EUR 57) per month to 35 (EUR 50) per month. Responsibility for providing the GMI benefit was devolved to local government.

Latvia is one of the countries in Europe that has experienced and continues to experience significant demographic decline as a consequence of both lower birth-rates and migration trends. The net migration trend, for example, has continued since 2009; in 2012 it was minus 11,890 (Central Statistical Bureau of Latvia). Moreover, the effect has been widespread across different regions (Table 13).

Table 13: Long-term net migration of population, by region (2012)

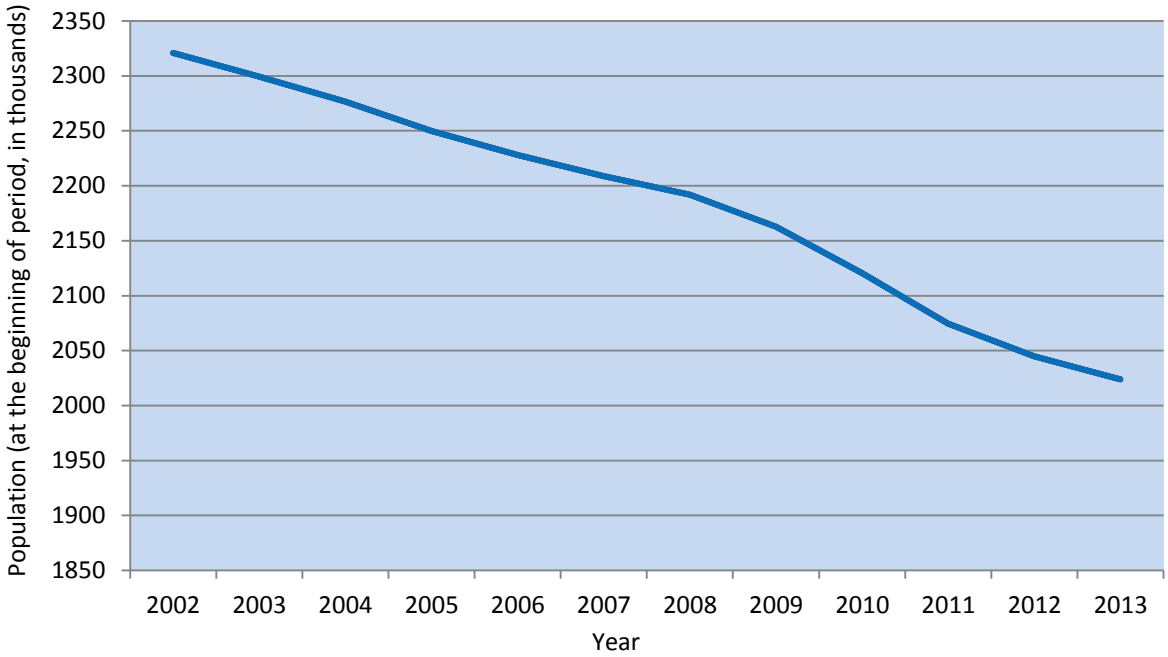
Region	Net migration of population (number of persons)
Riga	-4,056
Riga region	240
Vidzeme	-1,589

Kurzeme	-2,334
Zemgale	-1,544
Latgale	-2,577
TOTAL	**-11,680**

Source: Central Statistical Bureau of Latvia

Alongside these trends in migration, the school age population has also been rapidly declining since 2008 (Figure 4); however, anecdotal evidence indicates that a large share in particular of well-performing students emigrate at the end of secondary schooling[22].

Figure 4: Evolution of total post-secondary school-age population in Latvia 2002-12



Source: World Bank; Graph compiled by authors

[22] In a survey on their plans to study abroad, 50 percent of high school students in Latvia said they had such aspirations (Dream Foundation, 2011).

Over the next decades, Latvia will thus be confronted with the challenge to increase productivity as the basis for continuous growth, given its fast and significantly shrinking population. The higher education sector will play a paramount role in preparing highly skilled individuals that are able to address these challenges.

1.B Description of the Higher Education Sector in Latvia

Performance of Higher Education in Latvia

Higher education systems across the world have different missions and strategic goals; however, in one way or another all systems strive to transmit high-level skills to young people, prepare students for the labor market (including the academic labor market), contribute to research and development and the 'third mission' of universities which can be defined as their role in regional development and societies as a whole. A full discussion of the performance of the Latvian higher education system would be beyond the scope of this report; however, a short overview focusing on select indicators seems helpful for the following discussion.

As an EU member state Latvia has defined national targets for Europe 2020, the European Union's competitiveness strategy. Two out of the five headline targets pertain to higher education (http://epp.eurostat.ec.europa.eu/portal/page/portal/europe_2020_indicators/headline_indicators):

- 3 percent of the EU's GDP should be invested in R&D. While 3 percent is the overall EU target, the national target for Latvia is 1.5 percent. Latest available Eurostat data show that in 2012 Latvia allocated just 0.66 percent of its GDP to R&D.
- At least 40 percent of 30-34 years olds in EU member states should have completed a tertiary or equivalent education according to the other headline target related to higher education. The national target for Latvia is 34 percent; according to Eurostat 2013 data, 40.6 percent of Latvia's 30-34 year olds have completed a tertiary education, so the overall EU target has already been attained.

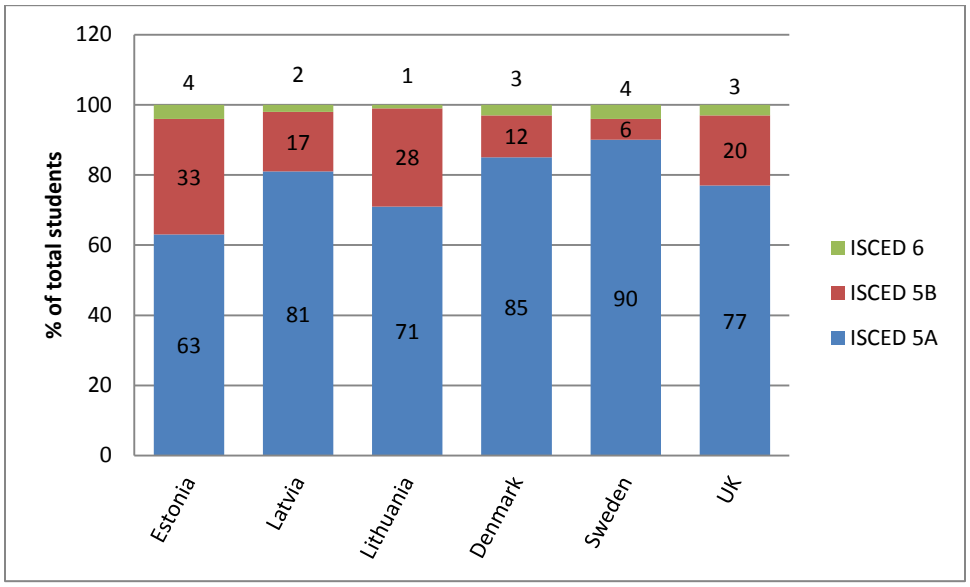
In the context of the EU and the aforementioned indicators, enrollment and attainment rates, on the whole, do not seem to pose a serious problem. Tertiary level attainment has continuously increased since 2005 when it was at just 18.5 percent. The percentage of female students has also been continuously above 60 percent in recent years[23]. The latest available Eurostat data on graduates in science, technology, engineering, and math (STEM) are from 2012, and Latvia had 13.7 STEM graduates per 1.000 inhabitants in the 20 – 29 age cohort which seems low in the European comparison (EU 27

[23] http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tps00063&plugin=1

average was 16.8 in 2011[24]. However, this issue already receives significant attention by policy makers in Latvia.

Figure 5 shows that the distribution of students across ISCED levels (or levels according to the European Qualifications Framework)[25] follows what can be considered a typical Northern European and UK pattern with a significant share of students being enrolled at the Bachelors level. There is a higher percentage of doctoral candidates in Latvia than in neighboring Lithuania; however, overall the percentage is lower than in comparator countries, perhaps pointing at possible issues concerning the professional 'pipeline' for academia and also innovation-related professions that require skills at the academically advanced level.

Figure 5: Distribution of students by the level of studies (2010)



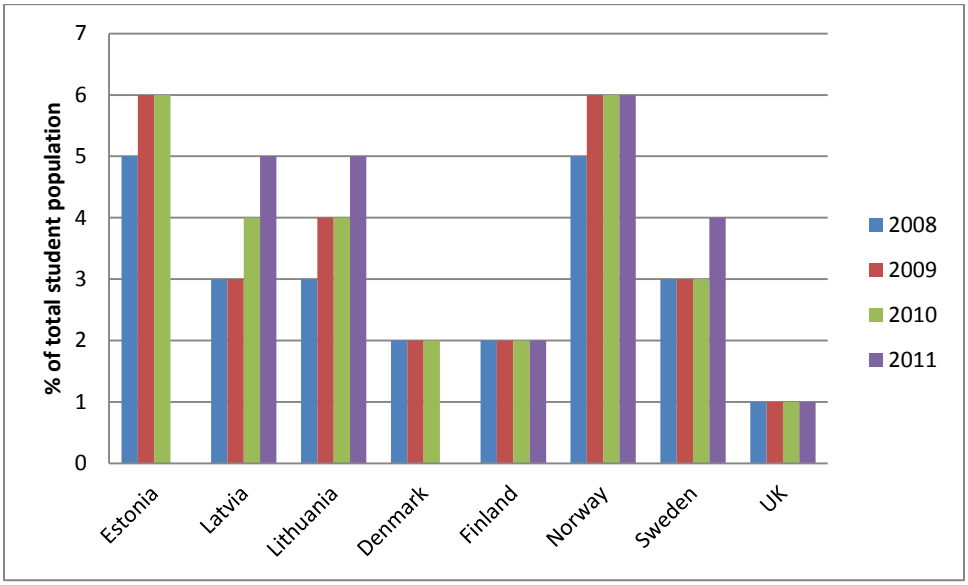
Source: UNESCO Institute for Statistics (2014), accessed on March 14, 2014 at http://stats.uis.unesco.org/unesco/tableviewer/document.aspx?ReportId=143

Vibrant higher education systems tend to have a high degree of internationalization and strive to attract renowned international scholars and talented students from other countries. However, also outward mobility can be highly beneficial, in particular if students return after a mobility period and become "agents of change" in their own evolving higher education systems and contribute as graduates to the labor market of their home country.

[24] http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tps00188

[25] ISCED is an abbreviation for the International Standard Classification of Education, an instrument for compiling internationally comparable education statistics. http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:International_standard_classification_of_education_(ISCED)

Figure 6: Outbound student mobility ratio

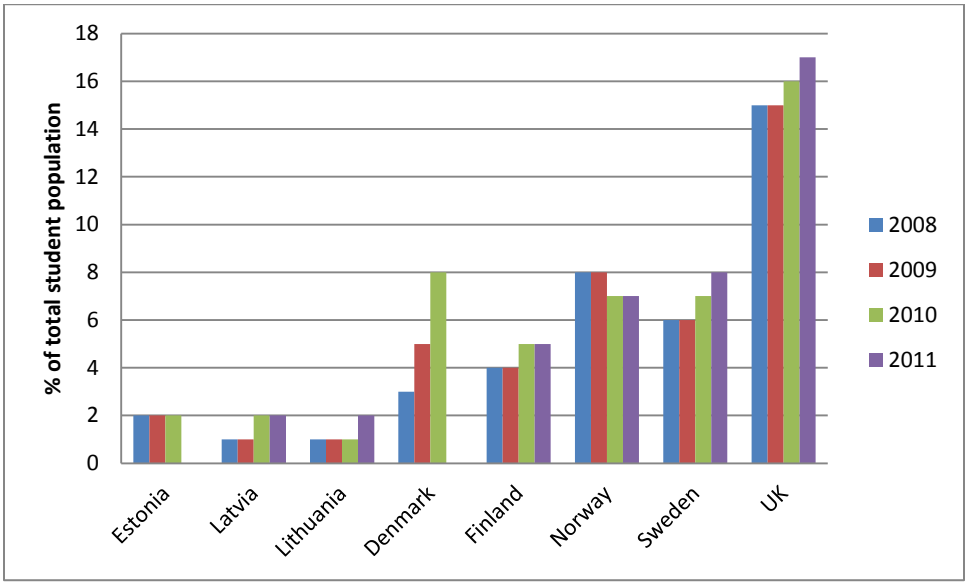


Source: UNESCO Institute for Statistics (2014), accessed on March 14, 2014 at http://stats.uis.unesco.org/unesco/tableviewer/document.aspx?ReportId=143

While stakeholders in Latvia raise concerns about outbound student mobility, this type of mobility in Latvia is comparable to neighboring Lithuania and significantly lower than in Estonia. From the data at hand alone, outbound student mobility should not be a great source of concern in the Latvian sector.

However, as in neighboring Baltic countries, outbound mobility of students does not seem sufficiently balanced by inbound mobility, which can be considered a proxy for system attractiveness in a European and international context. Scandinavian countries and the United Kingdom, in particular, are much more successful at attracting foreign students, who often pay significant fees for their education abroad. Through these fees as well as through the transfer of know-how and more generally the inflow of talent, these students contribute to the increasing attractiveness of their receiving higher education systems.

Figure 7: Inbound student mobility ratio



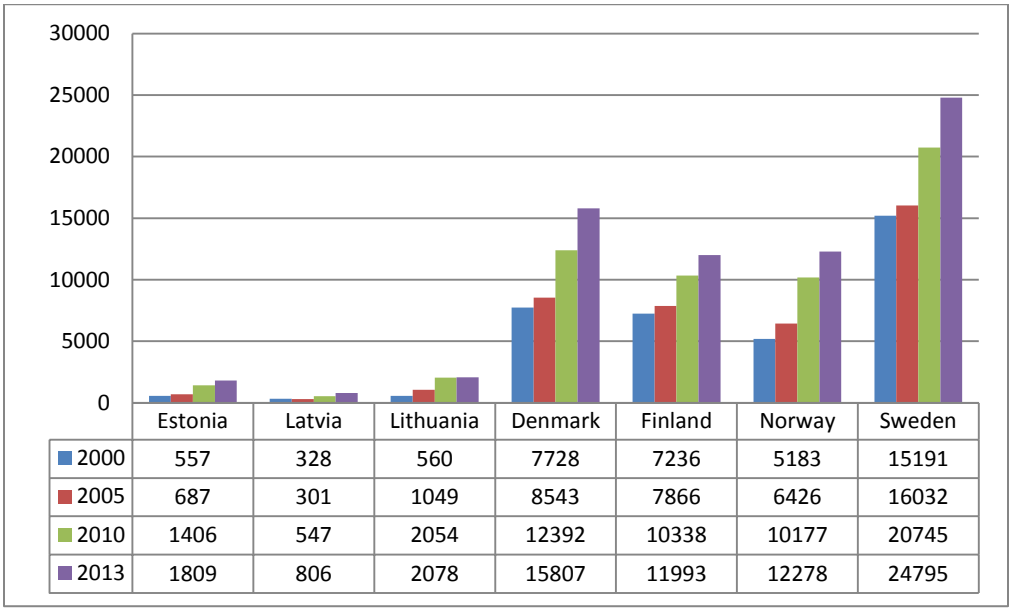
Source: UNESCO Institute for Statistics (2014), accessed on March 14, 2014 at http://stats.uis.unesco.org/unesco/tableviewer/document.aspx?ReportId=143

As previously mentioned, investment in R&D is very low in Latvia. In 2005, it was at 0.56 percent of GDP, and it has fluctuated between 0.46 and 0.70 percent since 2009[26].

Accordingly, Latvia, overall, does not perform well in the area of research and development in comparison with neighboring countries. This applies in particular to indicators like the number of peer-reviewed articles published, though language barriers and preferences might also play a role. As Figure 8 shows, Latvia performs significantly lower than comparator countries.

[26] http://epp.eurostat.ec.europa.eu/portal/page/portal/europe_2020_indicators/headline_indicators.

Figure 8: Number of peer-reviewed articles published



	Estonia	Latvia	Lithuania	Denmark	Finland	Norway	Sweden
2000	557	328	560	7728	7236	5183	15191
2005	687	301	1049	8543	7866	6426	16032
2010	1406	547	2054	12392	10338	10177	20745
2013	1809	806	2078	15807	11993	12278	24795

Source: Scopus (2014) accessed on March 14, 2014 at http://www.scopus.com/

The number of patent applications has been fluctuating in recent years. Significantly less patent applications have been originating from Latvia during the years of the economic crisis (Table 14).

Table 14: Breakdown of Invention Patent Applications by Categories and Years, 2007-2013

	2007	2008	2009	2010	2011	2012	2013	Total 2007-2013
National applications	147	215	243	185	183	205	233	1411
Including domestic applications	139	206	240	178	173	193	224	1353
International applications (PCT)	15	7	-	-	-	-	-	22
Total number of applications	162	222	243	185	183	205	233	1433

Source: Patent Office of the Republic of Latvia, http://www.lrpv.gov.lv/en/patent-office/statistics/inventions

The number of patent applications originating from Latvia that have been filed with the European Patent Office tended to be lower than those from neighboring Estonia, as illustrated in Table 15, with the exception of a substantial increase in 2013:

Table 15: European patent applications by country of origin

	2011	2012	2013
Estonia	29	42	41
Latvia	27	25	80
Lithuania	14	19	22
Romania	20	35	30
UK	4,753	4,717	4,567

Czech Republic	164	139	149
Poland	247	385	371
Germany	26,226	27,276	26,645
Austria	1,735	1,874	1,995
Netherlands	5,619	5,063	5,826

Source: European Patent Office

To summarize, while the low level of funding for higher education does not seem to affect the mere number of students and graduates (the section does not discuss the quality of provision), there might be a negative impact on research outcomes as illustrated by low number of articles in peer reviewed journals. This coincides with a comparatively low percentage of doctoral candidates out of the overall student population. These trends may negatively impact the future research capacity of Latvia, which may affect the viability of R&D as well as the overall attractiveness of the Latvian higher education system.

Development of the Current System of Higher Education in Latvia

The Latvian higher education system evolved in accordance with legislative changes introduced since 1991. In 1991, the legislative body of Latvia passed the Law on Education, which provided the legal basis for the introduction of tuition fees in higher education (Supreme Council of the Republic of Latvia, 1991). This was a move from a fully state-regulated higher education system towards a system characterized by the interplay between the state, market and academia (Goedegebuure, Kaiser, Maassen & de Weert, 1994, p. 4). This development was further supported in 1995, when the national legislative body—*Saeima*—passed the Law on Higher Education Establishments. This law outlined the current structure in higher education and established the framework for institutional autonomy in higher education. In effect, higher education institutions were able to determine their internal structure, develop and adopt their own internal codes of conduct and procedures, establish academic programs, determine the levels of pay above governmentally-established minimums for academic staff, and set tuition-fee levels at the institution. These changes were in line with the overall liberalization and democratization reforms taking place in the country following the collapse of the Soviet Union. Reforms in higher education thus aimed to modernize the sector, in order to meet the needs of a democratic society and market economy. The move from a fully state-regulated system towards a market-based and autonomous one changed the landscape of the sector.

In the reforms, significant emphasis was placed on the provision of enhanced educational mobility opportunities. Accordingly, the degree structure in the Latvian higher education system adheres to the three-cycle system of the Bologna Process, comprising Bachelors (undergraduate), Masters (graduate), and Doctoral-level studies. Within this three-cycle system, study programs can be of either professional or academic orientation. Programs of both orientations are offered by university and non-university types of public and private tertiary institutions (Eurydice, n.d.). Universities administer programs on the level of Bachelors, Masters, and Doctoral or their equivalent level of studies. Non-university types of institutions offer Bachelors and Masters degree programs.

The distinction between university and non-university types of HEIs in Latvia is stipulated by the Law on Higher Education Establishments (1995). The main distinction between the two types of institutions, as mentioned above, is that while universities offer Doctoral study programs, non-university HEIs do not have such study programs. Non-university HEI status can, however, change their status and become universities by developing and receiving accreditation for a particular Doctoral study program[27]. Colleges are distinct types of non-university institutions that offer first-cycle professional higher education programs, in accordance with what was described as 'short higher education' in the Bologna context[28]. The full duration of these programs is between two and three years. The funding formula in the case of these institutions is similar to the one applied for public HEIs, whose allocation is done on a per-capita basis, per study program[29]. College graduates may continue pursuing higher education, should they wish to obtain higher professional or academic degrees. Holders of academic and professional bachelor degrees are eligible for admission to both types of master studies, whose paths make them also eligible for doctoral studies, resulting in the promotion of upwards educational mobility.

Another significant outcome of higher education reforms was the expansion of the sector. The number of institutions of higher education grew from 10 state-owned institutions in 1988, to 34 public HEIs and 27 private HEIs; including both colleges, and three branches of foreign HEIs (Central Statistics Bureau, 1988; MoES, 2012). To provide quality assurance in higher education, it was stipulated that only state-accredited HEIs and study programs were able to graduate students and issue a corresponding diploma recognized by the state (*Saeima*, 1995). The condition of accreditation of tertiary institutions and study programs was extended to accessibility of public funding for higher education, such that only accredited study programs are eligible for state funding, and only students in these programs can receive student loans that are subsidized by the government.

One element of continuity from the previous era is the multi-ministerial oversight of the sector. There are currently seven ministries that oversee at least one of the institutions of higher education in Latvia (Table 16). The most recently established institutions of higher education operate under the oversight of the Ministry of Education and Science (MoES), together with some older institutions.

Table 16: Supervision of ministries over public HEIs and colleges

Ministry	Institutions of Higher Education	Colleges
Ministry of Education and Science	University of Latvia	Riga Building College
	Riga Technical University	Riga Business College
	Daugavpils University	Riga Technical College
	Liepaja University	Olaine College of Mechanics and Technology
	Latvia Academy of Sports Education	Liepaja Maritime College
	Latvia Maritime Academy	Jekabpils Agrobusiness College
	Riga Teacher Training and Educational Management Academy	Daugavpils Medical College
	Rezekne Higher Education Institution	Malnava College
	Ventspils University College	P.Stradins Medical College of the University of Latvia
	Vidzeme University of Aplied Sciences	Riga 1st Medical College
	BA School of Business and Finance	Riga Medical College of the University of Latvia
Ministry of Health	Riga Stradins University	Red Cross Medical College of Riga Stradins University
Ministry of Agriculture	Latvia University of Agriculture	-
Ministry of Culture	Latvia Academy of Culture	Latvia Culture College of Latvia Academy of Culture
	Latvia Academy of Arts	
	J.Vitols Latvia Academy of Music	

Ministry of Defense	National Defense Academy of Latvia	-
Ministry of Interior	-	Fire Safety and Civil Protection College
		State Border Guarding College
		State Police College
Ministry of Welfare	-	Social Integration State Agency

Source: Authors, based on data provided by MoES, 2014

The majority of HEIs established after 1990 is privately funded, and primarily located in Riga. However, several public higher education institutions that receive direct public subsidies have also been established; among which are regional public non-university type HEIs in Valmiera, Rezekne and Ventspils, established in 1996, 1993 and 1997 respectively. All institutions of higher education—university and non-university type institutions including colleges, which offer short cycle professionally oriented higher education—receive public funding according to the same set of rules, elaborated in greater detail later.

In 2012/2013, Latvian HEIs together offered a total of 910 study programs across eight subject areas and 29 study directions. The majority of study programs is implemented in Social Sciences, Commercial Sciences and Law: 316; followed by Engineering, Manufacturing and Construction: 160; and Arts and Humanities: 110. The distribution of the total number of students (99,474 students) across subject areas differs slightly from that of study programs, i.e., the largest share of students study Social Sciences, Commercial Sciences and Law: 39,252; Engineering, Manufacturing and Construction: 13,751; Health and Social Welfare: 11,832; which points to differences as to the average number of students per study program in various subject areas (MoES 2012).

The most recent data on higher education published by MoES display the tendency of a decreasing number of students within a relatively stable number of study programs. At the beginning of the academic year 2013/2014, the number of study programs was close to the previous reporting year—901; in state HEIs and colleges, 700, and in private HEIs and colleges, 201. The distribution of programs across subject areas has not significantly changed: Social Sciences, Commercial Sciences and Law: 310; followed by Engineering, Manufacturing and Construction: 159; Arts and Humanities: 122; Health and Social Welfare: 83; Natural Sciences, Mathematics and Information Technology: 82; Services: 68; Education: 63; and Agriculture: 14. The most notable changes of the program structure have taken place in Arts and Humanities which gained 12 study programs and in Education which lost 15 study programs.

Table 17: Study Programs offered by HEIs in Latvia, 2013/2014

No. Subject Area	Subject area	Number of programs	Total number of students	Number of programs administered by public HEIs	Number of students at public HEIs	Number of programs carried out by private HEIs	Number of students at private HEIs	Proportion of programs at public HEIs (%)	Proportion of students at public HEIs (%)
1	Education	63	5,435	63	5,435	0	0	100	100
2	Arts and Humanities	122	8,119	98	6,441	24	1,678	80	79
3	Social Sciences, Commercial Sciences and Law	310	36,317	186	18,380	124	17,937	60	51
4	Natural Sciences, Mathematics and Information Technology	82	6,636	73	5,451	9	1,185	90	82
5	Engineering, Manufacturing and Construction	159	13,786	144	13,127	15	659	91	95
6	Agriculture	14	1,559	14	1,559	0	0	100	100
7	Health and Social Welfare	83	10,977	69	10,118	14	859	83	92
8	Services	68	6,834	53	4,899	15	1,935	78	72
	Total in HEIs and Colleges	**901**	**89,663**	**700**	**65,410**	**201**	**24,253**	**78**	**73**
Of which	Undergraduate Studies (College, Bachelor, Professional)	504	72,650	368	51,233	136	21,417	73	71

	Graduate Studies (Master and Doctorate)	397	17,013	332	14,177	65	2,835	84	83
	Including Doctoral Studies	93	2,404	85	2,198	8	206	91	91

Source: Authors, based on data provided by MoES, 2014

Student numbers have, however, changed more prominently: in 2013/14, the total number of students is 89,663, which represents a decrease of about 6 percent compared to the previous year. Again, the distribution of students across subject areas does not match that of study programs. The number of students in both public and private HEIs studying Social Sciences, Commercial Sciences and Law is 36,317; Engineering, Manufacturing and Construction: 13,786; Health and Social Welfare: 10,977; Arts and Humanities: 8,119; Services: 6,834; Natural Sciences, Mathematics and Information Technology: 6,636; Education: 5,435; and Agriculture: 1,559 (MoES, 2014).

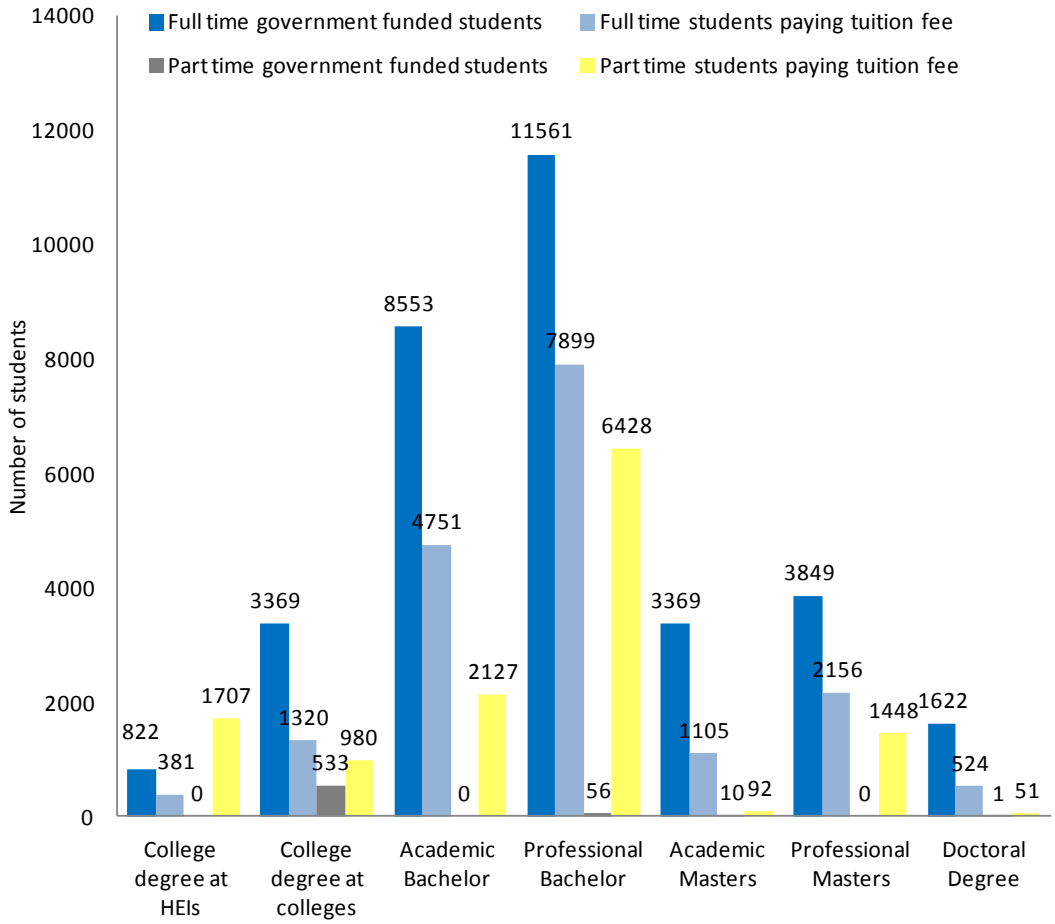
Higher Education Students in Latvia

Entrance to tertiary education in the form of first level professional education (i.e., short cycle) and Bachelor degree programs is granted to secondary education degree holders who meet the admission criteria set by the relevant higher education institution(s). Since 2006, most higher education institutions in Latvia admit students on the basis of the national centralized high-school graduation exams (Cabinet of Ministers Regulations No. 846, adopted on October 10, 2006, "Regulations Regarding the Requirements, Criteria and Procedures for Admission to Study Programmes") in which students are selected competitively based on their results in national exams as per their chosen field of higher education study. Institutions of higher education are free to set additional student selection criteria should they wish.

In principle, students are able to study in either full-time or part-time mode, providing that part-time study programs are offered by tertiary institutions in the respective area of studies. Not surprisingly, the proportion of students in full-time study programs at public institutions of higher education has always been bigger than in part-time study mode. In 2013/14, 80 percent of all students at public HEIs were in full-time education (MoES, 2014).

While in full-time study programs at public HEIs, a proportion of students are able to study in the state-funded study places without paying tuition, in part-time study programs, students are almost without exception charged tuition fees. That is, only full-time students in Latvia are eligible to compete for fully state-funded study places (Cabinet of Ministers Regulations No. 994, 2006). In 2013/14, 35 percent of full-time students at public HEIs, including colleges, paid tuition fees (MoES, 2014). For part-time studies, nearly all students paid tuition.

Figure 9: Students by mode, level and financing of their studies at public HEIs, 2013/2014



Source: Authors, based on data provided by MoES, 2014

Data from 2013/14 show that the majority of students, 73 percent, study at public HEIs, colleges included (MoES, 2014). Of the 65,410 students enrolled in public higher education sector, 56 percent paid tuition fees, charged by their institution. Depending on the institution and study program, tuition fees at public institutions of higher education in Latvia in 2013/14 ranged: from EUR 882 to EUR 5,208 per academic year for Bachelor degree students; from EUR 384 to EUR 15,000 in Masters' degree study programs; and from EUR 1,067 to EUR 9,135 in Doctoral degree study programs (MoES, 2014, p. 77).

Table 18: Tuition fees and other fees in European higher education systems in 2013-14

Country	1st cycle min. (EUR)	1st cycle max. (EUR)	Most common fee (EUR)	2nd cycle min. (EUR)	2nd cycle max. (EUR)	Most common fee (EUR)	Proportion of students paying fees (%)
Belgium (Flemish)	80	611	611	80	611	611	70 pay fees
Bulgaria	59	741		59	793		Almost all pay max. fees
Czech Republic	20	21		20	21		All students pay admission fees
Denmark	no fees	no fees	no fees	no fees	no fees	no fees	no fees
Germany	200	1,000		200	1,000		Majority pay minimum fee
Estonia	0	7,200		0	7,200		Fees mainly charged for incomplete ECTS
Ireland	2,500	6,000	2,500	4,000	30,000	6,000	60% pay fees, all 1st cycle pay 2500 EUR student contribution
Greece	no fees	no fees	no fees	no fees	no fees	no fees	no fees
Spain	713	2,011	1,074	1,052	4,734	1,074	70% pay fees
France	183	2,000		254	10,000		65% pay fees
Croatia	665	1,329		665	1,329		61% pay fees
Italy			1,300			1,300	88% pay fees
Cyprus	no fees	no fees	no fees	no fees	no fees	no fees	no fees
Latvia	903	4,876		918	6,571		55% of 1st cycle and 40% of 2nd cycle pay fees
Lithuania	625	5,260		1,411	6,249		48% pay fees
Hungary	795	5,532		1,556	6,569		43% pay fees
Malta	no fees	no fees	no fees	no fees	no fees	no fees	no fees
Austria	no fees	no fees	no fees	no fees	no fees	no fees	no fees
Poland	41		41	41		41	
Portugal	631	1,066		631	1,066		All pay fees
Romania	525	2,819		525	2,819		45% of 1st cycle and 37% of 2nd cycle pay fees
Slovenia	1,210	9,375	2,800	1,250	12,462	2,800	Less than 20% pay fees
Slovakia	10	1,960		10	2,940		All pay registration fees (10-100 EUR)
Finland	no fees	no fees	no fees	no fees	no fees	no fees	no fees

Sweden	no fees	no fees	no fees	no fees	no fees	no fees	no fees
England		11,099	11,099			4,810	All 1st cycle pay fees
Iceland	373			373			All students pay fixed fees
Norway	no fees	no fees	no fees	no fees	no fees	no fees	no fees
Switzerland	830	3,319		830	3,319		Almost all pay fees

Source: Authors' calculations, based on data provided by Eurydice *National Student Fee and Support Systems*, 2014
* The range of tuition fees at public HEIs in 2013/14 according to data from the Ministry of Education and Science is slightly different. The lowest fee for part time Bachelor degree studies was EUR 882, for full time studies – EUR 968. The highest fees respectively were EUR 2077 and EUR 5208. In Masters' degree programs the least tuition in part-time studies reported was EUR 384, in full time studies - EUR 818. The highest tuition in part time Masters' degree study programs was EUR 3256, and in full time studies - EUR 15,000 (MoES, 2014, p. 77).

Table 18 summarizes the latest information on tuition fees and other fees collected in public or government-dependent private higher education institutions in Europe[30]. Across eight countries in the first cycle of higher education, and five countries in the second cycle, no fees are collected. Compared to other European countries shown in Table 18, where fees are collected, tuition fees in Latvia (as well as in Lithuania and Hungary) are relatively high (even in nominal value), both in the first and second cycles. However, because of the dual track tuition fee system applied in Latvia, the proportion of students paying fees is to some extent lower, when compared with those European countries where other than nominal (< EUR 500) fees are collected.

The primary pool of students for HEIs in Latvia is local residents. At the same time, institutions of higher education seek to increase the number of international students. According to the Guidelines for the Development of Education 2014–20, the Government of Latvia aims to increase the number of foreign students in higher education institutions so that by year 2020 8 percent of the total number of students are foreign students studying for obtaining a degree or qualification (project approved by the Cabinet of Ministers on January 7, 2014). Admission requirements for international students include completed prior education which would qualify them for admission to tertiary education programs in their country of origin. An additional requirement is a good command of English. International degree seeking students in Latvia are only able to study in full-time mode.

International students studying in Latvia pay tuition fees. Some institutions of higher education set higher tuition fees to non-EU students, while others charge the same amount of money across all students on the program. Students who are also citizens of the European Union are eligible to compete with local students for state budget places at public HEIs if they are able to study in the Latvian language[31].

[30] Information in Table 18 refers to fees collected in public or government-dependent private higher education institutions and covers fees of domestic/EU students in the first and second cycles only (Eurydice, 2013, p. 2). All fees are in nominal value (EUR).
[31] However, state funded study places are also provided in programs which are either fully implemented in an EU language or for programs where the majority of courses are in an EU language/-es (e.g., English philology or modern lanaguages).

In addition, since 2012, international students in Latvia, together with students residing in countries that offer scholarships to Latvian students, can apply for a scholarship within the framework of intergovernmental agreements (as per Cabinet of Ministers Regulations No. 68, 2012, "Procedures for Granting Scholarships to Foreigners"). Scholarships are allocated to students for study programs and research as specified by intergovernmental agreements. If the study program is not specified, international students in undergraduate and graduate study programs studying in Latvian or some other official EU language may apply for one year of scholarship. For students in study programs administered in the Latvian language, Baltic philology, literature and culture or Master level studies in Latvian history, the scholarship can be awarded for two consecutive academic years, providing all course requirements are met. The minimum amount of the scholarship for international students in college, Bachelor and Masters degree programs is EUR 498, and EUR 669 a month in Doctoral programs. At the same time, governmental regulations might also mean that no scholarships are awarded if there is no sufficient funding for this purpose in the state budget for the respective academic year (Cabinet of Ministers Regulations No. 68, 2012). In 2012/2013, there were 88 scholarships distributed to foreign students, researchers, and faculty—58 scholarships of which were for studies and research, and 30 of which were for participation in summer schools (MoES, 2013a).

With respect to international full-time students in Latvia, most of them pursue a degree in the field of medicine and health care (MoES, 2012, p. 92). Among local students, however, enrollment is highest in the areas of social and commercial studies and law (MoES, 2013). Overall, 42 percent of students were studying in these subject areas. Half of the students in social and commercial studies and law were enrolled at public HEIs. The majority of these students studied full time and independently financed their studies.

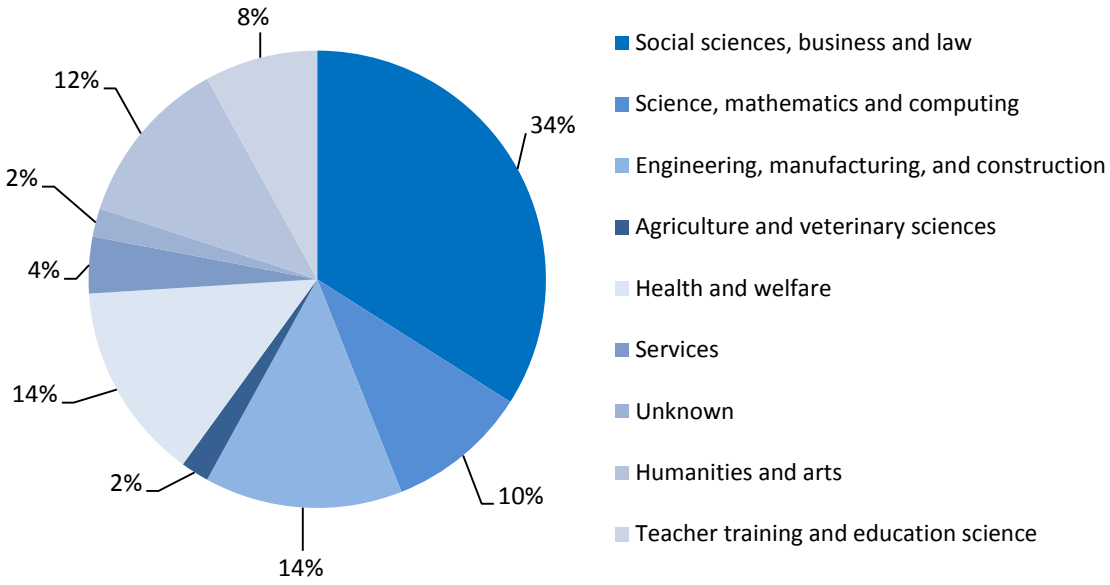
Table 19: Students by subject area at public institutions of higher education in 2013/14

No. Subject Area	Subject area	Total number of students	Proportion of students in the thematic group	Proportion of students at public HEIs	Full time students at public HEIs	Proportion of full time students at public HEIs	Government funded students at public HEIs (no tuition)	Proportion of government funded students at public HEIs (no tuition)
1	Education	5,435	8%	100%	2,812	52%	2,308	42%
2	Arts and Humanities	6,441	10%	79%	6,184	96%	4,424	69%
3	Social Sciences, Commercial Sciences and Law	18,380	28%	50%	13,152	71%	4,617	25%
4	Natural Sciences, Mathema-tics and Information Technology	5,451	8%	82%	5,356	98%	4,676	86%
5	Engineering, Manufactur-ing and Construction	13,127	20%	95%	10,774	82%	8,854	67%
6	Agriculture	1,559	2%	100%	1,025	66%	807	52%
7	Health and Social Welfare	10,118	15%	92%	9,549	94%	6,200	61%
8	Services	4,899	7%	71%	3,125	64%	2,605	53%
	Total in HEIs and Colleges	65,410	100%		51,977		34,491	

Source: Authors' calculations, based on data provided by MoES, 2014

There are some differences in terms of enrollment by subject area when Latvia is compared to EU27; however, the differences are less pronounced than one could expect from public debate which tend to highlight low(er) enrollment in STEM subjects in Latvia. Enrollment in humanities and social sciences combined in Latvia accounts for 49 percent of all students enrolled; it is on average 46 percent in EU27. The STEM subjects account for 22 percent of all students enrolled in Latvia; the corresponding figure is 24 percent for EU27 (see Figure 10).

Figure 10: EU-27 Tertiary Students (ISCED 5-6) by field of education (2010)



Source: Authors' calculations, based on Eurostat database

While across law, social and business studies, there is a strong competition for local students between private and public HEIs, applicants in other subjects mostly study at public institutions. Across all study programs for services, arts and humanities, 71 and 79 percent of all students, respectively, are enrolled in the public sector. Public institutions enroll 82 percent of students in the area of natural sciences, mathematics and IT; 92 percent in health and social welfare; and 95 percent in engineering, manufacturing and construction. Agriculture students are exclusively enrolled in public institutions.

Public funding covering tuition fees by subject area is most available to full-time students in natural sciences, mathematics and IT programs—86 percent of which study free of charge. This is also the subject area with the highest proportion of full time students. The next top two subject areas with nearly a total full-time student enrollment are (i) health and social welfare and (ii) arts and humanities. However, in these subject areas, the government funds between 61 and 69 percent of tuition fees. Social and business studies and law are the most competitive in terms of publicly-funded study places, since the government covers tuition fees for only 25 percent of full time students (MoES, 2014).

The aforementioned migration issues might possibly trigger questions about repayment modalities of migrating students. However, students who have studied free of charge in Latvia and have subsequently decided to move to another country are not required to repay part of their study-costs. They would only need to pay back a government-guaranteed loan to cover the costs of their studies, if applicable. At the moment, no data are available for Latvia on the proportion of higher education graduates who have received state-funded higher education and have moved on to pursue professional careers in other countries (however, general data on migration are provided in the initial part of this section).

Across Latvia, a high number of students pursue work alongside their studies. A representative survey of students in Latvia reveals that almost half of full time students in Latvia are employed besides their studies (Koroleva et al., 2013). Of all students, 37 percent said they work full time, spending on average 30 hours per week working in their jobs (Koroleva et al., 2013, p. 51). The same study reports that in 2013 on study-related activities, full-time students spent about 34 hours a week on average (p. 56). On the one hand, this work experience might contribute to the development of skills and practical competences of students. However, a study on undergraduate student employment in Latvia finds that working while studying has a negative effect on their academic achievement (Auers, Rostoks, & Smith, 2007). An empirical study undertaken by these authors confirm that the majority of working students also pay tuition fees.

While it seems likely that the high number of students working alongside their studies is related to the issue of drop-outs, further research is needed in Latvia to determine to what extent the inability to finance studies contributes to students dropping out of higher education. According to statistics provided by the Ministry of Education and Science (2013b), the drop-out rate at public institutions of higher education, (excluding colleges), has fluctuated between 12 percent and 18 percent during the years 2000 to 2010. The drop-out rate has been the same as in public institutions, on average, at private institutions of higher education.

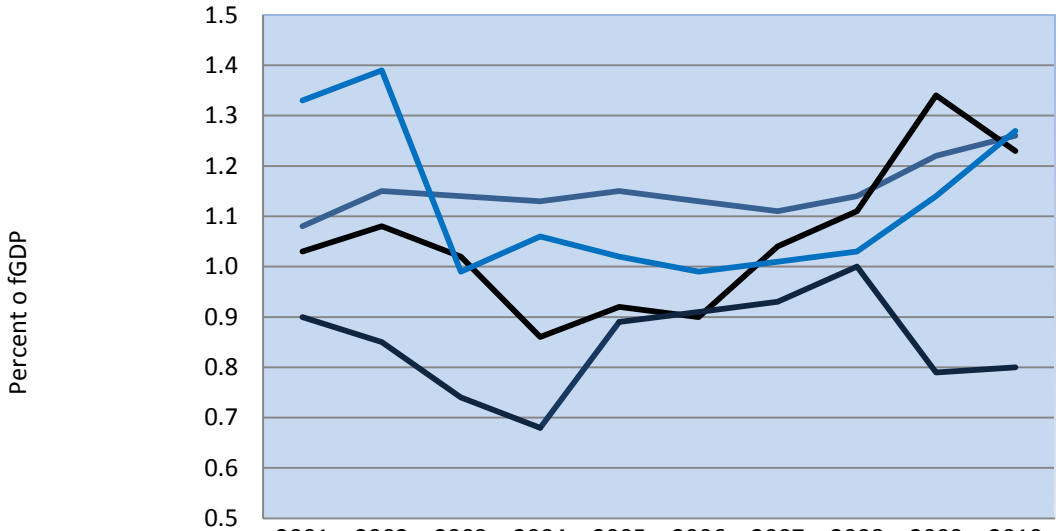
1.C Funding levels of higher education and research in Latvia

The focus of the following analysis is on the technical features of funding instruments. It is nevertheless also relevant to examine the Latvian situation of higher education with respect to funding levels; especially since there are recurrent discussions regarding Latvia being an “underfunded” system. In order to analyze the validity of this argument, Latvia is once again compared against European benchmarks.

The higher education sector in Latvia is funded from public and private sources. The total spending for higher education in 2012 was 1.4 percent of GDP or EUR 311.2 million (MoES, 2014). The state budget contributed 34 percent of the total funding. Private funding from students paying tuition fees paid constituted 24 percent. Other sources (where half of the funding comes from EU structural funds), constituted 42 percent of the total higher education revenue. As a proportion of GDP, higher education

funding has not changed across the past decade, although there has been an increase in terms of the absolute budget. In 2001, the total higher education sector budget was LVL 68 million (EUR 99 million) and constituted 1.5 percent of GDP (MoES, 2002).

Figure 11: Total public expenditure on higher education

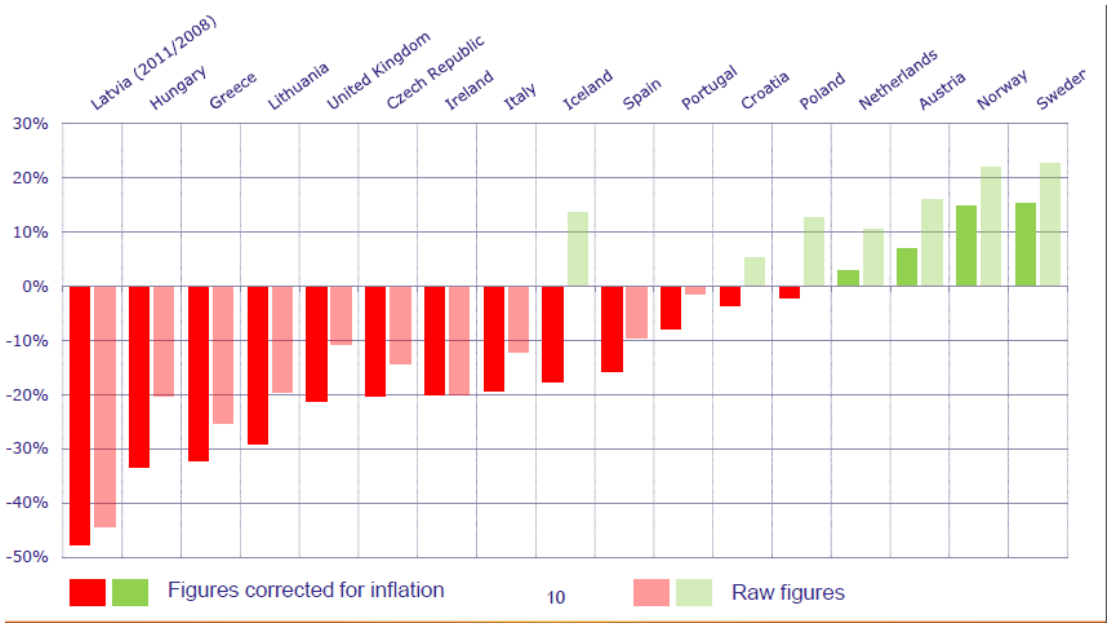


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EU 27 countries	1.08	1.15	1.14	1.13	1.15	1.13	1.11	1.14	1.22	1.26
Estonia	1.03	1.08	1.02	0.86	0.92	0.90	1.04	1.11	1.34	1.23
Latvia	0.90	0.85	0.74	0.68	0.89	0.91	0.93	1.00	0.79	0.80
Lithuania	1.33	1.39	0.99	1.06	1.02	0.99	1.01	1.03	1.14	1.27

Source: Authors' calculations, based on Eurostat database

As shown in Figure 11, the level of public expenditure on higher education in Latvia (expressed as a percentage of GDP) was clearly lower than the EU-27 average—and was, in fact, the lowest across the Baltic countries—between 2001-2010. In 2010 (most recent data), public expenditure on higher education represented only 0.8 percent of GDP in Latvia, versus an average of 1.26 percent in the EU-27 countries and 1.23–1.27 percent in Estonia and Lithuania respectively. Unlike in Latvia, public expenditure has been constantly increasing in Estonia and Lithuania between the years 2006-2010. In 2008, just before the financial and economic crisis, Latvian public expenditures accounted already for 1.0 percent of GDP before the budget cuts in 2009 and 2010 returned it to the lowest levels in Europe. Among all EU-27 countries in 2010, only Bulgaria (0.61 percent of GDP) exhibited a lower level of public expenditure on higher education than Latvia.

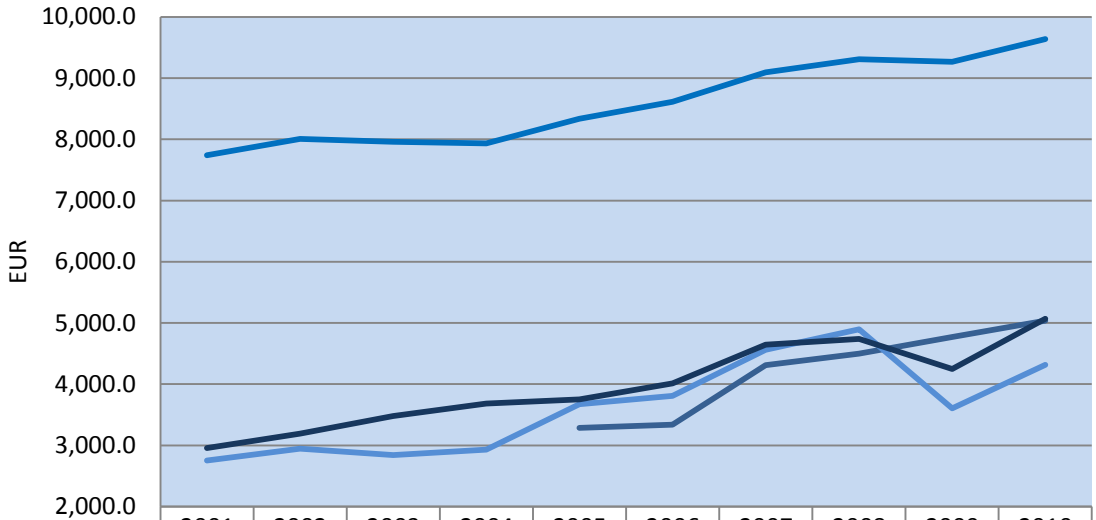
Figure 12: Public funding in 2012 compared with 2008, adjusted for inflation



Source: EUA—Nazare & Estermann, 2013 (http://www.auth.gr/sites/default/files/eua_presentation-_autonomy_greece.pdf)

The above graph (Figure 12) illustrates another perspective on the dramatic decline in public funding for higher education during the crisis years.

Figure 13: Annual expenditure on public and private educational institutions in 2001-2010 per student (purchasing parity standard based on full-time equivalent students, ISCED 5-6



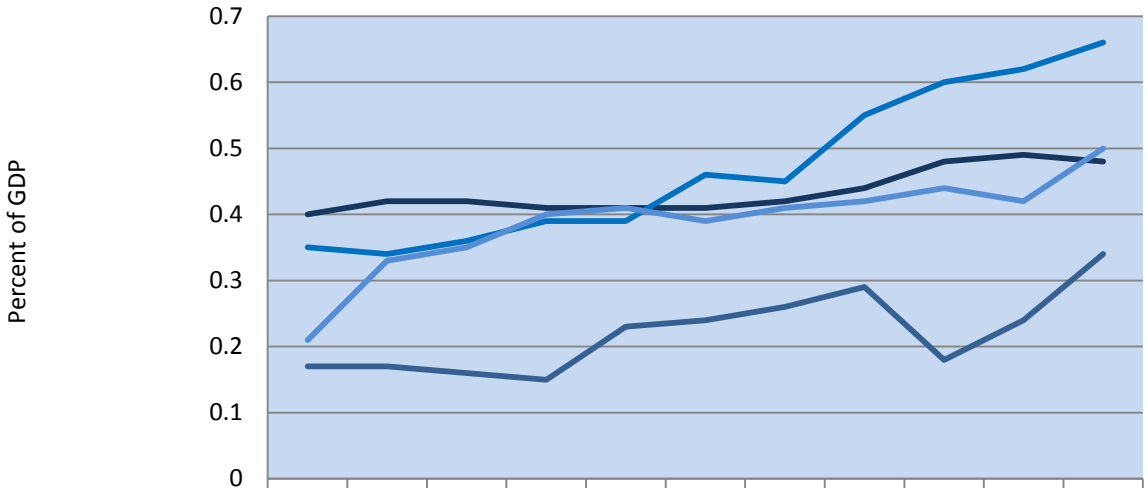
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EU 27 countries	7,740.	8,007.	7,961.	7,931.	8,335.	8,615.	9,092.	9,308.	9,264.	9,638.
Estonia					3,285.	3,340.	4,311.	4,500.	4,772.	5,037.
Latvia	2,750.	2,945.	2,839.	2,931.	3,673.	3,810.	4,561.	4,895.	3,605.	4,315.
Lithuania	2,956.	3,191.	3,481.	3,685.	3,753.	4,015.	4,644.	4,741.	4,249.	5,066.

Source: Authors' calculations, based on Eurostat database

When expenditures (both public and private) on higher education are measured per full-time equivalent student in purchasing parity standard (PPS), Latvia's expenditure levels are close to the expenditure levels of Estonia and Lithuania throughout the period of 2001–08 (Figure 13)[32]. However, due to the economic and financial crisis, annual expenditure per student in Latvia fell behind the levels of the two other Baltic countries, especially in 2009 and in 2010. Overall, annual expenditure on HEIs per student is very low across all Baltic countries in comparison to other European countries. Over the years 2001–10, expenditure per student in Baltic countries has been only half of the EU-27 average (the difference has been around EUR 4,800–5,900 per annum depending on the year). In 2010, Latvia's annual public and private expenditure per student was third lowest in among all EU-27 countries after Bulgaria (EUR 3,763) and Romania (EUR 2,956). If one would take a look only at the public expenditures per student, Latvia would again drastically fall behind the two other Baltic countries.

The situation remains similar, even if we make similar comparisons for R&D expenditures in Figure 14.

Figure 14: Expenditure for R&D in higher education sector as percentage of GDP



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
EU (27 countries)	0.4	0.42	0.42	0.41	0.41	0.41	0.42	0.44	0.48	0.49	0.48
Estonia	0.35	0.34	0.36	0.39	0.39	0.46	0.45	0.55	0.6	0.62	0.66
Latvia	0.17	0.17	0.16	0.15	0.23	0.24	0.26	0.29	0.18	0.24	0.34
Lithuania	0.21	0.33	0.35	0.4	0.41	0.39	0.41	0.42	0.44	0.42	0.5

Source: Authors calculations, based on Eurostat database

In 2011, R&D expenditure in Latvia's higher education sector was still clearly behind other Baltic countries and the EU-27 average, but has been steadily increasing following the significant drop in 2009 (Figure 14). From 2001 to 2011, Latvia has been able to increase the expenditure levels in total by 0.17 percentage points. This increase is lower than the respective increase of Lithuania (0.29 percentage

[32] Expenditure per student in public and private institutions measures how much central, regional and local levels of government, private households, religious institutions and firms spent per student. It includes expenditure for personnel, other current and capital expenditure (Eurostat).

points), and Estonia (0.31 percentage points), but higher than the increase in the average of EU-27 countries (0.08 percentage points). Furthermore, it should be noted that, in 2011, expenditure for R&D in the higher education (0.34 percent of GDP) sector constituted almost half (0.34 percent) of the total Latvian expenditure for R&D (0.7 percent of GDP) (see Figure 9).

To summarize:

The higher education and R&D system in Latvia is significantly underfunded, compared with both EU averages as well as Baltic countries, who are close neighbors and competitors. In the higher education sector, the drastic underfunding in public budgets is compensated only partly by private contributions. Given the magnitude of this problem, one would expect repercussions concerning the quality of higher education. It would be desirable if transparency initiatives like the new U-Multi-rank project, in which Latvian universities participate, would shed more light on this particular issue[33].

1.D Financial Autonomy of HEIs in Latvia

Institutions of higher education in Latvia are autonomous, in accordance with the Law on Higher Education Establishments (*Saeima*, 1995) which provides them with the status of public authority. This means that the government has no right to intervene in the way public and private HEIs manage their budgets, beyond the scope of the regulations in the framework of which public funds to HEIs are allocated. According to the law, institutions of higher education in Latvia can acquire and manage their property, as well as take out loans for institutional purposes from commercial banks and other lending institutions. They may receive donations from legal and private entities, in which case they need to deposit this funding in a special budget account of the institution (*Saeima*, 1995). Higher education institutions are free to determine their tuition fees and the total number of students that can be admitted annually. Overall, HEIs in Latvia enjoy a significant amount of financial autonomy (see Chapter 2 and Table 20), as the EUA autonomy scorecard exercise highlighted:

Table 20: Latvia's position in the EUA financial autonomy scorecard

Rank	System	Score
1	Luxembourg	91%
2	Estonia	90%
3	United Kingdom	80%
4	Latvia	80%
5	Netherlands	77%

[33] http://www.umultirank.org/

6	Hungary	71%
7	Italy	70%
	Portugal	70%
	Slovakia	70%
10	Denmark	69%
11	Ireland	66%
12	Switzerland	65%
13	Austria	59%
14	North Rhine-Westphalia	58%
15	Finland	56%
	Sweden	56%
17	Spain	55%
18	Poland	54%
19	Lithuania	51%
20	Norway	48%
21	Czech Republic	46%
22	France	45%
	Turkey	45%
24	Brandenburg	44%
25	Iceland	43%
26	Greece	36%
27	Hesse	35%
28	Cyprus	23%

Source: EUA, in Estermann & Bennetot (2011)

However, institutions of higher education are responsible for the rational and purposeful use of their financial resources as stipulated by the law.

The Ministry of Education and Science only regulates how many students are going to study on government-funded study places. This precise number is stipulated in an annual protocol that

complements a “performance agreement” (running over a 3-4-year period) between the HEIs and the MoES[34].

The Law on Higher Education Establishments (Saeima, 1995) stipulates that the founder of a HEI is responsible for financing its operations. In the case of a private HEI, this means that the institution is financed from private contributions. In the case of public institution, this generally means that the government is responsible for allocating funds to support operations of the HEI. Looking at the total budget of public HEIs, about 31 percent come from the national budget designated to cover the expenses of educating a certain number of students in government-funded budget places (MoES, 2014). This funding is allocated to the institution as a lump sum. In instances where a public HEI does not spend all the money allocated for the running year, it is not required to return these funds to the state budget. Thus, in principle, public HEIs can build reserves.

The MoES is also involved with monitoring whether or not the public HEI in question has met the terms of agreement for which the state funding was allocated—i.e., regarding the number of specialists that must be educated[35]. In cases where the HEI has failed to uphold this part of the agreement, it must justify its reasons for doing so. If the MoES considers that the public HEI did not adequately meet the terms of agreement and did not, moreover, spend the money as per the designated purpose, it does not budget free study places in the respective program for the particular public HEI for the following year. Thus, when allocating the state budget funds for free study places at public HEIs, the Ministry of Education and Science reacts to the behavior of the HEIs in a prospective manner.

Incorporated within the agreements between MoES and HEIs concerning the number of specialists that must be educated in the scope of state budget places, is a provision enabling HEIs to reallocate public funds up to the amount of 10 percent to other programs than the ones for which the amount allocated by the MoES[36]. Thus, institutions of higher education have some flexibility with regard to funds allocated. The MoEs is currently considering whether or not to remove this 10 percent flexibility margin, in order to ensure that HEIs do not spend public funds on educating specialists for which no public funding is usually foreseen.

Some aspects of institutional autonomy are nevertheless regulated, such as in respect to setting wages and to hiring staff. The law on higher education establishments stipulates that at least 65 percent of academic personnel need to have a doctoral degree (*Saeima*, 1995) at universities (i.e., institutions conferring doctorate degrees). At academies, this proportion must be at least 50 per cent, whilst at other HEIs, this figure drops to 40 per cent. The government also regulates the thresholds of the minimum monthly compensation for academic staff at public institutions of higher education (Cabinet of Ministers Regulations No. 836, 2009).

[34] Agreement Protocol updated annually as an Annex to the Contract between the HEIs and Ministry on the preparation of a certain number of graduates and scientific activity.
[35] For a discussion on available ”performance” data (in fact, input and output related data), see Appendix 2.
[36] Interview with MoES expert.

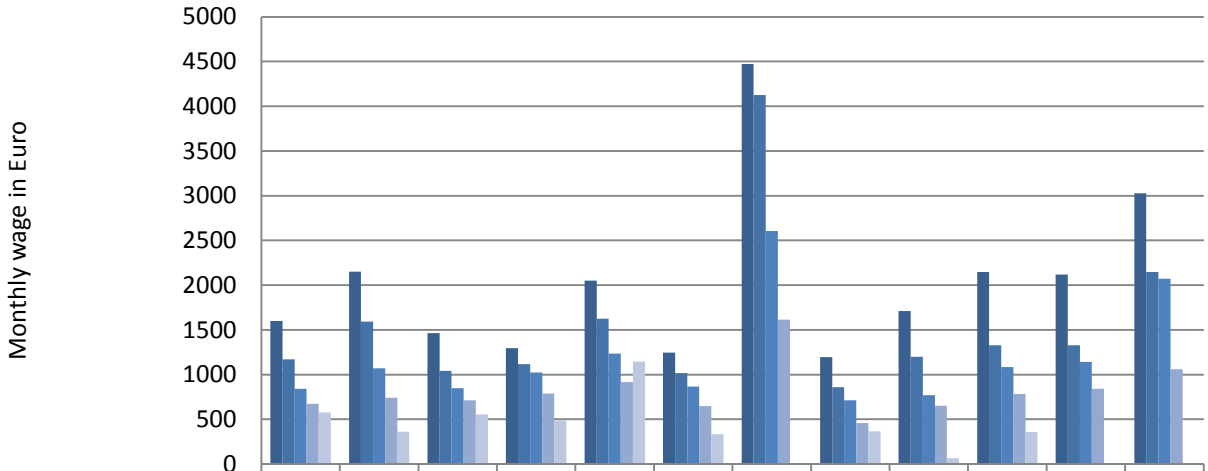
Table 21: Minimum wage thresholds for academic staff at institutions of higher education

No.	Academic position	Minimum monthly wage in EUR as required by regulations	Average remuneration of academic staff at public HEIs in 2011 (EUR/per month)
1.	Rector	1,410.07	n/a
2.	Professor	1,175.29	1791
3.	Vice-Rector	940.52	n/a
4.	Associate Professor	940.52	1371
5.	Dean	940.52	n/a
6.	Assistant Professor	752.7	1028
7.	Department Chair	752.7	n/a
8.	Vice-Dean	601.87	n/a
9.	Lecturer	601.87	747
10.	Assistant	480.93	421

Source: Cabinet of Ministers Regulations, 2009; MoES, 2013c
Note: n/a = not available.

Higher education institutions are able to pay higher salaries to their academic staff than the minimum stipulated by the government. The average compensation of the academic staff at public HEIs in 2011 for the most part was moderately higher than the minimum set by the government. However, there is significant variation between institutions, as the following Figure 15 shows.

Figure 15: Remuneration of academic staff at public HEIs in 2011



	LU	RTU	DU	LiepU	LLU	LMāA	BA	LSPA	RPIVA	LJA	ViA	VeA
Professor	1601	2150	1465	1296	2049	1246	4471	1197	1712	2146	2119	3026
Associate professor	1171	1592	1043	1118	1624	1018	4124	858	1198	1329	1328	2146
Assistant Professor	843	1072	849	1024	1236	866	2605	714	770	1084	1142	2071
Lecturer	674	741	713	786	915	650	1616	459	652	785	841	1059
Assistant	576	360	554	486	1144	334	0	365	66	360	0	0

Source: MoES, 2013c

In most cases, about 40 to 50 percent of the institutional budget is spent on remuneration of faculty and staff. The exceptions to this is Ventspils University College (VeA), which, in 2012, spent only 24 percent of their budgets on salaries (MoES, 2014). A further breakdown of this compensation expenditure shows that the majority of higher education institutions spent 40 percent or more of their salary budget on the wages of academic staff; the only exception to which was the Latvia Academy of Arts which spent 28 percent on the wages of faculty in 2012 (MoES, 2014). The largest share of the salaries budget at this institution, 66 percent, was allocated for the wages of general personnel; administrative personnel received the remaining 6 percent of the remunerations budget at Latvian Academy of Arts in 2012.

Table 22: Expenditure of public institutions of higher education on wages in 2014

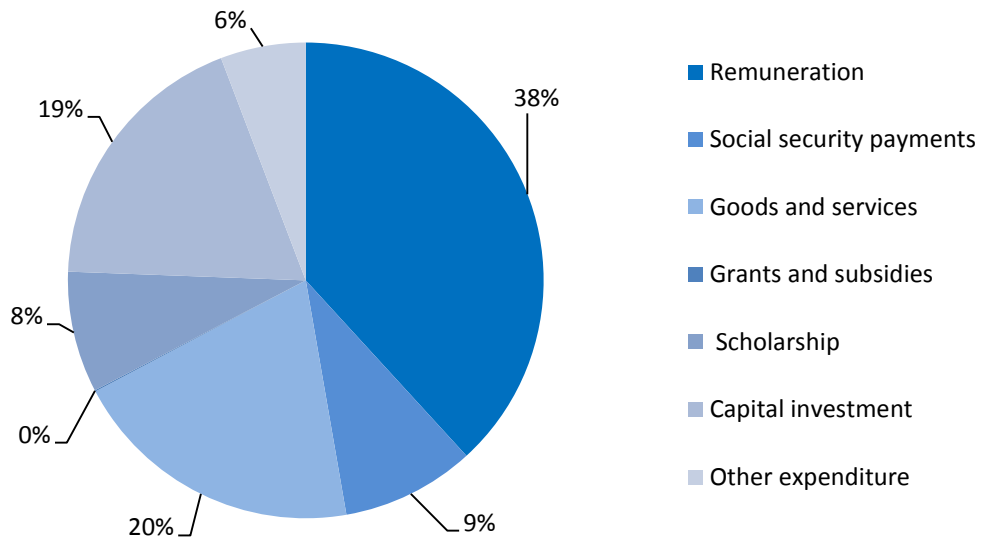
No.	HEI	Expenditure total	Remuneration total		Academic staff (of remuneration total)		Administrative staff (of remuneration total)		General staff (of remuneration total)	
		thousand Euro	thousand Euro	%	thousand Euro	%	thousand Euro	%	thousand Euro	%
1	LU	68,703	28,006	40.8%	14,355	51.3%	3,470	12.4%	10,181	36.4%
2	RTU	59,233	22,119	37.3%	12,749	57.6%	4,260	19.3%	5,110	23.1%
3	LLU	28,068	10,230	36.4%	4,550	44.5%	619	6.1%	5,061	49.5%
4	DU	11,929	4,629	38.8%	2,702	58.4%	1,106	23.9%	821	17.7%
5	RSU	43,822	14,444	33.0%	6,130	42.4%	4,367	30.2%	3,947	27.3%
6	LiepU	4,619	2,262	49.0%	1,551	68.6%	168	7.4%	544	24.0%
7	LKuA	3,486	1,325	38.0%	717	54.1%	108	8.2%	499	37.7%
8	LMāA	5,075	2,015	39.7%	561	27.8%	124	6.2%	1,330	66.0%
9	LMūA	4,323	1,796	41.5%	1,147	63.9%	649	36.1%	0	0.0%
10	LSPA	2,830	1,521	53.7%	839	55.2%	240	15.8%	441	29.0%
11	LJA	2,376	1,178	49.6%	747	63.4%	134	11.4%	297	25.2%
12	RPIVA	4,048	2,187	54.0%	1,015	46.4%	235	10.7%	938	42.9%
13	RA	5,965	2,271	38.1%	1,340	59.0%	0	0.0%	931	41.0%
14	VeA	7,688	1,877	24.4%	992	52.9%	740	39.4%	145	7.7%
15	ViA	2,968	1,254	42.3%	862	68.7%	57	4.5%	334	26.6%
16	BA	3,476	1,642	47.2%	871	53.0%	515	31.4%	256	15.6%

Source: MoES, 2014

For Vidzeme University of Applied Sciences and University of Liepaja, the largest share in wages was spent on administration—68 percent. Rezekne Higher Education Institution, on the other hand, did not report any budget spent on the wages on administration.

One reason for variation in the distribution of the salaries' budget appears to be that wages of academic staff at public HEIs reflect only compensation for teaching workload. Although there is an expectation that academic staff at public HEIs perform research, the scientific activity is not accounted for in the workload of academic staff at institutions of higher education. Additional compensation for academic staff is possible in the scope of research projects in which case the compensation is covered from project funding and, in principle, signifies a different status for the recipient (e.g., assistant professor vs. researcher).

Figure 16: Distribution of expenditure at public HEIs, 2012



Source: MoES, 2014

Institutions of higher education also have flexibility regarding other lines of expenditure. The second largest category of expenditures in 2012 at public institutions of higher education was on goods and services, for which public HEIs spent between 10 and 29 percent (MoES, 2014). Capital investment was the third ranked, where some public institutions of higher education were allocated sizeable amounts. The three largest expenditures on this position were made by Latvia Academy of Culture (to the amount of 30 percent of the total institutional budget expenditure in 2012); Jazeps Vitols Latvian Academy of Music (27 percent); and several institutions spent about 25 percent on this expenditure line.

Institutions of higher education have some autonomy to influence which students are able to study free of charge in state budget places. Several institutions practice a so-called 'student rotation' one-in, one-out scheme of state budget places, based on students' results in semi-annual exams (although there is no law requiring this practice). The underlying principle is that state budget places are allocated on the strict basis of academic merit, such that students who were initially admitted to a budget place and yet perform lower in semi-annual exams might have to forfeit their place to a higher-performing student who initially had to pay tuition fees. This student rotation takes place twice a year based on the overall exam performance. At the University of Latvia—which is the largest HEI implementing student rotation of budget places based on academic results—changes affect less than 10 percent of students that were initially admitted to budget places[37].

In contrast, government directives are relatively strict with regard to the distribution of governmental stipends for students in budget-funded places. Based on government regulations, publicly-funded

[37] Stakeholder interviews.

monthly stipends are awarded to the highest academic-achieving students on the program (Cabinet of Ministers Regulations No. 740, 2004). Criteria such as need, disability and other socioeconomic factors are only taken into account in instances where two candidates have the same academic results. These are taken into account in cases where a single payment stipend for which students facing some extraordinary personal hardships can apply. On these stipends, higher education institutions are only entitled to spend up to 5 percent of their annual publicly-funded stipend budget line.

As mentioned above, higher education institutions in Latvia enjoy considerable financial autonomy. The main criterion against which they are held accountable for spending public funds is linked to the number of specialists educated under the framework of agreement between the MoES and a given institution. Another aspect of their institutional accountability is their compliance with the requirements of private donors regarding the use of their donations. Conditions for spending these funds are usually set out in the terms of donation.

Assessing financial operations of public HEIs in Latvia from 2009 to 2012 exhibits an annual growth in public HEIs assets (Civitta, 2013). However, the fixed costs coverage ratio has gradually been declining since 2009. This means that the proportion of costs has been growing in relation to HEI revenues. At the same time, there is an acceptable level of debt to capital ratio at public HEIs that does not raise concerns in the short term. The analysis of public HEIs financial operations by Civitta (2013) indicates that liquidity is one of the strengths of public higher education institutions in Latvia: public tertiary institutions are able to meet their short-term obligations; a phenomenon which Civitta explains by the fact that public HEIs have large financial reserves. Nevertheless, from 2009 to 2012, the public higher education sector operated without profit with EBIT margin before tax, and with interest rate payments standing close to zero.

1.E Public State Funding to Higher Education in Latvia

General Overview of Public Funding for Higher Education

The government determines how public funds are distributed to institutions of higher education. There are two ways that determine this. The first is via direct allocations from the state budget to the institutions (Cabinet of Ministers Regulations No. 994, 2006). The second is via indirect subsidies through the government-guaranteed student loan system, whereby the state subsidizes the interest on student loans issued by commercial banks, covers the grace period, finances loan forgiveness, and acts as a secondary guarantor for the loans issued by commercial banks within the scope of its student loans scheme (Cabinet of Ministers Regulations No. 220, 2001).

Direct allocation of public funds to institutions of higher education falls under the remit of general funding that covers the study process for a certain number of students in free budget places and science funding. In 2012, these direct subsidies constituted about 31 percent of the total higher education

budget (MoES, 2014). The funding allocated directly from the national budget to science was about 5 percent of the total higher education budget.

Indirect subsidies to higher education via the publically subsidized student loans scheme constituted LVL 2.7 million (EUR 3.8 million) in 2012 (Studiju un zinātnes administrācija, 2012). This component of higher education funding is primarily concerned with ensuring access to higher education for students. State support to student borrowing enables a larger group of students to cover their tuition fees. There is no readily available information on the total proportion of higher education graduates and current students who hold outstanding student debt from the government's loan scheme either for tuition or for student living costs loan. However, the annual borrowing rate to cover tuition fee among students who pay tuition since 2009 has been 4 percent, on average. The average borrowing rate of governmentally subsidized loan for covering living costs has been about 1.4 percent among students who pay tuition and about 3 percent among students who study free of charge (SZA, 2012; MoES, 2009, 2010, 2011, 2012).

Direct Allocations of Public Funds to Cover Study Process

The amount of government funding to cover HEI study costs is calculated in accordance to a nationally predetermined formula (Cabinet of Ministers Regulations No. 994, 2006). The funding is only allocated to full-time study programs that are—almost exclusively—offered at public HEIs (although there are some exceptions which will be addressed later in this section). The amount of funding is calculated annually by applying a per capita formula that takes into account the costs of the study program by the field and level of studies. Specifically, the key components in the overarching formula are: (1) the number of state-funded study places determined annually by the Minister of Education and Science by March 1; (2) basic costs of a study place; (3) student social security and welfare costs; and (4) the coefficients by subject area.

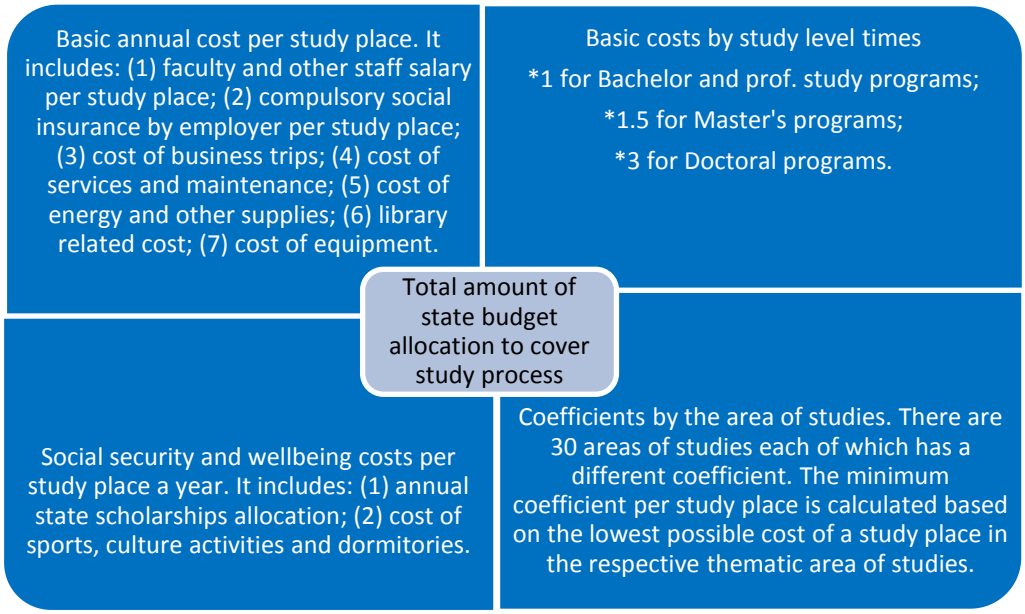
The basic costs of a study place reflect the lowest costs of a Bachelor and professional study program in the least expensive subject area in the respective year. As illustrated in Figure 16, this basic cost is multiplied by the minimum coefficient for the thematic area of studies and by the coefficient corresponding to the level of studies (of Bachelor, professional, Masters, or Doctoral study level).

Cost coefficients determine the amount of allocation for each study area in relation to the basic costs of a study place.

The government regulations stipulate the maximum and minimum value of the cost coefficients by study area. This distinction, which was introduced alongside formula-based funding in 2002, is motivated by the need to accommodate state budget constraints while projecting a future annual increase in state allocation to higher education. In 2002, an additional 10 percent (annually) to the minimum coefficient was planned until the funding reached the maximum value of subject area coefficients. Thus, the plan was to reach the maximum coefficient value in state budget allocation by

subject area in 2012. In reality, however, the higher education sector experienced drastic cuts in public financing; particularly during the economic recession.

Figure 17: Components in the formula for state-budget allocation to cover the study process at a HEI



Source: Authors, based on data provided by Cabinet of Minister Regulations 994, 2006

As a result, the allocation of public funds dropped *below even the minimum* coefficient value stipulated by the government. In 2013, it only constituted on average about 80 percent of the minimum coefficient value. At the same time, the delta between the stipulated and the actual amount of allocation differs between supervising ministries under which the HEIs operate[38]. Public funding per study place to the HEIs of the Ministry of Education of Science was only 84 percent of the minimum. It was 90 percent at the HEIs under the supervision of the Ministry of Health and the Ministry of Culture.

Table 23: Public funding coefficient values by subject area

No.	Study directions	Optimum value of the coefficient of the study costs	Minimum value of the coefficient of the study costs[39]
1	Legal sciences	1.1	1.0
2	Humanities	1.4	1.0

[38] Interview with MoES expert.

[39] Real allocation was on average 80 percent of the minimum in 2013 (however, there were differences accross subject areas and apparently also type of institution); interview with MoES expert.

3	Social and behavioral sciences	1.4	1.0
4	Information and communication sciences	1.4	1.0
5	Business and administration	1.4	1.0
6	Teacher education and education sciences (except for the programs in row 21 of this table)	1.7	1.1
7	Private services	1.8	1.1
8	Transport services	1.8	1.1
9	Computer sciences	2.5	1.5
10	Mathematics and statistics	2.5	1.5
11	Construction	2.9	1.7
12	Navigation	2.9	1.7
13	Engineering sciences	2.9	1.7
14	Agriculture, forestry and fishery	2.7	1.8
15	Manufacturing and processing	2.7	1.8
16	Organization and management of sport work	2.7	1.8
17	Natural sciences	3.2	1.9
18	Environmental protection	3.2	1.9
19	Architecture	3.5	3.1
20	Art (except for the programs in row 28 of this table)	3.5	3.1
21	Teacher education programs for the acquisition of a qualification of a visual art or music teacher	3.5	3.1
22	Pharmacy	3.5	3.0
23	Health and social care	3.5	3.0
24	Veterinary sciences	5.0	4.0
25	Medical treatment	4.0	3.5
26	Civil defense	4.2	2.7
27	Music, choreography	4.5	3.9

28	Art programs—The Audio-visual Media Art and Design	4.5	3.9
29	Dental care	5.1	4.4
30	Military defense	6.0	6.0

Source: Cabinet of Ministers Regulations No. 994, 2006

While the number of publicly funded study places per program is revised every year, the methodology of calculating the basic costs of a study place and the values of coefficients of subject areas has remained largely fixed since 2002. However, the modes of teaching and learning have changed, along with the actual costs of studies in various disciplines. In order to revise and update the methodology, the Ministry of Education and Science has commissioned research to evaluate the current methodology of calculating study costs and attributing coefficients to various subject areas[40].

As already mentioned, nearly all public funds for higher education studies are distributed to public HEIs. However, the regulations allow public funds to be allocated to private higher education institutions (Cabinet of Ministers Regulations No. 994, 2006). Ministries and other national public administration bodies are able to sign agreements concerning a certain number of students to be educated at private HEIs, in the following cases: (i) where private HEIs have study programs of higher quality than public HEIs (though it is not completely clear how this higher quality is demonstrated) (ii) when they offer a unique study program that is not offered by public HEIs, or (iii) when public HEIs are unable to educate the number of specialists required by the state in a given area. In 2014/15, under this agreement, the Ministry of Education and Science allocated 25 state-funded study places in hospitality services to the professional Bachelor degree program at the "Turiba" School of Business Administration. Public funding was also awarded for five Doctoral study places at the Riga International School of Economics and Business Administration, with a view to supporting collaboration between HEIs in carrying out joint study programs[41]. In years preceding the economic crises of 2009, there was an intention to extend public funding to private HEIs more frequently[42]. However, the public budget decreased due to the recession, and this subsequently did not happen[43].

[40] One approach which might be considered further is the full economic costing model (FEC), which was originally developed for research and which is calculated on a transparent basis using an extension of the TRAC methodology, whereby costs are normally divided into four main types: (i) directly incurred costs, which are costs spent specifically to enable the research project to be carried out; (ii) directly allocated costs, which are a share of the costs of a resource used by a project whereby the same resource is also used by other activities; (iii) estates costs, associated with the use of university buildings, such as rents, repairs, maintenance and so forth; and (iv) indirect costs, which are miscellaneous costs that are otherwise not included as directly allocated costs (e.g. administrative support, office consumables; usually expressed as GBP per academic staff FTE). For more information, see http://www.worcester.ac.uk/researchportal/documents/A_short_guide_to_Full_Economic_Costs.pdf

[41] Interview with MoES expert.

[42] Ibid.

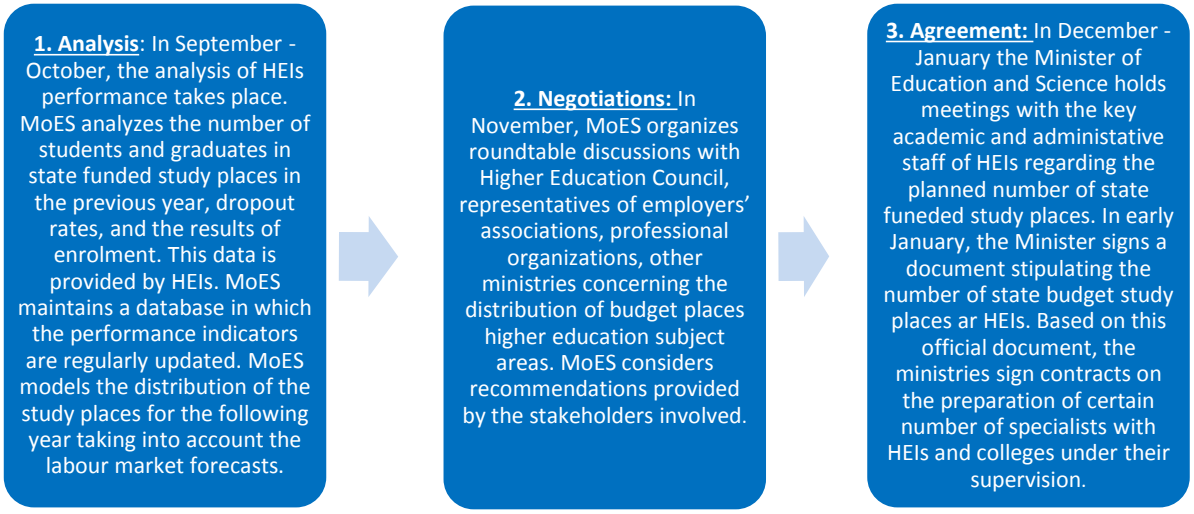
[43] There is another minor exception in relation to allocating public funds to full-time studies only. In 2011/2012, there were 40 part-time students studying in the professional Bachelor's degree study program "Boarder guard" at the regional Rezekne HEI (MoES, 2012). These students were admitted on the basis of a mutual agreement between the State Border Guard and the aforementioned public HEI (Kalvāne, 2011, 10 July).

The Process of Deciding on the Number of State Funded Students

The number of study places at various HEIs and fields of studies is set on an annual basis by the Minister of Education and Science. While the final decision rests with the Minister, the prior process involves multiple stakeholders, including the twelve Sector Committees of the Latvian Employers' Confederation, other professional organizations, ministries, and the Higher Education Council.

The distribution of budget places across study programs implemented by HEIs is planned on the basis of HEIs performance indicators - the actual number of state-financed students, graduates, and drop-outs. The planning takes into account labor market forecasts by the Ministry of Economics as well as the amount of the public budget funds available for the respective calendar year[44].

Figure 18: Process of annual planning in state-funded study places at HEIs



Source: Authors, based on information provided by MoES, 2013b

While the MoES is able to determine how many specialists should be financed by the state for HEIs that operate under its supervision (within the scope of the respective budget allocation), it cannot make decisions with regards to HEIs that fall under the supervision of other ministries. In these instances, MoES essentially agrees to the recommendations of these ministries as to how many state budget places should be allocated to these tertiary institutions in the respective year[45]. This is due to the fact that the funding for these places comes from the budget of these particular line ministries.

The annual agreement on the number of state-funded study places concerns the new matriculation cohort, i.e., full-time students to be admitted for the first year in their study program. When planning for state-funded study places in 2014, the Ministers of Education and Science, Agriculture, and Health, as well as representatives of eight major HEIs, agreed on the following list of guiding principles:

[44] Note difference between fiscal (calendar) year and academic year.
[45] Interview with MoES expert.

- The first guiding principle is to better take the needs of the labor market into account (MoES Protocol No. 1-27/289, Annex 1, 2013, December 20).

- The second is that the budget subsidy for the institution in 2014 must remain the same as in 2013. However, the distribution of study places in study program must be reduced by 20 percent across social sciences and education (decrease of enrolment in 2014/15 academic year) and a respective increase of the number of study places in STEM fields, especially at the Master and Doctoral level.

- The third guiding principle is strategic specialization. HEIs and the Ministers of Agriculture and Health have committed to revising the structure of study programs and to introducing a curriculum that: corresponds better to labor market needs, promotes the specialization of the institution by defining its strategic focus, reduces the fragmentation of study programs by joining similar programs and supports the vertical development of programs (one program at various study levels) rather than horizontal development (various program at the same study level). It was envisaged that Daugavpils University, University of Liepaja, Rezekne HEI, Ventspils University College, and Vidzeme University of Applied Sciences would evolve as regional HEIs whose main purpose is to support the development of their region.

- The fourth guiding principle refers to program sustainability, i.e., only those in demand and well-governed would be financed from the state budget. Programs that fail to maintain a sufficient number of students and that have high dropout and low graduation rates should either be consolidated with other similar programs within the institution or else closed. HEIs were encouraged to consider the development of joint study programs, especially at the Doctoral level. All these decisions regarding the curriculum and study programs should nevertheless be made by the respective HEIs themselves.

The changes applied in the scope of the aforementioned four principles require that HEIs consolidate their programs, and make strategic development decisions in order to maintain current levels of state budget funding for study places.

Quality assurance in Latvia is regulated by the Law on Higher Education Institutions, as well as Cabinet Regulations No. 668 “Regulations on Accreditation of Higher Education Institutions, Colleges and Subject Area”. The current regulation, adopted on September 25, 2012, embodies the reform of the system of accreditation. Previously, the scope of accreditation was higher education institutions and study programs. Study programs had to undergo an accreditation within three years after receiving a license (permission to implement a study program). With the new regulations, accreditation is granted to the study direction as a whole and applies to all licensed study programs that belong to this area. Study programs included in the study direction are described in detail in the accreditation application

submitted by the HEI. A study direction is accredited for six years; in case of a conditional accreditation for two years. Accreditation may be refused on the following grounds:

1. A substantiated joint report of the experts or individual opinion of an expert evaluating the study direction is negative.
2. The study program or study programs corresponding to the relevant study direction do not comply with the requirements of the Law and regulations.
3. The study and informative bases (including the library), material technical, financial base and the qualifications of the academic staff do not comply with the conditions for the implementation of the study program or study programs corresponding to the relevant study direction.
4. The study programs for the acquisition of a master's or doctoral degree do not comply with the state of (scientific) advancement of research or similar.
5. The institution of higher education or college has not eliminated the deficiencies detected during the previous accreditation of the study direction.

The transition to the new system of accreditation of study direction was completed by August 31, 2013. According to the most recent data on accreditation published by MoES on December 20, 2013, for higher education institutions taken as a whole there are currently 217 study direction accredited for six years, 28 study direction accredited for two years, 2 study direction for which accreditation was refused and three study direction where the accreditation is in progress.

The regulations foresee that accreditation is organized by the MoES or an institution authorized by MoES in an open tender. Currently, accreditation is organized by the Study Accreditation Committee chaired by MoES. In the long-run MoEs envisages the establishment of a national body for external quality assurance to be included in the European Quality Assurance Register for Higher Education.

While the previous discussion on external quality assurance has focused on accreditation, it is, however, important to keep in mind that accreditation, by its nature, only establishes if the quality of higher education is sufficient above an established threshold; it does not provide further-reaching information on relevance and attractiveness of programs. In order to gain a deeper understanding of the potential impact of the current level of funding on quality of provision, more research would be needed and possibly accompanying measures in terms of external quality assurance (like institutional evaluations). There is, however, anecdotic evidence pointing at deeper quality issues; the topic of perceived insufficient labor-market relevance was, for example, raised in discussions by employer representatives.

Direct Allocations of Public Funds to Cover Scientific Activities at HEIs

From a national policy financial and governance perspective, higher education and research in Latvia are viewed as two different activity streams. There are two separate laws regulating the sector of higher education: the Law on Higher Education Establishments (*Saeima*, 2005); and the Law on Scientific Activity (*Saeima*, 2005a), pertaining to research and scientific activity. The latter mostly takes place in

research institutions distinct from HEIs. The Law on Scientific Activity stipulates that it is the duty of HEIs to perform research activities.

There are two main sources of science funding in Latvia: the state budget and European Structural Funds. In 2012, state science funding constituted almost EUR 14.7 million, while EU contribution was 64.5 million euros (MoES, 2014). Additional funding for research can be generated through competitively-selected research and collaboration with enterprises. Funding from the state budget is available only to institutions registered in the Registry of Scientific Institutions. In 2013, all public HEIs (with the exception of the National Defense Academy) were represented in the Registry of Scientific Institutions either themselves or by some institution affiliated to some degree with the HEI (State Service of Education Quality, 2013).

State budget financing is intended to provide base funding for research activities at public HEIs and research institutions, as well as to support basic and applied research. Base funding for public scientific institutions is calculated on the bases of formula which includes infrastructure maintenance costs, wages for scientific personnel, and a coefficient for the development of scientific institution (Cabinet of Ministers Regulations No. 1316, 2013). The coefficient for the development of the scientific institution incorporates performance based criteria which is the amount of research and development projects, the number of scientific publications and patents, and the number of Masters and Doctoral thesis defended with the guidance from the respective scientific institution. The infrastructure maintenance costs and the coefficient for scientific development are both adjusted for the area of studies with a coefficient 2 for natural sciences and 1.3 for social sciences and humanities. Similarly like in the case of decreased funding for studies, research institutions receive only 25 percent of the optimal annual base funding for science.[46]

Public funding for research is also available on competitive bases from the State Research Program, Commercially Oriented Research Program, and Fundamental and Applied Research Program. Funding from these sources is available on competitive bases to all institutions registered in the Registry of Scientific Institutions, which also includes privately founded scientific institutions (Cabinet of Ministers Regulations No. 1316, 2013; No. 227, 2011). Yet, like in all other instances, the amount of public funding available is determined by the general availability of resources in public budget.

For the State Research Program, the Ministry of Education and Science invites proposals from scientific institutes, groups of scientists, commercial enterprises, non-governmental organizations as to what should be the subjects tackled in the scope of the research program (Cabinet of Ministers Regulations No. 443, 2006). These proposals are evaluated by a committee organized by MoES and representing various ministries, experts of Latvian Council of Sciences, and the National Academy of Sciences against the criteria of national priorities in research, scientific and applied importance of the topic, and the novelty of the topic. Once the relevant topic proposals for State Research Program are selected, a call for competitive research plan submissions which would meet the goals of the research program is

[46] Interview with MoES expert.

organized. The lead researcher in this application should be a scientist employed at registered scientific institution which can also be a HEI. There can be several partners—public and private scientific institutions—engaged in the implementation of the research and receiving public funding. It is also possible for commercial enterprises registered as scientific institutions to take part in the execution of these research projects and provide their co-funding.

Commercially Oriented Research Program is aimed to support research and business collaboration. Project applicant should be a scientific institution. The project should involve a commercial partner from the manufacturing sector who provides co-funding for the project. The distribution of public funding in the scope of this program is competitive, administered by the Ministry of Education and Science engaging experts in the areas of research proposals. Funds received in the scope of this program can only be used solely for the purposes designated in the allocation of research funding. In 2013, however, there was no public funding allocated for Commercially Oriented Research Program (MoES, 2014a).

Fundamental and Applied Research Program is funded by the state budget and administered by Latvian Council of Sciences. The purpose of Fundamental and Applied Research Program is to support the creation of new knowledge regardless of their relevance for the commercial use (Cabinet of Ministers Regulations No. 227, 2011). In order to ensure that all fields of sciences have access to this funding, Latvian Council of Sciences distributes the funding between the areas of science based on the hitherto results and scientific potential. Evaluation of projects submitted for each area of science is carried out by relevant experts. All registered scientific institutions, public and private, are entitled to apply for this funding. However, in the case of scientific institutions with some ownership of commercial enterprises a clause applies that the respective commercial institution holds no priority rights to the use of the research capacity and results funded by this program.

In addition to three aforementioned competitive public grants where HEIs registered as scientific institutions are eligible to apply and base funding for research institutions, there is additional stipulation pertaining to allocating funding for scientific activities at the institutions of higher education specifically (Cabinet of Ministers Regulations No. 994, 2006). Regulations on the HEI funding provide a formula for calculating funds for the scientific development of the HEI. This formula differentiates funding allocation by the area of studies, except for colleges, as mentioned in the regulation. When calculating funding for equipment essential for the scientific development of the institution, a higher coefficient of 2.0 is applied for natural sciences, engineering, technology, health, agriculture, forest sciences, and veterinary sciences. This increased funding is applied in the case of HEIs but not colleges. All other fields of scientific activity receive funding based on their HEI profile, which includes the number of state funded students by the level of studies and other indicators like the number of graduates and faculty holding Doctoral degrees and professorship. Governmental regulations stipulate that annual funding for equipment relevant to ensuring the scientific development of a HEI should not be less than EUR 21,344 in the case of HEIs and EUR 7,115 in the case of colleges (Cabinet of Ministers Regulations No. 994, 2006). This funding to HEIs and colleges is allocated as a lump sum. Within institutions, these funds are allocated based on internal competition. It should be mentioned that from 2009 to 2014, there were no

funds allocated to HEIs in the scope of this legislative framework due to severe public budget cuts.[47] In the years prior to budget crises the distribution of this funding to HEIs was stipulated in the agreement protocol between MoES and HEI, similarly like it is done for study places. In 2014, the funding in the amount of 55,028 Euros was reinstituted for scientific activities in study programs of Latvian philology and Latvian history at universities based on the vote in the national Parliament (Ministry of Finance, 2014). The clause on funding scientific activities at HEI was used to distribute these funds to University of Latvia, Daugavpils University and Liepaja University.[48]

All in all, public institutions of higher education which are registered as scientific institutions receive base funding for science, can receive on competitive bases funding from public research programs, if there are funds they may receive funding intended specifically for scientific activities at HEIs, and finally funding for Doctoral study programs, calculated according to the general procedure of state funding for study places is also considered as part of science funding at HEIs.

The decrease in the state allocation to higher education in the past years has correlated with the decrease in the research expenditure of HEIs (MoES, 2013d). From 2009 to 2013, EU structural funds became the main source of funding for HEI scientific activities. While base funding for science from the public budget might be considered insufficient, this issue seems unlikely to be addressed as long as project-contingent science funding is the primary form of financial support for research.

Research funding from structural funds is available for both developing scientific infrastructure as well as increasing human resource capacity in research. One tool for growing human resource capacity in research has been allocating scholarships to Masters and Doctoral students from the European Social Fund (ESF). Overall, 23 Masters degree scholarship projects have been supported to the amount of EUR 11.7 million, while 28 Doctoral degree scholarship projects have been supported to the amount of EUR 53 million (SEDA, 2014). ESF funding is also used to support young researchers by paying their wages in projects that have received funding on a competitive basis. EUR 75 million have been allocated for this purpose (ibid.).

The infrastructure for ESF-research funding totals EUR 80 million (SEDA, 2014). This is also distributed to institutions registered in the scientific registry, on a competitive basis. According to information provided by SEDA (2014), about 90 percent of science funding from EU structural funds is received by the University of Latvia and its affiliated scientific institutions.

Indirect Public Subsidies to Higher Education

Indirect public subsidies to higher education are channeled via public support to the student loans system. Since 2001, government-subsidized student loans have been available to all residents of Latvia

[47] Interview with MoES expert.
[48] Ibid.

pursuing higher education who can meet loan co-signatory requirements (Cabinet of Ministers Regulations No. 220, 2001). In order to obtain a state-subsidized loan, the borrower needs to provide a primary guarantor in the form of one loan co-signatory with income deemed sufficient by the issuing bank[49]. As a guarantee for the loan, the student can also offer real estate or securities, provided that the bank acknowledges and accepts these.

The government guarantees 90 percent of the student loan amount to all student borrowers. For orphans and children with no parent guardians, however, the government guarantees their loans 100 percent. Student loans are intended to cover tuition fees and support the costs of student living.

The loan is principally provided by commercial banks that are selected through an annual tender procedure based on the most attractive interest rate offered. The governmental subsidy to the student loan is reflected in the subsidized interest rate, the grace period after completion of studies, debt forgiveness under certain conditions stipulated by the government, and the secondary loan guarantor provision offered by the government.

The borrowing student is required to pay interest on the loan to the amount of five percent, even if the actual interest rate charged by the commercial bank is higher. This is the case regarding the loan issued to cover the student's daily living expenses. The government covers the difference between the interest rate paid by the student and the one charged by the bank. The governmental subsidy accommodated in the interest rate is even higher on those loans covering tuition. Students do not accrue an interest rate on these types of loans while they are enrolled in their study program. The government covers these expenses entirely until the student graduates and must start repaying the loan. The government then continues to subsidize the difference in the interest rate between the annual 5 percent paid by the student and the total annual rate charged by the bank.

Once students graduate, there is a grace period of one year during which students need not repay their loan. The expenses of the grace period related to withholding the loan payments are also covered by the government vis-à-vis the commercial banks that are the principal lenders. The government-subsidized student loan is a mortgage type of loan under which students need to repay 1/10 of the amount per year so that the total repayment is completed within 10 years. If a student borrower drops out of the study program for which the loan was issued, the loan repayment begins three months after ex-matriculation.

Moreover, there are certain conditions under which the amount owed by the student can be reduced, such as birth of a child, work in a profession or field as specified by the government, disability, or death. In these cases, the government steps in and repays the loan to the commercial bank for the respective forgiven loan proportion.

[49] A natural person of full-age with the capacity to act, who has a regular income, which is not less then the minimum monthly salary specified by the State.

Prior to this student loan scheme, the government had a policy of granting study and student loans from the state budget (Cabinet of Ministers Regulations No. 251, 1997; No. 86, 1999). These were loans that were generally available and did not require co-signatories. Although these loans are no longer available, there are still some outstanding debts today. However, they are in the process of collection.

The overall budget of the indirect subsidy to higher education via the government-supported student loans scheme comprised LVL 2.7 million (EUR 3.8 million) in 2012 (Studiju un zinātnes administrācija, 2012).

1.F Resource Diversification in Higher Education in Latvia

Tertiary education institutions in Latvia which offer Bachelors and graduate degree studies are expected to deliver higher education as well as engage in research (Saeima, 1995). Public funding to higher education is split into a subsidy for studies and a subsidy for research. As described in the preceding section, public funding for studies to public HEIs is distributed on the bases of the number of students. Science funding, on the other hand, generally is awarded on the bases of research results and in public grant competitions.

Overall, there are three main sources of revenue for covering costs of studies and scientific activities at HEIs: tuition, public funding, and EU structural funds. The proportion of these sources differs by public and private institutions. Private institutions primarily depend on tuition revenue. In 2012, private sector of higher education drew 78 percent of its total revenue from tuition fees (MoES, 2014). The remaining revenue in private sector of higher education came from public sources, EU structural funds, and income generated from institutional services. Public sector of higher education, on contrary, generated only 16 percent of its revenue from tuition fees. The most prominent sources of revenue in public education sector were state funding and EU structural funds.

By the revenue distribution as displayed in the table below, the largest share of higher education funds, 88 percent, was concentrated in the public sector of higher education. This corresponds to the fact that public sector absorbs the largest share of students in the country. Private sector of higher education received 12 percent of the total higher education budget.

Table 24: HE funding in Latvia, 2012

1	Total Revenue of HEIs and colleges		EUR 311.2 million; 1.4 percent of GDP
1.1	Public universities and colleges	EUR 237.3 million; 88% total HE revenue	
1.2	Private universities and colleges	EUR 38 million; 12% of total HE revenue	
2	State budget funding		EUR 110.6 million; 0.5% GDP)

2.2	Subsidy from the general revenue for universities and colleges, including 15 percent co-financing for EU structural funds	EUR 95.9 million; 31% of total HE revenue	
2.3	State budget funding for science, including 15 percent co-financing for EU structural funds	EUR 14.7 million; 5% of total HE revenue	
3	Private funds		EUR 72.8 million; 0.3% GDP
3.1	Revenue from tuition fees in state (public) universities and colleges	EUR 43.4 million; 14% of total HE revenue	
3.2	Revenue from tuition fees in private universities and colleges	EUR 29.4 million; 9% total HE revenue	
4	Other funds		EUR 127.8 million; 0.6% GDP
4.1	International funding for science and studies, including 85 percent co-financing from EU structural funding	EUR 64.5 million; 21% total HE revenue	
4.2	Revenue from scientific work not financed by the state budget or international funding	EUR 12.5 million; 4% total HE revenue	
4.3	Other revenue of universities and colleges	EUR 50.8 million; 16% of total HE revenue	

Source: MoES, 2014

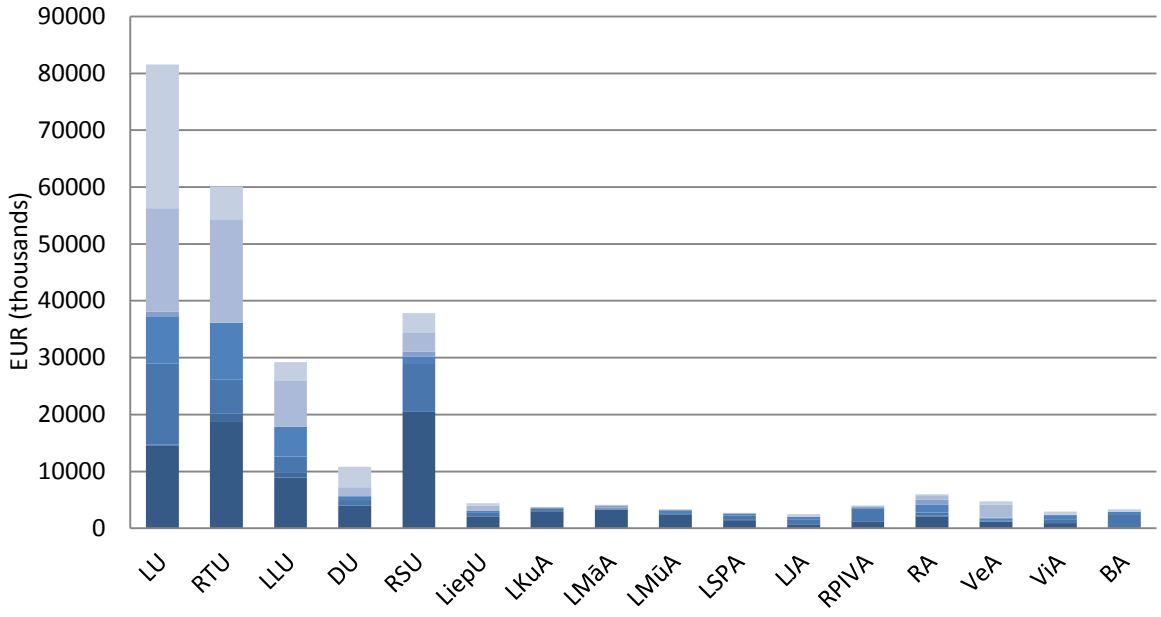
The greatest part of public higher education funding, which was 31 percent of total higher education revenue in 2012, was allocated towards study process in higher education. State funding for science comprised only five percent on the total higher education budget in 2012 (MoES, 2014). This difference between public investment in studies and science was mitigated by contributions from EU structural funds and other international sources, the third largest contributing source to higher education budget in Latvia in 2012. International funding for studies and science, including EU structural funds, comprised 21 percent of the total higher education budget.

It should be acknowledged that 15 percent of total higher education revenue in 2012 was generated by institutions of higher education via sources other than described above. These alternative revenue sources include income from educational services provided by HEIs, revenue from renting facilities, and donations.

While the presented general data on revenue in higher education sector informs about the general trends, the availability of more detailed data on the HEI revenue streams both in private and public sector is limited. Tertiary institutions are not required to publicly account for their balance sheets. The data on funding mix on the institutional level is more available for public institutions of higher education. However, even in instances when consolidated budget reports of public HEIs are examined, there are concerns on the accuracy of data reported due to underreported transfers between institutions of higher education, for instance (Civitta, 2013).

Nevertheless, information that is available on public HEI budgets informs several observations on the diversification of income at public institutions of higher education. The aggregate data on the institutional revenue sources in the public sector of higher education reveals that the amount of income from the various income streams differs from one institution of higher education to the next. For some public HEIs in 2012, about 80 percent of their revenue came from general governmental subsidy aimed to cover the costs of educating state funded students (MoES, 2014). In other instances, this proportion was about 20 percent and down to as little as two percent.

Figure 19: Revenues of public institutions of higher education in 2012



Source: MoES, 2014

Table 25: Revenues of public institutions of higher education in 2012

HEI	Total funding	State funding for studies	Co-funding for EU structural funds	Tuition revenue	International funding for studies	Other funding for studies	Science funding	Other revenues
	EUR (thousands)							
LU	81,432	14,600	92	14,298	8,157	992	18,159	25,226
RTU	58,665	18,675	1,476	5,987	9,994	0	18,088	5,921
LLU	28,376	8,924	832	2,888	5,235	0	8,028	3,301
DU	10,778	3,985	61	919	674	0	1,558	3,641
RSU	37,806	20,499	9	8,534	1,130	936	3,230	3,476
LiepU	4,431	2,096	0	744	199	0	928	464
LKuA	3,660	3,021	16	472	85	71	10	0
LMāA	4,037	3,293	37	97	213	380	28	26
LMūA	3,278	2,425	40	202	518	40	1	92
LSPA	2,661	1,443	46	788	330	0	38	61
LJA	2,493	635	17	956	390	0	4	508
RPIVA	4,024	1,197	7	2,265	215	134	127	87
RA	5,855	2,067	149	538	1,349	916	773	212
VeA	4,680	1,133	63	215	356	131	2,225	620
ViA	2,962	933	11	679	731	0	74	545
BA	3,364	90	0	2,429	359	40	0	447

Source: MoES, 2014

Depending on the institution, there were various combinations of revenue proportions for covering the study process. In all instances, tuition fee paid by full time and part time students presented a source of income. A source of revenue across all public institutions for financing study process was also international funding, including grants from the EU structural funds and international student mobility programs like ERASMUS. Several institutions reported revenue generated from educational services and intended to cover the costs of study process.

The same variation in institutional revenue in 2012 is observed also in regards to revenue generated for research at public institutions of higher education (MoES, 2014). Institutions of higher education can receive public funding for research projects if they are registered as scientific institutes, which nearly all of them are. As described earlier, public funding to research has declined since 2009 and it has correlated with the decline in HEIs research spending. Still, funding for science for the most part does form a significant share in the institutional revenue streams made available through the state funds and EU structural funding. At the same time, data on public HEIs revenue streams reveal differences in the ability of institutions to tap into these funds. In 2012, six out of 16 public HEIs reported revenue for research in the amount of 15 to 48 percent of their total revenue (MoES, 2014). For eight institutions this revenue contributed 0.5 to 15 percent of the total budget. In two cases there was no income from science funding reporter in 2012.

The ability of HEIs to attract funding for science from public and the EU structural funds depends on their position among all scientific institutions competing for research grants, which also include independent research bodies. In 2013, there were 88 institutions registered as scientific institutes; 46 of the publicly founded and 42 privately founded scientific institutes (Izglītības kvalitātes valsts dienests, 2013). Among these institutions, 10 were public institutions of higher education and four were units of HEIs. At the same time many other research institutions, although legally independent bodies have historic ties and collaborate on various levels with HEIs. Thus, even if in research competition a public HEI is not the main applicant, there are partnerships formed which enable access to research funding for various institutions, including public HEIs.

The authors argue that the ability of public HEIs to attract science funding also depends on their capacity in research. Most of the public funding for science is competitive. The element of competition in providing base funding for HEIs is involved in the assessment of their achieved research results. Access to other national grants for science is explicitly competitive. In order to access these revenue diversification opportunities, HEIs need to be able to achieve scientific accomplishments.

The national share of science funding revenue at the institutions of higher education is smaller when compared to the revenue generated from the EU structural funds for science and human capital in science. However, public budget for science is also enclosed in 15 percent co-funding for EU structural funds to HEIs receiving these funds. The remaining 85 percent are funded by the EU within the scope of structural funds projects. Overall, EU grants are the third most significant source of funding for higher education and science in Latvia.

Table 26: EU structural funds for higher education and science, 2007-2013

Allocation	European Social Fund	European Regional Development Fund
Higher Education	LVL 51 million (EUR 73 million)	LVL 102 million (EUR 146 million)
Science	LVL 40 million (EUR 57 million)	LVL 186 million (EUR 266 million)

Source: LIVA, 2010

Access to EU structural funds is done on a selective and competitive basis. The procedure for nationally distributing EU structural funds involves two types of tenders. One is an open call tender where any higher education institution can apply and submit its project. Project selection is done by assessing the relevance of the applicant to the minimum requirements set for participants in the tender, as well as by assessing the quality of the project. The second type of EU structural fund tenders is a restricted call tender, where only HEIs pre-selected by the Ministry of Education and Science are eligible to submit their projects. Once the eligible HEIs have turned in their project proposals, the recipients of funding are determined in competition between the projects. More than 75 percent of the EU structural funds for education and science are distributed in restricted call tenders (SEDA, n.d.).

Currently, EU funds provide a main leverage for retaining researchers in the Latvian higher education sector, namely by financing their research (SEDA, n.d.). Access to international funding for studies coming from European sources is important income for HEIs intended for improving the content of higher education curricula and developing graduate study programs (SEDA, n.d.). The increase in the number of Doctoral students as of 2008 is a direct result of the EU funds supporting Doctoral study programs, which allocated scholarships to PhD candidates. In 2008, 2,025 or 2 percent of all students were pursuing Doctoral level studies both at public and private HEIs (MoES, 2008). In 2012, this proportion had grown to 2,519 or 3 percent of all students (MoES, 2012).

Next to the three main income sources for higher education institutions is a category of “Other revenue” reported by public institutions of higher education. In 2012, other revenues contributed 17 percent of total public HEIs budget, colleges excluded (MoES, 2014). An inquiry into the details of this income category shows various sources of income. The example of the University of Latvia, which reported about 30 percent of its budget as other revenue in 2012, shows significant share of this income from rent of facilities, services provided by university (University of Latvia, 2012). Daugavpils University, which also has about one third of its budget from other revenues in 2012, reports the greatest share coming from an international infrastructure project not related to studies or research, followed by revenues from rent and services, some other international grants, and donations to the institution (Daugavpils University, 2014). A different case from two aforementioned is Ventspils University College which enjoys strong financial support of the local municipality (Sustainable Strategy of the City of Ventspils until 2030,

2013). In 2012, 13 percent of Ventspils University College budget was contributed by the local municipality on the bases of the mutual collaboration agreement (MoES, 2014).

Vidzeme University of Applied Sciences, a regional HEI, also receives municipal support. In 2014, Valmiera municipality allocated EUR 22,500 for the HEI's research grants program (Valmiera municipality, 2014). The purpose of this program is to support studies which engage young researchers, focus on issues relevant for Vidzeme region, and produce applicable results. Municipality of Valmiera finances this program since 2011. Prior to that equivalent funding was allocated to finance research of academic staff at Vidzeme University of Applied Sciences. In addition the research funding, Valmiera municipality supports the organization of an international summer school at Vidzeme University of Aplied Sciences. There is also a joint library for the city and HEI, funded by Valmiera municipality.

To summarize:

Public higher education sector has access to several sources of revenue both for covering study process as well as research activities. For study process, most revenue in the public sector is received from public budget and EU structural funds. Public HEIs also attempt to generate their own revenue from rent, services and other grants not related to studies and research. However, there are variations by the amount of each of these revenue sources among institutions of public higher education. While access to public funding for study process is not competitive, the accessibility of public and international research funding is linked to the competitiveness of HEIs as research centers. Achievement record in studies and science of public HEIs is also important when applying for EU structural funds. Thus, ability of public HEIs to diversify the revenue is related to its position in higher education and research sector overall.

1.G Student Financial Assistance

Free Study Places and Governmental Allowance to Students at Public HEIs

Student financial aid in Latvia is provided in the form of both direct and indirect public subsidies, and private resources. These include loans and scholarships, as well as income tax rebates for educational expenditures.

In addition to being a mechanism for allocating basic funding for higher education institutions, government-funded study places for a portion of students at public institutions of higher education might *also* be considered a form of student financial assistance. In 2012, 37 percent of all higher education students in Latvia studied free of charge. Access to publicly-funded study places varies from program to program, based on MoES distribution of budget places to institutions and study programs. Thus, chances of being admitted to study free of charge for students depend both on the study program and the particular institution, since some institutions and areas of study receive more support than others.

As discussed above, admitting students to government-funded study slots is based on academic merit. Applicants with the best grades are admitted to study free of charge, in accordance with the principle of free-of-charge budget places, while others have to pay tuition fees. “Academic merit”, however, is not uniformly understood across study programs: in programs with a large pool of academically outstanding applicants and fewer government-funded study places, the grade threshold for free study places can sometimes be very high. In study programs with fewer applicants and a larger number of government-funded places, applicants with mediocre academic results stand a greater chance studying free of charge. In order to ensure that only the highest-performing students in the program enjoy free studies, higher education institutions have—on their own initiative—introduced a so-called student ‘rotation’ scheme, based on the results of exams usually taken twice a year. According to this policy, students who pay tuition can transfer to governmentally-sponsored study places, providing they outperform (i.e. in these exams) students who were initially admitted to these free study places. With a few exceptions, only full-time students are admitted to study free of charge at public higher education institutions (Cabinet of Ministers Regulations No. 994, 2006).

Most students on budget places are enrolled in academic and professional Bachelor degree programs. In 2012, this proportion was 85 percent of all government-sponsored full time students (MoES, 2012). Students who are admitted to free study places also qualify for government-funded monthly stipends, whose amount depends on the particular level of studies. For Bachelor and Masters students, the government monthly stipend is EUR 99.60 (Cabinet of Ministers Regulations Nr. 740, 2004). For Doctoral degree students it is EUR 113.83 per month for their coursework and 85.37 Euros per month for their Doctoral research. A portion of the stipends for Doctoral research are conditional grants that might, under certain conditions (i.e. if Doctoral candidates fail to complete their dissertation within five years), become repayable loans. Conditional stipends for Doctoral research are generally not available. The list of subject areas where these stipends are available is approved annually by the Minister of Education and Science.

The stipends described above are financed from an institutional budget line of the government’s subsidy, calculated by multiplying the number of full-time equivalent study places by the equivalent of a full-time student on a per year basis (on Bachelor, Masters, or Doctoral level of studies). A small amount is also allocated to generate funds for covering stipends to students on maternity leave (Cabinet of Ministers Regulations No. 740, 2004).

The size of the government subsidy does not always match the number of students studying in free budget places. Funding allocated towards the provision of stipends is typically insufficient to successfully accommodate all students in government-funded study slots, i.e. depending on the institution; there might be more budget-places than stipends for students which would normally be expected to match in their number the number of budget places provided. Only about 15 percent of all students studying in state budget places at public HEIs receive state scholarships (MoES, 2014).

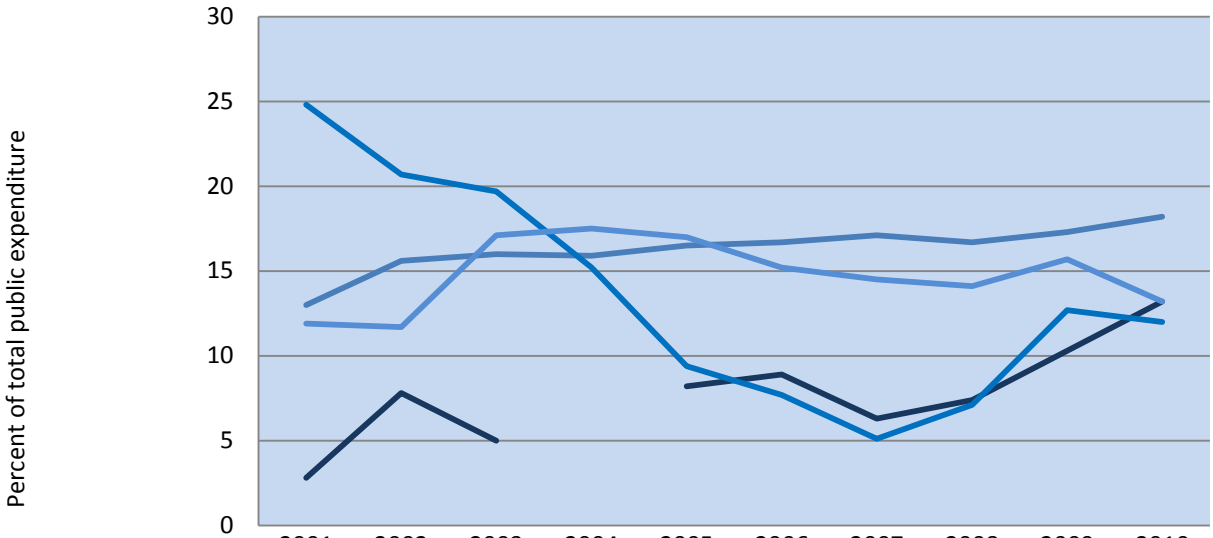
Based on government regulations, government-funded monthly stipends are awarded to the highest-achieving students in the program. Criteria such as need, disability and other socioeconomic factors are

only taken into consideration in cases where when two candidates have the same academic standing. Socioeconomic factors are the primary criterion for single payment stipends for which students facing some extraordinary personal circumstances apply. For these stipends, the institution of higher education can spend no more than 5 percent of its annual governmentally-funded stipends' budget line.

A separate budget line of government stipends funded by the European Social Fund (ESF) is available to Doctoral students in the scope of their Doctoral studies. However, in cases where the student receives the ESF stipend, the national monthly stipend is then revoked. Doctoral stipends paid under the framework of ESF funding are nevertheless more generous, since they include funds for activities such as academic conferences, and are competitively awarded to higher education institutions on the basis of developing their Doctoral study programs.

A proportion of annual expenditure for all public higher education is allocated by the government for the purpose of covering student scholarships (Cabinet of Ministers Regulations No. 740, 2004). Additional scholarships by HEIs can be provided from a special fund of private donations. In these instances, distribution of these funds is regulated by institutional policy.

Figure 20: Financial aid to students, as percent of total public expenditure on higher education (ISCED 5-6), 2001–10



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EU 27 countries	13.0	15.6	16.0	15.9	16.5	16.7	17.1	16.7	17.3	18.2
Estonia	2.8	7.8	5.0		8.2	8.9	6.3	7.4	10.3	13.2
Latvia	24.8	20.7	19.7	15.2	9.4	7.7	5.1	7.1	12.7	12.0
Lithuania	11.9	11.7	17.1	17.5	17.0	15.2	14.5	14.1	15.7	13.2

Source: Authors' calculations, based on Eurostat database

As shown in Figure 14, the level of financial aid to students as a percentage of total public expenditure of higher education in Latvia has decreased significantly between the years 2001–10 (12.8 percentage

points)[50]. In 2001, the share of financial aid of higher education expenditure in Latvia was among the highest in Europe, exceeding the EU-27 average by 11.8 percentage points whereas in 2010, Latvia fell 6.2 percentage points below the EU-27 average. In 2010, the expenditure share of student financial aid in Latvia was slightly below (1.2 percentage points) the level of aid in the other two Baltic countries.
In 2007, prior to the economic and financial crisis, the percentage of the higher education budget spent on student aid reached its lowest point of 5.1 percent, which was the fifth lowest among all EU-27 countries in that year. The relative share of public student aid financing in Latvia fell dramatically from 24.8 percent in 2001 to 5.1 percent in 2007 due to a reform in the student loan system. Until the year 2000, loans were granted from the State budget. However, from 2001 onwards, loans were granted by private banks appointed by the state, thereby dramatically reducing the share of student aid in total public expenditure on higher education. The transition was gradual - although the number of state-granted loans decreased immediately after 2001, the state continued to grant loans until almost 2007.

Government-subsidized Student Loans

As discussed extensively in the section on *Indirect Public Subsidies to Higher Education***,** government-subsidized student loans are available to all Latvian residents who pursue higher education and are able to meet co-signatory loan requirements (Cabinet of Ministers Regulations No. 220, 2001). There are two types of loans in this program. One is the so-called study loan meant to cover tuition fees. This loan is available to full-time and part-time students. The loan for covering tuition fees starts accumulating interest rate within just one year after the student has completed the studies and has to start repaying the loan. The maximum annual interest rate that student needs to pay for is 5 percent. If the total interest rate is more than that, the government compensates the difference to the commercial bank offering the loan.

The second type of loan is that intended to cover student living expenses. Only full-time students are able to qualify for this loan, whose maximum is EUR 170 per month. This loan also carries the maximum annual interest rate of 5 percent for students. The difference, however, is that this interest rate becomes effective from the issuance date of the loan, and students must cover these costs. The repayment of the principal loan amount, however, is postponed until one year following the completion of studies.

Both loans are also available for students seeking to study abroad. The maximum amount that students can borrow to finance their studies abroad for several consecutive programs is EUR 28,458 (Cabinet of Ministers Regulations No. 220, 2001).

[50] Financial aid to students as currently defined in the UOE data collection on education statistics is referring only to direct public assistance to pupils or students in the form of scholarships, public loans and family allowances contingent on student status. This is not a full measure of the level of assistance students may receive as for instance, students may also get financial support like loans from private banks, other services (i.e., student welfare services such as for meals, transportation, health care or dormitories) or tax reductions. The financial aid to pupils/students varies as the education systems are different across countries (Eurostat).

The government-guaranteed student loan is a mortgage-type loan with fixed monthly repayments over a maximum repayment term of 10 years. For students who successfully complete their studies, loan repayment begins one year following graduation, at a steady interest rate of 5 percent. For students who drop out, repayment of the interest rate on loans begins immediately after ex-matriculation, at a rate usually greater than 5 percent. Repayment of the principal loan for these students begins three months after ex-matriculation. There are, however, certain conditions under which the amount owed by the student can be reduced. For every child born or adopted, the student debt holder has 30 percent written off. If both parents have student debt, this provision only applies to one of them. The student loan debt is fully forgiven if the borrower becomes disabled or dies. Similarly, student debt is fully or partially written off if the graduate becomes a military officer and is employed by the military service. In addition, one tenth or one fifth (each year) of the student debt is written off in instances where the graduate is employed by public sector (gradual loan forgiveness). The list of positions that qualify for this waiver is annually approved by the government.

Prior to the current student loan scheme, the government had a policy whereby study and student loans were granted from the state budget (Cabinet of Ministers Regulations No. 251, 1997; No. 86, 1999). These were widely available and did not require co-signatories. Although these loans are no longer provided, repayments are still actively being collected.

Private Student Financial Support Programs

There are two main types of private student financial support programs: the first is student lending schemes implemented by commercial banks for commercial purposes, and the second involves philanthropists and businesses engaging in philanthropy.

In the case of private loans, the largest commercial banks in Latvia offer some sort of student loan scheme. These are essentially commercial loans targeting students and offering funding to cover their higher education costs.

Philanthropic support to students is also made available, in the form of scholarships provided by foundations to higher education institutions. For instances, the “University of Latvia Foundation” manages both monetary donations and income from handling in-kind donations, such as real estate bestowed to the university and pays stipends to students (Latvijas Universitātes Fonds, 2014). In addition, there are foundations such as “Vitolu fonds”, which offer direct scholarships to students. In terms of the selection criteria, scholarship recipients are usually chosen on account of both need and merit; however, there are sometimes also particular constraints with respect to the subject area.

Student financial support initiatives are, further, offered by municipalities, where additional funding is leveraged via local businesses, philanthropists, and the municipal budget. In these instances, grants typically tend to be offered on the assumption that recipients will return to the municipality following the completion of their studies, and thus contribute to the local community/economy.

Appendix 2 List of documents reviewed - development of discussion on HE funding reform

Below is a short overview of the main documents discussing and referring to the pros and cons of the existing HE funding model, proposals for reforms, and target indicators.

Guidelines for the Development of Higher Education and Science Technologies 2002–2010, Ministry of Education and Science, 2001

Targets:

- State budget funding to HE: 1.4 percent of GDP; state budget funding to science and research: 1 percent of GDP (from that 0.4 percent for science universities).
- Attract private funding to HE: 1–1.4 percent of GDP; private funding for research 1–1.3 percent of GDP.
- Funding for state-funded study places should cover 20 percent of the respective population aged 18–23.
- Provide additional state budget funding for internationalization; support for student exchange programs (Erasmus, Socrates, Nordbalt, etc.).
- Develop scholarship funds at HEIs from their own resources.
- Integrate HE, science, and modern technology.
- Increase state funding for science at universities for the development of doctoral studies, support science disciplines, scientific research base, and infrastructure.
- Attract international funding for the development of research and technology.

National Concept of the Development of Higher Education and Higher Education Institutions until 2010, Higher Education Council, 2001 *(approved by the Cabinet of Ministers on July 16, 2001)*

Targets:

- State budget funding to HE has to be gradually increased (by 2006, plus LVL 3 million a year; by 2011, plus LVL 1.3 million a year). At the same time HEIs should bear responsibility for the effective use of public resources in the form of performance contracts between HEIs and MoES regarding the specific number of specialists to be prepared.
- In the following 10 years, to increase the state funding to reach the optimum coefficients for studies in accordance with the existing normative basis.
- Revise the remuneration system of academic staff by harmonizing the lowest rates of salary for the different groups of academic personnel.

Guidelines for the Development of Education 2007–2013, Ministry of Education and Science, 2006 *(approved by the Cabinet of Ministers on September 27, 2006)*

Evaluation: In 2004/2005 the number of students per 1,000 members of the population is 556, which in comparison with the average number in EU of 371 is high. However, the number of students is not the indicator of quality. It can be explained by the low prestige of vocational education and limited possibilities in the labor market. Moreover, the number of students in STEM is insufficient, only 5.2 percent of the total number of students and 12.5 percent of state-funded students. Number of budget study places is not sufficient and does not promote accessibility.

Targets:

- Increase the amount of student loans (to reach LVL 120 a month) and increase the number of study loans, which are covered by the state budget.
- Increase the number of state funded scholarships by 5 percent a year. Attract private funding for the formation of scholarship funds.
- Increase the number of budget study places in STEM to reach at least 51 percent of all state-funded study places.
- Attract EU funds for the preparation of the highest level specialists (Masters, Doctors).
- Increase the coefficients of study costs by 1/10 a year to reach 83 percent of the optimal value in 2007 and 95 percent in 2010.
- Increase funding to HE to reach 0.8 percent of GDP in 2007, 1.1 percent in 2008, 1.4 percent in 2009, and 1.5 percent in 2010.
- At least 40 percent of state budget funding for science concentrated in universities for research.

Is anything wrong with higher education in Latvia?, 2009, paper by V.Dombrovskis, Stockholm School of Economics

Evaluation: Existing system is geared to funding study places, which are a form of industrial policy in HE with government subsidizing certain professions. Science funding is largely independent of any performance indicators and is allocated to scientific institutions based on tradition. Present HE system is not as effective as the Soviet education in promoting innovativeness.

Proposals for reform:

- Research budget should be allocated on the basis of success: publications in internationally peer-reviewed journals and success in attracting European research grants.
- Allocation of subsidies for budget places should depend on the program full time faculty's success in publishing in internationally recognized peer-reviewed journals. That is, a university with a more publishing full-time faculty in a relevant program of study would be entitled to a greater subsidy as compared to a university with a less publishing faculty. This would push

universities to change their internal motivation systems to stimulate their faculty to produce research that would comply with the world standards.

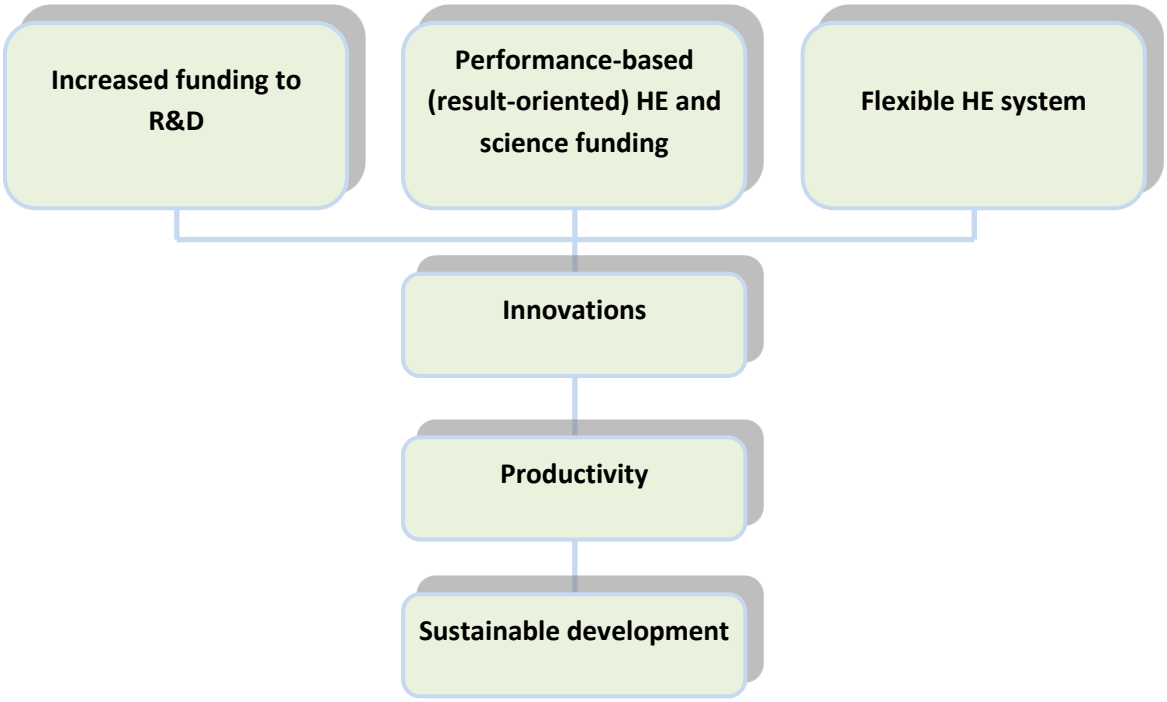
- The reform would not increase the total amount of financing for HE but would change the criteria by which universities receive public subsidies.
- Government should offer additional financing contingent on introducing credible MA programs in English, and possibly provide matching grants linked to universities' success in attracting foreign students.
- Government may provide targeted grants for training PhD students abroad and for attracting visiting faculty from top schools in the world.

Information Note on the Necessary Structural Reforms in HE and Science to Enhance the International Competitiveness of Latvia, Ministry of Economics, 2009. *(Information note was submitted to the Cabinet of Ministers to present the results of the working group on structural reforms in HE initiated by Prime Ministers upon the request of HE sector).*

Evaluation: In 2009 Latvia has low state budget funding for HE (less than 1 percent of GDP). Both public and private funding for HE has considerably decreased.

Proposals for structural reforms in regard of HE and science funding:

- Increase state budget funding to HE to reach 1.2 percent of GDP in 2015; for science, 1.5 percent of GDP in 2015. Increase to be achieved gradually, around 0.3–0.4 percent of GDP per year for HE and around 0.4–0.5 percent of GDP per year for science.
- Improve the system of allocating state budget funds; introduce a transparent performance-based funding principle ("money follows quality"). Decrease the weight and impact of "input" indicators on the amount of allocated budget funding.
- Introduce performance-based funding in science, and link funding with the results of scientific activity– publications and patents—and their application to national economy.
- Diversify HE resources; allow attracting additional funding from private sector (industry, entrepreneurship) and other sources. Make the HE funding system more transparent; clearly differentiate public and private finance to HE.
- State funding for graduate studies (MA, PhD) to be concentrated in the HEIs with the quantitative and qualitative indicators to operate at the highest level studies and research.
- MoES to evaluate the actual costs of a study place and plan adequate funding for it.
- Optimize study programs, especially those funded by the state, to reduce fragmentation and doubling and to facilitate the development of joint programs.
- MoES in cooperation with MoF to work out a performance-based HE and science funding model which takes into account the results of HEIs and scientific institutions in the previous three years, as well as sets the expected results (indicators) of the funding to be allocated.



Financing Higher Education: A Model for Reform, May, 2011, by V.Dombrovskis, Strategic Analysis Commission

Evaluation: The cornerstone of the HE financing in Latvia is the system of budget places, whereby the state provides predetermined per student subsidy in certain education programs. The state also decides on major parameters of this system, such as the size of the subsidy, the distribution of budget places by study programs, as well as among universities.

Arguments against:

1. The tax financed system distorts the incentives of both students and universities, thereby producing economic inefficiencies.
2. The system is intrinsically regressive with regard to income distributions, as it entails redistribution from the poor to the affluent.
3. Given competing demands for public financing, the present system is unlikely to procure sufficient resources for HE.

A fully tuition based system of financing, in which the students directly incur the costs of their education, is the opposite of tax financed system of HE. It is not associated with the problems discussed above, but it has its own issue.

As compared with tax financed systems, tuition based systems put the student in the driver‘s seat. Advantages: students have substantial incentives to invest in higher education. Tuition based systems

are open ended in terms of financing. Drawbacks: low paying capacity of students; as a result, only those from wealthy families can afford HE. Pure tuition based systems might be inefficient and socially unfair.

Proposed solution: Income contingent loans. Basic idea: students do not pay, but graduates do.

- Abandon the system of budget places and the central planning that it entails. Introduce tuition fees for higher education with substantial autonomy for the universities to formulate study programs and set the fees.
- Introduce state provided loans for the students with interest rates tied to the government cost of borrowing.
- Charge the State Revenue Service with collection of these loans from graduates, alongside the income tax.
- Protect graduates with income contingent repayments by providing built-in insurance against inability to repay and excessive volatility. This would facilitate competition between universities and provide information to help students make more informed choices about their human capital investment.

Action Plan for the Government 2011 (Prime minister Valdis Dombrovskis) *(Parliamentary elections in 2010, Parliament was dissolved next year May 28, 2011)*

- Provide sufficient funding to HE taking into account performance and quality indicators, develop funding coefficients for regions.
- Introduce performance based HE funding to ensure the consolidation and effective use of HE and science resources.
- Funding to be granted on the basis of a long-term national development perspective.

The Proposal for Performance Based Funding of HE and Science, Ministry of Education and Science, 2011 *(remains as a project version, further activities suspended by the incoming Minister of Education and Science Roberts Kilis)*

Proposal for performance-based funding:

After analysis of the higher education and science financing model that exists in Latvia, it may be concluded that the higher education and science financing model in Latvia already comprises all three types of performance based higher education and science financing: (i) formula, (ii) target contract, and (iii) financing to be obtained according to tender procedure.

A partially formula-based financial reference amount has been introduced in the higher education of Latvia since 2002, and it is supplemented by a performance-based (number of prepared specialists) contract among the institutions of higher education and ministries.

The formula is based on the clear and easily comprehensible criteria suggested by the World Bank experts. A formula financial reference amount has been also introduced in science from 2005, where the variable part depends on particular scientific results (number of publications, number of patents, etc.). Innovative financing or financing to be allocated according to tender procedure has also been introduced (financing of science according to tender procedure, ESF and ERDF financing for studies, scientific activity and innovations and for improvement of infrastructure).

Therefore, it may be concluded that in order to comply with the task entrusted by the Cabinet, it is necessary to put more emphasis in the financing of the HE and science on the results by introducing additional performance indicators in accordance with the state policy for the area of higher education.

Action Plan for the Government 2012 (Prime Minister Valdis Dombrovskis)

A new HE funding model from 2014 to enhance accessibility, fairness, and international competitiveness of HE based on a thorough analysis and evaluation by international experts. Aim: by the end of 2014 research on the funding model carried out, normative basis worked out, and the new model implemented.

Action Plan for the Government 2014 (Prime Minister Laimdota Straujuma)

Strategic specialization of HE, optimization of HE network, balanced development in regions. Enhancing the engagement of HEIs in the economic development in regions. Proposals for a new HE funding model to be prepared to enhance national development, accessibility of HE in regions, labor market connect, international competitiveness. For the budget of 2015 evaluation of the actual costs of study place.

Action Plan for the Development of Higher Education and Science 2013–2014 *(approved by the Cabinet of Ministers)*

Target: To prepare for implementation a new model for higher education financing ensuring quality higher education for everybody.

- Research carried out in cooperation with the World Bank regarding the current financial model for higher education in Latvia, as well as the potential alternative financing models and their legal, economic, financial, social and other aspects (risk assessment) (01.10.2014).

- Based on the results of the performed research, prepared proposals for establishment of optimal model for financing of higher education, assessed risks for implementation thereof, performed detailed assessment of initial impact and summarized opinion of the public and social partners on that model (01.11.2014).
- Prepared normative basis for gradual introduction of the financing model (01.11.2014).

Guidelines for the Development of Education 2014–2020 (project) *(approved by the Cabinet of Ministers on December 16, 2013, parliamentary endorsement needed)*

New funding model of HE as central to reforms in HE to enhance international competitiveness and quality of studies. Aspects to take into consideration in the process of preparation of the new funding model: accessibility and fairness; international competitiveness; legal, economic, financial, and social risks; possible scenarios of implementing the new model. Aim: by 2020 the new funding model is fully functioning and its impact on the strategic goals can be evaluated.

Appendix 3 Note on availability of performance data

Submission and processing of the data reflecting the activity of higher education institutions (both university type and non-university type institutions—colleges) in Latvia is governed by the Law on Higher Education Institutions, Official Statistics Law, Regulations of the Cabinet of Ministers No. 922 "Procedures for the Approval of the State Statistics Reports and Forms", Regulations of the Cabinet of Ministers No. 348 "Procedures for the Submission of Information of Activity of Higher Education Institutions to the Ministry of Education and Science", as well as the related Regulations of the Cabinet of Ministers No. 994 "Procedures for the Financing of Institutions of Higher Education and Colleges from the Funds of the State Budget". The main players in the process of gathering and analyzing activity and performance in higher education[51] are HEIs, Ministry of Education and Science, Central Statistical Bureau. To various extents the data are submitted to the Ministry of Education and Science (in some cases through other ministries) and Central Statistical Bureau, as well as published in the institution's annual report and on the institution's website.

Official Statistics Law defines the role of Central Statistical Bureau as the main co-coordinator of the flow of statistical information at the national level, as well as the mutual harmonisation of statistical indicators to be included in State registers and other information systems. This includes gathering the data of activity and performance of higher education institutions, both state funded and private. Official Statistics Law states that the provision of the data required by the Central Statistical Bureau is obligatory. In light of the stipulations of the Statistics Law the Regulations of the Cabinet of Ministers No. 922 "Procedures for the Approval of the State Statistics Reports and Forms" specify the parameters (templates) to be used for the submission of data. Specifically, the Regulations No. 922 include a special form for HEIs to submit information on their activity at the beginning of each academic year—by October 15.

Law on Higher Education Institutions (henceforth Law on HEIs) defines the general principle that HEIs monitor their performance by gathering and analyzing relevant data. Section 5 of the Law on HEIs lists the tasks of HEIs including the obligation to ensure that "information regarding student results, graduate employment, the satisfaction of students with the study program, the work effectiveness of academic staff, the study funds available and the disbursements thereof, essential indicators of the activities of an institution of higher education is compiled and analyzed". Section 75 of Law on HEIs elaborates on the data to be published in the institution's yearly report (year-book) and submitted to the Ministry of Education and Science as follows:

(1) Each year, for the promotion of co-operation among institutions of higher education and colleges, State authorities and local government institutions and society, an institution of higher education and college shall prepare a report of the activities thereof in the reporting year (a year-book) which shall be published as a separate issue and kept on the Internet home page of the institution of higher education and college.

[51] "Performance data" are here less strictly defined and include both input and output indicator of HEIs.

(2) In accordance with the procedures and the time period prescribed by the Cabinet, an institution of higher education and college shall submit information regarding the activities thereof to the Ministry of Education and Science, and this information shall include data about:

1) The structure of the institution of higher education and college;
2) The number and composition of students and other staff of the institution of higher education and college;
3) Options for study and the number and composition of enrolled students;
4) The offered study courses, study modules and study programs, as well as information regarding the subject areas;
5) The allocation and utilization of State budget funds;
6) Economic activity, own income and utilization thereof;
7) International relations;
8) Information regarding the subsequent course of work of graduates in the next three years after completion of the relevant study program of the institution of higher education or college.

On the basis of the above stipulations in the Law on HEIs (and the Law and regulations governing statistics), the Cabinet of Ministers Regulations No. 348 "Procedures for the Submission of Information of Activity of Higher Education Institutions to the Ministry of Education and Science" (henceforth Regulations No. 348) detail the procedure and timeline for the submission of data to the Ministry. Annexes to the Regulations No. 348 specify the parameters according to which the above information should be structured. Moreover, the Regulations include reference to the parameters of information required by the Central Statistical Bureau.

Regulations No. 348 provide that HEIs provide the following information to the Ministry of Education and Science:

(1) By September 5 of the current year: information on the structure of higher education institution or college (structural scheme of the institution); number and composition of enrolled students; number and characteristics of graduates (students who have obtained the academic, professional, scientific degree and professional qualification); and information on study opportunities.

Data on the newly enrolled students are provided per study level and study program: title and level of study program; number of applicants per one state-funded study place; and number of newly enrolled students, including those enrolled as state-funded and those to pay tuition fee (Appendix 2, Table 1). Data on the graduates are also provided per study level and study program: title and level of study program; and number of students who have obtained a degree or qualification, including those whose studies were state-funded students and those who paid tuition fee (Appendix 2, Table 2). Information on study opportunities entails information regarding the tuition fee per study level and program in full-time and part-time studies (Appendix Table 3).

Appendix 2, Table 1 MoES parameters for the information on the number and composition of newly enrolled students in higher education institution/college in the respective academic year

Level and title of study program	Applicants per state-funded study place	Number of enrolled students	*Including*	
			State-funded	Paying

Appendix 2, Table 2 MoES parameters for the information on the students who have obtained a degree or qualification in higher education institution/college in the respective academic year

Level and title of study program	Number of persons who have obtained a degree or qualification	*Including*	
		State-funded	Paying

Appendix 2, Table 3 MoES parameters for the information on the tuition fee for study program in higher education institution/college in the respective academic year

Level and title of study program	Fee for full-time studies	Fee for part-time studies	
		Attendance required[52]	Attendance not required

(2) By October 15 of the current year: information on the number and composition of students (currently studying) and staff, the courses and study programs offered, as well as information on business operations (in accordance with the form specified by Central Statistical Bureau), international relations.

This section of information is provided in parallel to the Central Statistical Bureau on the basis of the parameters specified by Central Statistical Bureau regarding the activity of HEIs—detailed information on the students and staff, study programs, business operations *(CSB form to be added).* Along with that the Regulations No. 348 specify the information to be provided on international relations (Appendix 2, Tables 4, 5 and 6).

Appendix 2, Table 4 MoES parameters for the information on the students of higher education institution/college studying abroad in the respective academic year

Country	Higher education institution/college	Number of students

Appendix 2, Table 5 MoES parameters for the information on the international contracts and participation in international projects and programs

[52] In Latvia part-time studies are further differentiated according to attendance requirements.

Country	Higher education institution/college	Number of contracts, projects

Appendix 2, Table 6 MoES parameters for the information on the international exchange of academic staff (work, internship and other cooperation abroad)

Country	Higher education institution/college	Field of science (study program)	Number of persons

1) By 1 November of the current year: admission requirements.
2) By 1 April of the current year: distribution and use of state funds for the previous year's budget, revenues and expenditure of the institution.

The latter section of information has to be provided according to the parameters specified by the Ministry (Appendix Tables 7 and 8).

Appendix 2, Table 7 MoES parameters for the revenue of higher education institution/college

No.	Type of revenue	Amount of revenue
1.	Subsidy from the general state revenue	
	incl. co-funding for the implementation of European Union structural funds projects	
2.	Revenue from tuition fee	
3.	Subsidy (grants) for scientific projects	
4.	Rest of budget funding for scientific projects (for instance, state programs, state commissioned research)	
5.	Revenue from the performance of scientific work not financed by the state budget	
6.	International funding (funds, programs), incl. international funding for research projects	
7.	Revenue from facilities rental	
8.	Other revenue	

Appendix 2, Table 8 MoES parameters for the expenditure of higher education institution/college

No.	Type of expenditure	Amount of expenditure (percent)
1.	Remuneration total	
	incl. salary for academic and administrative staff	
2.	Social security costs for the employees	
3.	Business trips	
4.	Services	
5.	Materials, energy resources, heating, light, water, inventory,	

	etc.	
6.	Books and magazines	
7.	Grants	
8.	Transport compensations	
9.	Capital expenditure, including movable property	
10.	Other expenditure	

Performance indicators of budget study places

Reporting on the use of budget funding is also described in other regulations. Regulations of the Cabinet of Ministers No. 994. "Procedures for the Financing of Institutions of Higher Education and Colleges from the Funds of the State Budget" stipulate that the Ministry of Education and Science and other ministries, which have institutions of higher education and colleges under their authority, enter into contracts with the State institutions of higher education and State colleges regarding the preparation of the definite number of specialists and the provision of development of scientific work. The Performance Contract defines the mutual liabilities of the institution and the Ministry in the use of the state budget funds for the preparation of specialists, the control of finance, reporting and exchange of information. The annexed Agreement Protocol which is updated yearly details the amount of state funds granted to the institution and its composition: total number of study places, total amount of funding granted for the relevant year, costs of study place, and number of specialists to be prepared. Institutions having received state budget places have to report at the beginning of each calendar year—by 1 February— on such things as fulfillment of budget places (actual number of budget students as compared to the planned), number of graduates, and number of students actually studying. In case of underperformance (not enough budget students and graduates), HEIs have to provide explanation.

Thus, the data of higher education institutions are gathered annually by the Ministry of Education and Science, as well as the Central Statistical Bureau, and are governed by several regulations. Some data are submitted in parallel to both institutions.

The system appears to be opaque and causes duplication of data collection. A discussion to introduce a more effective exchange of statistical information is in progress towards a unified register of HEIs subject areas where the performance data are linked to the study program and consequently – to quality. The changes in the system would require considerable amendments in the current Regulations No. 348, as well as the Law on HEIs concerning the exchange of statistical information, possibly consolidation of the existing normative basis. At present amendments are in progress to revise the positions of revenue and expenditure to ensure their consistency with the Cabinet of Ministers Regulations of December 25, 2005 No.1031 "On the Classification of Budget Expenditure in accordance with the Economic Categories" and Regulations No. 1032 "On the Classification of Budget Revenue". The planned amendments also include more detailed parameters on graduates to be provided by institutions on a regular basis.

Analysis of performance data

Central Statistical Bureau provides general statistics on higher education such as number of students, graduates, academic staff, and funding to higher education; however, the central statistics do not reflect the situation in specific institutions. The data received at the Ministry of Education and Science included in the Annual Survey on Higher Education Institutions reflect the situation in each institution in the respective year. The data are partially included in the internal database of the MoES to monitor the use of the budget funding, the dynamics of students' numbers per program, and the actual numbers of graduates as opposed to the planned numbers (fulfillment of the requirements in the Performance contract and Agreement Protocols).

Graduate Tracking

Although the Law on HEIs explicitly states the obligation of HEIs to monitor the progress of graduates in the labor market, an appropriate monitoring methodology has not yet been developed. Apart from the data on persons having graduated (persons who obtained a degree or qualification), information on graduates is currently limited to voluntarily feedback provided as a response to graduate surveys, interviews, or other outreach organized by HEIs. A systemic and unified approach to graduate tracking is yet to be developed. It is envisaged to develop cooperation with the State Revenue Service to analyze graduates' success in the labor market on the basis of their income indicators (tax paid). A pilot project between the State Revenue Service and Riga Technical University has been conducted to gather data on graduates' average income per subject areas.

Appendix 4 Stakeholder consultations

Workshop—December 2, 2013

Institution, organization	Representative(s)	Position
Ministry of Education and Science	Iveta Graudina	Councilor to the Minister
	Liga Lejina	Director of the Department of Political Initiatives and Development
	Inese Sture	Deputy Director of the Department of Higher Education, Science and Innovations
	Marina Meksa	Senior Expert of the Department of Higher Education, Science and Innovations
	Anatolijs Melnis	Senior Expert of the Department of Higher Education, Science and Innovations
	Inta Svirksta	Expert of the Department of Structural Funds and International Financial Instruments
	Laura Treimane	Officer of Higher Education/Local Consultant
State Education Development Agency	Dita Traidas	Director

Stakeholder Roundtable—December 3, 2013

Institution, organization	Representative(s)	Position
Higher Education Council	Andris Teikmanis	Associate Professor
Latvia Students' Union	Inguna Zarina	Member
	Asnate Kažoka	Member
Latvia Confederation of Employers	Anita Līce	Expert
Latvia Chamber of Commerce and Industry	Karīna Zarina	Director of Political Department
Ministry of Economics	Vita Skuja	Official/Department of Economic Development and Labour Market Forecasts
Riga Stradins University	Toms Baumanis un rektora	Prorector of Development
	Jānis Bernāts	Legal Advisor
Business Higher Education	Aldis Baumanis	Lecturer

Institution, "Turība"		
Latvia Academy of Arts	Andris Teikmanis	Associate Professor
Ventspils University College	Ligita Blumberga	-
Riga Graduate School of Law	Kitija Freija	Director
University of Latvia	Gundars Bērziņš	Chancellor
Riga Academy of Pedagogy and Education Management	Tija Zirina	Associate professor, Manager of the Department of the Organization of Studies
Vidzeme University of Applied Sciences	Agnese Lapetrova	Rector's Assistant—Research Coordinator
Stockholm School of Economics in Riga	Rita Kaša	Pro-Rector B.Sc. Thesis Faculty Advisor
Daugavpils University	*Participated.*	
Liepaja University		
Riga Technical University		
Ventspils University of Applied Science		
Latvia University of Agriculture		

Stakeholder Interviews—February 5–7, 2014

Institution, organization	**Representative(s)**	**Position**
Ministry of Culture	Roventa Putnina	Officer at Budget Department
	Barba Krisjane	Head of Budget Department
Latvia Academy of Arts	Sandra Plota	Director
	Gita Senka	Deputy Director of International Cooperation and Development
Latvia Academy of Culture	Zane Silina	Vice Rector
Latvia Academy of Music	Normunds Viksne	Vice Rector of Academic Affairs
	Irena Baltabola	Director of Study Programs
	Vita Daudisa	Head of Finance Department
Riga Academy of Pedagogy and Education Management	Dace Markus	Rector
	Daina Voita	Vice Rector of Science
Latvia Academy of Sports Education	Svetlana Panova	Chief Accountant
	Juris Grants	Vice Rector of Science
	Janis Zidens	Rector
Latvia Maritime Academy	Andrejs Zvaigzne	Vice Rector
	Janis Brunavs	Professor
	Janis Berzins	Rector
BA Business School of Business and Finance	Dr. Andris Sarnovics	Rector
	Liga Peiseniece	Vice Rector for Academic Affairs
Ministry of Defense	Ilona Drege	Under State Secretary of Administrative and Legal Affairs
	Inese Kaive	Deputy Director of Section of

		Military Education and Science of Department of Human Resources
National Academy of Defense	Georges Kerlins	Vice Rector
Daugavpils University	*Several participants and PhD students from Institute of Systematic Biology*	Students, PhD students
	Inese Kokina	Vice Rector for Research
	Irena Kaminska	Vice Rector for Studies
Rectors' Conference[53]	Janis Bernats	Legal Expert
	Agnese Rusakova	Expert
Higher Education Council	*Several representatives from the Higher Education Council*	-
Ministry of Interior	Alda Strode	Financial Specialist
	Laris Tumanana	Director of Department of Financial Management
	Agnese Laure	Office at Department of Financial Management, Section of Financial Policy and Methodology
	Gints Rozenbils	Officer at Department of Human Resources Management
Ministry of Agriculture	Ilze Slokenberga	Official of Department of International Affairs and Strategic Analysis
Ministry of Environmental Protection and Regional Development	Edgars Paulovics	Officer at Zemgale Planning Region Development Department (counterpart of Latvia University of Agriculture)
Latvia University of Agriculture	Janis Sprukts	Chancellor
	Daira Treigute	Head of Financing Department
	Dita Stefenhagena	Rector's Assistant
State Police	Natalija Dorozko	Head of Financial Department
	Gunta Gregersone	Head of HR Department, Section of Professional Competence Building
State Police College	Maris Riekstins	Deputy Director
State Border Guard	Aivars Uzulnīks	Deputy Director
	Velta Grecka	Head of Finance Department
	Sandra Keisa	Senior Specialist of Human Resources Department
State Border Guarding College	Iveta Plasa	Head of Department of Finance and Planning
	Daiga Kupcāne	State Border Guard
Fire Safety and Civil Protection	Vilis Students	Deputy Director

[53] Separate meeting with Andrejs Rauhvargers, Secretary General of Rectors Conference on February 18, 2014.

College		
Ministry of Health	Inese Andersone	Head of Department of Coordination of Financial Analysis and Investment
	Biruta Kleina	Deputy Director of Health Care Department
Ministry of Welfare	Danute Jasjko	Director of Department of Social Services
	Aldis Dudins	Senior Expert of Department of Social Services
Riga Stradins University	Toms Baumanis	Vice Rector of Development
	Janis Bernats	Rector's Legal Advisor
	Juris Lacis	Vice Rector of Administration
Red Cross Medical College (of Riga Stradins University)	Gastons Neimanis	Director
	Inara Urpena	Deputy Director in Academic Affairs and Research
Social Integration State Agency	Jana Pulkstene	Deputy Director in Professional Rehabilitation
	Inese Urpena	Administrator of College Study Programs
Business Higher Education Institution "Turība"	Aldis Baumanis	Associate Professor
Riga International School of Economics and Business Administration	Irina Sennikova	Rector
	Ilmars Kreituss	Vice Rector of Academic Affairs
	Tatjana Vasiljeva	Vice Rector of Science
	Ieva Brence	Head of Department of Economics and Finance
Transport and Communications Institute	Irina Yatskiv	Acting Rector
	Igors Kabaskins	President
	Igors Graurs	Vice Rector of Academic Affairs
Ministry of Economics	Vita Skuja	Officer of the Department of Economic Development and Labor Market Forecasts
	Ludis Neiders	Head of Department of Structural Policy of National Economy, Economic Coordination Section
	Ruta Rimsa	Officer at Department of Structural Policy of National Economy, Economic Coordination Section
Ministry of Environmental Protection	Veronika Jurca	Senior Expert of the Department of Regional Development Planning
Cross-Sectoral Coordination Center	Elina Petrovska	Consultant
Latvia Confederation of	Inga Sina	National Coordinator in

Employers		Professional Education and Employment
Latvia Chamber of Commerce and Industry	Aldis Baumanis	Associate Professor
Latvia Students' Union	Inguna Zarina	Member
	Liva Vikmane	Member
Vidzeme Planning Region	Kristaps Rocans	Project Manager
Ministry of Finance	Ilonda Stepanova	Director of Budget Department
	Liga Sulca	Head of Division
Ministry of Education and Science	Inese Sture	Deputy Director of the Department of Higher Education, Science and Innovation
	Gunta Arāja	Deputy State Secretary—Director of the Department of Structural Funds and International Financial Instruments
	Marina Meksa	Senior Expert, Department of Higher Education, Science and Innovation
	Anatolijs Melnis	Senior Expert, Department of Higher Education, Science and Innovation
	Janis Paiders	Officer, Department of Higher Education, Science and Innovation
	Reinis Lasmanis	Officer, Department of Higher Education, Science and Innovation
	Kristīne Keiča	Officer, Department of Higher Education, Science and Innovation
	Karīna Aleksandra	Officer, Department of Higher Education, Science and Innovation
	Evita Sarma	-
University of Latvia	Jānis Stonis	Administrative Director
	Gundars Bērziņš	Chancellor (supervises Department of Development and Planning, and Department of Finance and Accounting)
Ventspils University College	Gita Revalde	Associate Professor and Rector
Vidzeme University College	Gatis Krumins	Rector
	Iveta Putnina	-
Liepaja University	Jānis Rimšāns	Rector

Riga Technical University	Ingars Eriņš	Chancellor, Associate Professor
	Prof. Uldis Sukovskis	Vice-Rector for Academic Affairs
	Tālis Juhna	Zinātņu prorektors
	Prof. Ugis Bratuskins	Dean of the Faculty of Architecture and Urban Planning
	Prof. Juris Smirnovs	Dean of the Faculty of Building and Civil Engineering
State Education Development Agency	Dita Traidas	Director
	Elita Zondaka	Head of Department of Structural Funds Management and Monitoring
	Ansis Pekss	Head of Science Project Monitoring Unit, Department of Structural Funds Management and Monitoring
	Ingus Zitmanis	Head of European Social Fund Project Monitoring Unit, Department of Structural Fund Management and Monitoring
	Atvars Sauss	Head of Infrastructure Project Monitoring Unit, ERDF Infrastructure Project Control Department
	Agnese Aivare	Head of the ERDF Infrastructure Project Control Department

List of references

Arnhold, N. and Kwiek, M. (2011). Enabling Smart Growth for Poland through Education and Skills Supply. In: World Bank, Europe 2020 Poland. Fueling Growth and competitiveness in Poland through Employment, Skills and Innovation. Technical Report

Aslund, A. and Dombrovskis, V. (2011). How Latvia Came through the Financial Crisis. Washington D.C.: PIIE Press.

Auers, D., Rostoks, T., & Smith, K. (2007). Flipping burgers or flipping pages? Student employment and academic attainment in post-Soviet Latvia. *Communist and Post-Communist Studies, 40*, 477–491.

Augstākās izglītības padome (2013). *Latvijas augstākās izglītības un augstskolu attīstības nacionālā koncepcija 2013. – 2020. gadam* [The national concept for the development of higher education and institutions of higher education of Latvia for 2013–2020]. Rīga: Augstākās izglītības padome.

Augstākā Padome (1991). Latvijas Republikas Izglītības likums [The Law of Education of the Republic of Latvia]. *Ziņotājs*, 31. Accessed on December 27, 2013 at http://likumi.lv/doc.php?id=67960&search=on

Barr, N. (2004). Higher Education Funding. Oxford Review of Economic Policy, 20 (2), 264–283.

Bevc, M. & Uršič, S. (2008). Relations between funding, equity, and efficiency of higher education Institute for Economic Research. Education Economics, 16 (3), 229–244.

Cabinet of Ministers Regulations Nr. 1316, (2013). Bāzes finansējuma piešķiršanas kārtība valsts zinātniskajiem institūtiem, valsts augstskolām un valsts augstskolu zinātniskajiem institūtiem [Procedure of allocating base funding to scientific institutes, public institutions of higher education, and public scientific institutes]. Latvijas Vēstnesis, 236 (5042). Accessed on 7 March, 2014 at http://likumi.lv/doc.php?id=262508

Cabinet of Ministers Regulations No. 68 (2012). Stipendiju piešķiršanas kārtība ārzemniekiem [Procedure of allocating scholarships to foreigners]. *Latvijas Vēstnesis*, 15 (4618). Accessed on January 3, 2014 at http://likumi.lv/doc.php?id=243231

Cabinet of Ministers Regulations Nr. 227, (2011). Fundamentālo un lietišķo pētījumu projektu izvērtēšanas, finansēšanas un administrēšanas kārtība [The procedure of evaluating, financing and administering fundamental and applied research projects]. Latvijas Vēstnesis, 51 (4449). Accessed on 7 March, 2014 at http://likumi.lv/doc.php?id=227966

Cabinet of Ministers Regulations No. 335 (2010). Noteikumi par centralizēto eksāmenu saturu un norises kārtību [Regulations on the content and procedures of centralized exams]. *Latvijas Vēstnesis*, 57 (4249). Accessed on January 15, 2014 at http://likumi.lv/doc.php?id=207788

Cabinet of Ministers Regulations No. 836 (2009). Pedagogu darba samaksas noteikumi [Regulations on teachers' wages]. *Latvijas Vēstnesis*, 121 (4107). Accessed on 3 January, 2014, at http://likumi.lv/doc.php?id=195578

Cabinet of Ministers Regulations No. 846 (2006). Noteikumi par prasībām, kritērijiem un kārtību uzņemšanai studiju programmās [Regulations on the Requirements, Criteria and Procedure for the Admission to Study Programmes]

Cabinet of Ministers Regulations No. 994 (2006). Kārtība, kādā augstskolas un koledžas tiek finansētas no valsts budžeta līdzekļiem [Regulations on the procedure of state budget financing to institutions of higher education and colleges]. *Latvijas Vēstnesis*, 200 (3568). Accessed on December 27, 2013 at http://likumi.lv/doc.php?id=149900

Cabinet of Ministers Regulations Nr. 443, (2006). Valsts pētījumu programmu pieteikšanas, ekspertīzes un finansēšanas kārtība [The procedure of submitting, assessing, and financing of public research program]. Latvijas Vēstnesis, 95 (3463). Accessed on 7 March, 2014 at http://likumi.lv/doc.php?id=137902

Cabinet of Ministers Regulations No. 740 (2004). Noteikumi par stipendijām [Regulations on scholarships]. *Latvijas Vēstnesis*, 138 (3086). Accessed on January 3, 2014 at http://likumi.lv/doc.php?id=93004

Cabinet of Ministers Regulations No. 220 (2001). Kārtība, kādā tiek piešķirts, atmaksāts un dzēsts studiju kredīts un studējošā kredīts no kredītiestādes līdzekļiem ar valsts vārdā sniegtu galvojumu [Regulations on issuing, repaying and forgiving state guaranteed student and study loan from the funds of commercial banks]. *Latvijas Vēstnesis*, 97 (2484). Accessed on January 3, 2014 at http://likumi.lv/doc.php?id=25577

Cabinet of Ministers Regulations No. 86 (1999). Studiju kreditēšanas noteikumi [Regulations on study loans]. *Latvijas Vēstnesis*, 75/78. Accessed on January 3, 2014 at http://likumi.lv/doc.php?id=22700

Cabinet of Ministers Regulations No. 251 (1997). Studējošo kreditēšanas noteikumi [Regulations on student loans]. *Latvijas Vēstnesis*, 184/185. Accessed on January 3, 2014 at http://likumi.lv/doc.php?id=44409

Central Statistical Bureau (1989). *Latvijas PSR tautas saimniecība: Statistikas gadagrāmata '88* [Economy of Latvia's SSR: A statistical yearbook '88]. Riga: Avots.

Civitta (2014). *Augstākās izglītības institūciju finanšu – ekonomiskās darbības izvērtējums un publisko pārskatu konsolidācija* [The assessment of financial - economic operations of institutions of higher education and the consolidation of public reports]. Riga: The Ministry of Education and Science.

Daugavpils University (2014). Informācija par citiem ieņēmumiem [Information on other revenue]. Unpublished material.

(2014). *Deklarācija par Laimdotas Straujumas vadītā Ministru kabineta iecerēto darbību* [Declaration on the action plan of the government of the Prime Minister Laimdota Straujuma]. Accessed on February 14, 2014 at http://www.mk.gov.lv/lv/mk/darbibu-reglamentejosie-dokumenti/Straujumas-valdibas-deklaracija/

Dream Foundation (2011). Dream! Foundation Latvija 2011. gada pavasara aptaujas rezultāti. [Results of the spring survey 2011]. Accessed on August 18, 2012 at http://www.dreamfoundation.eu/lv_LV/news/new/id/279

Erins, I. (2013) Augstākās izglītības studiju vietas bāzes izmaksu komponentu, aprēķina metodikas un studiju izmaksu koeficientu aktualizēšana un koriģēšana atbilstoši reālajām studiju izmaksām [Updating and Adjusting the Components of Higher Education Study Place Base Costs, Calculation Methodology and Study Cost Coefficients according to Actual Study Costs]. Research ordered by Ministry of Education and Science of the Republic of Latvia.

Estermann, T. & Bennetot Pruvot, E. (2011). Financially Sustainable Universities II. European universities diversifying income streams. Brussels: European University Association.

Estermann, T., Bennetot Pruvot, E. & Claeys-Kulik, A-L. (2013). Designing strategies for efficient funding of higher education in Europe. DEFINE interim report, December 2013. Brussels: European University Association.

Estermann, T., & Claeys-Kulik, A-L. (2013). Financially Sustainable Universities. Full Costing: Progress and Practice. Brussels: European University Association.

Estermann, T. & Nokkala, T. (2009). University Autonomy in Europe I: Exploratory Study. Brussels: European University Association.

Estermann, T., Nokkala, T. and Steinel, M. (2011). University Autonomy in Europe II. The Scorecard. Brussels: European University Association.

EUA (2012). EUA's Public Funding Observatory. Brussels: European University Association.

European Commission/EACEA/Eurydice (2013). Funding of Education in Europe 2000-2012: The Impact of the Economic Crisis. Eurydice Report. Luxembourg: Publications Office of the European Union.

European Commission (2013). Council Recommendation on Latvia's 2013 National Reform Programme and delivering a Council opinion on Latvia's Convergence Programme for 2012-2016. Accessed on December 27, 2013 at http://ec.europa.eu/europe2020/pdf/nd/csr2013_latvia_en.pdf.

European Commission (2012). Council Recommendation on the National Reform Programme of 2012 of Latvia and delivering a Council opinion on the Convergence Programme of Latvia for 2012-2015. Accessed on December 27, 2013 at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:219:0050:0053:EN:PDF.

European Commission (2011). Supporting growth and jobs – an agenda for the modernisation of Europe's higher education systems. Communication from the Commission to the Council and the European Parliament. Brussels: European Commission.

European Commission (2006). Delivering on the Modernisation Agenda for Universities: Education, Research and Innovation. Communication from the Commission to the Council and the European Parliament. Brussels: European Commission.

Eurydice (n.d.). *Latvia: Higher Education.* Accessed on December 27, 2013 at https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Latvia:Higher_Education

Eurydice (2008). Higher Education Governance in Europe: Policies, structures, funding and academic staff. Brussels: Education, Audiovisual and Culture Executive Agency.

Eurydice (2011). Modernisation of Higher Education in Europe: Funding and the Social Dimension 2011. Brussels: Education, Audiovisual and Culture Executive Agency.

Eurydice (2013). National Student Fee and Support Systems 2013/14. Brussels: Education, Audiovisual and Culture Executive Agency.

Goedegebuure, L., Kaiser, F., Maassen, P., & de Weert, E. (1994). Higher education policy in international perspective: An overview. In L.Goedegebuure, F.Kaiser, P.Maassen, L.Meek, F.van Vught & E.de Weert (Eds.), *Higher education policy: An international comparative perspective* (pp. 1–12). Oxford: Pergamon Press.

Hölttä, S., Jansson, T. & Kivistö, J. (2010). Emerging Markets in Finnish System. In Brown, R. (Ed.) Higher Education and the Market. London: Routledge, pp. 123–134.

International Monetary Fund (IMF) (2013). *Republic of Latvia: Selected Issues*. IMF Country Report No. 13/29. Washington D.C.: IMF.

Izglītības kvalitātes valsts dienests, (2013). *Zinātnisko insitūciju reģistrs* [The registry of scientific institutions]. Accessed on February 14, 2014 at http://ikvd.gov.lv/zinatnisko-instituciju-registrs.html

Johnstone, B. & Marcucci, P. (2010). Financing Higher Education Worldwide: Who Pays? Who Should Pay? Baltimore, Maryland: Johns Hopkins University Press.

Jongbloed, B., de Boer, H., Enders, J. & File, J. (2010). Progress in higher education reform across Europe. Funding Reform. Volume 1: Executive Summary and main report. Enschede: CHEPS.

Kalvāne, Ž. (2011, 10 July) *Valsts robežsardzes virsnieki studē Rēzeknes Augstskolā* [Officers of the State Border Guard study at Higher Education Institution]. Accessed on February 2, 2014 at http://www.rs.gov.lv/?rel=1943&id=1031&top=-4

Koroleva, I., Aleksandrovs, A., Trapenciere, I., Rungule, R., Trapencieris, M., & Jankovskis, M. (2013). *Studentu sociālie un ekonomiskie dzīves apstākļi Latvijā, 2013. Eurostudent V* [Social and economic conditions of student life in Latvia. Eurostudent V]. Riga: LU Filozofijas un socioloģijas institūts. Accessed on January 15, 2014 at http://izm.izm.gov.lv/nozares-politika/izglitiba/augstaka-izglitiba/7238.html

(2014). *Latvijas Universitātes Fonds* [University of Latvia Foundation]. Accessed on January 15, 2014 at http://www.fonds.lv/

LIVA (2010). *ES Struktūrfondi izglītībā: ES struktūrfondu aktualitātes* [EU Structural Funds for Education]. Accessed on February 14, 2014 at www.izm.gov.lv

Marcucci, P. & Usher, A. (2012). 2011 Year in Review: Global Changes in Tuition Fee Policies and Student Assistance. Toronto: Higher Education Strategy Associates.

Marginson, S. (2007). The public/private divide in higher education: A global revision. Higher Education, 53, 307–333.

Ministry of Economics (2010). *Informatīvais ziņojums „Par nepieciešamajām strukturālajām reformām augstākajā izglītībā un zinātnē Latvijas starptautiskās konkurētspējas paaugstināšanai"* [A report on "Necessary structural reforms in education and science for increasing international competitiveness of Latvia"]. Riga: The Ministry of Economics.

Ministry of Education and Science (2014a). Pārskats par Latvijas augstāko izglītību 2013. gadā (galvenie statistikas dati) [Review on higher education in Latvia in 2013: Main statistical indicatotrs]. Riga: Ministry of Education and Science.

Ministry of Education and Science (2014b). Tirgus orientētie pētījumi [Commercially oriented research]. Accessed on March 10 at http://izm.izm.gov.lv/nozares-politika/zinatne/TOP.html

Ministry of Education and Science (2013a). *Pārskats par Latvijas augstāko izglītību 2013. gadā: Skaitļi, fakti, tendences* [Annual report on Latvia's higher education in 2013: Numbers, facts, tendencies]. Riga: The Ministry of Education and Science.

Ministry of Education and Science (2013b). *The number of students in thematic groups of education in state and private HEIs and colleges in 2012/2013 academic year.* Riga: The Ministry of Education and Science.

Ministry of Education and Science (2013c). *Gala ziņojums par „Pasākumu plāna nepieciešamajām reformām augstākajā izglītībā un zinātnē 2010.-2012.gadam" izpildi* [The final report on the accomplishment of the "Action plan for structural reforms in education and science in Latvia, 2010–2020"]. Riga: The Ministry of Higher Education and Science.

Ministry of Education and Science (2013d). *Drop-out rate at higher education institutions in Latvia.* Riga: The Ministry of Higher Education and Science.

Ministry of Education and Science (2013e). *Remuneration for academic staff in HEIs in 2011 (Ls/per month).* Riga: The Ministry of Higher Education and Science.

Ministry of Education and Science (2013f). Zinātnes, tehnoloģijas attīstības un inovācijas pamatnostādnes 2014. – 2020.gadam [Guidelines for the development of science, technology, and innovation, 2014 - 2020]. Riga: Ministry of Education and Science.

Ministry of Education and Science (2013g). Izglītības attīstības pamatnostādnes 2014. – 2020. gadam [Education development guidelines, 2014 - 2020]. Riga: Ministry of Education and Science.

Ministry of Education and Science (2013h). Koledžu stratēģiskā attīstība: koncepcija [A framework document for the develompent of colleges]. Riga: Ministry of Education and Science.

Ministry of Education and Science (2012). *Pārskats par Latvijas augstāko izglītību 2012. gadā: Skaitļi, fakti, tendences* [Annual report on Latvia's higher education in 2012: Numbers, facts, tendencies]. Riga: The Ministry of Education and Science.

Ministry of Education and Science. (2002). *Pārskats par Latvijas augstskolu darbību 2001. gadā: Skaitļi, fakti, tendences* [Annual report on Latvia's higher education in 2001: Numbers, facts, tendencies]. Riga: The Ministry of Education and Science.

Ministry of Finance (2014). Likuma "Par valsts budžetu 2014. gadam" paskaidrojumi [Explanations on the law State Budget 2014]. Accessed on March 10 at: http://www.fm.gov.lv/lv/sadalas/valsts_budzets/budzeta_paskaidrojumi/2014_gads/

Ministry of Welfare (2007). *Professional Activities of Graduates of Higher and Vocational Education Institutions after Graduation*. Riga: The University of Latvia.

OECD (2013). Education at a Glance 2013. Paris: OECD.

OECD (2007). Reviews of Tertiary Education—Estonia. OECD Reviews of Tertiary Education. Paris: OECD.

Saeima (1995). *Augstskolu likums* [The Law on Higher Education Establishments]. *Latvijas Vēstnesis*, 179 (462). Accessed on December 27, 2013 at http://likumi.lv/doc.php?id=37967

Saeima (2005a). *Zinātniskās darbības likums* [The Law on Scientific Activity]. *Latvijas Vēstnesis*, 70 (3228). Accessed on February 10, 2014 at http://likumi.lv/doc.php?id=107337

Santiago, P., Tremblay, K., Basri, E. & Arnal, E. (2008). Tertiary Education for the Knowledge Society. Vol. 1. Paris: OECD.

Steier, F. A. (2003). The Changing Nexus: Tertiary Education Institutions, the Marketplace and the State. Higher Education Quarterly, 57 (2), 158–80.

Studiju un zinātnes administrācija (2012). 2012. *gada publiskais pārskats* [Public report 2012]. Riga: The Administration of Studies and Science.

SEDA (n.d). *ES Struktūrfondi izglītībā un zinātnē* [EU Structural Funds for Education and Science]. Accessed on February 14, 2014 at http://sf.SEDA.gov.lv/lat/strukturfondi_2007_2013/

Sustainable Strategy of the City of Ventspils until 2030 (2013). Accessed on March 12 at http://www.ventspils.lv/files/dokumenti/attistibasprogramma/ventspils_strategija_2030_27_12_2013.pdf

University of Latvia (2012). Latvijas Universitātes budžeta sadalījums un izlietojums 2012. gadā [Budget revenue and expenditure of Latvia University in 2012]. Unpublished material.

Valmiera municipality (2014). Informācija par Valmieras pilsētas pašvaldības sniegto finansiālo atbalstu Vidzemes Augstskolai [Information on financial support to Vidzeme University of Applied Science from Valmiera municipality]. Unpublished material.

Vossensteyn, J. J., Cremonini, L., Epping, E., Laudel, G. & Leisyte, L. (2013). International experiences with student financing: tuition fees and student financial support in perspective, final report. Enschede: CHEPS.

Ziegele, F. (2013). European Trends in Performance-Oriented Funding. In Bergan, S., Egron-Polak, E., Kohler, J. & Purser, L. (Eds.): Leadership and Governance in Higher Education - Handbook for Decision-makers and Administrators, 1/2013. Berlin: Raabe, pp. 71–88.