

ACCESS

**Higher Education
Funding and
the Social Dimension
in Croatia:
Analysis and
Policy Guidelines**

**Jon File, Thomas Farnell,
Karin Doolan, Dušan Lesjak
and Ninoslav Šćukanec**



Institute for the
Development of Education



Ministry of Science, Education and Sports
of the Republic of Croatia



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Table of Contents

INTRODUCTION.....	5
PART I: KEY DATA AND IDENTIFIED CHALLENGES.....	9
1.1 HIGHER EDUCATION ACCESS AND THE SOCIAL DIMENSION IN CROATIA.....	9
Higher education enrolment and attainment trends.....	10
Inequalities in access to higher education.....	13
Vulnerable groups in higher education.....	15
Adverse study conditions.....	17
Inequalities within the binary system.....	19
1.2 HIGHER EDUCATION FUNDING IN CROATIA.....	22
Levels of public and private expenditure and efficiency of expenditure.....	22
Tuition fee system.....	23
System for allocating state funds to higher education institutions.....	29
Financial management and data collection.....	31
1.3 STUDENT FINANCIAL SUPPORT IN CROATIA.....	32
Financial needs of students: costs and sources of financing.....	32
Structural characteristics of student financial support in Croatia.....	35
Indirect student financial support.....	36
Direct student financial support: grants.....	38
Direct student financial support: loans.....	39
Management of the student financial support system.....	40
PART II: POLICY GUIDELINES.....	41
2.1 POLICY GUIDELINES FOR PUBLIC AND PRIVATE EXPENDITURES ON HIGHER EDUCATION IN CROATIA.....	42
2.2 POLICY GUIDELINES FOR REFORMING THE HIGHER EDUCATION FUNDING SYSTEM IN CROATIA.....	45
Tuition fee system: addressing the cost-sharing debate.....	45
System for allocating state funds to higher education institutions.....	49
Financial management and higher education information systems.....	56



2.3 POLICY GUIDELINES FOR REFORMING STUDENT FINANCIAL SUPPORT IN CROATIA.....	57
Structural characteristics of the student financial support system.....	58
Financial support mechanisms.....	60
Determining financial need and support levels.....	62
Determining coverage of support and the levels of grants and/or loans.....	65
Administration and management of the student financial support system.....	70
2.4 ASSESSING THE BROAD FINANCIAL IMPACT OF REFORMING STUDENT FINANCIAL SUPPORT AND TUITION FEE POLICIES IN CROATIA.....	73
Defining possible student financial support systems and tuition fee options for Croatia.....	73
Important assumptions underlying the model.....	75
Technical aspects for the creation of a model.....	78
Overview of the ACCESS model.....	80
Financial impact of different scenarios: national higher education budget.....	82
Financial impact of different scenarios: higher education expenditure in European comparison.....	84
Additional scenario: keeping the linear tuition fee system.....	86
ANNEXES	90
Annex 1: Glossary.....	91
Annex 2: References.....	94
Annex 3: About the ACCESS project.....	99

Introduction

For the past few years, the Bologna Process has given increasing importance to the “social dimension” of higher education within the European Higher Education Area. The concept of the social dimension of higher education was first developed within the Bologna Process in the Prague Communiqué of 2001 and, broadly speaking, refers to the goal of removing social and economic inequalities in access to higher education. The goal was most clearly defined in the London Communiqué of 2007:

“We share the societal aspiration that the student body entering, participating in and completing higher education at all levels should reflect the diversity of our populations. We reaffirm the importance of students being able to complete their studies without obstacles related to their social and economic background. We therefore continue our efforts to provide adequate student services, create more flexible learning pathways into and within higher education, and to widen participation at all levels on the basis of equal opportunity.”
(London Communiqué, 2007)

The precondition for ensuring the social dimension of higher education is the development of institutional measures that contribute to equal opportunities in higher education (at the level of access, participation and completion of studies), and with special emphasis placed on socially disadvantaged groups.

As a signatory country of the Bologna Process, Croatia has also committed to improving the social dimension of higher education.

The factors influencing opportunities and decisions to enter and complete higher education are complex. Most research on inequalities in access to higher education emphasises that these are primarily a result of inequalities that develop at earlier levels of education, and that the cultural and social environment of different social groups strongly influences their educational achievement and their likelihood of enrolling in higher education. The practices of educational institutions may also play an important role in reinforcing (or alleviating) such inequalities.³

At the same time, however, financial obstacles have been recognised by researchers, policy-makers and stakeholders in higher education as a key factor that influences access to and completion of higher education, especially in the context of the introduction or increase of tuition fees. Policy documents from the European Commission (2006), the Organisation for Economic Cooperation and Development (2008), the International Association of Universities (2008) and the European Students Union (2013) argue that removing financial barriers to higher education is a prerequisite for equity in higher education.

Linking higher education funding with the social dimension

Higher education funding policy directly relates to the social dimension of higher education in the following three areas:

- **Tuition fees:** tuition fees (or other fees charged to students by higher education institutions) can represent a major financial barrier for access to higher education for students from low-income families. Therefore, the question of who pays fees, what amounts are charged and what mechanisms exist for taking into account students' socioeconomic backgrounds when defining tuition fee policies have important equity repercussions.

³ For an overview of research findings on educational inequalities and policy responses see Santiago et al (2008) and Ross (2009). For a recent report with quantitative data on access to higher education in Europe see Camilleri & Muhleck (eds) (2010).

- **Student financial support:** the most direct link between higher education funding and equity is made through national student financial support policies. The type of support provided (grants, subsidies, loans, tuition fee waivers, etc.), the levels of support, and the criteria for receiving support are all essential indicators of how equitable a higher education system is.
- **Funding incentives for higher education institutions:** targeted funding policies can increase equitable access by, for example, setting quotas for certain groups of students (“affirmative action”), funding institutions to develop better support for enrolled disadvantaged students or to implement outreach programmes for enrolling such students, or rewarding institutions financially for ensuring the graduation of disadvantaged students.

The ACCESS project

This document has been prepared as part of the project “Towards Equitable and Transparent Access to Higher Education in Croatia (ACCESS)”, funded by the European Commission through the TEMPUS programme. The ACCESS project aims to contribute to ensuring equitable access to higher education in Croatia by removing financial obstacles, improving data availability and building capacity for action. The project, which lasts from 2010 to 2013, is led by the Institute for the Development of Education (Croatia) and Technische Universität Dresden (Germany), and includes a consortium of 23 Croatian and international institutions, including representatives of Croatian higher education institutions, the Croatian Student Council, the Agency for Science and Higher Education, the Ministry of Science, Education and Sports, as well as research institutes and NGOs.

The expected outcome of the ACCESS project is to provide policy-makers, higher education stakeholders and the wider public with reliable data and policy guidelines necessary to undertake higher education funding reform in, including the reform of the student financial support system. The specificity of these policy guidelines is that they place the social dimension of higher education as a central tenet.

Further information on the ACCESS project is available as an annex to this publication and on the project web site: www.tempus-access.info.

Aim and method of policy guidelines

The policy guidelines were drafted by the Expert Team of the ACCESS project, consisting of both international and national experts in the fields of higher education funding and equitable access to higher education, and were discussed and confirmed by the ACCESS project Consortium. The Expert Team consisted of experts from higher education institutions, research institutes, state institutions and NGOs from 6 different countries:

- Anto Bajo, PhD, Researcher, Institute of Public Finance (Croatia)
- Danijela Dolenc PhD, Researcher, Faculty of Political Sciences, University of Zagreb (Croatia)
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The guiding principle of the ACCESS project in developing its policy guidelines is that of evidence-based policy making. Namely, that effective reform in higher education should be based on the collection and analysis of relevant data, on expert recommendations and on discussions with stakeholders. Therefore, the method for developing and drafting the guidelines consisted of the following steps:

- A study was carried out in the academic year 2010/2011 on the Croatian higher education funding system in a comparative perspective, resulting in a report entitled *The Croatian Higher Education Funding System in a European Context: A Comparative Study* (available here: <http://www.tempus-access.info/english/publications/>).
- The international EUROSTUDENT survey on social and economic conditions of student life was carried out in Croatia to assess the challenges with regards to access to higher education, and more broadly to the social dimension of higher education. The EUROSTUDENT report for Croatia, entitled *Social and Economic Conditions of Student Life in Croatia*, is available here: <http://www.tempus-access.info/english/publications/>.
- A study was carried out in the academic year 2011/2012 on the Croatian student financial support system in a comparative perspective, resulting in a report entitled *The Croatian Student Financial Support System in a European Context: A Comparative Study* (available here: <http://www.tempus-access.info/english/publications/>).
- The project Expert Team held meetings and workshops to identify the strengths and weaknesses of the current Croatian higher education funding and student financial support systems, to compare these systems to different higher education funding models in EU countries, and to identify particular challenges facing Croatia in terms of equitable access to and progress in higher education.
- Based on the data and analyses above, policy guidelines were drafted by the ACCESS Expert Team. The final guidelines presented in this document were discussed at project seminars in Rijeka in March 2011 and July 2012, and in Split in April 2013, attended by vice-rectors and other representatives of Croatian universities, Ministry representatives and representatives of other stakeholders in the ACCESS project Consortium (for more details see the project web site: <http://www.tempus-access.info/>).

Without blindly copying other EU models, the policy guidelines presented in this document were developed to provide a new approach to higher education funding reform in Croatia, and in a way that:

- Stresses important strategic objectives the higher education funding system should address, while also taking into account the importance of university autonomy.



- Is pragmatic and does not disrupt the stability of funding of higher education institutions in Croatia.
- Addresses, in parallel to the issues above, equity of access to and progress in higher education, as the core focus of the ACCESS project.

The resulting policy guidelines do not represent a fully-developed policy model that can be readily implemented by the Croatian government, since the project had neither the mandate nor the capacity to produce such an output. Instead, the policy guidelines provide a set of principles and practices that the project participants believe should form a central part of the reform of higher education funding in Croatia, and provide illustrations of possible policy models and scenarios that could be applied in the Croatian context.

Structure of policy guidelines

Part I of the document summarises the findings of the data collection and analyses carried out in the ACCESS project studies and survey. This section aims to identify the challenges, weaknesses and threats that need to be addressed in Croatia with regards to the social dimension of higher education, the higher education funding system and the student financial support system.

In Part II.2, specific policy guidelines are provided for reforming higher education funding and student financial support in Croatia in response to the challenges identified in Part I.2. The guidelines highlight the principles and objectives that such funding systems should incorporate, identify some of the policy mechanisms available, and make concrete proposals that the ACCESS project believes are most adequate for addressing the social dimension in Croatia.

Finally, in Part II.4, the guidelines provide illustrations of possible “policy scenarios”, which are dependent on the decisions the Croatian government takes on the issue of tuition fees and levels (and types) of student financial support. These illustrations include estimates of the financial repercussions of each policy scenario, as well as probable repercussions for the social dimension.⁴

⁴ It should be noted, however, that the financial estimates provided are exclusively intended to suggest the broad impact of a particular policy scenario, and not as a precise calculation of the cost of introducing such a policy.

Part I

Key data and identified challenges

Based on the results of the comparative studies carried out in the ACCESS project, as well as information compiled by broader international data and research, the following part of the publication provides an overview of key data on Croatian higher education in a comparative perspective, focusing on the social dimension of higher education, the higher education funding system and the student financial support system.

Part I analyses data in comparison to trends at the international level, with a special focus on the five selected EU countries participating in the ACCESS project (Austria, Germany, Hungary, Slovenia and Sweden). This section of the publication aims to identify key challenges that face the social dimension of higher education, higher education funding and student financial support in Croatia, thereby providing a basis for the policy guidelines developed by the ACCESS project in the following part of the publication.



1.1

Higher education access and the social dimension in Croatia

Higher education enrolment and attainment trends

Higher education attainment in Croatia is low in international comparison

At a global level, higher education attainment levels have increased considerably over the past 30 years. On average across OECD countries, 38% of 25–34 year-olds in 2010 held higher education qualifications, compared with 23% of 55–64 year-olds (OECD, 2012).

In 2012, the average higher education attainment of 25–34 year-olds in the EU-27 countries was 35%. Croatia, however, remains below the EU average in terms of higher education attainment with 24.3% in the 25–34 age group (although this figure has grown from 18% in 2005). This places Croatia slightly above the group of countries with the lowest attainment levels in the EU, which includes Malta (24.8%), Romania (23.3%), Austria (22.8%) and Italy (22%). Also, when comparing higher education attainment levels of the 25–65 age group, Croatia has an attainment level of only 18.2%, compared to 27.5% in the EU-27 (Eurostat, n.d.).

Improving the level of higher education attainment in Croatia has been recognised as a priority both by the government (MSES, 2005) and international institutions (World Bank, 2008).

Massification of higher education has occurred and enrolments are currently very high

Despite current low attainment levels, Croatia has undergone a process of massification of higher education over the last two decades, especially since 1994/1995 (Matković, 2009). The number of students who enrolled in higher education (in their first year of studies and for the first time) has increased continually from 23,165 in 1994/1995 to 39,459 in the academic year 2009/2010 (which represents a growth of 70%), which was followed by a small drop in student enrolments after 2009/2010 (CBS 2011). Overall, this trend of massification should result in a rapid increase in the higher education attainment level of 25–34 year-olds over the next seven years.

There is also a very high progression rate from secondary education to higher education. In Croatia, upper secondary education is divided into academic and vocational tracks. The schools that result in a state matriculation exam, thus allowing for direct progression to higher education, are four-year comprehensive schools (*gimnazije*) and four-year vocational schools (*strukovne škole*), which are attended by 77.5% of secondary school students. The third category of secondary schools (three-year vocational schools) are attended by 22.5% of secondary school students and generally do not allow for progression on to higher education, and instead lead directly to the labour market (CBS, 2012.b). Analyses by Matković (2009) show that between 1998 and 2007, the proportion of four-year secondary school leavers that directly entered higher education following secondary school increased from 61% to 81% in 2007.

Expressed as a proportion of the cohort enrolling in higher education, the proportion of 18 year-olds enrolling in higher education increased from 42.1% to 79% in the period from the academic year 1994/1995 to 2009/2010 (CBS, 1996–2011).

The increase in enrolments has resulted in a corresponding increase in graduation rates³ in Croatia. Whereas in 1997 the proportion of 25 year-olds who held a higher education degree was 14.7%, this figure rose to 36% in 2007 and to 41.2% in 2010 (calculations based on (Matković 2009 and CBS 1995-2011). Assuming that these enrolment and graduation trends continue, higher education attainment of the 25-34 age group in Croatia will reach 40% in 2020, which will also be in line with the benchmark set in the European Union's *EU 2020* strategy that at least 40% of 30-34 year-olds should have attained a higher education degree by 2020.

Despite increasing enrolment trends, the gross enrolment ratio is low, which is probably caused in part by low completion rates in higher education

The massification of higher education in Croatia has resulted in a corresponding growth in the gross enrolment ratio (GER) in higher education for Croatia. GER shows the number of students enrolled in higher education, regardless of age, expressed as a percentage of the age group 18-22, and is an indicator of the extent of overall higher education participation (as opposed to looking only at entry rates).

The GER in Croatia increased from 26.5% in 2005 to 54.13% in 2010 (UIS, n.d.). It is worthy to note, however, that this GER level still remains below the average GER of the OECD countries, which was 64.91% in 2010 (OECD, 2012) and of the EU-27 countries, which can be estimated at around 66% for the same year (UIS, n.d.)⁴. Individual EU countries have GER levels above the OECD average, such as Sweden (74%), Slovenia (87%) and Finland (94%) (ibid).

So, although the progression from secondary school to higher education is very high, Croatia remains below average in terms of its GER. This discrepancy is likely to be due in part to the low rate of completion of higher education (high drop-out rate) in Croatia. Although no official data on drop-out rates is analysed or published in Croatia, estimates by Matković (2009) based on data from the Central Bureau of Statistics show that the completion rate in Croatia was 59% (i.e. a 41% drop-out rate) for the generation that graduated in 2007. These findings are corroborated by the survey "Educational and Working Careers of Youth in Croatia" (UNDP Croatia, 2009), according to which the share of young people who enrolled in professional studies and successfully graduated was 52%, while the proportion of young people who complete university studies was higher at 62%. Comparing these estimates to data on completion rates in OECD countries for the year 2008 (OECD, 2010), Croatia has significantly higher drop-out rates than the OECD or EU-19 countries averages (31% and 30% respectively), which places Croatia among the countries with the highest drop-out rates (above 40%).

³ The tertiary graduation rate is the share of each age cohort that will complete higher education based on current patterns of graduation (OECD, 2012). The calculation of graduation rates is complex and requires for a given year, to break down the number of students who graduate into age groups. In this section, the graduation rate is calculated as a simplified indicator of the proportion of 25 year-olds who hold a higher education degree.

⁴ Calculation based on data for 24 out of 27 EU countries (average GER value).



Another factor that influences the low GER is the low proportion of mature students in Croatian higher education. Since GER calculates the sum of students of all ages enrolled in higher education as a proportion of the number of people in the population within the 19–24 age group, countries with higher numbers of mature students have a higher GER (which also explains why some countries may even have a GER of over 100%). A section below will provide more details on the proportion of mature students in Croatia.

Negative demographic trends represent a threat to long-term growth of higher education enrolments and attainment

The current population decline of those under 30, as well as a decline in the number of school-age children, will mean that the level of higher education attainment will begin to drop in the next few years. The number of people aged 18 has decreased from 58,363 in 2001 to 47,960 in 2011 (CBS, 2011.b). Given the number of births in 2000, it is likely that by 2020, the overall size of the generation that will enrol in higher education will reach a maximum of 40,000, which will then correspond to 90% of the generation aged 18 years-old (Matković, 2009). The conclusion, according to Matković, is that the maximum number of potential newly enrolled students (which is limited by the number of pupils who complete secondary school tracks that allow for matriculation and entry to higher education) has already been reached. This is confirmed by relatively stable enrolment trends from 2005 onwards (between 38,000 and 39,000 first-time enrolments per year).

Further increase of higher education attainment requires widening participation in higher education and reducing drop-out rates

Based on the above constraints to increasing enrolments, further expansion of access to higher education could be achieved through some of the following measures, each of which is closely related to the social dimension of higher education:

- **Expansion of access to four-year secondary school programmes and to the state matriculation exam:** one of the structural aspects of the Croatian education system that is an obstacle to wider access to higher education is the existence of 3-year vocational secondary schools that do not allow direct progression to higher education upon completion (these schools are attended by 22.5% of secondary school students; CBS, 2012.b). Increasing access to secondary programs that allow vertical educational mobility (especially in comprehensive schools) could increase the number of eligible candidates for higher education (Babić et al., 2006).
- **Widening access of non-traditional students:** higher education access can be further expanded by greater inclusion of mature students (including through lifelong learning programmes) and providing better access to underrepresented groups to compensate for the drop in numbers of traditional students (Eurydice, 2011). This can be achieved by diversifying higher education provisions (e.g. by further strengthening provision of vocationally-oriented study programmes, or by providing distance learning) and by ensuring diverse pathways to higher education (including through recognition of prior learning or the recognition of professional experience as valid criteria for entry (Santiago et al., 2008)). In order to ensure not only broader access, but broader retention and success in higher education, adequate support should be provided to non-traditional students in order to overcome academic, financial and other difficulties faced by these groups.
- **Decreasing drop-out rates:** ensuring retention and successful completion of a larger proportion of students could positively influence graduation and attainment rates. Non-completion has a variety of causes, including weak prior academic preparation, poor career guidance, adverse financial circumstances, combining employment and study and

lack of institutional support (Santiago et al., 2008). As will be noted below, disadvantaged groups are more likely to drop-out of higher education than other students, therefore such measures would contribute to greater equity in higher education, in addition to increasing efficiency.

Inequalities in access to higher education

Students from lower socioeconomic groups are under-represented in higher education

In inclusive higher education systems (which ensure equitable access to higher education), the socioeconomic structure of the student body should reflect the socioeconomic structure of the population as a whole. In international comparisons, one way of measuring this is to compare the educational attainment of students' parents compared to the educational level of adults in the general population of corresponding age (Orr et al., 2011).

In Croatia, according to data collected through the EUROSTUDENT survey (Farnell et al., 2012), students whose fathers have completed higher education are significantly over-represented in the student population in Croatia (35% compared to 16% in the corresponding population). On the other hand, students whose fathers have only completed a three-year secondary school are significantly under-represented (18% compared to 48% in the general population), as are students whose fathers have only completed primary school education or lower (6% compared to 21% in the general population). Additionally, if one looks at the highest level of education of both parents (i.e. where either the father or mother has a higher education degree), nearly half of the Croatian students participating in the survey (45%) have at least one parent with a higher education degree, while only 3% of students have at least one parent who has only completed primary school. In other words, accessing higher education is around six times more likely for children of higher socioeconomic status than for children of lower socioeconomic status.

Most European countries (and OECD countries) have inequalities in access to higher education based on socioeconomic background (Altbach et al., 2009; Santiago et al., 2008; Camilleri & Mühleck [eds.], 2010). However, according to an analysis of the social inclusiveness of higher education systems based on EUROSTUDENT data (Orr et al., 2011), Croatia is among the countries displaying significant under-representation of students of parents with low levels of education and significant overrepresentation of students of parents with high levels of education. Croatia is therefore considered as having a "socially exclusive" higher education system (Orr et al., 2011).

The proportion of mature students and students with children is low

Attracting individuals to enrol in higher education later than the traditional age of enrolment (immediately after secondary education) as "mature students"⁵ can represent an important contribution to lifelong learning. It can also provide a "second chance" to students who previously decided not to enrol, or who dropped-out of the higher education system

According to the internationally comparative EUROSTUDENT report (Orr et al., 2011), Croatia has least proportion of mature students enrolled in ISCED 5A study programmes (university studies) in Europe. Only 9% of students in Croatia are over 24 years of age, whereas in Austria that figure is 47%, in Denmark 48% and in Finland 53% (ibid). On the other hand, an analysis of EUROSTUDENT data for Croatia (Farnell et al., 2013) has shown that professional studies in Croatia (ISCED 5B) have a higher proportion of students aged over 24 (between 13% and 22%, depending on the professional higher education institution). This suggests that vocationally-oriented programmes are more attractive to mature students and/or that institutions providing these programmes are more inclusive (which is often the case internationally, see Santiago et al., 2008).

⁵ There is no international definition of mature students. In some countries, the term can refer to students that enrol for the first time after the age of 21, in other cases after 25, or in some cases student who are aged 30 or above (European Commission, 2011).



The lack of study opportunities for mature students was emphasised in the OECD tertiary education review in Croatia (Duke et al., 2008). The review noted that:

“There appears to be little or no consideration that lifelong learning might extend to degree studies for older people. Moreover, the system of access and funding favours school-leavers, and there does not appear to be specialist support to assist mature students to enter tertiary education” (ibid. 47).

Persons with children are another category of potential students who are likely to have barriers to access and participation in higher education. Students with children are faced with financial constraints (often exacerbated by the costs of childcare), time constraints, conflicting demands of being a student and a parent, as well as constraints due to undertaking paid work. This additional burden may put them at a disadvantage compared to their peers without children (Moreau & Kerner, 2012, Orr et al., 2011).

In Croatia, according to the EUROSTUDENT survey, a total of 6% of students have one or more children. The proportion of students with children is more than six times higher in professional studies (13%) than in university studies (2%). Compared to other countries participating in the EUROSTUDENT survey (Orr et al., 2011), Croatia has the second lowest proportion of students with children enrolled in university studies (after Turkey). However, there is no data on how Croatia compares to other countries regarding the proportion of students with children enrolled in both university and professional studies.

Gender inequalities exist primarily according to academic discipline and type of study

In Croatia, female students make up the majority of the student body (57.3%) (CBS, 2011), which is consistent with trends in the EU-27 countries, where female students on average make up 55% of the student body (Eurydice, 2010). However, despite the relative gender balance within the student body at a general level, there are both horizontal and vertical inequalities in the representation of students by gender.

Horizontal inequalities relate to academic discipline and to type of studies, and EUROSTUDENT data confirms previously known trends in choice of study programme by gender. Namely, male students are substantively overrepresented in the technical sciences (68%), while women are overrepresented in the humanities (78%). Female students in Croatia are also slightly overrepresented in university studies (59%) and are less represented in professional studies (51%) (Farnell et al., 2012).

Vertical inequalities refer to the level of studies, which in Croatia is relevant in third cycle (doctoral) studies. In the academic year 2010–2011, there was gender parity in participation in the third cycle (53% women), but this participation was not proportional to the share of women among students who graduated from second cycle degrees (around 59%) (Farnell et al., 2013).

Disabled students, children without parental care and Roma are the groups most vulnerable to educational disadvantage

According to previous research by Matković (2009.b), three groups have been identified in the Croatian context as being the most disadvantaged in terms of access to all levels of education (from preschool to higher education): young people with significant physical or mental disabilities, children without parental care (brought up in children's homes/institutional care) and children from the Roma minority.

Although EUROSTUDENT data for Croatia does not provide information on ethnic characteristics of students or on children without parental care, the data does show that around 7% of the student body report having a physical disability, chronic disease or mental impairment (calculated based on Farnell et al., 2012).⁶ Although there are no reliable data that could allow a national or international comparison of proportions of students with disabilities (Orr et al., 2011), underrepresentation of these students is common internationally (Santiago et al., 2008), and in Croatia these students are likely to be one of the groups that face the most obstacles in accessing higher education.

Regional imbalances in access to higher education exist and should be the subject of additional analysis and research

The EUROSTUDENT national report did not focus its analyses on differences on representation in higher education according to regional or rural/urban differences, which can be important factors in determining the likelihood to enrol in higher education (Santiago et al., 2008).

Previous analyses carried out by the World Bank (2008) in its review of the education sector in Croatia showed that urban (compared to rural) residence has a positive effect on enrolment in higher education, as well as for access to secondary comprehensive schools instead of vocationally-oriented schools. A more recent study by Bilić (2012) carried out an analysis of official statistical data in Croatia to determine whether the socioeconomic development of particular local government units (regions or municipalities) do have an influence on the rate of access to higher education of their populations in the age cohort 15–24. The study confirmed that both the spatial and socioeconomic characteristics of specific regions and municipalities influence access, whereby the lowest access rates can be found among local government units that are classified as rural and/or socioeconomically underdeveloped.

Vulnerable groups in higher education

Students of lower socioeconomic status face financial difficulties, which may affect academic performance and motivation

As will be demonstrated in detail in Part I.3 on the student financial support system, students of lower socioeconomic status are exposed to greater financial difficulties than other students. Based on self-assessments of students reported in the Croatian EUROSTUDENT survey, the lower the level of parental education (or the lower the self-assessment of socioeconomic status), the lower the perceived adequacy of financial resources for students. Students of lower socioeconomic status are also more likely to pay tuition fees than other students (Farnell et al., 2012).

Linked to the point above, the EUROSTUDENT survey results for Croatia demonstrated that, the lower the level of parental education, the higher the likelihood that students will be employed full-time or part-time. Probably due to this factor, students of lower socioeconomic status have a more negative assessment of their “time budget” than other students. The assessment of student time budgets was based on a survey question which asked to what extent students were satisfied with time at their disposal in order to meet both their study-related obligations (lectures and independent studying) and work-related obligations, as well as travel. Lower levels of satisfaction with one’s time budget was more likely for students who worked and for students with higher levels of study-related obligations (Farnell et al., 2013).

Other research in Croatia has shown that most students who have dropped out of higher education (around 50%) mention loss of motivation to study as one of the causes for dropping out, while approximately 30% of drop-outs mention the desire or need for employment (which is closely related to financial need or financial security) and over 15% mentioned academic difficulties (UNDP Croatia, 2009). Each of these three factors is likely to be more pronounced among

⁶ According to EUROSTUDENT data for Croatia (Farnell et al., 2011), a total 15% of all Croatian students report experiencing physical or mental problems that impaired them during studies. However, the majority of these students (53%) did not mention having a physical disability, chronic disease or mental disorder, but rather “other health problems”. Since this category is ambiguous and difficult to interpret critically (in terms of the nature of the impairment and whether it is long- or short-term), it is not included in the above calculation.



disadvantaged groups. Indeed, research by Doolan (2010), Matković, Tomić and Vehovec (2010) and Mihaljević Kosor (2010), has shown that dropping out of higher education is more likely for students of lower socioeconomic status, mature students and students who have completed vocational secondary schools.

Mature students are more likely to study in adverse conditions than other students

The study circumstances of students enrolling after the age of 20 are significantly different from those who follow traditional enrolment patterns. According to EUROSTUDENT data for Croatia (Farnell et al., 2013), around 75% of mature students are enrolled in professional studies, with 60% enrolled as part-time students, and around 60% engaged in full-time employment during their studies. Only 10% of mature students receive financial support in the form of grants. Mature students on average assess their socioeconomic status as being slightly lower than other students.

That the above characteristics are indeed unfavourable from a financial point of view is confirmed by the comparatively negative self-assessment by mature students regarding the sufficiency of finances at their disposal for covering monthly costs. Additionally, this group assessed their workload as being significantly higher than for students who enrolled immediately after secondary school, probably due to the fact that a higher proportion of mature students are employed during their studies (Farnell et al., 2013). Overall, these adverse study conditions may explain why, according to research by Mihaljević Kosor (2010) at the University of Split, mature students have a higher risk of dropping-out during the first year of study.⁷

Students with disabilities are highly dissatisfied with the support they receive in higher education

Based on EUROSTUDENT data for Croatia on the self-assessment of students with disabilities (with any form of physical or mental impairment) and the extent to which higher education institutions take their impairments into account during their studies, 68% of students with disabilities report that their impairments were “insufficiently taken into account” or “not taken into account at all” (Farnell et al., 2012).

This dissatisfaction is reflected in other assessments made by this group of students. Based on their negative assessments of their time budgets, students with disabilities appear to experience a significantly higher burden from their workload compared to other students, despite spending a similar number of hours in class (Farnell et al., 2012). In addition, their dissatisfaction with the quality of their study programme is also noted. Namely, of all students in Croatia, students with disabilities assess the extent to which their study programme contributes to their future employability or to providing a good foundation for personal development least positively.

Finally, students with disabilities also reported a higher degree of financial burden than other students (Farnell et al., 2013), which is consistent with the fact that they have higher living costs than people without disabilities, especially for housing and health costs (Farnell et al., 2012).

Students with children face a significant burden due their financial situation and workload

Students with children show the highest degree of financial burden in relation to other students in Croatia, having the highest monthly expenses of all students (for more details, see Part I.3 on the student financial support system).

Students with children also assess that studying is significantly more demanding than students without children. In particular, they have a more negative assessment of their time budgets. According to EUROSTUDENT data for Croatia (Farnell et al., 2012), it is evident that this is because students with children have a much higher time budget than most

⁷ Interestingly, however, mature students on average have a more positive assessment of the quality of their study programme in terms of its significance for future employment and personal development. This seems to indicate a strong selection effect: given the difficult circumstances of enrolment and participation for mature students (due to financial barriers and workload), only those that are most motivated to study are likely to persist in higher education and not drop-out (Farnell et al., 2013).

other students due to employment, as students with children work in paid employment 31.7 hours per week on average. Along with hours of learning and teaching, this reaches a very high level of 64.2 hours a week of combined work and learning.⁸

Adverse study conditions

Students who pay tuition fees are likely to experience other financial difficulties

As will be discussed in more detail in Part I.2, around half of all Croatian students do not pay tuition fees (49.7%), whereas the other half do pay tuition fees, either as full-time students (26.2%) or as part-time students (25.1%) (data for the academic year 2011/2012: CBS, 2013).

According to EUROSTUDENT data for Croatia (Farnell et al., 2013), there are consistent differences in the study experiences of students depending on whether they pay fees or not. Full-time students who pay tuition fees have significantly less chance of being awarded grants or housing in student halls of residence compared to full-time students who do not pay fees. This finding can probably be explained by the fact that academic performance is the main criteria for receiving a tuition fee exemption, receiving a grant and obtaining a place in a hall of residence. This results in a greater overall financial burden for full-time, fee-paying students, who (aside from higher costs due to fees) on average have 1,000 HRK/130 EUR higher accommodation costs per semester than full-time students who do not pay fees. The fact that this does indeed represent a burden is confirmed by the self-assessment of students, where full-time students who do not pay fees are more likely to consider that they have sufficient finances to cover their monthly expenses, compared to full-time, fee-paying students.

Part-time student status in Croatia is highly problematic from the point of view of equity

In addition to the category of full-time, fee-paying students, a total of 25% to 27% of all students in Croatia have been registered as part-time students since the academic year 2002/2003 (CBS, 2002-2012). The specificity of part-time student status in Croatia (as will be developed in Part I.2 and Part I.3) is that all part-time students pay tuition fees and are ineligible for any form of student financial support (neither direct support through grants, nor indirect support through public subsidies for accommodation, meals, transport or tax benefits).

The first problem with part-time student status in Croatia is that although these students are officially registered as studying part-time, in most cases they have the same study load as full-time students, with the difference that they are exempted from attending classes and (significantly) that they must all pay tuition fees. As noted by Duke et al. (2008), there are few examples in Croatia of teaching schedules being organised to better suit "real" part-time students such as those who are employed or have family responsibilities (for example, through courses in the evenings or on weekends). Therefore, most part-time students in Croatia are *de facto* full-time students who could not enrol under the enrolment quotas as full-time students.

A common justification for part-time student status (and the associated fees and ineligibility for financial support) is that these are students who are already employed and therefore do not require public subsidies. However, EUROSTUDENT data for Croatia on student employment shows that in reality the proportion of part-time students who work is 54%, including only 31% who are employed full-time, which brings into question the claim that part-time students are all students who are employed and who therefore do not need financial support (Farnell et al., 2012).

⁸ However, as with mature students, EUROSTUDENT data shows that students with children on average have a more positive assessment of the extent to which their study programmes contribute to their future employability or to their personal development. This positive result can be considered as logical in the sense that students with children who choose to enrol in higher education probably choose to do so after careful consideration of the challenging study conditions they will encounter. This implies that this group has a high level of motivation and commitment to study and that they consider higher education as an investment for ensuring a better quality of life (Farnell et al, 2013).



From the point of view of equity, an analysis of the institutional and socioeconomic characteristics of part-time students demonstrates that these students are predominantly of lower socioeconomic status and are predominantly older students. According to Matković (2009), since the academic year 1994/1995, part-time students in Croatia are predominantly those students with the lowest-level entrance examination results (since those with slightly higher grades could enter the full-time, fee-paying status), whereas genuine part-time students who were studying while employed were a rarity.

In other words, students who are already the most vulnerable in terms of higher education access and completion, both due to their academic performance and social background, are placed with an additional and substantial financial burden through fees and lack of access to student financial support.

Students living with their parents outside the county where they study are more vulnerable to experiencing difficulties during their studies

The type and location of accommodation that students live in can play an important role in providing adequate (or less adequate) conditions for studying. According to Matković, Tomić and Vehovec (2010), students who did not live at home during their studies were more likely to complete their studies than students who lived with their parents in the city where they studied, or who commuted from their family home to attend classes.

Surprisingly, according to EUROSTUDENT data for Croatia (Farnell et al., 2013), housing in private accommodation was not associated with a higher likelihood of experiencing financial or other types of difficulties, despite being a significantly higher cost than living at home or in student accommodation. This suggests that such arrangements are primarily accessible to those students who receive adequate support from family or other sources to cover this cost.

The group of students identified as most vulnerable based on their type of accommodation arrangement are students who live with their parents outside the county where the higher education institution is located. These students, who have to “commute” to attend their courses, assess their financial burden as being higher than other students. They are more likely to work and less likely to receive financial support from grants (and even from their families). This suggests that their living arrangement is probably due to the lack of possibility of paying for housing in the location of the higher education institution, rather than being a choice of convenience.

Paid employment during studies raises equity concerns, since it may affect academic performance and retention rates

According to a review of international research on the effect of student employment on higher education attendance and performance, part-time or full-time employment can in some cases have adverse effects on students' academic performance and retention (Santiago et al., 2008). Some of the findings of the research reviewed by Santiago et al. on the negative effects of student employment are the following:

- Term-time employment is more likely for students who did not receive financial support from their families.
- Higher education systems with less generous public financial support systems result in students spending more time in paid employment and less time on studying than in other systems.
- Working can be detrimental to academic performance in higher education (although findings differ based on field of studies), and can have an adverse impact on higher education attainment.

At the same time, however, the review by Santiago et al. notes that research on the effects of student employment is mixed, and depends on many factors associated with a person's specific situation. Indeed, some studies suggest that

student employment can have a beneficial impact on the student's current income, future income and the development of skills (especially if the work is related to the student's field of study).

According to EUROSTUDENT, a total of 45% of students in Croatia reported engaging in paid employment (part-time or full-time). Regarding full-time work, data from the Central Bureau of Statistics (CBS) (CBS, 2011) reports that 4.4% of students enrolled in university studies and 23.3% of students enrolled in professional studies worked full-time. From the point of view of equity, it is important to analyse whether the likelihood of working is higher among certain groups of students, and whether working can be associated with adverse study conditions or with negative educational outcomes. An analysis of existing data provides the following conclusion on the equity considerations of student work:

- According to EUROSTUDENT data for Croatia, the students that are significantly more likely to work during their studies are students older than 30 years old, part-time students and students of lower socioeconomic status. Data from the CBS confirms this finding, and notes that children of highly educated parents are far less likely to be in full-time work during their studies. For example, among students enrolled in professional studies, only 11.8% of students of higher socioeconomic status worked during their studies, whereas this was the case for 35% of students of lower socioeconomic status.
- CBS data also shows that the type of employment is in most cases in occupations that have no direct connection with the profession for which they are studying.
- Students who worked reported on average that they are exposed to more financial problems during their study than students who have not worked.
- Students who worked, especially in full-time employment, assess their total workload (including both study and work time) as being significantly higher than students who do not work.

(Farnell et al., 2013)

These findings confirm that students from disadvantaged groups are overrepresented among the group of employed students. The findings also suggest that student employment often has the characteristic of a necessity for meeting living costs, instead of being primarily for the development of skills and career opportunities.

Inequalities within the binary system

Students enrolled in professional studies are more likely to come from lower socioeconomic backgrounds

Compared to parents of students enrolled in university studies, parents of students enrolled in professional studies are twice as likely to have only attained primary school and almost half as likely to have completed higher education. According to EUROSTUDENT data for Croatia (Farnell et al., 2013), the share of students who have at least one parent with a tertiary level of education is 51% in university studies, compared to 31% in professional studies.

The findings in Croatia reflect patterns that are similar in many other higher education systems worldwide. According to a review of international research by Santiago et al. (2008), expansion of higher education has in most countries been accomplished by expanding access to places in institutions or programmes offering more vocationally-oriented study programmes. Places on such programmes or in such institutions are predominantly filled by students from more disadvantaged groups. In Croatia, expansion of higher education access was primarily achieved by expanding access to professional higher education programmes. Between 1994 and 2005 (the main period of higher education massification



in Croatia), the number of students enrolled in university studies in Croatia increased by 50%, whereas the number of students enrolled in professional studies increased by 184% (Babić et al., 2006).

From the point of view of equity, expansion through diversified provision of higher education (either through vocationally-oriented programmes, shorter programmes or lower-tier institutions) can be considered a “double-edged sword”. On the one hand, such new study opportunities can lead to bringing students into higher education who otherwise might not have enrolled, which represents an example of inclusion. On the other hand, this trend can be seen as a replacement of “quantitative” inequality (under-representation of disadvantaged groups in higher education as a whole) with “qualitative” inequality (under-representation in certain parts of the higher education system, including in more “prestigious” programmes or institutions) (Santiago et al., 2008; Camilleri & Mühleck [eds], 2010). According to Shavit et al. (2007), expanding access primarily through vocationally-oriented programmes can either be interpreted as a process of inclusion, or a process of “diversion” of disadvantaged students from institutions that are perceived as “higher-tier” institutions (usually research universities) to other institutions that are perceived as “lower-tier” institutions (usually providing vocationally-based study programmes). In countries where this distinction exists, the new opportunities provided by expanding access through vocationally-based programmes or institutions may be of diminished value. Shavit et al also demonstrated that binary systems provide less access to so-called “higher-tier” institutions than “diversified” higher education systems, which have less formal/legal distinctions between academically-oriented and vocationally-oriented programmes or institutions.

As mentioned earlier, the higher education system in Croatia can generally be considered as “socially exclusive” compared to similar systems in Europe based on the low proportion of students from lower socioeconomic backgrounds (Orr et al., 2011), although professional higher education institutions have much lower under-representation of lower socioeconomic groups. However, there are currently no indicators that could help answer the question of whether this larger representation of students of lower socioeconomic status in professional studies represents a positive example of inclusion or an example of “diversion”. In principle, university and professional studies in Croatia should have a parity of esteem, since both studies are in line with the Bologna Process, and professional studies can award both undergraduate and graduate degrees (although they also offer some shorter programmes). Both university and professional studies in Croatia also undergo national quality assurance and (re-)accreditation processes. The answer to the question would therefore depend upon analysis of both the public perception (and in particular employers’ perception) of professional studies and the value of professional studies qualifications on the labour market, in terms of graduate employability and graduate income levels compared to graduates of university studies. However, even if it is established that there is indeed a parity of esteem between university and professional studies, a clear conclusion based on existing data is that university studies need to be more inclusive.

Choice of studies is predominantly determined by type of completed secondary school

Socially stratified access to higher education as described above is closely related to stratified systems of secondary education (Orr et al., 2008); countries where there are great differences between types of secondary schools (which are divided into academic or vocational tracks) tend to have higher levels of inequality by social group in access to higher education.

As mentioned earlier in the text, the secondary school system in Croatia is divided into four-year, academically-oriented comprehensive schools, four-year vocational schools and three-year vocational schools (the latter being the only schools that do not allow for automatic progression to higher education upon completion). Pupils attending comprehensive schools tend to be of higher socioeconomic status, while students attending technical (in particular craft

and industrial) vocational programmes are more likely to be of lower socioeconomic status. The share of comprehensive school-leavers is also far higher in university studies (67%) than in professional studies (22%). On the other hand, the inverse relationship is the case for vocational school-leavers: the proportion of students who completed vocational schools is much higher in professional studies (66%) than in university studies (22%) (Farnell et al., 2012).

Students enrolled in professional studies are more likely to face adverse study conditions

An equally important question to consider is whether students attending professional higher education programmes in Croatia study in conditions that are similar to students enrolled in university studies. EUROSTUDENT data for Croatia demonstrates that there are substantial inequalities between university students and students enrolled in professional studies, particularly in terms of the likelihood of studying in adverse conditions. The main findings were the following:

Table 1 Differences in study conditions of student enrolled in university or professional studies in Croatia

	University studies	Professional studies	Source of data
Proportion of students who pay tuition fees (2011/2012)	39%	76.9%	CBS, 2013
Proportion of part-time students (2011/2012)	14.7%	50.1%	CBS, 2013
Proportion of students receiving a grant (2009/2010)	33%	18%	EUROSTUDENT Farnell et al., 2012)
Proportion of students who work full-time during their studies (2009/2010)	13%	31%	EUROSTUDENT (Farnell et al., 2012)
Proportion of students who live in student accommodation (2009/2010)	16%	3%	EUROSTUDENT (Farnell et al., 2012)
Proportion of students with children (2009/2010)	2%	13%	EUROSTUDENT (Farnell et al., 2012)

Of course, many of these findings are closely correlated. For example, the proportion of students enrolled in professional studies who pay fees is related to the much higher proportion of part-time students (who all pay fees), which also accounts for the lower proportion of students receiving grants or living in student accommodation (since part-time students are ineligible for student support). The higher likelihood of being employed could be partially linked to the higher costs of study and the lack of financial support, but also to the fact that there are a higher proportion of mature students in professional higher education (who are also more likely to have children). What the findings do demonstrate, however, is that education policy needs to address these inequalities and ensure that all students within the Croatian higher education system study in similar conditions (or can be adequately supported if they study in significantly different circumstances).



1.2

Higher education funding in Croatia

Levels of public and private expenditure and efficiency of expenditure

Public expenditure on higher education in Croatia is low in European comparison

According to the latest available data from Eurostat (n.d.), in 2009 Croatia's public expenditure on higher education as a proportion of its GDP was 0.82%, which was lower than the EU-27 average of 1.22% for the same year.⁹ Among the other countries participating in the ACCESS project, Sweden continues to invest the highest proportion of its GDP (1.82%), followed by Austria (1.49%), Slovenia and Germany (1.2%) and Hungary (1.02%)

In a broader European context, the only other countries in 2009 that invested less than 1% of GDP in higher education from public funds were Portugal (0.95%), Bulgaria (0.95%), Italy (0.86%), the United Kingdom (0.81%), Slovakia (0.81%) and Latvia (0.79%) (ibid.).

A recently completed monitoring report by the European University Association (2012) places Croatia within the group of countries that have responded to the economic and financial crisis by reducing funding for higher education by up to 10%. As this study shows, in the period 2008–2012 many EU countries on the periphery of the European Union reduced public spending on higher education, while the "core countries" of the European Union have responded to the crisis by increasing public funding (ibid.).

As noted in Part I.1, negative demographic trends will mean that Croatia will be one of the numerous countries in Europe where the higher education attainment levels of the 25–34 age group will begin to drop after 2020 unless efforts are made to widen access to higher education to non-traditional or under-represented groups (Eurydice, 2011). It is questionable whether the current levels of funding are likely to be adequate to address this challenge.

Private expenditure on higher education in Croatia is relatively high in European comparison

According to the latest available data from UNESCO (UIS, n.d.), private expenditure on higher education in 2009 was comparatively high in Croatia compared to other countries participating in the ACCESS project. As a proportion of GDP,¹⁰ private expenditure on higher education in Croatia was 0.28%, which is higher than in Sweden (0.17%), Austria (0.18%), Slovenia (0.19%) and Germany (0.20%). At the other end of the spectrum, the countries in Europe with the highest private expenditure on higher education were the Netherlands (0.46%), Bulgaria (0.52%) and the United Kingdom (England and Wales) (0.87%).

In Croatia, the largest proportion of private expenditure on higher education is composed of tuition fees. A total of 51.3% of students paid tuition fees in the academic year 2011/2012 (CBS, 2013). In 2007, on average around 30% of the income of higher education institutions came from own-income sources (Hunjak, 2008),¹¹ and for most public universities the income from tuition fees represents over 50% of their overall own-income (the proportion ranges from

⁹ Eurostat data for 2010 reports that Croatia's public expenditure on higher education as a proportion of its GDP fell to 0.78% (i.e. by 0.04 percentage points), however, there is no comparative data for other countries for this year (Eurostat, 2013).

¹⁰ The UNESCO indicator is defined as „total expenditure on educational institutions and administration as a % of GDP; private sources; tertiary education“.

¹¹ It should be noted, however, that the average conceals strong differences at the institutional level, since at smaller integrated universities, such as the University of Dubrovnik or University of Zadar, the proportion of own funding is significantly smaller, between 8% and 12% (Doolan et al, 2012).

41% to 68%) (Doolan et al., 2012). This points to a weakness in the higher education system, since income from other sources appears to be low, especially for activities such as research and development or commercial activities.

High levels of private expenditure on higher education become an equity problem if they are not matched by adequate financial support mechanisms for students to meet those costs. This is especially true for students from disadvantaged backgrounds. Since the current Croatian student financial support system does not provide such comprehensive support (as will be discussed below), the high level of private expenditure on higher education in Croatia represents a challenge in terms of the social dimension of higher education.

High drop-out rates and slow completion of studies place a burden on public funding of higher education

The problem of high drop-out rates and slow completion of studies was also noted in Part I.1, and are characteristics of the Croatian higher education system that have been identified by previous higher education sector reviews by the World Bank (2008) and the OECD (Duke et al., 2008). Both these characteristics have a negative impact on higher education funding by placing a burden on the resources higher education institutions need to allocate to teach students who are unlikely to complete their studies, or who are likely to repeat examinations or entire academic years. The OECD team of experts that reviewed the higher education system in Croatia in 2006 noted that this resulted in “inefficiency and high wastage” (Duke et al., 2008), and that such wastage occurs both at the public and private expenditure levels on higher education.

Regarding the average time needed to complete studies in Croatia, according to estimates made by Matković (2009) students who graduated from university studies in 2007 (i.e. who enrolled before the implementation of the Bologna Process) needed an average of 6.6 years for university studies and 5 years for professional studies. Although it is not yet possible to assess the study duration of “Bologna” students (who enrolled in study programmes adapted to the Bologna Process degree structure), an analysis by Farnell et al. (2013) of the progression of a generation of Bologna students from their second to third years of study suggests that a certain improvement has been made with the introduction of the Bologna study programmes: 52% of students in university studies progressed from their first to third years on time in 2010/11, compared to 47% in 2007, and 62% of students in professional studies progressed on time in 2010/11 compared to 55% in 2007/08.

Tuition fee system

The previous dual-track tuition fee system for full-time students was neither a fair nor equitable funding system

In international literature on higher education, “dual-track” tuition fee systems refer to cases when a proportion of students studies without paying tuition fees (or with minimal fees) and have their costs covered by the state, while other students are charged tuition fees by higher education institutions. Fees can be charged to part-time students,



students who take longer than the prescribed time to graduate, or students that are admitted to the institution above the number of study places funded by the government (Jongbloed et al., 2010). According to Altbach et al (2009), the addition of a special tuition fee-paying track while maintaining tuition fee exemptions for the regularly admitted and state-supported students, preserves the legal and political appearance of free higher education while introducing new revenue for higher education institutions. This practice is present in many transition economies – such as Russia, most of eastern and central Europe, and other countries that were once part of the former Soviet Union (ibid).

From 1993 to 2010, the tuition fee system in Croatia was a dual-track system, whereby the state would set quotas for the total number of full-time students whose costs could be covered by the state budget, but universities would have the autonomy to set enrolment quotas higher than the state-funded quota and to charge tuition fees to these additional students. Entrance into the state-funded quota depended primarily on academic performance. In addition to a dual-track system for full-time students, part-time students were considered a separate category altogether and all such students pay tuition fees (see below for more details). This system resulted in 59% of students in Croatia paying tuition fees in the academic year 2009/2010 (CBS, 2011).

The primary problem of dual-track tuition fee systems is one of fairness. According to the OECD review of tertiary education in Croatia (Duke et al., 2008): “the award of fees remission through a single ‘all or nothing’ system seems fundamentally unfair: one higher or one lower in the ranking determines whether all or none of one’s fees are paid” (p. 48). The second problem with dual-track systems is one of equity, as noted by the World Bank in a review of higher education systems of the eight countries of Central and Eastern Europe that entered the EU in 2004:

“An anomaly associated with the dual-track-fee system is that it tends to penalize students from disadvantaged families. Those who obtain fee-free, state-subsidized places are disproportionately from privileged backgrounds (which have contributed to their academic success); poorer students, who are less successful in entrance examinations and cannot afford the alternative fee-paying track, are excluded from higher education.” (Canning et al., 2007: 14).

The new “linear” tuition fee system for full-time students provides a novel policy approach, which proclaims to be fairer than the previous system

From the academic year 2010/11, the Croatian Government decided to abolish the previous dual-track system and introduce a new and ostensibly fairer tuition fee system. Croatia introduced a so-called “linear system”, which is a variant of the practice of charging tuition fees to students who extend their studies beyond the official duration of the study programme. According to the new system, all full-time undergraduate and graduate students can enrol in their first year of studies without paying tuition fees, after which students who have not accumulated a minimum required number of ECTS points (i.e. 55, where 60 credits is the full annual course load) in the previous year of study must start paying tuition fees at the beginning of the following academic year. Tuition fees are charged in a “linear” fashion, whereby the fee levels are variable and increase proportionally, depending on how short of the target of 55 ECTS points students are (MSES, 2012).

Croatia’s latest system of tuition fees is in line with the Austrian, Slovenian, Swedish (and to a certain extent German) higher education systems, in the sense that undergraduate or graduate students initially do not pay tuition fees. However, the subsequent linear model of charging tuition fees after the first year depending on accumulated ECTS points is unique to Croatia (Doolan et al., 2012).

Compared to the previous dual-track system, the linear tuition fee system is not as unfair, as there is no longer an “all or nothing” approach, whereby there is a cut-off point between students who pay no fees at all and students who must pay full fees (which are substantial, as will be noted below). Instead, the new system allows for some students to study without paying tuition fees and for the rest to study with minimal, moderate or substantial fees, depending on their study progress. The introduction of the new system can also be considered as a positive initiative to improve the efficiency of the higher education system. There is some international evidence that points to improved student completion rates and completion times when the level of public subsidies for individual students is made conditional on student performance. (Santiago et al., 2008).

The implicit objectives of the linear tuition fee system are that it will encourage broader access to higher education through removing initial financial obstacles, that it will encourage students to complete their studies within the official duration of the study programme and that it will promote excellence. However, since the introduction of the new system, there has so far been no evaluation made of its impact and effectiveness in meeting such objectives.

The only immediate impact of the new system that can currently be measured is that the numbers of fee-paying students has dropped, although not significantly. Compared to 59% of all student paying tuition fees in the academic year 2009/2010 (including 45% of all full-time students), in 2011/12 the proportion of fee-paying students dropped to 51% (or 34% of full-time students) (CBS, 2013).

The new tuition fee system nevertheless has a number of weaknesses in terms of sustainability, transparency and fairness

While the introduction of the new tuition fee system does represent a valid attempt to make the fee-system more effective and fairer than the dual-track system, the new system has a number of weaknesses and faces a number of challenges:

- **Stability:** the new tuition fee system has been introduced via a series of ministerial decrees, and has not been legislated by parliament. This means that the stability of the “system” is highly tenuous. A new decree by the minister could potentially reverse all the new elements of the system.
- **Financial sustainability:** the linear tuition fee represents a “high-risk” system in terms of financial planning for the state and higher education institutions. On the one hand, it is difficult to accurately predict the success-rate of students in terms of ECTS points passed, and hence for the state to predict the financial allocation needed to cover the costs of successful students who study without paying tuition fees. For the same reasons, higher education institutions cannot accurately plan the expected income from tuition fees, since the tuition fee levels are variable and the number of students paying tuition fees is uncertain.

On the other hand, the fixed rate that the Ministry of Science, Education and Sports pays to institutions for each fully-subsidised place (i.e. covering the costs of the students who do not pay fees) is set each year, is consistent across the system and does not vary by academic discipline. From 2010 to 2012, this was set by the MSES at 3,650 HRK/485 EUR per year. This is significantly lower than the 8,800 HRK/1,170 EUR average tuition fee charged by Croatian higher education institutions (as will be further developed below). This has two important consequences: it makes the financial planning challenges for universities mentioned



above more complex, and it potentially sets up the perverse consequence that universities with better student completion and study progress rates (which is a desirable performance for the institution) might receive less combined income from state tuition-fee subsidies and private tuition-fee payments than those who do not perform as successfully.

- **Transparency:** for the purpose of students wishing to enrol in higher education, the linear system makes the financial planning of higher education close to impossible. The probability of study progress cannot be assessed by prospective students, nor can the corresponding cost be easily calculated. This complexity and lack of transparency does not allow potential students to make a cost-benefit analysis of enrolling in higher education, which can be of significant concern to students from low-income families for whom that information plays a key part in their decision to either pursue education or enter the labour market.
- **Fairness:** one assumption of the linear system is that it is exclusively the responsibility of the student, and not the institution, to ensure the student's study progress. Another assumption is that the quality of teaching and academic support provided to students is adequate and well-balanced among different higher education institutions in the system, which is ensured by a well-structured and functional external quality assurance system. However, if these two assumptions are brought into question, then a system in which students pay variable fees based only on their progress can also bring into question the fairness of such a system, since students cannot be expected to complete their studies on time if higher education institutions do not secure and respect minimum European Standards and Guidelines for Quality Assurance. Additionally, since the first year of study has been shown to be a period of emotional, social and academic adaptation (Živčić-Bećirević et al., 2007), charging tuition fees immediately after the first year is problematic in pedagogical terms.
- **Equity:** (see below)

The new tuition fee system also poses a fundamental equity problem, since payment of fees is dependent on merit

Although academic performance in terms of students' grade point average is not factored into the linear tuition fee system, the linear system is still fundamentally merit-based, since it is based on the successful completion of courses. In this sense, the linear system poses the same equity challenge as do all dual-track systems. Namely, charging fees based on performance (in this case ECTS points) is likely to disproportionately favour students from more privileged backgrounds, since they are more likely to achieve academic success (Canning et al., 2007). This challenge was also noted by Santiago et al (2008): "although reporting that there is evidence that using student performance as a basis for fee-paying and/or receiving financial support may improve student completion rates and time to completion, the report also notes that these types of incentives may cause an "equity-efficiency trade-off", whereby "some students (...) might be at a disadvantage in securing their public subsidy (either in the form of lower fee or grant) if it is linked to student progression." (ibid. p. 231).

One notable exception to this practice has been the inclusion of special conditions in the new linear system relating to the progress of students with disabilities. Students with a physical disability of 60% must obtain a minimum of 30 ECTS instead of 55 ECTS points in order to progress without paying tuition fees (MSES, 2012). Although this is a positive example of how the tuition fee system can incorporate elements relevant to the social dimension of higher education, the system has not developed any similar conditions for students from disadvantaged socioeconomic backgrounds.¹²

¹² There have been isolated cases of Croatian higher education institutions (e.g. University of Rijeka) that have established institutional-level policies that provide tuition waivers to certain categories of disadvantaged students, although in some cases these include a merit component as well). However, a comprehensive national system providing special conditions for disadvantaged students backed up by additional institutional support is likely to be more effective and consistent.

Finally, the fact that the new tuition fee system has been developed without any corresponding changes to the student financial support system means that the system continues the practice of charging fees without mechanisms to counterbalance the impact of costs on students from different socioeconomic backgrounds. Low-income students will have difficulty in meeting the costs of study (increasing the risk of drop out), whereas the fees are unlikely to represent a problem for students from higher income families.

Keeping part-time students as a separate tuition fee category is unfair and inequitable

A major criticism of the linear system as a whole is that it does not include part-time students, all of whom must pay full tuition fees, regardless of their study progress. In addition to the category of full-time, fee-paying students, a total of 26.2% of students in Croatia were registered as part-time students in the academic year 2011/2012, all of whom pay tuition fees. Part-time students are concentrated primarily in professional studies programmes, and while 50.1% of all students enrolled in professional studies are part-time students, only 14.7% of students enrolled in university studies are part-time (CBS, 2013). Regarding Croatian tuition fees, what differentiates part-time students from full-time students is that all part-time students pay tuition fees, and all part-time students are also excluded from the linear tuition fee system (i.e. none are eligible for tuition waivers based on ECTS points and the levels of their fees are not regulated according to the linear model).

As mentioned in Part I.1, despite the status of studying “part-time”, these students are for the most part *de facto* full-time students, who could not enter the enrolment quotas as full-time students. Despite the changes brought about by the new tuition fee system for full-time students, the presence of part-time students in the system effectively means that the dual-track system nevertheless remains in place in Croatian higher education.

According to Jongbloed et al (2010), the practice of admitting additional students over and above the quota of publicly funded study places, and registering them under the category of “part-time students”, “evening students”, or “lifelong learning students”, is carried out in a large number of Central and Eastern European countries, including the Czech Republic, Bulgaria, Croatia, Hungary, Poland, Romania, Estonia, Lithuania, Latvia, and Slovakia. In most of these countries, these students are often charged prices based on the full cost of the programme.

In addition to paying tuition fees, part-time students in Croatia are not eligible for any form of student financial support. This means that part-time students cannot access subsidised meals, student accommodation, transport and tax benefits available to full-time students, nor can they apply for student grants (see Part I.3 for more details).

Similarly to the criticism of the dual-track system for full-time students (as noted above) the first problem with part-time student status is one of *fairness*. Part-time students do not have the same rights as full-time students and are effectively being financially penalised for not being able to enter the full-time enrolment quotas set by higher education institutions, both through upfront payment of fees, and through lack of access to financial support.

From the point of view of *equity*, as noted in Part I.1, part-time students are predominantly of lower socioeconomic status and are predominantly older students. Thus students who are already most vulnerable in terms of higher education access and success, both due to their academic performance and social background, have an additional (and substantial) financial burden.



Fee levels in Croatia are high in international comparison

According to an analysis of higher education funding systems in Europe (Jongbloed et al., 2010 – data for 2008), a total of 18 countries in Europe charged no tuition fees, 7 charged moderate tuition fees and 8 had tuition fees above 500 EUR per annum.

According to the national EUROSTUDENT report for Croatia (Farnell et al., 2012), the average tuition fee in Croatia for undergraduate studies in the academic year 2009/2010 was 4,400 HRK/585 EUR per semester or 8,800 HRK/1,170 EUR per year. In the same year, no tuition fees were charged to students enrolling in graduate studies. Undergraduate tuition fees vary widely between higher education institutions, as well as between fields of study. In the academic year 2009/2010, public universities charged on average 5,550 HRK/735 EUR per year for social sciences and the humanities, around 6,900 HRK/920 EUR for natural, technical and biotechnical sciences, and around 9,000 HRK/1,200 EUR for medicine and art (Doolan et al., 2012).¹³

According to the internationally comparative EUROSTUDENT report, which presents data from 25 European countries for the academic year 2009/2010, the average tuition fee in countries with fees was below 100 EUR per month (or 1,000 EUR per year). The highest tuition was charged in England/Wales, Ireland, and Lithuania, where they range from 1,700 EUR to 2,800 EUR per year. In this respect, Croatia still has one of the highest European tuition fees, just lower than the Netherlands and Portugal (1,360 EUR) but higher than Switzerland (970 EUR) and Spain (900 EUR) (Orr et al., 2011).

Such high levels of tuition fees can be a major deterrent to higher education access, as noted by the OECD team reviewing Croatian higher education in 2008:

“(Tuition fees) should not be structured in such a way or be of such an order of magnitude that they discourage participation, particularly by students from social groups under-represented in tertiary education, including those from disadvantaged groups.” (Duke et al., 2008: 30)

Fee levels are unregulated and are not transparent

Tuition fee levels in Croatian higher education are not fixed or clearly regulated at the national level. Based on data collected during the ACCESS project in the academic year 2009/2010 (Doolan et al., 2012), the maximum levels of tuition fees at the undergraduate level at universities are determined in an annual coordination process between the Ministry of Science, Education and Sports (MSES) and Croatia’s higher education institutions. The recommended maximum amounts of tuition fees were set according to criteria of academic discipline, and, in principle, all higher education institutions were expected to abide by this joint decision. However, in practice, the annual amounts charged to undergraduate students differed strongly among universities, even in the same academic disciplines, with the highest maximum undergraduate fees recorded at the University of Split, where, for example, tuition fees for social sciences and humanities were around 25% higher than most other Croatian public universities (author’s calculation based on data in Doolan et al., 2012).

With the introduction of the linear tuition fee system, there is no sign that tuition fee amounts per ECTS credit have been regulated or agreed to at the national level, meaning that these still vary between institutions and that there is no limit on the maximum level of tuition fees. The transparency of the tuition fee system therefore remains inadequate in terms of the information needs of both students and decision-makers at the national and institutional level.

¹³ A possible explanation for high average tuition fee costs reported by EUROSTUDENT, when compared to the fee amounts reported by universities, is that in the EUROSTUDENT survey the term “tuition fees” comprises several categories of expenses paid by students to higher education institutions, including tuition fees, registration fees, examination fees, and other administrative costs.

System for allocating state funds to higher education institutions

Incremental and negotiated funding have been the dominant criteria for higher education funding in Croatia, instead of formula-based funding or contract funding

Based on international practices, there exist four main possible mechanisms for determining financial allocations to higher education institutions (with the majority of countries combining two or more of these mechanisms):

- **Incremental funding:** allocations are based on a “historical” basis, i.e. on previous years’ allocations.
- **Formula funding:** allocations are calculated using standard criteria for all institutions (such as unit costs, input criteria and performance indicators).
- **Negotiated funding:** allocations are based on negotiations between the state and higher education institutions based on a budget proposal submitted by the institution.
- **Contract funding:** allocations are based on the outcome of a performance contract, i.e. meeting agreed indicators of achievement, such as set number of graduates by field of study).

(Jongbloed et al., 2010: 47)

In Croatia, financial allocations from the state to higher education institutions have primarily combined incremental funding and negotiated funding. While some input-based criteria are used during negotiations (such as number of students and number of staff), the data submitted to MSES by universities for the purposes of determining and the negotiation of their budgets are not identical for all universities, nor are the negotiation practices themselves (Doolan et al., 2012). Compared to the other countries participating in the ACCESS project, these characteristics make the public funding model of higher education institutions in Croatia most similar to that of Germany. In all other countries, either formula-based systems are used (Slovenia from 2004 to 2009), or funding agreements (e.g. Austria, Sweden), or combinations of funding agreements and negotiations (Hungary). In all these cases, both input and output criteria are used as a basis for determining allocations, while in Croatia no output criteria were used in funding arrangements (until the academic year 2012/2013, which will be developed below).

According to the conclusions of the OECD’s review of higher education in Croatia (Duke et al., 2008), the system for allocating funds to higher education in Croatia is rigid and represents an obstacle for mid- to long-term planning. The OECD team recommended that the system of financial allocation for funds from the state budget to higher education institutions should be consistent with several criteria such as transparency, differential funding according to field of study and even-handed determination of allocations for different institutions, as well as supporting priority public policy objectives in higher education.

The latest reform of the institutional funding system is introducing contract-based funding, using both input-based and output/performance-based criteria

In this context, a new development for the academic year 2012/2013 has been the introduction of a pilot-scheme of funding agreements (or “contract funding” according to the categorisation by Jongbloed et al., 2010) between the state and higher education institutions. These agreements introduce for the first time a transparent input-based component, as well as an output/performance component, allowing institutions to receive additional funding for meeting specific public policy objectives. The core components of this latest funding system are the following:



- **Base funding:** base funding for higher education institutions remains a combination of incremental funding and negotiated funding.
- **Input-based supplement to base funding:** in addition to base funding, each higher education institution receives additional funds through tuition fee subsidies to fully cover the costs of all full-time students entering their first year of studies (undergraduate or graduate) and of all full-time students who progress through each academic year with more than 55 ECTS points. The subsidy is provided at a national fixed-rate of 3,650 HRK/485 EUR per student.
- **Performance-based funding:** within the pilot funding agreements, each higher education institution agrees on performance targets with the Ministry among a list of priority areas set by the Ministry. Higher education institutions receive these funds if they achieve certain targets measured by set indicators within the three-year term period of the agreement (from the academic year 2012/2013 to 2014/2015). Performance-based funds are calculated as 10% of the total amount that each higher education institution receives as tuition fee subsidies (as described above), and not as a percentage of base funding or total funding.

The ACCESS Expert Team estimates that input-based supplemental funding will represent around 10% of the overall public funding received by higher education institutions, and that funding allocated on the basis of performance will be around 1% of overall funding. Although of limited magnitude, and although the funding system is still dominated by incremental/negotiated base funding, the introduction of these new mechanisms represents a significant step in itself in changing the dominant paradigm of incremental and negotiated funding in Croatia.

The new performance-based system includes funding incentives to promote the social dimension of higher education

Output criteria for higher education funding represents a form of incentive for higher education institutions to meet objectives that are defined as public policy priorities. This is one of the reasons why the European Commission, in its *Modernisation Agenda for Universities*, urges member states to use relevant outputs rather than rely on inputs as the basis of funding (European Commission, 2006).

Apart from criteria such as completion rates, duration of studies, graduate employment or research output, funding mechanisms that use input and/or output criteria can use such mechanisms to promote the social dimension of higher education. An analysis of practices in Europe (Eurydice, 2011) has shown that most countries in Europe that use funding formulas rarely use them to foster social dimension objectives. However, eight countries in Europe do use funding formulas that contain an explicit reference to aspects such as widening participation. In such cases, the number of enrolled disadvantaged students carries a funded premium, or additional funds are provided to institutions for widening participation. Among the countries participating in the ACCESS project, only Austria is an example of a country that takes into account an aspect relevant to the social dimension when determining funding allocations: the number of female graduates in doctoral programmes is used as a performance indicator.

Until 2012/13, Croatia had no funding mechanism to promote the social dimension of higher education. However, following the introduction of the above-mentioned pilot funding agreements in the academic year 2012/2013, the Croatian government included two performance indicators directly related to the social dimension (fostering access of under-represented groups and of mature students), as well as an indicator that is indirectly related to reduce drop-out rates. Although performance-based funding is of a small scale, the ACCESS Expert Team deems this measure a highly significant step in moving away from mere rhetoric on fostering the social dimension to implementing concrete policy measures with associated funding incentives.

Financial management and data collection

In addition to issues relating to the levels of expenditure on higher education, the funding sources of higher education institutions and the criteria for allocation of funds, it is equally important to consider the use and management of finances by higher education institutions.

Lack of data and financial management capacity at higher education institutions

According to Hunjak (2008), higher education institutions in Croatia often lack trained staff to analyse financial data and manage higher education institution finances.

In their review of higher education in Croatia, an OECD expert team noted that the development of reliable and transparent information systems producing data which are comparable, both between and within institutions, is a prerequisite for financial management at the institutional level, and for an overview of higher education funding at the national level (Duke et al., 2008). However, data collection on finances at Croatian higher institutions is not standardised. Hunjak (2008) reports that universities in Croatia collect some data on the financial aspects of their operations, but that it is incomplete and not unified across the individual institutions' constituents and across institutions as a whole. In some cases, university rector's offices do not have complete information on own-income amounts and sources, nor on their utilisation across various constituent faculties and departments. The general lack of reliable data on aspects of the higher education system has a direct effect on funding policies: e.g. the introduction of input or output criteria (such as number of students, staff and graduates) require such data to be standardised and readily available.

Financial reporting is also not standardised. Financial reports are submitted to the Ministry of Finance, but they are not made available on web sites of higher education institutions. The need to address this issue was stressed by the OECD review of higher education in Croatia ("the regular publication and dissemination of relevant data and information should be treated as an urgent requirement", Duke et al., 2008: 89).

Such a situation inevitably brings into question not only the efficient use of funds at higher education institutions in Croatia, but also the transparency of the allocation of public funds to these institutions, whereby certain institutions may disproportionately benefit from public funding allocations compared to others.



1.3

Student financial support in Croatia

Financial needs of students: costs and sources of financing

The total annual costs of students in Croatia are substantial

According to the national EUROSTUDENT survey report for Croatia (Farnell et al., 2012), the average total cost incurred per student in the academic year 2009/2010 was 31,500 HRK/4,200 EUR. This amount includes both direct costs (study-related costs such as tuition fees, registration fees, study materials, etc.) and indirect costs (living costs such as accommodation, daily expenses, etc.). On average, direct costs make up only 18% of the total student cost, while indirect costs amount to more than four times this amount, or 82% of the total cost, which is a similar proportion to most other European countries (Orr et al., 2011).

A rough estimate of the overall financial value of this private investment into the combined direct and indirect costs of higher education can be calculated by multiplying the average cost by the total number of students in the higher education system. In total, this amounts to a total of 4.24 billion HRK/566 million EUR per year.¹⁴ Since overall public investment in higher education amounted to 2.7 billion HRK/360 million EUR (Ministry of Finance of the Republic of Croatia, 2010), the size of the private investment made by students and their families is clearly substantial.

Student costs appear to be unfairly distributed within higher education: certain categories of students in Croatia are more likely to incur higher costs

Although the average total cost of 31,500 HRK/4,200 EUR per year is a useful indicator, this figure is also misleading, since it conceals significant cost differences among different student groups in Croatia. In the national EUROSTUDENT survey report for Croatia (Farnell et al., 2012), the range of expenses was analysed in cost quintiles, ranging from the lowest 20% student cost levels, to the highest 20% student cost levels. According to this analysis, over 35% of students incur high costs (from 32,000 HRK/4,260 EUR to 72,000 HRK/9,600 EUR), 17% of Croatian students incur costs ranging from 24,000 HRK/3,200 EUR to 32,000 HRK/4,260 EUR, and the greatest proportion of students (over 45% of all students) spend less than the average (from 8,000 HRK/1,060 EUR to 24,000 HRK/3,200 EUR).

One policy concern identified through the EUROSTUDENT survey is that the level of costs often differs for structural or institutional reasons, which implies that groups with higher costs may be in an unfair position. The groups in question are the following:

- **Tuition fee-paying students:** part of the disparities in the costs of students is due to tuition fees, which is a significant cost that is not incurred by all students (in 2011/2012, 49% of students did not pay fees). Both full-time, fee-paying students and part-time students are at a significant financial disadvantage compared to that part of the student body that studies without paying tuition fees.

¹⁴ Calculation based on total number of students in 2009/2010 (145,263 according to CBS, 2012) and the total cost of 31,500 HRK. In addition, in order to offset the costs that were not privately met (i.e. that were covered through scholarships), the sum of average scholarship amounts was multiplied by the number of scholarship recipients and was subtracted from the total figure.

- **Part-time students:** in addition to paying fees, part-time student status also results in incurring significantly higher costs due to their ineligibility for any form of student financial support (either direct support through grants or indirect support through public subsidies for accommodation, meals, transport or tax benefits).
- **Students enrolled in professional studies:** these students are much more likely to pay tuition fees than students enrolled in university studies. In the academic year 2011/2012, 76.9% of students enrolled in professional studies paid fees, compared to 39% of students enrolled in university studies (CBS, 2013). Students enrolled in professional studies also have higher costs on average for food, transportation and health, and their living expenses are slightly higher as well. Both findings can be partially explained by the fact that the share of mature students and part-time students is significantly higher in professional study programmes (Farnell et al., 2012).

Students from disadvantaged groups and students who face adverse study conditions are likely to have higher costs and to be more financially vulnerable than other students

In addition to examining the levels of student costs by full-time/part-time status and by institution, it is important to establish whether certain groups of students, however high or low their costs may be, experience difficulties in meeting their costs with the finances at their disposal. The national EUROSTUDENT survey provides a valuable indicator of financial vulnerability in the form of self-assessments of students on their satisfaction with the finances they have at their disposal for meeting monthly expenses. The analyses of these self-assessments in the national EUROSTUDENT survey report for Croatia point to the fact that disadvantaged students are more likely to experience financial difficulties:

- **Students of lower socioeconomic status:** students of lower socioeconomic status are more exposed to the financial burden of tuition fees than students of higher socioeconomic status: 56% of students with fathers who completed primary school or lower pay tuition fees, compared to 43% of students whose fathers have a higher education degree. The fact that this finding is problematic is confirmed by the fact that these students perceive themselves as being financially more vulnerable than other students: the lower the level of education attained by students' parents, the lower the perceived adequacy of financial resources (this finding is also confirmed when comparing students' self-assessed socioeconomic status with perceived adequacy of finances).
- **Students with disabilities:** students with disabilities reported a significantly higher degree of financial burden than other students. Students with disabilities have higher living costs than those without disabilities, especially in terms of housing and health care costs.



- **Students with children:** students with children show the highest degree of financial burden in relation to other students. The only other group of students who reported a similar degree of financial burden are students of lower socioeconomic status. Students with children have the highest cost of living during the academic year (64,000 HRK/8,500 EUR). The costs related to children (and to a lesser extent health care) represent nearly a third of their total costs. Their other costs are also higher, especially for accommodation, food, clothes and supplies.

In addition to these groups of vulnerable students, study circumstances and living conditions can also affect the financial burden of students:

- **Accommodation:** as can be expected, students who reside in student accommodation (halls of residence) are less financially burdened than students who rent private accommodation. An interesting finding is that students in halls of residence are also more satisfied with the finances at their disposal than students who live at home with their parents, and that the most financially vulnerable students are those students who live with their parents in another county and who commute to their higher education institution. It can therefore be assumed that the latter group lives at home since they cannot afford housing at the place of study.

The challenge facing any national financial support system is to address such disparities in costs by alleviating the financial burden of those students who incur higher costs in order to study, and/or who are in most financial need.

The income sources of students also reflect equity concerns

According to the national EUROSTUDENT survey report for Croatia (Farnell et al., 2012), the main source of financing for Croatian students is their families: 82% of students reported being supported by their family, and students receive 46% of their total income from this source. In a comparative European perspective, this places Croatia at the top of the scale of European countries in which students rely on family for financing higher education - followed by Romania, Spain and France (Orr et al., 2011: 125).

While reliance on financial support from families is not a problem *per se*, it can become a major problem for students from low-income families. The EUROSTUDENT survey report confirms that students from families with lower levels of education (which is usually closely correlated with lower income) have less financial support from their families as a proportion of their overall income. Whereas family support accounts for 51% of student income for students whose parents have completed higher education, this figure falls to 42% for students whose parents have only completed secondary education and further to 28% for those whose parents have only completed primary education (Farnell et al., 2012).

This problem is directly related to the higher propensity for paid work among students of lower socioeconomic status. According to the national EUROSTUDENT report for Croatia (Farnell et al., 2012), income from employment accounts for as much as 56% of total student income for those students whose parents have only completed primary education, while this percentage is 33% for students whose parents have completed secondary education and 22% for students whose parents have completed higher education. The self-assessment by working students about their financial well-being confirms that paid work during studies is an equity problem. Students who work temporarily or full-time during their studies report being less satisfied with the finances they have at their disposal than students who do not work, and student satisfaction with their workload is inversely proportional to the time they spend studying and/or working (Farnell et al., 2012). This confirms that employment for these students primarily represents a necessity for their livelihood, and not a decision motivated by career or skills development.

In conclusion, in addition to considering the different costs that need to be met by students, financial support systems can play a key role in compensating for a lack of financing from sources such as family, and in mitigating situations where students must rely on paid work to fill this financing gap.

Structural characteristics of student financial support in Croatia

Despite using a variety of student support mechanisms, the vast majority of support in Croatia is in the form of meal subsidies and is not targeted based on financial need

Croatia uses a broad range of financial support mechanisms for students in higher education. Direct financial support is provided to some students in the form of grants, while indirect support is provided through subsidised meals and accommodation, subsidised transport, free health insurance and tax benefits (tax-free work for students who earn up to 50,000 HRK/6,660 EUR per year). The largest form of student support in Croatia, however, is in indirect financial support to students in the form of subsidised meals, which accounted for 78% of the total funds for student financial support allocated by the Ministry of Science, Education and Sports in 2012 (calculation based on Doolan et al., 2013).¹⁵

In international comparison, the combination of financial support mechanisms used in Croatia (and the primary focus on indirect financial support) is similar to other countries in Central and Eastern Europe such as the Czech Republic, Hungary and Slovenia (Dolenec, 2010). Indirect support for accommodation is also a widespread arrangement across Europe, with as many as 21 countries in Europe providing accommodation at subsidised rents (European Commission, 2007). While there are no recent comparative data on the subsidising of student meals in the EU-15 countries, data from 1999 shows that meals were provided to students at lower prices in virtually all European countries. Specifically, *state-subsidised* meals were provided by 8 EU countries, with the remaining 7 countries ensuring reduced prices through special arrangements made by higher education institutions themselves (Eurydice, 1999).

Although the existing financial support mechanisms do to a limited extent take into account social dimension criteria such as socioeconomic status or geographical distance from the institutions as a basis for support, support is predominantly provided on the basis of merit, or is provided universally to all full-time students, irrespective of financial need. As noted by Duke et al (2008), such an approach to student support in Croatia has consequences that do not align well with national policy and socioeconomic need:

“Assistance flows mainly to the more fortunate and consequently successful secondary school students from middle class families in urban areas, and especially in the capital Zagreb. This works to the disadvantage of poorer students, students from economically poorer and geographically more remote areas, and those who have not just left school to proceed straight on into tertiary education.” (p. 13)

Public expenditure on direct student financial support in Croatia is low in international comparison

International comparisons of investment into student financial support analyse the proportion of public funds invested into direct financial support to students (through grants or loans only, not through indirect financial support) as a percentage of overall funding for higher education (Eurydice, 2011; Santiago et al., 2008).

Examined from this perspective, Croatia fares badly in comparison to other European countries. According to calculations based on the budget for State Scholarships in 2012 and on the overall state budget for higher education, Croatia invests

¹⁵ Meal subsidies accounted for 250 million HRK out of a total of 319 million HRK allocated by the Ministry of Science, Education and Sports for student financial support (Doolan et al, 2013).



a total of 1.62% of its higher education budget on student grants.¹⁶ According to data from EACEA/Eurydice (2011), the countries that invest the least as a percentage of their higher education budget in direct financial support to students are Poland (1.5%), Romania (3.8%), the Czech Republic (4.2%), Latvia (5.1%) and Estonia (6.3%), whereas countries such as Austria, Germany, Hungary and Italy invest 15–20% of their budget on direct student support. Countries such as the UK (England and Wales), Sweden and the Netherlands invest 25% or more of their higher education budgets on student financial support.

It could be argued that the above comparison is misleading, since it does not include indirect student support. However, even if the entire investment into indirect financial support in Croatia were added to the calculation, overall student financial support (both direct and indirect) that is provided by MSES would amount to around 11.65%¹⁷ of the total higher education budget, which still remains lower than in the majority of countries in Europe (many of which provide indirect support that is also not included in the presented data – such as Austria and Germany). In any case, what the data does demonstrate is that most countries in Europe provide a significant proportion of their higher education budgets in the form of direct support (through grants and loans), which is not the case in Croatia.

In addition to low levels of direct student financial support in Croatia, data analysed by Budak et al (2010) show that investments into subsidised meals dropped by 21.7% between 2003 and 2008, although in the same period the number of students increased by 14.1%. There has also been a slight decrease (of around 6%) in funding for State Scholarships since 2005 (Doolan et al., 2013).

Part-time students are excluded from the student financial support system

Part-time students are ineligible for all forms of student financial support. As already noted in Part I.1 and Part I.2, part-time students in Croatia are rarely “genuine” part-time students who are studying while employed full-time, but are usually *de facto* full-time students who were not accepted into the enrolment quotas as full-time students. Excluding them from student financial support is therefore fundamentally unfair. Since the EUROSTUDENT survey report for Croatia (Farnell et al., 2012) confirmed that these students are also predominantly of lower socioeconomic status and are predominantly older students, their exclusion raises a serious issue of inequity in access to higher education.

Student financial support policy has not been reformed since the 1990s, despite increasing numbers of fee-paying students

Despite a significant growth in student numbers since the 1990s (primarily in the number of students paying tuition fees) (Matković, 2009), no fundamental reforms of the student financial support system have been carried out.

In addition to the lack of reform, funding levels for some of the individual subsidies within the existing system have not been changed since the 1990s. For example, the prices of student meals have not changed since 1998, despite the fact that market prices rose by 41,6%, while the amount that the state pays to subsidise accommodation (105 HRK/14 EUR per month) has not changed since 1993 (Budak et al., 2010).

Indirect student financial support

Universal provision of subsidies lacks efficiency by including students who are not in financial need

As noted above, the provision of subsidised meals (at 25% of their market price) is the main component of student financial support in Croatia. This financial support is made universally available to all full-time students.

¹⁶ The Croatian state budget for higher education in 2012 was 2.71 billion HRK (Ministry of Finance, 2012) and the total allocated by the Ministry of Science, Education and Sports to direct student support in 2012 was 44.95 million HRK (Doolan et al, 2013).

¹⁷ The Croatian state budget for higher education in 2012 was 2.71 billion HRK (Ministry of Finance, 2012) and the total allocated by the Ministry of Science, Education and Sports to both direct and indirect student support in 2012 was 316.45 million HRK (Doolan et al, 2013).

The problem with such a form of universal financial support is that it lacks efficiency and does not distribute resources equitably. Subsidies are provided to all full-time students, irrespective of whether they have a demonstrated financial need for the subsidy, instead of being targeted at students from low-income families for whom the support is essential to meet the costs of studying.

It should, on the other hand, be noted that the right to subsidised meals is partially dependent on criteria that are relevant to the social dimension of higher education. Namely, the number of meals that are subsidised depends on the student's place of residence (the distance between their residence and the place of study) (Budak et al., 2010). Although this is a positive example of consideration for the social dimension of higher education, a more equitable criterion, other than place of residence, would be to provide subsidies based on the financial need of students *as well as* taking into account their place of residence. Additionally, support still goes to students living in the same location as the higher education institution, irrespective of financial need.

Subsidies for transport, healthcare and tax benefits are also universally available to all eligible students (full-time) in Croatia.

Student accommodation is awarded primarily on the basis on merit, although socioeconomic status and financial needs are partially taken into account

Similarly to subsidised meals, the criteria for awarding subsidies for accommodation also include some elements relevant to the social dimension of higher education. Social criteria such as family income, disability and adverse family conditions are taken into consideration for awarding places in student halls of residence and awarding private accommodation subsidies. However, merit criteria (grade point average and ECTS points) are nonetheless the predominant criterion for awarding places in student accommodation (Doolan et al., 2013).

In European comparison (European Commission, 2007), in those countries where criteria are centrally defined, the level of parental or student income is the factor most commonly governing the allocation of accommodation in student halls of residence, followed by the distance between the family home and the place of study. Meritocratic criteria do apply in half of the countries concerned, however only as a supplement to the criterion of need.

It is unclear whether indirect student support is equally available to eligible students at each higher education institution

Based on the data collected in the ACCESS project, it is unclear whether all forms of indirect financial support are equally available to eligible students at all higher education institutions in Croatia. For example, while it is clear that student accommodation is not available at each higher education institution in Croatia, it is unclear what proportion of the students at those institutions without halls of residence are adequately compensated by a direct subsidy for their private accommodation costs (which is also provided by MSES). It is also unclear whether Student Centres operate at each public higher education institution and whether subsidised meals and tax-exempt work is equally available throughout Croatia.

According to Budak et al (2010), there is an unequal availability of subsidised accommodation and meals within Croatia, as there are considerable differences in the quantity of supply and prices, particularly in regards to student accommodation.

The system of student subsidies is open to abuse

The problem of abuse of the system of indirect student financial support was also noted by Budak et al. (2010), who argued that the right to inexpensive lodging and meals can be transferred or resold to those who are not eligible, or to persons who are not enrolled as students.



Direct student financial support: grants

National grants are awarded to approximately 6% of the student body

The main national grant programme in Croatia is the "State Scholarships" programme, awarded by MSES. Apart from these grants, as many as four other Croatian ministries and a national foundation provide grants at the national level in Croatia. The largest grant programme after State Scholarships is the programme of the Ministry of Family, War Veterans and Inter-generational Solidarity, which awarded 3,770 grants for children of war veterans in the academic year 2011/2012. Other grants (less than 500 grants per programme) are awarded by the Ministry of Sea, Transport and Infrastructure, Ministry of Defence, Ministry of Foreign Affairs and European Integration and the National Foundation for Supporting the Pupil and Student Standard of Living.

In the academic year 2010/2011, around 3.7% of full-time students received State Scholarships (Doolan et al., 2013). The total number of recipients of the different categories of national-level grants is 9,000 students, which amounts to 6% of the total undergraduate and graduate student body in Croatia. This coverage is low compared to, for example, Slovenia where there were 42,646 grants (also called State Scholarships) in 2010, covering around 23% of the student body (Doolan et al., 2013).

A much larger proportion of students receive grants from other institutions (probably local and regional government authorities)

According to the EUROSTUDENT survey report for Croatia (Farnell et al., 2012), grants were cited as a source of income by 28% of students, which is approximately 40,000 students. The reason for this major discrepancy between the number of national-level grants and the amount of grant-recipients is most likely due to grants that are provided by most local and regional authorities. In addition, grants are provided by a range of international organisations, foundations, non-governmental organisations and private companies. Since there is no official register of grants available, it is not possible to ascertain the precise number of grant-recipients or the number of grants awarded by different grant donors (Doolan et al., 2013).

It could be argued, however, that these grants exist precisely due to the lack of a comprehensive national system of grants. Without wide coverage of the student body, there is a financing gap that needs to be filled by local or regional authorities as a compensatory measure.

The data on criteria for awarding grants is unclear, but generally points to a predominance of merit-based instead of needs-based criteria

According to MSES data on State Scholarships recipients in 2012 (Doolan et al., 2013), 63% of grant recipients are full-time students from lower income families ("category E"), whereas 31% are "especially gifted full-time" ("category A") and the rest are in other categories. This suggests that the social dimension is a predominant criterion for awarding this form of financial support.¹⁸ However, data from other data sources would suggest that State Scholarships (and grants from other institutions) are primarily awarded on the basis of merit, and are more concentrated among students of higher socioeconomic status. According to a World Bank (2008) study on public finances in Croatia:

"Students from households in the highest (income) quintile continue to receive both the largest share of total scholarships and educational allowances and the highest value scholarships. The state spends almost 10 times the amount on scholarships for students from this quintile than for those from the lowest." (p. 117)

¹⁸ However, this data differs from data from the original State Scholarships competition announcements in the period 2006–2007 (Stipendije.info, 2012), according to which each year over 60% of scholarships would be awarded on the basis of merit, and 30% on the basis of socioeconomic status.

The OECD review of tertiary education in Croatia (Duke et al., 2008) also noted that student funding in Croatia is based on merit, not on need. Data from the EUROSTUDENT survey report for Croatia (Farnell et al., 2012) appears to corroborate this, finding that full-time, fee-paying students have a far lesser chance of being awarded a grant than full-time students who do not pay tuition fees. Since tuition fee exemptions depend on academic achievement, this suggests that the criteria for awarding grants is merit-based, and that it is more likely for student of higher socioeconomic status to be represented in this group.

Finally, it should be noted that due to the limited number of grants available, most State Scholarships provided on the basis of socioeconomic status also have a merit-component, in order to select a limited number of grant recipients. A resulting weakness of such an approach to financial support is noted by Duke et al (2008) in their recommendations for higher education reform in Croatia:

“Although continued funding, based on need, might also take into account annual performance in tertiary education, this places unequal stress on poorer students, a stress not placed on their richer colleagues”.
(p.49)

Grant amounts are low and do not cover tuition fees and living costs

According to EUROSTUDENT data, the average grant amount in Croatia is 807 HRK/107 EUR per month. An annual, 10-month grant therefore amounts to just under the average cost of tuition fees in Croatia.

Among the students who receive grants, the amount of the grant represents on average 38% of the students' total income. However, the EUROSTUDENT survey report for Croatia (Farnell et al., 2012) also showed that those who receive grants on average also have much lower average costs, since these students are usually students who do not pay tuition fees and are more likely to live in student accommodation. Therefore, a grant is unlikely to be a high proportion of overall income for students with higher costs.

As a comparative illustration, the average needs-based grant (State Scholarship) in Slovenia is almost twice the amount of a Croatian grant (180-240 EUR per month in Slovenia, compared to 66-106 EUR per month in Croatia), while the self-reported monthly living costs for students in these two countries are not significantly different (Doolan et al., 2013).

Direct student financial support: loans

Croatia does not have a national student loan system

There is no publicly-subsidised or publicly-guaranteed student loan system at the national level in Croatia. While there are a small number of examples of local and regional governments (and in one case a higher education institution) that participate in loan schemes by subsidising the interest on student loans, the majority of student loan opportunities are provided by commercial banks.

The conditions of student loans currently provided by commercial banks are incompatible with equitable access to higher education

Based on an analysis by Budak et al (2010) of student loans provided in Croatia, 13 out of a total of 32 commercial banks offered student loans. In the vast majority of cases, the terms and conditions for taking out such loans in Croatia are identical to other bank loans. Loans are offered at market interest rates, banks require guarantors and collaterals to



secure the repayment of the loan, and banks require regular monthly repayments from students. Only in two banks can students repay the loan after graduation. Budak et al (ibid) conclude that loans provided by commercial banks “do not have a social dimension” and that “the only aim of these loans is that of achieving profit for banks. The need to meet certain economic and social objectives is left to a small number of local government units.” (p. 289).

3% of Croatian students take out student loans

The lack of state student loans and the predominance of commercial student loans may in part explain why only a small minority of Croatian students take out student loans. According to the EUROSTUDENT survey for Croatia, only 3% of students mentioned loans as one of their sources of financing (Farnell et al., 2012).

Management of the student financial support system

The institutional framework for providing student financial support is complicated

Due to the variety of student financial support mechanisms in Croatia, the management and implementation of student support is operated by a range of different institutions. The overall responsibility for the student financial support system is that of the MSES, who manages the distribution of funds for State Scholarships, subsidised meals and subsidised accommodation. The provision of meals and subsidised accommodation is organised by Student Centres within higher education institutions. The Student Centres also administer tax-exempted student work.

Complications in the system arise at the following levels:

- National grants are also provided by four ministries other than MSES, as well as from a national foundation.
- Local and regional authorities also provide grants to students.
- Subsidised transport is managed at the level of local and regional authorities.
- Health insurance is managed at the level of the Croatian Institute for Health Insurance.

Data on student financial support is not collected centrally

The partially centralised system of provision of student financial support results in a lack of data on the total cost of different forms of student financial support as a whole (as noted by Filipić, 2009), and on which students receive such support, and for how long. This makes any detailed evaluation of the efficiency or effectiveness of the system impossible.

Regarding direct financial support, there is no national database on those students receiving grants from various public or private institutions in Croatia. This makes any assessment of the number of grants provided from these institutions (and the overall or average value of grants provided) impossible. Additionally, since most grant donors stipulate as one of their conditions that students may not receive more than one grant at the same time, the lack of a national database makes any verification process complicated to carry out.

Part II

Policy guidelines

Based on the data and analysis presented in Part I, the ACCESS Expert Team developed policy guidelines for the reform of the higher education funding system in Croatia. The policy guidelines provide, on the one hand, a set of process recommendations on how to approach reform in this area, highlighting the crucial questions that need to be addressed by the Croatian government and higher education stakeholders. On the other hand, the policy guidelines also provide substantive recommendations, proposing concrete policy mechanisms and scenarios that could be most effective in order to reach the strategic objectives of the reform. While basing the policy guidelines on international best practices in the field, as well as on recommendations of international institutions such as the European Commission and the OECD, the policy guidelines do not uncritically copy policy models from other countries, but instead consider solutions that would address the specific needs of the Croatian higher education system.

It should be noted, however, that the policy guidelines do not represent a fully-developed policy model that can be readily implemented, since the project had neither the mandate nor the capacity to produce such a model. Any reform based on these guidelines would require detailed development and further discussion for it to be developed and implemented.

While developing the policy guidelines for higher education funding, the core concerns of the Expert Team were:

- To stress important strategic objectives that the higher education funding system should address, while also taking into account the importance of university autonomy.
- To be pragmatic and not to disrupt the stability of funding of higher education institutions in Croatia.
- To address, in parallel to the issues above, equity of access to higher education, as the core focus of the ACCESS project.

The guidelines presented in this document were discussed at project seminars in Rijeka (Croatia) in March 2011 and July 2012, as well as at a final meeting in Split in April 2013, and were endorsed by vice-rectors and other representatives of Croatian higher education institutions, representatives of the Ministry of Science, Education and Sports and representatives of all partners of the ACCESS project.



2.1

Policy guidelines for public and private expenditure on higher education in Croatia

Define strategic goals for the higher education sector and assess the funding that is necessary to meet these goals

The priority given to higher education in Croatia and the corresponding level of public funding to be allocated to this sector should be addressed in a Croatian higher education strategy, which should itself be based on a broad national development strategy for Croatia (e.g. for the period until 2020).¹⁹ Among other topics, this higher education strategy should develop a position on the following critical policy issues and assess what impact this position has on the need to increase funding for higher education:

- **Main sector priorities:** overall, assessing the main areas of priority for various stakeholders in the period until 2020 and to what extent (and how) equity can be incorporated into these priorities.
- **Participation in higher education:** the strategy should define targets for the overall increase in higher education attainment and the contribution of both parts of the binary system (professional and university studies) for the realisation of these targets. The strategy should also consider whether to prioritise underdeveloped regions and/or specific under-represented groups in access to higher education. In addition, the strategy should define goals relating to those aspects of efficiency and effectiveness of the higher education system that have a direct relationship to the social dimension of higher education (i.e. decreasing drop-out rates of lower socioeconomic groups, improving employability of graduates, etc.).
- **Equity in higher education:** the strategy should define a national approach to equity in higher education, including providing targeted financial support to disadvantaged students, providing funding incentives for institutions, and developing other support measures in higher education (and at earlier stages in the education system) to foster greater access and progress in higher education among disadvantaged groups. The ACCESS Expert Team's conclusion is that providing general and "meritocratic" support measures (e.g. general financial support for all, irrespective of background, and merit-based financial support) is not an adequate measure for achieving more equitable access and participation in higher education.

The definition of strategic goals for Croatian higher education is the responsibility of government and national stakeholders. However, the ACCESS Expert Team believes that certain Europe-wide goals are likely to influence Croatia's strategic goals. These concern the need to further increase education attainment levels of persons in the 25-34 age group

¹⁹ At the time of writing, a national Strategy for Education, Science and Technology was in the process of being developed by the Croatian Government.



(and maintaining these levels despite negative demographic trends), the need to ensure equity in higher education, and the need to improve completion rates. If Croatia wishes to meet these goals, then additional public investment will be necessary to achieve this (despite demographic changes), particularly in order to fund policies for widening access and participation and a more comprehensive student financial support system.

Increase the levels of public funding for higher education at least to the EU-27 average

In addition to the definition of strategic goals for the higher education system, another important factor in assessing whether to increase funding for higher education is “benchmarking” by considering Croatia’s position with regards to public and private expenditure on higher education in comparison to the EU-27 countries. Since the evidence presented in Part I.1 clearly demonstrates that the Croatian higher education system is significantly underfunded compared to the EU-27 countries with regards to public expenditure, the ACCESS Expert Team recommends that the Croatian Government increase public funding for higher education in line with the EU-27 average of 1.22% of GDP.

Improve data on public and private expenditure on higher education

The ACCESS Expert Team also recommends that additional studies be carried out to assess the range and volume of public funds invested into higher education from sources other than the Ministry of Science, Education and Sports, and to improve data collection and data provision on both public and private funding of higher education to international institutions such as Eurostat and UNESCO.

Namely, within the ACCESS Expert Team there were some reservations about the reliability of the data provided to Eurostat or UNESCO by the Croatian authorities on overall public and private expenditure on higher education. As noted in Part I.3 on student financial support, certain public funds invested in higher education are unlikely to be included in national statistics on expenditure on higher education (such as public subsidies and grants provided by local and regional governments, national scholarships and certain national subsidies provided by institutions other than the Ministry of Science, Education and Sports). It was also noted that it was unclear whether any income other than tuition fees were included in calculations of the overall private expenditure on higher education.



Although the correction of such discrepancies is unlikely to significantly alter how Croatia compares with other countries according to Eurostat/UNESCO data, it is still fundamental to ensure that policy-makers have the most reliable data on the overall public and private cost (and cost structure) of the higher education system.

Decide on the mix of public and private funding for higher education

Apart from addressing the question of public funding of higher education, another crucial question to address is the extent to which an overall increase in funding should also come from private finances. This (controversial) debate depends on the perceived extent of the private and public benefits of higher education; the role of higher education in contributing to economic development on the one hand, and its role in fostering broader social development and social inclusion on the other: on the priority level that should be given to higher education in relation to other areas of public expenditure; and on the current levels of public and private investment in higher education in a comparative perspective. This debate will be further explored below.

Improve the transparency, efficiency and effectiveness of allocation of funds to higher education institutions

The conclusions of Part I noted that not only is overall expenditure on higher education low in Croatia, but the mechanisms and practices for allocating public funds to higher education institutions have been insufficiently transparent and have not contained incentives for improving equity, efficiency or effectiveness (although steps towards addressing this have been the 2012 funding agreements).

In order to improve transparency and improve equity, efficiency or effectiveness, the ACCESS Expert Team recommends the introduction of a new funding framework for funding higher education institutions, as described in detail in this part of the publication.

2.2

Policy guidelines for reforming the higher education funding system in Croatia

Tuition fee system: addressing the cost-sharing debate

Assess the arguments for and against tuition fees and develop a national policy on this issue

Tuition fees are among the most sensitive and controversial policy issues in higher education (Jongbloed et al., 2010; Altbach et al., 2009). The main argument used internationally against tuition fees is that they create barriers in access to higher education for certain social groups (and negatively affect equity in higher education) and more generally that higher education is a public good. Advocates of tuition fees, on the other hand, emphasize their positive effects on increased quality of education by the impact they have on greater accountability of institutions (and competition between them) and heightened responsibility of students (Jongbloed et al., 2010).

It is important, however, to consider the arguments for and against tuition fees in more detail. According to an overview of international research on the topic (Santiago et al., 2008), the main rationales used in supporting the principle of cost-sharing in higher education (i.e. for students and their families to share the costs of higher education with taxpayers) are the following:

- Public money available for higher education is limited in light of the very high demand for higher education, the expansion of higher education systems and rising costs per student.
- Graduates will enjoy significant private benefits from higher education (in terms of better employment and higher income) and they therefore should contribute to the costs of higher education.
- Public expenditure released by increased private contributions can be channelled into improving equity of access through developing more comprehensive student financial support systems.
- Tuition fees introduce market mechanisms into higher education, which can lead to greater efficiency, responsiveness and quality at institutions, as well as greater responsibility on the part of students.

On the other hand, the arguments against cost-sharing in higher education as summarised by Santiago et al (based on Johnstone, 2004 and 2006) include:

- Higher education is primarily a public good, and society is the major beneficiary of higher education, while the importance of the private benefits provided by higher education is relatively limited.
- Certain countries have a long-held tradition of the state fully covering the instructional costs of higher education, instead of families and/or students (e.g. Nordic countries).
- The presence of commercialisation and market forces in higher education should be rejected, and efficiency and market responsiveness should not be used as rationales for greater cost-sharing.

- Taxes can be raised, both substantially and progressively, if there is political will, and thus the view that public revenue is inevitably limited is incorrect.
- Although tuition fees combined with student financial support might target resources better, there is no guarantee that politicians will indeed follow through on prioritising (and maintaining) student financial support after introducing tuition fees.
- Not all countries have the necessary capacity to develop comprehensive student financial support systems that are based on means-testing, which should be a precondition for developing significant cost-sharing.

Other arguments against tuition fees include that publicly funded higher education is a key vehicle of social mobility, representing an important cornerstone of legitimacy for democratic societies. Conversely, the privatisation of higher education and the introduction of tuition fees without appropriate support can risk limiting access to higher education for those who cannot afford it, which entrenches social stratification in access to higher education.

Take into account and carefully interpret existing cost-sharing and public funding trends in Europe, as well as different tuition fee (or no-fee) models

According to a study by Jongbloed et al (2010), the majority of countries in Europe (among 33 countries covered in the study) were still reported as not charging tuition fees. According to data for the year 2008, the trends showed that for undergraduate studies, 15 countries in Europe charged tuition fees, while 18 countries did not charge fees. However, the study notes that many European countries have started to rethink their higher education funding policies and have embarked on a policy of cost-sharing, meaning the introduction of tuition fees (ibid). This trend is broadly in line with the European Commission (2006) recommendations in this area and with similar trends at the global level (Altbach et al., 2009; Santiago et al., 2008).

Despite the usefulness of such overviews of funding trends, the data on tuition fees in Europe are often difficult to compare and can be misleading when used in policy debates without a thorough detailed examination of policies and practices in specific countries. (Eurydice, 2011). For example, in countries that are categorised as having no tuition fees, tuition fees may still be charged to certain categories of students, such as students who study beyond the official maximal duration of studies, students who did not succeed to enter state quotas for fully-subsidised study places (dual-track systems) or students who study part-time. According to Jongbloed et al (2010), a total of 11 of the 18 “no fee” countries have such systems for charging tuition fees to particular categories of students. When taking these countries into account, only 7 out of 33 countries do not charge any tuition fees at all. In addition, much of the comparative data about tuition fee systems cover only the undergraduate level and national/EU students, since in many “no fee” countries, fees are charged for graduate or doctoral studies, and special fees may be charged for international (non-EU) students.

An additional factor complicating any simple comparative approach to analysing fee systems is the *amount* of the tuition fees charged. In some countries, undergraduate students in fee-paying systems pay a fee below €500 per year (e.g. France, some German states, Iceland, Turkey), in other countries the average fees are between €500 and €1,000 per year (e.g. Belgium, Bulgaria, Lithuania, Italy), other countries have substantial tuition fees (above €1,000 per year in the Netherlands, Ireland and Latvia), while England has recently introduced undergraduate tuition fees as high as €10,000 per year. But even these figures can fail to provide an accurate picture, since in many countries fees are variable, and not fixed (Eurydice, 2011).

Due to the complexity of the different tuition-fee (or no-fee) models that exist, the table below provides a summary overview of the main policy options, based on European examples. The presented options are simplified, but can provide a reference tool for policy-makers.

Table 2.1 Tuition fee/no-fee policy options (for public higher education institutions)

1. No tuition fees for all or the great majority of students	
	No fees for undergraduate students, graduate or doctoral students Example of countries: Finland, Denmark
	No fees for undergraduate students, graduate or doctoral students (for home students only); fees for all non-EU students Example of countries: Sweden
	No fees for undergraduate students; fees for graduate and doctoral students or part-time students Example of countries: no data available
2. Dual-track tuition fees	
	No fees for undergraduate students who study within the state-funded enrolment quota; fees for all students who exceed this quota (either as full-time, tuition fee paying students; or part-time students). Example of countries: Croatia, Hungary, Czech Republic, Bulgaria, Poland, Romania, Estonia, Lithuania, Latvia, Slovenia, and Slovakia.
3. Progress-based or performance-based tuition fees	
	No fees for students completing their studies within the formal duration of the study programme; fees for all students studying beyond this period Example of countries: Austria, Germany (some states)
	No fees for full-time undergraduate students or graduate students in first year of studies; fees for all students in subsequent years who do not complete the minimum required number of ECTS points Example of countries: Croatia, from 2012 (although part-time students are still charged as a separate category, meaning that Croatia still has a form of dual-track system)
4. Universal tuition fees	
Fixed tuition fee levels	
	High tuition fees (over 1,000 EUR per year), with flat-rate tuition fees for all students, irrespective of institution or study programme Example of countries: Netherlands, Latvia
	Low tuition fees (under 500 EUR per year), with flat-rate tuition fees for all students, irrespective of institution or study programme Example of countries: France, Lithuania, Turkey
Variable tuition fee levels	
	Variable rates of tuition fees for undergraduates and graduates with differences in rates depending on one of the following factors: <ul style="list-style-type: none"> • the costs of the study programme • the priority given to the programme in terms of societal needs • the field of study and/or type of institution. Example of countries: Spain, Italy, Switzerland, Portugal*, England* (*fees capped at maximum level)

Based on Jongbloed et al (2010), with additions from EACEA/Eurydice (2011) and Doolan et al (2013)

Critically reconsider the tuition fee policies adopted in Croatia due to their negative equity implications

Based on the models listed in the table above, the two models which are of immediate concern from the perspective of equity are the dual-track tuition fee system and the progress- or performance-based tuition fee system. As noted in Part I.2, basing the payment of fees on merit or performance is more likely to penalize students from disadvantaged families, since they are likely to be less successful in entrance examinations and in their study progress (Canning et al., 2007; Santiago et al., 2008). Such systems therefore risk being fundamentally unfair and inequitable. For this reason, the ACCESS Expert Team recommends against the use of the dual-track tuition fee system in Croatia.

While the criticism of using merit-based criteria for charging tuition fees may not equally apply to progress-based tuition fees (since these do not take into account grade point average as an indicator, only study progress), a similar concern does still apply regarding the likelihood of students from different backgrounds completing their studies “on time” or not. Such systems may indeed risk favouring students from more privileged backgrounds. For this reason, the adequacy of these tuition fee policies should be questioned due to their potentially negative equity implications.

Link all debates about tuition fees and equity policies to debates about student financial support policy

It is erroneous to relate the presence/absence of tuition fees to equity outcomes without considering the total cost of higher education to students, since student living costs amount to the largest part of the total cost of studying. Although a detailed discussion about student financial support will take place in Part II.2, it is useful to summarise here the different models of combining tuition fee and student financial support policies, based on international data from the OECD (2012):

- **Model 1: Countries with no or low tuition fees but generous student-support systems:** Denmark, Finland, Iceland, Norway and Sweden
- **Model 2: Countries with high levels of tuition fees and well-developed student-support systems:** Australia, Canada, the Netherlands, New Zealand, the United Kingdom and the United States.
- **Model 3: Countries with high levels of tuition fees but less-developed student-support systems:** Japan and Korea
- **Model 4: Countries with low levels of tuition fees and less-developed student-support systems:** Austria, Belgium, the Czech Republic, France, Ireland, Italy, Portugal, Switzerland, Spain and Mexico.
- **Model 5: Countries with non-uniform and variable level tuition fees and less-developed student support systems:** Russian Federation, Estonia, Poland and Croatia.²⁰

According to the OECD, the countries that provide well-developed student financial support systems (even in countries with high fees) provide wider access to higher education and have higher participation rates in higher education than, for example, countries that have low fees and less-developed student support systems.

In other words, the potential positive impact that no-fee systems might have on equitable access to higher education can therefore be negated if there is no comprehensive student financial support system that provides disadvantaged groups with adequate support for their living costs. But equally, the potential negative impact that universal tuition fee systems might have on equitable access to higher education can also be neutralised with a student financial support system that can adequately cover the costs of fees and living expenses for the students who are most in need. For this reason, the debate about equity in higher education in relation to its financial aspect should be focused on how to eliminate financial obstacles, rather than focusing on the tuition fee debate in isolation of financial support.

²⁰ The OECD (2012) defines four different models. The fifth model is an addition based on a separate OECD publication (Santiago et al, 2008).

Remove financial obstacles to access to higher education through the student financial support system (irrespective of the policy choice on tuition fees)

The ACCESS Expert Team has not adopted a joint position on which policy to recommend for Croatia regarding tuition fees, since the opinion of the Expert Team (as well as the Consortium as a whole) was divided on the strengths and weaknesses of fee-systems and no-fee systems. However, approaching the issue of tuition fees solely from the point of view of equity in higher education, the Expert Team agreed to adopt the following positions:

- Firstly, that the question of tuition fees is inextricably linked to the question of student financial support and that there can be no proper discussion about the equity implications of tuition fees alone. Rather, such a debate must consider the questions of tuition fees and student support in parallel (as will be developed below).
- That the most ideal policy scenario from the point of equity of access to higher education would be for a higher education system to not charge tuition fees and to provide comprehensive financial support on the basis of need. This would eliminate the financial deterrents to higher education access and ensure that low-income students would receive support for living costs, which are always substantial.
- That charging tuition fees represents a financial obstacle to higher education access, especially for disadvantaged students, and that the “minimal standard” from the point of equity of access to higher education would be for the state to ensure a comprehensive student financial support system to cover the costs of students from disadvantaged backgrounds (including both the costs of tuition fees and living costs).

While the ACCESS Expert Team recognises that there are important implications of tuition fee policies other than equity (relating to autonomy, sustainability and quality), it agreed to focus on these two policy scenarios which are the most equitable. These policy scenarios will be developed in Part II.4 of the policy guidelines.

System for allocating state funds to higher education institutions

Establish a strategic framework for funding higher education institutions, but which remains simple and pragmatic

The ACCESS Expert Team recommends that Croatia fundamentally reforms its system for allocating funds to higher education institutions, in order to achieve strategic objectives in the higher education system, and in particular to increase the transparency, efficiency, effectiveness and equity of the Croatian higher education system. The ACCESS Expert Team proposes that this can be achieved by developing a new funding framework that uses a combination of input-based, output-based and project-based funding.

The new framework developed within the ACCESS project, which will be described in detail below, was developed with public universities in mind, but following consultations with all stakeholders and experts in the project, it was agreed that the framework (possibly with some modifications) should also be applicable to professional higher education institutions. It is important to note that the suggested framework could be implemented alongside any of the tuition fee options discussed above. That is, from a system with no tuition fees to a universal tuition fee system.

Designing a new funding framework for higher education is not a simple task, and the ACCESS Expert Team has tried



to keep its proposed framework as simple as possible. The proposed framework is based on the following three core principles:

- **Strategic approach:** the ACCESS Expert Team believes that higher education funding should be linked to the achievement of the strategic goals of the sector in general and to the promotion of equitable access to higher education in particular. The funding system should therefore serve as a steering mechanism which provides incentives for institutional performance in these areas.
- **Pragmatic approach:** the ACCESS Expert Team believes that the approach to developing a new funding framework should be pragmatic, which avoids linking new funding arrangements to the actual costs of educating a student in different degree programmes (both by level and field of study). Instead of the complicated process of developing a “full-cost” model of funding, the ACCESS Expert Team proposes to use other mechanisms used internationally which take into account the different costs of study programmes in different broad disciplines or fields of study.²¹
- **Stable approach:** the ACCESS Expert Team believes that it would be counterproductive to introduce a new model that seriously disrupts current funding levels and trends in fund-allocation to Croatian higher education institutions. The project therefore proposes to accept the levels of the current historically-based public funding allocations and to build on this base by adding performance-based funding and project-based strategic funding alongside base funding, whilst allowing the relative share of base funding provided by the state to decline over a five year period. While this has the disadvantage of not rectifying unbalanced or unfair allocations of funding under the previous system, this approach has the major advantage of introducing a new funding mechanism with improved steering mechanisms and performance incentives without there being immediate institutional “winners and losers” and a consequent political battle over resource redistribution.

Alternative policy option: Develop a full-cost model for higher education funding in Croatia

While such models are highly valuable, the precondition for developing them is to determine the full costs of teaching in every study programme (or groups of study programmes) at each higher education institution. To do this would require a major and detailed research project, which is beyond the scope of this project, and it is also unlikely that a single funding formula derived from such a study would meet the needs of the diverse group of Croatian higher education institutions.

If Croatia opted for a full-cost approach to higher education funding, this would not affect the rest of the funding framework proposed by the ACCESS Expert Team. In other words, only the base funding for Year 1 of the new framework would be affected, and the rest of the framework could still be applied as described below.

Create a framework for calculating funding allocations to higher education institutions based on the number of enrolled students by study programme

The ACCESS Expert Team recommends that a new funding framework be created which would determine funding for higher education institutions in which the major element is a “funding unit” per enrolled student. Funding units would

²¹ This is not to suggest that our proposal has no inherent technical challenges: the coefficients, funding shares and implementation plan outlined here all need careful and detailed attention.

be determined by the number of students enrolled in a specific study programme at a higher education institution, with coefficients applied to reflect the different costs of different broad disciplines or fields of study. Based on these funding units, the framework would determine in a transparent way the level of funding allocations for each higher education institution. Such a method is used internationally and was recommended in the OECD review of higher education in Croatia (Duke et al., 2008).

The funding framework would consist of three building blocks:

- **State-funded study programmes:** after a programme is accredited, the Ministry should decide whether this study programme (which in practice means the students enrolled in the programme) is eligible for public funding. While it is anticipated that the great majority of study programmes will be state-funded, this allows for contract teaching programmes (such as in-house programmes for companies) and possibly high private return graduate programmes (for example MBAs) to be excluded.
- **Subject groups:** all state-funded programmes will be assigned to one of (say) four subject groups recognising that some programmes are more expensive to teach than others. Each subject group would be assigned a specific funding coefficient. The criteria for grouping subjects and for defining their relative coefficients can be derived from existing international models: these are typically divided into humanities and social sciences as the first subject group (which is least expensive to teach), and with medicine and applied arts at the other end of the scale (as the most expensive to teach).
- **Full-time equivalent (FTE) students:** students enrolled in state-funded programmes need to be counted in “full-time equivalent” terms, to correct for different proportions of full-time and “genuine” part-time students (i.e. who have a lower study load, as measured by ECTS points) at different institutions. This is relatively easy to do by giving each module in a study programme a credit value linked to its ECTS value, and then turning the ECTS value into a FTE equivalent.

Based on the three steps above, the following grid can then be developed for each higher education institution, presenting total student enrolments in terms of FTE units.

Table 2.2 Illustrative example of grid for calculating weighted FTE student enrolments

Degree level	Subject group W	Subject group X	Subject group Y	Subject group Z	Total
Doctoral (PhD)					
Graduate (Masters)					
Undergraduate (Undergraduate)					
Associate/Diploma					
Total					



Since each degree level and subject group will have a different funding coefficient, by entering the numbers of FTE students of a given institution into the cells of the above grid, it is possible to automatically calculate the “**weighted student load**” for that institution. As an illustration, in Austria three subject groups are used, with the following coefficients:

- Humanities, social sciences, education: coefficient = 1
- Natural and technical sciences: coefficient = 3
- Medicine, Art: coefficient = 5

This weighted student load would then provide the basis for the level of base funding to be allocated by the state to a higher education institution. This would therefore represent the main “input-based” criterion of the funding framework for Croatia.

Illustration of the weighted FTE student enrolments grid

Example 1: Calculating the weighted load of Undergraduate students in Economics

- A higher education institution has 3,000 Undergraduate students enrolled in the Economics study programme. Of these students 2,000 are full time and 1,000 are part-time (i.e. are registered for half the student load, i.e. 30 ECTS per year).
- Calculated according to full-time equivalent (FTE) status, there are 2,500 FTE enrolled in this study programme.
- This figure is therefore entered into the grid above, under the category of Undergraduate (Bachelor) and Subject Group W (Economics would fall under this category as a subject that is not expensive to teach).
- If we assume that Subject Group W has a subject coefficient of 1.0 and that a Undergraduate degree also has a coefficient of 1.0, then the calculation of the weighted student load of this group would be the following:
 - **2,500 (FTE) x 1.0 (subject group) x 1.0 (degree level group) = 2,500 funding units**

Example 2: Calculating the weighted load of graduate students in Engineering

- A higher education institution has 600 graduate students in Engineering. Of these students 200 are full-time and 400 are part-time.
- Calculated according to full-time equivalent (FTE) status, there are 400 FTE enrolled in this study programme.
- Since Engineering is more expensive to teach than Economics, the number of FTE students is entered into the grid above under Subject Y, whose subject coefficient is 3.0, and under graduate, whose degree coefficient is 2.0 (graduate programmes require lower student to staff ratios and are therefore more expensive to teach)
- The calculation of the weighted student load of this group would be the following:
 - **400 (FTE) x 3.0 (subject group) x 2.0 (degree level group) = 2,400 funding units**

In addition to creating a transparent input-based funding criterion for the funding framework, the funding unit system described above can also be used for output-based (or performance-based) funding criteria. Namely, a similar methodology can be used to calculate an institution's weighted number of graduates, which (as will be further developed below) can be an indicator of performance of a higher education institution.

Allocate public funds based on current levels of funding per institution, using the funding framework for determining levels of increase or decrease of funding

Funding units should, in principle, have a direct monetary value, meaning that the above-described framework should be able to immediately convert funding units per institution (based on the weighted student load) into the total amount of public funding per institution in Croatian Kuna. However, as mentioned earlier, the ACCESS Expert Team believes that turning immediately from a negotiation-based and incremental funding system to a funding-unit system could seriously disrupts current funding levels and trends in fund-allocation to Croatian higher education institutions. This could bring instability into the higher education system as a whole and result in a political battle over resource redistribution.

For this reason, the ACCESS Expert Team proposes that, in a first phase, the proposed funding framework be used as a mechanism for gradually introducing the principle of transparent, input-based funding. In other words, in the first year of introducing the system, the levels of state funding per higher education institution would remain the same as it has been in previous years. However, after the introduction of the new funding framework, funding for each subsequent year will be determined based on increases or decreases in the overall weighted student load. To illustrate how the system would work, let us take a scenario in which a given higher education institution experiences notable growth or reduction in student enrolments. In terms of reductions the ACCESS Expert Team suggests that the public allocations from the Year 1 amount be guaranteed to institutions for subsequent years provided that their weighted FTE enrolments do not drop by more than 5% from their Year 1 levels in which case there would be a proportionate reduction in base funding. Similarly, growth in student numbers of more than 5% on Year 1 levels should be compensated by an adjustment in base funding provided that such an adjustment is approved in advance as part of the funding agreements (referred to below).

Provide public funding in three streams: base funding, performance-based funding and project-based funding

International trends in higher education funding show that countries are increasingly shifting from negotiated or incremental funding to formula-based funding, from input-based to output-based funding and from annual funding to multiyear funding agreements (Jongbloed et al., 2010; Eurydice, 2011). Based on such international practices, and taking into account the recommendations of the OECD review of higher education in Croatia (Duke et al., 2008), the ACCESS Expert Team recommends dividing public funding into three streams by using the above-mentioned framework as the main tool. The three streams would be base funding, performance-based funding and project-based funding:

1. **Base funding:** base funding would represent the main input-based segment of funding, and would be linked to the FTE enrolments of the university weighted by programme level and subject group. Base funding would remain the largest component of funding for higher education institutions, although its share will reduce over time, e.g. from 100% to 85% over five years.

Illustration: Base funding

To illustrate how this gradual reduction of base funding would work, consider a scenario in which the student numbers at a certain higher education institution do not grow or drop significantly within a five year period. In such a case, the base funding of the institution in its Year 1 would be “frozen” and become the base funding for the following four years. Although the actual amount of funding would remain the same over the entire five-year period, inflation will result in it dropping from 100% of the institution's required funding to around 85% four years later. The resulting gap in funding, however, would be made up by performance-based and project-based funding as described below.

2. **Performance-based funding:** although it is possible to develop many indicators of performance (e.g. graduate employment; average time to degree; research output, etc.), the ACCESS Expert Team has opted for a simple and transparent indicator - quite simply, the number of graduates.

The Year 1 graduation profile should be used as a base and the Ministry should negotiate a “funding agreement” with each university indicating the (weighted) graduation targets for the next four years. Universities that reach the set targets would receive the agreed funding; those that do not meet these targets would have their notional performance-based funding amounts reduced proportionally. Potential concerns over how such a funding incentive could negatively affect quality (by lowering academic standards to increase the number of graduates) would need to be adequately addressed through the quality assurance system.

In addition, the indicator of the number of graduates could also incorporate the social dimension of higher education as an indicator of performance, by specially rewarding institutions who ensure the graduation of students from under-represented groups.

The pilot funding agreements launched in the academic year 2012/2013 in Croatia provide an example of such performance-based funding, and a positive new initiative that the ACCESS Expert Team believes should be consolidated and further developed. The difference, however, between the performance-based component of the pilot funding agreements is that they are based more on “project-based” indicators, rather than on output in terms of student numbers, which would work as a funding coefficient through the funding grid. The ACCESS Expert Team considers that project-funding should be a separate category (as described below).

3. **Project-based funding** would represent a complementary source of funding for higher education institutions in order to promote policy objectives in areas such as strategic planning, quality assurance, equity, etc. This funding does not refer to research projects, but only to projects relating to improving the performance of higher education institutions. This funding would also be separate to funding agreements between the state and higher education institutions, and would be allocated based on the results of a call for proposals and an independent evaluation of these proposals. Project-based funds could be either earmarked (each institution has a reserved amount and will receive this provided its project proposals are judged to be satisfactory) or fully competitive (the university submitting the best proposals will receive the highest proportion of project-based funding). For the first five year phase of implementation, the ACCESS Expert Team suggests the earmarked approach as it brings more stability and predictability into the system.

In the table below we illustrate how this model of public funding might be introduced at a hypothetical higher education institution.

Table 2.3 Illustrative example of proportions of public funding in three streams over a five-year period

Degree level	Base funding	Performance-based funding	Project-based funding
Year 1	100% (€X mil)	-	-
Year 2	97% (€X mil)	2%	1%
Year 3	95% (€X mil)	3%	2%
Year 4	90% (€X mil)	7%	3%
Year 5	85% (€X mil)	10%	5%

As noted in the introduction to this section, the ACCESS Expert Team considers that the base funding in Year 1 should be based on current levels of historically based allocations in Croatia, since it would be counterproductive to introduce a new model that seriously disrupts current funding levels and trends in fund-allocation to Croatian higher education institutions, and thereby creates a political battle over resource redistribution between different higher education institutions.

It should be noted that even in a scenario where there is no growth in student enrolments, this model does assume a growth in public funding (in nominal HRK) of 3% in Year 2 rising to 15% in Year 5. This needs to be tested against forecasts of inflation rates: if cumulative inflation is expected to be less than 30% over this period then reducing the share of base funding to 85% may take longer than five years.

On the other hand, a scenario in which there is growth in student numbers (although unlikely in the current demographic trends) would further increase public funding, not only by increasing the base funding beyond the €X million in the grid above, but also by proportionally increasing the levels of both performance-based and project-based funding.

Provide incentives for promoting the social dimension of higher education

The funding model described above provides clear incentives for institutions to improve their performance in terms of graduation and gives the Ministry (and other system coordinating bodies) a significant new steering instrument in project-based funding in strategically important areas. However, it does not yet provide incentives to promote equitable access to higher education. While student financial support will be addressed fully in Part II.3 of these policy guidelines, a number of aspects of the proposed new funding framework can be used to create incentives to promote the social dimension.

The system of performance-based funding could be used as a possible incentive to ensure that the higher education institutions respond to the challenge of implementing a broader access policy and ensuring the academic success of disadvantaged groups. This could be achieved by incorporating the numbers of students from disadvantaged groups into the grid for calculating graduation rates. For example, students from disadvantaged groups who graduate could be double-weighted within the grid of graduate students, thereby providing a higher performance-based funding coefficient.

Project-based funding is another mechanism to promote the social dimension, and by setting this policy area as one of the priority areas for project funding, it thereby encourages higher education institutions to enhance the social dimension

of their access policies and of their support to students. Projects could include, for example, providing academic support services to disadvantaged students, providing outreach to recruit under-represented students, creating an institutional scholarship fund for disadvantaged students, etc.

The ACCESS Expert Team considers that the pilot funding agreements established in the academic year 2012/2013 have provided an important, and unprecedented, step forward in providing such incentives to higher education institutions to work on the social dimension, by including goals relating to disadvantaged groups and mature students as eligible for performance-based funding. Such goals should certainly remain part of the future funding system.

Financial management and higher education information systems

The prerequisite for a new funding system is a reliable higher education management information system

The policy guidelines for higher education funding assume that the following data is readily available at institutional and national levels, and that the information is reliable and transparent:

- Number of enrolled students by institution, level and study programme.
- Number of graduates by institution, level and study programme.
- Number of publicly financed study programmes by institution, level and study fields.
- Study load (measured by ECTS points) of each enrolled student (for the purposes of calculating full-time equivalents).
- Socioeconomic status of enrolled students (and other relevant indicators for the social dimension), for the purposes of possible double-weighting for performance-based funding.

While the ACCESS Expert Team acknowledges that most of this data is systematically collected at the national level (and published by the Croatian Bureau of Statistics), it is important that all stakeholders confirm the reliability of the data, and that the data is readily available to the institution(s) in charge of the funding system.

The ACCESS Expert Team also recommends that the above data, as well as the data on the funding arrangements within each institution, are made transparent through regular publication and dissemination of the relevant data and information. An example of good practice with regards to data collection and reporting comes from Slovenia, where higher education institutions have to report both financial and other institutional data to:

- National Statistical Office (at the end of each calendar year, providing figures on students and graduates, as well as employees (their employment, workload, etc.).
- Tax administration of the Republic of Slovenia.
- The Ministry of Science and Higher Education of Slovenia (at least twice a year).
- National Higher Education Information System (which notes every change in the number of enrolled students, graduates, changes of the study programme, etc).
- Each higher education institution also makes their annual reports publicly available on their web sites.

Finally, in order to manage the system effectively, specialised staff should be trained and assigned to the tasks of financial planning and management, both at the level of the Ministry and of higher education institutions.

2.3

Policy guidelines for reforming student financial support in Croatia

Based on the data and analyses presented in Part I, the ACCESS Expert Team developed policy guidelines for the reform of the student financial support system in Croatia.

It should be emphasised that student financial support policy is an integral part of higher education funding policy and should be included in any national debate on higher education funding. In this sense, separating this topic as a separate section from “higher education funding” is somewhat misleading. However, for pragmatic reasons, the ACCESS Expert Team chose to address the issues of institutional funding and financial support for students separately and consecutively, due to the complexity of each topic.

As noted in Part II.2, the ACCESS Expert Team is of the view that there can be no proper discussion about the link between tuition fees and equity in higher education, without examining in parallel student financial support policy. If Croatia decides on a funding system that includes tuition fees, or other fees charged to students by higher education institutions, additional mechanisms need to be developed to address the financial barrier that such fees represent and the important equity repercussions they could have. At the same time, the data analysed has also shown that, irrespective of whether tuition fees are charged or not, living costs for Croatian students (accommodation, meals, transport, etc.) are far more substantial than tuition fee costs, meaning that access to higher education would remain a serious financial challenge for certain groups of disadvantaged students, even if tuition fees were not charged. The role of student financial support is therefore to help students cover both the costs of study and living costs, with a special focus on disadvantaged students, irrespective of the existence of tuition fees.

The policy guidelines presented in this part primarily provide recommendations regarding concrete policy mechanisms and scenarios that could be most effective in order to reach the objectives of the reform of student financial support. As in Part II.2, however, the policy guidelines do not represent a fully-developed policy model that can be readily implemented by the Croatian government, since the project had neither the mandate nor the capacity to produce such a model. Any ideas taken from these guidelines would require detailed modelling and further discussion to be implemented.

The guidelines presented in this document were discussed at a project seminar in Rijeka (Croatia) in July 2012, as well as at a final Access Consortium meeting in Split in April 2013, and were broadly endorsed by vice-rectors and other representatives of Croatian higher education institutions, representatives of the Ministry of Science, Education and Sports and representatives of all partners in the ACCESS project.

Structural characteristics of the student financial support system

Establish a comprehensive and strategically targeted national student financial support system, which is coordinated with other sectors that provide support

Currently, Croatia effectively does not have a functional national system of student financial support. Instead, as shown in Part I.3, student financial support in Croatia is provided through a combination of different forms of support, that are provided by a range of institutions at the national and local levels, and that are neither fully centrally coordinated nor clearly targeted. Support is provided primarily via indirect student financial support (in the form of subsidies for meals, accommodation, transport, etc), via a small number of national grants, and with little emphasis on financial need as the criterion for awarding financial support.

As will be described below, the ACCESS Expert Team recommends introducing a new and comprehensive national system of student financial support that would be more equitable, efficient and effective than the current financial support arrangements in Croatia.

Since local and regional authorities currently provide a range of student financial support programmes (including scholarships, grants and transport subsidies), an important question is the impact the establishment of a national financial support system would have on such programmes. The ACCESS Expert Team considers that the establishment of a new national support system should not result in the phasing out of local and regional programmes. On the contrary, such initiatives should be further encouraged since they would represent valuable complementary measures to the main national system. However, a precondition of having effective national and local/regional financial support programmes in place would be a national financial support database, which would contain centralised data on recipients of student financial support, and would therefore ensure that students do not receive the same support from two different sources.

The decision on how the establishment of a new and comprehensive financial support system should be linked to existing national programmes is a more complex question. The national programmes currently in place include grants (provided by the Ministry of Science, Education and Sports and other ministries) and subsidies for meals, accommodation, transport, health insurance, as well as foregone tax income from non-taxable student work. The new system could replace all existing national support programmes, replace some national programmes, or existing programmes could remain in place as complementary measures.

Base the student financial support system on the principle of affordability and on achieving strategic objectives in Croatian higher education

The ACCESS Expert Team recommends that the primary objective of the Croatian student financial support system should be to ensure the affordability of higher education for all Croatian students, and to further the realisation of the country's strategic objectives for the higher education system. The principle of affordability means ensuring that no student is deterred from accessing, participating in and completing a higher education programme in Croatia based on an inability to meet the costs incurred in attending higher education. In this respect, the financial support system should be able to cover both the *direct* costs of study (fees and study materials) and the *indirect* costs (accommodation, living costs, etc.) for those who demonstrate financial need. This includes not only students of lower socioeconomic status, but other categories of students with demonstrated financial need such as those living away from home, students with children, or students who for other reasons need additional support (e.g. students with disabilities, Roma students, etc.). The principle of affordability will therefore ensure that the student financial support system promotes equity in higher education.

In addition to affordability as a primary objective, a number of other policy issues directly related to financial support can be addressed via the student financial support system. Depending on the system objectives defined in Croatia's strategy for higher education, the objectives that could be promoted through the student financial support system include:

- Increasing the number of students and graduates in certain academic fields.
- Reducing the length of study.
- Increasing access of particular under-represented or vulnerable groups.
- Promoting student excellence by rewarding high academic performance through merit-based scholarships.
- Encouraging mobility by providing grants for student exchanges and other international mobility.

Each of these factors could be incorporated into the student financial support system (which will be described below) as criteria that can determine either eligibility for a certain type of student financial support or the amount of support awarded. In the proposed model below, the ACCESS Expert Team recommends that the student financial support system initially focuses on only one of these additional strategic goals: reducing the length of study in Croatia.

As a final note, in the current student financial support system in Croatia, the criterion of merit and academic excellence has played an important role in determining tuition fee subsidies, access to grants and access to subsidised accommodation. Although promoting excellence among students is a legitimate policy objective and is used in a number of European countries as a basis for financial support, the ACCESS Expert Team recommends that merit should no longer be a criterion in determining financial support, since it is likely to disproportionately exclude students from disadvantaged backgrounds who are most in need of such financial support. While rewarding merit and excellence is important in any higher education system, the ACCESS Expert Team recommends that such grants be awarded at the level of individual higher education institutions and other public or private bodies.

Student financial support should be universally applicable based on demonstrated need: every student in Croatia should be eligible to apply for financial support

Every student enrolled at an accredited study programme in Croatia should be eligible for needs-based student financial support, irrespective of attendance at a public or private higher education institution, or on a full-time or part-time basis. The main impact of the universal applicability principle would be to change the current Croatian policy of excluding groups (such as part-time students) from all types of financial support, and excluding students from private higher education institutions from some types of financial support (grants).

The principle of universal applicability, however, does not mean universal *eligibility* to receive financial support (or a certain type of financial support), nor a universal right to *the same level* of financial support as all other students. Indeed, the student financial support system would determine eligibility both for receiving a certain type of financial support and the amount to be received based on financial need (and on other additional criteria, if necessary). Additionally, a number of additional criteria should ensure the fairness and efficiency of the system (e.g. a maximum number of years of study for which a student can receive student financial support). However, the criteria for receiving financial support are universally applicable to all students, thereby "levelling the playing field".

Financial support mechanisms

Make grants the central component of the student financial support system

International research (reviewed in Santiago et al., 2008) has shown that grants²² have a positive impact on access to higher education (in terms of volume of enrolments). Inversely, reductions in grants have been shown to negatively affect trends in access to higher education. In addition to the argument of the value of grants in terms of improving access to higher education, studies have shown that among low-income groups there is an even stronger correlation between receiving grants and retention, i.e. grants have a demonstrated impact on dissuading low-income students from dropping-out of higher education (Usher, 2006).

For the above reasons, providing grants represents an important measure for ensuring the affordability of higher education for students from disadvantaged groups, which has been proven to have a positive impact on equitable access. The ACCESS Expert Team therefore recommends that grants make up the central component of the student financial support system in Croatia.

Consider introducing state-guaranteed student loans as an additional mechanism in order to allow broader coverage of financial support to middle-income students

Student loans provide a way of addressing liquidity constraints by students who need to cover the costs of higher education, but do not have immediate access to funds at the time when the costs are incurred, either via their own income or through family support. State-guaranteed student loans can be repayable either in the conventional way (over a set period of time), or on an income-contingent basis (the loan is repayable only after graduates are employed and reach a specified income threshold), as well as via a graduate tax whereby a student incurs an obligation to pay a higher rate of income tax. In addition to being state-guaranteed, student loans may also have state-subsidised interest rates.

The significance of student loans for higher education systems is that they provide immediate financial support to students, but which becomes a form of cost-sharing over the long-term since the student must pay back the support received. Due to the lower cost (in the long run) of providing loans than grants, loans can usually be made available to a much larger number of students than grants.

Although student loans can provide a valuable source of support for a large number of students, they should not be viewed as a solution to increased access of *low-income* students into higher education. According to a review of international research on the impact of financial support on higher education access (Usher, 2006: 11), most studies show that while student loans are useful for ensuring retention among middle- and upper-income students, they are "ineffective among lower-income students". On the other hand, studies show that the converse is true for grants. Significant effects on retention through lowering the costs of higher education via grants "*only* occur among low-income students" (ibid – emphasis in original text). Usher explains that this difference is due to the fact that the problem faced by low-income students when accessing higher education is not a "cash-flow" problem, since this problem could be solved by loans. Instead, low-income youth tend to evaluate the cost-benefit ratio of higher education in a systematically different way than youth from higher socioeconomic backgrounds, and they are less likely to perceive higher education as a long-term investment. These students are therefore in need of financial incentives to enrol and remain in higher education.

²² The term "grant" refers to non-repayable financial support that is provided directly to an individual student. The term is used as a synonym for the term "scholarship", which is also used in other parts of this document. Other terms that are also used internationally for the same concept can include "bursary", "stipend" and "fellowship". Scholarships are, however, frequently awarded on merit.

Another argument against relying on loans to address equity of access is that there is an on-going debate internationally about whether the distribution of the benefits of higher education are equal according to students' socioeconomic background. Namely, there is some evidence from international research that the rate of return on a higher education diploma is positive for graduates from higher-income backgrounds, but actually negative for graduates from the lowest-income backgrounds (Usher, 2006).

For the above reasons, the ACCESS Expert Team recommends that if student loans are to be considered, they should be part of a comprehensive student financial support system combining grants and loans, with student loans as a form of support targeted primarily at students from middle-income backgrounds, and not low-income backgrounds.

From the point of view of equity, the ACCESS Expert Team also recommends that student loan repayment should be income contingent, in order to avoid debt problems for graduates who face unemployment or poorly paid employment. This is especially relevant within the context of the global economic crisis, and in the specific national context of Croatia, where unemployment (including graduate unemployment, particularly in the popular fields of management and law) is high. However, it should be emphasised that income-contingent student loan schemes carry a range of risks, which should carefully be considered. Sweden, for example, had an income-contingent loan in the 1990's and experienced major problems with its implementation, including gathering reliable data on graduate's income and how to address borrowers who moved abroad.

Phase out indirect financial support for students from the system and reinvest these funds in grants to improve equity and efficiency

As noted in Part I, the provision of indirect support to students in the form of subsidies represents the predominant form of student support in Croatia. The fundamental weakness of this form of support is that certain subsidies are made available to all full-time students, irrespective of whether they have any need for such support -this is the case for subsidised meals, which represent the greatest share of the overall student financial support system. The ACCESS Expert Team considers that such expenditure is inefficient, that it is unlikely to be effective (e.g. to achieve a specific policy objective) and is inequitable, since the support is spread thinly across the student population, including higher-income students, rather than providing adequate levels of support for those most in need.

Other weaknesses of the system of indirect student support include the fact that part-time students are excluded from this system and that students at certain higher education institutions may not have the same opportunities to access subsidised meals or accommodation. Additionally, subsidies for student accommodation are made available primarily based on merit, and only partially based on the criterion of need.

The ACCESS Expert Team therefore considers that if equity and affordability are to be central principles of the student support system, then indirect student support (subsidies and other) should be phased out from the system and be replaced by a grants (or grants and loans) system.²³ However, it is important to note that removing indirect student support does not mean closing down the infrastructure of student canteens and student accommodation, nor should it seriously impact funding of the service-providers. The difference would be in the source of funding for those services. Instead of being partly subsidised by the state, the service-providers would recover the entire cost from the students themselves who, depending on need, would have grants (or grants and loans) to cover these costs.

²³ This measure was also recommended by the OECD review team for Croatia in 2008 (Duke et al 2008: 35).

From the students' perspective, the removal of indirect student support would mean raising student expenditure for student meals and accommodation. However, according to the new system of student financial support, this increase would be off-set for all students who receive grants (and/or loans). However, since meals are currently made available to all full-time students, and since not all students will receive equal financial support from the new system, this change will indeed result in raising expenses for meals and/or accommodation for the wealthier groups of students.

Alternative policy option: Keep indirect financial support, but make access to this support more equitable

Taking away a subsidy that students have enjoyed for two decades, such as meal subsidies, is not a decision that is likely to be popular among students, despite the equity rationale for such a move. Although it would be the most equitable measure, if it is deemed that such a decision is not politically feasible, then the ACCESS Expert team recommends that a reform of the system of subsidies should be made to make these forms of support fairer and more equitable, by targeting more support to disadvantaged students and ensuring that support is available to all students irrespective of study location and mode of study (full-time or part-time).

Determining financial need and support levels

Introduce means-testing as the main basis for determining eligibility for the type and level of financial support

Means-testing is a method used for determining whether an individual or family qualifies for a government financial assistance programme, and is used to target assistance to those who are most in need. Means-testing either defines a certain income threshold (personal income and/or household/family income) below which point individuals or families are eligible to receive assistance, or it can provide variable amounts of support more progressively, by calculating the level of support based on the precise level of income.

The ACCESS Expert Team considers that a system based on the principle of affordability cannot function without a means-testing system. The Expert Team therefore recommends that means-testing be used as the main instrument to determine the type and amount of public financial support that students are eligible to receive during their studies. This would allow financial support to be concentrated primarily among the groups of students who come from families for whom the costs of higher education would be a significant burden and who lack the personal resources to cover these costs.

Although the method for providing financial support and determining levels of support will be proposed below (in section D), the general recommendation of the ACCESS Expert Team is to provide financial support progressively based on income. This as opposed to having a fixed income threshold, or "cut-off point", which would make support unavailable to students with income only slightly above the maximum eligible level, since this could result in a substantial financial disadvantage for these students.

Finally, there are a number of technical and administrative challenges for establishing a means-testing system, including the lack of a data system for reliably verifying income, as well as the lack of a tradition of honestly revealing incomes and assets in response to tax rules when seeking financial assistance (Johnstone, 2004). However, as will be developed below (in section E), the ACCESS Expert Team considers that such challenges can be addressed, including -if necessary -the use of other indicators or "proxies" for socioeconomic status, such as parental occupation, type of housing, or educational level.

Provide additional criteria for supporting specific groups of students that demonstrate the greatest need or disadvantage

The criterion of need does not relate exclusively to students' income or their families' income, but also relates to the types of costs that students are likely to incur, as well as to other factors that might require students to receive additional financial support (or incentives) in order to access and successfully complete higher education.

The elements that need to be taken into account in order to determine need could include:

- Accommodation arrangements of students (living with parents, in rented accommodation or student accommodation).
- The distance between students' homes and the institutions they attend.
- Being married and/or having children.
- Having a chronic illness or a mental or physical disability.

In addition to the criterion of need, other groups may be specially targeted through a student financial support system including groups that are defined as being under-represented or as particularly vulnerable with regards to higher education access. Such groups could include students from rural regions, mature students and students of a specific ethnic background. For Croatia, this could mean adding the groups that have so far been targeted through the State Grants programme, such as children brought up in institutional care, children of war veterans and students from "regions of special state concern", as well as Croatia's special grant programme for Roma students.

The new student financial support system could address the needs of any of the above groups by including additional criteria, coefficients or formulas to determine the type or level of support received by such students, *in addition to* the criterion of means-testing.

Introduce measures to ensure the efficiency of student support, and to promote timely completion of studies

At the same time as promoting equitable access to higher education, student financial support can also contribute to the achievement of other strategic goals of the higher education system, such as excellence, effectiveness, mobility, etc. The student financial support system should also ensure that its funds are used efficiently and transparently.

The ACCESS Expert Team recommends that one measure that could be used to both ensure efficiency of spending and promote the strategic objective of effectiveness would be to limit the period during which students are eligible to receive financial support and/or to link eligibility to receive financial support to study progress. In this way, the system would ensure that students could not receive public subsidies indefinitely, and would dissuade individuals to enrol in higher education primarily in order to access financial support. It would also provide an incentive for students to complete their studies on time.²⁴

Such an approach presupposes that there is a well-structured and functional external quality assurance system in place. Students cannot be expected to complete their studies on time if higher education institutions do not secure and respect minimum European Standards and Guidelines for Quality Assurance.

²⁴ However, the system should consider what exceptions should be made to the criterion of progress for certain categories of vulnerable students (e.g. students with disabilities) and should consider different progress requirements for students of lower socioeconomic status.



Alternative policy option: Progress-dependent financial support might provide a better incentive than the disincentive of progress-dependent tuition fees:

As noted in Part I.2, one of the main objectives of the linear tuition fee model was to improve progression and completion rates. However, one of the potential criticisms of such a policy, as noted by the ACCESS Expert Team, is that it is based on the principle of penalising students for slow study progress. Policy-makers could therefore consider whether using a different approach, such as limiting access to financial support based on a maximum period of entitlement to financial support, might represent a more effective and less unpopular measure, since this would be based on financial incentives instead of “fines”.

Another measure that would ensure efficiency is to have a special set of criteria for students who are employed full-time during their studies (“genuine” part-time students). Such students should still be eligible for financial support, however, yet due to their income situation the threshold for accessing different forms of financial support would be raised (which would result in them receiving lower levels of support and/or being more likely to receive loans than grants).

Illustration of a similar policy model: Austrian Study Grants programme

The Austrian Study Grants programme, which is received by around 20% of Austrian students, was analysed in detail during the ACCESS project and provides a model that addresses a number of recommendations made in this report.

Type of support: the programme consists of grants only, without any loans. The grants range from 5,700 EUR per year (475 EUR per month) to 8,148 EUR per year (679 EUR per month), depending on a range of criteria.

Target groups: grants are provided primarily based on a means-test of the income of students and their families. In addition, the following groups are eligible for additional support: married students, students with children, orphans, students living far from the permanent residence of their parents and mature students (who have returned to university following employment). Students with disabilities are a special category that is eligible for even higher grant amounts.

Period of entitlement: the eligibility period for receiving financial support is the legal duration of the study, with one additional semester per year of study (thus six years for a four-year programme). However, many exceptions to this rule do apply, including for students with children, or due to issues such as illness, disability, army service/civil service and studying abroad.

Eligibility limits: financial support in Austria is dependent on the so-called “favourable success” criterion, whereby an appropriate number of exams/ECTS points needs to be achieved in order to continue to receive the study grant for the following academic year. As an example, the minimal level is 30 ECTS points after 2 semesters (from a maximum of 60 ECTS points).

Finally, Austrian students receiving financial support are allowed to change their field of study a maximum of two times, after which they are no longer able to receive financial support.

Source: Austrian Study Grants Authority (2011)

Determining coverage of support and the levels of grants and/or loans

Focus support on the students in most financial need, but provide some support to the majority of students

One of the key questions to address when designing a comprehensive student financial support system is what proportion of students should receive financial support. On the one hand, a student financial support system could aim to provide support to all students, or at least a majority of students (so-called “universal” support systems, such as those in Sweden, England and the Netherlands). On the other hand, other systems target support that is provided to a substantial, but relatively smaller proportion of students (as is the case in Austria, where 20% of the student body receives a study grant; in Germany, where 17% receive the so-called *BAföG* grants and loans; and in Slovenia, where 23% of student receive a grant) (Doolan et al., 2013).

From the point of view of ensuring affordability and equitable access to higher education, the “minimum standard” should be that the state only covers the costs when the family or individual cannot afford to do so (the state as a “funder of last resort”). This would mean that means-tested support would be provided to a minority of students who have demonstrated financial need.

While such an approach does target available funds in the most equitable way possible, the ACCESS Expert Team considers that such an approach places all students who are above the maximum income threshold, but who are not necessarily from affluent families, at a financial disadvantage. In other words, students should not have to face significant financial consequences for being above the “cut-off” point of the income threshold. The ACCESS Expert Team considers that the optimal approach is one in which the student financial support system provides some support for all students (or the majority of students), and more support for disadvantaged students.

Alternative policy option: Focus support on disadvantaged students only

Although the optimal option would be to provide broader support, it is possible that such a policy scenario is technically, politically or financially unrealistic in Croatia. As mentioned above, the alternative to this policy should be, as a minimal standard from the point of view of equity, to ensure that support is secured for low-income students and other disadvantaged groups, irrespective of the tuition fee policy in place.

These policy scenarios are developed in Part II.4, including a model of their relative costs.

Provide levels of support that cover a large proportion of the total costs of the students most in need, and some support for all other students

Another key question to address when designing a comprehensive student financial support system is determining what maximum and minimal amounts of financial support should be provided. More precisely, the questions that need to be answered include: what proportion of students’ costs should the student financial support system cover? Should all groups have the same proportion of costs covered, or should the proportion vary according to income groups or other criteria? Should any group have 100% of their costs covered? Should the mix of grants and loans vary for different income groups?



The ACCESS Expert Team recommends that student financial support should cover the full costs of study and living expenses for the students most in need (i.e. 100% of costs), but that the proportion of costs to be covered should be reduced progressively for students in higher income categories. At the same time, however, the ACCESS Expert Team also believes that a minimal level of cost-sharing should be encouraged, since higher education does bring private returns, and that this should also be the case for low-income groups. However, the system must ensure that the level of cost-sharing does not place low-income students in financial difficulty, nor deter them from higher education access and progression. The way to ensure this principle of cost-sharing would be by combining grants and loans, whereby lower income groups would receive a higher-level grant and lower-level loan, while higher income students would receive the inverse.

Calculate the proportion of students receiving financial support, and the types and levels of support by creating five income groups

In order to have a comprehensive student financial support system that is not based on a specified income threshold as the basis for receiving support, and which aims to provide variable amounts of support to students in the system, the method recommended by the ACCESS Expert Team is to use a system of grouping students by level of family income (and/or own-income) into five groups, ranging from the students with the highest family income, to the students with the lowest family income. An illustrative example is included below:

Table 2.4.a Illustration of how to create income groups for the purposes of determining student financial support eligibility, based on household income

Income group	Monthly parental household income (using a fictional currency X)
Group 1 (highest income)	Over 5000 X
Group 2	3000-5000 X
Group 3	2000-3000 X
Group 4	1000-2000 X
Group 5 (lowest income)	Under 1000 X

A crucial aspect to understand in this system is that the income-groups are not determined by the income distribution of the student population, with Group 1 being the wealthiest 20%. Rather, they are determined by policy-makers as a tool for providing financial support. In other words, the system could set a low threshold for the highest income group (Group 1), so that 50% of the students fall within the group and would receive low levels of financial support. On the other hand, the system could use a higher threshold for Group 1, which would mean that a higher proportion of students would receive a more significant level of financial support.

As a fictional illustration of the former scenario, the following table shows the relationship between income groups and the actual proportion of students that fall within each income group:

Table 2.4.b Illustration of how to create income groups for the purposes of determining student financial support eligibility, based on household income

Income group	Monthly parental household income (using a fictional currency X)	Percentage of students in each group
Group 1 (highest income)	Over 3000 X	50%
Group 2	2000 - 3000 X	20%
Group 3	1500 - 2000 X	15%
Group 4	1000 - 1500 X	9%
Group 5 (lowest income)	Under 1000 X	6%

Once the five different income groups are defined, the student financial system would need to define the percentage of the students' costs that should be covered for each of the groups (e.g. how the proportion should vary according to income groups). Additionally, a grants-loan proportion should be defined for each group, if applicable (e.g. should low-income students receive a 100% grant, and high-income students a 100% loan? Or should there be a minimum of 25% loan for the lowest-income group? etc).

Use a formula-based grid to determine financial eligibility and calculate the amounts of financial support

Based on the recommendations above, the proposed student financial system is already considerably complex as it now combines the following factors:

4. Determining the proportion of all enrolled students who are eligible to receive financial support by defining the five income groups.
5. Determining the proportion of overall study/living costs that should be covered by financial support provided for each of the income groups.
6. In the case of a grants/loans mix, determining the proportion of grants and loans to be provided to students in each income group.

The new student financial support system should therefore use a formula-based system which includes all the above-mentioned factors and which can easily result in calculations of financial support amounts per student and of the total cost of the system. The grid for such a formula is presented below, along with an illustrative example.



Table 2.5.a Grid for calculating eligibility for student financial support, type of support and levels of support

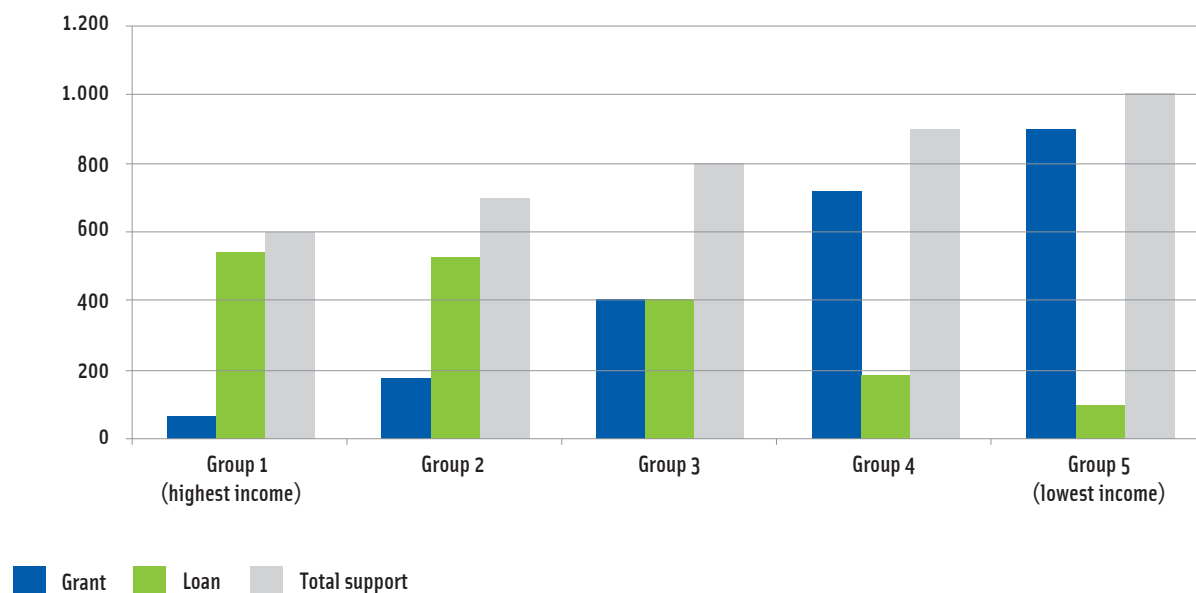
Income group	% Student in each group	% of assessed costs met	% of support as grants	% of support as loans
Group 1 (highest income)				
Group 2				
Group 3				
Group 4				
Group 5 (lowest income)				

Table 2.5.b Illustrative example of completed grid for calculating eligibility for student financial support, type of support and levels of support

Income group	% Student in each group	% of assessed costs met	% of support as grants	% of support as loans
Group 1 (highest income)	20	60	10	90
Group 2	20	70	25	75
Group 3	20	80	50	50
Group 4	20	90	80	20
Group 5 (lowest income)	20	100	90	10

This illustration demonstrates that such a financial support system can provide a way of providing progressive financial support based on income levels established through means-testing. Presented in a different way, the above illustration can be shown as a graph, using a fictional currency with a maximal value of financial support at 1,000.

Figure 2.1 Illustrative example of types and levels of student financial support awarded to different income groups (using fictional currency X)



Integrate additional factors into the financial support calculations to provide for other students in financial need or disadvantaged groups

After calculating the basic financial support to be provided to students based on means-testing, further methods also need to be developed for determining additional funding for groups of students identified as priority groups for financial support. These include, for example, students who live away from home, students with children, students with disabilities, etc. The options for achieving this include increasing the total financial support by a certain coefficient depending on the vulnerable group the student belongs to, or by setting specific higher levels of support for certain groups, or for certain needs.



Illustration of a similar policy model: Austrian Study Grants programme

The Austrian Study Grants programme provides additional support for certain categories of students, by defining different maximal levels of funding depending on the group, as well as by providing additional funding to targeted groups, on top of the original grant amount. The categories of grants and their amounts are the following:

Basic, means-tested grant: up to 5,700 € / year (475 € / month)

Means-tested grant for special categories of students: up to 8,148 € / year (679 € / month)

The groups covered by these grants are married students, students with children, orphans, "self-supporters" (mature students) and students studying far from the permanent residence of their parents.

Additional grant: additional amounts for students with children (up to an 804 € to the original grant) and disabled students (up to an additional 5,645 € to the basic grant).

The manner in which the total grant is calculated:

	Maximum study grant (for basic grant or for special categories of student)
+	Additional amount for children/handicap
-	Parental maintenance payment
-	Maintenance from spouse
-	Own income of the student (> 8,000 €)
-	Family allowance/child tax credit
=	Total study grant per year

** Explanation: Family allowances and tax credits are provided in Austria to families whose children are in (higher) education. These are not relevant to the Croatian case.

Source: Austrian Study Grants Authority, 2011

Administration and management of the student financial support system

In order for such a comprehensive and complex system to be established and to be functional and sustainable, there are a number of administrative and technical challenges to be addressed.

Develop the infrastructure for establishing a functional means-testing system

Means-testing requires a transparent way of documenting and verifying income-levels of students and/or parents as the basis for providing financial support. As a rule, the technical pre-conditions for successful means-testing include “pervasive and generally workable income tax systems with high degrees of voluntary compliance that capture most sources of taxable income, and allow reasonably reliable calculation and monitoring of family means, or need” (Johnstone, 2004). In other words, means-testing usually requires a high-quality tax system which allows rapid, centralised access to all relevant data on individual income and assets, and which can allow for an “automated” assessment of means (and corresponding need). The key question is whether Croatia currently has the necessary infrastructure within its tax system to carry out such a task.

However, even if there is currently no system for a centralised and “automated” assessment of means, there are other ways of estimating means or need which are used in other countries. Such systems, which are generally in place in middle- or low-income countries, are based around the students or families themselves needing to demonstrate and document financial need. According to Marcucci and Johnstone (2010) such systems of means-testing can include the following mechanisms:

- Voluntary reporting of income and/or assets.
- Verification of income/assets.
 - With official documentation (tax returns, pay stubs, bank statements) and/or with a third party (income tax authority, bank, or employer) when possible, or
 - With a stipulated set of verifiable categorical indicators such as: parental occupation/educational level, household composition, structure of family dwelling, automobiles owned, etc.

Since this system may rely on data that could be misrepresented, Marcucci and Johnstone note that measures to enforce such a means-testing system would require random audits to check information provided (such as requests for additional documentation, interviews or home visits), as well as appropriate sanctions for misrepresentation (such as cancellation of the student support, penalties, or even legal prosecution). This would deter abuse of the system and would ensure that the resources are indeed distributed equitably, according to demonstrated need.



Carefully consider the risks and the financial and technical complexities of setting up a public student loan scheme

The initial assessments that need to be made when considering introducing student loans are whether there is a general perception of loans as an acceptable form of student financial support among students, whether there is sufficient demand or interest for student loans by students, and under what conditions (i.e. interest rates, income-contingency, grace periods, repayment periods, etc.). Student representatives in the ACCESS project emphasised that a loan scheme runs the risk of being rejected in Croatia, especially within the context of an economic crisis and with the financial risk for students in terms of unemployment after graduation. The fact that student loans were unsuccessfully introduced, and subsequently removed, in Slovenia in the early 2000s, suggests that a similar risk may exist in Croatia.

If it is assessed that there is a serious demand for student loans, then the next challenge to address is how to design a loan system that is affordable, that is well-managed and, most importantly, that is financially sustainable. This would include assessing the probability of loan default in Croatia (loans that are not repaid by the recipients of the loans). The design of the loan system increases in complexity (and cost) if options such as subsidising interest rates or setting up income-contingent loans are part of the system. Overall, a comprehensive loan system would require an initial substantial investment and would be complex to manage, which has led to recommendations by the OECD, for example, to initially launch loans on a means-tested basis, but to make loans universally available once the system reaches maturity (Santiago et al., 2008).

A feasibility study on establishing student loans systems in Southeast Europe (Bosnia and Herzegovina, Croatia and Kosovo) was launched in 2013, led by the German Development Bank (KfW). The ACCESS Expert Team recommends for policy-makers to closely monitor the results of the feasibility study and to assess the demand for student loans in Croatia and to consider which loan options would be the most sustainable and best-suited to Croatia's needs.

Consider establishing a specialised agency for implementing the student financial support system

Any large-scale system of student financial support, especially for administering loans, would require an independent agency to administer the system. This is the case in Sweden and the Netherlands (administering both grants and loans) and in Austria (administering study grants).

Establish a national database on student financial support

Finally, a national database on student financial support is essential for tracking other grants received by students (e.g. from local or regional government), as well as for tracking study progress, and for managing application and administrative documentation of the recipients of financial support.

2.4

Assessing the broad financial impact of reforming student financial support and tuition fee policies in Croatia

In this concluding part of the publication, the ACCESS Expert Team aims to give a broad indication of the likely financial implications of the two student financial support policy options identified in Part II.3 as being the most suitable options in terms of ensuring the social dimension of higher education. While these financial implications are largely independent of the changes to the overall institutional funding mechanisms proposed in Part II.2, the question of which tuition fee policy will be in place in parallel to the student financial support system is clearly crucial, and can have a major impact on the total costs to the state to support such policies.

The Expert Team has developed two **simplified models** of the aforementioned student financial support systems, and provided a **broad indication** of their financial implications within three different tuition fee policy options. For the purposes of estimating these financial implications, the Expert Team used the best data that was available, recognising that much of it is imperfect. The models and policy scenarios described below are therefore not fully developed and would require far more detailed design to be accurately cost calculated, which is beyond the scope of the ACCESS project. The models and policy scenarios are intended to illustrate the difficult policy choices facing Croatia regarding student financial support and public/private higher education funding and to identify the major “cost-drivers” underlying different policy choices (i.e. which models or policy choices cause the largest impact in terms of cost).

Defining possible student financial support systems and tuition fee options for Croatia

Providing comprehensive student financial support to most students or targeted financial support to the most disadvantaged students are the two most equitable models

In Part II.3 of this report, the ACCESS Expert Team developed policy options for an equitable Croatian student financial support system that was based in part on a comparative study of support systems in the other countries participating in the ACCESS project. In the section that follows, the Expert Team has taken the student financial systems deemed as most equitable and has designed two simple models:

- **System 1: Comprehensive student financial support system**

In such a system, all Croatian students would be eligible for some form of direct financial support from the system (as grants and/or loans). However, the level and type of support (the proportion received as a grant and/or loan) would vary by socioeconomic status. As a general rule, the lower socioeconomic status of students, the higher proportion of their assessed costs would be met by the support system, and the lower proportion of the support would be received in the form of a loan. This system was described in Part II.3 of the report as the “ideal” system in terms of equity, although it clearly would have substantial financial implications for public funding of higher education.



- **System 2: Student financial support system targeted at students of lower socioeconomic status**

In such a system, which would have less extensive coverage and more modest financial implications than the comprehensive system outlined above, only the neediest of students in terms of socioeconomic status (or other prioritised groups) would receive grant and loan support. For the purposes of scenarios and models, this group has been set arbitrarily at 20% of the Croatian student population. In Part II.3 of the report, it was argued that such a system would be the “minimum” requirement in terms of ensuring equity.

Although the issue of the viability of a **Croatian student loan system** is by no means certain,²⁵ both of the student financial support systems developed in this section include a “social student loan scheme”. This refers to a public loan scheme that operates on the basis of:

- Ensuring a public guarantee for the loans taken out by students (the state agrees to cover the costs in case of student loan default, i.e. students are unable to repay the debt).
- Ensuring safeguards for students and graduates who for various reasons (health, unemployment, poorly paid employment, parenthood, further study, etc.) are not able to meet the scheduled repayments. This would ensure the “social” element of the loan scheme, rather than it being based on the strict enforcement of repayment rules, irrespective of students’ specific circumstances.

Once again, it is beyond the scope of the ACCESS project to design such a loan system. It has been included in the models because it has a significant impact on the public cost of student financial support. It is also a helpful mechanism in terms of dealing with imperfect means-testing procedures: students or families with “hidden resources” will clearly accept grants greater than their actual requirements but are much less likely to take out loans they do not need.

It should be emphasised that the ACCESS Expert Team is not advocating a social loan scheme as an ideal equitable student support system, but only as one potential element of a student support system. If on the grounds of equity, social policy or financial viability Croatia decides against such a social loan scheme, then the ACCESS model described below can be adapted accordingly. The consequences would be that more public investment would be required to maintain the different levels of support to students (as a percentage of the assessed costs met for the five groups) or that a given level of public expenditure would be able to cover a lower proportion of assessed student needs.

The tuition fee policy options to be combined with each of the student financial support models range from no tuition fees to universal tuition fees

As indicated at the start of this section, student financial support systems are obviously impacted by the tuition fee policies in place in a higher education system. In the scenarios developed below to estimate the financial impact of each student support system, the Expert Team has worked with three possible options for tuition fee policies.

- **Option 1: No tuition fees.**

In Part II.2 it was indicated that this would be the “ideal” policy in terms of equity, since it would remove a potential financial barrier to accessing higher education for disadvantaged groups.²⁶ However, similarly to providing comprehensive student financial support, such a policy has major financial implications. Nevertheless, the Expert Team decided to include this policy option in the modelling exercise.

²⁵ See the discussion in Part III and particularly the reference to the German Development Bank (KfW) feasibility study on establishing student loans systems in Southeast Europe.

²⁶ Although the policy option is referred to as “no tuition fees”, in reality there would be limits to the number of degrees and years for which an individual student would be entitled to study without paying tuition fees.



For the purposes of assessing the financial impact of such a policy option on the state budget for higher education, the Expert Team has assumed that the total tuition fee revenue that higher education institutions would “lose” by abolishing tuition fees would be compensated by a corresponding increase in funding to higher education institutions by the Croatian Ministry of Science, Education and Sports (hereafter: MSES) to safeguard the financial sustainability of the sector. The assessment of the financial impact of this option (developed below) indicates that this would require a 31% increase in the MSES budget for higher education.

- **Option 2: Tuition fees for all**

This policy option is based on maintaining the current (2010) levels of tuition fee revenue by higher education institutions, but making the tuition fee system more equitable than in a dual-system whereby some students pay fees and others do not (a practice which is effectively continued in the linear tuition fee model). Instead, the tuition fee burden would be distributed across all students rather than exclusively on those outside the state-funded quota (and part-time students) or those who do not reach the minimum ECTS threshold to maintain their status as students who do not pay fees. Based on the EUROSTUDENT survey, this average tuition fee would be **5,000 HRK/670 EUR per year**.

- **Option 3: Higher tuition fees for all**

The final tuition fee policy option is based on the average level of tuition fees currently (2010) paid by students who are charged fees (full-time fee-paying students and part-time students). Based on EUROSTUDENT data, this average tuition fee amounts to **8,800 HRK/1,170 EUR per year** (which is 75% higher than the “tuition fees for all” policy option). This is arguably still more equitable than the dual system, but since it increases the overall volume of tuition fees in the system, the need for an equitable student financial support system is even more important than in the previous two options.

While tuition fees in excess of 1,000 EUR per year are relatively high in European terms, they would still be significantly below the actual costs of providing higher education (the new UK tuition fees are over €10,000 per year).

In the mirror image of the situation outlined in the policy option with no tuition fees, the MSES would reduce its levels of funding to institutions given the higher aggregate tuition fee income introduced into the system and would re-allocate these “savings” to help finance the improved student financial support system such a policy change would require. The ACCESS model estimates that the introduction of higher tuition fees for all would allow MSES to reallocate 23% of its current higher education budget to the student financial support system.²⁷

Important assumptions underlying the model

Students rely heavily on family and work as sources of financing, which raises equity concerns

The EUROSTUDENT survey provides detailed data on how Croatian students (in 2010) meet the direct costs of study and associated living costs. This data (presented in Chart 4.1. below) demonstrates conclusively the absence of a strong student financial support system in Croatia, with only 13% of the costs being met by grants and loans.²⁸ The dominant sources of financing are family and savings (54%) and paid student employment (29%). As demonstrated earlier in this

²⁷ Although it should be noted that this scenario assumes that the overall levels of public funding do not increase, even through these were identified as being low in comparison to EU countries.

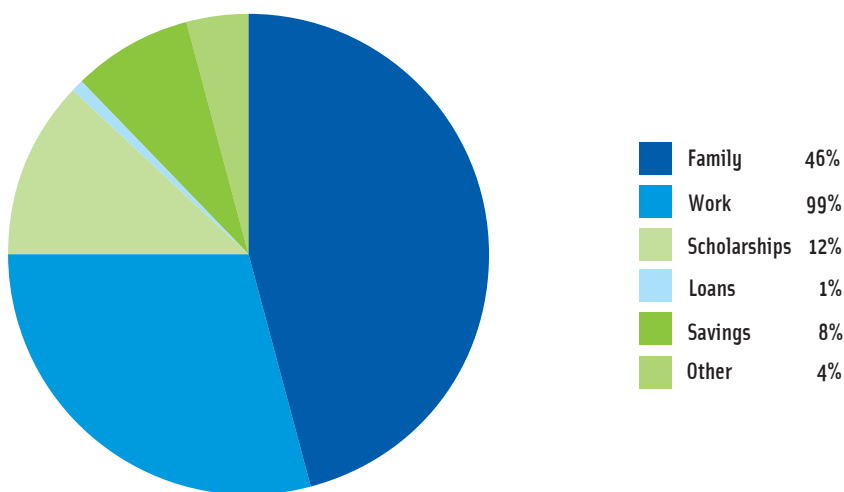
²⁸ It should, however, be noted that Chart 4.1 does not show indirect financial support in the form of subsidies, and these do have an impact on lowering the living costs of students.



report, the former raises major equity concerns for students whose families are not able to support them financially, while the latter may be an indication of excessive paid employment on the part of Croatian students. This in turn may have negative consequences for study progress, particularly for students of lower socioeconomic status, who were shown as being more likely to work, according to EUROSTUDENT data.

Therefore, there is a strong case for a larger role of the state in financially supporting students during their studies, particularly those from disadvantaged groups.

Chart 2.2 Estimate of current sources of financing for student study costs (2010)



Source: Extrapolated from the national EUROSTUDENT survey report (Farnell et al., 2012)

Although the state should financially support students, especially from disadvantaged groups, self-earned income should also play a part in overall student financing

One of the fundamental questions in designing and modelling a student financial support system is what proportion of the costs of study should the system meet, and how should this vary by socioeconomic status. In many European countries, an important part of this consideration is the role of paid student employment in this equation. In other words, a decision needs to be made regarding the extent to which it is desirable and reasonable to expect students to fund a part of their study costs independently through paid work, and for such an expectation to be factored into the design of the student financial support system.

The Expert Team considers that the Croatian student financial support system should be designed in such a way as to expect that students can fund part of their living costs through part-time work. Chart 4.1 suggests that in 2010 Croatian students on average were earning 9,135 HRK/1,215 EUR per year from employment (29% of 31,500 HRK/4,200 EUR). This corresponds to approximately 57 working days per year (estimated based on a daily rate of 160 HRK/21 EUR per

day).²⁹ If 20 of these days are assumed to be during the holidays, then students would be working for about eight hours a week during the term time. The Expert Team does not think this is an excessive workload that would have a negative effect on study progress. For this reason, it has been assumed in the model that students are able to raise 20% of their study and living costs from part-time work: on average 6,300 HRK/840 EUR per year or 40 working days per year (20 working days during the holidays and four hours per week during the semester).

In comparative perspective, there is a strong case for increased expenditure on higher education in Croatia, especially student financial support

In the comparative studies on higher education funding in Croatia and the other countries participating in the ACCESS project (as well as in comparison with EU-27 data), the following data was collected:

Table 2.6 Public and private expenditure on higher education in selected European countries and percentage of public expenditure as direct spending on institutions (year: 2010)

Other countries in ACCESS project	Public HE expenditure as % GDP	Private HE expenditure as % GDP	Total HE expenditure as % GDP	% of Public HE expenditure as direct expenditure
Austria	1.49%	0.18%	1.67%	75%
Germany	1.20%	0.20%	1.40%	82%
Hungary	1.02%	0.30%	1.32%	85%
Slovenia	1.20%	0.18%	1.38%	78%
Sweden	1.82%	0.17%	1.99%	75%
EU 27	1.22%	0.39%	1.61%	75%
EU 2020 target			2.00%	
Croatia Baseline 2010	0.82%	0.28%	1.10%	78%

Source: Eurostat (in Doolan et al., 2012)

This comparative data suggests that:

- Public expenditure on higher education in Croatia is relatively low.
- Private expenditure on higher education in Croatia, in contrast, is relatively high compared to the other countries participating in the ACCESS project.
- The mix of public direct support (to institutions) and public indirect support (to students) is similar to other countries in the study, although it is questionable whether all indirect subsidies are being reported consistently across the countries.

²⁹ This is a rough estimate based on information provided by Croatian students consulted within the project, who stated that the average rate for student work is around 20 HRK/2.66 EUR net per hour (although it can go down to 15 HRK per hour, or up to 25 HRK per hour), and that this is the predominant fee for administrative work. This results in 160 HRK/21 EUR net per day for student work.



Croatia's current public expenditure level on higher education relative to other EU countries, and in relation to the EU 2020 target, suggests that there is a strong case for increased public spending on higher education, including on student financial support.

Technical aspects for the creation of a model

Based on the student financial systems described above, the ACCESS Expert team developed a model (hereafter: the ACCESS model) which defined:

- Five different groups of students (by socioeconomic status).
- The proportion of the students' assessed costs that would be met by student financial support.
- The proportion of this support that would take the form of grants and loans.

The basic ACCESS model then has two variants for the two student financial support systems defined above (comprehensive and targeted). The creation of the ACCESS model required a number of technical elements and different data sources in order to create formulas that would calculate the estimated financial impact on the public and private expenditure on higher education of the different student support systems and tuition fee policy options examined. The process also required a number of estimates and assumptions to be made by the Expert Team. These technical aspects are highlighted below.

Sources of data used and assumptions made for assessing the financial impact of introducing new student financial support systems and tuition fee policies

Without explaining in detail the entire process or the different calculations and formulas created, the following parameters should be taken into account:

- **Data on higher education budget, Croatia GDP and other indicators:** the main sources of data have been the Croatian Bureau of Statistics and Eurostat data for 2010, verified by data from the Ministry of Finance on expenditure on higher education.
- **Total costs of study as basis for calculating value of grants and loans:** the average costs of study (direct study costs and living costs) have been set at 31,500 HRK/4,200 EUR per year across all student groups, based on EUROSTUDENT. The average is used despite the fact that it is known that the average disguises significant discrepancies in the costs of study: for example, fee paying students, those living away from home, and students with children will have higher costs.
- **Assessment of cost of establishing a public student loan scheme:** while this is a very complex issue that needs more study, the ACCESS model assumes that the capital required for the social loan scheme comes from a source outside the MSES budget, yet that MSES contributes 33% of the value of the social loans granted each year to a government guarantee fund against eventual "bad debt".
- **Current spending on indirect financial support remains the same:** the Expert Team has assumed that indirect financial support for students (subsidies for meals, student accommodation, transport, health and tax-free work) continue at current levels. This assumption has been made solely to keep the ACCESS model simpler to develop. The Expert Team still believes (as argued in Part II.3) that some of these indirect subsidies should ideally be removed from the system and the funds reallocated into the new student financial support system.



- **Current spending on direct financial support (from MSES and other institutions) remains the same:** the ACCESS model assumes that the value of MSES and other grants (extrapolated from EUROSTUDENT) continues at current levels and that a national database will be introduced so that the student financial support system can reduce its support to students who have grants from other sources.
- **Total number of students as basis for calculating total cost of system:** the ACCESS model is based on setting the total student population of undergraduate and graduate students in the Croatian higher education system at 170,000 students. The Expert Team has deliberately included into this figure the number of students enrolled in the so-called “*apsolvent*” status, i.e. students who have completed coursework but must finish their remaining exams and submit their final dissertation. This group of around 20,000 students are no longer recorded in official statistics on student numbers, but are still technically enrolled as students, they still generate work for teaching and administrative staff of their institutions, and may have access to certain subsidies. Finally, it should also be noted that the figure of 170,000 is deliberately used as an approximation. Precision is not essential to the ACCESS model, which only aims to provide a very broad overview of financial implications.

Limitations of data used in the modelling process

The following aspects of the availability and quality of higher education data should be taken into account when considering the ACCESS model presented in this section:

- **Limitations of EUROSTUDENT data on student finance:** the Croatian EUROSTUDENT survey results are an important new source of data for Croatian higher education, and the statistically representative survey sample provides policy-makers with robust national data on the social profile and living conditions of students in Croatia. The EUROSTUDENT survey is also the first study that has been carried out on the costs and income sources of Croatian students. At the same time, however, as is the case with most surveys that request information regarding expenses and/or income, it should be noted that a large number of participants choose to withhold this information, whereas some other students, who are dependent on others for income, may not have a clear idea of their actual monthly spending or income. Therefore, extrapolating financial data from the EUROSTUDENT results to estimate costs and income sources of the complete population of around 170,000 undergraduate and graduate students in Croatia may not capture the full picture in terms of student costs and sources of income. This limitation should be taken into account when examining the financial implications presented in this section.
- **Continual changes to tuition fee policy in Croatia:** one of the challenges the ACCESS project has faced has been a number of policy changes over the life of the project (2010–2013). One of the major changes has been the progressive introduction of a new linear tuition fee model.³⁰ This policy is relatively new and its impact on the average amount of fees paid by students (and the resulting total income of higher education institutions from charging tuition fees) is not known, nor is it clear how it impacts the overall level of public expenditure on higher education. For this reason, the Expert Team has developed the ACCESS model and assessed its financial implications using data on tuition fees and on public expenditure from 2010. In this year, the linear model of tuition fees was in an early stage of implementation.
- **Limited data on indirect financial support to students:** no comprehensive data has been found on the cost of indirect financial support to students that fall outside the MSES budget. This indirect financial support relates primarily to subsidies for transport, health care, as well as to the loss of potential tax revenue from students being able to work

³⁰ As elaborated in Part II, according to the linear tuition fee system, the MSES pays tuition fee subsidies to higher education institutions at a standardised rate per student, in order to cover the full tuition fee costs for full-time students entering first year Undergraduate and Master's studies. If the enrolled students succeed in acquiring a specified number of ECTS credits (set at 55 credits) every academic year, MSES will continue to provide these tuition fee subsidies to higher education institutions, thereby allowing those students to study without paying tuition fees until they graduate. However, if students fail to reach this ECTS threshold, institutions may charge tuition fees proportionate to the ECTS shortfall.



tax-free (within certain limits). This means that the projections on the financial impact underestimate the total cost of the student financial support system (although this is also the case with current Eurostat/government figures).

- **Limited data on grants granted by institutions other than MSES:** the EUROSTUDENT survey results indicate that there are significant amounts of grants available to Croatian students beyond the limited number offered via MSES grant programmes. The Expert Team has therefore extrapolated the results of the EUROSTUDENT survey sample to the full student population to estimate the total amount of grant funding in the system (by multiplying the average annual value of grants in the overall student income structure by the number of students -170,000).

Based on the above assumptions and data, the ACCESS model measures the financial impact of different tuition fee/student financial support system scenarios in terms of:

- Changes needed in the MSES total budget for higher education.
- Public and private spending on higher education as % of GDP.
- Direct and indirect proportions of public spending on higher education.
- Croatia’s position in comparison to other countries participating in the ACCESS project and the EU 27.

Overview of the ACCESS model

The fundamental element of the ACCESS model is the student financial support grid or matrix introduced briefly in Part II.3. In the interests of simplicity, five “Socioeconomic Status” groups of equal size have been created, although a student financial support system could opt for many different permutations in terms of the numbers and sizes of groups. For each group, the grid indicates the proportion of the students’ assessed costs that would be met, and the proportion of this support that would take the form of grants and loans.

Design of ACCESS model (version 1): Comprehensive student financial support

The comprehensive student financial support system is the most complex to turn into a model, since it involves setting a number of parameters. The table below presents what proportion of costs the ACCESS model proposes to cover for each of the five socioeconomic groups, and what proportion of support should be in the form of grants or loans.

Table 2.7 The ACCESS model (version 1): A comprehensive student financial support system for Croatia

Socioeconomic status groups	% of students in group	% of assessed needs met	% of financial support as grant	% of financial support as loan
Group 1 - highest socioeconomic status	20%	20%	30%	70%
Group 2	20%	30%	40%	60%
Group 3	20%	50%	50%	50%
Group 4	20%	60%	60%	40%
Group 5 - lowest socioeconomic status	20%	70%	70%	30%

The percentages placed in the ACCESS model represent a relatively conservative proposal, which does not propose to cover full costs for any group (including the 20% with the lowest income) and places a relatively large emphasis on loans. The reason for this is pragmatic, as the system is very expensive. By way of illustration, if a more generous student financial support model would be set up (covering up to 100% for the lowest income group) and with a variable loan component (50% for the highest income group decreasing to 20% for the lowest income group), the ACCESS model estimates this would require an 84% increase in MSES spending on higher education (assuming there is no change in the tuition fee system). For this reason, the Expert Team has opted for more modest coverage in terms of assessed needs, and for a higher contribution from loans as shown. Clearly, however, there are many other alternatives that could be modelled.

The outcome of the comprehensive student financial support system in terms of the different sources of financing for study and living costs is presented in the table below. The table incorporates the earlier assumption regarding part-time work (as representing 20% of income, regardless of socioeconomic status) and compares the outcome with the original structure of income sources according to the EUROSTUDENT findings (for the year 2010).

Table 2.8 Sources of financing for study and living costs with a comprehensive student financial support system

Socioeconomic status groups	Sources of student income				
	Part-time work	Grants	Loans	Family support	Total
Group 1 - highest socioeconomic status	20%	6%	14%	60%	100%
Group 2	20%	12%	18%	50%	100%
Group 3	20%	25%	25%	30%	100%
Group 4	20%	36%	24%	20%	100%
Group 5 - lowest socioeconomic status	20%	49%	21%	10%	100%
Average	20%	26%	20%	34%	100%
EUROSTUDENT 2010 (excl. 4% other)	29%	12%	1%	54%	96%
Difference (in percentage points)	-9	+14	+19	-20	-

The comprehensive ACCESS model as developed above has two major overall impacts: it reduces the share of the costs needing to be funded by students and their families and from part-time employment, and it significantly increases the volume of grants and loans in the student financial support system. Due to the impact of the variable amounts of support depending on socioeconomic status, the family contributions are as low as 10% of student costs for the lowest income group, increasing to 60% for the highest income group.



Design of ACCESS model (version 2): Targeted student financial support

The student financial support model targeted only at students in the lowest socioeconomic status group (Group 5) is obviously much easier to model, and is significantly cheaper than the comprehensive model. The table below shows the ACCESS model in question, which uses the same proportion of financial needs met and a grants/loans mix as for Group 5 in the previous model.

Table 2.9 The ACCESS model (version 2): A student financial support system for Croatia targeted only at students of lower socioeconomic status

Socioeconomic status groups	% of students in group	% of assessed needs met	% of financial support as grant	% of financial support as loan
Group 1 - highest socioeconomic status	20%	0%	0%	0%
Group 2	20%	0%	0%	0%
Group 3	20%	0%	0%	0%
Group 4	20%	0%	0%	0%
Group 5 - lowest socioeconomic status	20%	70%	70%	30%

This targeted financial support system would have the same impact as in Table II.7 on the students in Group 5 (lowest socioeconomic status). However, all other students would continue (as at present) to need to fund the costs of study from a combination of family support, part-time employment and the (limited) availability of grants and loans.

As mentioned in Part II.3 of this report, however, this model is considered by the Expert Team to be the “minimum standard” in terms of equity, and not the ideal policy choice, since having a strict “cut-off point” for receiving financial support is likely to place a significant burden on students who are from disadvantaged backgrounds but who are just above the threshold for receiving financial support.

Financial impact of different scenarios: national higher education budget

The two versions of the ACCESS model for student financial support and the three tuition fee policy options outlined above provide six scenarios as indicated in the table below.

Table 2.10 Six student financial support/tuition fee policy scenarios

STUDENT FINANCIAL SUPPORT SYSTEMS	TUITION FEE OPTIONS		
	No tuition fees	Tuition fees for all (5,000 HRK)	Higher tuition fees for all (8,800 HRK)
ACCESS model (1): Comprehensive student financial support	Scenario 1	Scenario 2	Scenario 3
ACCESS model (2): Student financial support targeted at students of lower socioeconomic status	Scenario 4	Scenario 5	Scenario 6

Based on these six scenarios, calculations can be made to assess the likely financial implications of implementing the two ACCESS models in the three different tuition fee environments. As mentioned in section C, the calculations are made based on data on the Croatian higher education budget (data from Eurostat and Ministry of Finance of the Republic of Croatia), and based on entering data extrapolated from EUROSTUDENT on overall student costs into a grid containing the percentages support provided (and proportions of grants and loans) of the ACCESS models. The table below shows the outcomes in terms of the estimated impact of the different scenarios on MSES spending on higher education.

Table 2.11 The estimated financial impact of the six student financial support/tuition fee scenarios: estimated increase needed in MSES budget for higher education

STUDENT FINANCIAL SUPPORT SYSTEMS	TUITION FEE OPTIONS		
	No tuition fees	Tuition fees for all (5,000 HRK)	Higher tuition fees for all (8,800 HRK)
ACCESS model (1): Comprehensive student financial support	+72%	+51%	+35%
ACCESS model (2): Student financial support targeted at students of lower socioeconomic status	+50%	+22%	+1%



The two “tuition fee for all” scenarios indicate the different financial implications of the two ACCESS models for student financial support: a comprehensive student financial support system (even on the relatively modest parameters indicated in Table II.9) is estimated to cost more than twice as much as the targeted support system.

The financial implications of the other four scenarios are all determined by two factors: the costs of the student financial support system involved and changes in total revenue of higher education institutions from charging tuition fees, and the consequences this has for the level of public funding of institutions.³¹ In the two scenarios with no tuition fees, the estimated increase in public funding to institutions to compensate for the loss of tuition fees (a 31% increase in MSES spending as indicated earlier) needs to be added to the basic costs of the student financial support system as indicated in the “tuition fee for all” scenarios.³²

In the “higher fees for all” scenarios the basic costs of the student financial support systems (see the tuition fees for all columns) are reduced by the amount of institutional funding MSES is able to reallocate to student financial support given higher aggregate tuition fee income in the system (equivalent to a 23% reduction in MSES funding as indicated earlier).³³

Financial impact of different scenarios: higher education expenditure in European comparison

Earlier in this section, data was presented comparing Croatian expenditure on higher education with that of other countries participating in the ACCESS project and the EU 27 (Table II.6). Following the calculations of the financial impact of each of the six policy scenarios above on the Croatian national budget for higher education, the table below demonstrates the effect each scenario would have on Croatia’s comparative position with the aforementioned countries (and the EU-27 average) with regards to public, private and total expenditure on higher education in Croatia, as well as the proportion of public funding that is direct funding. Regarding the latter, this indicator is especially valuable for the purposes of assessing the size of the student financial support system, since indirect public funding usually consists of funds that are provided to individuals (i.e. funds provided through the student financial support system).

Table 2.12 The estimated impact of the six scenarios on Croatian higher education expenditure in comparative terms

	Public HE Expend as % GDP	Private HE Expend as % GDP	Total HE Expend as % GDP	% of Public Expend as direct
Austria	1.49%	0.18%	1.67%	75%
Germany	1.20%	0.20%	1.40%	82%
Hungary	1.02%	0.30%	1.32%	85%
Slovenia	1.20%	0.18%	1.38%	78%
Sweden	1.82%	0.17%	1.99%	75%

³¹ Although to a lesser extent, changes in tuition fees also have an impact on the total amount of support needed to be provided by the student financial support system as they increase/decrease the average assessed costs of eligible students.

³² The fact that, for example, in the targeted system, the scenario with no tuition fees entails an estimated 50% increase in MSES funding and not 53% [22% + 31%] reflects lower average costs per student. This factor is more significant in the comprehensive system as there are more students receiving support.

³³ The small differences (e.g. 51% - 23% is not 35%) reflect in this case higher average student costs

	Public HE Expend as % GDP	Private HE Expend as % GDP	Total HE Expend as % GDP	% of Public Expend as direct
EU 27	1.22%	0.39%	1.61%	75%
EU 2020 target			2.00%	
Croatia (scenarios sorted by increase in MSES budget required)				
Croatia, baseline 2010	0.82%	0.28%	1.10%	78%
Scenario 6. Targeted support; higher tuition (1% increase)	0.83%	0.39%	1.21%	63%
Scenario 5. Targeted support; tuition for all, (22% increase)	1.00%	0.22%	1.22%	64%
Scenario 3. Comprehensive support; higher tuition, (35% increase)	1.11%	0.23%	1.34%	49%
Scenario 4. Targeted support; no tuition (50% increase)	1.23%	0.00%	1.23%	73%
Scenario 2. Comprehensive support; tuition for all (51% increase)	1.24%	0.17%	1.41%	52%
Scenario 1. Comprehensive support; no tuition, (72% increase)	1.41%	0.00%	1.41%	64%

A full exploration of the factors underlying the information presented in the table above is beyond the scope of this report. Readers interested in exploring these issues in more depth are referred to the two comparative studies on higher education funding and student financial support systems respectively, published earlier in the ACCESS project (see Doolan et al., 2012; Doolan et al., 2013).

In terms of the financial implications of the six student financial support/tuition fee scenarios and their impact in terms of public (direct and indirect) and private expenditure on higher education in Croatia, the following major conclusions can be made:

- **Overall expenditure on higher education:** none of the six scenarios (including the most expensive - no tuition and comprehensive support) raise overall expenditure on higher education in Croatia as a % of GDP to near the EU27 average of 1.61% or the EU 2020 target of 2.00%. Three of the scenarios would, however, raise overall expenditure on higher education to levels comparable to Hungary, Slovenia and Germany.
- **Public expenditure on higher education:** all of the scenarios would involve an increase in public expenditure; in five of the six cases this would be a significant increase (from 0.82% in 2010, to between 1.0% and 1.41%). In three cases this would take Croatia above the EU27 average of 1.22%.



- **Private expenditure on higher education:** the scenarios vary considerably in their impact on private expenditure. According to the calculations of the Expert Team, the two “no tuition” scenarios would reduce private expenditure to zero. Obviously, such an outcome is impossible in reality, and is a result of the limitations of the data used in the ACCESS model (please see footnote for an explanation).³⁴ What this estimate clearly indicates, however, is that removing tuition fees would certainly cause a large drop in private expenditure, since the system has been depending on these funds in the last decade.

The “tuition fee for all” scenarios would reduce private expenditure with the extent of this reduction determined by the coverage of the student financial support system in question; while one of the “higher tuition” scenarios would increase private expenditure (the aggregate increase in tuition fees is not off-set by the restricted coverage of the student financial support system), the other would reduce it (the comprehensive student financial support system more than covers higher aggregate tuition fees). Thus, in five cases the relatively high private expenditure in Croatia would be reduced from its 2010 level.

- **Proportion of public funding as direct expenditure:** in all six scenarios the proportion of public funding as direct expenditure reduces and indirect expenditure (i.e. funds which go students rather than institutions) increases through the introduction of the student financial support system. The change is most striking in the case of a comprehensive support system. All six scenarios would bring Croatia below the EU27 average in this respect. This indicator essentially compares public spending on institutions with public spending on students. While further study is warranted, one tentative conclusion would be that the lower proportion of direct expenditure in Croatia would be a reflection of introducing student financial support systems that are relatively better funded than the higher education institutions. This is perhaps best illustrated in the Swedish case: Sweden has the most comprehensive support system of the countries participating in the ACCESS project (far more generous than the ACCESS model), yet direct expenditure on institutions still accounts for 75% of public expenditure. Clearly, direct institutional funding levels are equally generous.

The last point demonstrates why discussions about the future of student financial support cannot be conducted in isolation from other strategic questions relating to higher education policy in general, and higher education funding in particular. This point will be returned to briefly in the next and final section that follows.

Additional scenario: keeping the linear tuition fee system

As mentioned earlier, the ACCESS models for student financial support and their financial implications were developed using 2010 as a base year, because the linear tuition fee policy is relatively new and its impact on the total revenue of higher education institutions from charging tuition fees and the overall level of public expenditure on higher education is still not known. For these reasons, the Expert Team did not attempt to model the two student financial support systems with a linear tuition fee policy scenario. It is however possible to indicate the likely implications of the linear tuition fee policy on the revenue of higher education institutions from tuition fees and on institutional funding and on this basis to consider the possible implications for the student financial support systems.

³⁴ The fact that private expenditure reaches zero in this model is a result of the imperfect data available, and of the limitations of creating a simplified model as is the case of the ACCESS project. It is a result of combining Eurostat data on private expenditure with calculations of total fee-income in the Croatian higher education system based on extrapolating financial data from EUROSUDENT (average tuition fees multiplied by total number of students). The result of this calculation was that the total value of fee-income in Croatia was equal to the private expenditure on higher education according to Eurostat. Although this appears to corroborate somewhat the fact that EUROSUDENT data does provide valuable data for policy-making (since the figures are so close), the ACCESS study on higher education funding (Doolan et al, 2012) demonstrated that higher education institutions receive between 44% and 68% of their own-income from tuition fees, which means that they clearly have other sources of private income. This either means that the data provided to Eurostat on private expenditure is unreliable and/or that EUROSUDENT is insufficiently precise.

The clearest impact of the new linear tuition fee policy has been on changes in the numbers of students by fee-paying status. The table below provides a breakdown of the changes in Croatian student numbers by fee-paying status over the past three years.

Table 2.13 Croatian students by fee-paying status

Year	Full-time, no tuition fees	Full-time, tuition fees	Part-time	Total fee-paying	Total
2009/2010	59,508	50,128	35,627	85,755	145,263
2010/2011	73,150	38,801	36,796	75,597	148,747
2011/2012	74,488	38,360	40,009	78,369	152,857

Source: CBS (2011, 2012 and 2013)

The linear tuition fee policy has resulted in an increase in the number of full-time students who do not pay fees by 15,000, in a reduction in the number of full-time fee-paying students by 7,000, while part-time fee-paying students increased by 4,500 over the three-year period. Taken together, this means that there are 7,000 fewer students paying tuition fees in Croatia than in the base year of the ACCESS model. This means that total revenue from tuition fees in the higher education system has probably reduced since 2010 and will continue to do so until the linear policy is fully implemented.

A more complex issue is the question of tuition fee levels. The average tuition fee charged to fee paying students in 2010 was 8,800 HRK/1,170 EUR per year. In the period from 2010 to 2012, MSEES paid a tuition fee subsidy of 3,650 HRK/485 EUR per year to higher education institutions for each approved full-time student who does not pay fees. Those students who fail to gain 55 ECTS per year in their studies may be charged a tuition fee by their institutions, proportionate to the ECTS points that they are lacking. The Expert Team does not have a clear enough picture of either the basis on which this proportionate fee is being set, or the spread of sub-55 ECTS students by ECTS points obtained. This would have enabled the recalculation of the financial impact of student financial support systems based on the current income of institutions within the linear tuition fee system.

Nevertheless, the direction of change is clear:

- The number of fee paying students is reducing and is likely to do so for the next few years
- Within this smaller group of fee-payers the number of students paying an average fee of 8,800 HRK/1,170 EUR has reduced and will reduce further
- The number of students paying linear/ECTS-based fees has increased and will increase further as the linear model is fully rolled out
- Crucially, the average ECTS based proportionate fee will be considerably less than 8,800 HRK/1,170 EUR, so average tuition fees will fall.



This means that the financial implications of both the targeted and comprehensive student financial support systems outlined above would be lower if they were introduced in the context of a linear tuition fee policy. How much less cannot be accurately assessed at present. However, falling average tuition fees as a result of the linear tuition policy's lower proportionate fees mean that the possible reallocation of MSES resources to student financial support as a result of increased aggregate tuition fees (envisaged in the "higher fees for all" scenarios) cannot be achieved in the linear tuition fee environment.

However, as elaborated in Part II.2, the ACCESS Expert Team has identified a number of weaknesses and challenges facing this system. Should the main stakeholders in Croatian higher education choose to keep this model, the ACCESS Expert Team recommends that the system be adjusted to address the identified concerns. The recommendations of the ACCESS Expert Team are highlighted below.

Ensuring equity, fairness, sustainability and transparency of the linear tuition fee model

- **Equity:** the linear tuition fee system poses a fundamental equity problem, since payment of fees is dependent on merit, which may disproportionately penalise students from disadvantaged backgrounds. While safeguards have been included for students with disabilities, additional safeguards should be ensured for other disadvantaged categories of students (through nationally-defined tuition waivers and/or through the student financial support system).

Additionally, despite the introduction of the linear model, the practice of enrolling significant numbers of part-time students as *de facto* full-time students has remained. Since these students fall outside the linear model, pay full fees and have no access to indirect student support, this inequitable practice should be discontinued. Unless all students fall within the linear model (or unless part-time student status is genuinely based on a student's ECTS study load), the tuition fee system will be fundamentally inequitable.

- **Fairness:** the linear system places the entire responsibility and "financial risk" of ensuring study progress on the student, instead of sharing that risk with institutions. Namely, the model potentially sets up the perverse consequence that universities with better success and retention rates (a desirable performance) might receive less combined income from publicly-subsidised tuition fee places and private tuition fee payments than those who do not perform as successfully. An opposite scenario, whereby institutions would receive higher funding based on the number of ECTS points accumulated by students, might represent a fairer approach to risk-sharing.
- **Sustainability and transparency:** the linear tuition fee model is complex in terms of financial planning at the level of the state and by higher education institutions. It is also complex and non-transparent for the purposes of students wishing to enrol in higher education. Greater transparency could be achieved by publishing the probability rate of students completing the necessary ECTS and their studies on time (by study programme), based on the results of students in the previous academic year, whilst taking into account the social profile of the student body.
- Finally, the ACCESS Expert Team recommends that fee levels in Croatia be regulated (e.g. by setting fixed fees or capped fees per academic discipline) in order to remove the major differences in fee levels that currently exist in the public HE system.



By way of conclusion, this brief exploration of the linear tuition policy and its implications for student financial support systems illustrates that the consideration of the strongly inter-related questions of funding and student financial support policies in Croatian higher education will continue well beyond the ACCESS project, of which this report is the final output. The ACCESS Expert Team has made the ACCESS model for student financial support described above available to MSES and would welcome the opportunity to contribute to its further development as policy options become clearer and as further data on the financial and other implications of the linear tuition fee policy becomes available.

ANNEXES

Glossary

Although most of the terms used are in accordance with national and international literature on the subject, and most terms will be known by stakeholders in the field of higher education, the following comments and definitions of terms used may be of assistance for reading the report:

Degree structure terminology (e.g. undergraduate/bachelor's/first cycle): In this report, the following terms are used to describe degree structures in the countries analysed in this study:

- Undergraduate: this term is used instead of (but a synonym for) the term "bachelor's" or "first-cycle" study programmes/degrees.
- Graduate: this term is used instead of (but a synonym for) the term "master's" or "second-cycle" study programmes/degrees.
- Doctoral: this term is used instead of (but a synonym for) the term "PhD" or "third-cycle" study programmes/degrees.

Country-specific study programmes that do not fit into the aforementioned terms are referred to by their country-specific titles (e.g. "post-secondary two-year study programmes"; "postgraduate specialist study programmes").

Direct and indirect public expenditure on higher education: Direct public expenditure on higher education refers to funds provided directly to higher education institutions (or paid directly to university staff), usually including funding for teaching, research and development. Indirect public expenditure on higher education refers to payments of public funds made to individuals or households in the form of direct student financial support (grants, loans and other allowances). A considerable difference between direct and indirect expenditure on higher education should indicate relatively high expenditure on direct student financial support mechanisms.

Direct and indirect student financial support: Direct financial support refers to grants and loans, which are direct monetary transfers to individual students, usually not specifying what type of cost they should spend them on. Indirect financial support refers to various forms of subsidies and tax benefits which do not result in the receipt of funds by individual students, but which instead lower the cost of a particular good or service, or which facilitate access to income (e.g. tax exempted student work). In particular, subsidies are transfers made to institutions and services that students may benefit from should they be in position to use them, such as accommodation, meals and transport.

Direct and indirect costs of higher education: Direct costs of higher education incurred by students refer to costs that are immediately related to a student's study programme, include primarily tuition fees and other administrative fees paid to the higher education institution, as well as educational materials (books, computers, etc). Indirect student costs of higher education relate to the living costs of students while they are studying, which consist primarily of accommodation, meals and transportation, as well as all other categories (health costs, childcare, communication, books and educational materials, social and leisure activities and other miscellaneous costs).

Grants (and scholarships): Grants refer to non-repayable money transfers that are made to individuals for the purpose of supporting them financially during their education. The authors of this report have decided to categorise the grant

systems into “general grants” (which are non-competitive and available to a significant proportion of students) and “targeted grants” (which pursue specifically designed objectives and may or may not be competitive, and tend to be available to a smaller proportion of students).

In addition to the term “grant”, the authors will occasionally use the term “scholarships” in this report. The term will be used to refer to a form of “targeted grant”, which is usually characterised by being competitive and (partially) merit-based, with a small number of grants awarded. The term “scholarship” is also used by several countries as the English translation of the national term for “grant”.

Gross enrolment ratio (GER): GER shows the number of students enrolled in higher education, regardless of age, expressed as a percentage of the age group 18–22, and is an indicator of the extent of overall higher education participation (as opposed to looking only at entry rates).

Incremental or historical funding: incremental funding refers to a funding system whereby previous allocations to higher education institutions play a leading role (hence “historical” allocations or “historical funding”), and whereby certain adjustments are made based on increases in students, staff, etc.

Lump-sum funding and line-item funding: Lump-sum funding refers to the method of allocating of funds from the state to higher education institutions in a way which allows them to freely allocate the funds within their institution according to their priorities. This differs from line-item funding, which refers to public funding that requires higher education institutions to conform to pre-arranged budgets, without the flexibility to reallocate funds internally.

Means testing: Means-testing is a method used for determining whether an individual or family qualifies for a government financial assistance programme, and is used in order to target assistance to those who are most in need. Means-testing either defines a certain income threshold (personal income and/or household/family income) below which individuals or families are eligible to receive assistance, or can provide variable amounts of support more progressively, by calculating the level of support based on the precise level of income.

Own income and third-party income: in this report, own income refers to all income received by higher education institutions other than public funds -this includes income from tuition fees, administrative charges, development projects, services, donations, etc. Third-party income, on the other hand, is a sub-category within “own income”, but refers to all funding that is neither public funding nor income derived from students through tuition fees or administrative charges.

Professional higher education/professional studies: In binary higher education systems, professional higher education refers to the part of the system that provides study programmes that are vocationally oriented (in this report: “professional studies”), compared to theoretically-based, academic study programmes provided at traditional research universities (in this report: “university studies”). The term “professional higher education” is used in this report, in line with the use of the term by the sector’s umbrella organisation in Europe, EURASHE (European Association of Institutions in Higher Education), instead of the terms “vocational higher education” or “non-university higher education”, which are sometimes used internationally.

Socioeconomic status: An assessment of an individual's or family's economic and social position in relation to others. Socioeconomic status can be determined based on several indicators, including parents' education, occupation, employment, and employment status of parents, the number of children in families receiving social assistance, etc. In this report, we use two proxies for socioeconomic status: parental education in the form of the highest educational attainment of students' mothers and/or fathers, as well as self-assessment of the socioeconomic status of students based on responses to the EUROSTUDENT survey.

Students with disabilities: In this report, this term will be used to refer to the group defined in the EUROSTUDENT survey as "students with impairments", and refers to students who have one of the following characteristics or conditions:

- Chronic illness.
- Physical disabilities; (including both motion- and sensory-related disabilities, for instance, sight and/or hearing impairments).
- Mental problems.
- Other health problems.

Tuition fee subsidies: In the specific Croatian context, this refers to public funds provided to higher education institutions from the academic year 2012/2013 for each student enrolling in the first-year of study (for full-time study programmes only) at the undergraduate and graduate level, as well as for students in subsequent years who acquired at least 55 ECTS points in the previous academic year. The funds are provided at a fixed rate per student.

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About the ACCESS project

Basic information about the project

Title: *Towards Equitable and Transparent Access to Higher Education in Croatia - ACCESS*

Number of project: 158745-TEMPUS-1-2009-1-DE- TEMPUS-SMGR

Project grant holder: Technische Universität Dresden, Germany

National coordinator: Institute for the Development of Education, Croatia

Duration of project: 15.01.2010. - 15.07.2013.

Project web site: www.iro.hr/access

Project summary

Overall objective:

- Contribute to ensuring equitable and transparent access to higher education (HE) in Croatia by removing financial obstacles, improving data availability and building capacity for action.

Specific objectives:

- Collect data on social status of students in Croatia to evaluate the effectiveness of higher education funding and student financial support policies and assess the capacity to enhance them.
- Establish a policy framework to enhance the social dimension and transparency of the higher education funding and student financial support system in Croatia, which can be translated into amendments of laws and regulations.
- Establish a national coordination group to implement and monitor measures for equitable and transparent access to higher education.

Expected results: A concrete proposal for a new higher education funding and student financial support system in Croatia, which will rely on the principles of evidence-based policy making, which can be translated into concrete amendments of laws and regulations and whose implementation can be monitored by a National Coordination Group.

Project consortium

Croatian partners:

- Agency for Science and Higher Education
- Association for Higher Education Development "Universitas"
- Croatian Council of Universities and University colleges of Applied sciences
- Croatian Student Council
- Institute for Social Research, Centre for Educational Research and Development
- Institute for the Development of Education



- Institute of Public Finance
- J.J. Strossmayer University of Osijek
- Juraj Dobriča University of Pula
- Ministry of Science, Education and Sports
- University of Dubrovnik
- University of Rijeka
- University of Split
- University of Zadar
- University of Zagreb

Individual experts

- Jon File, Centre for Higher Education Policy Studies, University of Twente (the Netherlands)

International partners

- Corvinus University Budapest (Hungary)
- CSN - Swedish National Board of Student Aid (Sweden)
- International School For Social and Business Studies (Slovenia)
- University of Graz (Austria)
- Mälardalen University (Sweden)
- Ministry of Higher Education, Science and Technology (Slovenia)
- Technische Universität Dresden (Germany)

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